

FOURTH REPORT
OF THE
ROYAL COMMISSION
APPOINTED TO INQUIRE INTO THE SUBJECT OF
MINING ROYALTIES;
WITH
MINUTES OF EVIDENCE AND APPENDICES.

Presented to both Houses of Parliament by Command of Her Majesty.



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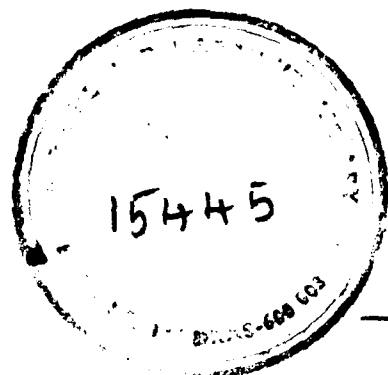
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TABLE OF CONTENTS.

ROYAL COMMISSION	Page iii
FOURTH REPORT	v
LIST OF WITNESSES EXAMINED	vii
NOTES OF EVIDENCE	1
INDEX TO EVIDENCE	77
INDEX TO APPENDICES	79
APPENDIX A.:-	
PAPERS HANDED IN BY WITNESSES	80
APPENDIX B.:-	
DOCUMENTS RELATING TO THE MINING LAWS OF INDIA AND THE COLONIES	86
APPENDIX C.:-	
DOCUMENTS RELATING TO FOREIGN COUNTRIES	92
APPENDIX D.:-	
NOTES ON THE MINING LAWS OF FOREIGN COUNTRIES AS REVISED BY MR. OSWALD WALMESLEY	275



WARRANT APPOINTING THE ROYAL COMMISSION TO INQUIRE INTO THE SUBJECT OF MINING ROYALTIES.

Whitehall, August 19, 1889.

THE Queen has been pleased to issue a Commission under Her Majesty's Royal Sign Manual to the following effect:—

VICTORIA R.

Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith.

To Our right trusty and right well-beloved Cousin and Councillor Thomas George, Earl of Northbrook, Knight Grand Commander of Our most Exalted Order of the Star of India; Our right trusty and well-beloved Councillor Edward Baron Macnaghten; Our trusty and well-beloved Sir William Thomas Lewis, Knight; William Abraham; Alfred Barnes; Thomas Burt; David Dale; George Baker Forster; Henry Hucks Gibbs; Archibald Hood, President of the Mining Association of Great Britain; George Auldjo Jamieson; William Kenrick; John Knowles; Joseph Edwin Crawford Munro, Doctor of Laws, Professor of Law and Political Economy at the Owens College, Manchester; William Cole Pendarves; Christopher Talbot Redington; Frederick Parker Rhodes; Robert Chisholm Robertson; Josiah Thomas; Charles Algernon Whitmore; and Nicholas Wood, Esquires, greeting.

Whereas We have deemed it expedient that a Commission should forthwith issue to inquire into the amounts paid as royalties, dead-rents, and way-leaves on coal, ironstone, iron-ore, shale, and the metals of mines subject to the Metalliferous Mines Act, 1872, worked in the United Kingdom, and the terms and conditions under which those payments are made, and into the economic operation thereof upon the mining industries of the country; and, further, to inquire into the terms and conditions under which mining enterprise is conducted in India, the Colonies, and Foreign Countries by the system of concession or otherwise, and the economical operation thereof.

Now know ye, that We, reposing great trust and confidence in your knowledge and ability, have authorised and appointed, and do by these presents authorise and appoint you the said Thomas George Earl of Northbrook; Edward Baron Macnaghten; Sir William Thomas Lewis; William Abraham; Alfred Barnes; Thomas Burt; David Dale; George Baker Forster; Henry Hucks Gibbs; Archibald Hood; George Auldjo Jamieson; William Kenrick; John Knowles; Joseph Edwin Crawford Munro; William Cole Pendarves; Christopher Talbot Redington; Frederick Parker Rhodes; Robert Chisholm Robertson; Josiah Thomas; Charles Algernon Whitmore; and Nicholas Wood, to be Our Commissioners for the purposes of the said Inquiry.

And for the better effecting the purposes of this Our Commission, We do by these presents give and grant unto you, or any five or more of you, full power to call before such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; and also to call for, have access to, and examine all such books, documents, registers, and records as may afford you the fullest information the subject; and to inquire of and concerning the premises by all other lawful ways means whatsoever.

And We do further by these presents authorise and empower you, or any five or more of you, to visit and personally inspect such places as you may deem expedient for more effectual carrying out of the purposes aforesaid.

And We do by these presents will and ordain that this Our Commission shall continue in full force and virtue, and that you Our said Commissioners, or any five or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any five or more of you, have liberty to report your proceedings under this Our Commission from time to time, if you shall judge it expedient so to do.

And Our further will and pleasure is that you do, with as little delay as possible, report to Us, under your hands and seals, or under the hands and seals of any five or more of you, your opinion upon the several matters herein submitted for your consideration.

Given at Our Court at St. James's, the fourteenth day of August one thousand eight hundred and eighty-nine, in the fifty-third year of Our Reign.

By Her Majesty's Command.

HENRY MATTHEWS.

Whitehall, August 19, 1889.

FOURTH REPORT.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

We, the undersigned Commissioners, appointed under Your Majesty's Commission, dated 19th August 1889, desire humbly to submit to Your Majesty the following further Report of evidence taken at meetings which we held between December 15th, 1891, and December 14th, 1892, together with written information which has been furnished to us relative to the Mining Systems of India, the Colonies, and Foreign Countries.

(Signed) NORTHBROOK.
 " MACNAGHTEN.
 " W. THOMAS LEWIS.
 " W. ABRAHAM.
 " A. BARNES.
 " THOS. BURT.
 " DAVID DALE.
 " G. B. FORSTER.
 " HENRY H. GIBBS.
 " ARCHD. HOOD.

(Signed) GEO. AULDJO JAMIESON.
 " WILLIAM KENRICK.
 " JOHN KNOWLES.
 " J. E. C. MUNRO.
 " W. C. PENDARVES.
 " C. T. REDINGTON.
 " F. PARKER RHODES.
 " R. CHISHOLM ROBERTSON.
 " JOSIAH THOMAS.
 " C. A. WHITMORE.

HERBERT LYON, *Secretary.*

March 8th, 1893.

LIST OF WITNESSES.

Name.	Description.	Page.
Mons. Herman Hubert	Government Mining Engineer ; Lecturer on Mineral Legislation at the Mining School of the University of Liege.	1
Mr. Thomas R. Mulvany	H.M. British Consul at Düsseldorf	9
Mons. Raoul-Duval	Director of the Bank of France ; Civil Mining Engineer ; Chairman of the Gas Company of Paris.	16
Mons. Emile Aguilon	Chief Engineer of Mines in France ; Professor of Mining Laws of the Higher School of Mines of Paris.	16
Mr. Robert Watson Cooper	Newcastle-on-Tyne, Solicitor to Colliery Owners and Lessees in Northumberland and Durham.	27
Mr. Philip Arthur Scratchley	Managing Director of the Wohlfahrt Lead Mines in the Rhine Province of Germany.	45
Mr. Charles Augustus Vansittart Conybeare.	Member of Parliament for the Camborne Division of Cornwall.	48
Sir Joseph H. Warner	Counsel to the Chairman of the Committee of the House of Lords.	64
Mr. John Francis Rotton, Q.C.	Legal Adviser to the Local Government Board	67
Mr. Reginald Guthrie	Secretary to the North of England United Coal Trade Association.	68
Mr. Oswald Walmesley	Barrister-at-Law ; Secretary to the Committee of Mine Proprietors in connexion with this Inquiry.	71
Mr. Robert Strathern	A writer to the Signet, Edinburgh	72
Mr. Frederick Parker Rhodes	A Member of the Commission ; Solicitor, Rotherham	75

ALPHABETICAL LIST OF WITNESSES.

	Page.
Aguillon, Emile	16
Conybeare, M.P., Charles Augustus Vansittart	48
Cooper, Robert Watson	27
Duval, Raoul	16
Guthrie, Reginald	68
Hubert, Herman	1
Mulvany, Thomas R.	9
Rhodes, Frederick Parker	75
Rotton, Q.C., John Francis	67
Scratchley, Philip Arthur	45
Strathern, Robert	72
Walmesley, Oswald	71
Warner, Sir Joseph H.	64

INDEX TO APPENDICES.

Title.	Page.
APPENDIX A.	
PAPERS HANDED IN BY WITNESSES.	
I. A Bill to regulate the imposition of Mining Royalties in the United Kingdom, handed in by Mr. Conybeare, M.P.	80
II. Memorandum by Mr. E. C. Marriott, in reply to the evidence given by Mr. Conybeare, M.P.	91
III. Observations on some of the evidence given on legal points to the Commission, handed in by Mr. Oswald Walmesley, on behalf of the Committee of Proprietors	82
IV. Observations on complaints made by various witnesses as to the action of Irish Landlords and Mining Proprietors, handed in by Mr. Oswald Walmesley, on behalf of M. Gilbert de L. Willis, Secretary to the Irish Landowners' Convention	83
V. Statement of the Revenue derived by the Crown from mineral substances in the Isle of Man, in the year ended 31st March 1890, handed in by Mr. Geo. Culley, Commissioner of Woods, &c.	86
VI. Return showing the gross amounts due and payable to the Ecclesiastical Commissioners for England during each of the years 1888, 1889, and 1890, in respect of rents, royalties, and wayleaves, &c., in the county of Durham	86
APPENDIX B.	
Notes on Mining and the Law as to Ownership of Minerals in India and the Colonies	86
APPENDIX C.	
DOCUMENTS RELATING TO FOREIGN COUNTRIES.	
I. Correspondence with the Foreign Office	92
<i>France.</i>	
II. Notes on the Mining Laws	94
III. Correspondence, and reply to Memorandum	102
Translations of pamphlets handed in by Mons. Raoul Duval	111
Memorandum furnished to the Commission by Mons. Aguilon, showing the proportional dues paid during the last ten years in the coal mines of the North of France	115
IV. Extracts from "Statistique de l'Industrie Minière" for the year 1888, with references to the Statistics for 1889 and 1890	116
<i>Belgium.</i>	
V. Notes on the Mining Laws	127
VI. Correspondence, with reply to Memorandum, by M. de Bruyn, and Report furnished by M. Emile Harzé	129
VII. Tables showing the average wages of miners	133
VIII. Memorandum furnished by Professor H. Denis, based on information contained in "Statistique Générale des Recettes," 1840-80	136
IX. Papers handed in by Mons. Hubert, supplementary to his evidence	137
X. Memorandum on the Mining Law, by Mons. Hubert	146
<i>Germany.</i>	
XI. Notes on the Mining Laws	150
XII. Correspondence, with reply to Memorandum by Mr. Mulvany	153
XIII. Extracts from the Report of the Royal Commission appointed in 1890 by the German Emperor to inquire into the condition of the Miners in the Coal Industry	161
XIV. Table of Wages for the Mining Districts of the Oberbergamtsbezirk of Dortmund	170
XV. Taxation of Mines by Dr. Arndt	198
XVI. Report of Dr. jur. George Heinrich Wable upon the Mining Laws of Saxony	206
<i>Austria-Hungary.</i>	
XVII. Notes on the Mining Laws	212
XVIII. Correspondence, with reply to Memorandum by Dr. Moriz Weiss	215
<i>Italy.</i>	
XIX. Notes on the Mining Laws	224
XX. Correspondence, with reply to Memorandum by the Marquis di Rudini	232
<i>Spain and Portugal.</i>	
XXI. Notes on the Mining Laws in Spain	238
XXII. " " " Portugal	241
<i>Luxemburg.</i>	
XXIII. Notes on the Mining Laws	244
<i>United States of America.</i>	
XXIV. Notes on the Mining Laws	246
XXV. Replies received from Mr. Carnegie to questions addressed to him by Mr. Dale	253
XXVI. Replies received from Mr. Commissioner Wright of the Department of Labour, Washington, to questions addressed to him by Mr. Dale, with documents	255
APPENDIX D.	
Notes on the Mining Laws of Foreign Countries, as revised by Mr. Oswald Walmesley (by permission)	275

MINUTES OF EVIDENCE

TAKEN BEFORE THE

ROYAL COMMISSION ON MINING ROYALTIES.

FORTY-THIRD DAY—(continued).

6, Old Palace Yard, Westminster, S.W., Tuesday, December 15, 1891.

PRESENT:

THE RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

Sir WILLIAM T. LEWIS.
Mr. ALFRED BARNES, M.P.
Mr. THOMAS BURT, M.P.
Mr. GEORGE BAKER FORSTER.
Mr. HENRY HUCKS GIBBS, M.P.
Mr. GEORGE AULDJO JAMIESON.
Mr. WILLIAM KENRICK, M.P.

Mr. J. E. CRAWFORD MUNRO, LL.D.
Mr. CHRISTOPHER T. REDINGTON.
Mr. F. PARKER RHODES.
Mr. ROBERT CHISHOLM ROBERTSON.
Mr. JOSIAH THOMAS.
Mr. CHARLES A. WHITMORE, M.P.
Mr. HERBERT LYON, Secretary.

MONS. HERMAN HUBERT called and examined.

[Sir Joseph Crowe, K.C.B., H.M. Commercial Attaché for Europe, attended for the purpose of translating the evidence.]

Mons.
H. Hubert
15 Dec. 1891

18,776. (*Chairman.*) You are a Government mining engineer, I believe?—Yes.

18,777. And Professor at the Mining School at Liège in connexion with the university?—I am charged with lectures on mineral legislation.

18,778. M. de Bruyn, the Belgian Minister for Agriculture, Industry, and Public Works, has been so kind as to send us a very important letter on the subject of the Belgian Mining Law (see Appendix C. VI. 2). He has given us a great deal of information, and he has told us that a letter which one of our members received from M. Harzé contained authentic information with respect to the law, (see Appendix C. VI. 3), and also that certain notes prepared by Mr. Walmesley with reference to the Belgian Law were, generally speaking, accurate (see Appendix C. V.). We nevertheless wished to have some further explanations, and we asked M. de Bruyn to be so kind as to permit one of the mining engineers of Belgium to attend here, and give evidence before us. I believe you are the gentleman whom M. de Bruyn was kind enough to depute for that purpose?—Yes.

18,779. Have you seen a memorandum giving what we believe to be a summary of the Belgian Mining Law?—Yes, I have seen it. (See Final Report, Appendix VIII.)

18,780. And also certain questions that we have put down in relation to it?—Yes.

18,781. Those being questions to which we have received answers, we do not desire to have the information which we already possess in writing repeated on the present occasion, but only to clear up some points upon which we were not quite certain. I will, therefore, ask you in the first place to take the questions for Belgium, and to inform the Commission whether you can answer them?—Yes, I shall be happy to do so.

18,782. Are you able to inform us what number of concessions have been granted to surface owners since

1837, and what number have been granted to other applicants?—It is not at all possible to answer this question exactly, because in our country, the holdings are generally very small, and the concessions have rarely been granted to surface owners. The applicants for concessions have generally obtained the consent of the surface owners. Some great proprietors have obtained concessions, but they are chiefly metallic concessions—not for coal.

18,783. Speaking generally, then, the preference given by the law of 1837 to surface owners has not been largely used in consequence of the small properties in Belgium?—That is so. But I must also say that the majority of our coal beds were known and conceded before the law of 1837, and that the concessions which took place after the law of 1837 were simply, generally speaking, consolidations of ancient rights.

18,784. Is it correct to say that mines, but not buildings and machinery, are exempted from the *impôt foncier* in Belgium?—That is correct.

18,785. Can you inform us what the rate of the *impôt foncier* is upon other property?—Yes. The *impôt foncier* is 7 per cent. of the revenue of the cadastral product of a special valuation by the administration of the cadastre. The cadastre is the measurement of the area of the country by a special administration called the *administration du cadastre*.

18,786. Is the *impôt foncier* a land tax or a property tax?—The *impôt foncier* is simply on *immeubles*; it includes land and houses, and everything that is on the land.

18,787. It is a land and house tax?—Yes.

18,788. And not a property tax?—That is so. It is not an income tax. In order to establish the tax, the *administration du cadastre* estimates the probable value of the lands, &c., such estimated value being very much lower than the real value.

Mons.
H. Hubert.
Dec. 1891.
le impôt
acier.

communal
ces.

18,789. (Sir William Lewis.) It is a rateable value then, is it?—It is a rateable value; it is a fictitious value which is up for the purpose of establishing the amount of the tax. Upon that the 7 per cent. is charged.

18,790. (Chairman.) Are the mines exempt from that tax?—The mine in the ground is exempt, but not the property in and about the mine; the buildings, the machinery, and the surface property are not exempt.

18,791. M. Harzé, in his letter, informed us that mines are subject to special communal taxes, which are sometimes heavy; can you tell us whether those taxes are levied from other industries or not?—These taxes are actually very numerous, and they differ according to the different communes. Each commune has a special law, and I have prepared for the Commission a recapitulation of these taxes, according to the base of the tax. These taxes are imposed under the *redevance des mines*—the royalty—by putting an additional tax on the royalty, sometimes on the proportional royalty, sometimes on the fixed royalty, and sometimes on the proportional and fixed royalty. Sometimes the commune taxes the engines according to the horse-power or the square metre of boiler surface. In some other communes, the tax is based on the number of persons employed or per hectare of surface conceded. In numerous cases, a company pays one tax to one commune and another tax to another commune. As I have said, I will give the Commission a recapitulation of these taxes for the past two years. I cannot give the actual existing tax, because it changes frequently. The Government approves these taxes, and gives its approbation sometimes for one year, sometimes for three years, sometimes for ten years; and when the term is past, the commune has to apply for another approbation.

18,792. Can you tell us whether these taxes are levied upon mines only, or upon other industries as well?—Yes, some taxes are special to mines. The taxes based on the hectare of surface conceded and on the hectare of surface worked are special to mines. The taxes based on the number of persons employed are generally common to other industries, but in several communes the tax on a colliery per head of the workpeople employed is higher than for other industries. The taxes based on horse-power and on the boiler surface are common to other industries. The taxes based on the royalty are special to mines.

18,793. So that some taxes are special to mines, and others are common to other industries?—Yes.

18,794. Would it be possible to give us any idea of the incidence of those taxes which are special to mines per ton of coal raised?—It would be very difficult, because each commune has a special rule. I can give the recapitulation commune by commune, but I cannot at this moment give the details for each commune.

18,795. Is it a heavy tax or not?—Sometimes it is relatively heavy. The town of Liège, for example, takes 125 per cent. on the royalty, and, in addition, Liège takes also a tax on the surface of the boilers.

18,796. The tax on the surface of the boilers would be common to other industries, I presume, from what you say?—Yes.

18,797. It would not be a special tax on the mine?—No.

18,798. But the 125 per cent. on the royalty would be a special tax on the mine?—Yes; but in the case of the tax on the boilers the commune of Liège exempt the collieries in respect of the boilers used for pumping water.

18,799. In Hainaut, where the greater portion of the coal from Belgium is raised, are the taxes heavy or not?—They are relatively heavy. I shall be happy to give the Commission an account of the tax in Hainaut and in Liège. (See Appendix C. IX. 1.)

18,800. If you would be good enough to do that we should be very glad?—I will recapitulate it by provinces. The province of Namur has no tax or

very few taxes, but the province of Hainaut and the province of Liège have numerous taxes.

18,801. Where the coal industry is a very important industry then the taxes are heavy?—That is so, because the charges on the communes are also heavy in those provinces owing to the numerous working-class population, which, of course, is not rich.

18,802. In conjunction with M. Wilquet you have published a book on mining law, I believe?—Yes.

18,803. In the description which you gave in that book of the *Cahier des Charges* you say, I believe, that any clause in the *Cahier* which is contrary to the law has no validity?—Yes, I think that is so, and the principal authors of books on mining legislation think so too. The law has not forbidden the leasing of mines, it has forbidden the division of mines but not the leasing, and, in fact, we have in Belgium some examples of mines worked by lessees.

18,804. What you call *forfaits*. The Government has never forbidden the *forfaits* which exist?—Never.

18,805. Has there never been any case within your knowledge of the Government withdrawing a mining concession which has once been given?—The Government has never withdrawn a concession. The legists do not agree on this question. Recently it has been decided by the Conseil des Mines that the Government have not the right of withdrawing a concession; but in ancient times the contrary has been said by the same council and lately by the legislation committee, so that legislation is not well established on this subject. I think the Government could withdraw a concession if the mine were not worked, but it has not yet done so.

18,806. Would the question have to come for decision before a court of law?—Yes, because the concession is a perpetual property established by the law, like surface property, and the Government cannot withdraw it, they must ask the decision of a court of law. In such a case I think the concession would not be destroyed, but that it would be granted to another concessionaire. The property existed after the Act of Concession, and nothing can destroy it; it is a property like that of the surface.

18,807. In other words, the concession cannot be withdrawn by the arbitrary act of a minister. The question would have to be raised in a court of law, and even the court of law could not destroy the concession; it could only take it away from the individual person and give it to somebody else?—That is so.

18,808. The concession, if it is not worked, can be withdrawn by the Government, but only after the decision of a court of law?—Yes, I think so.

18,808a. (Mr. Whitmore.) On what is the decision of the court of law based—simply on the fact of its not being worked?—Yes.

18,809. (Chairman.) Can you give us any case of this having taken place?—It has never occurred. We have in Belgium numerous coal and metallic concessions, but especially metallic concessions which are not worked, but the Government has taken no steps towards withdrawing those concessions.

18,810. As a matter of practice a concession once given has never been withdrawn by the Government or by a court of law?—That is the fact.

18,811. (Mr. Gibbs.) I think I understood you to say that the concession was a property?—That is so.

18,812. I suppose you mean that it is not a property belonging to the concessionaire, but that it is a real property and an *immeuble*; is that so?—It is an *immeuble*.

18,813. It is a real property?—Yes.

18,814. It is the concessionaire's under the condition of working?—Yes.

18,815. It has not, I understand, been found necessary or desirable to withdraw a concession, but, as a matter of fact, it is a part of the condition that the concessionaire should work it?—Yes, it is a condition.

18,816. It is the same in the Spanish law, as very likely you know. There a man denounces a mine, and it is his so long as he works it, but it reverts to the State without course of law in Spanish countries

The Cahier des
Charges.

Right of
Government
to withdraw
concessions.

The Députa-
tion Perma-
nente and
Députation
Provincial.

Power of
surrendering
concessions.

Surface owners
and fixed
royalty.

Collieries
worked under
leases held
under con-
cessionaires.

if he does not work it. In Belgium, as I understand you, it ceases to be the property of the concessionaire if he does not work it, in so far as the Government may, by course of law, deprive him of it, only they do not do so?—The concessionaire who does not work his concession remains concessionaire so long as the Government has not withdrawn the concession, and, in fact, the Government has never withdrawn it.

18,817. (Mr. Whitmore.) I do not quite understand why the Government does not exercise this power?—Because generally the concessions which are not worked are without great value.

18,818. (Mr. Gibbs.) In fact, those which are not worked are not worth withdrawing, and those that would be worth it are worked?—We work several concessions which are without great value, and they are worked at some loss. These concessions which are not worked are very bad.

18,819. (Chairman.) They are losing concerns?—Yes.

18,820. Is the constitution of the *Députation Permanente* in Belgium rightly explained in the Summary of the Belgian Mining Law? (See Final Report, Appendix VIII.)—The explanation is not perfectly correct. It says every year the *Conseil Provincial* elect a committee of six. It is not every year, but every four years; and half of the *Députation Permanente* is re-elected every two years. The power of the members of the *Députation* is for four years.

18,821. As a matter of practice, does the *Conseil Provincial* ever overrule the decision of the *Députation Permanente* in respect to mining matters?—The *Conseil Provincial* has scarcely to occupy itself in mining matters.

18,822. And it does not do so?—No, the *Députation Permanente* makes the decision because it is a matter purely of administration.

18,823. Has a concessionaire power to give up his concession?—I think he has not that power. Some concessionaires have already attempted to give it up because when the concession is not worked, the concessionaire must, notwithstanding, pay the fixed royalties to Government and the surface owners, because the Government cannot deprive the surface owners of their royalties; in fact, the fixed royalties can never be obliterated. (Appendix C. IX. 8.)

18,824. (Sir William Lewis.) That is the fixed royalty to the surface owner?—To the surface owner and to the State. In giving a concession, the Government deprives the surface owner of a part of his right, and he is given in return the right of receiving a fixed and a proportional royalty, and the Government has no power to deprive him of that right.

18,825. (Chairman.) Can you tell us what proportion of the total output of coal from Hainaut comes from collieries worked under leases under which royalties are paid to the original concessionaires?—Yes, we have actually very few leases, and they are in Hainaut only; in the province of Liège there are none. In the first arrondissement of Hainaut three mines are worked under lease. In 1890 the total yield of coal in that district was 4,469,520 tons, and only 436,100 tons were got from mines which were under lease. In the second district there were no mines under lease. In the third there is but one; there have been more, but they have disappeared.

18,826. (Mr. Forster.) Have you the quantity for that one mine?—No, but I will calculate it out, and send it to the Commission.*

18,827. Can you give us the royalties there, and the other small payments added to the royalties?—No, I cannot now; but I will work the figures out, and let you have them.†

* Monsieur Hubert states that the only mine under lease in the district of Charleroi (province de Hainaut) is a little one depending on the colliery of Marcinelle-Nord, where the royalty is 6d. per ton; the total output in 1890 being about 3,500 tons. All the other *forfaits* in this district have disappeared. The royalties were generally from 10th to 14th of the gross product.

† Monsieur Hubert subsequently wrote that in the year 1888 the total yield of coal from mines under lease in the first district of Hainaut was 437,390 tons. The royalty paid to the concessionaire was 13,7652. 5s. 4d. + 1,0652. 16s. for expenses of superintendence (account of extraction, &c.)

18,828. Can you give us the amount per ton?—It would be practically about 75 centimes per ton—about 7½d.

18,829. (Chairman.) You have described in your book on mining law, have you not, the action which the Government can take in order to expropriate land required to make communications between mines and railways, or other places, for sending the produce outside the limits of the concession?—Yes.

18,830. Is it the custom, or is it the law, that the administration decides those questions, or do they go into the courts of law?—The administration of mines has never to decide them. That is purely an administrative body, and has no political authority. The political authorities in Belgium are the State, the Province, and the Commune. The mining administration is simply annexed to the Ministry of Agriculture, Industry, and Public Works. When a concessionaire wishes to have a portion of surface, he must ask the permission of the Government, then the Government consults the administration of mines, and the *Députation Permanente* of the *Conseil Provincial*, and after that the *Conseil des Mines*, and if these authorities find that the possession of the surface is necessary to the concession, the Government can allow the concessionaire to take the surface, after having heard the proprietor.

18,831. Can the proprietor of the surface, whose land is to be taken from him on the ground of public utility, appeal to a court of law, or not?—No, he cannot.

18,832. The decision of the Government is final?—Yes, the proprietor can only appeal to a court on the question of the value of the property.

18,833. Not on the question as to whether it is to be taken or not?—No; when it is a question of surface being—within the limits of his concession—absolutely necessary to the concessionaire, the concessionaire, with the approbation of the Government, can take the surface without having paid, if he does not agree with the proprietor on the question of the value of the property. If it is a question of a railway to unite the pit to a station, then in that case he can take property out of the limits of his concession, basing himself on the law of public expropriation.

18,834. On the ground of public utility?—Yes, only in this case he must pay before taking absolutely.

18,835. That is within the limits of the concession, the concessionaire can occupy the land at once, and pay for it afterwards, but without the limits of his concession he must have public utility declared, and he must pay for the land before he occupies it?—Yes; and in the second case, for communication ways only.

18,836. He has to pay double the value of the land in the case where he declares public utility, and sometimes more within his concession, I believe?—It is the same in the two cases, he must pay double the value.

18,837. (Mr. Gibbs.) How is the value determined; do you mean by value of the land its agricultural value, or in what way is it valued; when you say double the value, it must be double of something?—The question of determining the value is a question for a court of law; the administration has never the right of determining its value.

18,838. Does the court of law take into consideration only the agricultural value, or does it take into consideration all the circumstances, position, and other circumstances which give value to land?—In general a court of law must determine the value before the existence of the mine was known, and not make the worker of the mine suffer by its existence having become known.

18,839. (Sir William Lewis.) It is not to be the value that is given to it by the establishment of a mine, but its value previous to that?—Yes.

18,840. (Mr. Gibbs.) But the value of land in a mining country may be one thing, and the value of land in a purely agricultural country may be another: what I want to know is whether the court of law takes into consideration the general value of land in a mining country or only the value of the land for

Mons.
H. Hubert.
15 Dec. 1891.
Method of
procedure for
expropriating
land.

Valuation of
land ex-
propriated.

Mons.
H. Hubert.
15 Dec. 1891.
Value of
and ex-
propriated.

the production of corn or other agricultural produce?—The court is bound to take into consideration the agricultural value of the land independently of the establishment of the mine. If the land is in a village or in a town it has naturally more value than if it were not near a village or a town. The value is determined by experts chosen by a court of law—three experts generally.

18,841. In the court of law, is the question determined on the evidence of these experts by a jury or by a judge?—By three judges in the primary court, and five in the Court of Appeals.

18,842. Not by a jury?—No.

18,843. The experts, as I understand you, are themselves in a manner the jury, that is to say, they determine as to the facts of the value?—The experts are chosen by the court, and make a report to the court. Then the parties come before the court and discuss the report of the experts. The court considers the report, but it is not bound to accept it in its entirety, and then decides the question.

18,844. (Chairman.) I suppose the courts of law only interpose when the parties cannot agree between themselves—these questions do not always come before a court, I presume?—That is so, it is only in case of disagreement that they come before the court.

18,845. In Belgium of late years many concessions have been amalgamated and joined together, have they not?—Yes.

18,846. Has that been found detrimental to the interests of the public?—Probably the contrary, probably it is favourable, because the concessions in Belgium were small ones, and amalgamation is favourable to greater production and to economy of working.

18,847. Are all the profitable concessions in Belgium in full work?—Only a portion of them. Certain of the concessions are inactive.

18,848. I am only referring to the concessions which are worth working, I want to know whether any of the people holding those concessions are holding back in their own interests, and not working their coal?—There are none. The concessions not worked are very bad concessions, very poor ones. The concessions which are actually worked are not all rich ones; there are numerous concessions on which money has been lost, not simply in the past year, but for five or more years.

18,849. (Mr. Gibbs.) They rest upon hope?—Yes.

18,850. (Chairman.) Some collieries, I presume, are very much better than others?—Yes.

18,851. And they produce a larger profit than others?—Yes.

18,852. Owing to the difference in their position, and in the nature of the coal which they have to work?—Yes, and to the regularity, or otherwise, of their beds of coal, and the questions of water, fire-damp, and the depth of the mines.

18,853. Have you looked through the summary of the mining law of Belgium which has been prepared?—Yes.

18,854. Could you favour us with any corrections?—Yes, I will send them to you.

18,855. We should be especially obliged if you would check the calculation as regards the incidence per ton of the royalties payable to the State and to the surface owner. The calculation in the summary makes it out for the year 1890 to be about three half-pence per ton on the coal raised, after deducting the quantity consumed in the mine, and we should be glad to know whether that is a fairly accurate calculation?—That is an average royalty, because the collieries which have lost do not pay at all.

18,856. (Sir William Lewis.) The collieries that have actually paid royalty pay a very much higher one than the three half-pence?—Yes.

18,857. This calculation includes a number of collieries that do not pay any royalties at all by reason of their not being profitable?—That is so.

18,858. (Chairman.) So that this three half-pence would be a low estimate?—Yes. Is the purpose of the Commission to obtain information as to what the

total amount of royalty is per ton at those mines which do pay independently of those which do not pay?

18,859. We should like that information if it is possible to get it without giving you too much trouble?—I can make that out.

18,860. (Sir William Lewis.) This figure, I take it, has been ascertained by dividing the amount paid by the number of tons worked?—Yes, all the mines pay the fixed royalty on account of the surface, but the proportional royalty is paid only by the mines which gain.

18,861. (Chairman.) The fixed royalty is a very small sum?—Yes, 10 centimes, or a penny per hectare.

18,862. Is there any particular remark you would wish to make to the Commission with respect to this subject?—No. If anything suggests itself to me, I will put it in writing.

18,863. (Mr. Jamieson.) I have prepared a list of questions here which I should be glad if you will answer in writing (handing a list of questions to witness)?—I should be glad to do so when I get home. Does the Commission desire to have evidence not only upon royalties, but upon the charges in connexion with accidents and deaths in the mines? (See Appendix C. IX. 2).

18,864. (Sir William Lewis.) It will be very useful for us to have that information?—I shall be very happy to supply it then.

18,865. (Mr. Jamieson.) Is it not given in gross on page 9 of the Memorandum?—Those payments are not included in the table. The collieries in our country have special charges for the service of the *caisse de prévoyance*, for the workmen who are killed or wounded—that charge is relatively heavy. They have also another fund, the *caisse de secours*.

18,866. That is to relieve those who have suffered from accidents?—Yes. If the Commission desires it, I can furnish them with information later on that subject.

18,867. (Chairman.) If you please?—I will do so. I have brought with me a number of forms which have to be filled up in connexion with the royalty, and I shall be very happy to put them in if the Commission desires it.

18,868. It would be very useful indeed to have those?—I will hand them in (see Appendix C. IX. 4, 5, 6, 7). One of the papers is filled in for a special mine, but, of course, I have not given the name of the mine.

18,869. This form is the actual statement upon which royalty has been charged upon a particular mine?—Yes.

18,870. Has it been compiled by the committee of valuation?—It is given to the committee of valuation and the worker of the mine must prepare a return in this form. This Form (A). (Appendix C. IX. 4) goes before the committee of valuation, after having been signed by the mining engineer and the committee of répartiteurs. The word "répartiteur" is very difficult to explain in English. The répartiteurs are the persons who examine the declarations of persons who contribute in each commune to the tax called *patente*. After having been signed by the mining engineer and the committee of répartiteurs this Form A. is given to the committee of valuation. That committee is not very well described in the Summary, but I will give complete information to the Commission upon its constitution. The worker of the mine can appeal before the valuation committee against the valuation made by the administration. After the valuation committee has given a decision the worker of the mine can appeal to another functionary—the Director-Provincial—that is, the Receiver of Taxes. He would have a still further appeal to a court of justice against the contribution and the case can be taken up to the last court of appeal—the Cour de Cassation. All these appeals have been found necessary in order to be able to establish the proper sum which is payable under the circumstances in each case.

Compensation
funds.

Admini-
stration.

18,871. Are these appeals frequent?—No, they are not frequent; there are only one or two cases in each year.

18,872. Now, as regards Form B. (Appendix C. IX. 5), that is prepared, I presume, by the administration of mines for the purpose of the mining statistics of the year?—Of the preceding year.

18,873. I see that it includes a quantity of detail respecting the working of a mine as well as the expenses and the produce?—Yes.

18,874. As I understand it, Form A. is the basis of the royalties that are paid?—Of the *redevance proportionnelle*.

18,875. And Form B. is a statistical paper prepared after that has been settled?—Yes, the mining engineers prepare that paper for their chief.

18,876. (Sir William Lewis.) This Form B. gives the actual cost of the whole colliery with a quantity of other information?—Yes, I have also here two forms, C. and D., which are given by the administration to the provincial government filled up, one for the fixed royalty, and the other for the proportional royalty.

18,877. (Chairman.) What do the provincial governments do with these returns; what use do they make of them?—They are given to the committee of valuation and are then, if there be no opposition, transmitted to the Director of Taxes for the purpose of levying the tax.

18,878. I cannot quite see what the provincial government does—what part it takes in this?—These forms go to the governor of the province in order to be transmitted to the committee of valuation.

18,879. The provincial government is merely a post office, in point of fact?—That is all in this case. The provincial governors are officers chosen by the Government; they are not elected officers. The governor is the president of the *Députation Permanente* of the province. He presides also over the Valuation Committee. The government of the province is a mixed body, the members are elected, but the governor is chosen by the King.

18,880. The royalties are received by the Government of the country, not by the provincial government, I presume?—No, by the State; by the receiver of contributions. It is dealt with by a special financial administration.

18,881. I see on Form A. (Appendix C. IX. 4), these words: "Fait et arrêté par nous, ingénieur des mines, bourgmestre, échevins et répartiteurs de la commune." Are those the valuation committee?—No, not the valuation committee; it is the first committee which deals with it before it is transmitted to the valuation committee.

18,882. (Mr. Jamieson.) It is the commune committee?—Yes.

18,883. (Chairman.) It begins with the commune committee?—Yes, because numerous concessions are made in several communes.

18,884. At the end it is filled up by the valuation committee—the last figure obviously must be filled up by the valuation committee?—Yes; after having received it the committee of valuation examine it and, if it is correct, sign it.

18,885. (Sir William Lewis.) They indorse it?—Yes.

18,886. (Chairman.) To make it quite clear, this form goes to the provincial government for them to fill up to a certain point?—Yes. The *conseil des répartiteurs*, the communal committee, can refuse to accept the valuation of the administration of mines if they think it is too low, because, of course, the commune has often an interest in taking more money from the mine.

18,887. That means that the communal taxes on mines are based upon the valuation given in Form A.?—Yes.

18,888. (Professor Munro.) Referring to the table in the memorandum furnished by Professor Denis (see Appendix C. VIII.), to what purpose is the compensation fund (in the 5th column) devoted?—This fund was established by the Law of 1810 in

Compensation
fund.

France, but it has never received any application in Belgium; the State takes what it has received, and never gives up anything.

18,889. What was the object of the law?—The Law of 1810 was a very liberal law for mining. The law desired to favour mining, and the principle of it was, that the royalty was to be applied only to pay the administration, and to help miners and concessionaires when they lost money, and also to favour the discovery of mines. Practically, now the royalty is a tax like any other tax.

18,890. Theoretically, the object of the law was to benefit mining explorers?—Yes.

18,891. And also concessionaires who lost money?—Yes.

18,892. Then did I correctly understand you to say that there are also contributions levied in respect of accidents which may happen to the workmen?—No; but in each district there is a *Caisse de Prévoyance* to which the mines are all affiliated. They pay to that fund a sum proportional to the amount of wages paid at the mine. This fund is administered by a committee composed of mine owners and of working men. (See Appendix C. IX. 2.)

18,893. Could you inform us, when you are replying to our other questions, what is the amount, say per ton, of these contributions?—Yes, I will do so.

18,894. Could you also give us further details as to the hours of the miners in Belgium?—Yes.

18,895. In the particulars you give us, could you distinguish between the underground and the over-ground workers?—Yes. (See Appendix C. IX. 3.)

18,896. Are the miners in Belgium paid by the day or by the ton?—Some classes of them are paid by the day, and some are paid at piece-work rates. Certain mines pay their workmen always by the day, but mostly the wages are paid by piece-work—that applies to hewing; the haulage is paid for sometimes by the day, sometimes by waggon.

18,897. Where they are paid by piece-work, is the piece-work measured by a certain quantity to be extracted out of the mine, or by the ton?—By the surface worked. The price of the work is established by square metre.

18,898. (Mr. Gibbs.) Not by the ton, therefore?—Not by the ton, because the thickness of the seams differs, and the hardness or softness of the coal has to be taken into consideration. A miner will sometimes hew as little as two tons in a day, and sometimes he can hew seven or eight.

18,899. According to the easiness of the work before him, I suppose, according to the thickness or the thinness of the seam, or the hardness of the coal?—Yes, and according to other conditions, such as water and fire-damp.

18,900. (Professor Munro.) Is the price of coal taken into account in the rate of wages?—No.

18,901. That is, supposing coal rises in price, wages do not rise correspondingly?—There is no rule with reference to that. The wage is established rather by the state of the market.

18,902. (Chairman.) Do you mean by the state of the labour market, or the market for coal?—By the state of the labour market, not by the state of the coal market.

18,903. (Professor Munro.) Please turn to the first table in the report of M. de Bruyn (see Appendix C. VII.), in which statistics are given as to the average wages of the workers in the different provinces. Do you know how these figures are compiled?—They are taken from returns, forms of which I have put in. Form B. gives the statistics for one mine, for instance. On that form you will see the numbers and the average wages of men, women, boys, and girls. (See Appendix C. IX. 5). From this information the general statistics are obtained for all the mines.

18,904. Would those figures represent the average for a year?—Yes.

18,905. So that when the average is given of 3 francs 26 c. for 1889, for underground workers at Hainaut, would the 3 francs 26 c. represent the total wages paid during the year to underground

Mons.
H. Hubert.
15 Dec. 1891.
Compensation
fund.

Miners' wages.

Mons.
H. Hubert.
15 Dec. 1891.
Miners' wages.

workers, divided by the total number of underground workers and the total number of days' work?—Yes, it is practically all obtained from returns like Form B. (see Appendix C. IX. 5). On the third page of that form you will see the number of days worked, and the number of the workpeople.

18,906. The returns you receive from the concessionnaires give you the total amount paid in wages in the year, the total number of days worked in the year, and the total number of workers during the year?—Yes.

18,907. And the result is this average given in M. de Bruyn's table?—Yes. The administration of mines controls these figures.

18,908. In the second column for Hainaut, the table gives the average wages for underground workers, and in the third column the average for all workers?—Yes.

18,909. Each of those columns is calculated on different figures?—Yes.

18,910. (Sir William Lewis.) Of course, if the number of men on the surface and the number of men underground were equal, that figure in the third column should be the mean of the two, but that is not so?—The number of men underground is considerably more than the number of men on the surface.

18,911. (Professor Munro.) Now turn, please, to the second table (see Appendix C. VII.); the first column, I presume, gives the production in tons?—Yes.

18,912. I take it that represents the output per underground worker?—Yes.

18,913. The second column gives the average value?—Yes, in francs.

18,914. The third column gives the average output for underground and overground workers?—Yes.

18,915. And the fourth column gives the average value of that in francs?—Yes.

18,916. Then come three columns dealing with the wages; may I ask what classes of wages are included in the word *salaires*; does it include office expenses?—No, the wages of the workpeople only are included. If you will refer again to Form B. (see Appendix C. IX. 5), you will see that the *salaires des ouvriers* and the *appointement des employés et des administrateurs* are two different figures.

18,917. Would *salaires* in this table include the carpenters' and smiths' wages?—Yes, the wages of all the workmen attached to the mine.

18,918. Of the engine-men?—Yes. All the workmen are paid fortnightly; the other employés, the clerks and the manager, are paid by the month or by the year.

18,919. Dealing still with the second table, you will see that the last two columns give the per-centage of the wages to the value of the product?—Yes, that is so.

18,920. It results from that that the underground workmen in 1889 were receiving 43 per cent. of the value of the product, and that all the workmen together were receiving 54 per cent.?—Yes, that is so.

18,921. When you say that the per-centage of the product obtained by the underground worker is 43, and that the per-centage obtained by all the workers is 54, what exactly do you mean—43 per cent. and 54 per cent. of what?—It signifies that if the ton has a value of 100, the workman has received 43.

18,922. Where do you calculate the value of the ton—is it at the pit's mouth?—No, it is the value as sold.

18,923. Does that 43 per cent. mean 43 per cent. of the price of the coal sold at the pit's mouth, or are there any deductions made first; can you show us that in Form B. (Appendix C. IX. 5)?—The value of the ton of coal is given on page 2 of Form B., under the head of "*Prix Moyen*," which is the average value of the ton sold.

18,924. Then 43 per cent. would be 43 per cent. of that value?—I have not myself prepared the second table in M. de Bruyn's report (Appendix C. VII.), but I think the figures given there are calculated on

the value of the ton sold, not at the pit's mouth, but after delivery.

18,925. (Chairman.) I presume the calculation in the table is made upon the value of the coal as ascertained and given in the Annual Statistical Report?—It is so.

18,926. On page 2 of the Annual Statistical Report the total number of tons raised in Belgium is given, then the average prices of the year, and then a calculation is made as to the valuation of the whole. I presume that that works out the figures given in the table?—That is so.

18,927. (Professor Munro.) In arriving at the average prices is any allowance made for coal consumed in the mine?—Yes, that is put down as an expense on the first page of Form B., under the head of *Consommation totale de Charbon*. (Appendix C. IX. 5.)

18,928. You have told us that the local taxes on mines are heavier in some provinces than in others?—Yes, in some communes.

18,929. Do wages vary in these provinces to any large extent?—No.

18,930. Are the wages as high in the communes where the taxes are light as where they are heavy?—There is no relation between the two.

18,931. Would you say that the reason why wages vary in these four provinces is because the supply of labour is greater in one province than in another?—No, it is a question of the local custom. Wages are always higher in the district of Liège than in the district of West Hainaut, for instance, because in Liège there are more occupations open to the workpeople, whereas in West Hainaut there is nothing but mining going on. It has been established that workmen often get less wages in very dangerous mines than they do in other mines which are not so dangerous. That is in confirmation of my statement that the amount of the wages is rather a matter of local custom. The miner of Belgium does not easily change his locality, he remains in his village, he is not fond of moving from his home, and therefore he suffers rather than change.

18,932. (Mr. Barnes.) Are the workmen's dwellings healthy and good?—Not everywhere.

18,933. Do the companies provide houses for their workpeople?—Some companies have constructed houses for their workpeople, but not all.

18,934. (Professor Munro.) Do the miners receive any allowances in the shape of free coal or of coal at a reduced rate?—Generally the workmen have to buy their coal, but they get it often at a lower price because they consume the inferior coal, coal in which there is a proportion of stone—such as the coal which is employed in the furnaces of boilers.

18,935. Are the miners organised into any trades unions?—A few years ago the miners began to form themselves into syndicates and trades unions, and the strikes of this year have been caused by the syndicates.

18,936. Has there been a rise in the price of coal in Belgium as well as elsewhere recently?—Yes, the price has been rising for some years. The price was very high in 1872, 1873, and 1874, after the war between France and Germany.

18,937. I am speaking rather of the last two years?—The price continued to rise from 1887 until 1890, but it is now again falling.

18,938. Was there any corresponding rise in wages?—No, the variations in the wages follow at a certain distance; they do not rise as quickly, nor do they fall as quickly. If you were to prepare a diagram showing the fluctuations in the price of a ton of coal and in the wage of the workpeople, the curve of the wage would be smooth while that of the value of the coal would be sharper.

18,939. Then, I take it that it is the concessionnaires who derived the advantage from the rise in prices in 1890?—The miners also derived the advantage, because their wages did rise then. The higher the price to which the coal attains, of course the more the profit which goes to the concessionnaires. If the Commission desire it, I should be very happy to furnish

Selling prices.

statistics showing the relative rise in the value of coals and in wages.

18,940. That would be very interesting for us to have?—I will prepare it for you.

18,941. Thank you. In the third table in M. de Bruyn's report (Appendix C. VII.), I see that the average wages per ton for 1889 are given at 5.05 francs, and the average price is 9.39 francs; that is not necessarily the average price of the coal at the pit's mouth, is it?—No; that is the selling price, not at the pit's mouth.

18,942. Would that vary very much according to the place where the coal is sold?—It is the selling price loaded on to a waggon at the mine.

18,943. Or loaded into a boat—where there is a canal?—Yes.

18,944. Then the average price of 15.34 francs given on Form B. (Appendix C. IX. 5) will represent the average price of the coal loaded on the railway at the pit's mouth?—Yes. All the pits, with very few exceptions, are connected either with the railway or with the canal.

18,945. May I put it in this way: that the purchasers of coal from the pit buy the coal laden into waggons at the pit?—Yes; the cost of carriage is in no case included in these prices.

18,946. Is it the case that the right of the State to give power to search for minerals and the right of the State to give a concession to work minerals have contributed to the development of the mineral industry in Belgium?—I think so. I think our law is a favourable law.

18,947. Would you say that it is an especially favourable law where there are not very rich deposits of minerals?—Our law is favourable because the State takes its royalty only when the mine is profitable, when there is a loss the State does not take its royalty, except the fixed royalty, which is very small.

18,948. Do you consider that the fact that the concessionnaire would not have to pay any tax to the Government in case he made a loss has attracted capital to the mining industry?—Generally speaking, yes; but there is this to be considered in addition, that capital put into mines is in a precarious position. It should, however, be borne in mind that the property in a mine is perpetual, it cannot be taken away, and the charges are relatively small.

18,949. (Sir William Lewis.) You say that the State does not take its royalty when there is a loss, but the concessionnaires have to pay the local and imperial taxes, whether the mine pays or not?—Yes; but that particular royalty is small and unimportant, land in fact is rarely paid, because the surface holdings in our country are so small that each proprietor has very little money to take from the mine, and generally speaking, he does not claim it.

18,950. (Professor Munro.) Do you consider that the mining law has been very advantageous, in view of the fact that the surface is owned by a large number of small owners?—It is an advantage to the mine, in fact, although not in law, because the small proprietor is entitled to too small an amount of royalty to induce him to claim it, and as he does not claim it, it is not paid. The case would be different, of course, with a big royalty owner, who would have a larger amount to receive; but in the mineral provinces of Belgium, large properties are very rare.

18,951. (Mr. Forster.) Do you think the fact of not paying so small a rent as they do to the Government in case of no profits, is sufficient inducement practically to bring capital in, which otherwise would not have been put into mines?—Practically it comes to this, that it is an advantage created by the law that the charges should only be those which depend upon the hazards of mining.

18,952. Do you think that that practically induces people to put in money who would not have put it in otherwise?—Generally speaking, I do not think so. I think capital may be absolutely employed independently of such considerations. I think what decides capitalists to open up the mines is the hope of benefit, and consequently the price in the market;

but, as a matter of fact, there is nothing more to be conceded in Belgium, the coalfields are all known.

18,953. Do you know what the royalty would be in Liège, where you said the taxes are 125 per cent. of the royalty?—Three and an eighth per cent. on the net profits, the words in the law are "net produce," but those words signify net benefit.

18,954. (Chairman.) When you use the term "net profits," I presume that you mean the net profits as ascertained by the process explained in the Memorandum?—Yes.

18,955. Namely, after deducting working expenses, but not interest on capital or depreciation?—Yes.

18,956. This is not a new figure, it is the ordinary calculation of the net produce; but you may call it profit or produce if you like?—Yes.

18,957. (Mr. Forster.) The taxes you said were 125 per cent. more than that?—Yes, in proportion to the tax raised by the State.

18,958. (Chairman.) Is this the way to put it: If you suppose that the royalty payable to the State is 1*d.* per ton, they pay 1*½d.* in taxes?—Yes. The net profit—the net benefit—is established according to special rules; it is not the real profit, it is a particular profit established by the mining administration. To get at it, we take the whole value of the coal extracted during one year; we deduct all the expenses of all kinds and we make no redemption. The contribution is fixed for each year. If a mine gains one year and loses the next year, the State does not account for that, the mine pays as it gains and receives nothing to counterbalance that when it loses.

18,959. Then the basis on which the tax is levied, the assumed profit, is greater than the real profit?—In some mines it is greater, but in other mines, it is less. In the good mines it is less; in the bad mines it is greater.

18,960. How can that be if you allow no redemption?—Because certain mines which are in an excellent financial position have a reserve, and the interest of this reserve is given to the shareholders and not to the Government. If, for example, the worker of a mine has to buy a piece of land, it is accounted for to the Government as an expense, although it is not a real expense, because the value of the surface still remains. It is the same for a building and for an engine.

18,961. (Mr. Forster.) Have you any idea what the average profit per ton might be, taken out roughly, on which the tax is levied?—I will furnish it. I have with me some sheets which I give to my pupils in the school of mines, but they are in French. The mode of establishing the net benefit is explained in those sheets which I will have translated into English for the Commission. (See Appendix C. IX. 9 and 10.)

18,962. (Mr. Barnes.) Does the owner publish a balance sheet?—No; but the Government engineers have the right of examining the books of the colliery. If the colliery owners will not show their books, the Government engineer has the right of taxing them on the market price of the coal of the locality, and if the colliery owners refuse to accept that price, then they must show their books.

18,963. (Mr. Forster.) Do you know of any instances of concessions being sold?—Yes; concessions have been sold, but good concessions are not sold.

18,964. Are good concessions never sold?—Scarcely ever, the owners preserve them.

18,965. Have you known any instances of concessions being let?—That may be done, but it is not the practice. In reality there are only four which have been let.

18,966. Of course they are let at an increased price—they pay something beyond the ordinary tax which the concessionnaire pays?—That is so, because the royalty received by the first concessionnaire is proportional to the amount of tons extracted.

18,967. Independent of the profits?—Yes; but the Government only gets it in case of profits.

18,968. Have several of these concessions been formed into public companies?—It more frequently

Mons.
H. Hubert.
15 Dec. 1891.
Taxation of royalty.

Sale and lease of concessions.

Mons. H. Hubert.
15 Dec. 1891.
Sale and lease of concessions.

occurs that a company buys a mine which is neighbouring to its own, and then amalgamates it; but it has occurred that two companies have been fused into one.

18,969. Do those companies, like ours, publish the value of their shares—are their shares on the market?—Yes, almost all of them are joint stock companies.

18,970. And their shares are quoted on the market?—Yes.

18,971. Have they gone up or down?—They have risen considerably within the last two years. In the case of some mines they have risen to as much as triple their former value, because four years ago they had fallen very low in the market.

18,972. (*Mr. Barnes.*) Does the Government still hold the first concessionnaire liable after the concession has been transferred to a second or third concessionnaire?—Such a case would occur very seldom, but when a mine is sold it is sold with all its liabilities.

18,973. Do the Government allow the concessionnaires to assign the concession?—Yes; they assign it completely. The property in the concession is the same as that in a piece of ground on the surface.

18,974. (*Chairman.*) Is it not the case, that when there are amalgamations, a fresh concession is taken out, so that the barriers may be removed between the concessions?—The mines in Belgium must reserve a barrier of 20 metres in width from the surface to the centre of the earth. That rule has been established to protect one mine against the water coming into it from an adjoining mine. The Government scarcely ever gives authority to remove those barriers when the mines are not amalgamated. This specially applies to cases where one mine would be likely to be jeopardised by a neighbouring one. But when the mines are united under the same hand the Government nearly always gives permission to work those barriers. The Administration of Mines is always consulted in these cases and the Council of Mines also. This is, of course, a very important question for all mines. Sometimes the Government has given the authority to take away the barrier between two mines which were not united under one hand when the two mines have asked its consent.

18,975. When three or four mines are amalgamated, it becomes practically a new concession, does it not?—Yes, it becomes a new concession; but each original concession retains its ancient charges, and the authority to amalgamate the concessions does not destroy the rights of the surface owners. If you amalgamate a mine which was conceded before 1837 with one conceded after that date, the rights of the owners of the surface generally differ, and each surface owner would retain the rights given him under each separate concession, but in relation to the State the concessions are united.

18,976. (*Mr. Forster.*) Is the area of each concession large; are the barriers far apart?—Generally speaking, the area is not great. I have prepared for the Commission an account of the number of concessions and of their extent, and I will send it in.*

18,977. If the area is not large, the 20 metres barrier would form what we would consider a large proportion of the whole, compared with our areas?—Yes, it is of importance, because we have frequently in our collieries beds which are perpendicular, and in that case the beds might be included in the barrier; that is not the general case, but it may happen.

18,978. You mean a bed like that (*illustrating*)?—Yes. The limits of the concessions cannot be accurately established, on account of the direction of the seams.

18,979. (*Mr. Redington.*) In granting a right of search, is any preference given to the surface owner?—A payment must be made to the owner of the surface. Generally the searcher agrees with the surface owner, but if the surface owner refuses to allow the search, the Government can allow it.

* Coal: 256 concessions, extending over 142,892 hectares; 133 only are worked. Metalliferous mines (iron, lead, zinc): 103 concessions, extending over 59,906 hectares; 7 only are worked.

18,980. My question was rather whether the surface owner could prevent an outsider from searching?—He may do it.

18,981. Can he reserve it for himself?—He can. He may say "I am going to do it myself." He has the absolute right to search, but not the right to work. The right to work he must get by concession.

18,982. When the concession is given, does it include all the seams of coal down to the centre of the earth?—Yes, now.

18,983. Then it is not a concession for only one seam?—No, in ancient times, in the province of Hainaut, the concessions were given by seams, and there are, in that province, concessions of super-imposed seams, and that is very bad.

18,984. (*Mr. Barnes.*) When they have given a concession for one seam, would they give other concessions which would interfere with the working of that seam?—There are in some cases four or five super-imposed concessions.

18,985. (*Mr. Redington.*) In modern concessions are all kinds of minerals included?—No, only one mineral. If a concessionnaire has obtained a concession of coal, and he finds lead or zinc, he must apply for a new concession to work that mineral.

18,986. Is there a certain defined recognised area for each concession, or does it vary in each case?—The surface of the concession is very variable; the limits are never straight lines, but irregular lines.

18,987. Then one concession may be of much larger superficial area than another?—Yes, of ten times the size.

18,988. When a payment is made to the surface owners, how is it divided among the various surface owners who have the land over the mine; is it in proportion to the areas of their properties?—Yes, the total benefit of the mine is divided by the total surface area, and each proprietor has the right of receiving a royalty, proportional to his surface, whether the surface is worked or not worked.

18,989. There is a reference on page 2 of the Summary to certain *droits de terrage* which "still remain upon collieries in the province of Liège"; do they still exist?—Yes; some collieries pay also the *droit de terrage*. It has been recently decided by the courts that these claims must be paid in the province of Liège. There are cases where mine owners have constructed galleries to carry away the water, and it has been decided that the owners of other mines which benefit from the existence of these galleries, must pay to the owners, who have constructed them, a certain royalty. The Court of Appeal of Brussels has this year decided, in a process which has lasted 40 years, that these ancient rights were still in existence.

18,990. Mr. Broke, in his report upon mining rents and royalties, puts those charges at 1½d. per cent. of the gross produce; is he right in that?—We say the 80th part; the 80th basket is the *droit de terrage*.

18,991. In M. de Bruyn's Report, Article 2 of the *Cahier des Charges* (see Appendix C. VII.) says, the concessionnaire shall conduct his works so as to provide for the interests of the consumer; that is a very vague term?—This Article is considered as of no value, and in modern concessions it is not reproduced.

18,992. I think your attention has been called to the table on page 1 of M. Denis's Memorandum (see Appendix C. VIII.)?—It has, but I have not seen it before to-day.

18,993. (*Chairman.*) It has been sent by M. Denis, of Brussels, to Mr. Munro; would you kindly examine it, and tell us at your convenience when you get back to Belgium, whether it is accurate?—Yes, I will verify it.

18,994. You perceive that it ends with 1888; if you can add to it the corresponding figures for 1889 and 1890, we should be very much obliged?—I shall be happy to do so. I think this table contains an error; I am not sure that the "compensation fund" is actually received now.

18,995. (*Mr. Redington.*) Have you supplied us with a return of the total cost of the mining

Property concession.

Strikes and miners' wages.

Area of concession.

Surface owners.

The droit de terrage.

Ancient royalties.

Sale of concessions.

Cost of administration.

administration in Belgium?—Yes; it is about 425,000 francs a year.

18,996. As against a total of the taxes received from the mines of how much?—I have here a table which has been prepared for a financial newspaper, in which the amount has been calculated from the year 1835. The total amount of royalties was in round figures 21 millions, and the expenses for administration 16 millions; the profit to the State being 5½ millions of francs—that is the difference between the royalty and the expenses. I will send this table also to the Commission.

18,997. (*Mr. Robertson.*) Did I correctly understand you to say, in answer to a question by Professor Munro, that strikes have only taken place in Belgium since the syndicates of miners were formed?—No; strikes are very ancient things in Belgium.

18,998. Strikes took place before the formation of the Miners' Unions?—Yes.

18,999. And have taken place since?—Yes. The strike became almost general in Belgium last year on account of the establishment of syndicates. The syndicates decided to struggle for the general suffrage—the popular party. The miners have been brought to think it was necessary to have a universal strike, in order to obtain universal suffrage, and commenced their festival day on the 1st of May, the chiefs of the party of workmen, as they call themselves, at first considered this strike unseasonable, but they were not listened to, and finally they followed the miners.

19,000. Strikes have taken place during the past four years?—Yes, several.

The witness withdrew.

Mr. THOMAS R. MULVANY called and examined.

19,010. (*Chairman.*) You are the British Consul at Disseldorf, I believe?—Yes.

19,011. And as such you have had opportunities of becoming acquainted with the German Mining Law?—Yes.

19,012. I believe you have received from the Secretary to this Commission a summary of the Mining Law in Germany?—I have. (*See Final Report, Appendix VIII.*)

19,013. And also certain other papers connected with the subject?—Yes.

19,014. And also a list of the questions which summarises those points upon which the Commission would like to have further information?—Yes.

19,015. In the first place, can you tell us what quantity of coal is raised, subject to a payment of one-tenth to the old proprietors of Crown rights?—No; I have not been able to ascertain the quantity, but I believe that, if any, it is a very small quantity.

19,016. Then it is not a matter worth further investigation?—It is hardly worthy of consideration.

19,017. Are there any other ancient royalties preserved by the Prussian Law of 1865?—In some States there are; in some of the States of Germany there are exceptions to the rule of the Law of 1865.

19,018. Do any of these ancient royalties really affect the great coal produce of Germany?—No.

19,019. When a person applies for a concession, is any investigation made of his financial means before the concession is granted in Germany?—No.

19,020. Has any inconvenience been found in Germany in consequence of the concessionnaire not working the mine himself?—No; I have not heard of any inconvenience arising from that, from the simple fact that if the concession is at all worth working, there are always capitalists to be found to buy it up and to work it.

19,021. The concessionnaire then passes it to some company, for example?—The concessionnaire who bores for, and proves the coal, almost invariably sells it to a company, a partnership or a joint stock company.

19,022. Getting some consideration for it?—Yes; that depends upon the state of the coal market

19,001. And during the past four years there has been a great improvement, I understand you to say, in the condition of the Belgian coal trade?—Yes.

19,002. The price or value of shares has trebled during the past four years?—Not in every colliery, but in some collieries.

19,003. There has been a very considerable increase in the value?—Yes.

19,004. Which means that there has been an increase in the profits?—Yes.

19,005. And in the name of this increase of profits the miners have asked for increase of wages?—They have already received an augmentation.

19,006. Has that augmentation been given to them since their strike, or was it given before the strike?—Generally, the collieries were obliged to give an augmentation, because in the state of the labour market, it became difficult for them to get labour. In some cases the owners did not grant a sufficient augmentation, and in those cases the miners struck, but generally the strikes are against a diminution of wages.

19,007. A reduction in wages?—Yes, in bad times.

19,008. (*Mr. Redington.*) If two persons apply for the right to search, on what principle is the right given to one? Is it left to the arbitrary decision of anybody?—I do not think the case has occurred. There is now literally nothing left to look for.

19,009. (*Mr. Gibbs.*) In times past was it so?—It was exceedingly rare and uncommon for such things to occur. The Government would have to decide in that case, and I think they may give the right to search to several persons.

Right of search.

Mr. T. R. Mulvany.

Area of concessions.

Concessions unworked.

Wayleaves. Expropriation of land.

generally, and upon the value of the property—it varies, of course.

19,023. Do you know whether there is any limit to the size of the concession?—Yes, under the Law of 1865 there is a limit in one case of 25,000 square lachters, equal to 27,059 acres, in certain districts for certain classes of mineral. The maximum field is 500,000 square lachters.

19,024. How does that compare with our English systems of measurement?—500,000 square lachters are about 540, equal to 541,181 acres.

19,025. Have many concessions been granted which are not now being worked?—I have not been able to obtain any reliable information upon that subject except that in the Oberbergamt district of Halle, where there is a great deal of lignite coal, there are a number of concessions that are not being worked because they are not sufficiently valuable to pay for the surface damages. Those charges in the lignite district are very heavy because the coal comes up to the day, and the surface is destroyed with it. But in the mineral coal districts of Westphalia and the Rhenish provinces the number of concessions not now being worked is very few, and they are only in a few exceptional cases where the chalk marl is so heavily watered, and the coal lies at such great depth that there has been a want of enterprise during the great depression of trade of the past 10 years to undertake such work. But where there is good coal, and coal which is easily got at, it is all being worked.

19,026. The Commission would like to have some further information as to the power of obtaining wayleaves; in the first place, inside the limits of the concession, what are the powers a concessionnaire can exercise over the surface?—The powers are under the rights of expropriation. When the landowner objects to give a wayleave, or to give the land necessary for the construction of a road, or railway, or canal, then the matter is referred to a joint commission of the local government of the province and of the mining council. They appoint experts, and the landowner has a right to appoint an expert, and if they cannot agree, and the Government expert decides that the

Mr. T. R. Mulvany.
15 Dec. 1891.
Wayleaves.
Expropriation of land.

wayleave shall be granted, and the landowner does not agree to that, then he has the right of appeal to the Minister of Public Works, and if the minister decides that the wayleave shall be granted, the extra expense of that appeal must be borne by the landowner. Then, if he will not take the sum at which the experts have valued the land, the landowner has still the right to go to the law courts with it, and to get a judicial decision as to the value.

19,027. Is the law the same with respect to the wayleaves inside the concession as to those outside the concession, or is there a difference in the law, as far as you know?—The law is the same, even if there is a railroad to be reached at a distance outside the concession, they have still the power to expropriate the necessary land for that purpose.

19,028. Inside the concession the concessionaire wants to make shafts, or to put up buildings, or to have houses for the workmen, and outside the concession he would want to take a railroad to connect his mine with a neighbouring railroad; would the same law be applicable to both these cases?—It would. The railways in Germany being State railways, they have to agree with the railway fiscus, which comes in then and gives a decision.

19,029. That is to say, the railway authorities?—Yes.

19,030. I presume it would be very similar to the law for Belgium which M. Hubert has been explaining to us this morning, namely, that the only *locus standi*, the only power, the courts would have would be to settle the amount of compensation?—Exactly.

19,031. They would not have any power of deciding upon the question of whether the land should or should not be taken?—No.

19,032. That is decided by whom?—That is decided by the minister.

19,033. (*Mr. Jamieson.*) Who are the experts you have mentioned, are they sworn experts, or may they be selected anywhere?—They are sworn experts. I have never heard of a case going into the courts; the valuation is generally so made that the landowner would have no chance if he went to law on the subject; he would not get anything more out of it.

19,034. Do they give double the value, the same as they do in Belgium?—There is no fixed rule, as far as I know. In the mining districts the land has a much higher value in the market for purchase than the agricultural value.

19,035. As a matter of fact, they get higher than the agricultural value?—Yes, much higher; sometimes three or four times the agricultural value. The agricultural value in many parts of Westphalia and Germany is very low.

19,036. Do you know whether the mines are exempted from any other taxes in consideration of the 2 per cent. impost?—No, they are not exempted from any other taxes.

19,037. Do you know whether they have to bear any communal or other tax in addition to those payable in respect of other property?—Yes.

19,038. They have?—Yes.

19,039. Are they heavy?—The communal taxes are, in many cases, very heavy. They depend upon the requirements of the community of the district, for provision for the poor—poor rates—churches, schools, and roads, and repairs. In Westphalia, the rates are generally about 300 per cent., and, in some cases, 400 per cent. of the Government income tax. The Government income tax is the basis of all the taxes on the income.

19,040. Do you mean that the mines have to pay some of these communal taxes when other properties have not to pay them?—No; all industrial undertakings have to pay the communal taxes.

19,041. Then the mines do not have any special taxes to pay?—No, not in that respect.

Income Tax,
1891.

19,042. Now, as regards the income tax, have the mines to pay any special income tax?—Under the Law of 1891, which comes into force on the 1st of April

1892, there is a Government income tax to be levied which graduates from about $\frac{1}{3}$ per cent. up to 4 per cent. On an income of 50*l.* a year, say, it is about $\frac{1}{3}$ per cent., and then there is a rising scale up to 4 per cent.—4 per cent. being the highest rate. A colliery would have to pay 4 per cent., not only upon the net profits, but upon the moneys applied out of profits, to the development and improvement of the concession.

19,043. Taking the case of a company; would the shareholders in a company have, in addition, to pay the same income tax upon the money they receive from the colliery?—Yes; the individual shareholder has to pay on his proportion, under this new law, at the same rate, so that, in the case of a shareholder receiving a dividend of 1,000*l.* a year, we will say, out of a company which divided 5,000*l.* a year profit altogether, there would be a double tax altogether of 8 per cent. on the money which goes to the State.

19,044. There would be, in point of fact, 8 per cent. taken on the profits of the mine?—Yes.

19,045. Would that be 8 per cent. on the gross?—The shareholder would have to pay 4 per cent. on the dividend, and the colliery would have to pay 4 per cent. on the gross profit.

19,046. That would be considerably more than 8 per cent. on the net profits?—Yes, it would be considerably more.

19,047. Because, as you have explained, the tax upon the gross profits includes expenditure made upon the mines which would be in the nature of capital expenditure?—Yes.

19,048. Is the same tax required to be paid by a cotton factory, for example?—Every industrial undertaking; every commercial undertaking under this new law is subject to these taxes.

19,049. These taxes will be very heavy upon commerce and trade in general?—They will be very heavy. The income of a concern and the income of an individual have to be declared, and whoever makes a false declaration is liable to a very heavy fine. It is a tremendous new burden that is laid upon the industry of Germany.

19,050. Can you tell us how much the communal taxes come to?—I can ascertain that; but I have not got the material at hand. It varies in every part of the district. Take the case of Düsseldorf, where I reside; the communal taxes there are about 215 per cent. of the State income tax. In the more industrial parts of the district, strange to say, the rates are even higher; they are 350 per cent., and, in some cases, 400 per cent.

19,051. (*Sir William Lewis.*) Of the Imperial taxes?—Yes.

19,052. (*Chairman.*) Are they all based upon the Imperial income tax?—Yes; all communal income taxes are. Then, in addition to that, there is the tax on lands and buildings; that is a tax on the cadastral valuation.

19,053. Can you tell us how many concessions have been granted, and how many are not now being worked, and from what causes?—I have not been able to ascertain the number of concessions, which, of course, is very large. Each concession is what is called a "feld" or field of either 25,000 square lachters or 500,000 square lachters. These fields are often amalgamated or united into one concern. Five, or six, or ten, or any unlimited number of fields are united together into one, and that constitutes the working field of a colliery. The number of working companies in Westphalia, I have given in my proof, I think, as 170. They are separate groups of collieries, with large concessions, having united fields. Great numbers of them have been again amalgamated within the last few years by a fusion of companies, so that the number of companies is becoming reduced. There are some cases where one company has 10 or 12 collieries united together. By that means the great competition in the country between the various collieries has been very much reduced, and the price

Communal
taxes.

Number of
concessions
granted.

of coal has been kept up. Of course, the number of concessions can be ascertained.

19,054. Has the tendency been to amalgamate?—Yes, the tendency has been to amalgamate in the last few years.

Compulsory
Insurance Act.

19,055. Can you tell us what additional charge was put upon the mine owners by the law of compulsory insurance of labour which was passed in 1890?—As near as I can ascertain it is about a farthing per ton. The old insurance law, called the "Knappschaft," existed, and under it there was a certain insurance against accident and death, so that this new tax upon collieries does not represent the full burden that it does to other concerns which had no such insurance previous to this.

Coal pro-
duction.

19,056. Has any experience been obtained as to the practical effect of the mining laws in Prussia and Saxony on the development of industry; in the first place, is there any considerable amount of coal raised in Saxony?—The amount of coal raised in Saxony is very much smaller than the amount raised in Prussia. The production of mineral coal in Saxony is only about 4,234,000 tons, against 67,000,000, the produce of all Germany. The Dortmund district alone produced 33,855,000 tons in the year 1889.

19,057. So that, in reality, there is no very useful comparison to be made between the effect of the laws in the two parts of Germany?—No. I have just been speaking of the mineral coal, but I may remind you that there is a considerable amount of lignite coal produced in Saxony.

Compulsory
taxes.

19,058. The Commissioners would like some further explanation of Table I. which you sent us. (*See Appendix C. XII.*) You sent us an extract from a report of a leading coal company in Westphalia. We should like to know which of the items are compulsory, and which not. The first item is "mining, land, building, and trade taxes," those, I presume are compulsory?—Yes.

19,059. "Community taxes"?—Those are compulsory.

19,060. "Miners' funds taxes, including workmen's contributions"?—Those are compulsory.

19,061. "Contributions to Miners' Trade Association"?—Those are compulsory.

19,062. "Contributions to Chamber of Commerce"?—Those are compulsory.

19,063. "Contributions to Miners' Association funds"?—Those are compulsory.

19,064. "Contributions to Association for the Protection of Mine Owners' Interests," those, I presume, are not compulsory?—Those are voluntary.

19,065. (*Mr. Forster.*) Then everything in that table is compulsory, except item 7?—Yes.

19,066. (*Chairman.*) And that is a trifle?—That is a very small thing.

19,067. You have given the amount in marks—a mark is a shilling, I believe?—Yes.

19,068. Therefore the result would be that, in 1890, on the coal sold in the colliery, these charges would come to something over 6*d.* a ton, 0.56 marks?—Yes.

19,069. (*Mr. Forster.*) The average for the four years, from 1887 to 1890, is 0.48 marks?—Yes. Then there comes, in addition to that, the new law, providing against infirmity and old age, and the income tax.

19,070. (*Chairman.*) Does the calculation in your table, No. 1, not include the new income tax?—No, it does not include the new law providing protection against old age and infirmity. That is only just coming into force.

Development
of the mining
industry.

19,071. The general opinion expressed by you in the report which you were good enough to send us, was, that the alteration of the law in Germany, of 1865, had a very favourable effect upon the development of the coal industry of Germany?—That is so.

19,072. But that, before, there were great restrictions, and that it has opened out a field of speculation and industry, with excellent effect?—That is so. This improvement has been attributed by some people

to the result of the last war, which, in uniting Germany, gave a stimulus and impetus to business and trade. But, before that war took place, there was a great improvement—the improvement began immediately after the Law of 1865.

19,073. I gather from your report that in old times there was a great deal more interference with the working and management of the mines on the part of the administration than was quite desirable?—Yes.

19,074. Or than was wise?—There was a great deal of interference.

19,075. But that has been very much removed of late years?—One of the main objects of that law was to remove that.

19,076. And they have introduced better processes of mining from England?—Yes, they have obtained a great deal of information from England.

19,077. Both privately and by means of Government engineers?—Yes; Government engineers were sent over to England on tours of instruction.

19,078. What proportion of collieries in Germany are worked directly by the State?—There is the Saarbrücken district and Ibbenbüren.

19,079. Is the output very large?—Westphalia represents the largest production of all. Westphalia represents in round numbers 35,000,000 tons out of the whole production for the year 1890 of 70,000,000 tons.

19,080. You are speaking of all collieries, including those worked by private enterprise?—Yes. I do not exactly remember the figure for Saarbrücken.

19,081. Can you tell us whether the working of the collieries by the State is considered to be a success in Germany?—A success for the State, or in the general interest?

19,082. One way or the other, whether the State makes a considerable profit?—The State makes a profit from it, but I doubt whether the profit is equal to the profit which private companies could make of it. It is considered to be an advantage that the State should have at least some collieries which would be worked as models, as it were, for the others to copy. Of course, the organisation, the system, and the technical arrangements at the State collieries are considered to be samples and models for private parties to follow. But the general feeling in the country is against State management. Private owners of coal mines consider that it is unfair that the State should compete with them in the production of coal. There is a certain party in Germany who, during the 10 years of depression in trade, advocated the purchase of all the collieries in Germany by the State, but they do not find any support, and the general feeling is, that it is the duty of the Government to govern, and not to manage industrial undertakings.

19,083. I believe the concession of a right to mine in Germany is the same as it is in France and in Belgium, and places a real property in the hands of the concessionaire?—Yes, it is a real estate—it is freehold property.

19,084. Practically, is it ever resumed by the State?—Practically, no.

19,085. Is it constantly sold in the market?—Yes, in good times like those of the last two or three years there have been concessions sold and companies amalgamated—of course at an increased value—at an advantage to the former owners. In bad times there is a want of enterprise, and there is no inclination to buy concessions.

19,086. Have you seen a memorandum which one of the members of the Commission has prepared, giving a summary of the mining law in Germany?—Yes. (*See Final Report, Appendix VIII.*)

19,087. Have you any observations to make upon that paper?—I think the summary in general terms expresses the state of the law in Germany fairly well. I do not see that there is much to alter in it. There is one point, where the taxation of the "output" is spoken of,—it is not the output, it is the actual vend in each case which is taxed.

Mr. T. R. Mulvany.
15 Dec. 1891.
Development
of the mining
industry.

Collieries
worked by the
State.

Property in
concession.

Sale of
concessions.

Imperial
taxation.

Mr. T. R.
Mulvany.

15 Dec. 1891.

Imperial
taxation.

19,088. The actual quantity of coal sold?—The actual quantity sold or used by the company for manufacturing purposes. A colliery uses coal for making gas or for coke and other purposes. If a colliery company is an owner of ironworks and sends the coal to ironworks, the coal is then used for manufacturing purposes, and it is liable to the 2 per cent. taxation.

19,089. (Mr. Forster.) The memorandum says "The output is all produce actually sold or used for the consumption of the mine itself or by the owners"?—The consumption of the mine is not taxed.

19,090. What do you mean by the consumption of the mine?—The consumption of the mine for boiler purposes is not taxed; the word used in Germany is "absatz," and absatz means what is disposed of. The returns are made out at the collieries by sworn officials, colliery clerks who are sworn, and who have to make quarterly returns showing exactly the amount of the coal which has been drawn, and what has become of it, and only that portion that is used in the way I have described is liable to the duty of 2 per cent.

19,091-2. Do you know the relative increase in the production of coal in Saxony and Germany during the last 8, or 10, or 20 years?—No; I have not gone into that, and I have not got the particulars of that over a long period of time. The increase in Germany in the Westphalian district, for instance, I gave.

19,093-4. Now the amount of these taxes seemed to be about 5.8d. per ton before the new income tax was put on the insurance?—Yes.

19,095. Do you think that that amount of tax has tended to retard the development of the mining industry in Germany?—The new income tax is only now coming into force.

19,096. It is independent of that figure 5.8d. You do not think that that would retard the industry at all?—It was felt to be very severe during the depressed state of trade, but it did not retard, to any material extent, the development of the industry or the production of the coal.

19,097. The experiments that you speak of in your memorandum were rather impediments in the way of getting concessions, and in connexion with the workmen's ladders and shafts, and things of that sort?—Yes, in connexion with the supervision of the mines.

19,098. They have really nothing to do with the amount of money paid to the Government?—No, I do not think the increase in the taxes has materially retarded the development of the industry.

19,099. Have you any idea what the new Income Tax would amount to per ton?—It would amount to 4 per cent. on the profits.

19,100. You inform us in Table I. (Appendix C. XII.) that the contribution for mining land, building, and trade taxes, comes altogether to 228,000 marks: have you any idea what proportion of that is the Government tax?—I do not exactly know what amount that is; it is a large amount.

19,101. Does this item include the 2 per cent.?—The mining tax, of course, is the 2 per cent.

19,102. Then you do not know what proportion of those marks went for mining and what proportion for land, what proportion for building, and what proportion for trade taxes?—No; I have not got the material here to answer that question, but I can easily ascertain that. (See Statement following Table I., Appendix C. XII.)

19,103. I think it would be of importance, because then we can see what the effect of the new tax would be?—I will get it for you.

19,104. Do you mean that, in addition to the 4 per cent. tax paid by the mine itself, dividends are taxed absolutely?—They are taxed to the same amount. If there is a dividend up to 1,000l., the average is about 3 per cent., perhaps, but above 1,000l. the rate of taxation is 4 per cent.

19,105. Then are those taxes that you have described paid equally by the ordinary concessionaire

and by those who have the old leases under the Government?—There are hardly any leases. I do not know of any leases existing in Germany. The coal is all worked by the owners, and collieries are seldom let or sublet.

19,106. Is a concession ever worked by itself, without amalgamating with other concessions?—Not in any deep-lying coals.

19,107. The concessions are not large enough to amalgamate?—Not large enough to be worked without amalgamation, only where the coal lies close to the surface, of course, would it pay to work 400 or 500 acres.

19,108. In point of fact, I suppose, the original concessionaires never work the mine themselves?—Very seldom; it is exceptional where they do.

19,109. Several concessionaires, I suppose, usually join together and form companies?—Yes.

19,110. They acquire neighbouring concessions as well, I suppose, buying them up?—Yes; as a general rule the concessionaire sells direct to a capitalist who will form a company to work the concession.

19,111. After those companies are formed, I suppose the shares are in the market like those of our ordinary companies?—Yes; there are two classes of companies. First, there is the partnership company, which is limited to 1,000 shares. Under the old partnership system it was unlimited liability, but now it is limited; there are some even still existing which are unlimited. The other class of company is similar to the English joint stock company; the shares are on the market and they are quoted every day on the Bourse, and very large transactions are done in the shares now.

19,112. I suppose they have gone up considerably of late years?—They went up 150 per cent. and 200 per cent.

19,113. In point of fact, the concessionaire, I assume, from what you say, generally takes the concession and disposes of it without making a profit?—No, unless in bad times, when he is forced to sell because he has spent some money on it, and he is in difficulties; then, of course, he sells for whatever he can get.

19,114. Has he any power of giving up his concession?—I do not know of any power of doing that, unless to let his right lapse.

19,115. Must he hold his concession, and pay certain fixed taxes?—There are no taxes on it unless he commences to work.

19,116. It is not heavily taxed?—No, a mere nothing. The expense of acquiring a concession is merely the stamp duty of 1s. 6d., I think, on registry, and some trifling expenses in addition.

19,117. I suppose the Government have power to take the concession away from him in certain cases?—They have power to take the concession away from him where, in the general interest and welfare of the public, they deem it necessary that the mine should be worked, and it is not worked. If the nation is losing money by its not being worked, the Government have a right to take up the concession, but there is not a case that I have ever heard of, upon record, and I have been informed by the Oberbergamt at Halle that they have never known of a case.

19,118. So that, practically, it is a dead letter?—Practically, it is not exercised; it is a dead letter.

19,119. Is there much ground now in your district, the Dortmund district, which can be taken up?—Is there much room for coal to be taken up?

19,120. Is there much coal proved?—Yes, there is a considerable extent of coal to the north which lies at great depths.

19,121. At great depths?—Yes.

19,122. Not perhaps workable whilst the shallower mines are being worked?—No; the expense of working the deep mines is very great.

19,123. The coal is sent, in some cases, considerable distances by railway, is it not?—Yes.

19,124. What is the greatest distance you know of?—Some coal is sent to Hamburg; then there is

Amalgamation
of concessions.

Sale of con-
cessions and
formation of
companies.

Transit
charges.

Wayleaves.

Powers of
surrender.

Taxes on
concessions
unworked.

Right of
Government
to withdraw
concessions.

Right of
search.

Coal in the
Dortmund
district.

coal sent to Berlin, and to Northern Italy, and also to Paris and Antwerp and the Dutch ports; there is a very large quantity of coal sent to Holland.

19,125. They are all State railways, are they not, to the German frontier?—They are all State railways now, except that there are one or two short connecting lines, still in the hands of private companies, but not on the main routes to sea ports.

19,126. Could you give us any idea what the carriage on these railways is per ton per mile?—I have not gone into that question, but I should think it is considerably under halfpenny per ton. There is a differential tariff. For the short distances the rate per mile is much higher than for longer distances, and there are certain advantages given for coal which is exported from Hamburg or any of the other ports, there is a drawback given on the freight, to encourage the export, but the export trade is not extensive.

19,127. There is a good deal of coal sent to Hamburg itself, I suppose?—Yes, there is a very large amount.

19,128. You do not know what the railway rate is to there, do you?—I think it is 6s. a ton.

19,129. Six marks a ton?—Yes, and 5 marks 40, I think it is, for export.

19,130. (Sir William Lewis.) From where?—From the middle of the Westphalian district; from Dortmund and Essen, they are the main points.*

19,131. (Mr. Forster.) I think you said there was no difficulty about getting a railway out beyond your concession if it was wanted?—That is so.

19,132. Is there any difficulty about getting your road underground? Supposing there were two concessions with a piece between, would it be possible to get a road from one to the other?—And this piece between belonged to another party?

19,133. Yes?—There would be no difficulty in getting through, that is if it was deemed to be absolutely necessary for the safety of the mine to get a connexion.

19,134. I was not speaking of questions of safety; I am referring to questions of trade, of carriage, of advantage?—There, I think, there would be a difficulty. The Mining Council decides as to whether any connexion can be made underground in any way, or whether what they call auxiliary works should be made in another mine, or connexions made. The Mining Board decide absolutely to the exclusion of any other court. Under the law of two shafts being compulsory, coal companies, with adjoining collieries, have agreed amongst themselves, and they have made connexions to avoid the expense of sinking so many shafts for the purposes of ventilation.

19,135. Are they allowed to do that?—They are.

19,136. They pay nothing to the State for that, I presume?—No.

19,137. I believe a man who wishes to be a concessionaire can search on his own land at any time?—Yes, he can search there at any time.

19,138. Does he require leave from the State to prove for minerals?—He must give notice of it.

19,139. After he has found the mineral?—When he has found it; but on his own land he can search without leave from the Government.

19,140. Can he search another person's land?—No; not without the consent of the owner.

19,141. I mean, supposing the owner is not willing, will the Government give him leave?—The Government will give him leave. The land for the purpose can be expropriated, and if it is used for more than three years the landowner has the power to demand that the party making the search shall purchase the land, and that is arbitrated in the same way as it would be for roads, railways, or for any colliery purpose.

* Note.—Mr. Mulvany subsequently wrote to say that the freights for coal from the Westphalian district are, according to his information, about the following:—

To Berlin	-	Mark 0.0272 per ton and kilometre.
" Hamburg	-	" 0.1551 " "
" Bremen	-	" 0.2236 " "
(That is per ton of 2,000 kilogrammes.)		

19,142. When that man has discovered minerals, he has to give notice I suppose to some official?—He has to give notice to the mining inspector directly he touches a seam of coal, or touches a mineral. He reports it to the mining inspector, and the mining inspector has to be present to watch the boring operations through the seams, so as to be able to take a protocol of the thickness of the seam.

19,143. After that is proved, there is no chance of anyone getting it but the discoverer, I suppose?—No, it belongs to the first discoverer of the mine who has proved it. It is registered in the mining books, and it is his absolute property.

19,144. (Sir William Lewis.) Will you tell us what proportion the wages bear to the total cost of getting the coal in, say, the Westphalian district?—I have not gone into the question of the cost of production, but, as a general rule, it is taken to be about one-half.

19,145. One-half?—I should think it has been so, but since the last strike it has very considerably increased.

19,146. I do not see by your table, if I understand it aright, that you give the per-centages which these charges, by way of taxes, bear to the total cost of getting the coal?—In table No. 1, I think you will find it is given. (Appendix C. XII.)

19,147. The per-centage that it bears to the actual cost is what I want to find?—The per-centage is given on the coal sold, on the value of the coal, on the total gross profit, and on the total net profit.

19,148. And you would have to take the one out of the other in order to arrive at what I want?—It has not been worked out. It was not given in the report that I took it from. This table is simply copied from a report.

19,149. (Mr. Forster.) Look at page 3 of the Summary; the working cost there is deduced in per-centages?—It gives, not the per-centage, but the actual working cost.

19,150. (Sir William Lewis.) I assume that you know the general arrangements for letting mines in your district; comparing the average royalty in his country as against the various taxes which are set forth in your table No. 1 (Appendix C. XII.) as being chargeable upon coal, do you consider that the taxes are more or less than the average royalty in this country?—I do not know much what the royalties here are. At one time I heard that they were 1s. and 1s. 6d. a ton; are they not so in some cases?

19,151. Assuming that they were 6d., would that be higher or lower than the average charges on the collieries in your district?—I should think it would be about the same. I fancy under the new law that the German rates will be higher than what I suppose to be the average of the royalties in England.

19,152. They will be higher than half a mark per ton?—Yes.

19,153. (Mr. Jamieson.) You spoke of experts being employed in cases where the concessionaire either desired to extend his boundaries or to make a railway?—Yes.

19,154. How are these experts selected?—They are selected as men who have got a practical knowledge of the value of the land and of all local circumstances.

19,155. Is anyone selected or is there a college of experts from whom the concessionaire must select?—He may select anyone, I believe. I am not aware of there being a college.

19,156. Are there no qualified or sworn experts?—The State railways, for instance, have their own special experts, men whom they swear in for valuing the land. These men are very often selected in cases like that because they happen to have a knowledge of the local circumstances. They are sworn experts.

19,157. Before the introduction of the new law of insurance, what was the liability of the concessionaire towards the men working the mine—the workmen—in case of accident?—Before the introduction of the new law he was obliged, in case of accident, to

Mr. T. R.
Mulvany.

15 Dec. 1891.

Right of
search.

Wages and
cost of pro-
duction.

Comparison
between
royalties in
England and
Germany.

Valuation of
expropriated
land by
experts.

Compensation
funds.

Mr. J. R.
Mulvany.
15 Dec. 1891.

Compulsory
Insurance Act.

Production in
Westphalia.

Hours of
labour.

Wages.

contribute, through the Knappschaftsverein, to an association for the protection of the interests of the workman. They provided the necessary funds to support him, perhaps less than half his ordinary wages, and a good deal less than that during the time he was invalided from an accident.

19,158. Did the coalowners pay some voluntary contribution to the association?—That was compulsory.

19,159. That is also compulsory under the new Act, is it not?—Yes. It has taken now a new form, and the old Knappschaftsverein will be merged into this new form.

19,160. As regards the expense, will that add materially to the cost?—No; under the new law, so far as I can ascertain, it amounts to perhaps a farthing a ton more than under the former law.

19,161. They will contribute to the more recent assessment for old age?—That is the new law that I have been speaking of.

19,162. Will that make a material difference?—Yes, about a farthing a ton.

19,163. I understand that in that district of Germany there is no compulsory poor law requiring the poor to be supported?—There is no poor law exactly similar to the poor law in England, each community is bound to provide for its own poor.

19,164. How?—It is for that purpose that the communities levy taxes on the industrial undertakings.

19,165. Did they levy taxes upon mines before this new law?—Yes.

19,166. So that the new law there again is only an addition to a previous assessment?—Yes; but all other undertakings, ironworks, cotton mills, and all other classes of commercial undertakings have now come under an entirely new burden.

19,167. Have you any idea what the extent of the new impost is on the industry as compared with what was formerly paid by the collieries?—As I understand, it is about a farthing a ton extra.

19,168. I understood you to say that was for accidents?—For infirmity and accidents.

19,169. For both?—Yes.

19,170. And that farthing a ton is the excess of cost caused by the new law over the old?—That is, so far as the present experience goes; but if they find that that amount will not be sufficient, if any serious accident occurs by which a number of lives are lost, the reserve fund may be so much exhausted that they may be obliged to increase the rate. The rate is not absolutely fixed, it varies according to the circumstances.

19,171. (Mr. Burt.) You mentioned Westphalia as the great coal producing district of Germany, and I think you said that the total coal produce last year was about 35,000,000 tons?—Yes, I think so.

19,172. Would that be about half the total coal produce of Germany?—The total produce of Germany is about 70,000,000 tons.

19,173. Has Westphalia developed very much of late years?—Yes, it has developed immensely. In 1850 the production in Westphalia, as I have given it in my table, was about 2,000,000 tons only, and it is now 35,000,000 tons.

19,174. So that there has been a great increase during that time?—Yes.

19,175. Do you know what are the hours worked underground by the miners of Westphalia?—In Westphalia they vary; there is no fixed rule or law on the subject of the working hours, though the working classes are trying for it in Westphalia; but at most of the collieries, I think, the rule will be found to be eight hours work, not taking into consideration the time occupied in descending and ascending. At some of the collieries, however, the eight hours includes the time of descending the pit and ascending. In other parts of Germany there are nine hours, 10 hours, and even 12 hours still existing.

19,176. Can you state what are the wages of the underground men?—The wages in Saarbrücken, I think, are about the highest, and the wages in West-

phalia may be taken, I suppose, at an average of a little over 3s., taking a number of years.

19,177. (Professor Munro.) You mean per day?—Yes.

19,178. (Mr. Burt.) Is that the average wage of the coal getters, the coal hewers?—That is the average of all hands.

19,179. Including everybody?—Yes.

19,180. You have mentioned that, assuming the royalty in this country is 6d. per ton, in Germany it would be about the same; you did not mean the actual royalty paid, but the total taxes, did you not?—The total taxes.

19,181. And the total taxes in Germany would include what?—The 2 per cent. to the State for the supervision of the working of the mines, the community taxes, all the workmen's taxes, the contribution to the Chamber of Commerce, in fact, all the taxes that are given in my table No. 1, except the seventh.

19,182. The farthing per ton that you mentioned a short time ago you think would cover the total payment of the coalowner towards the Government and the pension?—Yes, the total over and above what he already pays towards insurance pensions. In many cases the colliery owners, in addition to that, contribute voluntarily to the special funds attached to their own collieries. In the case of one particular colliery the colliery owners give 300l. a year, 6,000 marks, of their own free will.

19,183. And will they continue to give that, quite independent of the amount imposed?—Quite independent of the other amount, yes.

19,184. (Mr. Robertson.) Is your table No. 1 representative of the payments made at the collieries throughout Germany?—No, it only applies to one particular company. (Appendix C. XII.)

19,185. Do many companies pay according to this table?—It is taken as a fair sample; it is one of the largest companies, having three large collieries. Of course, it cannot be taken as giving an exact average but the average of the whole district can be ascertained.

19,186. Would you say that many collieries do not pay some of these items?—In the Rhenish Westphalian collieries they all pay these taxes.

19,187. What is the fourth item meant to indicate, "Contributions to Miners' Trade Association"; what kind of association is that; for what purpose is it formed?—That is an association, which was formed years ago, by which the miners' interests were to be protected, and also to provide a fund in cases of accidents.

19,188. It is not a miners' trade union, as the term is understood in this country?—No.

19,189. Was the object of its formation to relieve the employers of a burden that might suddenly befall them in the case of an accident?—It was originally an association formed by the mine owners amongst themselves; then it was taken over, under the Law of 1865, directly under Government control.

19,190. And the fund is used for the purpose of relief in case of accidents?—Yes.

19,191. Then the sixth item, "Contributions to Mining Association funds," what is that meant to indicate?—The Berggewerkschaftskasse; that is also an older fund, that was established by the private companies.

19,192. For what purposes?—The Knappschaftsverein is a general fund for the whole district, and the Berggewerkschaftskasse is formed by the private companies; and these were, practically speaking, amalgamated and put under Government control.

19,193. Then, as a matter of fact, these are colliery owners' protection societies in funds?—But the funds have to be all applied merely for the benefit of the workmen.

19,194. In relieving the employers of burdens that would probably fall upon them under the existing law in some other way; is that so?—Originally it was not so. Under the law under which companies were made liable for all accidents, it became, of course, a

Hours of
labour.

Comparison
between
royalties in
England and
Germany.

Imperial and
trade taxes.

Mines worked
by the State.

Effect of the
German
system.

protection; but the companies are obliged by law to contribute to these funds, and the amounts of the contributions vary from time to time, according to the special necessities of the case.

19,195. Referring to the hours, in reply to a question put to you by Mr. Burt, you said some collieries work eight hours from bank to bank, and some eight hours at the face; was not that so?—That is so. There is no fixed rule.

19,196. Do any collieries work fewer than eight hours per day?—I am not aware of any.

19,197. In hot mines, do they work fewer than eight hours?—From bank to bank?

19,198. Yes?—No, there is no exception for hot mines.

19,199. Speaking of the mines worked by the Government, you say they serve as models for the private capitalists; is that so?—Yes, they are looked upon in that light, and that is one of the intentions of the Government in working the mines.

19,200. Do they really serve as models?—I have never seen the Saarbrücken mines; but I have heard the opinion generally expressed that they are in many respects, as regards machinery and appliances, better than some private mines; and when anything new is started, they are the first to take it up.

19,201. Are accidents more frequent in occurrence in the Government mines than in the privately managed mines?—I am not aware of their being more frequent.

19,202. You cannot speak to that?—No.

19,203. You said there was a general feeling against the State management of mines; is that amongst the workers, or is it amongst the capitalists?—The miners would be in favour of the State taking over all the mines.

19,204. The miners are?—Yes.

19,205. What about the consumers?—I do not know about the consumers; I have never heard that they have given any particular opinion on the subject. As regards the mine owners themselves, when the times were very bad there was a party amongst them who wished to sell over to the State, because they thought there was a blue look-out for the future.

19,206. Then your personal expression of opinion merely refers to the private owners of mines?—Yes. There is also a party represented in Germany who think that all industries ought to be managed by the State, but it is only a small party.

19,207. Is there a profit to the State from the working of these mines?—Yes. I cannot at the present moment give you the figures of the profit, but I can easily obtain them.

19,208. Do the workers get as good conditions under the State management as they do under private management?—Yes.

19,209. Better?—It is considered to be about the same, but I do not know that there is any advantage.

19,210. Not better?—I do not know that there is any advantage.

19,211. (Professor Munro.) Knowing as you do of the system that prevails in England where mines belong to the owners of the surface, do you think that the German system is better suited to the special circumstances of Germany?—Yes.

19,212. What would you consider those special circumstances to be?—The special circumstances of Germany are that the land is more subdivided into smaller holdings. In some parts of Germany there are small holdings of 15, 10, and even 5 acres of freehold land.

19,213. Is that the system that prevails in Dortmund, in the Westphalian district?—Yes, in the Westphalian district there are a great number of small landowners; there are some extensive landowners; but the larger landowners, the aristocracy, in many cases have a great aversion to the mining industry, and do

not like to see it brought near their residences. If they were the owners of the soil, most likely the coal would remain idle, and would remain unworked.

19,214. The export of coal from Germany is not tending to increase to any large extent, I believe?—No, the increase of price of the last couple of years has rather tended to retard it, because there is an actual market in Germany for nearly all the production, and they get better prices at home than when they export.

19,215. I think the imports of coal into Germany are tending to increase?—The tendency is for the imports of coal into Germany to increase whenever the prices go up.

19,216. Has there also been, within the last 10 years, say, a very substantial increase in German production?—There has been a very substantial increase indeed in the production of coal.

19,217. I take it that the fact that exports of coal are not increasing, but that imports are increasing, and the home production is increasing, shows that there is a very large increase in the demand for coal in Germany itself?—Yes, undoubtedly.

19,218. So that the home market has been increasing at the same time as the production of coal has been increasing?—Yes, it has been.

19,219. (Mr. Redington.) Could you tell me whether the right of search given by the Government authorities is an exclusive right?—No, it is a free right. It appears to me that under the law anyone has a right to search.

19,220. In the same locality?—In the same locality.

19,221. Can two people get rights of search in the same locality?—They can get the rights of search in the same locality, and the man who proves the coal or other mineral first gets the concession. I have known cases of competition of that sort where two borings were working neck or nothing against each other to prove the coal first.

19,222. Then no preference, of course, is needed to be given by the Government to any one person?—No. The Government have that right, but in deep borings it very seldom happens now that there are two people trying for it.

19,223. On page 2 of the Summary I see it is stated that in Prussia the mines are relieved from the trade duty; is that so?—I cannot find that they are relieved from the trade duty under the law.

19,224. Then is that statement incorrect?—In a case in point I asked the question especially, and I was told that the Gewerbesteuer, as they call the trade tax, is a compulsory tax which they are obliged to pay as trading concerns.

19,225. Has your attention been drawn to the table on page 3, where the summary of the charges on the mine amounts to considerably less than what you stated was the charge on that Westphalian coal company?—The charges in that table do appear to be less than in the table I have given.

19,226. You will see that it is 484 instead of 484?—That only includes, perhaps, one Government tax; it does not include all.

19,227. Then it is not to be compared with your Table No. 1?—No. All those charges in my Table No. 1, except the seventh item, are compulsory. (Appendix C. XII.)

19,228. My point is, whether the instance given in your table No. 1 is a typical instance. I think, in answer to Mr. Robertson, you said you were not quite sure whether it was typical or not, and, therefore, I draw your attention to this other table, from which it differs?—Of course, my table cannot be taken as an exact average—I said it might be taken as a fair sample. The exact amount can be averaged from the Government Returns, of course.

The witness withdrew.

Adjourned till to-morrow at 11 o'clock.

Mr. T. R.
Mulvany.
15 Dec. 1891.

Exports,
imports, and
home pro-
duction.

Right of
search.

Taxation.

FORTY-FOURTH DAY.

Wednesday, December 16th, 1891, at 6, Old Palace Yard, Westminster, S.W.

PRESENT:

THE RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

THE LORD MACNAGHTEN.
 Sir WILLIAM THOMAS LEWIS.
 Mr. WILLIAM ABRAHAM, M.P.
 Mr. THOMAS BURT, M.P.
 Mr. DAVID DALE.
 Mr. GEORGE BAKER FORSTER.
 Mr. GEORGE AULDJO JAMIESON.
 Mr. WILLIAM KENRICK, M.P.
 Mr. JOSEPH EDWIN CRAWFORD MUNRO, LL.D.

Mr. CHRISTOPHER TALBOT REDINGTON.
 Mr. FREDERICK PARKER RHODES.
 Mr. ROBERT CHISHOLM ROBERTSON.
 Mr. JOSIAH THOMAS.
 Mr. CHARLES ALGERNON WHITMORE, M.P.
 Mr. NICHOLAS WOOD, M.P.

Mr. HERBERT LYON, Secretary.

M. RAOÛL DUVAL and M. AGUILLON called and examined.

[SIR JOSEPH CROWE, K.C.M.G., C.B., H.M.'s Commercial Attaché for Europe, again attended for the purpose of translating the evidence.]

M.
 Raoul Duval
 and
 M. Aguillon.

16 Dec. 1891.

19,229. (Chairman.) M. Duval, you are a Director of the Bank of France, are you not?—(M. Duval.) Yes, I am.

19,230. And you are connected with other commercial undertakings in France, I believe?—Yes, I am a civil mining engineer, and I have interests in many coal works in France, and I am also chairman of the gas company of Paris, who use over 1,000,000 tons of coal every year.

19,231. M. Aguillon, you are the chief engineer of mines in France?—(M. Aguillon.) Yes.

19,232. And Professor of Mining Laws of the Higher School of Mines of Paris?—Yes.

19,233. The French Government have been exceedingly courteous to this Commission, and on Lord Lytton's application they were kind enough to request M. Aguillon to send us memoranda in reply to certain questions that were put generally through Lord Lytton to the French Government on the subject of mining. The Commission nevertheless thought it desirable to request the French Government to depute one or two gentlemen who might give oral evidence before the Commission in order to clear up some points upon which the Commission were still somewhat doubtful. The French Government deputed M. Duval and M. Aguillon to be kind enough to offer evidence before us, and we sent to those gentlemen certain questions and also a summary prepared by one of the members of the Commission of what the Commission believe to be the French law and practice regarding mining. I believe M. Aguillon has prepared answers to the questions written in French; that is so, I think, M. Aguillon?—Yes.

19,234. And Sir Joseph Crowe, Her Majesty's Attaché, has been kind enough to translate those answers into English?—Yes.

19,235. It will be therefore the most convenient way to put the questions which stand upon the paper, and which all members of the Commission have before them, and Sir Joseph Crowe will then read the answers as translated into English to each question as it occurs. If any member of the Commission, after the answer to the question has been given, would like to make any further inquiries regarding each question, I think it would be convenient to take those inquiries after each particular question has been answered.—(M. Duval.) All right.

19,236. I will, therefore, begin with the first question. Has the State any legal power to work a mine?—As regards the legal power to work a mine, the State has no more right than a private individual. The State can only work a mine of which it has obtained possession by the purchase of the concession in the ordinary way. One example is known in which mines were conceded to and worked by the State. That was in 1825, on April 6th, when the Government was empowered by a special law to hold the salt mines of

ten departments of the east of France, and a special ordonnance authorised them to carry on the workings to the 21st of August of the same year. But this arrangement only lasted 15 years. A law of June 17th, 1840, repealed the law of 1825. The concession was withdrawn, and salt became subject to the same rules as other substances raised by mining. There is but one case under which the State can become possessed of a mining concession previously granted to private individuals by means not open to the public at large. The case arises when a mine has been put up for sale after the concessionaire forfeited it under the terms of the law of April 27th, 1838, and no bidder was found for it. Under these circumstances the mineral property does not disappear, it goes back to the State with its rights and liabilities, according to Article 6 of the law above quoted.

19,237. (Mr. Burt.) Does the State at present in any instance work a mine of any kind?—(M. Duval.) No there is none at present.

19,238. (Chairman.) The second question I have to put is, What proportion of the French coalfields and iron mines are held under concessions previous to 1810; and can any information be given as to the dues now payable to the surface owners under those concessions?—The following table shows what proportions of the French coalfields and iron mines are held under concessions previous to 1810. The concessions of coal mines of January 1st, 1890, are 638 in number, with an area of 558,081 hectares. Concession of coal mines previous to 1810, Article 51 and 52 of the law of April 21st, 1810, are 84 in number, with a surface of 194,729 hectares. The proportion per cent. of number is 13 per cent., and of surface 35 per cent. Concessions of iron ore January 1st, 1890, are 318 in number, with an area of 154,497 hectares. The concessions of iron ore previous to 1810 are in number six, with a surface of 8,767 hectares. The proportion is for the numbers 2 per cent. for the surface 5.6 per cent.. It seems to be generally established that in the coalfields outside the basin of St. Etienne the owners of the surface, under concessions for coal granted previous to 1810, received no dues in the nature of royalties (*tréfoncières*). At St. Etienne there is no sensible difference in this respect between concessions previous and subsequent to 1810. Little else has been done for the concessions subsequent to 1810 than to maintain by Government authority what had been done for the earlier concessions by the free accord of the parties interested. We shall see later on the amount of royalties at St. Etienne.

19,239. The third question is: Can a right of search or a concession be granted contrary to the opinion of the Council of Mines, and in what form are the proceedings before the Préfet and the Council of Mines conducted and recorded? Is the inquiry, in case of

Mines held under concessions granted previous to 1810.

Selection of concessionaire when more than one applicant.

opposition at any stage, of the nature of a judicial proceeding?—The forms under which grants of concessions are made are exclusively administrative, and never in the nature of judicial proceedings. The written petition which must have been delivered to the Préfet registered in a special register kept for the purpose at the Préfecture. Notice of any opposition introduced during the course of the inquiry must be given by an extrajudicial act, that is through the medium of a *huissier*, and notice must be registered in the register above mentioned. After the usual two months' inquiry the original application and opposition are the subject of a report by the State engineers upon which the Préfet gives his opinion (*avis*). Before giving an opinion the State engineers must have visited the locality and have questioned the people there. But they are under no obligation of form or of substance in respect to this matter. The action of the engineers and Préfet is simply this—that they look through the papers and bring together all the information they can find, and then deliver their personal opinion on the various questions raised in respect of the grant of the concession such as questions: Shall the concession be granted? If so, in whose favour? Within what limits? With what dues? And, What indemnity to the discoverer? The Minister of Public Works, on receipt of the papers (*dossier*), with the engineer's report appended, hands over these documents to the Inspecteur Général of the territorial division in which the concession is to lie. The official being a member of the Conseil Général des Mines reports on the whole case, and reads his report to the Council, and after this has been done the Council gives its decision (*avis*), which is registered immediately after that of the Inspecteur Général. The Conseil Général des Mines does the whole of this business with closed doors; but if it thinks fit takes the evidence of any persons who express a wish to make depositions; but these witnesses are dismissed after they have been examined and questioned. From a legal point of view the decision (*avis*) of the Conseil Général des Mines is a mere expression of opinion on the subjects of the various points raised in the case. The Government are in no wise bound by that decision and it has happened (though not often) that they did not adopt it in all of its parts. The decision of the Council of State is also given with closed doors and under administrative forms. It comes immediately after that of the Conseil Général des Mines, and is no other weight in law. There is, however, no case on record in which the Government has not made the decision of the Council of State its own.

19,239a. (Mr. Redington.) What happens in the case of there being more than one applicant; how is the selection made?—(M. Duval.) When there are several applications for the concession it is the Conseil Général des Mines which makes its proposition to the Government, and the Government, after having taken the advice of the Conseil des Mines and the Council of State, decides, because the decision belongs to the Government; the Conseil Général des Mines and the Council of State are mere advisers.

19,240. Do they go on any principle or is it a mere arbitrary selection? Do they give it to the richer applicant of the two?—No; only in deference to all the points of usage. The Conseil des Mines and the Council of State have been obliged to look at it and so even for myself I have been concessionaire for a coal mine where there were two people asking at the same time, and the Conseil Général des Mines stated that the importance of our discoveries was greater than that of our rivals, and we were declared concessionaires, but there came in another question and we were bound to give an indemnity to the others.

19,241. That is with regard to the concessions, but with regard to the granting of a search note how do they go?—The answer is in the memorandum. You will get it from the paper giving the summary of the mining laws of France. You will find it on page 3

of the printed paper, "Steps to be taken in order to obtain a Search-note."

(Sir Joseph Crowe.) The answer is already there in the print.

(Mr. Redington.) I am supposing that two people make applications. I do not see any explanation given in that case.

(M. Duval.) It is for the Government to give the authorisation, and it may be given to one person.

19,242. It is the arbitrary selection of the Government?—It is so when the concessionaire objects. If the concessionaire objects to the search the Government states the decision, and many people may search on the same ground at once when they are authorised by the Government.

19,243. It is not exclusive then?—It is not exclusive. Several people may make searches for minerals, and M. Aguillon says that generally for the common welfare one gives very liberal authorisation; the more people looking for discoveries the more chance you will have of getting the discoveries made; if one does not succeed another will.

19,244. (Sir William Lewis.) But there may be two, three, or four making trials concurrently upon one tract of mineral property?—Yes, no doubt, and it is very often the case. Generally when one begins, it causes another competitor to search also. But when you ask for a search you must specify a limited area.

19,245. (Chairman.) Then the area given to the person who obtains the right of search is a small area and not a large one?—Yes, it is limited.

19,246. (Mr. Redington.) When the concession is given, does it apply to all seams of coal or only to one—does it include all?—All the mineral property is given with the concession, but sometimes you may have different minerals granted to different people on the same ground.

19,247. A concession only gives one kind of mineral, while another concession will give another mineral to be dealt with?—Yes; all different concessions.

19,248. (Chairman.) The 4th question on the printed paper is as follows:—Is Article 22 of the law of 1810, requiring the authorities on receiving a petition in due form to issue an advertisement within ten days, still in force?—Article 22 of the law of 1810, requiring the authorities on receiving a petition in due form to issue an advertisement within 10 days, is still in force. The Administration endeavours to proceed with the inquiry as quick as it can; but in practice more than ten days elapse before the Préfet can give orders for the advertisement and publication. It may be said that Article 22 is obeyed in this sense, that the Préfet orders the advertisement and its posting as soon as circumstances allow. It cannot in any case happen that a petition for a concession is set aside by any interlocutory proceeding (*voie préjudicielle*), even though it should be known beforehand that it could not possibly be granted.

19,249. Does the Act of Concession contain only regulations prescribed by law?—As to regulations in the Act of Concession, and in reply to this question whether the Act only contains regulations prescribed by law, it is to be observed that until 1859 the Administration paid little attention to the point whether all the clauses inserted in the Acts of Concession were sufficiently in accordance with the law. Since 1859 a strenuous effort has been made to embody none but strictly legal provisions in these Acts. When early Acts of Concession contained clauses which have been shown to be not in accord with the law, the Administration consider these clauses void, and do not allow them to be applied. At this very moment a revision is being made of the very last model of an Act of Concession drafted in 1882, and since then in use, because it was discovered that many clauses in that Act were not sufficiently in conformity with the text of the law.

19,250. Are the royalties payable to the surface owners practically always paid, or are there some cases where property is much sub-divided and the royalties payable to surface owners

M.
 Raoul Duval
 and
 M. Aguillon.

16 Dec. 1891.

Selection of concessionaire when more than one applicant.

Right granted by a concession.

Law of 1810, Art. 22.

The Act of Concession.

Royalties payable to surface owners

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Royalties
payable to
surface owners.

are small where they are allowed to lapse?—The commonest royalty in France is that of 5 to 10 centimes per hectare per annum. It is an almost constant fact that these royalties are never or nowhere paid.

19,251. I presume that this reply does not refer to the royalties of the district of St. Etienne, which are much higher?—(M. Duval.) In St. Etienne it is not the fixed royalty by hectare which is referred to in the answer. It is special to St. Etienne, but the general royalty of the surface owner granted by the concession is only 5 centimes or 10 centimes per hectare; elsewhere it is very small, on account of the division of inheritance, and that is why it is not paid.

19,252. Then the reply only refers to the fixed royalty and not to the proportional royalty?—Exactly.

19,253. (Mr. Redington.) Is there a proportional royalty outside the basin of St. Etienne?—In some other coalfields, for instance, in the coalfields of Aveyron, where I was myself a concessionaire, we had a proportional redevance by hectolitre, according to depth. It amounted from five centimes to ten centimes per ton, but it is quite exceptional, and in all later cases it is only the fixed redevance by hectare; and in all the coalfields of France there is no redevance proportional but only a fixed royalty.

19,254. (Chairman.) Is there any limit by law or regulation to the amount of fixed and proportional royalty payable to the surface owner under the Act of concession? And can an approximative return be given of the tonnage and locality of the coal, subject to a royalty of more than 2d. a ton?—There are no laws or regulations in existence limiting the amount of fixed and proportional royalties under the Act of Concession. At the time of granting a concession the Government used their discretion as to the kind (fixed or proportional) and amount of the royalty. There is but one rule acted on in practice, though it is not to be found in any text book; the Government cannot sanction (*attribuer*) a royalty less than that offered by the petitioner for a concession in his printed and published petition. The coalfield of St. Etienne alone has royalties on fuel of more than 2d. per ton. The quantity in that coalfield subject to that amount of royalty may be estimated at 3,000,000 tons, the total sum of royalties, varying in each case, according to the depth and thickness of the seams, and the mode of working them, and being supposed to amount to 1,500,000 francs (60,000*l.*) per annum or about 6d. (0.50) on an average per ton.

19,255. (Sir William Lewis.) That is 3,000,000 tons per annum being worked at a royalty exceeding 2d. per ton in the St. Etienne district?—Exactly.

19,256. (Mr. Jamieson.) To whom does this royalty of 50 centimes go; to whom does it belong?—To the owner of the surface.

19,257. (Chairman.) What is the average amount of taxes contributed to the commune upon the net produce of a mine? Are any of these taxes special to mines?—No taxes are contributed to the commune on the net produce of a mine nor are any taxes special to mines levied for the benefit of the communes. But mines are burdened with taxes payable to communes which fall equally on all property or industries in the commune. In the case of mines, for instance, within the octroi district of certain towns like St. Etienne, the town dues are levied on materials necessary for the working of the mines and chiefly upon timber.

19,258. Could you say whether those dues in St. Etienne are heavy?—The taxes on timber generally are not very heavy because they would injure the exportation and go against the interest of the commune of course, and so much of the coal which is exported, does not pay any duty or octroi; still less for the coal which is consumed in the circle of the commune itself.

19,259. Are the cases frequent of one concessionaire having to go into an adjoining concession for the purposes of ventilation or drainage?—The cases are extremely rare in which a concessionaire goes into an

adjoining concession to sink a pit or make passages for purposes of ventilation or drainage (*épuisement*). As regards ventilation it would be almost absolutely true to say that no such case exists. In some exceptional instances examples might be found of galleries driven for purposes of drainage, but used occasionally for increasing natural ventilation.

19,260. (Mr. Forster.) Can you go into the question of a concession being made over surface roads, for instance?—Yes, for a road or railway or canal the concessionaire has a right to establish it in the concession, but when it is out of the concession he must always have a grant of what we call public utility; we are obliged to have an inquest to show that it is of public utility to open the roads and canals, and the same legislation applies for this as for all other ways of transport to be opened.

19,261. That is a decision of the Government?—Exactly, after inquest and decision of the Government.

19,262. Then is a payment made to the surface owner of the land?—Yes.

19,263. (Sir William Lewis.) I assume the concessions are usually very large?—Yes.

19,264. Large enough for the establishment of one set of pits or one set of collieries?—Yes, generally. In France the concessions, especially for coal, are extensive.

19,265. So that the circumstances do not usually arise such as are suggested by Mr. Forster's question?—I beg your pardon, it is often the case, because to join a railway or an existing canal it is seldom that the boundaries of the concession are decided only by the extent of the mines and of the way of transport or carriage. Now all the coal mines want to be connected with a railway or a canal, and so, as it is very seldom that in the concession there is a railway or a canal, the concessionaire must join in it by an arrangement for the part out of his concession.

19,266. Is there any prohibition against two adjoining concessionaires driving through the barrier that is arranged to be left between the concessions?—Do you mean for working a mine or for railways?

19,267. No, underground. Suppose two concessionaires desire to join their underground workings either for ventilation or for pumping purposes?—If there is a zone of protection.

19,268. That is a barrier?—In the case of a barrier which has been decided by the Government, the two concessionaires are bound to take the advice of the Government before cutting it. If not, if there is no actual barrier, and if they agree for the common interest in the connexion between the two concessions they may do it.

19,269. (Chairman.) Then it is not a universal enactment in the Act of Concession that there should be a barrier kept?—No, it depends. For instance, in the case of a concession which stood alone that contingency would not be provided for because there was no reason for it. But if subsequently a concession is granted else by after a time, a clause is inserted in the Act of Concession, which is already in existence.

19,270. What proportion of the production of iron is worked by open workings?—The proportion of the production of iron worked by open workings is about 20 per cent., having been in 1889 for a total production of 3,000,000 tons of iron ore (Algeria excepted) 600,000 tons.

19,271. Does paragraph 2 of section 3 of M. Aguilon's Report, Appendix C. III., "Dans un seul cas il est nécessaire d'obtenir au préalable une autorisation du Gouvernement; c'est dans le cas où le concessionnaire serait déjà concessionnaire ou exploitant d'une mine de même nature," refer to leases as well as sales, and is its meaning that the Administration has been on principle against the amalgamation of concessions?—From information we have received it appears that the concessions in the Northern coalfields have been amalgamated to a considerable extent. Under the decree of October 23rd, 1852, permission must be asked of

Government to amalgamate mines of the same kind no matter whether acquired by sale, or by lease, or by inheritance. Previous to that decree there was no bar of any kind to amalgamation, and the lumping of concessions on a large scale noticeable in the coalfield in the North of France dates from before 1852, the decree having no retroactive force. The object of the Government after 1852 was to get power to stop amalgamations which might become injurious to the public interest by favouring restrictions of production or an increase of prices. There are no fixed rules as to this. Each case is treated according to its particular circumstances as shown by the public inquiry which necessarily occurs whenever a petition for amalgamation is presented. Until a few years back all petitions of this kind were favourably considered, and it may be said that in consequence of the decree of 1852 no one would have ventured to ask for amalgamations suggested by an evident desire to monopolise or form into a compact mass a set of mining areas. For some time past the Government has been more severe; and if any serious opposition is made in the course of the inquiry, the petition is not unfrequently refused.

19,272. Does the Administration exercise any supervision upon the working of concessions in the interests of the consumer under the powers given by Article 49 of the law of 1810?—Under the powers given by Article 49 of the law of 1810 the Administration can only exercise supervision upon the working of concessions in the interest of consumers in a special way. The Administration can only intervene in case of restriction or suspension in the working of the concession. In practice the intervention of the Administration has never taken place, and can probably never occur except where there is a complete stoppage of the workings. It can have no other object than a resumption of working, for if this cannot be obtained the Administration is bound to pronounce, as it has done on many occasions, the forfeiture of the concession and the sale of the mine in conformity with the Articles 10 and 6 of the law of April 27th, 1838. This special sanction serves to characterise completely the nature of the right of intervention vested in the Administration in these cases. It may be observed in this connexion that no continuous and circumstantial action in the interests of the consumers would be allowed similar to that permitted and practised daily for the safety of the staff of a mine.

19,273. (Sir William Lewis.) I wish to know whether the Government would interfere in the sale of one concession to the holder or owner of another concession adjoining in contradistinction to an amalgamation of the two companies?—The authorisation of the Government is necessary to amalgamate two concessions of the same nature.

19,274. But assuming that I am the owner of this concession?—Yes.

19,275. You are the owner of that concession adjoining?—Yes.

19,276. You wish to acquire this concession and buy me out and out, would the Government under such circumstances interfere with the bargain?—Yes; you must have the authorisation of the Government to unite two concessions for the same kind of mineral. M. Aguilon wishes to supplement the answer I have just given by saying that where you have two concessions which have been authorised to be amalgamated in the same way you have referred to the Government after the amalgamation has still the right—the law of concessions superseded—and it may oblige the owners of both concessions to work each concession.

19,277. They may be worked as separate concessions although owned by one person; is that what you mean?—Exactly.

19,278. That is what I wish to know. Do the Government interfere with the acquisition of an adjoining concession by the concessionaire of, say, another concession?—The Government interferes, because the sale would not be legal if it was not authorised by the Government.

19,279. Even assuming that the two concessions are carried on separately by the one person in the same way as they were by the two persons?—Yes; if the two concessions have been united with the assent of the Government on the advice of the Conseil des Mines it may be that it becomes only one concession; it would not be a new grant, but it would be worked as only one concession. That would be in the case of their adjoining, of course.

19,280. I am assuming that they are kept distinct as they were originally, would the Government still object in that case?—If it is not a legal sale, if it has not been inscribed on the duties paid on the amount of the sale, the Government does not know it. It may be an agreement between the owners, but it is not a legal agreement. If there is a regular sale, if the duties for the sale have been paid, it cannot be done unless the Government has given an authorisation.

19,281. Can you give us an idea as to the objections that the Government would have to such an acquisition of concessions?—It may be in the interest of the consumer or in the interest of the State itself to object. For instance, the result of the amalgamation might be to lower the production of coal, then people might have their interest injured by the new way of working.

19,282. One of the objects would be, I take it, to prevent a monopoly?—Yes; exactly.

19,283. (Mr. Dale.) Might we begin a stage earlier and ask, if I am a concessionaire of minerals under this area, may I sell it to someone else, not being an adjoining concessionaire, without any Government sanction?—The property is created by the Act of Concession exactly like all properties. I say a man who has the property in a concession is the owner of that concession exactly as a man is owner of an estate or of a house, and he may sell it exactly in the same way as he may sell any other kind of property; but, of course, the seller transfers the obligations which are stated in the Act of Concession; he can only sell what he possesses.

19,284. Therefore, the fact of my being the owner of an adjoining concession would not disqualify me from purchasing your concession?—No.

19,285. When you speak of amalgamation do you mean the blending together into one concession of that which has hitherto been two?—If there is a power of amalgamation within your clause in the concession of course the authorisation must be given. In all cases the sale or the union or amalgamation of two concessions close by to each other, adjoining each other, is always subject to authorisation.

19,286. I suppose you do not mean that amalgamation would consist in the same person being the holder of two concessions as long as they were maintained as separate concessions?—When it is the same person who holds two adjoining concessions the authorisation of the Government must always be granted beforehand.

19,287. (Sir William Lewis.) The limitation that I understand there is with respect to the acquisition of concessions is simply to an adjoining concession of similar minerals?—Yes, it is.

19,288. Outside that a person might acquire a dozen other concessions as long as they do not abut upon a concession of similar mines that he already holds?—Yes, that is perfectly right.

19,289. (Mr. Redington.) As a matter of fact, has the Government ever interfered to prevent the amalgamation of two adjoining mines?—Yes; M. Aguilon states that, during the last 40 years, there were only five or six applications which were refused.

19,290. Why were they refused; on what ground were they refused?—Generally upon the objections of the population and of the consumers, who think that there will be either a scarcity of coal or higher prices; but on the other side M. Aguilon says there are every year nearly in all parts of France about 10 applications which are allowed.

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Government
interference
in the sale of
concessions.

Government
supervision
upon the
working of
concessions.

Government
interference
in the sale of
concessions.

Amalgamation
of concessions

Communal
taxes.

Ventilation
and drainage.

Iron produc-
tion from open
workings.

Amalgamation
of concessions.

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Sub-letting of
concessions.

Law of 1810,
Art. 39.

Expense of the
administration
of mines.

19,291. (Sir William Lewis.) Have there been any instances in your coalfields of concessionaires, after acquiring and proving the mines, sub-letting the concession into two, three, or more different collieries, so as to be worked by sub-concessionaires?—To our knowledge there is none. The concession makes a whole, which is worked by the same company or the same owner, and there is no sub-division afterwards. Sometimes it happens that a request is made to remit a little of the duty payable in respect of the surface. By the working of the concession one knows after a while that some parts are void of minerals; and so in order to lessen the charges the concessionaire is inclined to ask the Government to be relieved of a part of the concession which will give him no profit.

19,292. (Chairman.) Have the provisions contained in Article 39 of the law of 1810 been practically carried out, and are the royalties paid to the State applied towards the defraying of the expenses of the administration of mines?—Article 39 of the law of 1810 has been repealed by the Budget Resolution of 1814, which abolished the system of special funds. Since 1814 the taxes on mines are thrown into the general revenue, together with the land tax (*impôt foncier*), payable on the surface corresponding to the dues levied on mines. The expenses of the administration of the Mines Act are defrayed out of the estimates of each year.

19,293. Could you inform the Commission what is the actual yearly expense of the administration of the mines?—The whole expense of the administration of mines per annum may be given as follows:—(1.) Conseil Général of Mines, viz., nine inspectors, whose salaries and expenses amount to 140,000 francs; employés and petty expenses 15,000 francs. (2.) Stationary duty, viz., 20 head engineers and 40 ordinary engineers whose salaries and expenses amount to 405,000 francs; 120 controllers of mines, &c. whose salaries and expenses amount to 480,000 francs. (3.) Central Administration, Paris employés, 100,000 francs; stock, 80,000 francs. (4.) School of Mines, Paris, 250,000 francs; School of Mines, St. Etienne, 65,000 francs; School of Foremen at Douai and Alais, 35,000 francs, making a total of 350,000 francs. (5.) Geological Survey Map of France, 80,000 francs. Making a gross total of 1,650,000 francs. These sums under heads (1) to (3) must be taken, subject to deduction from the total expenditure of the *corps des mines*, part of the engineers of this corps and their agents being employed in controlling railways or other detached services. Likewise, as regards the Central Administration, the agents employed in the Department of Mines have other occupations, for which a deduction should be made. The expenses above given may be called the expenses of the ordinary service, which include the inspection and superintendence of the laws and regulations of steam machinery and boilers, in addition to that of laws and regulations affecting mines, minières, and quarries.

19,294. In addition to the answers which M. Aguilon has been kind enough to prepare to the questions, I believe you have been so good as to make some corrections in the memorandum on the mining laws of France?—Yes.

19,295. Perhaps you will be good enough to give those corrections to the member of the Commission who has prepared the summary; I do not think they are of sufficient importance for it to be necessary for me to ask any questions regarding them?—I do not think so either. The corrections have been made by M. Aguilon and myself in consultation, so I believe we shall be able to make the memorandum absolutely correct with a few additions.

19,296. Could you give the Commission the benefit of your opinion as to the general economical effect of the present mining law of France?—As to the economic results of the law of the 21st of April 1810, M. Aguilon and myself agree with most of the people in France who are interested in that question, that the results have been exceedingly favourable, and that the development of the production of coal, especially which

has taken place in the last 50 years, has been greatly due to that law. You know that by the Code Civil in France an inheritance must be equally divided between the children after the deaths of the parents, both in regard to the real and the personal estate. For instance, suppose that a gentleman dies leaving a concession, if it were not for the law relating to concessions that obligation of the Code Civil would be applied, and the concession divided. There is no doubt that extreme sub-division would very likely greatly injure the exploitation of the mines. These concessions cannot be divided, and therefore they are always large enough to admit of sufficient capital being raised either by the actual owners or by companies to work them, and to work them to a profit. There is no doubt that this modification of the general law of inheritance in France has been of practical value in connexion with coal mining. I believe M. Aguilon and myself may state most decidedly that the constitution of the mineral property as it has been established by the grant by the State is a very good thing, and a great source of profit for everyone—the owner of the mine, for the State itself, and for the consumer.

19,297. I think I gather from your reply that in your opinion, supposing the right to mineral in France had been with the owner of the surface the great sub-division of landed property would have been a serious obstacle in carrying on the mineral industry?—Yes, exactly.

19,298. And, therefore, under the French system, the minerals being conceded to parties, not the owners of the surface, it has been a great advantage to the development of the industry?—Certainly.

19,299. In case of a concession of minerals in France remaining in the hands of a single individual, what would be the law on his death as regards its division?—It remains as a concession, and cannot be divided; and so if there are several heirs they are obliged to sell it.

19,300. The Administration of mines would have to be consulted and to approve before a concession of minerals could be divided, would it not?—It is transferred to the heirs exactly as any other property is transferred, but they cannot divide it.

19,301. Practically this subdivision is impossible in respect of a mining concession?—Yes, the heirs must arrange that amongst themselves.

19,302. (Lord Macnaghten.) Can any one heir force a sale?—If the heirs do not agree together they are obliged to sell it, because it is not a divisible property, and also if they do not agree together to keep it they must sell it.

19,303. (Chairman.) There is a particular provision, I think, in Article 7 of the *cahier des charges* to the effect that concessions are transferable like all other property, but cannot be sold in lots or divided without the consent of the Administration?—Exactly; but it is not by regulations, it is according to the law itself.

19,304. That is the law or regulation?—The law.

19,305. I presume that practically most of your big collieries in France are managed by companies?—Yes, that is the fact.

19,306. (Sir William Lewis.) And the shares in such companies are easily sold, are they not, in case of death or in case of a desire to change an investment?—Yes, many of the shares are marketable, either in Paris, or in Lille, or in Lyons—in places close to the mines.

19,307. (Mr. Dale.) Have such companies usually purchased concessions or have they taken a lease paying the concessionaires so much per ton?—Generally the companies themselves are concessionaires. A company is raised in the first place to make searches—a small company—and if it is successful and if the concession is granted, they organise a company to work the concession which has been granted. I do not believe that there are any instances of leases; if there are some they are very few. Sometimes there has been a kind of lease because the concession is being

Area of
concessions.

worked by a company on account of others, but those instances are very few, and I do not believe that they are sufficient to be of any importance.

19,308. (Sir William Lewis.) With reference to your observations as to the sub-division of land, do you consider it is an advantage to a district that a number of concessions should be put together, say, to the extent of the company at Anzin, which has got 70,000 acres—is that not regarded as a large district, and is it considered undesirable that one company should embrace so large an area of minerals and lock it up?—There has been a good deal of discussion on the subject in France in relation to the Anzin Company you referred to. You know it is a very old concession. In the concessions of recent dates I do not believe that the Government would grant a concession over such an area. However, the general feeling is that the concessions must not be of too small an area. The extent of course depends upon the country where the mineral is lying, and whether there are other concessions close by. I believe the last concessions which have been made answer to about what we think the best area for which concessions should be made.

19,309. The most recent concessions you are referring to?—Yes, those most recently given. For instance, one of the last concessions which has been granted is in the central part of France, and it is close to a place where there have been very old workings since the last century. The new concession extends over an area of about 3,000 hectares, which makes over 6,000 acres.

19,310. Is that about the extent of concessions that are now granted, having regard to other circumstances, of course?—The area varies in our part of France, but now it is acknowledged that too small concessions do not put the concessionaire into as good a position as he should be put in, and are not profitable to either the consumer or to the concessionaire.

19,311. Where these various concessions have been acquired from time to time by different companies and made practically into one concern, has it been found that they have extended their operations of work anything like proportionately to the area, as in cases where the original concessionaires are limited to one concession?—As we have published every year statistics giving the production of each concession, it would be easy to give you the full and correct information that you ask for. As a fact these concessions, such as Anzin, have since the last 30 years increased in immense proportions. Of course they have profits which they can apply so as to increase their production, and when they are, like Anzin, in a district where there is a great want of coal, they can sell as much as they can produce; in fact, the whole of that part of France still imports foreign coal. That is a proof that the French companies could sell more. Every year there are new shafts sunk, and the production is spreading very quickly.

19,312. Did I rightly understand you to say that in that part of France they could sell more coal if they raised it?—Yes, no doubt.

19,313. The company which has got this large area?—Yes, they could; but they want time to sink a shaft. One cannot augment the production of a mine in a few months; that must take time, and requires a great deal of preparatory works. Some of the members of the Commission have a little book which gives the production of the coalfield of northern France, and if you refer to the statistics you will see that the production has been increasing very rapidly during the last 40 years.

19,314. Could you give us any information as to the railway rates from collieries to inland places as compared with the rates from collieries to the seaboard; are there any differential rates?—Yes, there are still differential rates; but the rates by rail are of course higher than the rates by sea. For instance, the coal coming from the North of France to Paris costs now about 7 francs a ton, and you know as well as myself that from England to the Mediterranean Sea it costs you 6s. now.

Transit
charges.

19,315. I was not asking that; I was asking more with reference to collieries supplying coal for inland purposes, say, to Paris; or supplying coal to be delivered on the seaboard of France, say, for steam purposes, or for exportation, if you like; do the Government give any differential rates over their railways depending upon the uses to which the coal is to be applied?—As you know, in France the railways are under the supervision of the Government, and so the rates for the traffic must be what we call homologated by the Board of Public Works. When these tariffs are under inspection at the Ministry of Public Works one takes into consideration all the interests concerned. There are still some differential rates—the rates are not proportional to the distance, and they depend on circumstances. For instance, for a long time the rate for sending coal to Paris particularly was always the same whatever was the mine it came from. A mine which was, for instance, 50 miles further off did not pay more than the nearest one to Paris; it was always the same tariff, 7 francs. Now, there have been some complaints about it, and there has been a change made in that, and new clauses have been introduced; for instance, a full train-load of coal would be charged at a lower rate than only a waggon-load; and then to favour the exportation of coal in some parts of France a uniform tariff is made for coal which has to be put on board ship. There are many such arrangements, depending on the circumstances of each particular case, but always made under the authority and supervision of the Government.

19,316. But are there lower rates for coal going to the seaboard than for coal going inland?—The industries, and commerce, and the consumer always ask for lower rates, and the company when they find an advantage in it propose lower rates, and if there is no objection the Government allows them. But in fact I believe that our rates in France are now still rather higher than in some other countries.

19,317. In answer to the Chairman you said that the royalty to the surface owner in some cases in St. Etienne amounted, I think, to 50 centimes per ton; has that charge in your opinion interfered in any way with the development of the minerals?—Of course it is a charge upon the consumer because the price is raised by the redevenance. As you know, St. Etienne is quite an inland country and it supplies coal only to a circle of French consumers. It is, therefore, very difficult to say that the royalty has interfered with and lowered the exportation. I do not believe it has, but we cannot tell because no foreign coal comes to St. Etienne. Of course if one was not paying 50 centimes, or 4d. or 5d., to the landowner, one could sell the coal that same amount cheaper. The St. Etienne is a very extensive coalfield in a very industrious part of France, and so the sale of coal there is very active and they produce as much as they can.

19,318. And I believe the minerals in the district have been developed rapidly?—Yes. The great difficulty at St. Etienne is that the coal is of rather a high price, because, as I said, it is a very industrial country, where there are a lot of buildings and much of the mines are worked near the town under buildings to the great annoyance of the owners of the surface, and that gives rise to claims for damages, and therefore very heavy expenses fall on the mine owner. Various industries have been developing also for many years in this district, and there is a great population inhabiting a large number of houses, factories, and so on; and when you work rather thick beds in those parts you cause a subsidence of the surface and injure the buildings and the properties and in that way heavy damages have to be paid.

19,319. But the existence of that payment does not in any way deter people from establishing factories in that district?—No.

19,320. (Mr. Burt.) Is the amount of royalty paid to the surface owner at St. Etienne higher or lower than the amount of royalty paid to the surface owner in other parts of France?—The royalty paid to the surface owner is much higher in St. Etienne than in any

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Transit
charges

Royalties to
the surface
owner, and the
development
of the minerals

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Royalties to
the surface
owner, and the
development
of the minerals.

other part of France, because, you see, it is about 5d., and in other parts of France it is only a fixed royalty per hectare, which is a very low sum, so low that very often it is not paid.

19,321. I understood from an answer you gave earlier that that amount of 5d. per ton applies to about three million tons?—Yes, that is it exactly.

19,322. Can you state why it is exceptionally high in that part of France?—Because the St. Etienne coalfields are nearly the most anciently worked in France, and are governed by old regulations which have not been applied to new concessions.

19,323. It was established, then, a very long time ago?—Yes, a very long time ago, and the old regulations were respected by the law of the 21st of April 1810; they were anterior to that law.

19,324. The State has the right to interfere in these mines, and to sanction and to refuse?—In France the quantity raised by each colliery is under the supervision of the State, under the supervision of the Administration of Mines, and one knows that so much coal has been raised from under such a surface; and one knows that if, for instance, there have been 10,000 tons of coals raised the owner there is entitled to ask for 5,000 francs.

19,325. You will not be able, I suppose, to state the average amount per ton paid as royalty to the surface owner throughout France?—At St. Etienne, I have told you that it was 50 centimes, but in other parts of France we cannot say what it is, because it is fixed by the area of the surface and not at all by the underground working, and so it differs.

19,326. One pays upon ground under which there is no working, and so it does not interfere with the price of coal, but it is a low charge; in fact, it is a trifle. I understand from you that is quite an exceptional thing for that amount to be paid?—Yes, because a man who possesses, for instance, half a hectare—one acre—of ground is entitled to receive a halfpenny only, and he will not go to receive it.

19,327. (Mr. Robertson.) Is there any difficulty in the way of a French subject who has obtained a concession granting his rights to foreigners who may form a company for the purpose of acquiring land?—There is no objection whatever. In France any foreigner may possess land, houses, and estates, and the law has been establishing the property in mines on exactly the same terms as other property. Mines may be sold to foreigners, and in fact there have been some foreigners owning such property in France. There are lead mines in Aveyron belonging to an English company.

19,328. Are there any English companies in France owning coalfields and working coal mines?—Any English or foreign companies?

19,329. Yes, any foreign companies?—A foreigner may be entitled to have a concession; he may be authorised to make searches to get a concession, and so he might buy a concession also.

19,330. The question I want to put to you is this: Can you tell us whether British capitalists have invested money largely in coal mining in France?—It is very difficult to say, because, as the largest companies in France are now shares companies, their shareholders may be foreigners; there is no disposition whatever to prevent it.

19,331. There is nothing against it?—No, there is nothing against it, and I believe a good deal of investment is made in mining companies in France by foreign financiers.

19,332. With what countries does the coal trade of France chiefly compete?—With England and Germany.

19,333. To the greater extent with which country?—You can see the statistics which are published every year which give the import of English coal and of German coal, and you may compare those imports with the home production.

19,334. Is the competition keener with Britain than it is with Germany?—Germany sends a good deal of coal into the eastern part of France.

19,335. Some strikes have taken place in France during recent years, and coal has been imported into the country largely during the continuance of the strikes; has that coal been taken from Britain or from Germany?—From both countries, of course, when there has been a scarcity of coal. We saw when coming across here at Boulogne that they were landing a good deal of English coal, and then on the eastern frontier a good deal of German coal has been introduced, of course.

19,336. Can you state the average wages paid to the French miners?—There is a book of statistics collected by a mining engineer which gives the wages. Of course the wages vary as between one concession and another.

19,337. Have wages tended to rise or fall during the past four years in France?—To rise.

19,338. I mean miners' wages?—Yes, I understand.

19,339. Has there been any proposal to reduce wages during that time?—No, I have not heard of any proposal to reduce the wages.

19,340. Has the demand of the royalty charge in France had any effect upon the wages paid to the miners?—I do not believe that it has had any effect; it is very small.

19,341. Are the wages at St. Etienne as high as they are in other parts of France?—I could not answer that question, but there are statistics published in France which you could refer to. I should not like to give you doubtful figures, and I am not prepared to answer such a question.

19,342. In granting concessions to parties wishing to work the minerals in France, is the Government desirous of aiding them in developing the mineral fields?—No doubt the Government is careful of all interests and does what it can for the best. It is for that reason that it takes the advice of the Conseil Général des Mines and of the Conseil d'État.

19,343. Do you know of any case where difficulty has arisen between a party desiring to acquire rights in a mineral field and the Government regarding the amount that should be paid, and where it has been so great that the proposal to take a coalfield has not been taken up?—No, I do not believe that has ever been the case.

19,344. In every case the Government departments and the proposers have come to terms?—Yes.

19,345. Is it within your knowledge that the Government department has ever subsidised a company working very poor mines, or helped them to tide over a time of depression by giving them a grant?—Never.

19,346. (Professor Munro.) I presume that you are acquainted with the annual volume of mineral statistics issued in France?—Yes, we can give you statistics for the year 1890. The volume the Commission has here is for 1888, but the statistics have been published up to the year 1890.

19,347. I should like to ask one or two questions in explanation of the tables in that volume, and first I would refer you to the table giving the total number and surface of concessions granted and worked, which shows that in France, out of 1,363 concessions granted in the year 1888, 454 only were worked?—Yes, I see that.

19,348. The next two columns in this table give the extent of the surface belonging to the same concessions, and the last two columns give the per-centages of the concessions worked?—Yes, that is so.

19,349. Now I will turn to the table on page 20 of the Volume. Does the shaded part of that table represent the production of coal in France, and the white part at the top the imports from other countries?—Yes, you are perfectly right; the entire diagram represents the general consumption, the shaded part represents the home production, and the difference between that and the total is the import. (See Appendix C. IV.)

19,350. Does the line running across the middle of the page give the average price of the coal at the pit's mouth for each year?—Yes.

Miners' wage

Action of
Government
in developing
the minerals.

Imports and
exports.

Mineral
statistics, 1888.

Concessions
worked.

Production and
consumption.

Import duties.

Selling prices.

19,351. And the upper line gives the price per ton at the place of consumption?—Yes.

19,352. Would that represent the retail price?—No, there is the carriage of the coal to the place of consumption and all the sundry other expenses till it is delivered to the consumer.

19,353. What I wished to ask was whether the upper line represents the retail price or the wholesale price at the place of consumption?—It is the wholesale price by waggon; one does not get so far into the detail as to know the prices to the retail dealers and so forth.

19,354. Could you kindly say how the information is obtained for drawing up these tables?—For the middle line, which gives the price at the pit, the information is based on the declaration of the coal owners, supervised by the mining engineers of the State. The top line, which gives the price at the place of consumption, is based upon figures prepared by the mining engineers on information upon which they consider they can rely.

19,355. Then, in regard to the price at the pit, is the price calculated upon the total amount raised or upon the total amount sold?—It is the price of the quantity sold, and also of the quantity used by the company itself; it includes that.

19,356. What places are selected as the points where the prices represented by the upper line are ascertained?—That upper line represents the average price for all the departments of France. We have a statistical return in France which gives the price of coal nearly all over France, and it is an average price for all France based upon that return which gives you that upper line to which you are referring.

19,357. In other words, you ascertain the wholesale prices of coal at all the leading towns and centres of consumption in France?—Yes.

19,358. And you prepare an average in that way?—Yes, that is how we get the average.

19,359. Then does the small shaded portion at the lower end of the table represent the export trade in coal?—Yes.

19,360. It follows from that table that France imports a great deal more coal than she exports?—Yes.

19,361. A table relating to imports and exports is given on page 13?—Yes. (See Appendix C. IV.)

19,362. From that table it appears that France imported about 10½ million tons in 1888?—Yes.

19,363. There were over 5 million tons from Belgium and over 4 million tons from England?—Yes.

19,364. Does the figure at the side of the table on page 20, "Exportation 629,000," mean that France exported 629,000 tons during that year?—The 629,000 tons that you point to is the exportation of France for the year 1888; you will see in the figures below that the exportation for 1888 is given as 629,000; that figure at the side of the diagram agrees with the figure given in the table below. (Appendix C. IV.)

19,365. I notice that 1883 and 1884 were the years in which the largest amount was imported into France?—Yes, that is so.

19,366. And that there has been a slight falling off since those years?—Yes.

19,367. Have you the figures relating to 1890?—No. The French Custom House tables would give you the importation into France month by month, and in that way you may get the figures not only for the year 1890 but for nearly the whole of the year 1891. The French Custom House statistics give you both the monthly importation and the monthly exportation.

19,368. Do you know when the import duty of 1s. per ton was placed upon coal imported into France?—The duty on coal is 1 franc 20 centimes, and it has always been in existence; it has not been altered; it is still the same that it has been for many years.

19,369. It has not been increased of late years?—No, it has not been increased.

19,370. Now I will turn to the table on page 17; that table gives the average price of coal in the different

mining districts for the year 1888, as you will see?—Yes, I see that. (Appendix C. IV.)

19,371. The coal seems to have been highest in price in the Loire basin?—Yes, it was, for the reason that I have told you, that there is a great industry there, and that there is no competition of other coal.

19,372. St. Etienne is in the Loire basin, is it not?—Yes.

19,373. Now, turning to the table on page 11, that gives the annual and daily wages of the workmen in each basin distinguishing between underground workmen and overground workmen?—Yes. (Appendix C. IV.)

19,374. The last column on that table gives the wages per ton for each district?—Yes.

19,375. It appears from this table that in Alais the wages per ton are highest, 5.09 francs. Then comes Le Creusot et Blanzay, 6.33 francs, and then comes St. Etienne, 5.30 francs?—Yes.

19,376. Can you explain the reason why at St. Etienne, where there is the high royalty payable to the surface owner, wages per ton are higher than in the North of France, where there is not this high surface royalty?—The principal reason is that in those coalfields of Creusot et Blanzay the strata worked are very thick and generally have a great deal of impurities in them, and so to make the coal available for sale one is obliged to wash the coal, and in that way the wages per ton are increased, because the price, I should mention, refers to the coal ready for sale. In Aveyron and in all those large beds of coal where the mineral is mixed with a quantity of stone and so on there is a good deal of supplemental work required for putting the coal in a proper state for sale. That is the principal reason for the difference in the wages.

19,377. (Chairman.) That is explained in the paragraphs which follow the table, is it not?—Yes, it is.

19,378. (Professor Munro.) There is another point that I should like to ask you about upon that table. If you will look at the daily wages of the underground worker, you will see that they are higher at St. Etienne, where they are 4.71 francs, than they are in Nord et Pas-de-Calais, where they were only 3.89 francs in 1888?—It depends a great deal upon the reason I have already mentioned to you. In the North of France they are generally working on beds which are not very thick, and it is curious to observe that the production per man is larger in small regular beds than it is in the more irregular strata which we have in the central part of France.

19,379. I notice in the table on page 17 that the average price of coal in the Loire is much higher than the average price in the Nord, nearly 3 or 4 francs higher (Appendix C. IV.)?—That is for the same reason, there is a great consumption of the coal in the locality and there is no other place of production. To introduce foreign coal they would have to bring it a long way by rail at a very heavy expense, and it is natural, therefore, that the prices should be rising. On the other hand, St. Etienne sends some quantities of coal to Switzerland. It is a very large consuming and selling place for a rather limited coal basin.

19,380. Taking the average all round, it appears from the table on page 4 that the average wages per ton are 5 francs 4 centimes?—Yes, that is so.

19,381. And that the average price per ton in all districts, according to the table on page 17, is 10 francs 31 centimes?—Yes.

19,382. It would amount to this, therefore, that the worker receives in wages not quite 50 per cent. of the price of the coal at the pit's mouth?—Yes, it is nearly that.

19,383. Are there any other tables published bearing upon the cost of production besides this one?—As I say, statistics are published yearly which give the cost of wages and many other data of that sort.

19,384. (Chairman.) What statistics do you refer to?—I refer to the statistics published in these small books. (Handing in pamphlets.) (Appendix C. III. 4 and 5.)

M.
Rabul Duval
and
M. Aguilon.

16 Dec. 1891.

Selling prices.

Wages.

Royalties and
wages in the
St. Etienne
district.

Selling prices.

Selling prices
and wages.

Rights of
foreigners to
obtain con-
cessions.

Foreign
competition.

M. Rabut Duval and M. Aguilon.
16 Dec. 1891.
Production of iron ore.
Selling prices.

Wages.

Royalties and wages.

Royalties.

19,385. (*Professor Munro*.) Now with regard to iron, the table and diagram on page 22 relate to iron ore, I take it?—Yes. (Appendix C. IV.)

19,386. The shaded portion of the diagram shows the production of iron ore out of mines which have been conceded by the State?—Yes.

19,387. And the portion at the top shows the amount obtained out of open workings?—Yes.

19,388. The line crossing the page gives the average price per ton?—Yes.

19,389. Would that be the average price per ton at the mine?—The line gives the average price for the ton of iron ore at the mine for mines and minières, that is, for open works and for underground works.

19,390. The average price for all iron ore raised from both mines and minières?—Exactly. Under the diagram you have a table which gives the same price.

19,391. Are there any tables published showing the wages of the workers in iron mines?—On page 42 there is a table giving the number of workers in mines, but I am not sure whether there are any tables that would give us the wages of the workers working the iron ore (Appendix C. IV.) On page 11 you will see that there is some information given in the middle of the page, not in the table. There it says: "The price per diem has been on an average 4 francs for pit workmen, 3 francs 38 centimes for those on the placer mine, and 3 francs 80 centimes without distinction of category?"—In the *Statistiques Générales* on page 49 you will find the figures as regards the wages for the workmen in iron mines.

19,392. What would you say has been the rise in wages at coal mines since those statistics were published, that is to say, since the year 1888?—Within the last two years there have been two successive increases of 10 per cent. in the Nord et Pas-de-Calais.

19,393. In the Pas-de-Calais?—Yes; and nearly everywhere there is a tendency to increase the wages. Wages have not been lowered; they have been rising, not by such an augmentation as 10 per cent., but in accordance with the quantity produced; and the payment for haulage and timbering generally has shown an increase.

19,394. It is not at all recognised yet that wages should rise as the price of coal rises?—It is a matter of fact that the price of coals has risen, and as it has risen the workmen have asked for an advance in wage and it has been granted to them.

19,395. Are wages higher in those districts and provinces where the total royalties are low than they are where the total royalties are high?—I do not believe that the difference of royalties has any effect upon wages; the wages depend upon local circumstances entirely.

19,396. The difference is due to other circumstances than the royalties?—Yes. M. Aguilon states that at St. Etienne, where the royalties are the highest, the wages are also the highest.

19,397. I take it that local considerations and perhaps old customs are very powerful still in France in regard to wages?—I do not believe that the prices are varying, and I do not believe that the old customs have any effect on the fixation of the actual wages. The workmen can now go from one part to another, and by the railways they may travel at a very low cost, so that if there is an increase in wages at any one place the workmen would immediately go there, and in that way a general level tends to be maintained.

19,398. Supposing that a concession was applied for to the Government in the St. Etienne district, where, I understand, the royalty payable to the surface owner is 50 centimes per ton, would the Government in granting that concession stipulate that 50 centimes should be paid to the surface owner?—M. Aguilon says, of course, it is a matter which would be brought before the Conseil Général de Mines, but it is very likely that they would fix the same *redevance* so as not to put the concession in a better position than any other concession for the purposes of sale and free competition.

19,399. That is to say, that the State in fixing the royalty to the surface owner is largely guided by the existing royalties that are paid in a district?—Yes. It is a matter of fact, of course, that the general principle of the intervention of the Government in these questions is that it should act as a moderator for the purpose of putting all people on about the same footing.

19,400. Then if the Government fix a royalty of 50 centimes in the Loire basin as payable to the surface owner, and in another district in France they fix a lower royalty to the surface owner, might it not be said that they are giving an advantage to this other district as compared with the Loire district?—Yes, you are right, it might be; but in fact it is of no importance, because if you will look at the map you will see that all those places in the district of St. Etienne are rather distant from one another, and also that it is a very hilly country. The fares on the railway are very high, and therefore there is no chance that such a small difference as 50 centimes could put some company in the department of Aveyron, say, in a position to compete with St. Etienne. It would be only at the extreme points where they would be in a position to compete. Perhaps the 50 centimes would allow you to go a few kilomètres more in the St. Etienne district or a few kilomètres less.

19,401. Then it would come to this: that these different coal basins are not necessarily connected one with the other except at certain points?—No; at certain points they are competing. The competition is always decided merely by the question of the railway carriage.

19,402. Then in the same district the State always aims at fixing the same royalty?—Yes.

19,403. In fixing the royalty payable to the State is the object that the State has in view the raising of a sum that will be sufficient for defraying the expenses of the Mining Department?—No; in fact the royalty on the taxes proportional and fixed raised by the Government is a part of the income of the country, and it is not determined by the cost of the Mining Department, which has to overlook some things other than mining; for instance, as regards the inspection of steam engines and the control of railways, it is the *corps des mines* who are in charge of that. It is a national revenue which comes into the general budget as a receipt; and the expense of the *corps des mines* comes in the general budget as an expense, but without connexion the one with the other.

19,404. As a matter of fact, is the income of the State from mines larger or smaller than the total amount of the expenses of the Mining Department?—M. Aguilon informs me that the total amount paid as royalty is greater than the expenses, so that there is a surplus which comes as a revenue to the State.

19,405. Now, you told me that in each basin the State endeavours to maintain a position of equality between two concessionaires by imposing exactly the same amount of taxation. If one concessionaire finds that his concession contains a better quality of coal, and is more easily worked than an adjoining concession, the State does not try to equalise the position of those two concessionaires by imposing a higher tax upon the one than upon the other, does it?—No; the *redevance proportionnelle* and the fixed tax payable to the State, and the *redevance* payable to the owner of the surface, would be a trifle compared with the difference you refer to in the quality of the coal and the facilities of working it, which would have a great deal more effect than the small charge resulting from the taxation.

19,406. The question I was going to put to you is, who derives the advantage from the fact that one concession is more valuable than the other; is it the concessionaire?—It is only the concessionaire. When you grant the concession you do not know whether the working will be a profitable one or not. Many of these concessions have been complete failures. You have seen the number of concessions which have been granted, and you have seen that here are many

Mining companies.

Taxation.

Development of the mining industry.

Concessionaires.

which are not being worked; they are not being worked only because they are not profitable.

19,407. If a concessionaire finds out that his concession is a much more favourable one and a better one than an adjoining concession, will he pay higher wages on that account to the men?—It is very difficult to say, but it is very likely that the workmen will know very well the price the coal is sold at, in fact, they are perfectly well aware of it, and if they see that their employer gets a large profit they will seek to derive advantage from it, by claiming higher wages.

19,408. Is it a fact that the price of the shares in the coalfields in the north of France have been rising for the last 50 years?—No doubt there has been a very great rise in the shares of the companies. In the Bourse, where you may see the prices of the shares, you will see that a lot of the companies have increased, but then some of them have also quite failed and have disappeared.

19,409. I am not sure whether you have seen this table giving particulars of the increase (*producing a pamphlet containing tables*)?—No, I have not. That table may be correct. As I say, the prices of the shares are quoted on the Exchange, and I have no doubt this table has been compiled from those quotations and must therefore be correct. Would you allow me on that question of the particulars of the price of shares to give an explanation which would, perhaps, make it more comprehensible. It is very erroneous to say that so much money at the beginning has been paid on a share as 1,000 francs or 500 francs. In mines like Anzin there has been a creation of extensive works which have been made from time to time. At the beginning the shareholders have paid so much, their money has been called for; but afterwards, very often for many years, they have received little or nothing, and all the produce of the mine has been used for developing the concern which has been increasing year by year, and in that way has been brought up to its present position.

19,410. Are the shares in the coal mines in French companies limited as to amount—limited as to liability?—It depends upon the composition of the companies. There are some companies, especially colliery companies, which are under different commercial laws. For instance, old companies, like the one at Anzin, have very old statutes, which have been always preserved. They are what we call *Sociétés civiles*. In France, by special regulation, the people who work a mine may be considered not like tradesmen, but they may be possessed of the mine without being tradesmen. The *Société civile* is not, therefore, a commercial company. There are some companies, practically, which are still under that law. Then according to the law of 1867 there are companies which we call *Sociétés anonymes* or *Sociétés en commandite*; in fact, there are many different forms of companies. It is not the quantity of coal workers which decides it, but the form of the company itself which determines the liabilities you were alluding to.

19,411. As a rule, would a French company if it required a further capital to develop the mine have a right to call upon the shareholders to contribute more capital?—If it is what we call a *Société anonyme*, which specifies the amount of capital by shares, they cannot ask beyond that capital; but if it is a *Société civile*, the shareholders may be called upon to contribute according to the necessities of the mine.

19,412. Do you consider that the French system has tended to the development of the mineral industry in France?—I have no doubt that it has. I consider that the law has led to the gradual development of concessions of a proper size. There are undoubtedly several causes for the development, and the chief cause, I think, is the opening of railways and the daily increasing facilities for carrying the coal far away from the place of production.

19,413. Would you attribute the development of the northern coalfields in recent years to the power of the French State to grant a right of search against the will of the surface owner?—That has amounted

M. Rabut Duval and M. Aguilon.
16 Dec. 1891.
Development of the mining industry.

Total royalties paid.

Royalty to the surface owner.

Royalties in the St. Etienne district.

to something; but the development is attributable more to the position of the coal. The development began about 1840 when the coal fields of the Pas-de-Calais were discovered. That has given a great impulse to the industries in that district, and now all those departments are the most inhabited and have a larger industry developing, especially, for instance, the sugar industry, which has spread on a very large scale in the north of France. If they had not had coal in sufficient quantity, and cheap enough and of good quality, that would have been impossible.

19,414. Have the surface owners in the north of France to any great extent assisted in the development of the coal industry under their lands?—The owners of the surface have derived profit from the prosperity of the coalfields by the general advantage which it has been to the country, but individually, unless they were shareholders in the mines, they have not had any special profit. The expansion of industry in all those districts, of course, has benefited all landowners and agriculturists also.

19,415. Have many of the surface-owners in the north obtained concessions?—Their being surface owners has never been a reason why they should obtain concessions. There have been owners of the surface who have discovered coal and who have become concessionaires, but that is not the case with the whole of them.

19,416. Is it the exception?—It is the exception. By referring to a little historical book which I have here you will see that some owners sometimes by sinking wells for water—artesian wells—have found coal-beds, and some of them have so become concessionaires.

19,417. Referring to page 9 of the notes on mining law, you will see a heading, "Total amount paid to surface owner"; is it possible to arrive at any calculation in that respect; is it possible to estimate the total amount received by surface owners in royalties?—I cannot give it to you now, but we may give it to you subsequently; you are really desirous to fill up a blank there?

19,418. Yes?—We shall be happy to send you the figure.

19,419. (*Mr. Dale*.) On what principle is the ground rent payable to the owner of the surface fixed by the State on granting a concession; has it any reference to the damage that will be occasioned to the surface, or what influence has that damage?—The principle as a principle is not stating that the owner of the surface has no right whatever in the mineral property lying under his ground, but that the State has the real property in it, which it can grant to a concessionaire; it wants, in fact, not to go to the extreme and say that there is no right whatever belonging to the surface owner. As for the damages that is quite a different question, and the concessionaire is liable to pay all damages which may occur from the exploration.

19,420. The 5d. per ton that is paid at St. Etienne, the *redevance proportionnelle*, is received by the owner of the surface, is it not?—Yes.

19,421. And it was fixed when the concessions were granted?—Yes.

19,422. What occasioned it to be fixed so high in that district?—Because it had been so from olden times. It was a right consecrated by long experience, and it has been respected by the law. The law of 1791 consecrated the right of the surface owner, but the law of 1810 says, on the contrary, that the minerals belong to the State. The rights previously in force before 1810 have been conserved.

19,423. At the present day when concessions are granted would a pretty uniform amount be made payable to the owners of the surface in different parts of France, or would it vary very much in the present day in regard to the new concessions?—In the present day it is always a very small fixed *redevance* in every part of France except St. Etienne; in all the other parts of France it is so much per acre.

M.
Laboul Duval
and
M. Aguilon.
5 Dec. 1891.
Royalties in
St. Etienne
district.
surface
mage.

19,424. I am speaking of the new concessions, of the concessions which have been made within the last few years, or which are now being made; there would not be much difference, would there, as between one kind of mineral and another, or as between one part of France and another, in the amount made payable?—No, the amount made payable is very small.

19,425. Then in addition to receiving such a rent, does the surface owner receive compensation for injury to his surface?—Yes, for any damage which occurs from the fact of working a mine under the surface. The owner of the mine is liable to pay for every damage caused, and the amount is assessed by the tribunal.

19,426. I suppose, if houses and other buildings were injured by underground operations that would be the subject of compensation also?—Yes, they are subject to compensation.

19,427. Are there many cases in which the concessionaire of minerals, say, coal, finds that he could not himself raise all the capital necessary for its development?—Yes, that is often the case.

19,428. Then in that case what usually happens?—Well, he starts a company.

19,429. And on what terms does the company get the benefit of his concession?—On the same terms as the owner himself; the company takes the place of the owner.

19,430. But if he has obtained a concession which he has proved by borings to be valuable, no doubt he would not transfer it to the company except at some premium?—Yes, it is a matter of negotiation between him and the people who bring the capital.

19,431. Then what form does the transaction usually take, is it the payment of a sum of money down for the concession, or is it the payment of so much on each ton of mineral which may be hereafter worked?—Generally it is by the allotment of a part of the shares. One makes an estimate of the value of the power of the concessionaire, and at a meeting of the shareholders the amount of shares for this purpose is fixed; it is very seldom that a company pays in money.

19,432. Then whatever the company so pays to the original concessionaire for the benefit of his concession is in fact, so far as the company is concerned, an additional rent by them?—I do not believe it is, it might be.

19,433. I meant to say, whatever form it takes, whether it is by the granting of a share in the undertaking, or by the payment of a sum of money down, or by the payment of a sum from year to year upon the quantity worked, whatever the form may be, it is in fact an additional charge or burden upon the company?—Yes; but all that depends upon the results which are obtained by the company.

19,434. That would be the effect, would it not?—Of course. If a man spends 1,000*l.* in searches, and he says that he wants to receive 10,000*l.* for the concession, that will be a charge upon the company—a charge upon capital, but it would be a matter of negotiation between the people connected with the same enterprise; it would not interfere with the granting of the concession.

19,435. I did not mean that. I merely meant to ascertain whether, as a matter of fact, the important companies working coal, we will say in France, are really doing so upon the exact terms of the original concession or whether they have to bear the burden of something given to the original concessionaire for the benefit of his concession?—It would be so in special cases, but it must occur very seldom. Generally the people who have discovered the mine get capitalists on liberal terms to work it and to derive profit from it, but they do not mention that they are to receive for so many years such-and-such sums; they become shareholders like the others, but they have more or less shares according to the estimated value of the concession at the time that the company started.

19,436. (Mr. Forster.) Do the large companies in the north of France, such as the Anzin Company, hold

one concession or many?—Anzin is a union of seven concessions.

19,437. Are they contiguous, do they touch each other?—They are all touching one another; they are separate concessions, but they have been united now.

19,438. Are they obliged to have a separate colliery or working on each concession, or may they work it as if it were one concession?—It is at the discretion of the Government. They are bound to supply the quantity of coal which is necessary in the district, and if there was a locality where some manufactures or some agricultural estate had grounds to complain that the supply of coal was not sufficient or that it was dearer on account of the carriage from a distant part of the concession, then the Government could oblige the company to work every concession. But as a general rule the interest of the company is to raise and to sell as much as possible, and so there has been no difficulty on that subject.

19,439. I understand if a colliery in a certain district, from some reason or other, is not profitable or could not be worked to pay itself they still would have to carry it on in order to supply that district?—That very seldom occurs; it may happen that a part of a concession would not be profitable to work. If on that part there are consumers who are injured by the stopping of the works the Government may oblige them to raise a certain quantity of coal there. But that power is very seldom applied. I must own that in one of my concessions it did occur:—It was a separate concession; it was in the department of Aveyron. We found it advantageous to entirely stop the works in one of the concessions. The people there complained to the Government, because they had to carry the coal by road for a few miles—say, about six miles—and the Government obliged us to open a new adit to deliver such a quantity of coal as was necessary; it was a very limited quantity, I believe 400 tons a year, but we were obliged to do that. That was a charge upon us, a loss of course, but we could not help it. The Government had the right to oblige us to do that. You will see by referring to the table on page 1 that there are 636 concessions granted, but under 300 of them are being worked; more than half of the concessions are not being worked, and they are not being worked simply because they are not profitable.

19,440. (Mr. Redington.) When there is a dispute between the surface owner and the concessionaire as to the value of the land taken, before what tribunal does the case go?—It depends.

19,441. If it is for the expropriation of land?—The possibility of expropriation of land is limited to a small number of cases, and then it is deferred to what we call a jury of expropriation; the jury meets, considers the circumstances of the case, and decide the amount to be paid. In some other cases the concessionaire has the right of occupying the ground for a certain length of time, it is the right of *occupation temporaire*; this right is subject to certain formalities. The concessionaire, when the authorisation is granted, is obliged to pay the double value of the income of the land he occupies; the authorisation is given by the Administration, and the value of the income is fixed by the *civil tribunal*.

19,442. Is that a jury of experts?—It is a jury of landowners and people qualified to ascertain the price. When it is for *Utilité publique* it is fixed by the Jury d'Expropriation, and when it is for occupation only it is referred to the ordinary jurisdiction, the *Tribunal civil*.

19,443. And the price given is twice the ordinary agricultural value, I suppose?—Yes, it is twice the value of the income of the land, which the law directs to be allowed by the *Tribunal civil*.

19,444. And the increased value which the existence of the mine would give to the land in the neighbourhood is not taken into consideration?—It is the usual value of the rent of ground in the country.

19,445. (Mr. Abraham.) Is the price of coal obtained in the district of St. Etienne higher than in the

Compulsory
working of
collieries.

Jury of
expropriation.

Wages

other districts where lower wages are paid?—Yes, it is higher.

19,446. Is the quality better?—Generally at St. Etienne the quality is pretty good, but I cannot say that it is better than in the northern part of France.

19,447. Then the quality of the coal and the higher price that is got for it justified the higher wages paid?—Yes. There are in St. Etienne some qualities specially useful for making iron and for forging iron, and, although it is rather a slack coal, it fetches a high price.

19,448. That will account for the higher price paid for it?—Yes, no doubt because it is used for special purposes.

19,449. (Mr. Kenrick.) I should like to ask you a question on the daily wages paid to labour in the field of the Pas-de-Calais compared with the daily wages paid in the St. Etienne district. It appears from the table on page 11 that the daily wage in the Pas-de-Calais is 3 francs 89 centimes, that is, for the hewer of the coal, the underground labourer, and that the wage for the same man in the St. Etienne district is 4 francs 71 centimes?—Yes. (Appendix C. IV.)

19,450. I understood you to say in explanation of that that the coal was more easily worked in the Pas-de-Calais than in the St. Etienne district; was that the reason of the difference in the wage?—That is one reason; there are other reasons of course; and daily wages might be higher with a lower price of coal per ton.

19,451. Then there is another column of statistics which wants explanation on that supposition. It appears that the annual production of coal by the labourer in the Pas-de-Calais is only 332 tons, whereas in St. Etienne it is 350?—Yes.

19,452. That would seem to point to the fact that the coal is more easily worked in the St. Etienne district than in the Pas-de-Calais?—The seams are different—the thickness varies, and, therefore, the

The witnesses withdrew.

Mr. ROBERT WATSON COOPER called and examined.

19,459. (Chairman.) You are a solicitor of Newcastle-on-Tyne, I believe?—Yes, I am.

19,460. And you are solicitor to various lessees and colliery owners in Northumberland and Durham?—Yes, I am.

19,461. And also in the counties of York, Derby, Monmouth, and Glamorgan?—I act for colliery owners in those counties as well.

19,462. Are you solicitor to the North of England United Coal Trade Association?—I am.

19,463. And to the Durham Coal Owners' Association?—Yes.

19,464. And to the Northumberland Steam Coal Trade Association?—Yes.

19,465. Are you also solicitor to any proprietors of mines?—Yes, I act for some lessors in Durham, but, my connexion is mainly with lessees or colliery owners, as they are called, in the north of England.

19,466. Will you describe the ownership of minerals in England and Wales generally?—*Prima facie* the owner of the surface is entitled to everything beneath or within it down to the centre of the earth. That is the ordinary legal definition; and, of course, by that means all mines and minerals, in the absence of evidence to the contrary, are presumed to belong to the owner of the surface, which is generally the subject of private as distinguished from State ownership. To that there are certain exceptions. The first exception is mines of gold and silver, which, wherever they are found, belong to the Crown. The second is mines under the foreshore of the sea and of tidal navigable rivers, that is to say, the portion of the seashore and the portion of the bed of the river which lies below ordinary high-water

Law as to
ownership of
minerals.

Exceptions.

Royalties in
the St. Etienne
district.

production by each workman of coal per day may vary between one place and another.

19,453. The work is not paid for by the ton, is it, but by the day?—The difference is caused by the thickness of the beds, and so a man may produce more in one place and less in another. For instance, with a thick bed, like those at St. Etienne, they work at once two yards instead of two feet, and they can produce more.

19,454. I see also that the daily labourer above-ground in the Pas-de-Calais gets 3 francs, but that only 2 francs 85 centimes are paid in St. Etienne, which would seem to point to the fact that the ordinary rate of wages in the Pas-de-Calais is rather higher than in the St. Etienne district?—Yes; but that depends precisely on what I have told you; that in the North and the Pas-de-Calais now there is a great deal of industry, such as this special sugar industry, and that, therefore, there is no necessity to be a miner; anyone may find work on the surface. And so in the Pas-de-Calais there is more demand for labour, and the general level of wages has consequently a tendency to rise. To illustrate that, when there was the strike many of the miners who were on strike went to the sugar works and they got work at once.

19,455. Then I think I might say, in summing up your evidence on that point, that it is the general circumstances affecting the labour of the district which really govern the rate of wages of the miner?—Yes, exactly, and especially of the workmen overground; it is the general wages of the country.

19,456. It affects the wages especially of the worker above ground?—Exactly.

19,457. But it also has an influence on the worker underground?—Of course. The price in this table has reference to the year 1888, and there has been a great change since because there has been the rise of 20 per cent., which I have been alluding to.

19,458. Still that would not affect the general principles of which we have been speaking?—No.

M.
Rabul D.
and
M. Aguilon.
16 Dec. 11
Wages.

Mr.
R. W. Cooper
—
Exceptions.

mark which belongs to the Crown, except in the cases where the owner of the land adjoining either the foreshore of the sea or the foreshore of the river has, either by some ancient grant or by prescription, obtained a title to the foreshore. I may say that in the north of England I know of no cases where the Crown is not the owner of the foreshore of the sea. I have come across cases where the Crown has lost its title to the ownership of minerals under the bed of a tidal navigable river. The third exception is the case of mines in the Forest of Dean, which I think are, under an Act of the 1st and 2nd Victoria, chapter 43, vested in the Crown. The condition in the Forest of Dean is, I believe, peculiar, but I myself have no personal experience of the Forest of Dean.

19,467. The Commission have received evidence about that?—Then I will go to the fourth exception, which is the case of certain mines of lead in certain parts of the district of the Peak in the county of Derby, which also are vested in the Crown under a local Act of the 15th and 16th Victoria, chapter 163, and a public Act of the 14th and 15th Victoria, chapter 94.

19,468. We have had evidence about that too?—The next case is the case of all mines except clay and sand in the Isle of Man, which, I believe, under the Act of Settlement of that island, are vested in the Crown. The last case that I am aware of is the case of mines in certain lands in the county of Cornwall, which, under another Act of Parliament, the 7th and 8th Victoria, chapter 105, are vested, I believe, in the Duke of Cornwall, as part of the property of the Duchy of Cornwall. As regards the foreshore in Durham, the foreshore belonged until 1858 to the

Mr. W. Cooper.
Dec. 1891.
ceptions.
Bishop of Durham as part of what were termed his *jura regalia*. (The bishop, as I have no doubt you know, was a prince palatine); but in 1858, by the Act of 21st and 22nd Victoria, chapter 45, these rights were transferred to the Crown, and they are now administered by the Office of Woods as a public department. In Northumberland the surface of the foreshore is administered by the Board of Trade under the Crown Lands Act of 1866, but the mines, as in Durham, remain under the administration of the Office of Woods.

19,469. What are the different classes of owners?—Generally speaking the owners are divided into classes of individuals and corporations. The powers of leasing minerals of individuals where the individuals are the owners in fee simple, as it is termed, of both the surface and the minerals are of course absolute. The powers of leasing of corporations depend upon the charters or Acts of Parliament which regulate the corporations. The corporations where I have had experience of cases of leasing are these. Perhaps I should mention first the largest in the north of England—the case of the ecclesiastical corporations, such as bishops, deans, and chapters, and prebendaries and rectors, whose mineral properties are now generally managed by the Ecclesiastical Commissioners under the Ecclesiastical Leasing Acts of, I think, 1842 and 1858, by which the Commissioners have very full and satisfactory powers of leasing, for almost any length of time. Their general practice is to grant leases in the north of England for either 42 years or 63 years. The next case is the case of municipal corporations. I mention them because although it may appear somewhat singular, yet in the neighbourhood of Newcastle the corporation of Newcastle are in fact the lessors of certain coal mines, and they are regulated by the Municipal Corporations Act of 1882. Their powers of leasing are confined to 31 years unless they get the consent of the Local Government Board to grant a longer lease.

19,470. (Sir William Lewis.) That is a lease of minerals that you are referring to?—I am speaking entirely of minerals. The third case is the case of the Crown. When I speak of the Crown I do not mean the Crown as regards those peculiar districts of the Forest of Dean, and Derbyshire, and Cornwall, and Devonshire, but I mean as regards the foreshore such as we have in the north of England. The powers of the Office of Woods are regulated by an Act of 10 George IV., chapter 50, and an Act of 36th and 37th Victoria, chapter 36, under which the Crown may grant mining leases for 63 years. The fourth case of which we also have experience in the north is the case of the Admiralty which has succeeded to estates belonging to Greenwich Hospital. Under their Act of Parliament of 1865 the Greenwich Hospital Act, 28th and 29th Victoria, chapter 89, they may grant mining leases for 42 years. The fifth case of which we also have examples in the north is the case of the Universities and the Colleges of Oxford, Cambridge, and Durham. They may, under the Universities and Colleges Estates Act of 1858, 21st and 22nd Victoria, chapter 44, grant leases for 60 years. The sixth case is the case of charities or hospitals of which we also have a few examples in the north, but their powers depend either upon their charters or upon their Acts or schemes sanctioned by the Court of Chancery, or upon the authority of the Charity Commissioners exercised under the Charitable Trusts Acts. In the case of the largest hospital that I know in Durham, which has a considerable amount of mining property, their powers of leasing are only for 20 years.

19,471. (Mr Rhodes.) What is generally the extent of the powers of leasing possessed by these charitable trusts?—That I really could not tell, because each depends upon the particular charter or the particular scheme sanctioned by the Court of Chancery or by the Charity Commissioners. In this particular case in Durham, which is the largest case I know, of a charitable corporation in the north being the owners of mines, their powers of leasing are only

for 20 years. Of course the Charity Commissioners or the court have power to sanction a longer lease, but that term of 20 years is the term that is acted upon.

19,472. (Chairman.) What are the conditions where the surface and the minerals belong to the same owner?—In that case the power to work is absolute, and it depends upon the will or power of the owner who may grant any power which he may think fit either for using the surface or underground space, and he may authorise the use of the underground space for any purpose whatever, and he may permit the minerals to be worked with or without leaving support for the surface.

19,473. What is the case where an owner is not an absolute owner?—In the case of an individual his power depends upon his instrument of title or settlement, whether it be a will, or whether it be a deed under which he claims his interest as limited owner, subject to recent statutes extending the powers of limited owners.

19,474. Would you go further and give us your opinion as to the power of limited owners as increased by the recent statutes?—Yes. Limited owners may be generally taken under the designation of tenants for life. There are other limited owners no doubt of a special character, but they are all fully comprised in the definition in the Settled Land Act as far as my knowledge goes.

19,475. I do not think you need go into that?—Tenants for life are of two classes, namely, those who are as it is called impeachable for waste, and those who are unimpeachable. Originally, in the absence of express powers, a tenant for life impeachable for waste could only work mines that were open when he succeeded, but a tenant for life unimpeachable for waste could work and open new mines. I think in both cases the power of leasing on the part of these tenants did not extend beyond their own lives. For many years previous to the passing of recent Acts of Parliament the powers of tenants for life were defined by their settlements, and, so far as my experience has gone, I think these settlement powers of leasing vary from 21 years to 60 years, 21, 31, 42, and 60 years I have known.

19,476. Have there not been cases in the north of England in which limited owners have gone to Parliament for Parliamentary powers to deal with their estates?—Yes, I know of one considerable estate belonging to a well-known nobleman now, and his predecessor and his trustees, under the original will of the testator, who also was a nobleman, got a Private Act of Parliament. The power of leasing in the will was 31 years, but by this Private Act, passed in the year 1850, the power of granting a mining lease was extended to 60 years.

19,477. Will you now explain what additional powers were given to limited owners by legislation since the year 1856?—In the year 1856 an Act was passed, called the Settled Estates Act, by which the Court of Chancery could authorise the granting of mining leases for 40 years, or for a longer term, I think, if on special grounds the Court thought fit to do so; and the powers of that Act were amended and amplified by another Act of 1877. In both of these cases a part of the rent had to be capitalised in very much the same way, I think, as it must be capitalised in leases granted under the Settled Land Act, in the absence of any provision in the settlement to the contrary.

19,478. I take it the reason why these provisions of capitalisation were insisted upon was to prevent the tenant for life getting the whole value of the land without giving the tenant in remainder any share of it?—No doubt that was the reason.

19,479. That was the principle of it?—No doubt that was the reason. It was no doubt thought that the working out of the mineral was to a certain extent an exhaustion of the *corpus*, and that provision ought to be made as it were to protect the interests of the inheritance.

Powers of absolute owners of both surface and minerals.

Powers of limited owners.

Settled Land Act, 1882. Section 7.

Settled Land Act, 1890, sec. 8.

Capitalisation of rent under the Settled Land Act, 1882.

Settled Estates Act, 1856.

19,480. What additional power was given by the Settled Land Act of 1882?—Under that Act—section 7 is the section I refer to—any tenant for life, whether impeachable or unimpeachable for waste, may grant mining leases for 60 years. The rent may be reserved either in the shape of an acreage rent, that is to say, so much per acre of coal worked, or it may be reserved according to the quantity of tons of coal worked, and there may be a minimum or dead or certain rent as it is called in various parts of England, and there may be a power to make up short workings to any extent whatever in respect of the certain rent. As regards the different methods of reserving rents, tonnage rents, I think, are the universal rule in Northumberland and Durham. In the Midlands and in South Yorkshire I rather think—I speak subject to correction—that acreage rents are more general, at least that has been my experience.

19,481. (Mr Rhodes.) They are universal?—Yes, I know they are in the cases I have had to do with.

19,482. (Chairman.) I believe doubts were entertained as regards the powers given under the Act of 1882?—Yes, there were doubts as to whether rents could be reserved which depended upon a sliding scale varying with the price of the minerals, but those doubts have been removed by the Settled Land Act of 1890, section 8.

19,483. What is the general effect of these statutory leasing powers?—The general effect, no doubt, has been to beneficially increase the powers of the tenant for life—I think there is no doubt about that.

19,484. What arrangement is made between the tenant for life and the tenant in remainder?—Under the Settled Land Act, unless there be a contrary declaration in the settlement, which of course can only take place in the case of a settlement made after the passing of the Act, in the case of a tenant unimpeachable for waste, he gets three fourths of the rent, and the remaining one fourth must be capitalised in the hands of the trustees of the settlement; and in the case of a tenant for life impeachable for waste he gets one fourth of the rent, and the remaining three fourths must be capitalised. It follows from that, of course, that in settlements made after 1882 settlers can insert a declaration avoiding capitalisation altogether, but that in settlements made previous to 1882, if the tenant for life desires to act under the powers of the Settled Land Act, and not under the special leasing powers of his settlement, the capitalisation cannot be avoided. I observe in the book of a very well-known conveyancer, Mr. Wolstenholme, there is a note that it may be presumed that in settlements made since the passing of the Act the insertion of a declaration against capitalisation will become usual.

19,485. Will you explain what the effect of that will be?—The effect will be that the tenant for life will get the whole of the rent, but in all cases to my knowledge previous to the passing of the Settled Land Act, where the tenant for life was acting under the special mining leasing powers contained in the old-fashioned but very well-drawn settlements, he got the whole of the rents; there was no capitalisation that I am aware of.

19,486. The suggestion would be to give a greater power to the tenant for life, to give greater freedom to the tenant for life?—Yes, it would, of course.

19,487. It would be in that direction?—In that direction undoubtedly; it would remove one of the objections which tenants for life have, and I have experienced them myself when acting under the powers of the Settled Land Act.

19,488. It might be in the case of some people that there might be an occasional disinclination to let?—I have had that objection put forward to me in my practice.

19,489. A man who was tenant for life might say, It is not worth my while; I shall get very little out of this; I had better leave it alone?—They have said that to me.

19,490. Or instead of giving a longer lease, which, perhaps, would be more for the benefit of the tenant,

he would give a shorter lease under the powers of the settlement?—That is exactly what has happened to clients of my own. I have urged for long leases, and I have been met with the objection, We shall have to capitalise part of the rent under the Settled Land Act if we go upon the Act. Our settlement powers are shorter than under the Act; they are only for 21 or 31 years; but our client, the tenant for life, desires to have the whole of the rent during his or her life, and therefore we object to grant the lease under the powers of the Settled Land Act.

19,491. What is the effect of the statutes regulating the Crown and the Ecclesiastical Commissioners as regards capitalisation?—In their Acts there are provisions made for a certain proportion of the rents to be carried to the revenue account of the particular body and the remaining proportion of the rents is to be capitalised and invested.

19,492. Those provisions affecting those public bodies cannot act injuriously I presume upon the letting of mineral property?—Not at all, because the public bodies have no option of granting shorter leases on the terms of applying the whole of the rent as revenue.

19,493. Will you point out what in your opinion even now are the disadvantages as respects the letting of mineral property in the present state of the law having regard to these alterations which have been made in the law?—I think myself that this capitalisation provision and the fact that there practically is an option, as it were, given to a certain class of settlements to avoid capitalisation, which option is not given to another class of settlements—I mean this option which was not given previous to the passing of the Act—is detrimental, because it is an inducement to tenants for life acting under settlements made previous to the Act with shorter leasing powers to act upon those shorter powers instead of acting upon the longer leasing powers of the Act. It is the longer leasing power which is really the thing that is to the advantage of the tenant. Every mining tenant naturally desires to have as long a tenure as ever he can get.

19,494. You pointed out as regards settlements made after the year 1882 that the difficulty may be avoided by a declaration in the settlement that no capitalisation need take place?—Yes, that is so.

19,495. But of course it is not certain that in all settlements made after 1882 the provision would be introduced?—No, it is not of course. It depends upon the will of the settlor. Now, speaking both of wills and of settlements which it has been my duty to draw, I know that by the express direction of the settlers I have been desired to avoid the capitalisation.

19,496. But in settlements made before 1882 the difficulty actually exists and cannot be removed?—No, it cannot be removed.

19,497. What suggestion have you to make to us to get rid of what you consider to be a difficulty?—I think either that capitalisation of the rents receivable by a tenant for life in respect of mining leases should be made universal, or else that there should be no obligation to capitalise at all leaving it to the free will of each particular settlor to direct what he pleases.

19,498. To which suggestion does your opinion incline, whether it should be repealed or made compulsorily universal?—That is an exceedingly difficult question. I think, perhaps, the balance of my mind—it is not a very strong balance—is in favour of repeal. I always think that settlers are persons who are thoroughly capable of looking after themselves, and that they are the best judges of the conditions of their property and of the necessities of their settlement and so forth.

19,499. (Lord Macnaghten.) I suppose those proportions were probably taken from settlements which were in existence at the time; they represent the general run of the settlements?—I never saw them in a settlement; I think they are in the Settled Estates Act.

Mr. R. W. Cooper.
16 Dec. 1891.
Capitalisation of rent under the Settled Land Act, 1882.

Mr.
R. W. Cooper.

16 Dec. 1891.

Capitalisation
of rent under
the Settled
Land Act,
1882.

Existing
difficulties,
effect on the
development
of the mineral
industry.

19,500. In the leases under the Settled Estates Act?—They are in the Act.

19,501. And you do not know from what they are taken?—I have no idea. I have never seen such a settlement with a capitalisation provision in it.

19,502. Do you think, if there is a provision for capitalisation, those proportions are fair and reasonable, or have you not considered that question?—I have not considered it particularly. It is an exceedingly difficult question, because it depends first of all upon whether the tenant for life is impeachable or unimpeachable for waste, and then the powers or the right of each class of tenant of that description depend upon the title and condition of the property—whether the mines are open or not, for instance.

19,503. And on the area of the property?—Yes, on the area of the property.

19,504. Because the tenant for life may exhaust the whole of the property?—Yes. It is an exceedingly difficult question; very difficult, indeed.

19,505. (Chairman.) You have given us your opinion as to these difficulties. You have had a great deal of practice in respect of these leases in the north of England, I believe?—Yes, I have.

19,506. Will you tell us whether these difficulties which you have pointed out have had any serious practical effect in respect of the development of the mineral industry of the north?—I certainly could not put it so high as that. I could not say that they have seriously interfered with the development of the mineral industry of the north.

19,507. In the north of England, that is, in Northumberland or Durham?—No, I would not put it so high as that, except in this sense: that everything, of course, that restricts the disposition of the industrial man, as I call him—the lessee—to embark his money and to spend his money freely, is indirectly a check to the development of industry. But if you ask me whether the production of coal has been restricted by these things, I could not, of course, say so. I have known several cases of distinct hardship arising from these short powers. I have a case in my mind at the present moment, where a question arose with regard to the exercise of certain rights on the surface with regard to colliery houses,—workmen's houses. Workmen's houses in the north are always built by the lessee; they are, in fact, part of his colliery plant. He has to provide good houses for the men free of charge. That is the custom in the north of England; in fact, it is part of the wages of the men. In this particular case the owner could only get a 21 years' lease, while the lease of the minerals was as much as twice or thrice that, and the duration would be probably twice or thrice that. The result will be that in the course of two years now, I think, this lease will fall in, and the colliery owner has to face his rent being doubled, notwithstanding the fact that the houses were built by himself or his predecessors. That does act undoubtedly as a discouragement to lessees; they like to have as fixed a tenure for their expenditure as they can get.

19,508. That particular case, I suppose, happened because there was no power in the settlement to give any lease beyond 21 years?—Yes.

19,509. That would apply to any building property, colliery or any other?—It was not a building property, it was more a mining property than a building property. Speaking of the same thing again I can think of another case of a 21 years settlor where he grants mining powers; these mining powers are necessary to be used in connection with the working of coal held on a much longer tenure, and they are, owing to the powers, only for 21 years. The colliery lessee who is working the minerals must face the almost certainty of having not only a discussion on it, but the possibility of having an increased rent at the end of 21 years. It may not be so of course; it is a matter for negotiation, but still the colliery lessee does dread those risks and he is always anxious to avoid them if he can so as to make the tenure as safe as possible.

19,510. (Chairman.) Have you had cases of difficulty arising when a settled property is under trust and in the hands of trustees who usually do not consider that they have the same latitude in action as actual owners, cases where trustees were obliged to be restricted to the letter?—To the letter of the lease do you mean?

19,511. Yes, to the letter of their powers?—Do you mean as regards waiving any of the conditions of the lease?

19,512. Where the difficulty is increased when a property is in the hands of trustees?—As against being in the hands of an absolute owner?

19,513. Yes?—Certainly I have.

19,514. Now as regards surface or underground easements, wayleaves, and surface subsidence, what have you to say upon those points?—I think the power in these respects conferred by the Settled Land Act is very full (section 17 is the section). It appears to give very wide powers to grant easements and rights and privileges of every description for mining purposes in relation either to the settled land itself or to any other land.

19,515. What form do concessions modifying the conditions of mining leases usually take?—The first concession that is generally applied for is a reduction of rent. The second—I have had a certain amount of experience as to the second—is that lessees sometimes ask when they find before the expiration of the lease that their coalfield is drawing to an end as it were, and that they are not able to work out the coalfield let to them up to the extent of the dead rent reserved, and that therefore the supply of their colliery establishment depends upon other coalfields which they work in connexion with the coalfield in respect of which they have to pay the dead rent—they sometimes are anxious to have the out-stroke rents, that is the underground wayleave rents, payable to the lessor of the shaft up which the coals are brought, brought into account as well as the actual tonnage rents, payable in respect of the coals worked out of the particular coalfield itself. There again, where the property is in the hands of limited owners or trustees, that can only be done in all probability by the lease being surrendered and a fresh lease granted. The third matter where concessions are often asked for is as to the power to carry forward short workings which have accrued under a previous lease, or a lately expired lease but which have not been worked off.

19,516. Now do you find in respect of those three different modifications of mining leases that there are practical difficulties put in the way of a limited owner carrying out whatever his wishes might be in respect of those three different items in consequence of the law of settlement?—Yes, I think there are practical difficulties in the way.

19,517. You will point out in what those difficulties consist?—In the first case, if it is desired to reduce the rent, this can only be done so far as I can see either by the lessee exercising his power to surrender his lease at stated intervals, if he has that power in the lease, which is universal in the north of England, and taking a new lease on the agreed modified terms, or by the lessor if he is tenant for life, exercising the power of surrender which is given to him under the Settled Land Act, and then granting a new lease.

19,518. (Mr. Rhodes.) Exercising his power or surrender under the Settled Land Act, do you say, the tenant for life can surrender his lease with or without consideration of the settlement?

(Chairman.) You are just now referring to the Settled Land Act of 1882, are you not?—Yes.

19,519. To section 13?—That is the section. Under that the lessor can accept a surrender and then grant a fresh lease. In granting a fresh lease, of course, the consideration of whether the settlement powers of leasing are as extensive as the powers of the Settled Land Act will naturally apply, and also the consideration of whether his settlement is

Powers in
respect of
easements.

Difficulties in
the way of
modification of
conditions of
leases.

Reduction of
rent, and
surrender of
lease.

Short
workings.

before or after the Act will also apply. If his settlement is before the Act, and if his settlement powers are shorter than those in the Act he will only exercise his shorter powers by reason, I think, of the capitalisation which would be involved in exercising the powers of the Act. Of course, if his settlement is after the Act, and there is a declaration in the settlement avoiding the capitalisation, he will then exercise the powers of the Act. I have had experience of cases under both those heads.

19,520. I understand the same difficulty would apply to the averaging of out-stroke rents?—I think so, precisely.

19,521. Have you had any cases in your own experience where a tenant for life was anxious in bad times to reduce the rents of the mine owner, and he could not do it in consequence of his limited powers?—I do not know. I do not think I have, because in one case that I have had to deal with, fortunately the tenant for life had a very full power under his settlement. He agreed to reduce the rent, and it was carried out by surrendering the lease under the powers of the Settled Land Act, and granting a fresh lease under the powers of his settlement, which did not entail any capitalisation. In another case that I had the lessees exercised their power of surrender, and then I think either the trustees or the tenant for life granted a fresh lease on the modified terms. I do not myself know of any case where the reduction has been rendered impossible, speaking as far as I recollect at present.

19,522. (Lord Macnaghten.) Of course the tenant for life may reduce the rent for his own life?—For his own life, of course—possibly in a case under the Land Act he would not have power to do it, because the tenant for life is supposed to be acting as trustee for the purposes of the Land Act.

19,523. We have had in the course of our inquiry a great many statements made to us that in bad times the proprietors of land have very often reduced the rents payable by the mine owners?—Yes.

19,524. Do you conceive that these difficulties have practically interfered with their power of action in this matter; do you know of any single hard case which has occurred in consequence of these difficulties?—I cannot say that I do. I know of a case at the present time where a tenant for life waived, I think an underground wayleave rent, or something of that nature. Of course the concession operated during his life, but he died, and I do not think that the concession was continued by his successor. To that extent of course it was a hardship, but I know of nothing, that I could bring forward as a striking case of hardship.

19,525. It is more a legal point than a practical point?—That is so, and it was in that sense that I brought it forward.

19,526. Now there is the third category which you have mentioned, namely, the short workings?—There I do know of a case.

19,527. I think, perhaps, you have not exactly explained where the difficulty lies in this?—I will do so. If these unrecouped (as I call them) short workings, which have accrued under a previous lease are to be carried forward and brought into account in a new lease, I do not think that a tenant for life exercising his powers of leasing would be able to authorise that to be done, because a power to make up short workings is in effect a liberty to work a certain amount of coal free of rent on the ground that it had been previously paid for, and I should more than doubt whether, under the terms of the sections of the Settled Land Act (which I think are section 7 and section 9) such a thing could be done; in fact, my opinion, for what it would be worth, is that it could not be done.

19,528. (Mr. Jamieson.) Before the Settled Land Act?—Under the Settled Land Act.

19,529. Before the Settled Land Act?—That would be a more difficult question, because before the Land Act, under the ordinary settlements the general

condition was that the rents that had to be reserved were the best that could be reasonably had. Therefore, in determining whether the rent was the best that could be reasonably had, you would have to have regard to a variety of considerations; and I can quite conceive it might well be that although the unrecouped short workings were allowed to be carried forward, yet taking the settlement into consideration, it would be difficult to show that the rent as a whole under a lease, previous to the Act was the best that could be had.

19,530. (Chairman.) Is there not a provision in the Settled Land Act to the effect that every lease shall reserve the best rent that can reasonably be obtained, regard being had to all the circumstances of the case?—Yes, that is in the Act.

19,531. Has any case come into court to settle this point?—No, I know of no decision whatever on the point.

19,532. (Mr. Jamieson.) If instead of making that abatement, the rent were reduced in the new lease, there could be no objection to that?—What I say of that is rather this when I come to think of it. The question of the power to make up the short workings is more or less in the nature of a concession to that particular lessee. The question is whether an independent lessee would not be willing to come and take the coal field without that particular concession; and if he was willing to pay the same rent without the concession then the granting of a concession would not be the best rent that could reasonably be had.

19,533. (Mr. Dale.) Supposing the terms as a whole, including the right to carry forward these shorts, were the best that could be got, there might still be an uneven distribution of the terms as between the tenant for life and the remainder man?—Yes, there might be.

19,534. Because alternative equivalent terms might be a lower tonnage rent and no carrying forward of the shorts?—Yes.

19,535. The effect of which might be that the tenant for life would benefit less because he would be immediately the recipient of a less tonnage rent?—Yes.

19,536. Do you see what I mean?—Yes.

19,537. I am assuming two sets of terms which might be deemed to be absolutely equivalent in point of advantage?—Yes; you mean the same certain rent and the same tonnage rent.

19,538. Not necessarily, two sets of terms which might be described as equivalents to each other although they varied in form; both of them being capable of being described as the best terms obtainable; but in regard to one of them shorts are carried forward, that is the right to work coal at some future period without paying any rent for it at all; and in the other set of terms there is no carrying forward of any shorts, but in all probability that is met by a lower tonnage rent than attached to the other set of terms. In the operation of these two sets of terms the effect might be different upon the tenant for life and upon the remainder man?—Yes, I can conceive of such a case.

19,539. Therefore there might be that difference?—Yes, I can conceive it.

19,540. (Chairman.) Do you know any case of difficulty under this particular head, where there has been some difficulty in allowing the short workings to be recouped in consequence of this?—Yes, I have known of such a case.

19,541. You have known of such a case?—Yes, I have.

19,542. Do you think it would be advisable to have an alteration in the law in order to make these things clear?—I think that if in fact any legal doubt exists upon that point it would be very well to have it altered, because the more the powers that are conferred upon tenants for life are brought into harmony with common practice the better. It is not at all an unusual thing in ordinary cases for unrecouped shorts to be carried forward, or for the lessee to ask for them

Mr.
R. W. Cooper.

16 Dec. 1891.

Short
workings.

Mr.
R. W. Cooper.
16 Dec. 1891.
Short
workings.

Minerals held
in undivided
shares.

to be carried forward; and power ought to be given to the tenant for life to do it.

19,543. You think nothing should restrict the tenant for life in acting in the same way that a man who had complete control over his property would act in similar circumstances?—I think so, provided it all be done *bonâ fide*.

19,544. Do you know any cases where minerals are held in undivided shares?—Yes; I have experienced two or three cases in the north of that description.

19,545. Will you explain what is meant by "held in undivided shares"?—Where the coal-field belongs to two, three, or four owners as what is termed joint tenants, or tenants in common as the legal expression is. Their shares are either fourths, or fifths, or tenths, or sixteenths as the case may be.

19,546. What is the result of that?—The effect of that is this: that the owner of any of the undivided shares may work the coal, and he may authorise the working of the coal; but, he is liable to account for the value of the coal at the pit mouth, less the cost of getting it there, to the other co-owners who do not concur, to the extent of their proportions.

19,547. (Lord Macnaghten.) Did you ever know of a co-owner working a mine?—I did once, but I confess it was probably a mistake. I acted for the co-owner; he was a defendant, as there was a bill filed in Chancery for an account.

19,548. He conceived himself to be the owner of an entirety?—I think he thought under the leasehold agreement that he had from the remaining nine tenths that it was all right. It had been probably overlooked altogether.

19,549. It is not a usual thing that of being a co-owner, is it?—These undivided shares are not by any means common.

19,550. (Chairman.) Do you know any cases in which coal is not worked in consequence of difficulties of this nature?—Coal not being worked?

19,551. Yes?—I never heard of one case; but I know of a case where the coal might not have been worked, where two owners had a strong dispute, and one owner immediately took proceedings for a partition, and, of course, that is by no means a satisfactory procedure; but the end of it was that the matter was compromised and conditions were arranged.

19,552. (Lord Macnaghten.) Why not satisfactory; that would have led to a sale and a partition?—It was so long, and the delay was so great; and in the meanwhile the colliery lessees' works were standing.

19,553. (Mr. Rhodes.) And then again, you cannot partition underground mines like you can the land?—You can do it, but then there was the uncertainty as to which particular portion of the coalfield might be allotted to the particular co-owner.

19,554. (Lord Macnaghten.) There is a right to demand a sale?—Yes, there is of course; but we dreaded the delay of 12 or 18 months before we got to a hearing.

19,555. (Chairman.) What remedy would you suggest to this difficulty, if a remedy should be applied to it?—I have not addressed my mind to that question at all.

19,556. (Lord Macnaghten.) Would you rather suggest the appointment of an additional judge, and less delay in dealing with cases?—Possibly; I think that would meet it. The acts of Parliament giving rights of partition are perfectly satisfactory if you can get the remedy in time.

19,557. Then when the country pays for another judge that will meet it?—Yes, I think that will be the best cure. I only mention that as one of the matters affecting the legal aspect of the position of the owner of minerals.

19,558. (Chairman.) As I understand you merely wished to make an exhaustive memorandum?—That was all. I have nothing to suggest on this point.

19,559. You do not put it forward as a matter of very serious consequence?—No, not at all; merely as a matter of interest rather than as a grievance.

19,560. What are the conditions when the surface and the minerals are held by different owners?—

There, of course, the condition of affairs does undoubtedly become more complicated. So far as my knowledge goes, except in Northumberland and Durham there is not much severance; that is to say, in most cases the surface and the minerals belong to the same owner; but in the county of Durham there is a great deal of severance. In Northumberland there is a certain amount, but not so much as there is in the county of Durham. I believe that in Durham the greater part of the land over the mines which belong to the Ecclesiastical Commissioners (who are no doubt the largest lessors in the county, because I think the out-put from their mines is more than a third of the whole out-put of the county) belongs to other owners than the Commissioners.

19,561. That is, the surface belongs to other owners?—The surface belongs to other owners than the Commissioners. The Commissioners are the owners of a considerable manor in a part of Northumberland which originally was part of the county of Durham, and there the surface does not belong to them. There are also in Northumberland cases of commons which have been enclosed, either by agreement or by Act of Parliament, where the surface belongs to the successors in title of the allottees and the minerals belong to the successors in title of the lord of the manor. There are also some cases near Newcastle where the surface was sold off of considerable estates, perhaps some 150 years ago or thereabouts, and the minerals are now being worked, and of course the surface of the estate has passed into a variety of hands since then.

19,562. Were the Bishop of Durham's lands largely held by copyholders?—Yes, in Durham the bishop's lands were largely held by copyholders, and there is to this day a large amount of copyhold surface land in that county. The county of Durham was divided into several large copyhold manors, and there are several manors in that county of which the bishop was the lord, and of which the Ecclesiastical Commissioners are now the lords.

19,563. Did the soil and the minerals themselves originally belong to the bishop?—Originally, in times gone by, no doubt both belonged to the lord of the manor. In the course of time a system of copyhold tenure sprang up, and although the copyhold surface dues in Durham are exceedingly light, the result is this, that as a matter of law what is termed the possession, of the entire property is in the copyholder, but the property or the ownership of the minerals is in the lord of the manor. Of course the result of that as a matter of law is this, that in the absence of custom neither the lord nor the copyholder can work the minerals without the consent of the other. The copyholder cannot work except possibly for his own personal use. I have seen it suggested somewhere that he might do it for that purpose. I know of one small manor in Durham of which the Commissioners are not the lords which belongs to a private individual, and there, by a very curious old custom, the upper seam of coal is worked by the copyholders of the manor who have a sort of copyhold pit, a little village pit which has existed for a very long time indeed. That is the only case I know of a copyholder in Durham working minerals at all. In all the other cases the minerals belong to the lord; the copyholder cannot work them but the lord has no right to enter upon the copyholder's property.

19,564. Has he a right to go underneath the copyholder's property?—He has the right to work the minerals undoubtedly.

19,565. (Mr. Rhodes.) And to let down the surface?—No.

19,566. (Lord Macnaghten.) Not without the leave of the copyholder or particular custom, has he?—In Durham (and I should say that I was referring to Durham) he has the right, which has been thoroughly well established, by custom and without

Severance of
ownership.

Surface
damage.

Shafto v.
Bolekow.

Copyholders in
the county of
Durham.

Eardley v.
Lord Granville,
and Bowser v.
McClean.

Rights of
copyholders,
surface
damage, and
underground
wayleaves.

the leave of the copyholder to work the minerals, but not to let down the surface.

19,567. (Chairman.) You are speaking now in reference to the Ecclesiastical Commissioners?—Yes.

19,568. Generally speaking, the Ecclesiastical Commissioners or the Bishop of Durham have the right to work the minerals?—Yes, they have.

19,569. Without the consent of the copyholder?—Yes.

19,570. As regards the letting down of the surface, what is the condition of things with respect to that?—As regards the letting down of the surface there appeared to be a somewhat common belief prevalent in Durham till the year 1888 that the bishop might let down the surface on paying compensation for damage done to the surface. That was contested in an action of Shafto v. Bolekow (the well-known Bolekow, Vaughan, and Company), but the Commissioners failed entirely to prove any such custom—I mean the custom of a right to cause subsidence on paying compensation. Mr. Justice Kekewich delivered judgment, and he was in favour of the copyholder.

19,571. What did that judgment establish?—It established in effect this, that the Ecclesiastical Commissioners, as the owners of the minerals under copyhold lands in the county of Durham, have not the right by themselves or their lessees to take away the surface support even on paying money compensation; and it also established this, that they have not the right to use the underground space for any purposes not connected with what I may call episcopal coal, that is to say, coal belonging to the bishopric of Durham originally.

19,572. They could not take, for example, the coal which the Ecclesiastical Commissioners might have acquired under the land of a neighbouring owner through underneath the copyholder's lands?—I think not. I think they would not have that right. Instead of episcopal coal I should more correctly, perhaps, have said coal that was part of the ancient possessions of the see and bishopric of Durham. In that particular case of Shafto v. Bolekow it was not a question of whether their lessee Bolekow had the right to carry underneath Shafto's copyhold, coals which belonged to the Commissioners, although they were not part of the ancient possessions of the bishopric, but whether he had a right to carry coals belonging to a third party. It was held that the lessee had not that right. In that particular respect, however, the decision in the case of Shafto v. Bolekow really amounted to this, that the Commissioners failed to establish the extensive custom which they tried to maintain; and the learned judge naturally followed the previous decisions. The last decision which I remember was the case of Eardley v. Lord Granville, a decision of the late Master of the Rolls which followed a previous decision in a north country case arising near Bishop Auckland, of Bowser v. McClean, which was a decision of Lord Campbell's.

19,573. How far has that practically interfered with the power of the coal owners to work the coal which they have leased from the Ecclesiastical Commissioners?—Well, the practical effect of it is this, that the copyholder, the surface owner, obtains rent from the worker of the minerals for the privilege of carrying underneath his surface nonmanorial minerals. It has not, as it were, interfered with the working because the lessee simply had to pay rent, and that has been a question of negotiation.

19,574. Did it enable the copyholder to ask what the mine owner might consider to be exorbitant terms either for letting down the surface or for using the underground wayleave?—Exorbitant, of course, is a question of degree; but it enabled the copyholder to demand a rent per ton for coal which did not belong to him, undoubtedly, for the mere privilege of working it away. What the copyholders have generally done is this: They say, "We will take a certain sum per ton with a general provision for payment of compensation in money for damage as it arises, or we will

"take an increased sum per ton to cover the right to "cause damage"; that is to say, which will include the compensation. Of course that is paid in addition to the rent which is paid to the owner of the coal underneath the copyhold tenement, namely, to the lord of the manor.

19,575. (Mr. Rhodes.) And in addition to that rent which was estimated as the fair rent when the mine was leased?—In many cases; certainly, I have no doubt that is so.

19,576. (Mr. Jamieson.) It would endure only during the continuance of the lease?—Most of our leases in Durham do not expire till the year 1926 or 1930, I believe. They were all previous to this decision renewed on terms of 42 or 63 years, expiring about 1926.

19,577. (Chairman.) Do you consider that that constitutes any grievous hardship to colliery owners?—It has had the effect of increasing the rent by from 1*d.* to 1½*d.* per ton. That is the effect. It is a question of money altogether, and it has increased the rent by from 1*d.* to 1½*d.* per ton. In times of depression, of course I am not a trader myself, but I know from my general knowledge, that in times of depression when competition is very severe 1*d.*, or 1½*d.*, or 1¾*d.* per ton is a matter of great importance.

19,578. (Lord Macnaghten.) But still the copyholder had certain defined rights which he would only give up on payment of money?—Undoubtedly, he had certain legal rights.

19,579. (Mr. Dale.) But rights which were not supposed to exist when the lease was taken?—I think in this case both the lessors and the lessees erroneously supposed that those rights did not exist. There appeared to be a sort of undefined idea that the Bishop of Durham or the Ecclesiastical Commissioners had very extensive powers; but when the question did arise the obligation to contest and settle all these questions was thrown upon the lessee. He has to fight the question and he has to pay the rent. The practice of the Ecclesiastical Commissioners—I do not blame them at all for it—is to grant their leases so far as they lawfully can or may.

19,580. (Lord Macnaghten.) And they do not reduce their rent in consequence?—I have not heard that they do so. I know cases where they certainly have not reduced the rent in consequence. I wish it to be understood that I do not venture to suggest any particular complaint against the Ecclesiastical Commissioners as landlords generally in regard to the rent they get, because if I were to express an opinion it would be rather a good one than a bad one.

19,581. (Chairman.) There are also some commons which are somewhat differently circumstanced in relation to the copyholders?—Yes, in Durham there is a large amount of common land, a very large amount. I have had a good deal to do with questions of commons, and I should think there must be at least 30,000 acres of land in Durham which was originally common land, and which is now enclosed by private Acts of Parliament under which valuable coal mines lie. There the relative rights of the owners of the surface and the owners of the minerals, who are the Ecclesiastical Commissioners in most cases, as lords of the manor, depend upon the language of the particular Act of Enclosure. There are several cases of commons in Durham where the lords of the manor are not the Ecclesiastical Commissioners, I can think offhand of at least half a dozen.

19,582. (Mr. Abraham.) To whom are the royalties paid in that case?—To the lord of the manor, the owner of the minerals.

19,583. (Chairman.) Is there no doubt about the ownership of the minerals?—None whatever.

19,584. The question, as I understand it, is as to how far the proprietor, as I should call him, of the minerals can work his minerals?—Or use the underground space.

Mr.
R. W. Cooper.
16 Dec. 1891.
Rights of
copyholders,
surface
damage, and
underground
wayleaves.

Right of
owners of
common land.

Mr. R. W. Cooper. 19,585. Paying for certain rights of the commoners?—Or use either the surface space or the underground space.

19,586. Have any cases of practical difficulty arisen in consequence of this?—Yes; several. Of course these practical difficulties in the end all become questions of money. It is a question of making the best terms you can. When these difficulties arise they all resolve themselves into a question of so much per ton.

19,587. Have the commoners been bought off?—?—Their successors; they are allottees now; they were commoners.

19,588. May we say that the allottees have been bought off by payment of some sort?—Certainly.

19,589. Has that also tended to increase the royalty upon coal?—Distinctly. We have had, I think, in Durham and Northumberland our fair share of reported cases on these questions in the law courts. We have a famous case of *Bell v. Love*, with which, of course, my Lord opposite is very well acquainted, reported in 9th Appeal Cases, p. 286, which went to the House of Lords. That was the case of the enclosure of a moor near the city of Durham. The lords there were the Ecclesiastical Commissioners as successors of the Dean and Chapter of Durham. Then we have that case of *Shafto v. Bolekow* in 1888, which was not reported; but I have the shorthand writer's notes of the judgment of Mr. Justice Kekewich. That was also the case of a common near Bishop Auckland, a place called Byers Green, of which, I think, the bishop was originally the lord, and of course the Ecclesiastical Commissioners were lords as his successors. In these two cases the decision on the question of the surface support was against the mine owner. Then we have the case of *Gill v. Dickinson*. We had that in the year 1880 or 1881, and the judgment, which was delivered, I think, by the late Mr. Justice Lush, is reported in the 5th Queen's Bench Division Law Reports, p. 159. That was the case of a common called the Wolsingham Common. And we have what is, I think, the last case to my knowledge, a case in which I was concerned myself, which was decided in the Court of Appeal in 1889, a case of the *Consett Waterworks Co. v. Ritson*. That is reported in the 22nd volume of the Law Reports, Queen's Bench Division, pp. 318 and 702. In that case the court below were of opinion that the mine owner was not entitled to let down the surface. That decision, however, was reversed by the Court of Appeal.

19,590. Is there any other case upon the restriction of the rights of copyholders in commons?—The rights to use the surface have been restricted. Upon that point there was a case decided as long ago as the year 1845 in connexion with one of these commons; it was the case of *Midgley v. Richardson*, which is reported in the 14 Meeson and Welsby, p. 595. There was another case in 1864, the case of *Hedley v. Fenwick*, which is reported in the third volume of *Hurlstone and Colman*, p. 349.

19,591. What was that case?—It was a case where a railway had existed for a good many years leading from a pit sunk on land forming part of one common. It ran over part of that common; then it passed over another common, the lords in both cases being the same, and eventually it joined a public line of railway. For a great many years the makers of the railway, the owners as I call them in popular phraseology, had carried their minerals—the common minerals belonging to the lord of the manor—from this common pit, as I call it, over this railway. They subsequently took a fresh coal mine adjoining, a freehold coal mine, not belonging to the lord of the manor. Thereupon the owner of the surface over which the railway passed applied for and obtained an injunction to prevent the railway being used for the carriage of coal not belonging to the bishopric of Durham. That case again was compromised by a wayleave lease having to be taken. I think the rent was fixed at a penny per ten—indeed I should not say I think—I

know it was, because I happen to know all about the case.

19,592. (Mr. Jamieson.) Do you quote that as a case of hardship?—The question of hardship is hardly a matter for me to express an opinion about.

19,593. Or for remedy?—Yes, I am rather disposed to think that it was. I will explain to you how the anomaly rose. In the case of one of these commons there was an undoubted right on the part of the lords of the manor to authorise their lessees to carry any coals wherever found by railway, but in the case of the common immediately adjoining the right was limited to coals belonging to the bishopric of Durham.

19,594. (Lord Macnaghten.) In the Enclosure Act?—In the Enclosure Act.

19,595. A great deal of difficulty very often arises from the variation of language in these Acts?—Very much so, indeed.

19,596. Have you ever thought of any means by which that might be remedied?—In the case of these enclosures, where the lords originally had a right I take it to make the railways and to use the soil was for any purpose they thought fit, because the soil was absolutely the property of the lord provided that he preserved the pasturage of the commoners, which was a comparatively small matter. I do not see why where these railways have been constructed for a given purpose and used for a given purpose they could not be used for all purposes of the colliery.

19,597. Still these rights have grown up and they have been recognised?—They are defined by Act of Parliament; they are rights undoubtedly in the legal sense of the word.

19,598. (Mr. Jamieson.) And everybody had notice of them?—I do not think so at all, because in all these cases I am quite sure that they were a surprise to the mine owners.

19,599. They had legal notice of them?—In the sense that every subject has legal notice of an Act of Parliament, yes.

19,600. (Chairman.) And did the landowner also receive wayleave rent?—That same landowner receives from another colliery which uses the same railway a wayleave rent for the coals passing over the same railway.

19,601. Have you any other cases in which you know of difficulties of this kind having arisen?—Owing to these variations in the powers in the Acts?

19,602. Yes.—I had a case of my own not very long ago where a pit had been sunk for drainage purposes on one of these commons. The pit had been sunk for many years, and it was sunk, of course, in connexion with the drainage which was naturally produced in the ordinary course of operations in the common colliery. The lessee subsequently took some adjoining freehold coal belonging to an adjoining proprietor, not the lord of the manor, and of course he worked it in connexion with the rest of his coal. The somewhat astute agent of the owner of the surface after some time discovered that the drainage from the freehold coal naturally mixed with the drainage produced in the common coal by gravitation, and he immediately threatened to apply for an injunction to restrain the use of the pit unless we came to terms, and to terms we were obliged to come; we could not help ourselves.

19,603. (Mr. Jamieson.) Is that again a case of hardship?—I think it is. I cannot conceive why in this case the owner of the surface land, which was undrained moorland, or land which without an existing pit upon it, was not worth more than 5s. an acre in the ordinary way—absolutely moorland—should in consequence of what was little better than an underground accident, that water gravitated from royalty A into royalty B and there mixed with the water of royalty B, demand a very excessive rent. The rent, I may tell you, was 100*l.* a year for a field of 25 acres.

19,604. For pumping out another man's water?—No, not for pumping out another man's water, but

Easement charges.

really because another man's water had by little more than an accident mingled with the water which undoubtedly had the right to be there. It made no material difference, and when I say "material difference," I mean as distinguished from theoretical difference, to the value of the surface, none whatever.

19,605. (Mr. Rhodes.) It was a legal pretext for exacting the rent?—Well, it was a legal reason why he got the rent. I took the opinion of a very well-known counsel, and he advised me that I had no option but to submit to the demand for the rent or to an injunction, and of the two evils I chose the lesser.

19,606. (Chairman.) You have some other instance to give us, I believe?—Yes, I have.

19,607. Will you mention it?—It is simply by way of illustrating these curious conditions of tenure in these various properties. I have a case where the working shaft of a colliery was sunk on some common land. It is a large royalty, a common royalty; but for the purposes of convenience the lessee took a comparatively small royalty adjoining to work in conjunction with the coal from an adjoining proprietor. The owner of that piece of allotment land on which this shaft and colliery works were standing, and had been standing for a great many years free of charge, in course of time learned this and demanded and obtained a shaftage rent of, I think 1*l.* or 1½*l.* a ton on all non-episcopal coals coming up that shaft. The owners of the allotment surface over which the railway which takes away the coals from the pit was laid, in like manner obtained wayleaves at the rate of 150*l.* per mile per annum by reason of the railway being used for purposes other than that of conveying common coal.

19,608. (Chairman.) How much did these surface wayleaves amount to?—In that case they came to 3*l.* per ton.

19,609. That is besides the other royalties?—That is in addition to the out-stroke rent, or underground wayleave rent, which is payable to the owners of the common coal on the freehold coal which, I think, in that case, is a penny, and, of course, it is in addition to the rent which is paid to the proprietor of the freehold coal himself.

19,610. (Lord Macnaghten.) Is it your view that nothing ought to be paid in those sort of cases, or that the payment is exorbitant, or that exorbitant claims ought to be repressed?—I think that those exorbitant claims ought to be repressed, because, you see, the question of the payment depends really upon the necessity of the coal worker. It is a question of what he can afford to give. You cannot, at least I cannot, I am not sufficiently able to make all these payments fit in so as to get compensation out of one property at the expense of another. I have tried to do it, and I have failed, and the general result is that these claims being made under what Mr. Rhodes has popularly termed a legal pretext, have all helped to make the rent very considerable. In this case, indeed, these, what I call legal matters, make the rent of this piece of freehold coal nearly 11*l.* a ton.

19,611. (Mr. Jamieson.) What is the size of that freehold coal?—I think about 300 or 400 acres.

19,612. And the fitting there would cost how much?—The fitting?

19,613. Yes, to work it?—I could not tell you.

19,614. Is that very important?—It lies immediately adjoining the common coal, and it is of the same character as the common coal, and the rent of the common coal is 5½*l.*

19,615. If the alternative of that owner were to make a separate fitting for himself or to pay wayleave to another man, would it not be a simple matter of calculation which was the better course to take?—It did not become so in this case because, as a matter of fact, the rent this particular owner gets for his own coal is a higher rent than the rent which is paid to the owners of the common coal.

19,616. (Lord Macnaghten.) Because he made a bad bargain?—Perhaps it was a bad bargain. But you cannot in practice make these, what I may call,

easement charges fit in so as to make the coal that is free from easement charges equal, as it were, in rent to the coal that is subject to easement charges—you cannot do it.

19,617. (Mr. Jamieson.) If you were to abolish easement charges?—I was not suggesting abolition; I suggest nothing.

19,618. (Lord Macnaghten.) You were not suggesting abolition?—I do not believe in the total abolition of vested rights; I believe they are all questions of adjustment and compensation, according to their merits.

19,619. (Mr. Jamieson.) It is a mere matter of degree?—Yes.

19,620. You would not have begrudged 7*d.* per ton instead of 11*d.*?—In that case I think I should. I do not think the coal is worth 7*d.* per ton.

19,621. (Chairman.) You have got other instances, I think, of the same class?—Yes, I have known cases of the owners of copyhold surface getting for the right to work the coal from 1*d.* to 1½*d.* per ton.

19,622. Is there any case of a copyhold manor adjoining the sea?—Yes; there, the lords of the manor obtain an underground easement rent for the coal that is brought, and has to be brought up the shaft, and there the owners of the lands have a certain share of that easement rent.

19,623. What has been the result of the difficulties in that case?—I do not know whether it was so in that particular case, but I have known cases of copyhold surface which have had to be bought at prices largely exceeding their real value for the purpose of getting over these difficulties, very largely exceeding the value.

19,624. Do you know cases in which properties have had to be bought for that purpose?—Yes, and bought more or less under the influence of either writs or bills in Chancery.

19,625. Those cases which you have mentioned are classes of difficulties arising from different kinds of tenure?—Yes, that is it.

19,626. What general idea have you for remedying these things which you consider to be hardships?—I think that as far as possible (subject of course to the question of terms, I do not know how to define the terms; I have not pretended to consider that) but I think as regards the mere question of legal powers the powers as it were of the minerals in relation to the surface, they ought to be on one uniform system both as regards the rights to use the surface and the rights to use the underground space.

19,627. And how would you settle the claims of the parties who either consider that they have claims, or who have real legal claims to some compensation or consideration, how would you settle those claims?—That is a matter which requires a good deal of thought and consideration undoubtedly, but I do not know that it is an impossibility.

19,628. Have you thought of any suggestion?—I have not.

19,629. (Lord Macnaghten.) Is it your general view that the mine owner ought to be at liberty to let down the surface in working his mine and paying compensation?—Yes, that is my view, except in the case perhaps of buildings. I should have certain special provisions as regards buildings, but I think in the case of the ordinary surface the payment of money compensation meets all the equities of the case.

19,630. From the mine owner's point of view?—I think so.

19,631. (Chairman.) And the compensation should be a fair compensation for the damage that is done?—Yes, I should give a liberal compensation.

19,632. A liberal compensation?—I should give a liberal compensation for the damage done.

19,633. To be settled by arbitration or something of that kind?—I should like to have it settled by arbitration certainly, I think. I know that in practice surface owners are always willing to waive their right to support, where it exists, for consideration in the shape of a rent or something of that sort, and if

Mr. R. W. Cooper. 16 Dec. 1891. Easement Charges.

Compensation for surface damage.

Mr.
R. W. Cooper.

16 Dec. 1891.

Compensation
for surface
damage.

Arbitration.

Rights of
surface and
mine owners

Compensation
for surface
damage.

that be the case they are really urging their right to support, not so much as it were for the protection and enjoyment of their own property on the surface, but as a means, more or less, of coercing the mine owner to pay them a rent out of the coal.

19,634. (*Lord Macnaghten.*) It is an interference with a right?—It is an interference with a right, but I do not think it is an interference with what I should call a natural enjoyment of property.

19,635. Not if he has all the drainage stopped and a pool in front of his house, and the house pulled down?—Of course I except the house, but in the case of the drainage of the fields that is a matter which can be easily remedied by drainage and by making the mine owner pay the costs. I think that mine owners in the north as a rule would be only too happy to do the drainage; if they were allowed to do the drainage they would be very glad to do it, and to pay the cost; but they have no power.

19,636. (*Mr. Jamieson.*) What would you define as the enjoyment of the land?—I define it as the natural enjoyment of it as land.

19,637. Does it not mean getting as much money as you can for it?—No, I do not think it does. I think that is a harsh application of the idea, "May I not do what I like with mine own?" I do not think a man may.

19,638. (*Lord Macnaghten.*) Would you leave these questions to arbitration generally, or would you have a board to arbitrate, a tribunal?—On the whole I think I should rather leave it to arbitration generally, leaving the parties to select as it were their own tribunal, each would select as his own arbitrator a practical competent man, and if they differed they would appoint an umpire who would very soon settle the matter; whereas, if you have a tribunal, the persons concerned have no voice in the nomination of the person discharging the functions of that tribunal. He may be competent or he may not. I think arbitration works pretty satisfactorily.

19,639. (*Mr. Dale.*) Would you have a procedure pretty similar to that of the Lands Clauses Act?—Yes, personally I should much prefer arbitration by practical men; we have a good many of them, I think, in the north, and in other parts of England too, especially on matters of this description—rather than by any tribunal.

19,640. (*Chairman.*) Have you any cases of difficulty in respect to severance by voluntary deed?—There, of course, the relative rights depend altogether on the terms of the deed, and no doubt various cases have arisen in which the rights have varied, and there have been certain restrictive powers exercised on the part of the surface owing to the variation in the language of the deed. That has generally arisen under what I should call old deeds. We have had several cases in the north, which have led to decisions, arising under deeds made in the 17th century—in 1630 and 1660, and so on.

19,641. Does it not depend a good deal upon accident whether there has been a careless enumeration of powers and so on?—It altogether depends upon the terms of the deed, and to a certain extent upon the interpretation which is put upon the language of the deed by the tribunal.

19,642. Is the effect of that that there is a great variety in the relative rights of the surface and of the mine owners?—A very great variety. One property may have free rights comparatively, and another property may have very restricted rights.

19,643. Have you any observations to make in respect to the surface support?—Yes. Of course the question of surface support is comprehended in the question of compensation for damage caused by letting down the surface. The question of surface support is a matter that has led to a great deal of legal decision in this country, and there are numerous cases upon the question. *Prima facie* the owner of the surface is entitled to the support, but he may lose that support by the terms of his tenure, as shown by the various cases we have been discussing.

19,644. (*Mr. Jamieson.*) What you have said with regard to copyhold would apply by analogy to the support of the surface?—It does; it applies to freeholds. I may mention that there is no right of support to be obtained in respect of water; in conducting your underground operations you may drain underground water, even though it cause shrinking.

19,645. (*Chairman.*) Then your view generally would be that the mine owner should have an unrestricted right to work his minerals to the best advantage, subject only to the liability to pay money compensation?—That is my view.

19,646. (*Lord Macnaghten.*) Does that apply both to houses and to agricultural land?—No.

19,647. I think you were going to tell us what you propose?—What I thought of in the case of buildings was this—that in the case of new buildings, where buildings have just come upon the surface, it would be right to give the owner of the buildings the option of purchasing the coal for his own support; but I do not see in the case of a new building that he should be entitled to greatly encumber the mine owner by putting up his new building without paying for it. In the case of an old building, which has been there so as to obtain an undoubted right to the extra support necessary for that building, I should be rather inclined to let him have that right and say the mine owner must leave the coal unworked, but with that qualification. I think the mine owner should be at liberty to work the coal out.

19,648. Then you would leave the compensation exactly as it is with regard to the old buildings which had acquired the right?—I think I would.

19,649. But with regard to new buildings, you would give them a right to purchase coal similar to that which is given to railway companies?—I would suggest that, as in the case of railway companies and water companies, and also in the case of local authorities, for the support of their sanitary works.

19,650. (*Chairman.*) Does the law with respect to the compensation for surface damage work satisfactorily?—In practice it does not. I am not saying anything against the theory of the law. In the north it works in this way: that the land is let to surface farmers, surface tenants, and the coal worker is bound to compensate them for all damage caused to their crops. The landlord's rights are plain, and he, of course lies by; year after year the tenants do not drain their land, and they further say it is not their affair; the landlord does not do it, year after year the tenants go on making their heavy claims, and they get an amount of damages which in the north becomes a very serious burden indeed for these damaged crops. There is an arbitration clause in all leases as between the landlord and the colliery tenant; but the arbitration clause does not bind the surface tenants, and you cannot get them bound by it, and they very frequently get into the hands of designing persons, both laymen and otherwise, and they make heavy claims. If you take these cases to trial it invariably happens that you may make an offer which is perfectly reasonable, but the tenant claims, perhaps, double, and the general result of the trial is that the tribunal and the jury split the difference, and you have all the costs to pay.

19,651. How can that be remedied?—My view is that if the relative rights of the surface and of the minerals were defined, and were regulated in the way I have suggested, then, of course, the surface tenant would be bound by that regulation—it would be part of his tenure. I know some cases in Durham just now where I am concerned where the farmer tenant is getting for a very small proportion of damaged land on his farm holding an amount of annual crop damage, as it is called, which practically pays the rent of the entire holding.

19,652. (*Mr. Forster.*) In that case would it not be advisable for the lessee of the coal to take a lease of the land as well?—He might take a lease of an

enormous amount of land which is of no use to him, because, of course, colliery owners are not farmers.

19,653. They might become so?—They would be most unwilling to do so, because the farm would almost always be held at a considerable cost.

19,654. (*Mr. Dale.*) I take it that in the case of a surface tenant who holds under a lease having some years to run his claim would be measured not merely by the amount of rent which he might have to continue to pay for land no longer capable of tillage, but would be measured also by the profit that he as a farmer was deriving from that land?—I think it would; it would be a question of the actual damage caused to his interest.

19,655. Have you known a case in which a tenant holding under a lease having several years to run was, in fact, by reason of a considerable amount of damage done to his surface, the recipient of the rent that he was paying to his landlord and a profit?—I have known of such a case.

19,656. (*Chairman.*) I think you have practically given us your suggestions on this question?—I do not think I need repeat what I have said. I think that if the relative rights of the owners of the surface and of the owners of the minerals were properly defined by statute or code, instead of depending, as they do now, upon an innumerable variety of considerations, then the surface tenant would take subject to the conditions of his tenure, and the matter would be settled in that way.

19,657. As regards underground easements, do you consider the same principle applies?—Do you mean in relation to the owner of the surface?

19,658. Yes?—Certainly I do. I certainly cannot see why the owner of the surface should have any right whatever to restrict the use for wayleave purposes of the underground space which does not concern him in the slightest degree, which does not affect the value of his property in his ordinary enjoyment of it in the remotest degree.

19,659. As I understand, in the instances you have given there are cases in which a copyholder can do that?—Yes, and does.

19,660. Are there cases in which he has exercised that power?—In which the copyholder has demanded the rent?

19,661. Yes?—There are. I may say also that I have known of cases where freeholders have done it. I know of a colliery where it was originally freehold, that is to say, the mines were sold apart from the minerals early in the present century, with what were conceived to be full powers of workings. The minerals were sold, and also the right of working in conjunction with them some adjoining minerals, which were then held on lease by the purchasers. In recent years the area of the coal held on lease by the purchasers or their successors became enlarged; as the workings developed they took fresh coal from the same landlords. The owner of the surface, although the colliery had been fully established for many years, and although the place had been entirely covered with surface works for some time, then threatened an injunction and obtained a rent, I think it was three halfpence a ton, for the privilege of using this underground wayleave space for the purpose of carrying the leasehold coals which lay beyond the original limit referred to in the original deed. The colliery is in operation now, and the rent is being paid now.

19,662. Coming now to surface wayleaves, have you any opinion to express upon the difficulty of obtaining power to cross land to get from collieries to a railway?—The difficulties undoubtedly do exist; they are, of course, all questions of money. There are surface wayleaves in some parts of Durham to a considerable extent—a very considerable extent indeed. I know one railway of, I think, 18 miles long, and I know of another railway 5 miles long; I believe I know of two which are 5 miles long.

19,663. Do you consider that high charges are put upon coal in consequence of any difficulties of this kind?—I think increased charges certainly have been

put upon coal by the existence of surface wayleaves. I observe that the idea appears to have been suggested that these surface wayleaves were fully taken into consideration in fixing what I call the rental value of the coal to the proprietor of the coal before the coal was led. I do not at all agree in that view. My experience does not lead me to that conclusion at all. I observed that there was an answer given at an early stage of the Commission by Mr. Hedley, the chief viewer of the Consett Iron Company, a man who has as large an experience of these questions of wayleaves as any other man, and I think that answer represents the case very truly. As he says, you cannot say they are not at all taken into consideration, because the lessee urges them as strongly as he can, but I think they are by no means fully taken into consideration in fixing the rent.

19,664. You think it is not the case that they are taken fully into consideration?—I have got several cases in my mind where I am perfectly certain that they could not have been taken into consideration fully in fixing the rent, or at all.

19,665. How can you account for the very able men who take these collieries, the mineral workers, not taking that matter into consideration, which would appear to be a very obvious matter?—Because they were told, "If you do not find it convenient to pay the rent I ask for the coal, somebody else will give it," and so the lessee took the coal.

19,666. (*Mr. Dale.*) May not the necessity for a wayleave present itself after the coal has been taken?—Yes.

19,667. By reason, for instance, of some new railway?—Yes. In that very case of Hedley v. Fenwick the necessity arose after the coal had been taken. Freehold coal had been taken at a rent; the rent was fixed, and then they began to use the railway; then the necessity for the wayleave became apparent, and they had to pay 1*l.* per ton.

19,668. The route for the minerals sometimes changes?—Yes.

19,669. Either because it is going to another market, or because there comes to be constructed in the neighbourhood of the colliery another railway?—Yes.

19,670. A railway which was not foreseen when the mineral was taken, but which it is very expedient should be used?—Yes, you cannot absolutely foresee it when taking the coal.

19,671. (*Mr. Jamieson.*) The new route, then, must have been a cheaper route, the old route which was originally used must have been a more expensive one?—I am not thinking of a special case. I was only replying to what I considered to be a hypothetical case put by Mr. Dale. When I speak of a case of coal rent where I think the wayleave cannot have been taken into consideration, I am speaking of an actual case. I know of a case at the present time of coal situate at the beginning of a railway, freehold coal, the rent, I think, is 9*d.* per ton and it pays a wayleave of 1*d.* Another competing colliery situate at the bottom of the railway close to the public line pays a rent of 7½*d.* Both rents were fixed at about the same time, and in pretty much the same condition of trade.

19,672. (*Mr. Jamieson.*) The question I put was this. You have said that the occasion for paying the wayleave might arise and probably would arise after the lease had been taken?—It has in many of the curiously diversified cases that I have spoken of, because I am sure that the lessees would have tried to get better terms.

19,673. Of course the lessee would choose the cheaper route, including the wayleave, and if the former route was the cheaper route he would adhere to it?—Where he has the power of exercising an option, he does, no doubt.

19,674. It would only be with a view to obtaining the cheapest that he would pay a wayleave?—Yes; but in some cases—in most cases in the north—he has not an option; the private railway exists, and there is no alternative line.

Mr.
R. W. Cooper.

16 Dec. 1891.

Surface
wayleaves.

Mr.
R. W. Cooper
16 Dec. 1891.
Compulsory
powers of
wayleave.
Arbitration.

19,675. (*Chairman.*) Now supposing it was thought proper to confer upon mine workers compulsory powers of wayleave, what would you propose?—Assuming that was conceded, I prefer arbitration on all these matters to a tribunal.

19,676. And on what principles?—As regards the principles upon which any power should be granted I do not see why it should not be open to the arbitrators to determine not only the necessity of the line of the railway, but also the position of it, and to consider whether another position might be chosen with equal convenience to the coal worker and less inconvenience to the surface owner. I know a case of a large property where the minerals were reserved, and there is a precisely similar provision to that put in between the parties. Before the mine owner begins any railways or surface works he must submit a plan to the surface owner. The surface owner had, if he thought fit, power to object and to make any alterations for the purpose of lessening the inconvenience to himself without unduly affecting the convenience of the mine owner, any questions in dispute being referred to arbitration.

19,677. (*Lord Macnaghten.*) Would you make the arbitration final, or would you give any power under any circumstances of appealing to the court?—I would rather make the arbitration final. I think on the whole that even though there may be certain disadvantages the advantage of getting rapidly a settlement and finality outweighs the right of appeal. It is not a question of law or anything savouring of law; it really is a question to be determined by practical men, and if the two arbitrators on each side, one named by each party, are thoroughly practical men, and the umpire named by them is a practical man, the probabilities are that the award will be more just than that of a tribunal not knowing the locality and composed of a person or persons unknown to the parties themselves.

19,678. (*Chairman.*) Would you require any preliminary inquiry as to whether the compulsory sale of land, which, of course, would be involved, was necessary on the ground of public utility, or would you assume that any way of getting the mineral produce to a market would of itself involve a question of public utility?—I think myself that where the necessity exists for a way for getting the minerals away to a market—the market meaning, say, a public railway or a shipping place—the question of public utility, so far as regards the development of the minerals, exists of itself without any further determination.

Compensation
for breach of
covenants.

19,679. I think you have gone through most of those legal questions connected with mineral property which you proposed to deal with; but there is one other question remaining, namely, the question as to relations between the landlord and tenant?—Yes; that of course is a matter, as I note it in the proof, more of contract than of law. There are certain restrictions even now upon the power of a landlord. I mean he cannot forfeit a lease. I do not suggest that landlords do forfeit leases, but as a matter of law a landlord cannot forfeit a lease except under comparatively special circumstances, however full and general the power of forfeiture which is commonly inserted in the lease may appear to be.

19,680. Do you think that wherever money compensation is a proper and sufficient equivalent for any breach of the conditions of a lease that ought to be accepted rather than forfeiture imposed?—I do certainly.

19,681. Ought there to be some legal provision to that effect?—I think there should. Take the common case of a power of surrender of a lease, it varies, of course. It depends very much upon the reasonableness or otherwise of the lessor with whom you are dealing. I know some lessors who do not make the actual performance of the conditions by the colliery lessee a condition precedent to the exercise of the power to quit. They waive it altogether, and simply reserve their remedy in damages for the actual breach itself. Others are willing to accept the

tender of money satisfaction in lieu of the actual performance, the sufficiency of the tender to be settled by arbitration. Others again, and these are an unreasonable section, say you must accept our conditions or leave it alone, that is where the hardship comes in. I have had cases of that sort. I know of three cases at least of lessors insisting in the most useless way, except for the purpose of maintaining the lease and maintaining the certain rent, upon the actual performance of conditions precedent to the exercise of a power of surrender. It of course, prevented the lessees from surrendering, and involved the lessees in very enormous cost. I remember one case, one of the earliest that I do remember, which was a case where there was that same general provision. The colliery was eventually abandoned, as the lessee found it perfectly impossible to make it pay; he could not quit; his lease continued, I think, for something like ten or eleven years, he still paying the rent to the end of ten or eleven years. The lessor brought a heavy claim for damages, I think some 60,000*l.*; that was one of the earliest cases I was in. It was referred to two arbitrators, practical men, and the umpire awarded that landlord, I think, 1,400*l.* damages, and ordered him to pay half the costs of the colliery workers. Now, assuming the award was a just one, and I have no right to assume it was not, because they were thoroughly upright men who decided the question, if the colliery worker had had the option ten years before of tendering that 1,400*l.* he would have been willing to tender twice or thrice the amount. The fact does not admit of question that if he had had such an option as that of going to arbitration then he would have raised the question then, and he would have been saved thousands of pounds in the shape of rent which he spent absolutely uselessly, because the colliery has never been opened from that day to this. I know of another case where there was what I call a specific condition that the lessees had to sink a pit before they could quit. The landlord absolutely refused to waive the condition in any way whatsoever. The condition proved to be a perfectly useless one; but it was insisted upon although perfectly useless. The lessees had to go on and spend a large sum of money to fulfil the condition, and then they exercised their power to quit, and they abandoned the colliery after a loss of a quarter of a million of money. This is in recent times, and the lessees were well-known men in the north of England. The only thing that they got was that the landlord, again acting under bad advice at the time because he has since, I believe, altogether failed to let the colliery, elected under the usual clause to purchase the colliery plant which the lessees were entitled to remove. There was an elaborate arbitration with counsel on both sides as to the value of that plant, and I think the lessees eventually got 18,000*l.* out of what I may term the wreck.

19,682. (*Mr. Forster.*) I think you are wrong there because the sinking of the pit was not a useless thing for the landlord, it was a very necessary thing?—It was useless in this sense that he has not been able to get the colliery let since.

19,683. I do not know about that?—Has he?

19,684. I am not prepared to say he has not; but at all events he could not have let it without a shaft?—Has he let it?

19,685. (*Mr. Dale.*) The question is, whether he has let it with the shaft?—To the best of my knowledge he has not let the colliery.

19,686. (*Chairman.*) To go back to the principle of the thing, have you any other instances?—I had another case which I am going to mention. In the case that I have last spoken of the arbitration occurred some years ago, and if the colliery has been let it is very recently. Another case that I had in my own experience the other day—within the last six months—was the case of a coal mine in Derbyshire. I was acting for the lessees. There was a clause there, as

is usual, I think, in that part of England, that the lessee might quit on exhausting all the coal and paying for the coal. It turned out on investigation that, as a matter of actual fact, all the coal had been exhausted except a very small quantity of the coal which could not be worked; it had been thrown up, they had worked it as skilfully as they could, but it was thrown up and inaccessible. They had actually paid the entire value of the coal in the coal mine at the acreage rent; but, nevertheless, the lessors sheltered themselves behind the fact of their being trustees, and they sued for the certain rent. Eventually I got the matter compromised on paying a considerable lump sum down by way of discount of the value of the certain rent for the remainder of the period fixed in the lease. In all these cases, if the lessee had had the option of tendering money compensation for the non-performance of the covenants, the matter would have been settled at a very much less expense to him; it would have been settled promptly, and he would have avoided paying what, in his opinion, was an absolutely lost rent, because lessees do not abandon collieries except for a very good reason.

19,687. Then I take it your general view is that where money compensation is a proper equivalent for the breach of a specific covenant in the lease, that money compensation should be accepted in lieu of enforcing a specific covenant?—Speaking generally, yes, it is; because it very rarely happens in these cases, even in the case of what I should call specific covenant, that the money compensation does not amply meet the case. It is possible that a case might occur where it might not, but in the case of a breach of what I should call the general covenants of the lease—the general covenants to work in an orderly manner, and to leave the pit open, or to do a specific thing like sinking a shaft—I think clearly the money compensation should be accepted.

19,688. (*Mr. Forster.*) There is no difference between sinking a shaft and paying for it, is there?—Except this. I think that the lessors in the case referred to would not even take the cost of making the shaft; they said, You must sink the shaft and go on paying rent; they never gave the lessees any option. I know the lessees made every conceivable endeavour that they could to get out of that difficulty.

19,689. As a matter of fact, it is much the same thing whether you pay for the shaft or sink it?—Except what I have just said.

19,690. (*Chairman.*) There is another matter that you wish to mention, I believe, namely, the difficulties in respect to the assignment of leases to limited liability companies?—Yes.

19,691. Has that become a pressing matter?—It is now, I think, or it has in my experience become on several occasions a pressing matter. In the north of England particularly I think all our colliery undertakings, which were originally held by four or five individuals, have gradually become in the nature of family properties by deaths and settlements, and so forth. But the conditions have altered, and it has now become very desirable, in fact necessary in several cases, to convert the concerns into limited liability companies under the Limited Liability Acts. But the moment you do that, at least in many cases, especially where your shares are fully paid up, and where the shares in the property are held by trustees, you practically must have them fully paid up or the trustees will not hold them; when you go to some landlords for leases they say, We object to grant a lease to a limited liability company. Lessors have said to me, we object because the shares are fully paid up. That, of course, is a reason that we cannot get over. We object, secondly, because if you go into liquidation we practically have no power of distraint.

19,692. (*Lord Macnaghten.*) Surely that is very easily met by having a reserve fund; by putting aside a sum of money to answer to the year's rent?—Landlords will not be content with that. The landlords in the cases I have experience of have demanded

a specific security for the whole of the rent. They generally ask for a specific security for two years' rent. 19,693. That is not an unreasonable demand, is it, security for two years' rent?—I am not suggesting that it is an unreasonable demand. I am pointing out how the difficulty arose, and I say that the difficulty of the objection to fully paid up shares must be left to settle itself; but when the landlords say, We object to your company because we have not the power of distress as we would have in the case of an individual there, I think, that is capable of a remedy. In some cases I have had I am quite sure that if I could have assured the landlords that they would have a power of distress in the same way as they would have had in the event of the bankruptcy of the old firm they would have been quite content.

19,694. Now they have only got that for six months?—A year, I think.

19,695. I think it is six months?—I beg your pardon, six months it is; but, still, rents are or can be payable half-yearly, and I do not think landlords, as a rule, let their rents get more than six months in arrear.

19,696. (*Mr. Wood.*) Do they give them security for compensation for the land at the end of the lease?—I have heard of such a case.

19,697. Do they commute it?—I never have had a case of my own in my own experience. I am speaking of cases of this description: A firm of colliery owners was formed 30 or 40 years ago—I am actually speaking now from my own experience—all the original partners are dead; there are wills and settlements, and the powers of the trustees depend of course upon the powers in the wills and settlements. In some cases they have power to agree in the formation of limited liability companies; in other cases they have not. Where they have not, the trustees must sooner or later proceed to dispose of their property unless they can get a limited company formed with the sanction of the court, which they are very anxious to do, because it makes a difference to them. In the case that I am thinking of the original leases expired in the ordinary course two or three years ago. Then a limited liability company, being formed, goes to the landlord, still working and paying rent, and asks the landlord to renew the lease to the limited liability company. He objects and says, No, I must have the names of some individuals as lessees; they may be trustees for the company. Those individuals, perhaps, are trustees themselves, or have limited interest, but they have personally to become responsible for the term of 42 years or 63 years under the covenants of the lease. They say that is to a certain extent defeating one of the objects, and perhaps one of the necessities they had in making a limited liability company. I think myself that if landlords had in the case of a limited liability company the same power of distress on the liquidation of the company that they have in the case of the bankruptcy of an individual or of a firm, a large amount of the feeling on the part of the landlords against granting their leases to limited liability companies would be removed.

19,698. (*Mr. Rhodes.*) I will deal with the last question first, the question of assignment to which you have referred?—It is more with respect to granting a lease generally; but it involves the question of assignment.

19,699. Will you take the case of a lease containing a covenant forbidding the lessee to either assign or underlet, or attempt to assign or underlet, without the consent of the landlord, and followed by a provision that breach of covenant shall entail forfeiture?—Yes.

19,700. In that case if the lessee assigns to a limited company without consent he at once, I presume, would forfeit the lease?—I take it so because there is no relief against a forfeiture on breach of covenant against assignment.

19,701. Exactly, and therefore the position would be that A, B, and C being lessees, A, B, and C, retaining their personal liability to the landlord and assign-

Mr.
R. W. Cooper
16 Dec. 1891.
Assignment of
leases to
companies.

Mr.
R. W. Cooper.
16 Dec. 1891.
Assignment of
leases to
companies.

ing to a company, would at the same time put the landlord in a position to forfeit the lease, although he retained the full benefit of their personal liability, and of their estates?—Undoubtedly.

19,702. Now, in your opinion, is that an equitable state of things?—No, I think it works a good deal of hardship. I am quite aware of what the lessor may say from his point of view; that although I have the liability of the original lessees it does not follow at all that I can follow their estates; they may get dissipated into various hands during the long term of the lease, and therefore I have probably only to look in the ordinary course to the assignees of the lease.

19,703. Let me carry it a step further?—That particular thing is a difficulty; but still I think a good deal of the sting of the difficulty would be removed if you put landlords in the same position as regards the liquidation of companies as they are now as regards the bankruptcy of firms.

19,704. If you adopt the suggestion you threw out a short time ago and do away with the power of forfeiture if the money compensation can be assessed and be paid, would that meet the difficulty?—Yes; but there, again, one must be perfectly fair. I can quite conceive how in many cases money compensation is a difficult matter in a case of a breach of a covenant against assignment. Of course, as you know, if the landlord likes you can qualify a covenant against assignment by saying that the concession shall not be unreasonably withheld in the case of any responsible company, leaving the question of responsibility to arbitration, which is often done.

19,705. I quite agree?—But, of course, assuming that a landlord had a reasonable ground for refusing his consent to an assignment on the ground that the proposed tenant was a thoroughly objectionable—I mean an insolvent person, or something of that sort—then you know no money compensation would do for the breach of the covenant.

19,706. Quite so; but you know from your experience that as years go on the tendency is to grant long leases, and of necessity the leases must be long?—Every lessee of collieries that I am acquainted with desires to have as long a lease as he possibly can.

19,707. And a 60 years' lease in the ordinary course carries you beyond the term of a man's natural life?—Seventy years is supposed to be the span of life, but if you take 21 as the beginning of a man's legal existence, then 60 does carry you beyond that.

19,708. Now take the case of a large estate dominating a particular coalfield, and which ceased on inserting that restrictive covenant against assignment, would that or would it not, in your opinion, operate prejudicially on the development of that particular coalfield, because that is the question we have to consider?—I quite see that. Of course I can quite conceive conditions, but no such conditions exist in the north of England now, because our coal has been so thoroughly well exploited, to use a somewhat curious term; but I can quite conceive, of course, that it might do so, because the great disposition now on the part of persons engaged in trade, so far as my knowledge goes, is to act under the Limited Liability Acts. Though the Limited Liability Acts may have considerable drawbacks and faults, I think there is no doubt that they have tended to the development of commerce.

19,709. And I daresay it is within your experience that a large number of limited companies exist which are limited in name but which in reality are private partnerships?—In the north of England that is practically universally the case; in fact, I think, the only company I am concerned with which is not so is the well-known Consett Company, which is a large public company; but nearly all the others are merely private partnerships formed into what I call private limited companies, mainly for the reasons I have given.

19,710. You will correct me if I am wrong, is it your view that the amount of wayleave that a man is entitled to should be equivalent to the injury done to

the recipient of the wayleave by the exercise of it, and should not be measured by the injury that he is able to inflict on others by withholding it?—Supposing it to be previously determined that the wayleave is a necessity for property A. to be developed or worked?

19,711. Exactly?—I think so.

19,712. Now there are a great many cases, are there not, where difficulties have arisen in consequence of the decisions entitling a copyholder to restrain the mine owner from working coal beneath the copyholds?—Yes.

19,713. You gave us, I think, cases where money rents have been exacted running from 1d. to 1½d. per ton?—Yes.

19,714. Would a burden of that kind of 1d. to 1½d. per ton in amount be a serious matter in bad times for the coal owner to contend with?—Certainly. I myself in the year 1886 was, as solicitor, concerned in the promotion of a short Railway Bill (I mention this to show what you say about the amount) in Durham. My chief opponent, of course, was the North Eastern Railway Company. The only difference alleged by the promoters as regards the cheapening of the cost of transport was 3d. per ton; but after 10 days' hearing the Committee of the House of Commons passed the Bill.

19,715. Then I may take it from you that 1d. or 2d. per ton may have a very serious effect in retarding the working and development of mines during bad trade?—Retarding the development of the mines is a very general phrase, but 1d. or 1½d. per ton in bad times makes all the difference in many cases between obtaining or losing a contract.

19,716. Very well, that being the case the imposition of 1d. or 1½d. which may prevent the obtaining of a contract, to the same extent would prevent the working and development of the mine in consequence of the loss of the contract?—Clearly.

19,717. Now I want to ask you a question with regard to the powers of trustees and others to take into account shorts in granting new leases. Is it your view that under the Settled Lands Act and under the legal powers that at present exist the trustees cannot take into account past over-paid shorts in granting a new lease?—I have very great doubt about it. Of course, I speak with the greatest possible hesitation and deference in the present company, but I have very considerable doubt about it.

19,718. You also advocate that there should be powers to reduce the rent?—Yes.

19,719. And I notice you state that in your district that was generally met by the lessee exercising his powers of surrender and taking a new lease?—I have had absolute experience in my own practice of a large colliery in the county of Durham under a well-known landlord, and held by very well-known lessees, where that was exactly the operation that was carried out.

19,720. The lessee possessing that power is enabled to give the trustee the necessary pretext for making the reduction?—Yes. I had a case, I may say, in Wales where the trustees did it, I believe, entirely because the lessees had the power to surrender. If the lessees had not had the power to surrender, I should doubt very much whether the thing would have been carried out.

19,721. Are you aware that in a very large proportion of the covenants no such power to surrender exists?—Yes, I am perfectly well aware of it.

19,722. In those cases trustees would be unable to make reductions, you know?—I gave you a case in the county of Derby in the last 12 months, which was a case which nearly came to trial where I was defending the lessees.

19,723. Now, with regard to the powers of a tenant for life, assuming that the present law under certain circumstances is an inducement to the tenant for life to grant a short lease in preference to a long one, that is not so advantageous for the colliery lessee, is it?—Certainly not.

Rights of
copyholders

Effect of
increased
charges.

Powers of
corporations.

Wayleaves.

Sea coal.

Powers of
trustees.
Short
workings.

Reduction of
rent.

Powers of
limited owners.

19,740. Without there is a grant?—Unless there has been a grant from the Crown. I am thinking of a case that you know yourself, where the coal under the River Tyne is at present being worked by certain lessees of a pit with which you are concerned where the coal belongs to the Crown.

19,741. I am not aware of any cases in the tidal waters of a river where prescription has come in?—I know that in the River Wear, in its upper reaches—I dare say you know that too—

19,742. Yes?—Prescription has come in, and the adjoining owner has a title as against the Crown.

19,743. Then in the case of copyholds?—You quite understand that my evidence was that *prima facie* the Crown had the right in all these cases of foreshore.

19,744. I only wanted to make it clear, not to dispute your evidence, but to put it in such a shape that it was quite safe?—I quite understand.

19,745. Now in the case of copyholds, do you say that 1d. and 1½d. per ton is only paid upon half of the coals?—No, it is paid upon the whole.

19,746. They could work half?—They could work, it might be, a half, or it might be more or it might be less.

19,747. Certainly, but would they have to pay on the whole?—Certainly, that rent per ton in copyhold cases is on the whole produce underneath the copyhold.

19,748. Now on the question of wayleaves of which you were speaking, do you think that it really affects the general question of the development and the carrying on of mines?—Yes, I do, because, as I told Mr. Rhodes just now, I confess that where a colliery wayleave is the only means, as in the case of some of our collieries, of getting the minerals from the collieries away to a place of market, that is to say, making it merchantable, it is an indispensable part of the colliery powers.

19,749. Are you aware that these private railways can lead at a cheaper rate than the public railways?—I am quite aware of that, but that arises not from any question of the cost of obtaining the means of passage, but from other considerations altogether.

19,750. But still these collieries, which are leading over the private lines by means of wayleaves, are in just as good a position as other collieries alongside of them which have to send by the public lines?—That may be; it depends altogether upon the locality of the colliery.

19,751. So that they are not in a worse position, but they would be in a better position; if they had no wayleaves to pay they would be more favoured than the collieries than had to go by the public railways?—That again depends altogether upon the actual cost of the particular railway. I believe you are correct when you say that, generally speaking, the cost of carriage on a private railway is less than on a public railway.

19,752. Do you not think that, in one way or another, a tenant when he is going to take a lease of a railway would reckon up all that he would have to pay?—If he can he does, but in some cases he cannot.

19,753. Have you never known a lessee when he is going to the lessor's agent say, I will have so and so to pay upon that?—I have known them to say so; on the other hand, I have known cases where with an existing railway the question of the amount of the wayleave rent was hardly discussed at all—it was no use discussing it. The question was, What will you pay for the coal?

19,754. What do you mean by the existing railway?—I mean in the case of a colliery on an existing line of railway. I am thinking of two or three at the present moment where the lessee did not say to the lessor, "I have this wayleave to pay on that coal."

19,755. But he said so to himself, I suppose?—I cannot tell what he said to himself.

19,756. Now with respect to the question of giving people power to work under buildings on paying compensation, or rather of requiring the owner of the

Mr.
R. W. Cooper.
16 Dec. 1891.
Sea coal.

Rights of
copyholders.

Wayleaves.

Compensation
for surface
damage.

Mr.
R. W. Cooper.
16 Dec. 1891.
Compensation
for surface
damage.

surface to pay for the coal under the sites of buildings, would that not be a very awkward thing in the case of building ground near a town; would it not retard the development of the necessary buildings for a town?—Near a town perhaps it may, but one knows that near towns there is not much coal comparatively speaking. There are cases of course, and I myself know of cases where the working of a colliery is enormously retarded by its being too close to a town.

19,757. No doubt; and I quite agree with you that it should not be so?—No doubt it is so.

19,758. I think you answered about taking the surface that when a lessee is very much bothered with damages he always or generally at least has the possibility of taking the surface, but I think perhaps your observations did not refer to cases in which the land belonged to the same person as the coal?—Well, they applied really to both. Of course where the land has not belonged to the same person as the coal there he has no option of taking the surface; I mean to say, the landlord of the coal not being the landlord of the surface he has not the same means of influencing him. In other cases the colliery lessee is always anxious to avoid taking a lease of the surface.

19,759. No doubt, but what you would propose, then, is that that should be left to arbitration, is that so?—The amount of compensation to be paid to the surface tenant or owner should be left to arbitration.

Arbitration.

19,760. Is that any different to going to a county court?—I think from experience a great deal, because what takes place even now in a case of crop damage is this, that the farmer names a farmer friend and the colliery worker names a farmer friend, and they name a farmer friend as an umpire, and they meet without the intervention of lawyers at all, and settle the matter. I do not believe people are so fond of going to county courts.

19,761. No; but I mean if you had to go to either a permanent arbitrator or to any other?—I would not have a permanent arbitrator at all.

19,762. To a chance arbitration then?—Yes.

19,763. That must be as expensive or more expensive than going to a county court?—Not at all necessarily.

19,764. There would be three judges instead of one?—But you would not have lawyers' expenses to pay at all.

19,765. Yes, you would?—You have not in practice.

19,766. Have you known of arbitrations without lawyers?—Yes, any number. I had one the other day in which you were good enough to act as an assessor for me.

19,767. But you would have got off just as well in the county court there?—I am quite sure we should not. I have got a very strong view in favour of arbitration in these matters; I think it is the best course.

19,768. Of course, generally speaking, it is left to arbitration?—Yes, that is the reason why I suggest it, because my suggestion accords with a considerable amount of common practice.

19,769. Now in the case of limited companies, do you not think it fair that some provision should be made for these permanent surface damages, because you know if a limited company surrenders the lease, and perhaps has dissolved itself, the landlord has no further claim upon it?—That again opens up a very wide field of inquiry, because you assume that the company is dissolved, and that the liabilities are not satisfied. Well, a company may not do that without satisfying its liabilities. Of course the case I assume, and it is the only practical case, is a limited company which has practically no assets at all.

19,770. After a company is wound up the landlord has no claim on any assets, has he; that is, after the company is wound up, and the assets are distributed by the liquidator?—When the claims are gone into it is the business of the landlord to send in his claim to the liquidator before the assets are distributed.

19,771. Are you aware that subsidence may take place for a year afterwards?—Yes, but that is a matter which is capable of prospective assessment.

19,772. Then you would expect that people having limited companies should make some prospective assessment of damage or have some provision for it?—I think that is not at all unreasonable.

19,773. Now in your case where you say that a person should have the power of taking away under arbitration—you would give that power to a lessor, I suppose, as well as to a lessee—I mean of a mine?—I do not think I should, because I think the question really is one of utility to the working of the mineral. The lessor beyond getting his rent has no interest in the working of the mineral. All the risk, and it is a very large risk and a comparatively small profit, in working the mineral falls upon the lessee, and, therefore, I think the lessee is the person who should have the power, because if the lessor got the powers, I take it, unless he has prohibited, he would probably only sub let them to a lessee at a rental.

Wayleaves.

19,774. Then you would not allow the lessor having an unlet property to claim a wayleave if he was going to let it?—I do not think I should. The interest in the wayleave only arises in the working of the coal, and all the risk and trouble of the working of the coal falls upon the lessee. The lessor gets his rent without any risk and without any expenditure of capital at all. I think, taking no consideration with another, that a lessor has a better thing than a lessee having regard to the fluctuations in trade and the enormous risk of capital that is involved in all colliery undertakings.

19,775. I do not think that. However, that is a matter of opinion?—Well, I will not say greater, but I think he has nearly as good—at any rate practically as good.

19,776. In the case of one man buying a wayleave of a penny and thereby losing a contract, I suppose somebody else will get the contract?—That depends upon circumstances somebody else in England might or might not. I remember that matter was gone into in the proceedings on that Private Bill to which I referred by a number of men whom you know very well indeed; they gave specific instances of their having lost their contracts by an exceedingly narrow amount, and that the contract had been given to foreign coal for places like Hamburg and Rotterdam in immediate competition with English coal. Of course that again opens up a very wide field of investigation, but that fact was stated. What I mean is this, that from the mere fact of the English colliery owner A. losing a contract it would not follow that the contract would go to English colliery owner B. in times of depression.

19,777. No, but you do not mean to say that everybody is liable to these wayleaves?—No, certainly not.

19,778. They are the exception rather than the rule?—I do not know that they are the exception rather than the rule, because a large quantity of the coals in Durham is carried over private wayleaves, but when the exception represents a very considerable minority I do not see why the minority should suffer a hardship, because if you average it up with the majority the hardship is diminished.

19,779. But you are not prepared to say that these coals in the county of Durham, which are carried over private railways and pay wayleaves, pay more for going than the other coals?—That I could not tell without investigating every particular colliery, and that is quite beyond my powers.

19,780. I think you will find that they pay rather less?—What I say is this, that the power of increasing the cost of production exists, and a question which you have got to determine is whether the power is a right one.

19,781. I suppose you will admit that naturally a person before he takes a royalty counts up what he will have to pay, and he takes that as his full rent?—

Sometimes he does and sometimes he does not, because he cannot.

19,782. Why can he not?—I am sure in five out of six cases that I can give you the lessee never contemplated the extra charges coming upon his coal.

19,783. How do you mean he never contemplated the extra charges?—He never anticipated that he would have to pay these rents for these various wayleaves. I am sure they never did, because in several cases they contested the claim.

19,784. I am taking the case of an ordinary wayleave where it is well known, before the worker commences to work the colliery, that he is going to pay the wayleave; do you mean if I was going to take a lease of coal of a thousand acres, distant a quarter of a mile from a railway, that I would not consider before making up my mind what the rent was to be what I should have to pay to the railway?—Of course you, a lessee, would consider it, but my point would be whether you would get the lessor to consider it. I quite agree that in theory it ought to be done; but what I say is that in practice it is not done; it may be done partially, but it is not done by any means fully.

19,785. But a lessee, you know, does not give more than he can afford, or than he thinks he can afford?—Sometimes lessees do give more than they can afford; they are foolish and do give more.

19,786. It is very foolish of them?—They do it, as you know.

19,787. No, I do not; I am not aware of that?—They do it.

19,788. (Mr. Abraham.) The district that you represent here to-day is a very extensive one, is it not?—I do not represent any particular district, but the district I come from is a considerable one.

19,789. Could you tell the Commission how many colliery workpeople would be affected or are employed in that district?—Really I can hardly tell you off-hand. I have a rough idea that there are about 60,000 in the county of Durham, and I think 30,000 in the county of Northumberland.

19,790. It would not be far off then to say 100,000?—I think you might say about that, according to my general knowledge.

19,791. Approximately?—Yes, I think so, approximately. I do not pretend to give you the precise figures; the figures exist, but I am only speaking as a matter of general knowledge.

19,792. That is near enough. Is it a fact that landlords have an absolute right to refuse to relet on any conditions, if they like to exercise such power?—Yes.

19,793. They have that right, even at the expense of throwing all these men, with many more are dependent upon them, out of employment?—They have that right, whether it is at the expense of those men I do not know; they have the right.

19,794. They have the right?—Yes. I do not profess to be a political economist in any way.

19,795. Whatever be the result they have the right?—Certainly.

19,796. I think you told us that the Crown took possession of some lands that were formerly held by the Bishop of Durham?—No; the Crown did not take them; the Crown became the owners, legally and properly the owners, that is to say, of the rights. The Bishop of Durham had certain regal powers under ancient charters, and connected with these regal powers he had certain regal rights. These regal rights, including the right of the foreshore and the bed of the tidal navigable rivers, were taken from the Bishop of Durham and transferred to the Crown in the year 1858.

19,797. Did those regal rights bring him in any remuneration?—I cannot at the present moment say that I know of a case where, in the time of the Bishop of Durham, what I may call submarine minerals were worked. It may have been so, but I do not know of such a case; I do not think that that was the case. I think that at that time the science of coal mining had not advanced so far, at any rate people were not so

enterprising, as to take coal underlying the bed of the sea or the bed of a tidal navigable river.

19,798. Have minerals been worked since from that property which was once by right in the hands of the Bishop of Durham?—Yes, and are being worked at the present moment.

19,799. Was the bishop compensated in any way?—That I really could not answer; that would involve an examination of the question of the terms upon which the rights of the bishop were got rid of. I think you may take it generally that directly or indirectly the bishop and his successors were compensated.

19,800. (Mr. Burt.) I think you mentioned that the Newcastle Corporation are the lessors of some collieries?—Yes, they are; they are the lessors of one colliery which is at the present time in working condition, a colliery called the Walker colliery. They are also the owners of coal under a large tract outside the town called the Town Moor.

Newcastle
Corporation
as lessors.

19,801. (Mr. Forster.) Is that working?—That is working to the Spital Tongues.

19,802. And Elswick?—Yes.

19,803. (Mr. Burt.) Elswick and Benwell pits?—Yes, the Town Moor coal has been worked at those pits.

19,804. (Mr. Forster.) Then they have some coals at Hebburn, too, have they not?—Yes, they have some coals at Hebburn too.

19,805. (Mr. Burt.) Do you know of any other cases of town corporations being lessors?—No, I know of no other case.

19,806. Would Sunderland or Monkwearmouth have nothing to do with it?—Not to my knowledge. I do not pretend, of course, to speak with absolute accuracy, but so far as I know the corporation of Sunderland has not anything in the nature of real property. The corporation of Newcastle is a very ancient corporation, and is in that particular in an exceptional position.

19,807. You spoke of certain disadvantages arising from the short leases, and you also mentioned the fact that in Northumberland and Durham the colliery proprietors often build the houses?—They do so, I may say, almost invariably.

Term of leases.

19,808. Would not the short lease system also tend to induce the building of inferior houses for the workmen?—Distinctly.

19,809. Has that in any case come under your own observation as one of the effects?—There is the case that I cited in my evidence in chief of a 21 years' lease. I hope, of course, to get a longer lease by some means or other, but in that particular case undoubtedly the question of the length of the lease is affecting the lessee at this moment in determining to spend a large sum of money on the houses. The lessee is a client of my own, and I know that from consultation with him. You may take it that it is pretty obvious that a colliery lessee, before he lays out a very large amount of capital in the shape of colliery houses, which cost at least 100*l.* a piece, perhaps more, sometimes 100*l.*, sometimes as much as 200*l.* a piece, desires to have a long lease rather than a short one.

19,810. And that would obviously operate in the direction of making him build better or inferior houses, as the case might be?—Distinctly so.

19,811. (Mr. Jamieson.) What is the average rate of royalty in Durham and Northumberland?—I think you have it in some returns; but, speaking from my own recollection, it is about 5*d.*, I think.

Royalties.

19,812. Is that the average?—I think so; 4½*d.* or 5*d.* is the average.

19,813. What is the lowest you are ever aware of?—The lowest I have ever heard of is 2*d.*

19,814. And the highest?—The highest I have ever heard of is 15*d.*

19,815. You said that a wayleave of 1½*d.* would prevent a man taking a contract; would a difference between 3*d.* and 4*d.* have the same effect?—Yes, certainly; a penny is a penny, of course.

Limited
liability
companies.
Surface
damage.

Power of
landlords to
refuse to relet.

Regal rights of
the Bishop of
Durham.

Mr.
W. Cooper.
6 Dec. 1891.
Royalties.

Sea coal, and
payment of
wayleave.

19,816. There would be no economic difference, of course, between the man who paid an excessive royalty and the man who paid a moderate royalty for a wayleave in the question of taking or not taking a contract.

19,817. Therefore they are the same thing?—Yes, they are all part of the cost of production, and the question is, what is the total cost of production as compared with the selling price?

19,818. How is the coal under sea reached?—It is reached by underground drifts from the land coal.

19,819. Is there any wayleave paid for that?—Yes.

19,820. Have you any objection to state the wayleave that is being paid?—Speaking from cases within my own knowledge, I know two cases; it is practically 2d.

19,821. That is a fair charge, is it not?—No; if by "fair" you mean is it above the average, it is certainly above the average of underground wayleave rent.

19,822. Would you have supposed that the Crown should get this coal taken from below the sea and taken through the vassals', through the subjects', land for nothing; do you see any hardship in the Crown paying?—I do not see any distinction between the Crown in its ownership of minerals and a private person.

19,823. Do you, therefore, maintain that the Crown coal ought to come through the subjects' land for nothing?—If you put it as high as that, I think practically it should if no damage was caused. The use of the underground way makes no difference whatever to the person you call the subject.

19,824. Then the Crown, therefore, would take the use of the subjects' land for the removal of its coal for nothing?—Subject to the question of causing actual damage to the subject; that is to say, if any of the subjects' coal was rendered unworkable or inaccessible, clearly that ought to be paid for; but if it is merely a case of using the empty underground space, which is of no value, I think there it is very doubtful.

19,825. On what ground would you allow the Crown to have that privilege, and not permit the subject to have the privilege of taking the coal belonging to the Crown?—As I have said, I make no difference between the Crown and a private owner as regards the use of the underground space.

19,826. I am putting this case: that the coal is useless to the Crown?—As it would be possibly to a private owner.

19,827. To the Crown it is absolutely useless?—It might be.

19,828. And it is only made useful by its proximity to the land of the subject?—Yes, to a certain extent.

19,829. Is it not, therefore, a joint subject if it is to be made useful? The one cannot use it without the other; why do you give a preference?—I do not see that; I do not see how a power of preventing the use of property A by property B makes the ownership of property A a joint matter.

19,830. Though, unless you were by compulsion to compel the subject to allow the Crown to pass through, that coal would remain useless?—Yes; but I am only assuming a case where the subject, of course as must be in practice, is the worker of the coal, and is the person who is working the adjoining coal; I am not assuming anything else.

19,831. I was putting that as a forcible illustration of the wayleave paid by one proprietor to another?—I think the true test of all these matters is everyday practice and everyday business experience; one knows that that would never happen.

19,832. In the case of wayleaves underground, is it not the case that coal would be entirely lost to many a man if he did not get leave to pass through the property of his adjoining neighbour?—Not necessarily so; it no doubt is in some cases an economy to a man to avoid the sinking of a shaft on a surface; in some cases it is not; in some cases it is probably

a great advantage to get the coal worked in connexion with other royalties. It is a question, more or less, of mining engineering.

19,833. Then in the case of surface wayleaves, we exclude necessarily all questions of public utility, because if there be public utility Parliament will pass an Act for the promotion of a public railway?—Yes.

19,834. In the case of a surface wayleave why should not the owner of the surface get what he can for the use which his surface is to his neighbour who is a coal owner?—Because, I think, if you carry that doctrine sufficiently far you might authorise him to prohibit the use altogether.

19,835. What harm would be done by that?—I think a great deal might be done by it.

19,836. Might be done?—Yes, because the coal adjoining might not be worked at all.

19,837. That would be a hardship to the coal owner?—To the coal owner.

19,838. To whom else?—I should think to the persons who are interested in the production of coal.

19,839. Who are they?—I take it there is the coal owner in the first place; there is the profit earner, the coal lessee, in the next; there is the workmen in the third place, and the consumer in the fourth.

19,840. Is there not in your district an abundant supply of coal for the next unlimited period?—There is an abundant supply of coal, no doubt.

19,841. And, therefore, the public interest is not involved in that question?—I do not think that. I think, speaking generally, that anything that adds to the cost of production of a product affects the public interest. If you ask me to say in what particular proportions it affects the public interest, I could not; that is a matter that is much too refined for me; but it seems to me to be obvious that it must. One knows perfectly well, and experience tells one, that the cheaper you get a thing the better it is for the public at large.

19,842. Would the effect of these wayleaves in your opinion have an effect upon the price of coal?—No, I do not think it would affect the price of coal.

19,843. And, therefore, the public at large are not interested?—Yes they are in times of depression.

19,844. Not more by a wayleave than by a royalty?—Yes, they are, more.

19,845. In times of depression both would be better away, would they not?—That again depends upon the extent of the competition.

19,846. Therefore, the one is not in that economic sense different from the other?—I do not, of course, profess to be an economist in the slightest degree, but my own idea is this, that you cannot attempt to define matters of that sort by the mere mathematical rules of political economy.

19,847. With regard to the question of subjacent and adjacent support, is it not the case that that has been dealt with in comparatively recent judgments?—Well, the decisions have run now for nearly 40 years; they began about 40 years ago. I think the first reported case I remember is in the year 1854. I say I remember, I mean that I have read of; 1854 is before my time.

19,848. Forty years is a pretty long tenure. Is there any person in the business whom you think to be ignorant of the relative legal position of the parties?—Oh, dear, yes. I am quite sure that I myself am ignorant of the relative legal position of the parties.

19,849. Because why?—Because I make mistakes in construing their rights.

19,850. That is in consequence of the conventional terms of their agreements?—From the conditions of their tenure. Putting it more generally, I have made mistakes in construing their rights, because I have made mistakes in construing their deeds.

19,851. But, in point of fact, is not the relative position of the surface owner and the mine owner well and generally understood and defined?—Do you mean the general or the particular position?

Surface
wayleaves.

Rights of mine
and surface
owners.

The Wohlfahrt
Lead Mines.

19,852. The general position?—It is generally well known that *prima facie* there is a right to support; that is known as anything else is known; but the particular position and the application of the particular position is by no means well known.

19,853. If you alter the general law, therefore, you would be now taking away something which the decisions of the court have given to a numerous body of people in that district?—I think you would do them no wrong, and that you would do the persons who suffer a great benefit.

19,854. You would be taking away something that they have now got?—True; but I am not aware—I never heard of a reform in this world being effected without taking away something that someone possessed, or there would be no cause for reforms.

19,855. But would you take it without compensation?—I do not propose to do so. I propose to give them full money compensation for actual injury suffered.

19,856. Which is the deprivation of the right which they now have?—Which I think is not a beneficial right in the ordinary sense; it is an obstructive right.

19,857. It is a right that they could sell for money?—Oh, dear, no; it is not a property.

19,858. It is the power to prevent minerals being worked except with their consent?—It is not, indeed. The mine owner has the full power to work without their consent. He can take out the whole of the coal provided he does not let down their surface. It is in no sense a right of property. When I say that, I speak with the sanction of judicial decision, that it is not a right of property in any sense at all.

19,859. But it is a right which, in your own experience, has been repeatedly paid for?—Yes, and, I think, unjustly paid for. I am sure of it, because in all those cases the lessees were persons of thorough respectability and responsibility who were fully prepared to pay the amplest compensation in money for the damage.

19,860. (Chairman.) There was a question put by Mr. Jamieson in relation to public utility. I think you wish to give some explanation?—Mr. Jamieson, I think, was referring to a question of Bills in Parliament. The degree of public utility, so far as my judgment goes, which influences Parliament, or which influences what you call Parliamentary procedure, is altogether a different matter from what is meant by this expression, "public utility," that we have been using in relation to the rights, as it were, that one mineral property in a mineral district should have for its own development over the intervening property.

19,861. Would there be any difficulty in people who want these railway rights going to Parliament for private rights?—Yes; it would be useless going to Parliament; it would be no use going to Parliament.

19,862. Is there any other observation that you wish to make?—No, I think not.

19,863. (Mr. Forster.) Might I just say a word about the Crown coal? Are you aware that the Crown only charges two thirds of the full rent?—I do not know that; I know that they charge a reduced rent, and I believe the rent in the particular case that you are referring to is 3½d.

19,864. In cases where the owner of the land takes the sea coal he takes it to the tenant of the land coal for the same as his own coal?—I do not know of any such case.

19,865. I do?—I speak, of course, subject to correction—in cases I have had to do with—I daresay you know the cases, the owner of the land coal did not take the Crown coal at all; he let it to the lessee, and the lessee of the land coal became lessee of the Crown coal, and the rents were fixed in the ordinary way.

19,866. And the two rents together would be about the ordinary rent?—By "the two rents together" you mean the Crown coal rent plus what?

19,867. Plus the wayleave?—In that particular case I think it was.

The witness withdrew.

Adjourned to to-morrow 11 o'clock.

FORTY-FIFTH DAY.

Thursday, December 17th, 1891, at 6, Old Palace Yard, Westminster, S.W.

PRESENT:

THE RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

Mr. WILLIAM ABRAHAM, M.P.

Mr. THOMAS BURT, M.P.

Mr. GEORGE AULDJO JAMIESON.

Mr. WILLIAM KENRICK, M.P.

Mr. JOSEPH EDWIN CRAWFORD MUNRO, LL.D.

Mr. CHRISTOPHER TALBOT REDINGTON.

Mr. ROBERT CHISHOLM ROBERTSON.

Mr. JOSIAH THOMAS.

Mr. CHARLES ALGERNON WHITMORE, M.P.

Mr. NICHOLAS WOOD, M.P.

Mr. HERBERT LYON, Secretary.

Mr. PHILIP ARTHUR SCRATCHLEY called and examined.

19,869. (Chairman.) You are managing director of the Wohlfahrt Lead Mines in the Rhine Province of Germany, are you not?—I am.

19,870. Which are held by the Continental Diamond Rock Boring Company, of which Sir Lyon Playfair is the chairman?—Yes.

19,871. Have the mines been at work?—Yes.

19,872. On a large or small scale?—On a comparatively small scale. It is not one of the large German mines; the present annual production being between 4,000 and 5,000 tons of lead ore.

19,873. And may your mines be considered as a good specimen of the lead mining industry of Germany?—Decidedly so, judging by the results.

19,874. How are the lead mines held?—They are held on lease for a long term of years.

19,875. From whom are they held?—From Mr. Wirtz, the owner of the concession.

19,876. Do you know when he acquired the concession or did he acquire it?—He acquired it, I believe, in 1861 from another German of the name of Suermant, but I do not know whether Mr. Suermant was the original owner of the concession or not.

Mr.
R. W. Cooper.
16 Dec. 1891.
Sea coal, and
payment of
wayleave.

Sea coal.

Mr. P. A.
Scratchley.

Mr. P. A. Scratchley.

17 Dec. 1891.

Royalty.

19,877. What are the conditions of your lease?—Well, the principal condition is that we have to pay the owner of the concession a royalty of 20 marks per ton of metallic lead contained in the ore raised and sold. The other conditions refer to continuous working and general conditions such as are usually inserted in leases.

19,878. Can you tell us how much per ton of ore that would come to?—Per ton of ore, the royalty is about 16s. 9d. per ton.

19,879. The mark is a shilling?—The mark being a shilling.

19,880. Can you tell us whether the arrangement for working a concession by payment of a royalty to the original concessionaire or the person who has acquired the concession from him, is common in Germany or not?—I believe the arrangement is very uncommon. I do not know myself of any other similar instance. I have made inquiries on the point and I am assured by Germans of experience that the arrangement is uncommon.

Mining companies.

19,881. Are the mines in Germany usually worked by companies?—I think they are, for the most part, worked by companies; sometimes by individuals, but there are a great many companies working mines.

19,882. Can you tell us what arrangement is made by the company with the concessionaire to get possession of the mines?—I cannot speak from my own actual knowledge as to that.

Inspection.

19,883. Do you find that Government inspection interferes with your working, or are you satisfied with the principle of Government inspection?—I think, I may say that we are entirely satisfied with the system of Government inspection. There is certainly no undue interference.

Taxation.

19,884. What taxes have you had to pay upon the mine?—The principal tax is the Government tax upon production of 2 per cent. That is arrived at every year. The tax is paid upon the value of the ore, and the value of the ore is fixed by mutual agreement once a year between our local manager and the Government representative. They generally arrive at a fair figure. We do not find any cause to grumble at it, and they make an allowance off the value of the ore for the cost of dressing and carriage to the dressing floors.

19,885. Is there anything paid for interest on capital or other charges?—Not in reduction of the value of the ore.

19,886. It is the gross value then?—They estimate what the probable market value of the ore is likely to be during the year, and off that they make a fair allowance for the cost of carriage to the dressing floors, and for dressing charges; and the difference is the amount upon which the tax of 2 per cent. is to be paid. Once every quarter a return is made up by the local manager, which he forwards to the Government, showing the quantity of ore raised and dressed during the preceding quarter, and its value upon the basis already agreed to between him and the Government official; and upon that return (the return being accepted as correct) the tax is paid.

19,887. Can you tell us at all how much per ton of lead that would represent?—I think I can. I have the figure here, about 2s. 6d.

19,888. Per ton of lead?—Per ton of ore.

19,889. So that that should be added to the 16s. 9d.?—Yes, it should be added to the 16s. 9d. It is in the nature of a royalty. The one is the royalty to the Government, and the other to the lessor.

19,890. Do you represent that the royalty is similar to that paid to the proprietor of the land in England?—Quite so.

19,891. What other taxes have you to pay?—Besides that we have to pay a tax upon buildings, and houses, and land, that is to say, upon such land as we hold; and we also have to pay taxes to the parish. The tax upon the land and buildings is calculated according to a scale of the supposed rentable value or what they are worth, all which is assessed by the Government. The taxes to the Gemeinde, or parish,

are based upon the net profits of the company, and vary with the requirements of the parish itself. For instance, in the parish of Hollerath, near to us, I think that last year they were 90 per cent., whereas in another parish quite close to us they were 225 per cent.

19,892. Are these two classes of taxes on land and buildings paid to the State and the taxes paid to the parish common to all industries, and buildings, and land in the parish, or are they peculiar in any way to mines?—Not at all peculiar in any way to mines. Both taxes are paid by individuals as well as by companies, and by all companies, including mining companies.

19,893. Is there not a new tax upon profits which you will have to pay to the State at the beginning of next year?—Yes, by a recent law which comes into operation in 1892. It is in point of fact, to come into operation in January next; and companies as well as individuals will have to pay income tax in future on their net profits.

19,894. (Mr. Whitmore.) Have they not done so hitherto?—Hitherto companies have been exempt from paying income tax to the State. The only tax upon income has been the one to the Gemeinde.

19,895. (Chairman.) Is that tax likely to be a heavy charge upon the industry?—The tax itself will vary with the amount of the income.

19,896. When you say income you mean profits?—The tax is payable upon net income or profits. Of course, applied in the case of an individual, he has to pay upon his income, but in the case of companies the tax will be assessed upon their profits. If the income or profits are small, the tax will be light, but in proportion as the income or profit increases, the tax becomes heavier; it proceeds upon a sliding scale.

19,897. It is a progressive income tax?—It is a progressive income tax, and I think that it will come to something over 3 per cent. in our case.

19,898. Have you any difficulty in the acquisition of surface land for mining purposes?—None whatever; we have always been able to get what we wanted.

19,899. We have had it in evidence that the administration of mines has the power of settling what land is required for mining purposes, and after that if you can arrange with the surface owner you acquire the land; if you cannot arrange with the surface owner it goes before a court of law?—Yes; if we want a piece of land we go to the owner and tell him so, and if he is willing we buy it, and there is an end of it; but if he objected, then we should apply to the Department, and the matter would be dealt with by expropriation, and the price settled in the event of dispute by a civil court.

Expropriation of the surface.

19,900. Has the practice been to give only the ordinary agricultural value of the land or something more?—About the ordinary agricultural value. Nothing is allowed for prospective profit that might accrue.

19,901. Supposing that your works in any way damage mines or buildings, what remedy has the surface owner in Germany?—Well, no compensation is due to the surface owner on account of subterranean mining works except in the event of his being able to prove that he has suffered any actual damage owing to the abstraction of water, or on account of the subsidence of the ground near dwellings, or through other circumstances.

Surface damage.

19,902. Supposing that damage had occurred, how are the disputes settled if you have a dispute with a surface owner?—He would put in a claim for damages, and if we admitted the claim we should pay; if we did not admit the claim it would be a matter to be dealt with in the courts.

19,903. Practically you have no difficulty in settling those matters?—None whatever.

19,904. Generally, is it your opinion that the present law in Germany is favourable or otherwise to mining enterprise?—My opinion is that the mining law is decidedly favourable to mining enterprise. I think it is an encouragement, and that is also the

Development of the mining industry.

Royalties.

opinion of those whom I have consulted on the subject.

19,905. (Mr. Redington.) Is any fixed rent payable besides the proportional rent?—Besides the royalty, do you mean?

19,906. Yes?—None.

19,907. The royalty is always in the same proportion; it does not vary according to the price of lead in any way?—No; the royalty in our case is a fixed royalty of 20 marks per ton of metallic lead contained in the ore raised and sold.

Local taxes.

19,908. Does the concessionaire to whom you pay a royalty pay any local taxes?—Not upon our property. We pay all the taxes on the mines.

Liability of concessionaire to the State.

19,909. Has he any liability to the State for the management of the mines, or have you the whole liability?—I believe, as the owner of the concession, he is eventually liable to the State for seeing that the terms of the concession are properly fulfilled, but we should be liable to him in the event of any breach of our part of the covenants, which are stringent enough, and he would at once proceed to enforce his rights.

19,910. But the State does not deal directly with you?—It does in everything. The question has never arisen, as the State deals directly with us, but I should say that if there were any breach of the conditions of the concession, which we failed to remedy, they might come down upon him as the owner of the concession.

19,911. Did you state how long the lease was?—I did not; I am speaking from memory, but I think the number of years is 99 years from 1877.

19,912. (Professor Munro.) I think you have to furnish statistics to the Government regarding mines?—Of what nature?

Statistics furnished to the Government.

19,913. I was going to ask you of what nature?—What sort of returns do you mean?

19,914. What returns are the concessionaires of mines required to make to the State?—Very full returns of everything that they do. The quantity of ore raised, the number of workpeople that they employ, the different classes into which those workpeople are divided, and, in fact, all information of that kind.

19,915. Have you also to return the number of hours the workers have been engaged?—Yes; the number of hours they are engaged too.

19,916. And the wages that are paid?—And the wages that are paid.

19,917. In regard to wages do you furnish averages, say for a year?—Well, I do not know that we do. Of course it could be worked out, but I do not think that we do furnish averages.

19,918. How often have those returns to be made?—The local manager deals with all these points; the returns are not made direct from the London office of the company.

19,919. Do you find any difficulty in making the returns?—None whatever. They are kept up very close.

19,920. Are you acquainted with the English system of mining?—To some extent.

19,921. Would you consider that there would be any difficulty in the lessees of mines in England making similar returns?—I think that all German officials, even the local manager of a German mine, are so much more "red-tapeist" in their ideas that they more easily fall in with the requirements than an Englishman would. They are more accustomed to make returns and to comply with official requirements in many ways, which I think that managers in England would object to. There is another point; take the question of fines which the workmen in Germany are exposed to. There are some of a very stringent character, and if attempted to be applied to

English mines the men would in all probability very strongly object to them.

19,922. (Mr. Kenrick.) You stated that the royalty paid per ton of ore was 16s. 9d.?—About that; it works out about that.

19,923. Can you give us the market value per ton of that ore?—Well, that of course must depend upon the price of the ore for the day.

19,924. Can you state approximately what is the average price?—Recently, between 7l. and 8l. per ton. At the same time I may remind you that lead has gone down a good deal of late.

19,925. Just so. That royalty of 2 per cent., which is another 1s. 9d., makes a total royalty of 18s. 6d. on 9l., which would be, of course, 10 per cent.?—Yes.

19,926. That seems a heavy royalty?—Yes, it is very high.

19,927. Then with regard to the local taxes, I understood you to say that those were not peculiar to mining, but that they were taxes paid by every kind of industry?—Yes, and by every individual; all individuals have to pay their contributions to the Gemeinde, and their contributions are really in the nature of income tax.

Local taxes.

19,928. And every kind of manufacturing industry is taxed?—And I believe every kind of manufacturing industry is taxed; I am not aware of any being exempt.

19,929. So that there is nothing peculiar in a mining tax?—No.

19,930. (Mr. Burt.) Can you state how much the produce of the mine in tons per year is?—Do you mean the quantity of ore produced?

Annual production.

19,931. Yes?—It is between 4,000 and 5,000 tons, about 5,000 tons of ore.

19,932. The 16s. 9d. that you mentioned is paid to the surface owner, I presume?—Not to the surface owner, but to the owner of the concession. A concessionaire is the owner of the underground rights; he may or may not have anything to do with the surface. In this particular case he has nothing to do with the surface.

19,933. The surface owner is only paid for the actual damage done?—In the case of the surface you take such surface land as you want for your requirements; you purchase it.

Surface damage.

19,934. At about its agricultural value?—At about its agricultural value.

19,935. Does the Government at all interfere between the concessionaire and the worker or the mine?—I am not sure what you mean. In what sense would the Government interfere?

Government interference.

19,936. Is the 16s. 9d. a bargain between the two without anybody interfering?—The royalty was a bargain between the concessionaire and the company without any intervention on the part of the Government at all. In point of fact, the concessionaire had something to sell, and he sold on the best terms that he could get, which was not cash, but a prospective (now an actual) payment.

19,937. Was he the original concessionaire?—No, I believe not; he acquired it from Mr. Suermandt.

19,938. Then the 2 per cent. of which you spoke, amounting to about 1s. 9d. per ton on the ore, is a general Government tax paid to the State?—It is a State tax upon the mining production, and applies to all classes of mines, except salt mines, I believe.

19,939. Could you state the number of hours that are worked?—Yes; I think I can give you some information upon that point. All the underground miners work in eight-hour shifts without any break.

Hours of labour.

19,940. Eight hours' actual working?—Eight hours' working; but surface labourers work for 12 hours, with two hours allowed for meals.

The witness withdrew.

The Commission adjourned *sine die*.

FORTY-SIXTH DAY.

Thursday, April 7th, 1892, at 6, Old Palace Yard, Westminster, S.W.

PRESENT:

The RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

THE LORD MACNAGHTEN.
SIR WILLIAM LEWIS.
MR. ALFRED BARNES, M.P.
MR. THOMAS BURT, M.P.
MR. DAVID DALE.
MR. G. BAKER FORSTER.
MR. H. H. GIBBS, M.P.
MR. GEORGE AULDJO JAMIESON.

MR. WILLIAM KENRICK, M.P.
MR. CHRISTOPHER REDINGTON.
MR. CHISHOLM ROBERTSON.
MR. JOSIAH THOMAS.
MR. C. A. WHITMORE, M.P.
MR. NICHOLAS WOOD, M.P.

MR. HERBERT LYON, *Secretary*.

MR. CHARLES AUGUSTUS VANSITTART CONYBEARE, M.P., called and examined.

Mr. C. A. V. Conybeare, M.P.
19,941. (*Chairman*.) You are member of Parliament for the Camborne Division of Cornwall, I think?—Yes.

19,942. You wrote a letter to us a few months ago saying that you wished to be examined by this Commission in reference to certain statements made in evidence by Mr. Heard, of Truro, and also generally upon other matters affecting the mining industry of the country. Will you kindly say to what part of Mr. Heard's evidence you refer?—Yes, I think it is question No. 16792. I had not intended to trouble the Commission with my evidence, and it was only because a reference was made to me in this evidence that I ventured to ask permission to give evidence. I make that statement because in the first place, having gone over the evidence of Mr. Heard, Mr. Walter Pike, Captain Josiah Thomas (who is one of your Commission), and Colonel Fludyer, I find that altogether, taking the salient and important points, their evidence is entirely coincident with what I should desire myself to give, and I do not wish to go over the same ground. I have been very pleased to find that the evidence of those witnesses, at any rate, from Cornwall, goes almost as far I might say as what I should wish to press upon the Legislature myself. But of course this reference to my action in the House of Commons by Mr. Heard does not give the whole story, and I wish now to place my action in that matter in a clear light, because my political opponents, for one reason—though I do not wish to obtrude that on the Commission—have been making use of those statements in a way which is hardly justifiable. I am represented here by Mr. Heard, of course I do not mean to say unfairly—I am merely stating the facts, as having opposed and defeated the Bill dealing with the question of Cornish Mine Leases in the House of Commons. That is quite true. In answer to question 3599, Mr. Walter Pike says what is not quite exact—of course he did not know all the particulars—he says that that Bill of Sir John St. Aubyn, the present Lord St. Levan, has not been re-introduced. Those two statements taken together would naturally imply that I have been the means of obstructing a beneficial reform which would have done good to the mining industry of the county. I wish, if I may be permitted, to place exactly before the Commission what happened in connection with the whole thing. I do not want to go into mediæval history, but as complaint has been made about the notorious Dolcoath fine, I think I may start by saying that I believe I am correct in stating that the Dolcoath fine question was settled in 1883. I commenced my candidature for the Camborne division in May 1885, which was immediately after the closing of the Wheal Jane Mine to which I find considerable attention has been drawn before your Commission. At that time, in May 1885, I saw

myself the bills posted in the city of Truro for the sale of all the plant and machinery of the Wheal Jane Mine. Consequently there was a considerable feeling in the county at the time as to the injustice which it was thought the adventurers were suffering from, as was then, I think, called the arbitrary action of certain lords. That induced me naturally to turn my attention principally to the question of mining leases as well as to the grievances which the miners were complaining of in respect to the payment of their wages and so forth. I am mentioning this because I am not aware that between the year 1883, when the Dolcoath fine was settled, I think I am right in saying it was that year, and 1885 that any public or open action had been taken in the county with reference to seeking redress for the evils complained of. Early in my candidature having informed myself as to the general outlines of the whole question, I drafted two Bills on which I fought my election. (One was to redress the grievances of the miners, and the other was the Bill which I have had before Parliament more than once since, for the establishment of a tribunal which would control the arbitrary action, as we called it, of the landlords in reference to the granting of leases and mining royalties.)

19,943. As we have got the other Bill in our Appendix perhaps you will put in a copy of that Bill?—I will with pleasure (*handing in print*) (*see Appendix A. 1.*). I have a copy of both the Bills which I introduced here. I will state the particulars in one moment. I am not going of course to trouble your Lordship and the Commission with the details of the Miners' Bill, as we are dealing now simply with the royalties, but I may say that I drafted myself and introduced and promulgated throughout my division for the purposes of my election these two Bills in July 1885 or thereabouts.

19,944. I see the Bill you have put in is dated 1887?—Yes; it is a re-print, with alterations and amendments of the Bill as I originally drafted it, the Bill of 1886 not having been printed in the House of Commons. I have handed in a copy of the first print.

19,945. Is this Bill of yours, dated 1887, the first Bill that was introduced and printed in the House of Commons?—It is the first Bill that I introduced which was printed by the House.

19,946. Was there a Bill introduced by you in the House of Commons previous to 1887?—There was, but as you know we do not always have the Bills printed at once; and in consequence of the shortness of the session, arising from the dissolution, my Bill was never printed until the year 1887.

19,947. So that it was in 1886 when your first Bill was introduced?—I gave notice of it on the first day of the session when we balloted for places.

19,948. What was the date on the back of your first Bill?—I introduced my first Bill, called the

Mining Leases Bill, on the 22nd January 1883. It was backed by Mr. Borlase, then member for St. Austell, Mr. Burt, Mr. Walter Maclaren, Mr. Blake, then member for the Forest of Dean, and Mr. William Saunders, who was then member for East Hull, and the title of it was "A Bill to Regulate the Granting of Mining Leases in Devon and Cornwall, and to amend the Law Relating to Payment of Wages of Miners and the Inspection of Mines."

19,949. As I understand that Bill was not printed?—It was not printed because it was my first session in Parliament, and I am afraid I must confess that I was not quite up to all the difficulties of legislation. I put down the second reading for the 16th June, which was for some reason or other—I forget now—it may have been the Derby Day—a *dies non*. Therefore I withdrew that Bill and introduced another one in the same session which had practically the same title which was backed by Mr. Blake, Mr. Borlase, Mr. Allison, of Cumberland, Mr. Burt, Mr. Abraham, of the Rhondda Valley, Mr. Mason, of Mid-Lanark, and Mr. Saunders. That was brought in on the 22nd February and the second reading was set down for the 22nd June.

19,950. What became of that Bill? Was that Bill not printed?—That Bill was not printed owing to Sir John St. Aubyn's two Bills having come on for debate previously, and owing to the dissolution taking place immediately afterwards.

19,951. (*Mr. Thomas*.) Did Sir John St. Aubyn introduce two Bills?—He did introduce two Bills.

19,952. One was with reference to the Stannaries I believe?—One was the Stannaries Act Amendment Bill dealing with the question of miners' wages which we are not concerned with at present. The other was the Mining Leases (Cornwall and Devon) Bill which was introduced and the second reading of which came on on the 20th May 1886. I should like to mention that previously, on the 14th May 1886, we had a motion on mining royalties which was discussed at some length. It was moved by Mr. Mason, who was acting with me in the whole matter, and there spoke upon it Mr. Fenwick, Mr. Haldane, myself, Colonel Blundell, Mr. Warrington, Mr. Abraham (Rhondda Valley) and the Secretary of State for the Home Department, then Mr. Childers. Perhaps before I refer, as I should like to refer your Lordship, to the debate on Sir John St. Aubyn's Bill relating to mining leases I might just conclude what I was saying as to what had happened in 1885. I stated that I promulgated and printed two Bills, to which reference has been made by me. After that a County Committee was formed of adventurers and lords throughout the county. I think Captain Thomas, Mr. Pendarves, and all the leading and influential gentlemen interested in the industry were on that Committee, and following my lead, if I may so say, this Committee drafted the Mining Leases Bill which is now under discussion, that is to say, Sir John St. Aubyn's Bill which he introduced in 1886. That Committee was objected to by the mass of the miners who supported me in the election on the ground that there was no miners' representative upon the Committee, and although Colonel Fludyer, as a lessee, was himself on the Committee and tried to obtain a direct representative of the miners appointed or elected upon it, he was unable to carry his point. It was from that Committee that the two Bills which were introduced in the following session emanated. At Easter, 1886, a meeting of this Committee was held at Redruth—that was during the recess—and I was asked to attend, which I did. The Committee on that occasion endeavoured to persuade me to drop my Bill and support Sir John St. Aubyn's Bill. I objected to do so, and in fulfilment, as I thought, of my duty at the time, I opposed Sir John St. Aubyn's Bill when it afterwards came before the House of Commons in May. I am mentioning these matters to show the full manner in which the question was being worked throughout that session by myself and friends of mine in the House of Commons. I should like here to

mention that in addition to the resolution on mining royalties which we initiated in the House of Commons we had an influential deputation to Mr. Childers, the then Home Secretary on April 1st, which I headed, being supported by a number of members of Parliament; but so far as my recollection goes, and so far as this report which I have of that deputation goes, I think that besides Mr. Borlase no other member for Cornwall took part in that deputation. Perhaps I may be permitted now to refer for one moment to the debate of the 20th May 1886, to which particular reference has been made. Sir John St. Aubyn moved the second reading of both of his Bills on that occasion—the first one being the Stannaries Act Amendment Bill, that is to say, the Bill relating more particularly to the miners' wages and the miners' grievances generally. After it had been moved I objected to it on the ground that it was then 1 o'clock in the morning, and I gave, amongst other reasons, that it was too late to consider a big question like that. However, I allowed that Bill to be read a second time without opposition. Sir John St. Aubyn then moved the second reading of the Mining Leases (Cornwall and Devon) Bill, which you have among the appendices to your report. I do not know whether I shall be trespassing too much on your time if I just read a few sentences from what I said on that occasion. It is very short. I said: "I have a much stronger objection to this Bill than I had to the last. The Bill does not deal I think with a single one of the great grievances we in Cornwall complain of. The public of Cornwall are in favour of a far more direct and stringent reform of the laws relating to mining leases than anything contained in this measure. This measure has been condemned by the public opinion of the county as inadequate and useless to remedy the evils which are complained of. The people of Cornwall, taken as a body, are in favour of the establishment of a mining commission for the purpose of dealing with mining questions. The China clay industry in particular; the China clay industry is excluded from your consideration, therefore I will not mention that. "The question of dues upon profits, which is really the burning question in connexion with the important mining industry in Cornwall, is not dealt with at all by this Bill, while questions connected with compensation for improvements, fines, and other matters of great importance to the adventurers and others concerned in mines in Cornwall are treated in the most inadequate fashion. It is perfectly well known that a measure has been introduced into this House to extend to the whole country and to deal in a systematic and thoroughly reforming manner with all the questions in which great interest is felt in every mining constituency of the country. The passing of this Bill would simply be used as an argument in favour of excluding Cornwall from the benefits of the Mines Bill when it comes to be passed in a future session. This matter has been fully discussed throughout Cornwall, and the feeling has been most strongly expressed that while all classes are anxious for some reform, it would be a very great mistake to rush through Parliament a very inefficient and inadequate reform this session, thus depriving, possibly, Cornishmen of the advantage of a much more thoroughgoing measure of reform which may come next session or the session after. I am speaking what is common knowledge in the district to which I allude"—that is, my division—"when I say that this zeal, on the part of the landlords and other interested persons for a reform of the law regulating mines, is perfectly new, and was never exhibited before my candidature for a seat in this House last year. Nothing will satisfy them now, but to rush through Parliament a paltry Bill in order to bilk a great measure which practically meets the wishes of all the mining representatives in the House of Commons. I have no hesitation whatever in moving the adjournment of the debate

Mr. C. A. V. Conybeare, M.P.

7 April 1892.

Personal action with reference to legislation dealing with Cornish mining.

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

Effect of the
abolition of
royalties.

the drift of your Lordship's question to be that if you were paying higher wages at one mine than at another, the natural law of supply and demand would tend to equalise the ratio of wages as between the poor mine and the rich mine; but if the miners looked after their interests, as I believe they would do, I think that if you get one strong body of them to set the example of higher wages, it would have to be followed by the others.

19,987. Therefore the effect would be that the wages would be raised all round?—I hope so.

19,988. What effect would that have upon the working of a poor mine; where would the profits be? Supposing that a mine is just holding its own, and the effect of the abolition of the royalty would be to raise the wages of miners all round, how would the poor mine be able to be worked at all?—Undoubtedly there is a possibility that in such cases some of the mines which are barely keeping above water would perhaps find it impossible to continue.

19,989. Would not the effect of that be to diminish the demand for labour and to throw out of employment the people who are employed in the poor mines?—That would of course depend, as I think, upon this question, whether it affected a great number of mines, whether it affected the majority of the mines, for instance, or otherwise; but I do not think that the mines generally are in such a very bad condition that it would have any considerable effect in that way.

Miners' wages.

19,990. Do you mean that the mining industry in Cornwall is going on well enough to pay a higher rate of wages than is being paid there now? Do you think that the profits are sufficiently large to enable the adventurers to pay a higher rate of wages?—I should not like to commit myself definitely to a statement that that would be so because it involves a great many considerations and a very detailed study of the position and prospects of a great number of mines which I do not pretend to have at my disposal at this moment; but what I do say is that I am quite sure that a higher rate of wages would be in the interests of mining generally. I think that a Cornish miner is entitled, if you consider the ratio of wages in other parts of the country, to at least 1*l.* a week wages, and if a mine is in a position to pay any dues at all, I think that before the question of dues is considered, the miner is entitled to have a fair rate of wages.

19,991. I presume that the low rate of wages of the miners in Cornwall, as compared with the miners in the North, has come from so many mines being closed, and therefore, for a time, the number of miners being in excess of the demand. For example, were the wages higher in Cornish mines in good times than they are now, or has that been the customary rate of wages for many years?—I could not speak for a number of years back. I suppose that what we call really prosperous times in the industry, now date some considerable time back, before my time certainly, before I was connected with the county; I could not say what the average rate of wages may have been then, but I think I am quite right in saying that during recent years they have not, taking the average all round, risen above 1*l.* a week or 4*l.* a month.

19,992. When you say 1*l.* a week or 4*l.* a month, does that refer to the actual hewers, the men who are actually doing the real hard work below ground, or is the 1*l.* a week an average?—No, that brings us to the point of the whole difficulty in estimating wages in connexion with our mining industry. You see we have two classes of men, the tributors, who are a sort of co-adventurers with the adventurers and who work for so much in the pound, and tutwork men, who work more, as we should say, by the piece. Now the tributors are a small proportion of the men as compared with the tutwork men, therefore, although under the tributating system you may have a party of men or single men who take a contract and perhaps make 200*l.* or 300*l.* out of that single contract, that can only be regarded as an exceptional case. Such instances as those are not the rule at all. The gene-

rality of the miners at the present time are tutwork men. I am simply referring to those working below surface, not to those working at grass. The tutwork men, so far as my information goes, as a rule, do not get certainly more than 1*l.* a week, and as a rule less than 1*l.* a week.

19,993. That would be very much less than a miner is getting, for example, in Northumberland and Durham, I suppose?—I do not think there are many of the northern miners who would be content with less than 30*s.* or 40*s.* a week.

19,994. Can you explain at all the reason for the difference. I suppose a Cornish man is as good a man as anyone else?—Yes.

19,995. (Mr. Dale.) You are speaking of a system under which they stand a chance of earning a good deal more, are you not?—Yes, the tributors.

19,996. But these tutwork men?—The tutwork men are not the men who stand a chance of earning more; it is the tributor who takes the contract.

19,997. Are these other men paid by piece or by day?—No, so much a fathom.

19,998. Then it is by piece?—These are rather technical questions. If I said it is piece-work I might involve myself in a difficulty. I do not know that I can say that it is exactly the same as piece-work.

19,999. (Chairman.) Are the tutwork men employed by the tributors?—No, the tributors are a sort of co-adventurers, and they stand the risk. They are really explorers of ground which has not been developed.

20,000. To go back to the general question, because we are getting too much into detail, what is your view generally as to the reason why the mining wages in Cornwall are so much below the mining wages in the North?—I think that there are various causes. One, no doubt, has been the feeling that owing to the very precarious condition and the speculative condition of our mining as compared with coal-mining, for instance, if the men pressed for a higher rate of wages, it might result in shutting down a number of mines. I think the men themselves have been considerably impressed with the view that if they made a determined and organised attempt to get higher wages it might result in the shutting down of a number of the mines and in their losing their employment altogether. I think that is really one reason. Another reason is that they have always been for generations past cut off from the rest of the country and left entirely to themselves. There is no doubt there is not that strong feeling of cohesion and organisation amongst the miners of Cornwall which you have in Wales, all through the Midlands, and in the northern counties. So far as my information goes, I think I am right in saying, at any rate, that any such thing as an organised strike of miners—anything like the formation of a strong organisation in the shape of a union which would combine all the men from one end of the county to the other, or within the Stannaries district generally, into one great body, like the Northumberland and Durham miners, and so on—is unknown. It is very curious; the question has been mooted since I have been connected with the mining division, and attempts have been made by some individual miners to form such an organisation, but so far those attempts have failed. Those, I think, are the principal reasons why there is such a low rate of wages. I think if I had been able to give sufficient time to study it I might have adduced other reasons.

20,001. (Mr. Thomas.) Do you think the cost of living and especially the cost of house-rent, are less in Cornwall than in the North of England?—I cannot say whether they are less than in the North of England, but that is undoubtedly one element, and I am glad Captain Josiah Thomas has mentioned it. The cost of living, no doubt, is less. But another reason probably is that when our miners find themselves scanty of work they emigrate at once to other countries. At this moment numbers of miners are going to South Africa; you cannot go to any of the mining districts of America without finding colonies of them, and

Comparison
between wages
in Cornwall
and the North
and the North
of England.

Condition of
miners in
Cornwall.

from these foreign countries, where they are working in copper, gold, and other mines, they are getting as much as 12*l.* and 16*l.* a month wages, and they are enabled to send home to their families a large proportion of what they earn, which keeps their families in a condition of comfort and prosperity, which would be impossible otherwise. I think it is only fair to say that it must not be supposed that the miners in Cornwall are prosperous in spite of their low wages. It must not be inferred from their low wages that they can live comfortably upon them if they depended solely upon the home industry. It is really the enormous sums of money which come through the post office from foreign mining districts from Cornishmen abroad which enable them to remain satisfied with their present low rate of wages, and I believe, if that was cut off it would be found practically impossible for many of them to live with that decency and comfort and sobriety which are so characteristic of them.

20,002. (Mr. Wood.) Do they get cottages rent free, as well as the 20*s.* a week?—Certainly not, very far from it I am afraid. It is not the practice for the adventurers in Cornwall, as it is the case in the colliery districts, to build pit villages for the mines. In many cases the miners will clear some of the waste ground belonging to an old mine and reclaim it, and build a neat little cottage and plant a garden. At first there is a mere nominal rent upon the three-life system, which I am glad to say is now coming to an end, but it used to be always a three-life lease system, and then as the lives dropped they would be rack-rented perhaps to 200 or 300 or 4,000 or 5,000 per cent. above their original rental, and if they would not pay that, their own property would be put up to auction and others—strangers—might come in and bid against them and take the whole of what they have put upon the soil away from them.

20,003. (Chairman.) Referring to what you mentioned just now of money coming from Cornish miners abroad, do you mean to tell us that you think that Cornish miners abroad send money, not for their own families who are left behind in Cornwall, but for other working men who are in full work?—No, I did not mean to imply that.

20,004. Then how would it affect the position of the men who are working for a pound a week; how would this money coming from abroad affect their position if those who are abroad only send money to support their own families who are left behind; how would it affect the general rate of wages?—Because one member of a family, for instance, may go abroad: I will give you the case of two brothers, two of the steadiest and best working young fellows that I know of in Cornwall. I daresay Captain Josiah Thomas knows them by name—the Trevillions of Puggis—they were both working I think in Dolcoath or one of the neighbouring mines. A few years ago, owing to one circumstance and another, one of them went to Johannesburg. Before he had been working a month there, owing to an unfortunate explosion he had his eyes blown out, and he had to come back, blind for life. Now the other brother, who was still working at that time in Cornwall, has gone to Johannesburg, and I had the pleasure of seeing him at work in Johannesburg when I was there. They have a mother to support, and unless the one who is working in the Transvaal was able to send home a part of his earnings to his mother and his blind brother, it would be impossible for them to live, I should imagine, in anything like the decency and comfort that they are able to enjoy. It is a case where there are only two brothers at home, but you may have a case where there are a number of young children, where the elder brother, the father being dead, we will assume—has gone abroad, and sends home a portion of his wages to support his mother and the young children who have to be at school, or there may be a young boy or a girl who is working on the tin streams at a very low rate of wages, probably a few shillings a week, and another

brother, who is getting perhaps his 17*s.* or 18*s.* a week in a mine. I say in that case that these people could not really live upon a bare pittance as you may call it, certainly not in the decency that they are able to live in at present—if it were not for the fact that a brother, or perhaps a cousin or some other relative, was assisting them from abroad.

20,005. That brings a certain amount of money into the country?—Undoubtedly.

20,006. In fact a considerable amount of money which affects them favourably?—That was my meaning.

20,007. Is there any other observation that you would like to make to us?—There is just this, that I wanted to bring before your Lordship, if I may be permitted, that having given some little time to trying to understand the past history of the Cornish mining—although I am not going to trouble you with the pre-historic times—I think that it will be found that the history of modern times and the cause of the difficulties of which adventurers are complaining, is that the old customs of the county, coming down from the times when tinners' courts used to sit, and when there were customs known as "bounders" customs, I think, and so on—that these old customs have been to a great extent encroached upon and actually abrogated by the action of the lords in connexion with leases, I wish it to be understood generally that I am not now desirous of saying anything harsh against the landlords; they have simply acted upon what either were, or were supposed to be, their legal rights, and I think it is much more often the care and the skill with which their solicitors have drawn leases than any intentional injustice on the part of the lords which has landed us in the difficulties we are in. Take a single illustration—that of a 21 years' lease. The 21 years' lease has now become the custom and it has become the recognised right of the landlord now to refuse to renew the lease except upon what might be unreasonable or harsh terms; but I think it will be found that in olden times the 21 years' lease was always granted with the understanding that it would always be renewed except in the event of the adventurers working the mine in an unminner-like fashion; that is to say, in olden times I could make the general statement, I think, that the 21 years' lease was almost synonymous with a perpetually renewable lease, and that the lord would not refuse to renew that lease except in the case of absolute mismanagement by the adventurers or some kind of misconduct. Now although, undoubtedly, the leases are, I suppose, in most cases renewed, it is a question of haggling between the adventurers and the lords, and as we know in some cases very onerous and unreasonable and exacting demands have been made by the lords before a renewal could be obtained.

20,008. Are you referring to any other case besides the Dolcoath?—Yes, I am referring to one which is more recent than that, namely, the East Pool, and one or two other mines where the Tehidy estate sought to impose upon the mines as a condition of the renewal of their lease that they should import their supplies through a particular harbour, that is to say, the port of Portreath.

20,009. That was withdrawn after some little time, I believe?—Yes.

20,010. We have had evidence upon that?—I did not know that you had had evidence upon it, but it was withdrawn because the East Pool, being a strong mine, resisted it; although, I think, one of the Seton mines, I forget whether it was the Wheal Seton or West Seton, or one of the other mines, was very nearly entrapped, or was quite entrapped, into acquiescing in it. That is one point, I think, on which we rather desire to revert to the old custom of the county. We do not ask for anything revolutionary, but we desire rather to revert to the old customs, especially in that particular. Then another point illustrating the same principle is as to the lord's share of the cost of dressing. I am not going into detail; I know you have had ample evidence about

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

Condition
of miners
in Cornwall.

Customs of
Cornish
mining.

(a) Term and
renewal of
leases.

(b) Share by
lords in cost
of dressing.

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

(b) Share by
lords in cost
of dressing.

(c) The cost-
book and
limited liability
systems.

(d) License
to search for
minerals.

that. In the olden times, I think, you will generally find the lords took their dues in kind, and the dues were more often one-twentieth than one-fifteenth or one-eighteenth. When the tin stuff was brought to grass I believe it was the practice to set apart what was called a dish for the lord, and in proportion, whatever it was, one-twentieth or otherwise; and the lord had then either to sell it to bargain buyers or to stand the cost, which, as the evidence has shown your Lordship, is very great, amounting to one-third, I think, as a rule, of dressing and manufacturing the rough tin stone into what I may call the manufactured article, of black tin as sold to the smelters. Now, the proportion, whatever it may be, one-eighteenth or one-twentieth or otherwise, which goes to the lord in the form of dues or royalty, is taken from profits from the value of the tin stuff after all this manufacturing process has been undergone, at the expense, not of the lord and the adventurers jointly, but of the adventurers alone. I therefore contend that in that respect also in asking that the lords should pay their share of the cost of dressing, we are merely reverting to what, I think, I am right in saying was the old custom of the county. I do not wish to trouble the Commission with details of evidence which have been amply placed before your Lordship by previous witnesses, but I should like to say very strongly that one most important point is the permission to work as a limited company. Whether it can be obtained without the machinery of a tribunal or not is another question. At present, it is competent to any lord to refuse a lessee to work his mine as a limited company. The principal case that has happened in that respect of late years is that of Colonel Fludyer, who gave evidence on his own case before your Lordship. I emphasise that point, because I desire to corroborate the strong evidence which has already been given to the Commission as to the actual injury which such refusal does to Cornwall in keeping out capital which would otherwise come to our assistance; and I do so in order to state decidedly and positively (because I see some doubt was thrown upon it in one answer given by one witness) that such cases are possible and are known at the present time—quite recently—because Colonel Fludyer's case happened only in the year 1888. I say that that is within my own knowledge a hindrance to Cornish mining. I have again and again tried to induce financiers outside Cornwall to come and take up some of our mining setts, and I have been always met by that argument that so long as lords insist as they do in many cases upon the cost book system they will have nothing to do with Cornish mining. The cost book system, of course, has certain good points about it, but the essence of it is that of unlimited liability; so that if you have 20 partners in the concern it may happen that 19 of them may relinquish their shares and leave the twentieth, whether he is a man of substance or not, to bear the brunt of the whole of the debts and liabilities and so on at that time hanging over the concern. That is undoubtedly a very great hindrance to the prosperity of our mining. There is another point that I should like to mention as to the license to search for minerals. I think that that is another case where the old customs of the county have been encroached upon. I think it will be found, that under the older customs of the county there was much greater liberty and license to search for minerals than at present exists. I introduced, I think, into my Bill certain provisions in order to redress that grievance. While speaking of the position of the Cornish industry as related to outside capital and so on, I should like to state as a result of my inquiries and study of the question, that I am quite sure that it is a mistake to suppose that the Cornish mineral districts have been worked out. I know more than one sett in Cornwall in my own immediate neighbourhood, which by all the accounts I have been able to gather would be quite worth working. There is a general idea outside that we are played out, but that is not the case; there is

plenty of good mineral; it is only a question of getting the means to work it. If I am not intruding too much upon you—

20,011. We should like to hear all your views?—

I should like to revert for one moment back to the Parliamentary history, if I may so say, of these Bills. There are one or two facts which I was stopped from mentioning just now, and I should just like to complete them. You have before you what happened as to the two Bills, and what happened generally in respect to this question in Parliament in 1886. It is not quite accurate, as Mr. Pike told you in his evidence, to say that Sir John St. Aubyn's Bill was not re-introduced. It was re-introduced by Mr. Charles Acland, the member for Launceston, in 1887. In that year we had a Select Committee to consider the sister Bill, the Stannaries Act Amendment Bill, and to that Committee my Bill in favour of the miners, and Mr. Acland's Mining Leases Bill, which was the same as Sir John St. Aubyn's Bill of the previous year, were referred. The Miners Bill, that is to say, the one relating to miners' wages, was carried into law as the result of the labours of that Committee; but when we had come to that point, it was too late in the session to go on with the consideration of the Mining Leases Bill, and accordingly it was dropped. My own Bill dealing with mining royalties in that session was opposed on the second reading by Mr. Tomlinson, M.P., for Preston, and thrown out. I do not know whether it was through inadvertence or not, but I think it was a pity that that Committee was not re-appointed in the following year, 1888; but I find by reference to Hansard, that Mr. Charles Acland again introduced his Mining Leases Bill in that year, and that it was withdrawn on the 4th of July. I myself was absent through ill-health until the middle of May, and therefore I could take no part, and I am really not exactly cognisant of what happened. I only say that I am sorry that the Committee which succeeded in passing the one Bill in 1887 was not re-appointed in the year 1888, when it might have continued the consideration of this question. I think that Mr. Acland has not re-introduced his Bill since that time, because your Commission was appointed in the year 1889, and although I myself re-introduced my Bill relating to this matter under the title of the Mining Courts Bill—I thought that was a better title—I did not pursue it any further, because the Royalties Commission was appointed, and of course we desired not to overload Parliament with the consideration of questions which were remitted to you for consideration. (See Appendix A. II.)

20,012. Is there any other observation which you wish to make?—I think that practically embraces all that I need trouble the Commission with.

20,013. (Mr. Gibbs.) I should like to ask you a few questions as to what you said in respect to the cost book system. You spoke of its being unlimited in liability, but at the same time I think you said that it was possible that 19 out of a co-partnership of 20 men might withdraw, and that one might remain hampered and burthened with the liabilities of the partnership?—Yes.

20,014. By what you say there, does it not show that the liability is limited, because any one of those 19 is at liberty to terminate his liability at any moment, or rather not at any moment, but at the end of each year?—I think that an adventurer can relinquish his shares at any moment, but then in the first place of course he loses a great deal of his capital, if not all of it, which he has embarked in the concern, and in the second place up to the date of his relinquishment he is liable for his proportion of the debt of the concern.

20,015. But that surely is the case in a limited liability company?—But when a man puts 100*l.* into such a concern he knows that by the law he cannot be called upon to contribute more than that 100*l.*

20,016. Certainly, and the other man under the cost book system—I am asking for information—has he not a right to say at any moment when he sees

Legislation
with respect
to Cornish
mining.

The cost-book
and limited
liability
systems.

that the liabilities of the company are exceeding the assets of the company, or what he thinks it likely to come out in the future, "I will not remain in this any more, I shall go"?—Yes.

20,017. He is liable for what has passed, and so it seems to me that the cases are pretty nearly the same?—No.

20,018. The only difference between the cost book system and that of a limited liability company is that the latter is more known on the London Stock Exchange, and that there are more easy dealings in such a thing than in the cost book system?—There are certainly more easy dealings.

20,019. And therefore you get a great deal more money brought in—whether it is well brought in is quite another thing?—I am afraid you do not get any money brought into Cornwall at present.

20,020. You practically may I mean to say?—I am afraid that I cannot agree with you, that it is practically the same thing for this reason. Supposing you and I are partners in a cost book mine. I relinquish. I pay up my proportion of the cost up to the date of my relinquishment. You think that it is worth while going on for some time longer, you may involve yourself in hundreds and thousands of pounds of costs after I have relinquished.

20,021. By my own fault?—Certainly; but when you went into the concern in the first instance you could not foresee, and there is no possibility under the cost book system of foreseeing, the extent to which your calls may run. For instance, it has been given in evidence before your Commission that there have been mines which have called up contributions from their members for 30 years without ever making a profit. That would be impossible under the limited liability system. As I said before, a man takes a 1*l.* share, and he knows that his liability is limited to that 1*l.* share whatever may happen. Surely there is a great difference. You will have to consider this, that Cornish men who put their money into the thing do not like to sacrifice it all by relinquishing their shares, unless they are quite certain it is a dead horse.

20,022. And in the case of a limited liability company I am sorry to say that people are very often found who had a great deal more than that 1*l.* that you spoke of as being the amount of the share, is it not so. You have new shares created, you have debentures issued, all sorts of things, traps which the unwary and the ignorant fall into. I do not think there is safety in either?—Then, of course, there is nothing but the sweet simplicity of Consols, 3 per cents., and even those are not very satisfactory now—a-days when they are cut down to 2½.

20,023. (Mr. Thomas.) You remarked just now that it is possible that 19 out of the shareholders might relinquish, and that the remaining one might have to pay all the debts of the company?—Yes.

20,024. That one who was remaining might know who his partners were at any time, might he not?—Certainly.

20,025. He need not keep on his holding in the mine if the other 19 had relinquished?—No.

20,026. Any shareholder in the mine can know at any time who his partners are, whether they are men of means or not?—Yes. I do not say it would be a wise thing to do to go on when everybody else had relinquished.

20,027. I am not talking about the wisdom of the measure, but as a matter of fact any shareholder in a cost book mine may know from the purser at any time who his partners are, and whether he is running any risk or not?—That is true, but let me put it in this way, which I think will be accepted as a correct statement. You may have your 20 co-partners, 19 of them may be men of straw, or, let us say, poor men, working miners, and the other one may be a banker with lots of money. You cannot get blood out of a stone. You cannot get money to pay the debts of the concern out of men who are earning from 15*s.* to 20*s.* a week, and then the man who has got all the money is come upon to an unlimited extent.

20,028. (Mr. Gibbs.) Only by his own good-will; I mean he chooses to do it?—He is bound.

20,029. No, he thinks that he sees good reason to go on, is that not so?—He might.

20,030. Well, he is wrong?—I am taking a case where there is no relinquishment but where a concern is not paying, and where 19 out of the 20,—of course it is only a hypothetical case taken as an illustration—where a considerable proportion we will say out of the whole number are not men who can pay, and then the man who can pay is come upon and has to pay for the whole of the rest.

20,031. (Mr. Thomas.) But then that man can terminate his liability at any moment he pleases?—By relinquishing.

20,032. By simply sending a note to the purser?—Undoubtedly; but then if he has got a good many thousands embarked in the concern already he does not like to do that.

20,033. (Mr. Gibbs.) Then what business had he in that galley with 19 others?—I am afraid there would be very little mining industry in our county if that consideration was always reasoned out. We are a very speculative lot of fellows in Cornwall. I think the people of Cornwall ought to have the same freedom to avail themselves of the general law about limited liability as other parts of the country. For any particular landlord to have power to override the general law of the country, to say, you shall not operate a mine in this particular part of the country except upon the cost book principle, which militates against the limited liability principle, I say that that is contrary to the interests of the whole community.

20,034. But is that the general law of the country?—Limited liability.

20,035. Limited liability is the general law, but is it the general law that everybody is obliged to have his property worked by limited liability companies?—No.

20,036. You say that no mine proprietor, is that not so, ought to be allowed to say you shall not work this in such and such a way?—At present a land owner, as you have had ample evidence to prove before this Commission, and as was proved by Colonel Fludyer's case not over three years ago, is able to say. "You shall not work your mine on the limited liability principle, I will tolerate no mine except on the 'cost book system,'" I say that that militates against the general principle of law applicable to the whole of the rest of the country, and that Cornish men as well as Derbyshire men or Northumberland men have a right to claim that they should have the benefit of the limited liability principle.

20,037. (Mr. Dale.) Are you aware that it is not an unusual thing for lessors of minerals in Northumberland or Durham to say, "We cannot accept as lessees a limited liability company"?—Then I say that Northumberland and Durham are in the same boat with ourselves.

20,038. (Mr. Jamieson.) That is not at all an unusual thing. I am afraid that would apply to Scotland.

20,039. (Sir William Lewis.) And to Wales?—That only strengthens our argument for the establishment of mining courts. I did not know that the evil was so extensive.

20,039. (Mr. Dale.) This of course is a question of credit, of being responsible for rent. It is not a question of the amount of rents fixed or of the tonnage, but it is a question of having a responsible tenant?—As a rule I think I should prefer a corporation or a company to an individual in that respect.

20,040. You would not be surprised to hear that any lessor would desire before granting a lease of minerals or lands or houses, or anything else, to be sure that he was going to get a tenant capable of paying his rent?—Certainly not.

20,041. Then that would naturally lead him to scrutinise the constitution of the company if it were a limited liability company offering itself as a lessee with the result, as I say, that it is not at all an unusual thing for a lessor in the North of England to say, I cannot

Mr. C. A. V.
Conybeare
M.P.

7 April 1892.

The cost book
and limited
liability
system.

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

The cost book
and limited
liability
systems.

Violet Seton
mine.

accept as my tenant a limited liability company?—I can understand a man saying I am not satisfied with the probable *bona fides* if you like, or the probable prosperity or solvency of the company as formed. What I say is that the power which landlords possess, and which you now tell me exists in other parts of the country besides Cornwall, to say to any body of adventurers, "You may work this and you shall work this upon the Cost Book system," that is to say upon the principle of unlimited liability, "and you shall not work it upon the principle of limited liability," I say that that is a monstrous, and I will add, an arbitrary power which the landlord ought not to possess, and in order to relieve us of that power I say, we want to establish mining courts.

20,042. I thought the idea of a mining court was a tribunal which would determine what was a fair rent rather than impose upon the owner, a tenant or a lessee, without adequate means of paying that fair rent?—I should challenge you upon that point. Just let me give you a concrete instance. I do not wish to go into details, but I will just refer to what happened in connexion with Colonel Fludyer's mine. In March 1888, when Dolcoath shares were up to 140*l.*, and when the price of tin was inflated to an unnatural extent, Colonel Fludyer actually had the offer of capital to work his mine (upon which he had sunk something like 60,000*l.*), on the condition that a limited company was formed. I came home from Africa just at that time. Colonel Fludyer asked me to go with him to Mr. Marriott, the representative of Mr. Basset of the Tehidy estate, in order to try and secure his consent to so alter the lease under which he held the sett as to enable him to accept this offer. Mr. Marriott refused; he kept us without any definite answer for months, and it was only in the late summer of that year and after an immense amount of argument and difficulty we succeeded in persuading Mr. Marriott that the proposal was equitable and reasonable, and he finally consented to waive the objection which he had raised to having any limited liability companies on the estate, but at the same time he insisted on other conditions, as that a sum of 10,000*l.* should be lodged in the hands of trustees, which were both unusual and almost prohibitive. When we had secured his consent the high price of metals had fallen; what was known as the copper corner on the Continent had burst, and the capitalists who had promised Colonel Fludyer his capital, withdrew and refused and said they would not go on with it, and he had to close down the mine; he had to dismiss the men, one of whom was that unfortunate young fellow who I said just now went to Johannesburg and had his eyes blown out, and the others were scattered about. That I say is an arbitrary and most improper power for any individual to possess in my opinion.

20,043. (Chairman.) Would it not have been an exceedingly fortunate thing for the shareholders of the company in that case?—I am glad you have put that question, because within the last six or eight months Colonel Fludyer has succeeded in obtaining the assistance of other capitalists. Captain Josiah Thomas knows the mine perfectly well, and he has reported upon it, and I believe I am correct in saying that at the time when Colonel Fludyer had to shut down his mine owing to the reasons I have given, he had cut a course of copper which is regarded as one of the most promising in any part of Cornwall or in the Camborne district. That copper lode he is at the present moment sinking a new shaft upon, and with every prospect as I hope of its turning out very successful, at any rate there is far more in sight in the way of a very strong course of copper in that mine at this moment to justify speculation and the further development of the mine than there is in half the concerns which are floated in different parts of the world.

20,044. (Mr. Gibbs.) So that you think then that the new capitalist who has now come forward to the assistance of Colonel Fludyer may do very well?—I hope so.

20,045. Still I ask what my Lord asked just now, what would have been the case of the unhappy capitalist who originally agreed with Colonel Fludyer if his landlord had allowed the thing to be done; he would have been in a very bad way, would he not?—I understand the question perfectly. The parties who had provided the capital were men acquainted with Cornish mining and knew what they were about; they were Messrs. John Taylor and Sons, and they were not likely to go into a thing which was likely to be a simple bubble. In consequence of the drop in the price of metals which probably no one could have foreseen, there might have been a difficulty; but it is not the business surely of a Cornish landlord to protect business men like John Taylor and Sons and other capitalists in London for fear that they should be like a lot of little children and run into a position of difficulty and danger; that is not one of the functions of Cornish landlordism; it is quite enough for them to protect their own interests, I think.

20,046. (Mr. Barnes.) The Cornish men are supposed to live upon them?—Live upon whom?

20,047. The outside, London?—They have not had much chance lately.

20,047a. (Mr. Forster.) In the case of a limited liability company going to a merchant and wanting to make a contract with him to supply them with goods, would it not be open to the merchant to consider in his own mind whether he would credit them or not?—Of course, but I have been associated and I am associated at this moment with mining companies, and I have gone to some of our manufacturers of machinery, Messrs. Harvey of Hayle, and Messrs. Tangye of Birmingham, and we have got machinery from them, and although we are carrying on our operations in South Africa they have never said, "No, we will not deal with you because we will not trust you."

20,048. No, but if they do and if they had thought so in their own minds, or said so, would you think that the Legislature should interfere to oblige them to make an engine for a limited company?—No, I do not see that that would be necessary, because you can easily find other manufacturers whom you can go to. Here in that case, if you mean to apply that to the case of Cornish landlordism, you have got one particular gentleman who is the lord of the land who says: "You shall not do this and you shall not do that," and you cannot go elsewhere as in the case of Colonel Fludyer. He had put 60,000*l.* or more of his money into that land, and it was not reasonable, and it is not reasonable to say: "Well, if you do not like the terms the landlord insists upon you can go elsewhere." Going elsewhere means leaving 60,000*l.* of hard won money in the ground.

20,049. But, because the landlord is the only man who can allow this to be done, is he to be subject to different laws from the general community and the trade of the country?—I do not think that he will be subject to different laws. At present the landlord is as a rule above the law in these matters. There is no law by which you can get a hold over him. If you are dealt unjustly with by a manufacturer you can bring him before a court, but we contend that if a landlord deals unjustly with us there is no court at present that you can bring him before. That is why I brought in a Bill for the establishment of a mining court by which you can get a hold over him.

20,050. There is no law which compels a merchant to supply a limited company with goods?—No, but do you mean me to infer from that we want a law compelling the landlord to supply us with anything?

20,051. To compel him to supply you with royalty?—No.

20,052. (Lord Macnaghten.) Would you kindly refer me to the section in your Bill under which a mining court would be able to compel a landlord to grant a lease to a limited company?—Clause 6 runs as follows:—

"6. Every person or any two or more persons who shall at any time after the passing of this Act make an application to the owner or owners of any land

Compulsory
powers of a
mining court.

"containing or believed to contain mines or minerals for a license to work the same, or for a lease or the renewal of a lease thereof, may, if the owners shall refuse to grant the said license or lease, or to renew the lease, or shall refuse to grant or renew the same upon such terms as the applicants may consider just and reasonable, apply to the Court in the manner herein-after prescribed, and, subject to the provisions of this Act, may acquire a lease or a renewal of a lease of the said land for which application has been made, upon such terms and conditions as the Court may deem just and reasonable.

"Where the said land is undivided or belongs to two or more owners, the Court shall, upon due notice given in the prescribed manner to all the owners, require them all to join in the same lease, upon such terms and conditions respectively as the Court may deem just.

"Where it is proved to the Court that the owner or owners of any portion of such land is or are uncertain or unknown, the Court shall make such order for the payment into Court of the royalties, dues, and other moneys from time to time payable out of such lands to the said owner or owners, to be placed to an account to be kept for the benefit of such persons as to the Court may seem fit."

20,053. I do not see anything in that clause to compel a landlord to grant a lease to a limited company?—A limited company would be included under the words, "any two or more persons."

20,054. I am afraid that is not the probable interpretation that would be put upon that clause?—This is only a draft Bill; we can amend it in Committee you know.

20,055. Would you not consider that in proportion as you impose upon a landlord the obligation to let his minerals at such rents as a court might deem to be fair, you do not increase the responsibility of that court in regard to seeing that he was certain to get the rent, that it imposed upon him?—No, I think not.

20,056. I am not criticising for the moment at all, or offering any opinion upon the question of whether it is expedient in the interests of the community that there should be created a court with full power to compel the owner of minerals to let them at such rent as the court might think fit; but that is your view, and I rather ask whether in proportion as you impose upon the owner of minerals an obligation to let his minerals at such a rent as a court may determine, you do not increase the responsibility of that court, or you do not impose upon that court the responsibility of seeing that he gets his rent?—Why?

20,057. That he gets responsible persons to pay the rent?—The question of the responsibility of the persons, that is to say the *bona fides* of the applicants, would be one of the circumstances to be considered by the court. If the court came to the conclusion that it was a mere bogus company got up by promoters for their own ends, then it would be the duty of the court to refuse on that ground. That is what I contemplate.

20,058. Supposing there is nothing bogus about it except the limitation of the capital?—Very well, then my answer to that would be this: If I owe you a sum of money and you get a judgment summons against me it is not incumbent upon the court to follow me about and see that I pay my instalments regularly; if I do not pay my instalments regularly you go to the court again and get me put into prison or something of that kind. In the same way it would be not incumbent in my judgment on the court to see that this mining company was a success,—that would be impossible. A mining company engaged in metalliferous mining can never be regarded as a success until it is proved to be a success. The whole business is so speculative; you may start with the most splendid prospects; you may cut a bunch of tin, and then it may all be worked out and you may find nothing more. Evidence has been placed before you by Mr. R. H. Williams to that effect. It is

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surely not reasonable to say, because you want to get a measure of justice through the agency of the court, therefore the court is to follow the company and to see that it fulfils all its obligations, whether they depend upon the success of mining which nobody can foresee, or not.

20,059. We are speaking, you know, of a distinct limitation to their obligations as measured by the capital that they create?—Yes. Some years ago when that notorious case of company promotion which has been given in evidence before you—the Tresavean and Old Shepherd's mines—there are four of them in different parts of the county—were blocked together and a capital of 350,000*l.* I think, raised, or something of that kind and the whole thing was bogus. Now if you had had a court to which the landlord could have applied or to which any of the parties interested could have applied, and the whole thing could have been sifted to the bottom you would never have had all that swindling that took place in connexion with that; at least I think I may say—my impression would be at any rate that it might have been averted and the immeasurable injury done to Cornish mining through that business would have been averted.

20,060. (Mr. Dale.) You tell us when a member of a Cost Book company gives notice to the purser of his desire to retire, he has to discharge his share of the obligations up to date—is that so?—I believe so.

20,061. Then, how would those obligations be reckoned under a lease that had many years to run, and contained perhaps onerous provisions?—I do not understand you.

20,062. Suppose you to be a member of a Cost Book company, and you give notice to the purser of your intention to withdraw on the 30th June next, subject as you say to the obligation of discharging your share of the company's obligations to that date, one of the company's obligations is to hold a mine for 40 years, it may be at a rent which is onerous. I am merely asking as a matter of fact, in what manner would your obligation under that be computed?—I am glad to say that I have never had personal experience of relinquishing yet. I understand your question to be this: There are liabilities running through the whole term of the lease; for instance, the rent to the landlord, dues, royalties, and so on. If I relinquish my shares how would my proportion of those liabilities be estimated? My answer, I think, would be,—I do not know that it is correct, but, judging from my knowledge of the system, that my responsibility for any liabilities in the concern would only be computed upon the actual liabilities up to the date of relinquishment, that is to say, the liabilities accruing either in the way of rent or anything else, subsequent to the date of my relinquishment, would not be taken into account at all.

20,063. How, if all of them took advantage of their right to withdraw what would then be the position of the lessor?—If they all took advantage of their right to withdraw simultaneously then there would be a general winding-up under the Stannaries Acts. I think you will find all provisions for that in the Acts relating to the Stannaries Court.

20,064. (Chairman.) In regard to this limited liability company, as you have referred to the question of Colonel Fludyer and Mr. Marriott, I wish to ask you whether you have read Mr. Marriott's evidence before this Commission?—I cannot say that I have gone through it carefully; my time has been very limited, and I was not supplied with the full evidence.

20,065. Then, in order to make it quite clear, perhaps I may inform you that Mr. Marriott says that Mr. Basset, in common with most of the leading adventurers and capitalists in the county, was very strongly of opinion that the Limited Liability Act had operated on the whole with disastrous results to the mining interests of Cornwall, and he puts in Appendix XIII. to the second report of the Commission a list of 24 mines started on the limited liability principle, all of which, excepting one, proved

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

Compulsory
powers of a
mining court.

Liability under
the cost book
system.

The limited
liability
system.

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

The limited
liability
system.

failures, and he produced the prospectuses of the three last, "By means of which a capital of somewhere about 320,000*l.* was raised and disappeared no one knows, I believe, exactly how." You had not observed these answers given by Mr. Marriott to the complaint made by Colonel Fludyer?—I have not observed them in that exact form, but I am perfectly cognizant of them. I have argued the whole matter out with Mr. Marriott.

20,066. Then in point of fact your view of the limited liability company differs from that which was held by Mr. Marriott, at that time, namely, that the limited liability companies are by no means to be encouraged in Cornish mining?—Certainly and my answer to that would be this: In the first place by way of parenthesis, I think if Mr. Marriott cannot I could, say where a good deal of that money connected with Tresavear and Old Shephard's and Mounts Bay mines went to, but that is by the way. He rests his case upon the fact that out of a certain number of limited liability mines, say 24, or whatever the number may be, the majority of them have proved failures. I should like to have asked Mr. Marriott, if I am to be pitted against him, how many Cost Book mines have proved successes in proportion to the number that have been at work in the county. It is only by comparing the statistics regarding the success and failures of the hundreds of Cost Book mines which have been started at different times with the number of limited liability mines which have been started at different times, that you can form a fair judgment as to that contention. But then that does not vitiate my position, I think. My position is simply this, that if you have a general law of the country permitting limited liability it is prejudicial to the interests of the country, that the desire and intention of parties to establish limited liability companies, should be thwarted by the opposition of particular individuals.

20,067. (Mr. Thomas.) I presume you are pretty well acquainted with the views of the adventurers as well as of the miners in reference to this royalty question?—Yes.

20,068. Do you think that the Bill of 1886, which was introduced into Parliament by Sir John St. Aubyn, and which provided for arbitration in case of dispute, would meet the views of the mining community in Cornwall generally at the present time?—Do you mean by the mining community at the present time, the adventurers, merchants, lords, and so on.

20,069. All connected with mining?—There are others besides those.

20,070. Shareholders and miners I was referring to principally?—It might have met the views of lords and adventurers in 1886, but it would not meet their views in 1892, because I observe that all the principal witnesses on the subject, I mean men like Mr. Heard, Mr. R. H. Williams, Mr. Pike, and others, have stated as strongly as I can ever have done myself, their view that a court—a tribunal should be established. They go distinctly further in their evidence than the proposal for a mere reference to arbitrators. This Bill proposed simply that *pro hac vice*, that is to say, for every individual case that might arise, the parties interested should under the ordinary powers that are given by certain Acts of Parliament appoint arbitrators and umpires. I say that what we want is a definitely constituted and permanent court. I have always held that opinion from the first, and I am glad to see that these gentlemen who in 1885 thought that I was most revolutionary in proposing it are all saying exactly the same thing. Therefore, my answer is that, at the present moment, judging from the evidence that has been placed before you, I do not think that the leading adventurers and others interested would be content with anything short of the establishment of a court. Now, let me raise a further question, what court should that be? Well, evidence has been placed before you very strongly in favour of the Stannaries Court, to the effect that the jurisdiction of the Stannaries Court should be enlarged. That is precisely what I

proposed in 1885 and 1886 myself. I am entirely in favour of it, and as the evidence on this point has not been given, I should just like to be permitted to place before the Commission evidence with respect to this particular point. The Stannaries Court is a court, in which, I think, owing to the uprightness and high character of the vice-warden—Mr. Fisher, I think his name is now—we all have confidence, but it is perfectly well known that practically the office of vice-warden is a sinecure office. I see by a statement that I have here that the vice-warden receives a salary of 1,500*l.* a year. Now, I believe I am right in saying that the vice-warden only acts as judge in the Stannaries Court upon four occasions in the year. He comes down perhaps once a quarter, and he sits perhaps for a day, or two or three days, as the case may be, according to the amount of work. Now it is perfectly clear that when you have a vice-warden with a salary of 1,500*l.* a year, a registrar with a salary of 800*l.* a year, a secretary to the vice-warden with a salary of 100*l.* a year, a clerk assistant to the registrar with a salary of 200*l.* a year, another with a salary of 100 guineas a year (I do not know what all these gentlemen do), and other officials, it is perfectly clear that there might be a great deal more work imposed upon these highly-paid officials than is the case at the present time. I am, therefore, entirely in favour of extending the jurisdiction of the Stannaries Court to deal with all these matters under discussion. But I go further. I understand the evidence of gentlemen who are much more competent to speak upon mining matters generally than I am to be simply in favour of extending this jurisdiction and leaving the court as it is. But certain questions were asked by members of the Commission of those witnesses as to whether they would have others to assist—practical men if you like, experts—as assessors. My proposal has always been that you should have assessors, and I cannot myself understand, if you constitute the county courts along the seaboard in different parts of the United Kingdom as Admiralty Courts, with naval officers as assessors to discuss all the technical details of naval matters, why you should not have mining assessors to assist the vice-warden of the Stannaries Court in dealing with all these matters; and my Bill has always proposed that you should have such assessors, and that they should be elected so as to represent the different classes interested in mining, that is to say, the lords, the adventurers, and the miners. You will find that provided for in the second and third clauses of my Bill. Of course this Bill being intended to apply to the whole of the United Kingdom goes further than what would be requisite for the county of Cornwall, but my proposal is that the Stannaries Court should have its jurisdiction extended to deal with all these matters, and that it should be strengthened by the appointment or election, I should prefer election, on the system of the Tinnars Courts of olden times, the election of assessors who would represent not only the lords and the adventurers, but also the miners; because the miners, I mean the working-men miners, are quite as much interested in this question as the adventurers and the lords.

20,071. (Mr. Redington.) Has your attention been called to the evidence given by Mr. Marriott in reply to Question 8272, because there is there a direct contradiction to a statement you have made as regards the price of copper in 1888?—I have not got Mr. Marriott's evidence before me as to the price of copper. I think what I said was that the price of Dolcoath shares was 140.

20,072. The point was, I think, that the delay in giving permission to Colonel Fludyer to start a limited liability company was very injurious to him, as the price of copper had gone down in the meantime. If you look to the answer to that question and also to Appendix XIV., you will find that the price of copper actually went up until March 1889, and that the fall took place in March 1889, and therefore that objection, at least, to the lords' action,

does not seem to hold good, does it?—I have not got Mr. Marriott's evidence before me, and I have not got all the figures immediately before me, but I know that there was a great fall which took place in the price of tin.

20,073. Surely the Violet Seton is a copper mine?—Yes, that is so, but I think you will find that the corner in copper which inflated the price of all minerals to such an enormous extent in 1888 burst in the latter part of 1888, and that M. Secretan committed suicide in that year.

20,074. Mr. Marriott states that "In March 1889 there was such a heavy fall in the price of copper, on failure of the receipt of remittances from the 'French Syndicate.'" If you will refer to Appendix XIV. you will find the monthly prices of copper, which go up from 80*l.* 2*s.* 6*d.* in March 1888 to 100*l.* in September 1888, and remain above 77*l.* until March 1889, when it suddenly falls to 39*l.* 5*s.*?—As I say, I do not happen to have the details of the dates and so on in my head. I am quite willing to accept that as a fact. But that will not affect my position in the least. It may be true that the price of copper remained high, but whether the price of copper remained high or not it is the fact that the capital which was forthcoming in March 1888 was refused later on in the year, and the company which Colonel Fludyer might have formed and might have carried on the working of his mine with in March 1888 and April 1888 was unable to be formed later on in that year.

20,075. It must have been owing to some other cause than the fall in the price of copper?—I think you will find it was a fall in the price of tin, the relative prices of the two metals are so closely connected together that a rapid and serious fall in the one affects the prospects of dealing in the other, I mean as far as forming a company, of course.

20,076. As a matter of fact the price of copper was going up between March and September 1888, and therefore those who wanted to invest in a copper mine, one would think, would be more inclined to do so when it was booming?—No, not if it were known that difficulties were likely to arise shortly. In March 1888 things were, as you say, booming, there was a feeling of confidence, but later on in the year it was known that the high prices—

20,077. I did not say that, I said the boom went on till September, because the price in September was 100*l.*?—In the meantime it had become generally recognised that the inflated condition of things which had sent up Dolcoath shares, for instance from 90 to 140—an absolutely unheard-of price—I believe was due simply to the operations of this copper corner, and although it is quite possible, and I am not denying it, that the price of copper may have been sustained for some time after that, there was a feeling not of growing confidence but of diminished confidence; it was recognised that it was simply a stock exchange operation, the operation of a corner, and people who had not realised that in the earlier part of the year, in the later part of the year refused to have anything to do with the flotation of the company.

20,078. Might I ask you your interpretation of the first clause of the Mining Leases (Cornwall and Devon) Bill—Sir John St. Aubyn's Bill; does it refer to the case of minerals being held in undivided ownership?—I think it does.

20,079. Have you read the paper handed in by Mr. Paull, which was published in Appendix No. II. to the second volume of our report?—I do not know whether I have read that one, I have not been able to study all the evidence.

20,080. He seems to think that the first clause is not quite clear, and that it might refer not merely to cases of joint ownership of minerals, but where there are large numbers of owners in severalty in the same neighbourhood?—I am afraid I have not seen that, I have done what I could in the short time at my disposal.

20,081. The question I wish to found upon that is this, do you think that clause gives the power to the

owners of the majority of mines in a district to compel the owners of other mines in the same district to grant leases of their mines, or that it would only refer to cases where there is a joint ownership?—I understand your point—I do not know what the legal effect might be.

20,082. What is the intention?—I should dislike to prognosticate anything on that score, but I think that the intention certainly was to apply only to undivided ownership, because we have got a number of cases both in Illogan parish, and in St. Agnes, and in other parishes where the owners of the land have land in joint ownership, and they have never had the land divided, and there are considerable difficulties arising.

20,083. Mr. Paull seems to think this open to two interpretations?—I think that is very likely.

20,084. In reference to the wages of miners in Cornwall, did you not say that the miners were very much inclined to emigrate in case they did not approve of the wages they were getting, or in case the mines in which they were working were closed?—They are a most migratory race.

20,085. Would that not have a tendency rather to keep up than reduce wages?—It may have a tendency to keep up wages at the low point at which they at present remain, but it does not tend to increase wages. I have never known wages go up beyond a pound a week as a general average.

20,086. But surely in a country where the habit of migration or emigration is common wages would be more likely to be high than where people are not accustomed to leave their own localities?—I do not know whether the colliers of South Wales, and Durham, and Staffordshire, and so on, are in the habit of emigrating as much as Cornishmen, but it is a fact that the wages of miners in all those districts are very much higher than the rate of wages ruling amongst us.

20,087. My point is that emigration would not be a cause of the low wages—that it would be in spite of the tendency to emigration that the wages remain low?—I do not say that emigration is the cause of the low wages.

20,088. I thought you gave that as one cause?—I meant only in this way, I said that the fact that the miners when they had emigrated and were getting high wages, like 12*l.* and 15*l.* and 20*l.* a month in foreign countries, are able to send home large proportions of those earnings to their families, it enables those families to live in comfort, where otherwise they would be starving if they had only to rely upon the small wages in Cornwall.

20,089. Then you said in some instances the dues were half the profits, and I think you instanced East Pool mine?—I said with some assurance that in certain of these balance sheets you will find that the dues have amounted for the three months, I do not say on the average for the whole year, to almost as much as one-half.

20,090. If you refer to Appendix B. of the first report of our Commission you will find that the profits of the shareholders are more than five times the dues paid over a long term of years?—Yes, undoubtedly; I do not deny that.

20,091. Would you not put that fact against the other?—I do not say that I am going to base a general principle on it; I do not wish, for instance, to say that that is the proportion which you will find always existing, but I do say that in particular instances you will find it as high as that.

20,092. You will find that the profits are put down as 457,985*l.* 19*s.* 6*d.*, while the dues are only 87,140*l.* 5*s.*?—I have not got the balance-sheet of East Pool here, but I have several of the Dolcoath balance-sheets.

20,093. We may take it, may we, that your statement merely refers to three months?—I find, for instance, that on the 19th May 1890 there was a Dolcoath dividend declared of 3,525*l.* and that the royalty was 1,684*l.* 14*s.* 7*d.* (See Appendix A. II.)

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

The Mining
Leases (Corn-
wall and
Devon) Bill.

Miners' wages.

Dues and
profits.

The Mining
Leases (Corn-
wall and
Devon) Bill.

Selling price
copper.

Establishment
of a tribunal.

Mr. C. A. V.
Conybeare,
M.P.

7 April 1892.

Dues and
profits.

Payment of
dues on profits.

The Mining
Leases (Corn-
wall and
Devon) Bill.

20,094. But we are talking of East Pool now?—I am sorry to say that I have not got my balance-sheets of East Pool with me.

20,095. You quoted East Pool surely?—Yes, I did, but I was quoting from a speech I made in Redruth on the 2nd of October 1890, in which I stated it from the facts I had in my possession at the moment.

20,096. If you take Dolcoath over the same period I have referred to you will find that the profits are 806,217*l.* 10*s.*, and the dues 259,579*l.* 19*s.* 11*d.*, which is considerably less than half. I merely want you to modify your statement that dues are often half. If you take a longer period you will see that in one case they are less than a fifth?—No, I cannot modify my statement. My statement was merely that in particular cases, which I quoted, the royalties have amounted to almost one-half of the profits. I never stated that taking the whole of the average of a number of years that would be the proportion.

20,097. Would it be fair to take three months; might there not be some special reason in that case?—I merely took that as an illustration of the onerous character of these charges. I do not pretend to cury in my mind the details of a great number of balance sheets extending over a number of years.

20,098. Surely it is a fairer statement, is it not, to take a long period than a short one of three months?—I have not the smallest objection to your doing that.

20,099. If the dues were paid upon profits, what power of interference would you give to the lords or would you give any?—What power of interference?

20,100. Yes, in the management of a mine?—I think that they would be entitled to some, I will not say interference, but supervision. But they exercise that at the present time. An instance was given in evidence before you, by Mr. Williams I think, of a case where a lord insisted upon having an engine of a certain scale and size placed upon a mine. I know of other cases. The lords, I may say, always have the power of sending down their representatives and agents to examine the workings of a mine, and to see that everything is being conducted in accordance with their ideas. They have that power of interference to a very great extent at the present time.

20,101. Have they sufficient power of interference to prevent?—Some of us think they have got too much.

20,102. You see the state of things would be very different when their dues depend upon profits. The statement has been made before our Commission that the profits might be run down by some of the people connected with the mine voting themselves large salaries for example?—If I remember rightly, that was a suggestion that the miners would divide a most unreasonable rate of wages.

20,103. No, excuse me. The gentleman who made this statement, Mr. Paull, argued that if two or three men took the mine they might vote themselves large salaries as pursers or as agents of the mine, and so reduce the profit, and the question was whether the lord had any right in interfering with such matters?—That would surely come under the head of mismanagement or otherwise.

20,104. It does not come now. You see, it would not be covered by any clause in the present leases—any power that the landlords have now does not extend to fixing the salaries of the engineer and agent?—No; I believe not.

20,105. Therefore a further guarantee should be given to the lord that the mine would be fairly worked?—I think there are sufficient guarantees there, but I do not think that any great difficulty would arise as to that. It would be possible if you had a mining court, and any dodges or tricks of that kind to defraud the landlord were provable, to bring the case before the court. I think you were referring to Question 3,977, were you not, the evidence of Mr. Pike, I think it is.

20,106. No, to Mr. Paull's answer to Question 9535. I was referring also to Appendix No. III.

Mr. Provis' paper, in which he criticises the Bill, the 4th section of it, headed "Reservation of Dues or Royalties on Profits instead of on Gross Produce?"—I have read that paper of Mr. Provis', and I think for the most part he does not show as much acquaintance with our system of things down there as some of your witnesses have shown.

20,107. Here is an objection that he makes that I would like you to consider. "There is another disadvantage the lessor would be subject to:—The mines in Cornwall and Devon are largely held (that is the working majority of shares) by merchants, engineers, bankers, and tin smelters. The merchants supply the coal, timber, &c., the engineers supply the engines, boilers, stamps, &c. The bankers do the banking business. The tin smelters buy their own tin. It may suit these gentlemen to carry on a mine on a large scale, the books showing no actual profit on the working, but they would get their profit in the coal, timber, and engines supplied, and the tin smelters on the tin they purchase, &c.; whilst, on the other hand, the lessor might have given them his property to work on, and receive no benefit from it whatever." How would you meet that difficulty, that the profits would not be fairly made? I think it might be met by the landlord having a representative on the board of management. What we complain of is really this, that whereas in the time of Lord De Dunstanville, an ancestor of the present Mr. Basset, the grandfather I think, it was the practice, almost the rule, for landlords or owners to be largely interested in the mines (I may say that when Dolcoath was very nearly going under altogether, Lady Basset nobly came to the rescue), what we complain of is that while that was the case in former days, the lords at the present time do not adventure sixpence in these mines as a rule, and yet they take an enormous proportion of the profits. Now if they are content to take a proportion of their profits more in accordance with what we consider the equity of the case, I do not think anybody would object to their having a regular representative on the board of management, whether you call him a director or a committeeman.

20,108. Would you give them power of voting equal to their share of the profits?—That is a question of detail which I think could be arranged.

20,109. I think you stated that one-thirtieth would be fair dues in your opinion?—I stated that as my own opinion.

20,110. Would you vary the proportion in accordance with the richness of the mine, or would you have the same proportion everywhere?—I think in estimating the question of dues, you ought to have regard to the value of the lode you are working, and also to the conditions under which you are working. For instance, we are working in Dolcoath at a depth of 420 fathoms, but there are other lodes which you may work at a depth of only 100 fathoms.

20,111. That was only an average then you would say—do you think in each mine the proportion might fairly vary, and that the court might consider that?—I am not at all saying—indeed I should be very sorry to say—that you should fix a regular proportion, say one-thirtieth for the whole county, or anything of that kind. No, you must vary it.

20,112. Might not a fifteenth in a rich mine be better for the adventurer than a thirtieth in a poor mine?—Yes, that is possible, but then I should say that the thirtieth in a poor mine ought to be reduced to a sixtieth perhaps.

20,113. That is what I wanted to bring out. You say there is plenty of mineral still in the country—then what is the real reason why it is not worked?—Because we cannot get any capital. A great many of the mines are run—if I may use a common expression—only by a few rich men like Messrs. Harvey, the Williamses, Bolithos, and others, who are interested as bankers, smelters, merchants, and so forth. If they were to withdraw their support, unless capital could

Royalties.

Depression
in the mining
industry
Cor

be introduced from outside, those mines would all go under. In other cases, like the West Seton Mine, which closed down about a year ago, or a little more than a year ago, the shares had passed to a great extent into the hands of small holders. The mine was not paying—not I believe because there was no mineral there, because I believe there is plenty of mineral there, only they got off the right track, I believe, so some people, at any rate, argue, but the mine was not paying, and those small men into whose hands the majority of the shares had passed were unable to stand the calls which were being made, and they could not get capital from elsewhere, and, therefore, they decided to wind up.

20,114. You do not think the low price of tin is the main cause?—The low price of tin undoubtedly has something to do with it—that is one cause undoubtedly.

20,115. Which is the chief cause—is it the disinclination of men of capital to invest in those mines, or is it that the mines do not pay well enough to induce them to invest?—I do not know what the price of tin is at this moment, but supposing we say it is 52*l.* The low price of tin does not shut down all the mines, so that it shows that is not the principal cause. We have got mines still working, and succeeding, and paying dividends in spite of the low price of tin. There are other mines which I contend, although they are not working at the present time, might be worked, and might be worked, I believe, to a profit from what I can gather about them, if only we can get capital from outside to come in and develop them; but owing to the causes we have been discussing—the action of the lords in the past, which has had a deterrent effect, and the cost book system, which has also been insisted upon to so great an extent—outside capitalists will not come in. And also, to be perfectly fair, of course I wish to mention, as one of these deterrent causes, the bogus companies, which undoubtedly have been a curse to the county.

Establishment
of a tribunal.

20,116. (Mr. Forster.) I think, in the Bill you proposed, that the county court judge should be the head of the court, but I gather from what you now say that you think it should be a higher court?—No, I think you mistake me. The county court judge, with assessors in parts of the country where county courts are the only courts, but in Cornwall we have a court called the Stannaries Court, which has sole jurisdiction in mining matters.

20,117. You think that would be the more proper court in Cornwall?—I think so, because we like our Stannaries Court. I am not wishing to disestablish it. As a question of expense it might be cheaper to get rid of the Stannaries Court and have a county court judge, but, in any case, my contention is that, whether it is a county court judge or the judge of the Stannaries Court you should have associated with him certain assessors technically acquainted with mines.

20,118. Of course those assessors would not have any voice beyond advising him—they would not have the power of voting?—No, I should put them on the same footing as the nautical assessors in the Admiralty courts.

20,119. I suppose you are aware that the county court jurisdiction is limited to comparatively small cases now?—Do you mean in connexion with nautical cases?

20,120. Yes, that their power is limited to a certain amount?—The county court jurisdiction has been considerably increased, I think of late years; but in any case that is no reason, if it is a competent tribunal, why you should compel people to come all the way up to London to the superior courts.

20,121. I am not suggesting that, but do you not think that you should have a court of rather more experience and weight than an ordinary county court if you do have a court?—By all means. I have not developed all my views upon mining reforms. I have not wished to trespass too much upon your attention, but if it comes to that, I am in favour of appointing a

Mining Minister and having a supreme Mining Commission or Mining Court, which would sit in London, and which would operate through commissioners or judges, or whatever you may like to call them, going to different parts of the country.

20,122. So that you think on the whole that, putting the question of expense out of sight for the present moment, a higher court would be better than the county court for this purpose?—Of course I do not wish to dogmatise or to speak in any sense with respect to what might be made for other parts of the country; I am content to deal only with my own county of Cornwall, and I think I should be upheld by most of the authorities in Cornwall when I state that we should have confidence in the Stannaries Court to deal with all these questions.

20,123. (Sir William Lewis.) I have not quite understood whether you have had experience in negotiations for acquiring leases in Cornwall?—I cannot say I have exactly had experience, I am having experience, I am applying to the trustees of the Tedy Estate at this moment for a license.

20,124. Who is in the habit of negotiating on the part of people desiring to become lessees?—Anyone may do so, any individual either as representing himself only, or others.

20,125. Someone who has had a previous experience, or is capable of dealing with such matters on behalf of himself and co-lessees, I suppose?—Not necessarily. For instance, a perfect stranger to Cornwall, I apprehend, might go down and look at a piece of ground, and after, I suppose, getting all the information he could, he might think to himself, "This would be a good mining speculation," and might send in an application to a lord for a license, which is usually a license for 12 months, to prospect upon it. It would, of course, be open to the lord, if he knew nothing at all about him, to make inquiries, and to say, "No, I do not know you. I do not know whether I should be justified in giving you this license."

20,126. Then there is a stereotyped form of grant, is there?—I am not quite sure. It is very much the same, it is called a take-note as a rule.

20,127. I wish to know what is the course usually adopted by people who are desirous of acquiring tracts, because you have told us there is plenty of good mineral still left undeveloped in Cornwall?—believe that is so.

20,128. Supposing there are people who had mines and were desirous of acquiring tracts, what is the course usually adopted by such people?—I do not think you would find many absolute strangers to the county come down and on their own responsibility take up a mining sett. I think they would rather associate themselves with people who knew the district, because, of course, you do not find the out-crops on the surface of the ground as you do in new countries like South Africa; you have got nothing to go by as a rule.

20,129. Is it generally known that there is a large tract of undeveloped minerals which it would be worth operating upon?—Yes.

20,130. Or is it some recent discovery?—For instance there is the great flat lode which is rich in all the run of mines just south of Camborne. That is believed to extend right away down to the West through a sett called Trevoal Sett. That sett was taken up for the purpose of working by a company which was called the West Wheal Grenville. They followed the advice, the very skilled advice, of Mr. Henderson the dialler, and surveyor of the county, who recommended them to cross-cut north and said that at a certain point they would cut this great flat lode, but after spending all their capital in cross-cutting north they did not cut it. I believe that they made a mistake and ought to have cross-cut south, I think the great flat lode, unless it is in a most unaccountable manner pinched out in Mr. Pendarves' ground in Pendarves Park, must be in that sett, and competent miners assure me that the out-crop is

Mr. C. A.
Conybeare
M.P.

7 April 18

Establishment
of a tribunal

Acquirement
of leases.

Undeveloped
minerals.

J. A. V.
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M.P.
April 1892.
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visible at a short distance from the engine-house of that particular mine the West Wheal Grenville.

20,131. Do you not think that that disastrous experience has had something to do to deter people from spending more money in that district?—That is always a risk that you have to face in any mining; it is not peculiar to Cornwall. But what I should have advised—it was not my business, I do not pretend to be a mining expert—I think I should rather have gone a different way to work and carried out a proposal which I made to some gentlemen in the county last year, to introduce into the county of Cornwall what never has been introduced, I believe, in this connexion, namely, a diamond drill, and to put down bore-holes in order to find out where the lode was. You can put down a bore-hole for a very small sum, whereas if you start sinking an expensive shaft you can run away with 15,000*l.* or 20,000*l.* before you know where you are. I believe at this moment anybody who cared to enter upon a legitimate speculation of that kind, and introduce diamond drilling for the purpose of testing different undeveloped portions of the county, would do a great deal of good, and probably make a large profit by it.

20,132. Have you had any experience of diamond drilling in Cornwall?—Not in Cornwall, because no one has ever tried it, but I have in other parts of the world.

20,133. Say in this kingdom; have you ever had any experience of the cost of diamond drilling in any part of this kingdom?—No, I have not been associated with mines in other parts of this kingdom, but I have had experience of the diamond drill in other countries, and I know as a matter of fact, and I may state it on the authority of one of the most eminent of Her Majesty's Inspectors of Mines (that is, Dr. Le Neve Foster) that the diamond drill is used in our Australian Colonies by the Government, and that they spend large sums of money every year purely for the purpose of prospecting for gold and coal and other minerals, and with the very greatest advantage.

20,134. I only wish to discover whether there were not other much more important reasons why these tracts are not developed than simply the difficulty of the Cost Book system, to which you attach a great deal of importance?—I am not asking you to infer that I refer only to virgin tracts of land. I have in my mind sets which have been worked in former days. There is a very well known sett close to my own house which was worked for copper and to a small extent for tin 25 years ago. From what I know of the history of that sett it was shut down, not because there is no mineral there, but because they came to an end of their capital, and could not go on below the 112 or 120 fathom level to prosecute their search. Men who have worked in that mine and others who know the history of it have assured me that there is good tin there—what they call champion lodes of tin which would very well pay for working.

20,135. There is an enormous difference, is there not, between not only the yield but the cost of working mine and mine in Cornwall, far beyond any royalty that is paid to a landlord?—There is a difference, no doubt, because one mine might be the cheapest to work, that is to say, the richest lode to work; but you may have another lode, another formation, which is called carbona, where you have the tin in deposits or bunches hardly connected with one another, or perhaps only connected by a thin vein a few inches thick, containing no mineral, which you have to pursue else you miss the recurring bunches or deposits. That was the case, for instance, in the set of mines known as the Lelant mines, and I believe is at this moment the character of a mine belonging to a friend of mine called the Wheal Lucy, close to Hayle.

20,136. Do you happen to know a mine that is more profitable to work at a high royalty than another mine entirely free of royalty?—Yes; put it in this way: Dolcoath is profitable to work in spite of its being a very heavy royalty—one-eighteenth—but of course that is more profitable, because it is paying dividends, than

half a dozen mines which I could mention to you, which are not paying at all; which are being merely carried on, and which would have been swamped entirely if the dues had not been remitted.

20,137. How do you describe a moderate or a high royalty? When you admit that Dolcoath is now paying well and you describe that as paying a high royalty, is that not in relation to other holdings, or in relation to the amount of profit that it yields to the shareholders?—I think one-eighteenth is in any case a high royalty, and it is a high royalty in the case of Dolcoath more particularly because we are working at 420 fathoms level, I think it is now, that is half a mile in depth.

20,138. You simply put it because it is a large proportion without reference to the profit that it yields to the shareholders?—I have not calculated exactly what percentage of profit the shareholders are making out of Dolcoath. Of course, in order to do that, or to take a fair average over a certain number of months or years, you would have to consider the fluctuating price of the shares, and the shares to-day are about 59 or 60, whereas they were a few years ago, as has been stated, over 100. But that royalty is a very heavy one considering the depth at which we are working, and I think that most mining authorities, that is to say, authorities on the question of investing in mines, will say that where you are dealing with such precarious undertakings, such risky adventures as mining, whether it is gold mining, or tin, or lead, or anything else, except, perhaps, coal mining, which is more sure, 25 per cent. return upon the capital is not too high a proportion. Now I have not got, as I say, the means of putting it into figures at this moment, but I think you will find that for a number of years past the dividends paid upon the share capital taking the value of the shares at any particular time in Dolcoath have not been 25 per cent.—nothing like it. I do not know whether I am going too far in saying that we have not had a 25 per cent. dividend at Dolcoath for a long time past, taking the value of the shares and the amount of the dividend that we get; but Captain Josiah Thomas would know all these things.

20,139. May we take it that you expect 25 per cent. return for mining?—Well, I should be very glad to get it. What I said was, that if you consult the authorities on investment in mines, you will find it generally stated that having regard to the precarious nature of the investment, 25 per cent. should be looked for.

20,140. Do you put that forward as the basis of valuation of mining lessees' property—is that so?—Well, I think as an adventurer I should desire to do so.

20,141. How about wages, do wages bear any relation at all to the fluctuations in these products, whether in tin or in copper?—With regard to copper of course there is practically no copper mining going on at the present, at least not that I can speak to; but with regard to tin mining I should say no, as a rule if the price of tin goes up I do not think that the wages follow.

20,142. There has never been any suggestion on the part of the owners to pay more to the men when tin has got into a very inflated condition in the market?—Not on the principle of a sliding-scale such as you have in the colliery districts of South Wales and the North of England. I do not think that that has ever been carried out. I will not say that it has never been suggested. I have practically suggested it myself as a reform.

20,143. Is it possible that the difference between the lowest and the highest prices in tin or copper are far beyond what are paid either in wages or to the landlord by way of royalty?—The highest prices?

20,144. The range between the highest prices and the lowest prices?—Of tin or copper?

20,145. Take tin if you like?—I fancy that except where you have extraordinary circumstances like the copper ring on the continent to inflate prices unduly

Migration of
miners.

the price of tin is fairly stationary—steady I should say—I will not say stationary. It may fluctuate between 50*l.* and 60*l.*, or something like that, but there again I should need to refer to tables, which I have not got at my command at present, in order to answer that question properly.

20,146. Only you are able to say that wages bear no relation whatever to the prices obtained either for tin or copper?—Certainly, so far as I know, the wages of the miners do not rise with the rise in tin, and fall with any fall in tin. I think they are stationary in fact.

20,147. (Mr. Barnes.) They do not rise and fall with the market in tin in fact?—I think not.

20,148. (Sir William Lewis.) I do not think you had in your mind in answering a question about migration the fact that Cornishmen migrate to South Wales collieries a good deal, where very much higher wages are obtained?—They do not migrate to South Wales to the same extent that they migrate to foreign countries; I have no statistics on that point, but I should say that you would probably find more Cornishmen who have gone to Northumberland and to Barrow-in-Furness and to those districts than to South Wales.

20,149. Are you speaking now with a knowledge of the number which goes to South Wales and the number which goes to the North?—I could not say that—that is a point which I have never gone into in detail. I do not know where I could get the statistics. But I do happen to know that some years ago quite a colony of men went to the collieries in the North, in Northumberland and Durham, and that there are quite a colony of Cornishmen working in the Barrow-in-Furness ironstone mines.

20,150. Is there not some difficulty in accounting for Cornishmen remaining in Cornwall at an average wage of 1*l.* a week when they can obtain as much as 40*s.* and 50*s.* a week by going to South Wales?—They do not remain very much. I have some figures here, I think, which would give you an idea of the decrease. I do not want to go into details, because I know it is in some of the evidence already placed before you. It has been stated that the last census shows a diminution of more than 30,000; that is to say, that the population of Cornwall has not only remained stationary instead of advancing 30,000, as it ought to have done, but it has actually decreased, so that there is a difference really of 60,000 in the population when it is looked at from that point of view. Here are a few facts which I have collected. These facts I took from a recognised authority which I had when I made this speech in October 1890. In 1864 there were 70 mines in full working in the Camborne district. According to the latest returns published, that is to say in 1890, the mines in the district of Camborne and Illogan working were 11 in number, and in the Redruth parish there were two mines at work. In the Camborne and Illogan districts there were 11 mines idle, which had fallen idle within the last few years. In the Redruth district there were two mines working and 10 abandoned within the last few years or so. There had been abandoned in the Gwennap parish in the last 14 years no less than nine mines, and at the present moment there was not a single mine at work in the Gwennap parish. Then as to the numbers of population, there were probably employed in the Illogan and Camborne district when the 11 mines which were now idle were at work, 3,000 persons, and possibly 10,000 dependent on them. In the Redruth parish the 14 mines now abandoned employed probably 3,500 persons, and provided a living for 11,000. The abandoned mines of Gwennap parish probably employed 3,000 persons, and possibly 10,000 were dependent upon them. All that population has disappeared. I do not know whether they have gone to Wales or not, but that shows that there has been a tremendous migration.

20,151. Were any of these mines worked under a limited liability company?—Probably some of them were—not very many.

20,152. Notwithstanding that, they closed?—Yes, I think most of those that are there referred to had gone under before I was connected with the mining division.

20,153. I think you said, in answer to Mr. Redington, that you would give the landlord a seat on the board; or the nomination of a seat on the board, in respect to his royalty, assuming that he took it in the shape of profits. Do you think that it would be a fair thing that he should be left with one seat to control that board?—I do not think that one member of a board would control all the rest, but I do not wish to commit myself to that as a proposal which I should be prepared to carry out. I merely suggested it as a way of meeting a difficulty which Mr. Redington put to me, and which seems to me a possible means, but until I have had experience of the working of mines as a committee man on some of the Cornish mines, which I never have had, I should dislike to commit myself further to that.

20,154. You stated that the landlord has already got power of inspection?—Yes.

20,155. That power of inspection is within the confines of his agreement, or else it is simply to see that the minerals are properly worked and properly drawn. He does not go any further than that. He has no power of interfering with the mine as regards profitable working, nor with the disposal of the produce of the mine, has he?—No, I should not say that, but he has means of interfering in other ways, as, for instance, in requiring this method of working to be adopted, or that.

20,156. That is part of the original bargain, is it not?—That is under the lease, and as I mentioned in a case which has been brought before you, the lord insisted upon a particular sized engine being put up.

20,157. Advised by a mining engineer that that was necessary, I suppose?—I presume that he would always be advised either by his agent, or by some mining engineer.

20,157. Has it occurred to you that there is any difference between the position of a landlord if he took his shares in profits, and an ordinary shareholder he would be a continuing shareholder in respect of his property, whereas the other shareholders could go on as long as it paid, and then sell out, and he would have the property thrown back on his hands?—I am aware that point has been insisted upon I think by Mr. Provis in his paper. I am not saying there is no distinction of that kind, but I apprehend that whether it is in the form of royalties, or whether in the form of dividend, that he takes his shares there really cannot be any very great difficulty in settling things equitably between the landlord and those who are working. I mentioned the case of Lord de Dunstanville, the ancestor of the present Mr. Basset in olden times as being the lord, who was very largely interested in the actual working of the mine. I never heard that there were any difficulties arising because he was a large shareholder in the mine, as well as being the landlord.

20,159. Possibly you have no means of going into the records of the proceedings at that particular time?—I have this statement in his favour by a writer in the *West Briton* on the 23rd January 1890, that “he never took the spoil from the field without being first and foremost in sharing the dangers that preceded the victory. He was always the foremost shareholder, while his steward, Mr. Reynolds”—who was well known in Camborne—“also ventured to a less extent.” That is to say, in those days, that lord at any rate did his duty nobly by the county in standing by the industry.

20,160. (Mr. Barnes.) About what period would that be?—That must have been over 30 years ago. When Dolcoath Mine was found to be worked out as a copper mine, and it was a question whether she should be carried on, or whether an attempt should be made to carry her on at all, I think it was when Captain Josiah Thomas' father was manager, it was simply by the pluck and perseverance of the Captain

Mr. C. A.
Conybeare
M.P.

7 April 1892

Payment of
dues on profit

C. A. V.
Conybeare,
M.P.

April 1892.

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Thomas of that day and of Lady Basset, who stood by the mine, that the tin was ever discovered. If Lady Basset at that time, and Captain Thomas, who was the manager, had not had faith in the mine, and in their belief that it would turn out to be rich after all, the present immensely valuable Doleath mine would never have existed. But to-day there are mines which undoubtedly have been closed down (which might be, I will not say equally rich, but might be certainly paying properties) because you have not had the same patriotic and public-spirited adventurers in the shape of landlords to back you.

The witness withdrew.

Adjourned.

FORTY-SEVENTH DAY.

Tuesday, November 22, 1892, at 6, Old Palace Yard, Westminster, S.W.

PRESENT:

THE RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

THE LORD MACNAGHTEN.
SIR W. T. LEWIS.
MR. ALFRED BARNES.
MR. THOMAS BURT, M.P.
MR. GEORGE BAKER FORSTER.
MR. H. H. GIBBS.
MR. ARCHIBALD HOOD.
MR. GEORGE AULDJO JAMIESON.

MR. WILLIAM KENRICK, M.P.
MR. WILLIAM C. PENDRYES.
MR. R. CHISHOLM ROBERTSON.
MR. JOSIAH THOMAS.
MR. CHARLES A. WHITMORE, M.P.
MR. NICHOLAS WOOD.

MR. HERBERT LYON, Secretary.

SIR JOSEPH H. WARNER called and examined.

20,162. (*Chairman.*) You are the counsel to the Chairman of Committees of the House of Lords?—That is so.

20,163. How long have you been so engaged?—For 21 years—since 1872.

20,164. And in that capacity you have had great experience in respect of private Bill legislation?—I have.

20,165. And you are fully cognisant of the principle upon which that legislation has been conducted in respect of the compulsory purchase of land?—Yes, I certainly ought to be.

20,166. You have seen certain evidence that we have received upon the subject of the proposals of the compulsory purchase of land, for what are called wayleaves?—Yes.

20,167. You have drawn up a memorandum stating the present practice?—Yes, I have put that as shortly and as fairly as I could, especially with reference to the grant of compulsory surface wayleaves. There are one or two trifling alterations of form in the memorandum which I should like to make. I may say that I have ascertained from the Journals of the House of Commons that the reference to the Standing Orders of 1774 and 1799 is correct.

20,168. Perhaps you will kindly read it, and if you do so, it might be put into the evidence.

[Mr. Lyon, the Secretary, then read the following statement with reference to wayleaves.]

"SURFACE WAYLEAVES.

"It is proposed that Parliament should be asked to give powers to proprietors and lessees of collieries to acquire compulsorily surface wayleaves for the purpose of getting their coal to market.

"The proposal takes two forms: one, that the Private Bill procedure in the case of a railway should,

20,161. (*Chairman.*) Is there anything else you would like to say before you leave?—No, I do not think there is anything else that occurs to me. Of course, I wish it to be understood generally in respect to other questions which I have not dealt with in detail, such as the cost at which the damage to land is charged for and other details of that kind, I am quite satisfied with the evidence which the Commission have already received. There may be some small points upon which I should go further, but still I do not think it necessary to trouble you with details upon those points.

as far as possible, be followed, a local tribunal being substituted for a Parliamentary Committee; the other, that the proprietors and lessees of collieries within a given distance of a railway or port should have general compulsory powers to take the intervening lands or wayleaves over those lands, following the precedent of certain Welsh Canal Acts of 1792 and 1793, of which the material parts are set out in Appendix IX. to the Second Report of the Commission, p. 390.

"The proposal in either form rests on the assumption that coal is an article of such general and paramount importance as to justify the grant of compulsory powers in order to bring it to market.

"I will endeavour to consider briefly and with reference only to the existing Parliamentary practice:—

"I. The principles on which Parliament grants compulsory powers.

"II. Whether the claim of a special privilege for coal can fairly be maintained, and, if so, with what limitations.

"III. The merits of the changes suggested.

"I should state that I shall not put forward any opinion of my own on any of these points. I shall endeavour to express, as fairly as I can, what after many years' experience I should consider to be the general Parliamentary view and practice up to the present time, and its bearing upon the questions which suggest themselves as to the grant of compulsory surface wayleaves.

"No doubt it may be possible to find cases here and there more or less inconsistent with the views which I express, but I think these will be found to be few in number and generally of an exceptional character.

"I.

"Parliament never gives power to take lands or easements compulsorily unless plans have been deposited and notices served (in accordance with the Standing Orders in the case of a Bill or the regulations of the Government Department in the case of a Provisional Order) on the owners, lessees, and occupiers concerned, and an opportunity has been afforded them of being heard before a Parliamentary Committee. The rule is the same whatever be the circumstances under which the lands or easements are proposed to be taken. The single exception is the power of a local authority, under the Public Health Acts, to carry sewers or water-mains, if, on the report of the surveyor, it appears necessary to do so, into, through, or under any land within their district. This power, as regards England (except the metropolis), dates from 1848, and was re-enacted in 1875. There are corresponding powers in the case of London, Scotland, and Ireland. Such powers are important in the interest of the public health, scarcely capable of abuse, and *prima facie* beneficial to the landowner. No such general powers have been given, so far as I am aware, by any other Acts, public or local, during the present century. I should add that under the Burgh Police (Scotland) Act of last session power is given to the authorities of the burghs which are within the Act, to take land compulsorily for street improvements, water supply, and sanitary purposes by an application to the sheriff, and that the appeal is to the Secretary for Scotland, not to Parliament.

"An adequate consideration is always secured to the public when compulsory powers are given. If a local authority seeks compulsory powers in accordance with the reasonable requirements of their district for sanitary or local government purposes, these requirements are considered a sufficient public consideration. In the case of a company, compulsory powers are given for a 'public undertaking' only. There is no recognised definition of a 'public undertaking'; probably no complete definition could be framed. The expression includes all undertakings regulated by the incorporation of the Railways Clauses Act of 1845, or of one of the Clauses Acts of 1847, or by some subsequent Act of a similar character, such as railways, tramways, gas, water, piers, harbours, docks, markets, fairs, and cemeteries. In all these cases Parliament makes important conditions to ensure to the public a share in the benefit of the undertaking.

"There is a remarkable instance of the application of this rule in the case of the short line of railway from the Muswell Hill Station of the Great Northern Railway into the Alexandra Park. When compulsory powers were asked for this railway, there was every prospect of the park being successful; but Lord Redesdale objected that there was no certainty that it would be kept open to the public, and he allowed the compulsory powers only on the condition that the park should always be open on payment of a reasonable sum for admission. The park has long since been practically closed, but Lord Redesdale's proviso remains in force, and alone prevents the park being built over; in which case the compulsory powers would have been used to make a railway for the development of a building estate, not for the benefit of the public generally.

"There are several classes of public undertakings not within the above description. Among these are canals, bridges, tunnels, subways, and drainage works. When such cases come before Parliament, a due consideration to the public is secured, in analogy with the public legislation, by provisions inserted in the special Act. Compulsory powers are occasionally given to companies or individual undertakers for local improvements. Such Bills, however, would have little or no chance of success without the previous assent of the great majority of the owners, lessees, and occupiers affected, and a

large consideration to the public, in the form of new or enlarged streets or improved communications, is always insisted upon.

"Another condition of the grant of compulsory powers is that they shall be given to a company incorporated under the Companies Clauses Acts, not to a limited company, or to private individuals. The reason for this is, not that a parliamentary company is necessarily more solvent, but that its exact purposes can be defined, and its share and loan capital regulated by the special Act. There is practically a statutory appropriation of the authorised capital of the company to the authorised purposes of the company. The borrowing powers of the company are limited, and its loan capital is charged on the undertaking, *i.e.*, the net profits, not on the land or property of the company. On the same principle, the rolling stock and plant of a railway company is protected from execution by the Railways Companies Act, 1867. In effect, the right of the public to have the undertaking carried on for their benefit is treated as paramount to the interests of the company and their creditors, and it would be impossible to secure this so effectually if the undertakers were a private company or individuals. There are some trifling exceptions to this rule in the case of local improvements and of some undertakings of minor importance constituted by Provisional Order.

"But it does not follow because an undertaking is 'public' in the sense above indicated, and complies with the conditions above mentioned, that compulsory powers will be given. In the case of a railway, for instance, it is not sufficient that the Railways Clauses Acts should be incorporated, maximum rates enacted, and the other usual provisions made for the benefit of the public. To justify the grant of compulsory powers, the railway itself must be so situate as to be of probable advantage to the public, and the main object must not be to serve private interests. Railways designed to serve private interests are usually termed for parliamentary purposes 'private concerns,' and though their construction is authorised, compulsory powers to take lands for the purpose are not given. Instances of this occur almost every session, and the practice is recognised in Standing Order 117 of the House of Lords, in the following terms:—

"If the Committee on any Railway Bill or Tramway Bill decide that general compulsory powers to enter upon, take, or use lands for the purposes of any railway or tramway ought not to be given on the ground that the direct object of such railway or tramway is to serve private interests in any lands, mines, manufactories, or other property, the Committee may insert a clause or proviso, &c."

"The object of the order was to provide against the forfeiture of the deposit in cases where the promoters failed to complete their railway within the prescribed period from want of compulsory powers, but incidentally it suggests the principle on which such powers would, in accordance with the established practice, be refused. To prevent misconception it is desirable to add that the expression in the order 'general compulsory powers' does not mean powers to take lands not shown on the plans and described in the book of reference. It was not, when the order was adopted, considered possible that any such power would be asked for. The expression simply means compulsory powers in the usual form over all the lands shown on the plans and described in the book of reference.

"To summarise the foregoing, and omitting for the present purpose the case of Public Departments and Local Authorities, compulsory powers are only granted—

"(1.) After deposit of plans and notice to all owners, lessees, and occupiers concerned, and opportunity given to them to oppose before a parliamentary committee.

Sir J. H. Warner.

22 Nov. 1892.

Compulsory purchase of land.

Sir J. H.
Warner.

22 Nov. 1892.

Compulsory
purchase of
land.

"(2.) For a public undertaking, and with the reservation of an adequate consideration to the public.

"(3.) To a company incorporated by special Act and regulated by that Act and the Companies Clauses Acts.

" II.

"On the general question, whether the claim of a special privilege for coal can be maintained, Parliament has never, I believe, expressed any formal opinion, and I am not aware that any proprietors or lessees of a particular coal mine or group of mines have, at least in recent years, tested the point by applying themselves for compulsory powers. But the subject has frequently been considered on applications by railway companies, and these are dealt with on the merits of each case. The tendency in recent years has, perhaps, been rather to relax the rule against private concerns, and to treat the application by a railway company as *prima facie* evidence of the public utility of the proposed line. The case is clear when the proposed line will serve a considerable mining population as well as convey coal. In other but comparatively rare cases, if it appears that the direct object of the proposed railway is to serve private interests, compulsory powers are refused, although unopposed by the landowners affected. No doubt, when this occurs, the railway company usually finds that it can make terms with the landowners before the Bill passes.

It seems to me that, as the question now stands, Parliamentary Committees would probably take the view that, assuming coal to be an article of great and general importance, it does not follow that compulsory surface wayleaves ought to be granted for the benefit of any particular mine or mines, or that coal should have a privilege not accorded to other raw material or manufactured products of great and general importance to the community. Moreover, I think it would have to be clearly proved that the power to take surface wayleaves compulsorily would lower the price of coal, and not increase, or unduly increase, the profits of the proprietor or lessee of the coal. According to the present law and practice of Parliament, a man is entitled to any increased value which his land may acquire from surrounding circumstances, even in the case of public improvements. *A fortiori*, he should be entitled to the increased value where the use of his land enhances the profits of private persons. I should anticipate that, if Parliament accorded to proprietors or lessees of coal any special privileges in the way of compulsory powers, similar powers would be given in the case of other articles of great and general importance, and that such powers would only be accorded, if Parliament adheres to its hitherto invariable rule, on terms securing an adequate and direct consideration to the public.

" III.

"The suggestion that compulsory powers to take wayleaves should be granted to proprietors or lessees of collieries, on the lines of Private Bill procedure, but by a local tribunal, raises the general question of an alteration of the existing Private Bill system. That was fully considered by the Joint Committee of 1888, and I have nothing to add to the evidence then given on the general subject. But I would point out that if a local tribunal is empowered to grant surface wayleaves compulsorily, serious conflicts of jurisdiction may arise between the local tribunal and Parliamentary Committees. The making of a branch to a colliery or manufactory is not unfrequently the subject of keen competition between two railway companies, and in that case may involve considerations extending far beyond the interests of the landowners concerned. A proprietor or lessee of coal who applies to the local tribunal for surface wayleaves to connect his colliery with the railway of one company may be seriously interfering with the rights or claims

of another railway company serving the same district, and possibly promoting in Parliament another line to the same colliery.

"The other suggestion, based upon the Welsh Canal Acts of 1792 and 1793, is, perhaps, best answered by a short reference to the Parliamentary history and practice of that period. In 1774, the House of Commons adopted a Standing Order requiring notices to be given to owners, lessees, and occupiers in the case of canals and other specified works, but this order did not in terms extend to the branch railways or feeders. In and about the years 1792 and 1793, there was a very great extension of canal enterprise in England. The general powers contained in the Welsh Acts to make branch railways and feeders no doubt excited attention, and in the year in which the latest of those Acts was passed, the House of Lords by Standing Order required Canal Bills to be advertised, plans to be deposited, and notices given. This, probably, operated as a check upon the grant of compulsory powers for unspecified branch railways and feeders, and the practice of allowing such powers, if it continued after 1793, must have been stopped altogether in 1799 when the Commons extended their Order of 1774, as amended and re-adopted in 1794, expressly to works of that description.

"So far, therefore, from these old Welsh Acts affording any argument in favour of the proposal now under consideration, it would seem that they had scarcely become law before Parliament took steps to limit or prevent the grant of such powers in the future. Every objection which could be urged against the simple 'tram' or 'dram' road of that period applies with greatly increased force to the modern railway.

"It is interesting to notice that the 'coalowners clause' in the Welsh Canal Acts was strictly in accordance with the principle that there must be a public consideration for the grant of compulsory powers. The clause provided that any branch railways or feeders made by coalowners or manufacturers should be open to the public on payment of the like tolls as were authorised to be taken on the company's railways. In the case of tramroads worked by horse-power, this provision had a real value, but experience has shown that corresponding provisions in the case of railways worked by steam are nugatory. In this respect, the old legislation is no precedent for the suggestion now under consideration.

(Witness.) I have with me a copy of the Commons Orders of 1774 and 1799, referred to in my memorandum.

20,169. Will you put in that copy of the Commons Order to which you have referred?—Yes.

EXTRACTS from Journals of the House of Commons respecting Private Bills (Rules and Regulations).

"Mercurii, 30^o die Martii.

"Anno 14^o Georgii IIIⁱⁱ Regis, 1774.

"Resolved, That it is the opinion of this Committee, that after this Session of Parliament, when any Petition is presented to this House for making a navigable canal, or for making or improving the navigation of a river, or for altering any Act of Parliament passed for either of those purposes, there be presented, with such Petition, a plan describing the line of such intended canal or navigation, and the lands through which the same is to be carried; and that previous application be made to the owners and occupiers of such lands, for their assent to the proposed canal or navigation; and that separate lists of the names of such owners and occupiers be presented also with the said Petition; distinguishing which of them, on such application, have assented to, or dissented from, the said proposed canal or navigation, or are neuter in respect thereto.

Resolved, that it is the opinion of this Committee, that after this Session of Parliament, when any Petition is presented to this House, for making a navigable canal, or for making or improving the

Sir J. H.
Warner.

22 Nov. 1892.

Compulsory
purchase of
land.

"Committee appointed 10th June.

"Mercurii, 19^o die Junii.

"Anno 39^o Geo. IIIⁱⁱ Regis, 1799.

"Resolved, That it is the opinion of this Committee, that the Standing Orders of the House, of the 7th of May, 1794, relating to Bills for making navigable canals, aqueducts, and the navigation of rivers, or for altering any Act of Parliament for any or either of those purposes, be extended to Bills for making any ways or roads, commonly called railways or dram roads, except so much of the said Standing Orders as requires an interval of seven days between the first and second reading of such Bills, and also between the day on which such Bills are reported, and the day on which such reports shall be taken into consideration, and also with respect to the printing of the reports."

"Resolution of Committee agreed to. 25th June."

navigation of a river, or for making a new turnpike road, or for raising any further sum of money for any of those purposes, there be annexed to the said Petition, an estimate of the proposed expense of such undertaking, signed by the person or persons making the same; together with an account of the money subscribed for carrying the said work into execution, and the names of the subscribers, with the sums respectively subscribed by them.

Resolved, That it is the opinion of this Committee, that after this Session of Parliament, in all Bills for making a navigable canal, or for making or improving the navigation of a river, or for making a new turnpike road, there be inserted a clause, compelling the subscribers for carrying any such work into execution, to make payment of the sums severally subscribed by them."

"Resolutions agreed to. April 25th."

[The foregoing Order was re-adopted with amendments not material to the present purpose, May 7, 1794.]

The witness withdrew.

Mr. F. J. ROTTON, Q.C., called and examined.

20,170. (Chairman.) You are the legal adviser to the Local Government Board, are you not?—I am.

20,171. And you have been so kind as to prepare the memorandum with respect to the rating of mines, showing practically how far in calculating the amount of royalties paid upon minerals, the Commission shall make use of that return?—Yes.

20,172. Will you read the memorandum which you have prepared?—Yes (*reading the memorandum*).

"1. Coal mines are rated under 43 Eliz., being expressly mentioned in that Act. Such mines, and (by s. 3 of the Rating Act, 1874) all other mines, not being mines on which the royalty or dues are wholly reserved in kind, or tin, lead, or copper mines, are assessable on the same principles as other hereditaments rated under the Act of Elizabeth, *i.e.*, according to s. 1 of 6 & 7 Will. 4. c. 96, on the net annual value, which is the rent at which the hereditament might reasonably be expected to let from year to year, if the tenant undertook to pay all usual tenants' rates and taxes and tithe commutation rentcharge, if any, but with a deduction from such rent of the probable average annual cost of the repairs, insurance, and other expenses, if any, necessary to maintain the hereditaments in a state to command such a rent.

"2. Mines of which the royalty or dues are wholly reserved in kind. In these cases the occupier is not rated except for surface land buildings and machinery, but the owner, or person to whom the royalty or dues are reserved, is rated. These mines are excepted from the operation of the Rating Act, 1874, by s. 13 of that Act.

"3. Tin, lead, or copper mines within the first paragraph of s. 7 of the Act of 1874 (that is to say, any such mines occupied under a lease or leases granted without fine on a reservation wholly or partly of dues or rent, except such as are excepted by s. 13 of the Act) are assessable on 'the annual amount of the whole of the dues payable in respect thereof during the year ending on 31st December preceding the date of the valuation list, in addition to the annual amount of any fixed rent which may not be paid or satisfied by such dues; but, subject, where the person receiving the dues or rent is liable for repairs, insurance, or other expenses necessary to maintain the mine in a state to command the annual amount of dues or rent, to a deduction of the average annual amount of such expense.'

"4. All other tin, lead, or copper mines—not coming within the exception in s. 13 of the Rating Act, 1874—come within paragraph 3 of section 7 of that Act. The assessable value is here the annual amount of the dues, or dues and rent, at which the mine

might be reasonably expected to let, without fine, on a lease of the ordinary duration, according to the usage of the country, if the tenant undertook to pay all tenants' rates and taxes and tithe rentcharge; and also the repairs and insurance and all other expenses necessary to maintain the mine in a state to command such annual amount of dues or dues and rent."

There are four classes of mines. Those which are not under the special provisions in regard to rating in the Rating Act of 1874, and these are coal mines which are under the Act of Elizabeth and all other mines which are not tin, lead, or copper mines, and which are brought under the Act of Elizabeth by the Rating Act of 1874, but not under the special rating provisions of that Act. Then there are the mines in which the dues or royalty is wholly received or wholly payable in kind, and those are entirely excepted from the Rating Act of 1874, and were by judicial decisions rated on an entirely different principle before that Act. Then come the tin, lead, and copper mines, which are within the first paragraphs of section 7 of the Act; that is to say, mines occupied under a lease or leases granted without fine on a reservation wholly or partly of dues or rent. Then comes the fourth class of mines, tin and lead, or copper mines occupied by the owner, or occupied under a lease granted on a fine, and generally any tin, lead, or copper mines which do not come within the first paragraph of section 7 of the Act.

20,173. Paragraph 1 of the section or paragraph 3 of section 7 of the report?—Paragraph 1 of section 7. 20,174. It is printed third paragraph?—I am speaking of those which do not come within paragraph 1, but come within paragraph 3.

20,175. I will put a question about the iron-ore mines. Under what category does the ironstone and iron-ore mines come for rating?—They are rated as all other hereditaments are. There is no special way of rating on the net annual value. It is the rent which the hereditaments might reasonably be expected to pay, and so on, with the ordinary deductions such as rating hereditaments are usually subjected to.

20,176. That is to say, ironstone and iron-ore mines will be rated on the same principle as coal mines?—Exactly.

20,177. Then for our purposes we may rely upon the assessment in regard to lead, copper, and tin mines, generally, as representing the royalties?—I suppose that there would be a difference between the mines which are rated under the first paragraph of section 7 and those which are rated under the third paragraph or the third sub-section of the last paragraph—the last but one.

Mr. F. J.
Rotton, Q.C.

Rating of
ironstone and
iron-ore mines.

Rating of
lead, copper,
and tin mines.

Mr. F. J. Rotton, Q.C.
22 Nov. 1892.
Rating of lead, copper, and tin mines.

Rating of mines where the royalty is in proportion to the selling price.

Rating of mines where a fine is exacted in addition to dues.

Mr. R. Guthrie.

Wayleave charges in Northumberland and Durham.

20,178. Are we to assume that the main part of the tin, lead, and copper mines are included under the first paragraph of section 7?—I should think so.

20,179. Then we may rely upon the returns as fairly representing the royalties?—Certainly. With regard to the mines that come under the third paragraph of that section of the Act, the three at the bottom (*handing Castle's book of rating to the Chairman*), the assessable value is sure to be the annual amount of the dues or rent at which the mines might be reasonably expected to let without fine on a lease of the ordinary duration, and so on. And, therefore, the machinery of the mine might be taken into consideration. It is the mine as it stands, with its apparatus.

20,180. So that in the case of these mines the rateable value might be somewhat in excess of the royalties, but not less than the royalties?—It would scarcely be less than the royalties, because the tenant would probably himself provide some buildings or machinery that would add to the rateable value.

20,181. (*Mr. Hood.*) Under what category would a mine come under in which the royalty consists of a certain proportion of the selling price?—You mean to say that it is a money payment in proportion to the value of the produce of the metal.

20,182. The gross value of the produce of the mine?—That, I believe, is not considered to be a mine of which the royalty or dues are wholly reserved in kind.

20,183. It is a direct result of that, is it not?—It is a direct result of that. The cases run very close. If the landlord received a certain proportion of the ore as brought up, of course, he was considered to take it in kind. If he took a certain proportion of the ore after it had been washed and riddled he was still considered to take it in kind. If he took a certain proportion of the metal obtained from the ore after smelting he was not considered to take it in kind.

20,184. Take the case of coal, for instance, where it undergoes no operation, generally, after it is produced?—The question with regard to mines in which the royalty or dues are wholly reserved in kind, does not apply to coal mines at all, because those mines were specially mentioned in the Act of Elizabeth, and are rated as coal mines. There the owner is not rated, but the occupier is.

20,185. Then it does not come under the category of number two at all?—No; coal mines.

20,186. (*Mr. Pendarves.*) Supposing that a fine is exacted in addition to the dues that may be reserved, what would be the proper way that the mine should be rated under those circumstances?—A tin, lead, or copper mine?

20,187. A tin mine?—It would come under the fourth head of the memorandum which I have read.

The witness withdrew.

Mr. REGINALD GUTHRIE called and examined.

20,196. (*Chairman.*) What position do you occupy in respect to the North of England United Coal Trade Association?—I am the secretary.

20,197. The Commission sent a circular to the association a few months ago asking for certain information respecting wayleave charges down in Northumberland. We asked “(1.) What is the total quantity of the proportion of produce subject to “wayleave charges; (2.) What is the amount of “wayleave per ton upon such quantity; (3.) And “what is the amount of wayleaves per ton that wayleaves average on the gross produce.” And the association have been kind enough to take a great

20,188. That is to say, it would not be rated on the dues?—It would not be rated on the dues. You observe that the mines which have come within the first paragraph of section 7 are mines—“tin, lead, or “copper mines occupied under a lease or leases granted “without fine on a reservation,” and all other tin, lead, or copper mines, which would include, of course, mines granted on a lease with a fine, and which would come under the last heading and would be rated at “the annual amount of the dues, or dues “and rent, at which the mine might be reasonably “expected to let, without fine, on a lease of the “ordinary duration, according to the usage of the “country, if the tenant undertook to pay all tenants’ “rates and taxes and tithe rentcharge, and also the “repairs and insurance, and all other expenses “necessary to maintain the mine in a state to com- “mand such annual amount of dues or dues and “rent.”

20,189. (*Mr. Forster.*) Ironstone mines do not, I understand, come into the Act of Elizabeth?—Yes, they do come under the Act of Elizabeth—by the Act of 1871.

20,190. But originally?—No.

20,191. In the case of royalties, with royalty reserved, would not a certain proportion of the value of the ironstone be considered to be in kind or not?—No doubt an ironstone mine, if there were a reservation in kind, would come within the exception of the Rating Act, and it would not be affected at all. There the person receiving the rate in kind would be rateable according to the amount that he received.

20,192. But if the landlord receives one tenth of the value of the stone, would that then be considered to be payment in kind or in money?—I believe that if the payment is a payment in value, not in kind, that does not come within the exception. But if there is a reservation of a proportion of the ore raised, with a provision that the payment may be in money, it has been held to be still a reservation in kind.

20,193. But where it is simply a reservation in money on a certain proportion of the value, you say it would not be in kind?—It would not be in kind.

20,194. (*Mr. Jamieson.*) Have you any knowledge of the mining in which the terms for rating are made in Scotland?—None at all.

20,195. Will it be possible to get any statement in any district in your knowledge of the gross royalties paid in any year on coal raised in that district?—It is not a matter relating in any way to my office, or on which I can express any opinion. It is not at all within my knowledge, or within the functions of the Local Government Board.

deal of trouble in collecting the necessary statistics for us, and on the 5th November last they sent, through you, answers to the questions, taking the form of two returns relating to Northumberland and Durham. You sent in first a return showing the amount paid for underground easements and short-surface wayleaves, and also a return showing the amount paid for long surface wayleaves. You also sent us a return comparing the result of the statistics derived from the information that you had received as compared with some statistics given by Mr. Daglish for Durham, and Mr. Simpson for Northumberland, is that so?—That is so (*handing in the same*).

Rating of ironstone mines.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
NAME OF COUNTY OR DISTRICT.	Average Royalty Estimated in Evidence.	Is Wayleave included?	Average Royalty paid.	Average Rent paid for Privileges, 6, 7, and 8.	Average Amount paid for Underground Easement.	Average Amount paid for Shaft-leave.	Average Amount paid for Short Surface Wayleave.	Total Quantity of Produce subject to Charges in Column 5 and 11.	Proportions of Produce subject to Charge in Columns 5 and 11.	Average per Ton on Produce Subject to Surface Wayleaves.	Average per Ton on the Gross Produce.
NORTHUMBERLAND.	—	—	—	1,925,339 tons. Amount paid, 9,697l. 8s. 9d. Average per ton, 1-21d.	1,806,714 tons. Amount paid, 4,945l. 11s. Average per ton, 0-96d.	1,185,276 tons. Amount paid, 2,377l. Average per ton, 0-48d.	1,078,456 tons. Amount paid, 2,374l. 17s. 9d. Average per ton, 0-53d.	Easement Charges (including Short Surface Wayleaves), 1,925,339 tons. Long Surface Wayleaves, 1,318,016 tons.	Easement Charges (including Short Surface Wayleaves), 34 per cent. Long Surface Wayleaves, 29 per cent.	Long Surface Wayleaves only, 1,318,016 tons. Amount paid, 10,687l. 12s. 4d. Average per ton, 1-88d.	Total Quantity raised by all returning Members, 5,244,352 tons. Total Amount paid for Easements and Wayleaves by all returning Members, 39,787l. 18s. 1d. Average per ton, 0-55d. Average per ton on total Raisings of Local Easements, 0-41d. Average per ton on total Raisings of Long Surface Wayleaves, 0-41d.
DURHAM.	—	—	—	8,612,283 tons. Amount paid, 44,462l. 0s. 1d. Average per ton, 1-24d.	7,569,880 tons. Amount paid, 24,091l. 9s. 7d. Average per ton, 0-78d.	6,385,254 tons. Amount paid, 13,297l. 3s. 8d. Average per ton, 0-50d.	5,461,415 tons. Amount paid, 6,623l. 6s. 10d. Average per ton, 0-26d.	Easement Charges (including Short Surface Wayleaves), 8,612,283 tons. Long Surface Wayleaves, 10,168,049 tons.	Easement Charges (including Short Surface Wayleaves), 41 per cent. Long Surface Wayleaves, 48 per cent.	Long Surface Wayleaves only, 10,168,049 tons. Amount paid, 84,254l. 14s. 7d. Average per ton, 0-81d.	Total Quantity raised by all returning Members, 21,004,954 tons. Total Amount paid for Easements and Wayleaves by all returning Members, 78,720l. 14s. 8d. Average per ton, 0-89d. Average per ton on total Raisings of Local Easements, 0-56d. Average per ton on total Raisings of Long Surface Wayleaves, 0-56d.

Mr. R. Guthrie.
22 Nov. 1892.
Wayleave charges in Northumberland and Durham.

In such cases they have divided approximately. Column 5 is accurate, and shows the amounts for each cannot be ascertained. In many cases an inclusive charge is made for all these three privileges, and the amounts for each cannot be ascertained. Columns 6, 7, and 8 are approximate. In many cases an inclusive charge is made for all these three privileges, and the amounts for each cannot be ascertained. Columns 6, 7, and 8 are approximate. In many cases an inclusive charge is made for all these three privileges, and the amounts for each cannot be ascertained.

NORTH OF ENGLAND UNITED COAL TRADE ASSOCIATION.

COMPARISON OF RETURNS supplied to the Mining Royalties Commission by the above Association and MESSRS. DAGLISH & SIMPSON.

Mr. R. Guthrie.
23 Nov. 1892.
Wayleave charges in Northumberland and Durham.

	Total raisings.	Local Easements (including Short Service Wayleaves).			On total raisings.	Long Surface Wayleaves.			Total per Ton on Total raisings.
		Amount paid, local easements.	Quantity affected by local easements.	Per Ton on quantity affected.		Long Surface Wayleaves, Total led.	Amount paid.	Per Ton.	
DURHAM:									
Mr. Daglish	Tons. 12,816,329	£ 25,758	Tons. 5,844,503	d. 1'05	d. 0'48	Tons. 5,285,775	£ 12,440	d. 0'50	d. 0'23
Coal Trade Association	21,094,084	44,162	8,612,283	1'24	0'50	10,169,049	34,258	0'81	0'39
NORTHUMBERLAND:									
Mr. Simpson	7,214,103	9,954	2,024,884	1'18	0'33	Figures not given.	Figures not given.	1'05	Figures not given.
Coal Trade Association	5,594,352	9,607	1,925,369	1'21	0'41	1,318,616	10,088	1'83	0'44

November 5, 1892.
Coal Trade Office, Newcastle-upon-Tyne.

Shaft wayleave and short surface wayleave.

Definition of short and long surface wayleaves.

20,198. Will you explain to us what distinction you draw between short surface wayleaves and long service wayleaves?—This question of the form of return was considered by the committee of the association who instructed me to get the return, and after correspondence with the Secretary to the Commission, I sent out to the members of the association a form of return which I should like you, if you think fit, to put on the notes. It contains instructions as to the manner in which they have to fill in the return, and what they were to understand as the definition of short surface wayleaves and long surface wayleaves. They were asked to give, in the first place, the total raisings in tons for the year 1889; the total quantity on which outstroke shaft and wayleave was paid; the total amount paid for outstroke shaft and wayleave, and they were asked to divide the above two heads as follows: the amounts paid for outstroke or underground wayleaves, shaft, short surface wayleave, and then to give the total amount on other surface wayleaves, and the total quantity on which other surface wayleaves were paid. I added a footnote to that instruction. "The 'outstroke, shaft, and wayleave,' is "to include all underground easements, shaft rent, and short surface wayleaves, i.e., wayleaves over the property on which the pit is situated. "Other "surface wayleaves" include all wayleaves after "leaving the property on which the pit is situated." That is the definition of short surface and long surface wayleaves as understood by our members in making this return. The form of return is as follows:—

NORTH OF ENGLAND UNITED COAL TRADE ASSOCIATION.

Return of Wayleaves, year 1889.

Total raisings	Tons.
Total quantity on which outstroke, shaft, and wayleave was paid	
Total amount paid for outstroke, shaft, and wayleave	£
Divide the above two heads as follows:—	

	Tons.	Amount.
Amounts paid for:		
Outstroke or underground wayleave		
Shaft		
Short surface wayleave		

Total amount of other surface wayleaves

Total quantity on which other surface wayleaves were paid

N.B.—The "outstroke, shaft, and wayleave" is to include all underground easements, shaft rent, and short surface wayleaves, i.e., wayleaves over the property on which the pit is situated. "Other surface wayleaves" include all wayleaves after leaving the property on which the pit is situated.

Firm

Signature

Date

20,199. Are short surface wayleaves usually paid for the coal to the proprietor who lets it?—They are not.

20,200. Then the short surface wayleaves, according to your return, would be for what is termed foreign coal carried over the land belonging to the proprietor of the original pit?—That is so.

20,201. Is there any other observation that you wish to make as regards this division?—With reference to the division in columns 6, 7, and 8, which are a division of the amounts shown in column 5, I have added a footnote to the return, saying that those three, the columns 6, 7, and 8, must be only taken as approximate, because, in many cases, an inclusive charge is made for all these three privileges, and the amounts for each cannot be ascertained, and in such cases they have been divided approximately. Wherever it has been possible, the members have divided them accurately, but that was not possible in all cases. Where there was an inclusive charge, and they were able to do it, they have done so, and in some cases they have divided it as an estimate, and in other cases I have divided it. Column 5 is accurate, and shows the total charges for the three items, but the division of 6, 7, and 8 is approximate.

20,202. Then, in column 5, your figures of 1,925,369 tons represents the total quantity of coal which pays any or all of the easements specified in numbers 6, 7, and 8?—That is so.

20,203. Comparing Mr. Daglish's estimate altogether with yours, the difference appears to be, looking at the total charge for wayleave, Mr. Daglish's would be '71 and yours '89?—Yes, on the total raisings, not in the quantity affected.

20,204. So that the difference of your statistics and those of Mr. Daglish, on the whole, is not great?—It is not very great.

Comparison between return handed in and Mr. Daglish's estimate.

Short surface wayleaves.

Comparison between return handed in and Mr. Daglish's estimate.

Long surface wayleaves.

20,205. It is only '18 of a penny?—Yes.

20,206. And your statistics of the charge come to very much the same thing for Durham and Northumberland, '89 in the one case, and '85 in the other?—They are almost the same. I have worked out the average for the two counties together, and it comes to '88 on the total raisings.

20,207. (Mr. Forster.) Just one point with regard to Northumberland. I see you have got an amount paid for shaft leave, 1,185,276 tons, and for short surface wayleave, 1,078,456. Is not it a fact that if he pays shaft wayleave he must pay short surface wayleave?—As I mentioned, those figures, 6, 7, and 8, cannot be considered absolutely accurate. They must be, to a certain extent, estimated. I do not know whether every man who pays shaft-leave also pays short surface wayleave. All those privileges which are totalled in column 5 and divided in columns 6, 7, and 8 are included in what is termed outstroke, and they are frequently covered by one undivided charge. I do not know whether that has confused any of the members in making their returns.

20,208. When covered by one undivided charge it is over the three, namely, numbers 6, 7, and 8?—In some cases the members have divided over the three equally, but I am not able to say how they have all done it in such a case.

20,209. Then, in the case of Northumberland, Mr. Simpson's quantity is considerably bigger than yours?—Yes.

20,210. I suppose you do not know whether those which are left out of yours, as it were, whether they are subject to wayleave or not?—Some of those which are left out, I happen to know, from my own knowledge, are subject to wayleaves, and some are not.

20,211. (Mr. Jamieson.) In contrasting the returns given by Mr. Daglish with those which you now give, you have no intention of questioning the accuracy of Mr. Daglish's return, so far as it goes?—None at all.

20,212. And the difference of the amount is through Mr. Daglish having access to fewer sources of information—taking it from fewer collieries than the association?—How the difference arises I do not know. I have no knowledge from what source the figures were obtained by Mr. Daglish. I have not the slightest desire to concern myself with the accuracy of his figures, I only know that those sent to me by the various members of the association are taken from books of the owners of the collieries, on forms of returns, one of which I have put in. These have been examined by myself, and summarised and transferred to this table.

20,213. But it is very probable that the 21,000,000 includes the 12,000,000 which Mr. Daglish gave?—No doubt they will include some of them.

20,214. In the long surface wayleaves, what is included in the sum of 34,000? Is there anything included there for services rendered?—Nothing at all.

The witness withdrew.

Mr. O. Walmesley re-called and examined.

20,226. (Chairman.) You, on behalf of the Committee of Proprietors, wish to put in some papers to the Commission?—Yes, I have referred to the evidence which I gave previously on the 5th of March 1891, and I beg to hand in the notes.

22,227. You wish to put in a paper by Mr. G. H. Blakesley, on some legal points on which evidence has been given before us?—Yes.

20,228. Will you be kind enough to put that paper in?—Yes (handing in the same). (See Appendix A. III.)

20,229. You also wish to put in a letter from Mr. Willis, of the Irish Landowners' Convention, enclosing a paper of observations, and complaints made by various witnesses as to the action of Irish landlords and mining proprietors?—Yes.

As I explained, it is simply for wayleave rent charged upon the coal after it leaves the property on which the pit is sunk.

20,215. Have you included there any, of what are called, private mineral lines?—You mean lines of the lessees of the pit conveying the coal to the place of shipment?

20,216. Yes?—Yes.

20,217. Have you included any cases in which other coal-owners have paid for the use of those lines?—Every amount which is paid for wayleave rent to any person, after the coal leaves the property on which the pit is situated is included in the account.

20,218. Is it not possible that there may be included in these charges, charges for service rendered by either conveying or dealing with the coal on those private railways?—I think not. The members were asked to return simply the amount actually paid for wayleave rents, and for nothing else.

20,219. To the proprietors of the land only?—To any person who received the wayleave charge either directly or indirectly.

20,220. If those private lines had been made by one who was not the proprietor of the land over which they pass, would the wayleave charge include compensation to the person so making the line, and the capital expended in the formation thereof?—I think not.

20,221. Have you satisfied yourself that this 34,000*l.* is exclusively paid for wayleave, for conveying the mineral exclusively to the persons to whom the land belongs?—That is my opinion.

20,222. (Mr. Forster.) You do not think it includes any payment for damage done, or anything of that sort?—Payment for damage to the surface do you mean?

20,223. Yes, ground rent?—Yes.

20,224. Very often they pay so much for wayleave and so much for land occupied?—Yes.

20,225. You do not know whether they separate it?

The witness subsequently supplied the following information in reply to this question:—

"In the county of Durham all the returns with three exceptions relate to wayleave rents simply, and do not include any payments for damaged ground. The three exceptions relate to long surface wayleaves only, and amount to 733*l.*, thus reducing the total shown on our return of 34,258*l.* to 33,525*l.*, which on the total quantity led of 10,169,049 tons amounts to 0'79*d.* per ton instead of 0'81*d.*, and on the total output to 0'38*d.* instead of 0'39*d.* As regards Northumberland, I find that in only one case, and that affecting long surface wayleaves, has a payment been included; the sum in this instance is 45*l.*, thus reducing the total amount paid from 10,088*l.* to 10,043*l.*, and the amount per ton on the total quantity led to 1'82*d.* instead of 1'83*d.*, and on the total output to 0'43*d.* instead of 0'44*d.* per ton."

Mr. R. Guthrie.

22 Nov. 1892.

Long surface wayleaves.

Mr. O. Walmesley.

Mr. O.
Walmesley.
22 Nov. 1892.

and also of the colonies?—I have also made that correct, up to date, from the colonies, as far as I can, from the regulations and statutes passed in the different colonies, which I have seen at the Colonial Office, and the offices of the Agents-General to the different colonies.

20,234. Will you put in that paper?—Yes (*handing in the same*). (See Appendix D.)

20,235. The Commission have no objection to its

being put in the Appendix, but it will not be issued with their authority, but simply as embodying the information which you, as an individual, have prepared in respect of those subjects?—Yes, which I have obtained from authentic sources.

20,236. Have you any other representations to make on behalf of the Committee of Proprietors?—No.

The witness withdrew.

FORTY-EIGHTH DAY.

Wednesday, December 14, 1892, at 6, Old Palace Yard, Westminster, S.W.

PRESENT:

THE RIGHT HON. THE EARL OF NORTHBROOK, G.C.S.I., CHAIRMAN.

SIR WILLIAM LEWIS.
MR. ALFRED BARNES.
MR. THOMAS BURT, M.P.
MR. DAVID DALE.
MR. G. BAKER FORSTER.
MR. ARCHIBALD HOOD.

MR. GEORGE AULDJO JAMIESON.
PROFESSOR J. E. CRAWFORD MUNRO.
MR. F. PARKER RHODES.
MR. R. CHISHOLM ROBERTSON.
MR. JOSIAH THOMAS.
MR. NICHOLAS WOOD.

MR. HERBERT LYON, Secretary.

Mr. ROBERT STRATHERN called and examined.

20,237. (*Chairman.*) You are a writer to the Signet, I believe?—I am a writer to the Signet in Edinburgh.

20,238. You have had a good deal of experience in respect to mineral properties in Scotland, I understand?—I have had some experience, acting as I do for some of the large landowners in Scotland.

20,239. Therefore you would be practically conversant with the business connected with the letting of minerals?—For upwards of 30 years.

20,240. Is there any material distinction between the law of Scotland and the law of England in respect of royalties?—I am not quite so certain of the law of England, and I would not like to speak upon the law of England.

20,241. To whom do the minerals belong in Scotland?—With the exception of the precious metals, to the landowners.

20,242. Can the rights of the landowners be restricted in any way by settlement or otherwise?—They might be restricted by the creation of life-renters and fiars, but other than that I do not think there is any restriction.

20,243. Are the surface and the minerals ever divided?—For temporary purposes I have seen them divided; and they are frequently divided when feuing is concerned.

20,244. Meaning?—Meaning the giving off of the surface, and reserving to the proprietor the minerals under the feu. It is somewhat allied to the copyhold system of England.

20,245. At the present time in respect of entailed estates in Scotland, are there any legal disqualifications of the person in possession with reference to the giving of leases of minerals?—None whatever.

20,246. Have you ever found in your experience that the state of the law has interfered with proprietors of minerals coming to terms and granting leases on equitable terms to both parties?—I have not met with it in my experience.

20,247. You have met with no instance?—None whatever.

20,248. I think you said that in some cases there might be a difficulty?—In the case of life-renters and fiars, where the estate is given off to one in life-rent and another in fee there is a difficulty.

20,249. What is the difficulty in respect of those estates?—I do not think the minerals can be worked to the sole advantage of the life-renter, but we have no machinery in Scotland to work it out.

20,250. The life-renter then would only have an interest in the minerals?—I doubt even if he could be allowed to work the minerals at all.

20,251. You think it is doubtful whether the minerals could be worked at all?—Yes.

20,252. Do you know any cases of that sort?—I had the question raised in one individual case. I do not care to mention the individual case, but I had the question raised, and I was obliged to advise that the life-renter there had no right to work the minerals.

20,253. Was the consequence that the minerals remained unworked?—I think not; I think they disregarded my advice.

20,254. Can you say that this particular difficulty has practically had any effect in the development of the minerals in Scotland?—The cases of that kind that I have alluded to are so extremely rare—I have only met with this one—that I do not think there is such a thing as a difficulty created. That was a very small case.

20,255. Is there any provision in the law or practice in Scotland equivalent to a provision we have in recent Acts in England regarding settled estates, namely, that the tenant in possession of the estate is bound to capitalise a portion of the returns for minerals?—No. The theory in Scotland is that the entailed proprietor is absolute proprietor of the minerals, and that he can do with them, subject to the conditions of the entail, exactly what he chooses. He can let for 31 years, which we find in experience has

Difficulties
arising from
severance of
ownership

been quite sufficient to meet all the demands of lessees for working; in some cases the owners work the minerals themselves, absolutely, and without fetter.

20,256. What length of lease can they give in Scotland, did you say?—31 years.

20,257. Do you consider that long enough?—Quite; in experience it works perfectly well.

20,258. Then, in point of fact, the position of a person in possession of an entailed estate in Scotland is more favourable, in respect to the management of the estate, than the position of a tenant for life of a settled estate in England?—I take it so—not being sure, however, of the exact position of the tenants for life in England. I have always understood that the proprietor of an entailed estate in Scotland was in a better position than the proprietor of a settled estate in England.

20,259. Was an Act passed in Scotland in 1848 touching entailed estates?—Yes, it practically destroys entailed estates.

20,260. Is the area of land in Scotland held under entail diminishing?—Rapidly. There are very few existing entails now which are not in the position of being absolutely barred, or in such a position that they may be barred at any moment.

20,261. Can that land in Scotland be sold?—Yes, by applying to the courts; we have machinery for that purpose.

20,262. Have you any difficulties in Scotland in working the minerals, owing to the conflict between the rights of the proprietors of the surface, and the rights of the proprietors or leaseholders of the underlying minerals?—I have never been personally involved in any question of that kind, but we see from the decisions in the courts that there have been difficulties.

20,263. Do you believe that recent judgments have placed the rights of a surface proprietor on a somewhat stronger basis than they were supposed to be before?—I am led to believe that the position of the proprietor of the surface is better than it used to be, in consequence of some decisions. I am not quite familiar with the nature of those decisions, and it is in a most general way that I have that in my mind.

20,264. (*Mr. Robertson.*) Have you read the evidence given by Mr. William Small, which is reported in the Second Report of this Commission?—I have just glanced at it; and I would not like to be examined upon what he has said.

20,265. Have you any knowledge of the latest statute regulating the rights of owners, and the privileges of owners of coal in Scotland?—Which statute do you refer to?

20,266. The Act quoted by Mr. Small, the Act of 1592?—I know nothing about that statute. So far as we in Scotland were concerned we did not know that there was any limitation of the powers of owners of land in Scotland with regard to minerals, except the precious minerals.

20,267. Part of an extract from the Act of 1592, put in by Mr. Small, is the following: "It is statute

"and ordained that it is within the power of his

"Highness and his successors, with advice of the

"Lords of the Treasury and Master of Metals, for

"reasonable compensation to vest in free favour to

"any earl, lord, baron, or other freeholder within

"this realm, all and sundry mines of gold, silver,

"copper, lead, tin, and other metals and minerals

"which are, or may be, found in their own lands,

"burdened with the King's duty, the tenth part of all

"minerals and metals, and the dues to the Master of

"Metals." Is it your opinion that this extract refers

to coal as being classed amongst the minerals?—I

should not like to be asked to construe that statute.

It certainly has no practical application nowadays, at

all events, so far as coal or iron is concerned.

20,268. Do I understand you to say that you cannot

express an opinion whether that extract includes coal?

—I would not like to express an opinion upon the

construction of that statute.

20,269. Have you seen the letter put in by Mr.

Small as having been received by him from the Lord

Advocate's office?—I do not think I read it; I saw that he had a letter, but I did not read it.

20,270. I will read the letter to you, and perhaps you will then be able to modify the opinion you have expressed regarding the absolute rights of owners: "Crown Office, Edinburgh, 31st August 1885.—Sir, "I am directed by Crown counsel to inform you, in "answer to your letter of 16th instant to the Lord "Advocate, that they have looked into the matter "referred to in your letter, and find that there is no "later statute than that of 1592, which is the regu- "lating one.—I am, Sir, your obedient servant, "H. MILROY, per Crown Agent." Do you know of any statute passed subsequent to the one of 1592 to which this letter refers?—None whatever.

20,271. Then on what ground do you base the opinion you have expressed that the rights of owners are practically absolute?—Constant usage, the recognition by the Courts of the landowner's right in minerals, when fixing provisions for entailed proprietors' children and widows out of the rents of the entailed estate.

20,272. Then it is only on the matter of usage and custom that you base your opinion?—Immemorial usage and custom.

20,273. It cannot be immemorial if you have an Act of 1592?—We should call it immemorial; probably I used the wrong expression, immemorial usage is past the memory of man.

20,274. Have you seen the evidence of Mr. Cochran-Patrick?—I have, in the same way, simply glanced at it.

20,275. At question and answer 7621, do you observe there that the answer he gives includes, in a grant from the Crown coal mines, stone quarries, stone, and lime?—I see that.

20,276. Are you of opinion that the Crown at any time has exercised its rights over this class of minerals?—It is an historical question which I am not prepared to answer.

20,277. Having before you this answer of Mr. Cochran-Patrick, are you prepared to dispute his statement?—I am not prepared to argue the question with Mr. Cochran-Patrick.

20,278. Then you cannot express an opinion?—I would not venture to express an opinion.

20,279. You have had a large experience in the letting of minerals, I believe?—A somewhat lengthened experience.

20,280. Has it been extensive over a great part of the country?—Yes, principally Lanarkshire I should say, however.

20,281. Can you give, approximately, the number of thousands of tons raised under the lands you have leased?—I am not prepared to do so.

20,282. Not even approximately?—Not even approximately would I venture to give a figure.

20,283. (*Mr. Barnes.*) Feuing is for a long period, it is a long lease, is it not, for 999 years generally?—Feuing is letting in perpetuity for a ground rent.

20,284. Are they guaranteed or covenanted quiet enjoyment, do you know?—Yes.

20,285. As far as subsidence is concerned, too?—There is no special covenant for that.

20,286. That would come under the ordinary law?—Under the ordinary rules of law.

20,287. When leases for 31 years expire, is there any difficulty in renewal on the terms of the day?—None; in experience there has never been any difficulty.

20,288. I mean to say that they are not passed over for fresh men?—Not necessarily.

20,289. It is rather the custom of the day to deal with the sitting tenant, supposing they have behaved themselves on both sides properly?—On both sides properly, yes.

20,290. (*Mr. Hood.*) You explained that life-renters sometimes had not the power to work minerals in Scotland; have they not always the power, provided they invest the proceeds in some secure thing or other?—I have been obliged to advise never, except

Mr. R.
Strathern.
14 Dec. 1892.
Act of 1592.

Ownership of
minerals in
Scotland.

Renewal of
leases.

Life-renters.

Mr. R.
Strathern.
14 Dec. 1892.
Life-renters.

Term of
leases.

in the very rare case of a life-renter whose life-rent right is one which he has himself reserved when parting with the fee. In this rare case the life-renter may continue to work any minerals which he has been working at the time of his parting with the fee.

20,291. They have not?—In my opinion, not.

20,292. Are you aware of the position in regard to glebe lands?—There are special rules for them; there is a special statute for working coal there.

20,293. There is a special statute for that, do you say?—Yes, it is regulated by statute.

20,294. In your experience you have never felt any difficulty with the 31 years' leases?—Not in my experience, and I have not heard of any difficulty in the experience of others.

20,295. Perhaps you are not aware that, in the case of a certain coal company—I need not name it—late established in Midlothian, there have been special arrangements made for renewing leases after 31 years, because it was felt that 31 years was too short for the amount of money that had to be expended in winning the coal?—We always rather took it that 31 years was enough, that it was sufficient.

20,296. It was not sufficient in that case?—It proved insufficient in that case, which is the only case which I have ever heard of.

20,297. I daresay you could conceive that it would be a hardship for a landlord not to have the power of granting a lease for more than 31 years?—The way in which we have got over the difficulty in practice was, when a lease was pretty well advanced, the tenant came and represented that the period was too short, and we arranged by renouncing the old lease and giving a fresh lease.

20,298. That would not be a continuation of a lease after 31 years?—No, it would not; it was a renunciation of a presently existing 31 years' lease, probably half run, and then a fresh 31 years' lease granted.

20,299. (Mr. Barnes.) Making a 46 years' lease, practically?—Making it practically 46 years.

20,300. With double costs and charges for making it?—Our costs and charges in Scotland are very trifling.

20,301. (Chairman.) Is the 31 years to which the power of lease is limited statutory?—In the case of settled estates it is statutory.

20,302. Have you any idea why that limit was put in?—I think the theory was that the letting of minerals for a longer period would amount to an alienation of the estate. I think that was the theory which was in the minds of the framers of the statute. You see, an entailed proprietor in Scotland is limited in only three ways: first, he cannot alienate the estate; second, he cannot burden it with debt; and third, he cannot alter the order of succession. It was felt that a lease to endure longer than 31 years might practically amount to an alienation of the estate. I think that was the theory.

20,303. Can you conceive any case in which extending a mineral lease for more than 31 years would be to the disadvantage of the successor?—Not with due precaution against the receipt of grassums—that is, fines—if there was a due precaution for that.

20,304. Putting that out of the question?—I do not see any disadvantage then.

20,305. Assuming the income comes from a tonnage rent, it would apparently be to the advantage of the successor to give a long lease?—Sometimes, yes, and sometimes, not; it gives an opportunity of reconsidering the bargain at the end of a reasonable period.

20,306. (Mr. Barnes.) It gives each life a chance of making a bargain?—The tenant protects himself in Scotland by retaining the privilege of throwing up the lease every three years. It is, I think, the almost universal practice in Scotland to give the tenant a right to throw up the lease every three years, or every five years, according as the bargain may be.

20,307. (Mr. Rhodes.) In mining leases?—I am dealing exclusively with mining leases; to a large

extent also in agricultural leases now, but certainly in all mining leases that I have seen.

20,308. (Mr. Hood.) Could there not be a condition put into the lease that it could be subject to revival after a certain time?—That would be practically a new lease, would it not?

20,309. Not necessarily?—Very nearly; if you alter the terms of endurance and alter its rent then you have a new lease.

20,310. I do not mean altering the terms of endurance; let the endurance, say, be for 60 years, with power for the landlord to have the royalties and other conditions fixed, probably, for a certain period by arbitration?—I should take it in this way: I think the power which is reserved to mineral tenants at present of breaking a lease every five years might, with advantage, be given to both parties, that they might reconsider the bargain every three years.

20,311. I do not think the lessees would like it?—The lessees would not like that very well. It is practically always a new lease.

20,312. Do you think it would be fair to allow the landlord to have the power to break the lease after the lessee had spent thousands of pounds, or hundreds of thousands of pounds upon the concern and be obliged to give it all up?—No, not for merely an increase of rent, certainly not; it would be most unfair, I think.

20,313. (Mr. Barnes.) The lever is not used unfairly?—No.

20,314. (Mr. Rhodes.) Is it correct that in Scotland your shallower mines are getting worked out, and that the tendency now is to work mines at a greater depth than was formerly the case?—That, I believe to be so.

20,315. That being so, does it not necessarily follow that the area of land in coal leases increases, too, in order to justify the necessary expenditure?—Yes.

20,316. For instance, where in a shallow mine 100 acres would be sufficient, when you come to work a deep mine you might want 1,000, or 1,500, or 2,000 acres to justify the expenditure?—I have had that argument given to me by mineral tenants who were going down to deeper minerals, asking for an extension of their mineral field for that very reason.

20,317. As a matter of fact, it is so; it must be so necessarily?—I think it is.

20,318. If the expenditure is larger, the field must be greater?—I think you are quite right.

20,319. That being the case, does not another thing also follow that a lessee now must begin to look to a longer term of lease than was formerly the case if he is going to work out the whole of his coal within the term?—No, I think 31 years is quite enough still, even with the deeper minerals.

20,320. Suppose you lease a field of a couple of thousand acres, it could not possibly be worked in 31 years?—No, but 2,000 acres of minerals would be exceptional.

20,321. I am assuming an extreme case where, perhaps, a number of seams are workable. If you retain your 31 years, assuming that to be insufficient to work out the whole of the minerals, will not the effect of that be to render it the tenant's interest to get the most he can in the 31 years and make himself safe?—Yes, if any landowner would give him 2,000 acres, but I think it would be very bad policy for any landowner to give such a very large field.

20,322. Why?—Simply because it could not be worked out in the period.

20,323. You can find, when you cross the border, scores of instances of 3,000 or 4,000 acres?—Yes, but we are a very small country in Scotland.

20,324. (Mr. Jamieson.) There is a little difficulty in the minds of some members of the Commission in understanding our distinction between the position of an heir of entail and that of a life-renter, perhaps you would very shortly explain what the difference is?—The heir of entail is an absolute proprietor of an estate, limited by the three conditions which I have referred to; in every other respect he is an absolute

Heirs of
entail a
life-rent
distinct
between

proprietor, but he cannot sell, he cannot burden with debt, and he cannot alter the order of succession in which the estate is settled. Subject to these, he is in the position of every landed proprietor in Scotland. A life-renter is in a different position, it is only life interest that he has got, and his powers are, in consequence, very limited as compared with an absolute proprietor.

20,325. (Mr. Dale.) What do you call the man in succession to the life-renter?—The fiar, the holder of the fee, as we call it in Scotland.

20,326. Then, if the life-renter cannot grant a lease of minerals, can the fiar?—The fiar can.

20,327. Even during the life of the life-renter?—That we have never had experience of; we have never met with the case, but I do not think there would be any reason why they should not together let the minerals.

20,328. (Mr. Jamieson.) In practice you have only met with one case?—Only one case.

20,329. And it is extremely rare?—I never saw it before.

20,330. But so far as you can judge, the life-renter and fiar together, holding together the entire right to the estate, could have granted a lease?—They could do everything; they have the whole interest in that which is there between them.

20,331. It is merely a question of the divergence of interest between the fiar and the life-renter in that case?—In that case.

20,332. (Mr. Barnes.) Is there any power to charge an entailed estate for younger children?—Yes, if the entail does not give the power the statute does.

20,333. (Mr. Jamieson.) You have said you have never met with an instance of a tenant desiring his lease extended beyond 31 years?—I think 31 years has been always rather assumed to be the period.

20,334. If you had, would you have had in your practice any difficulty in granting such an extension for such a more lengthened lease if you deemed it right in the circumstances?—If we deemed it right in the circumstances, of course, we should grant it.

The witness withdrew.

Mr. FREDERICK PARKER RHODES (a member of the Commission) examined.

20,348. (Chairman.) You are a solicitor?—I am, in practice at Rotherham.

20,349. You have had, I believe, great experience in mining leases?—I have, particularly in Yorkshire and the Midland Counties.

20,350. Do you know anything of the Lancashire and Cheshire leases?—A little; not so much as I do of my own district.

20,351. Can you tell us whether where there is no power of surrender in a mining lease, there are usually provisions that the royalty shall cease when all the coal has been paid for?—Yes, in Yorkshire and the Midland district, when the lease itself contains no power of absolute surrender after the payment for the whole of the mineral, there is nearly always a power that when the whole mineral demised has been paid for there shall be no further liability for rent in respect of that mineral—any rents reserved for wayleave rights or matters of that kind running on still, but the coal rent itself ceasing.

20,352. You have been speaking of Yorkshire, I understand; is that the same with respect to the Midlands?—I am speaking now of Yorkshire and the Midland Counties, and I would only qualify it to this extent, that it is not always the case in the older leases, which, as a rule, were not so carefully or so well drawn as they are at the present time; but in regard to all modern leases that statement, I think, will be found to be perfectly correct.

20,353. Can you say the same thing for Lancashire and Cheshire, or not?—I would rather not speak with the same positive voice as to Lancashire and

20,335. I mean, speaking of the various proprietors in Scotland for whom you act, would you yourself have any difficulty in conceding such a request, if made?—None whatever.

20,336. How would you do that in the case of any of your clients who hold entailed estates?—We could not.

20,337. I thought your ingenuity could have devised a means by which you could?—When a lease was half run you might.

20,338. Or with the consent of the next heir?—With the consent of the next heir you might do it.

20,339. Practically, you would not look upon it as a very insuperable difficulty to concede such a length of lease if it were desired by a tenant for a reasonable purpose?—For a reasonable purpose I do not think it would be refused.

20,340. (Chairman.) But still, you have your statutory limit which would be an obstacle, apparently, to an original bargain being longer than the 31 years?—It would be so in settled estates.

20,341. (Mr. Jamieson.) In the case of entailed estates, which you say are now very rare?—Very rare, and they are becoming rarer every day.

20,342. From your experience, would you object to Parliament extending the right to let leases for longer periods than 31 years?—To give the right?

20,343. To give the right?—I do not think I would have any objection to that, but I should not like it to be made a compulsory right.

20,344. You would not object to the right to confer the power in cases?—No.

20,345. (Chairman.) As you explained before, with certain safeguards?—With certain safeguards.

20,346. As respects not accepting fines?—Not accepting fines and taking the best terms that can be had.

20,347. (Mr. Hood.) In the event of the next heir being a minor, you could not do it with the consent of the next heir?—No, not with the consent of the next heir in that case.

Cheshire. In some leases that I have seen those clauses exist.

20,354. (Mr. Hood.) Did I understand you to say, "When the minerals are all exhausted"?—If I did, that was a *lapsus lingue*, and I ought to have said, "When they were paid for." I have known

some cases where a lease, evidently through bad drafting, has provided that the payment should cease when all coal had been exhausted and paid for. The effect of that has been, in one or two cases where that error has crept in, that the man has had to go on paying until he has exhausted the coal. I knew one particular case, where there was a pillar left which was inaccessible, where, after the lessee had paid for four or five years, he paid a lump sum down to be let off the liability to work. But those are only one or two of the instances which qualify every rule almost.

20,355. I just want to bring under your notice this point, that in working out a seam of coal long before the mineral is wholly exhausted, it becomes unworkable to profit, in consequence of little corners being left here and there?—The lessee may be allowed for bad coal, but not for coal which he chooses to leave till by so leaving it it becomes unworkable to profit.

20,356. In such an event as that would the lessee be bound to pay for that coal which is left, and which he could not work to profit?—That would depend, of course, upon the terms of the lease. In the more recent leases, as a rule, he would not, because the tendency is, in more modern leases, to make the lessee bound to pay for all good coal or to make him bound to pay for all coal except bad

Mr. R.
Strathern.
14 Dec. 1892.

Term of
leases.

Mr. F. P.
Rhodes.

Coal unwork-
able to a
profit.

Mr. F. P.
Rhodes.
14 Dec. 1892.

Coal unwork-
able to a
profit.

or unmarketable or unworkable coal, or words of that kind. The question that you put would then be dealt with under those allowance clauses in the lease, and that coal would be struck out of the total quantity to be measured up and paid for.

20,357. But that does not touch the question of unworkable to profit?—The workable to profit is a very difficult matter indeed to define, and I should certainly not like to commit myself on oath to an accurate definition of it.

20,358. (Mr. Barnes.) Is not the word "unmarketable" put in as well as "unworkable"?—Yes. That clause in the lease is the one which always, as a rule, provokes the greatest amount of discussion and negotiation between the lessor's and

lessee's solicitors, in order to arrive at something like a fair definition. The tendency in recent years undoubtedly has been to make that clause wider, and to practically allow for coal which cannot reasonably be worked and got without loss.

20,359. (Mr. Hood.) That is just the unworkable to profit clause, pure and simple—that it cannot be worked without loss?—I always prefer myself the definition that coal shall be excluded which cannot be worked without loss.

20,360. There is not much difference between that and coal which cannot be worked to profit?—I would rather not enter upon that. I may put something down for the benefit of a future adversary; but I think there is.

The witness withdrew.

INDEX TO EVIDENCE.

Index to
Evidence.

MONS. HERMAN HUBERT.

Administration, 18,867-87; amalgamation of concessions, 18,845-7, 18,974-5; areas of concessions, 18,976-8, 18,986-7; collieries worked under leases held under concessionnaires, 18,825-9; communal taxes, 18,791-802; compensation funds, 18,863-7, 18,888-95; concessions granted since 1837, 18,782-3; concessions unworked, 18,848-55; development of the mining industry, royalty and profits, 18,946-52; free coal, 18,934; method of procedure for expropriating land, 18,829-34; miners' dwellings, 18,932-3; miners' wages, 18,896-931; power of surrendering concessions, 18,823; property in a concession, 18,982-5; right of Government to withdraw concessions, 18,805-18; right of search, 19,008-9; right of surface owner to search, 18,979-81; royalties, 18,856-63; sale and lease of concessions, 18,963-73; selling prices, 18,941-5; strikes and miners' wages, 18,997-19,007; surface owners and fixed royalty, 18,823-4, 18,988; taxation of royalty, 18,953-62; the Cahier des Charges, 18,803-4; the Députation Permanente and Députation Provinciale, 18,819-22; the droit de terrage, 18,989-96; the impôt foncier, 18,784-90; trades unions, 18,935; valuation of land expropriated, 18,835-44; wages and production, 18,936-40.

MR. T. R. MULVANY.

Amalgamation of concessions, 19,106-8; ancient royalties, 19,017-9; area of concessions, 19,023-4; coal in the Dortmund district, 19,119-25; coal production, 19,056-7; collieries worked by the State, 19,078-82; communal taxes, 19,037-41, 19,050-2; comparison between royalties in England and Germany, 19,150-2, 19,180; compensation funds, 19,157-8; Compulsory Insurance Act, 19,055, 19,159-70; compulsory taxes, 19,058-70; concessions unworked, 19,025; development of the mining industry, 19,071-7; effect of taxation on the industry, 19,095-105; effect of the German system, 19,211-3; exports, imports, and home production, 19,214-8; hours of labour, 19,175, 19,195-8; imperial taxation, 19,087-94, 19,181-94; income tax (1891), 19,042-9; mines worked by the State, 19,199-210; number of concessions granted, 19,053-4; powers of surrender, 19,114; production in Westphalia, 19,171-4; property in a concession, 19,083-4; right of Government to withdraw concessions, 19,117-8; right of search, 19,137-43, 19,219-22; sale of concessions, 19,020-2, 19,085-6, 19,109-13; taxation, 19,223-8; taxes on concessions unworked, 19,115-6; transit charges, 19,126-30; valuation of land expropriated, 19,033-6, 19,153-6; wages, 19,176-9; wages and cost of production, 19,144-9; wayleaves, 19,131-6; wayleaves, expropriation of land, 19,026-32.

MONS. RAOUL DUVAL AND MONS. E. AGUILLON.

Action of Government in developing the minerals, 19,342-5; amalgamation of concessions, 19,271, 19,285-90; area of concessions, 19,308-13; communal taxes, 19,257-8; compulsory working of collieries, 19,439; concessionnaires, 19,406-7; concessions worked, 19,347-8; development of the mining industry, 19,412-6; economic effect of the mining law in France, 19,296-8; expense of the administration of mines, 19,293-5; formation of companies by concessionnaires, 19,427-35; form of procedure in granting a concession, 19,239; foreign competition, 19,332-5; Government interference in the sale of concessions, 19,273-84; Government supervision upon the working of concessions, 19,272; import duties, 19,368-9; imports and exports, 19,359-67; iron production from open workings, 19,270; jury of expropriation, 19,440-4; Law of 1810,

(Art. 22), 19,248; (Art. 39), 19,292; mineral statistics, (1888), 19,346; miners' wages, 19,336-41; mines held under concessions granted previous to 1810, 19,238; mining companies, 19,305-7, 19,408-11, 19,436-8; production and consumption, 19,349; production of iron ore, 19,385-7; right granted by a concession, 19,245-7; right of State to work minerals, 19,236-7; rights of foreigners to obtain concessions, 19,327-31; royalties, 19,398-404; royalties and wages, 19,395-7; royalties and wages in the St. Etienne district, 19,376-8, 19,420-4, 19,445-8; royalties payable to surface owners, 19,250-6, 19,317-26, 19,419; selection of concessionnaire when more than one applicant, 19,239a-44; selling prices, 19,350-8; 19,370-2, 19,379, 19,388-90; selling prices and wages, 19,380-4; sub-letting of concessions, 19,291; surface damage, 19,425-6; taxation, 19,405; the Act of Concession, 19,249; total royalties paid, 19,417-8; transfer of concession on death of concessionnaire, 19,299-304; transit charges, 19,314-6; ventilation and drainage, 19,259-69; wages, 19,373-5, 19,391-4, 19,449-58.

MR. R. W. COOPER.

Arbitration, 19,638-9, 19,675-8, 19,760-8; assignment of leases to companies, 19,690-709; Bell v. Love, 19,587; capitalization of rent under the Settled Land Act (1882), 19,484-504; cases of leasing by corporations, 19,469-70; classes of owners, 19,469; compensation for breach of covenants, 19,679-89; compensation for surface damage, 19,629-37, 19,643-56, 19,756-9; compulsory powers of wayleave—arbitration, 19,675-8; difficulties in way of modification of conditions of leases, 19,515-6; Eardley v. Lord Granville, 19,572-3; easement charges, 19,607-28; exceptions, 19,466-8; existing difficulties, effect on the development of the mineral industry, 19,505-13; Gill v. Dickinson, 19,589-90; Hedley v. Fenwick, 19,590-600; law as to ownership of minerals, 19,466; limited liability companies—surface damage, 19,769-72; minerals held in undivided shares, 19,544-59; Newcastle Corporation as lessors, 19,800-6; powers in respect of easements, 19,514; powers of landlords to refuse to re-let, 19,791-5; powers of leasing of corporations, 19,471, 19,727-8; powers of limited owners, 19,473-6, 19,723-6; powers of owners of surface and minerals, 19,472; powers of trustees—short workings, 19,717; reduction of rent and surrender of lease, 19,517-25, 19,718-22; regal rights of the Bishop of Durham, 19,796-9; rights of copyholders, surface damage, and underground wayleaves, 19,574-80; right of copyholders in common land, 19,581-9, 19,712-6, 19,745-7; rights of surface and mine owners, 19,640-2, 19,847-59; royalties, 19,811-7; sea-coal, 19,732-44, 19,818-32, 19,860-7; Settled Estates Act (1856), 19,477-9; Settled Land Act (1882), sec. 7, 19,480-3; severance of ownership, 19,560-1; Shafto v. Bolckow, 19,570-2, 19,589; short workings, 19,526-43; surface damage, 19,570; surface wayleaves, 19,662-74, 19,833-47; term of leases, 19,807-10; the Enclosure Acts, 19,601-6; underground easements, 19,657-61; wayleaves, 19,710-1, 19,729-31, 19,748-55, 19,773-90.

MR. P. A. SCRATCHLEY.

Annual production, 19,930-2; development of the mining industry, 19,904; expropriation of the surface, 19,899-900; Government interference, 12,935-8; hours of labour, 19,939-40; inspection, 19,883; liability of concessionnaire to the State, 19,909-11; local taxes, 19,908, 19,927-9; mining companies, 19,881-2; royalties, 19,877-80, 19,905-7, 19,222-6; statistics furnished to the Government, 19,912-21; surface damage, 19,901-3, 19,933-4; taxation, 19,884-98; the Wollfhart lead mines, 19,870-6.

MR. C. A. V. CONYBEARE, M.P.

Acquirement of leases, 20,123-8; comparison between wages in Cornwall and the North of England, 19,993-20,000; compulsory powers of a mining court, 20,052-9; condition of miners in Cornwall, 20,001-6; customs of Cornish mining, 20,007-10; depression in the mining industry in Cornwall, 20,113-5; dues and profits, 20,089-98; effect of abolition of royalties, 19,984-9; effect of royalties on wages, 19,983; establishment of a tribunal, 19,959, 20,070, 20,116-22; high royalties, 19,974-5; legislation with respect to Cornish mining, 20,011-2; migration of miners, 20,148-52; miners' wages, 19,990-2, 20,084-8; miners' wages and selling prices, 20,141-7; payment of dues on profits or output, 19,960-7, 20,099-105, 20,153-61; personal action with reference to legislation dealing with Cornish mining, 19,942-58; remission of dues, 19,976; royalties, 20,109-12; royalties, effect on the mining industry, 19,968-73, 19,977-82; royalties and profits, 20,136-40; selling price of copper, 20,071-7; the cost book and limited liability systems, 20,013-41, 20,060-9; the Mining Leases (Cornwall and Devon) Bill, 20,078-83, 20,106-8; undeveloped minerals, 20,129-35; Violet Seton mine, 20,042-51.

MR. R. STRATHERN.

Development of the minerals, 2054; effect of the law, 20,246; heirs of entail and life-renters, 20,324-32; life-

renters, 20,248-53, 20,290-3; ownership of minerals in Scotland, 20,241-5; Act of 1892, 20,266-73; settled estates, 20,255-61; severance of ownership, 20,262-3; 20,283-6, term of leases, 20,256-7, 20,294-322.

MR. F. PARKER RHODES.

Coal unworkable to a profit, 20,354-60; powers of surrender, 20,351-3.

SIR JOSEPH H. WARNER.

Compulsory purchase of land, 20,167-9.

MR. J. F. ROTTON, Q.C.

Rating of mines, 20,171-95.

MR. REGINALD GUTHRIE.

Wayleave charges in Northumberland and Durham, 20,196-225.

MR. OSWALD WALMESLEY.

Documents handed in on behalf of the Committee of Proprietors, 20,227-35.

INDEX TO APPENDICES.

Title.	Page.	Index to Appendices.
APPENDIX A.		
PAPERS HANDED IN BY WITNESSES.		
I. A Bill to regulate the imposition of Mining Royalties in the United Kingdom, handed in by Mr. Conybeare, M.P.	-	-
II. Memorandum by Mr. E. C. Marriott, in reply to the evidence given by Mr. Conybeare, M.P.	80	-
III. Observations on some of the evidence given on legal points to the Commission, handed in by Mr. Oswald Walmesley, on behalf of the Committee of Proprietors	81	-
IV. Observations on complaints made by various witnesses as to the action of Irish Landlords and Mining Proprietors, handed in by Mr. Oswald Walmesley, on behalf of M. Gilbert de L. Willis, Secretary to the Irish Landowners' Convention	82	-
V. Statement of the Revenue derived by the Crown from mineral substances in the Isle of Man, in the year ended 31st March 1890, handed in by Mr. Geo. Culley, Commissioner of Woods, &c.	83	-
VI. Return showing the gross amounts due and payable to the Ecclesiastical Commissioners for England during each of the years 1888, 1889, and 1890, in respect of rents, royalties, and wayleaves, &c., in the county of Durham	86	-
APPENDIX B.		
Notes on Mining and the Law as to Ownership of Minerals in India and the Colonies	86	-
APPENDIX C.		
DOCUMENTS RELATING TO FOREIGN COUNTRIES.		
I. Correspondence with the Foreign Office	92	-
<i>France.</i>		
II. Notes on the Mining Laws	94	-
III. Correspondence, and reply to Memorandum	102	-
Translations of pamphlets handed in by Mons. Raoul Duval	111	-
Memorandum furnished to the Commission by Mons. Aguillon, showing the proportional dues paid during the last ten years in the coal basin of the North of France	115	-
IV. Extracts from "Statistique de l'Industrie Minérale" for the year 1888, with references to the Statistics for 1889 and 1890	115	-
<i>Belgium.</i>		
V. Notes on the Mining Laws	127	-
VI. Correspondence, with reply to Memorandum, by M. de Bruyn, and Report furnished by M. Emile Harzé	129	-
VII. Tables showing the average wages of miners	133	-
VIII. Memorandum furnished by Professor H. Denis, based on information contained in "Statistique Générale des Recettes," 1840-80	135	-
IX. Papers handed in by Mons. Hubert, supplementary to his evidence	137	-
X. Memorandum on the Mining Law, by Mons. Hubert	145	-
<i>Germany.</i>		
XI. Notes on the Mining Laws	150	-
XII. Correspondence, with reply to Memorandum by Mr. Mulvany	153	-
XIII. Extracts from the Report of the Royal Commission appointed in 1890 by the German Emperor to inquire into the condition of the Miners in the Coal Industry	161	-
XIV. Table of Wages for the Mining Districts of the Oberbergamtsbezirk of Dortmund	170	-
XV. Taxation of Mines by Dr. Arndt	198	-
XVI. Report of Dr. jur. George Heinrich Wahle upon the Mining Laws of Saxony	206	-
<i>Austria-Hungary.</i>		
XVII. Notes on the Mining Laws	212	-
XVIII. Correspondence, with reply to Memorandum by Dr. Moriz Weiss	215	-
<i>Italy.</i>		
XIX. Notes on the Mining Laws	224	-
XX. Correspondence, with reply to Memorandum by the Marquis di Rudini	232	-
<i>Spain and Portugal.</i>		
XXI. Notes on the Mining Laws in Spain	238	-
XXII. " " " Portugal	241	-
<i>Luxemburg.</i>		
XXIII. Notes on the Mining Laws	244	-
<i>United States of America.</i>		
XXIV. Notes on the Mining Laws	245	-
XXV. Replies received from Mr. Carnegie to questions addressed to him by Mr. Dale	253	-
XXVI. Replies received from Mr. Commissioner Wright of the Department of Labour, Washington, to questions addressed to him by Mr. Dale, with documents	255	-
APPENDIX D.		
Notes on the Mining Laws of Foreign Countries, as revised by Mr. Oswald Walmesley (by permission)	275	-

APPENDIX A.

PAPERS HANDED IN BY WITNESSES.

I.

Handed in by Mr. Conybeare, M.P., Question 19,943.

A Bill to regulate the imposition of Mining Royalties in the United Kingdom.

Whereas it is expedient in the interests of the mining industries of the United Kingdom that greater security should be given to persons engaged in such industries:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. In every county where mining operations are or shall be hereafter carried on, a Court shall be established, having the jurisdiction of all questions relating to leasing and working of mines under this Act.

2. Such Court shall consist of, (1) in England, the county court judge, and not less than six, nor more than twelve, assessors, the number to be determined by the judge, according to the size of the county; (2) in Scotland, the sheriff of the county or his substitute, and a like number of assessors, determined as aforesaid; and (3) in Ireland, the Land Commissioners.

3. The assessors in England and Scotland shall for each county be elected as follows; that is to say, one third by the owners of lands and heritages whose assessable rental, as appearing on the valuation roll, shall be at least of the annual value of fifty pounds sterling; one third by the lessees of mines or minerals being wrought, whose assessable rental, as appearing on the valuation roll, shall be at least fifty pounds sterling; and one third by the miners employed in such mines, and whose names appear in the register of persons entitled to vote for a member of Parliament in force at the time of such election of assessors; and in the case of land being owned by more than one proprietor, or of mines or minerals being held by more than one tenant or lessee, only one of such proprietors, tenants, or lessees shall be entitled to vote in such election.

4. A majority of the persons forming the Court shall be a quorum, and in the event of the Court being equally divided as to the judgment to be pronounced, the county court judge, sheriff, or chairman of the Land Commissioners, as the case may be, shall have a deliberative and also a casting vote. Any vacancy occurring among the assessors, by death or otherwise, shall be filled up by the Court from the class to which the member whose place is to be filled belonged.

5. The first election of assessors shall take place within three months after the passing of this Act, on a date to be fixed for each county to which the Act applies, by the county court judge in England, by the sheriff in Scotland, and by the Land Commissioners in Ireland; and such election and all subsequent elections shall be conducted under the Act thirty-fifth and thirty-sixth Victoria, chapter thirty-three, by ballot. Future elections of assessors shall be triennial, dating from the first above referred to, and the county court judge, sheriff, or, as the case may be, shall fix the day of election and act as returning officer, or appoint some one to act in that capacity.

6. Every person or any two or more persons who shall at any time after the passing of this Act make an application to the owner or owners of any land containing or believed to contain mines or minerals for a license to work the same, or for a lease or the renewal of a lease thereof, may, if the owners shall refuse to grant the said license or lease, or to renew the lease, or shall refuse to grant or renew the same upon such

terms as the applicants may consider just and reasonable, apply to the Court in the manner herein-after prescribed, and, subject to the provisions of this Act, may acquire a lease or a renewal of a lease of the said land for which application has been made, upon such terms and conditions as the Court may deem just and reasonable.

Where the said land is undivided or belongs to two or more owners, the Court shall, upon due notice given in the prescribed manner to all the owners, require them all to join in the same lease, upon such terms and conditions respectively as the Court may deem just.

Where it is proved to the Court that the owner or owners of any portion of such land is or are uncertain or unknown, the Court shall make such order for the payment into Court of the royalties, dues, and other moneys from time to time payable out of such lands to the said owner or owners, to be placed to an account to be kept for the benefit of such persons as to the Court may seem fit.

7. The application to the Court shall be in such form and manner as may be prescribed, and shall specify—

- (1.) The name and address of the applicant or applicants, and, if a company, the amount of capital raised or to be raised, and whether limited or on the cost-book system.
- (2.) The locality and extent of the land in question as shown on the ordnance survey.
- (3.) The name and address of the owner or lessor.
- (4.) As full and correct a plan of previous workings, if any, as possible.
- (5.) The nature of the interest sought to be acquired, together with such other particulars as may be prescribed.

8. Upon the hearing of the application the Court shall, if it be satisfied upon the evidence adduced by the parties on both sides that the refusal of the owner or owners to grant the license or lease is under all the circumstances of the case unreasonable, or that the terms and conditions demanded by them are oppressive or opposed to the public interests, grant the application upon such terms as the Court shall deem just.

9. The lessee, under any lease existing at the date of this Act, may apply to the Court for a revision of the terms or conditions of his lease, and the Court shall, upon a full consideration of all the circumstances of the case, have power to alter or modify the same in such manner as it shall deem just.

Provided that the lessee shall upon such application prove to the satisfaction of the Court—

- (1.) That he had previously sought the relief now asked for from the owner or lessor, and had been refused.
- (2.) That owing to the altered conditions of the trade it is impossible for him to continue working the mine under the covenants and provisions of the existing lease.

10. Upon the hearing of any application for a lease, or the renewal of an old lease, or the revision of an existing lease, the Court shall fix the dues or royalties or payments by way of dues or royalties on a percentage of the output, having regard to the working of the mine, to the selling price of the mineral, the wages of the workmen, and other circumstances affecting the cost of production, the money value of such payments to be ascertained by striking an average of the selling price of the mineral when brought to the surface during the preceding twelve months.

11. Upon the hearing of any application for a lease, or a renewal or revision of a lease, the Court shall determine the price to be paid for all land destroyed or damaged by the mining operations according to the

Power of Court in respect of wayleaves.

Improvements to belong to those who make them.

Abandonment of mine.

Form of application.

Power of Court to grant or refuse application.

When lode intersects land of different owners.

Power of Court to deal with existing lease.

Right of inspection of mine by owners.

Rent dues or royalties to be fixed by Court.

Reference to arbitration.

then current market value, whether as agricultural or as building land, such value to be assessed, if necessary, by two competent valuers appointed by the Court.

12. Upon the hearing of any application for a lease, or a renewal of a lease, or the revision of a lease, the Court shall have power to grant wayleaves for the conveyance of the minerals either over, through, or under the adjoining lands of neighbouring owners upon such terms as the Court may deem just and reasonable, and may review and determine the conditions upon which such wayleaves have been previously granted; and any surface damages caused by such wayleaves shall be assessed by the Court upon such a scale as the Court may deem just and reasonable.

13. In all cases improvements, such as engine-houses and other buildings or works necessary for the proper working of the mine, and dwellings for the housing of the workmen employed in or about the mine, which may have been erected and left standing by the lessees, or which may have been erected by the workmen or any parties other than the owner or lessor, and all shafts or other permanent works executed for the development and proper working of the mine, shall, unless the owner shall have taken the same over from such lessee or others at a fair valuation, be deemed to be the property of such lessees, miners, or other parties. The lessees may, subject to the provisions of section fourteen, sub-section three, of this Act, at the expiration of the lease by effluxion of time or otherwise, remove or sell the same as well as all leavings then being upon the land.

14.—(1.) Where the lessees have ceased or neglected to work a mine for a period of twelve months, it shall be lawful for the lessor to apply to the Court, and the Court, upon being satisfied that the lessee or lessees have ceased or neglected to work the mine for such period, shall, unless the lessee shows reasonable excuse, pronounce an order declaring that the lease has expired, and the lease shall be deemed to have expired from the date of such order.

(2.) The lessee or lessees may at any time previous to the expiration of the said twelve months apply to the Court for an extension of time not exceeding six months, and the Court shall have power to grant such extension.

(3.) Provided also, that in all cases where the lessees have so abandoned a mine, all the buildings erected by them upon the sett, and all permanent works and other improvements constructed or made by them, shall be deemed to be their property, and it shall be lawful for them to sell the same either by public auction or by private contract.

15. Where in the working of any mine or sett it is found that the lode, seam, or mineral deposit passes beyond the limits of that mine or sett into the adjacent property of some neighbouring landowner, or where in the course of the working, owing to the influx of water from such adjacent land or other natural causes, it is necessary for the full development and proper working of the mine that the works should be extended beyond the limits of the mine or sett, it shall be competent for the lessee to apply to the Court, and the Court shall, after due notice to such neighbouring owner in the prescribed manner, and upon consideration of all the circumstances of the case, and upon hearing all parties, make such order in the matter as it shall deem just.

16. It shall be lawful for any owner who has granted a lease of any sett, or his steward or agent, either alone or with any other person or persons, at all reasonable times to go down into, examine, dial and measure any part or parts of the mine and works, and for that purpose to use the machinery, tackle, buckets, and other conveniences then and there being. And if any question shall arise between the owners and the miners as to the miner-like manner in which the mine is being worked, it shall be competent for the owner to apply ex parte to the Court for an order for the inspection of the mines by one of Her Majesty's inspectors of mines, and upon the report of such inspector the Court shall make such order in the matter as to costs or otherwise as it may deem just.

17. Any matter capable of being determined by the Court under this Act may, if the parties so agree, be decided by arbitration.

18. This Act may be cited for all purposes as the Mining Royalties Act, 1887.

i 70489.

19. This Act shall come into operation on the first day of January one thousand eight hundred and eighty-eight, which day is herein referred to as the commencement of this Act.

20. In this Act "owner" or "lessor" means any person in whom for the time being the freehold of any land containing or believed to contain minerals is vested, and includes all persons having any estate or interest in the same in remainder or reversion.

"Lease" includes a grant or license for mining purposes, and also an agreement for such lease, grant, or license.

"Lessees" includes every person or persons who as lessees or grantees shall have the right to work any mine, whether as an individual lessee or lessees, or as a limited company under the Companies Acts, or as a company of adventurers under the cost-book system, and also all persons claiming under the original lessees.

"Minerals" include all metallic or mineral deposits of whatever kind, whether open quarries of stone or slate, or collieries, or clay or china clay setts, or metalliferous mines or tin streaming works.

"Prescribed" means prescribed by rules made under the provisions of this Act.

"Miners" shall mean every person who hews coal or other mineral, and all other persons employed underground except agents, captains, or other the representatives of the lessees or owners.

21. It shall be lawful for the Court, subject to the approval of the Lord Chancellor in England or Ireland, and the Lord President of the Court of Session in Scotland, to make or alter such rules or forms as may be requisite for the regulation of the proceedings under this Act, and to fix or alter any such scale of costs as the Court may deem just, and the same shall come into force on their being approved by the Lord Chancellor in England or Ireland, and of the Lord President of the Court of Session in Scotland under his hand.

II.

MEMORANDUM OF MR. EDMUND CHASE MARRIOTT UPON THE EVIDENCE OF MR. C. A. V. CONYBEARE, M.P., GIVEN BEFORE THE ROYAL COMMISSION ON MINING ROYALTIES ON 7th April 1892.

With reference to the statement in answer 19,974, it is misleading to say that East Pool was paying "one-fifteenth dues until within the last two years, when it was reduced to one-eighteenth," because, although Mr. Basset was obliged by the restrictions of the settlement under which he held the estate as tenant for life to reserve the dues at one-fifteenth, he personally covenanted not to take more than one-thirtieth until the mine was making a profit, and then one-eighteenth on tin, which was the main production of the mine, the dues on the other minerals only, which other minerals were of comparatively trifling value, reverting to one-fifteenth.

In answer to question 20,008 and 20,010, it is stated as follows:—

The Portreath clause was withdrawn because "East Pool, being a strong mine, resisted it, although I think one of the Seton mines, I forget whether it was the Wheal Seton or West Seton or one of the other mines, was very nearly entrapped, or was quite entrapped, into acquiescing in it."

The clause was to the following effect:—That the adventurers should undertake that their coals, howsoever obtained, should be imported through Portreath, provided that the total charges, including freight and carriage from the port to the mine, do not exceed in the aggregate the similar charges ruling at the neighbouring ports of Hayle and Penzance; and that if a vessel consigned to Portreath is driven by stress of weather to Hayle or Penzance, the adventurers should be at liberty, notwithstanding this undertaking, to discharge at either of those ports, if it should be more convenient to them.

At a meeting specially convened at the Carn Brez Mines on the 31st December 1889, as receiver of the estate under the Court of Chancery, I publicly left the

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Whereas it is expedient in the interests of the mining industries of the United Kingdom that greater security should be given to persons engaged in such industries:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. In every county where mining operations are or shall be hereafter carried on, a Court shall be established, having the jurisdiction of all questions relating to leasing and working of mines under this Act.

2. Such Court shall consist of, (1) in England, the county court judge, and not less than six, nor more than twelve, assessors, the number to be determined by the judge, according to the size of the county; (2) in Scotland, the sheriff of the county or his substitute, and a like number of assessors, determined as aforesaid; and (3) in Ireland, the Land Commissioners.

3. The assessors in England and Scotland shall for each county be elected as follows; that is to say, one third by the owners of lands and heritages whose assessable rental, as appearing on the valuation roll, shall be at least of the annual value of fifty pounds sterling; one third by the lessees of mines or minerals being wrought, whose assessable rental, as appearing on the valuation roll, shall be at least fifty pounds sterling; and one third by the miners employed in such mines, and whose names appear in the register of persons entitled to vote for a member of Parliament in force at the time of such election of assessors; and in the case of land being owned by more than one proprietor, or of mines or minerals being held by more than one tenant or lessee, only one of such proprietors, tenants, or lessees shall be entitled to vote in such election.

4. A majority of the persons forming the Court shall be a quorum, and in the event of the Court being equally divided as to the judgment to be pronounced, the county court judge, sheriff, or chairman of the Land Commissioners, as the case may be, shall have a deliberative and also a casting vote. Any vacancy occurring among the assessors, by death or otherwise, shall be filled up by the Court from the class to which the member whose place is to be filled belonged.

5. The first election of assessors shall take place within three months after the passing of this Act, on a date to be fixed for each county to which the Act applies, by the county court judge in England, by the sheriff in Scotland, and by the Land Commissioners in Ireland; and such election and all subsequent elections shall be conducted under the Act thirty-fifth and thirty-sixth Victoria, chapter thirty-three, by ballot. Future elections of assessors shall be triennial, dating from the first above referred to, and the county court judge, sheriff, or, as the case may be, shall fix the day of election and act as returning officer, or appoint some one to act in that capacity.

6. Every person or any two or more persons who shall at any time after the passing of this Act make an application to the owner or owners of any land containing or believed to contain mines or minerals for a license to work the same, or for a lease or the renewal of a lease thereof, may, if the owners shall refuse to grant the said license or lease, or to renew the lease, or shall refuse to grant or renew the same upon such

terms as the applicants may consider just and reasonable, apply to the Court in the manner herein-after prescribed, and, subject to the provisions of this Act, may acquire a lease or a renewal of a lease of the said land for which application has been made, upon such terms and conditions as the Court may deem just and reasonable.

Where the said land is undivided or belongs to two or more owners, the Court shall, upon due notice given in the prescribed manner to all the owners, require them all to join in the same lease, upon such terms and conditions respectively as the Court may deem just.

Where it is proved to the Court that the owner or owners of any portion of such land is or are uncertain or unknown, the Court shall make such order for the payment into Court of the royalties, dues, and other moneys from time to time payable out of such lands to the said owner or owners, to be placed to an account to be kept for the benefit of such persons as to the Court may seem fit.

7. The application to the Court shall be in such form and manner as may be prescribed, and shall specify—

- (1) The name and address of the applicant or applicants, and, if a company, the amount of capital raised or to be raised, and whether limited or on the cost-book system.
- (2) The locality and extent of the land in question as shown on the ordnance survey.
- (3) The name and address of the owner or lessor.
- (4) As full and correct a plan of previous workings, if any, as possible.
- (5) The nature of the interest sought to be acquired, together with such other particulars as may be prescribed.

8. Upon the hearing of the application the Court shall, if it be satisfied upon the evidence adduced by the parties on both sides that the refusal of the owner or owners to grant the license or lease is under all the circumstances of the case unreasonable, or that the terms and conditions demanded by them are oppressive or opposed to the public interests, grant the application upon such terms as the Court shall deem just.

9. The lessee, under any lease existing at the date of this Act, may apply to the Court for a revision of the terms or conditions of his lease, and the Court shall, upon a full consideration of all the circumstances of the case, have power to alter or modify the same in such manner as it shall deem just.

Provided that the lessee shall upon such application prove to the satisfaction of the Court—

- (1) That he had previously sought the relief now asked for from the owner or lessor, and had been refused.
- (2) That owing to the altered conditions of the trade it is impossible for him to continue working the mine under the covenants and provisions of the existing lease.

10. Upon the hearing of any application for a lease, or the renewal of an old lease, or the revision of an existing lease, the Court shall fix the dues or royalties or payments by way of dues or royalties on a percentage of the output, having regard to the working of the mine, to the selling price of the mineral, the wages of the workmen, and other circumstances affecting the cost of production, the money value of such payments to be ascertained by striking an average of the selling price of the mineral when brought to the surface during the preceding twelve months.

11. Upon the hearing of any application for a lease, or a renewal or revision of a lease, the Court shall determine the price to be paid for all land destroyed or damaged by the mining operations according to the

Power of Court in respect of wayleaves.

Improvements to belong to those who make them.

Abandonment of mine.

Form of application.

Power of Court to grant or refuse application.

When lode intersects land of different owners.

Power of Court to deal with existing leases.

Right of inspection of mine by owners.

Rent dues and royalties to be fixed by Court.

Damage to land to be paid for at current market value thereof.

Reference to arbitration.

then current market value, whether as agricultural or as building land, such value to be assessed, if necessary, by two competent valuers appointed by the Court.

12. Upon the hearing of any application for a lease, or a renewal of a lease, or the revision of a lease, the Court shall have power to grant wayleaves for the conveyance of the minerals either over, through, or under the adjoining lands of neighbouring owners upon such terms as the Court may deem just and reasonable, and may review and determine the conditions upon which such wayleaves have been previously granted; and any surface damages caused by such wayleaves shall be assessed by the Court upon such a scale as the Court may deem just and reasonable.

13. In all cases improvements, such as engine-houses and other buildings or works necessary for the proper working of the mine, and dwellings for the housing of the workmen employed in or about the mine, which may have been erected and left standing by the lessees, or which may have been erected by the workmen or any parties other than the owner or lessor, and all shafts or other permanent works executed for the development and proper working of the mine, shall, unless the owner shall have taken the same over from such lessee or others at a fair valuation, be deemed to be the property of such lessees, miners, or other parties. The lessees may, subject to the provisions of section fourteen, sub-section three, of this Act, at the expiration of the lease by effluxion of time or otherwise, remove or sell the same as well as all leaveings then being upon the land.

14.—(1) Where the lessees have ceased or neglected to work a mine for a period of twelve months, it shall be lawful for the lessor to apply to the Court, and the Court, upon being satisfied that the lessee or lessees have ceased or neglected to work the mine for such period, shall, unless the lessee shows reasonable excuse, pronounce an order declaring that the lease has expired, and the lease shall be deemed to have expired from the date of such order.

(2) The lessee or lessees may at any time previous to the expiration of the said twelve months apply to the Court for an extension of time not exceeding six months, and the Court shall have power to grant such extension.

(3) Provided also, that in all cases where the lessees have so abandoned a mine, all the buildings erected by them upon the sett, and all permanent works and other improvements constructed or made by them, shall be deemed to be their property, and it shall be lawful for them to sell the same either by public auction or by private contract.

15. Where in the working of any mine or sett it is found that the lode, seam, or mineral deposit passes beyond the limits of that mine or sett into the adjacent property of some neighbouring landowner, or where in the course of the working, owing to the influx of water from such adjacent land or other natural causes, it is necessary for the full development and proper working of the mine that the works should be extended beyond the limits of the mine or sett, it shall be competent for the lessee to apply to the Court, and the Court shall, after due notice to such neighbouring owner in the prescribed manner, and upon consideration of all the circumstances of the case, and upon hearing all parties, make such order in the matter as it shall deem just.

16. It shall be lawful for any owner who has granted a lease of any sett, or his steward or agent, either alone or with any other person or persons, at all reasonable times to go down into, examine, dial and measure any part or parts of the mine and works, and for that purpose to use the machinery, tackle, buckets, and other conveniences then and there being. And if any question shall arise between the owners and the miners as to the miner-like manner in which the mine is being worked, it shall be competent for the owner to apply ex parte to the Court for an order for the inspection of the mines by one of Her Majesty's inspectors of mines, and upon the report of such inspector the Court shall make such order in the matter as to costs or otherwise as it may deem just.

17. Any matter capable of being determined by the Court under this Act may, if the parties so agree, be decided by arbitration.

18. This Act may be cited for all purposes as the Mining Royalties Act, 1887.

i 70489.

19. This Act shall come into operation on the first day of January one thousand eight hundred and eighty-eight, which day is herein referred to as the commencement of this Act.

20. In this Act "owner" or "lessor" means any person in whom for the time being the freehold of any land containing or believed to contain minerals is vested, and includes all persons having any estate or interest in the same in remainder or reversion.

"Lease" includes a grant or license for mining purposes, and also an agreement for such lease, grant, or license.

"Lessees" includes every person or persons who as lessees or grantees shall have the right to work any mine, whether as an individual lessee or lessees, or as a limited company under the Companies Acts, or as a company of adventurers under the cost-book system, and also all persons claiming under the original lessees.

"Minerals" and "minerals" include all metallic or mineral deposits of whatever kind, whether open quarries of stone or slate, or collieries, or clay or china clay setts, or metalliferous mines or tin streaming works.

"Prescribed" means prescribed by rules made under the provisions of this Act.

"Miners" shall mean every person who hews coal or other mineral, and all other persons employed underground except agents, captains, or other the representatives of the lessees or owners.

21. It shall be lawful for the Court, subject to the approval of the Lord Chancellor in England or Ireland, and the Lord President of the Court of Session in Scotland, to make or alter such rules or forms as may be requisite for the regulation of the proceedings under this Act, and to fix or alter any such scale of costs as the Court may deem just, and the same shall come into force on their being approved by the Lord Chancellor in England or Ireland, and of the Lord President of the Court of Session in Scotland under his hand.

II.

MEMORANDUM OF MR. EDMUND CHASE MARRIOTT UPON THE EVIDENCE OF MR. C. A. V. CONYBEARE, M.P., GIVEN BEFORE THE ROYAL COMMISSION ON MINING ROYALTIES ON 7th April 1892.

With reference to the statement in answer 19,974, it is misleading to say that East Pool was paying "one-fifteenth dues until within the last two years, when it was reduced to one-eighteenth," because, although Mr. Basset was obliged by the restrictions of the settlement under which he held the estate as tenant for life to reserve the dues at one-fifteenth, he personally covenanted not to take more than one-thirtieth until the mine was making a profit, and then one-eighteenth on tin, which was the main production of the mine, the dues on the other minerals only, which other minerals were of comparatively trifling value, reverting to one-fifteenth.

In answer to question 20,008 and 20,010, it is stated as follows:—

The Portreath clause was withdrawn because "East Pool, being a strong mine, resisted it, although I think one of the Seton mines, I forget whether it was the Wheal Seton or West Seton or one of the other mines, was very nearly entrapped, or was quite entrapped, into acquiescing in it."

The clause was to the following effect:—That the adventurers should undertake that their coals, howsoever obtained, should be imported through Portreath, provided that the total charges, including freight and carriage from the port to the mine, do not exceed in the aggregate the similar charges ruling at the neighbouring ports of Hayle and Penzance; and that if a vessel consigned to Portreath is driven by stress of weather to Hayle or Penzance, the adventurers should be at liberty, notwithstanding this undertaking, to discharge at either of those ports, if it should be more convenient to them.

At a meeting specially convened at the Carn Brez Mines on the 31st December 1889, as receiver of the estate under the Court of Chancery, I publicly left the

Appendix A.
Papers handed
in by witnesses.

adoption or rejection of the clause absolutely to the decision of a majority of the adventurers in all the mines.

In 1888, before Mr. Basset's death, the clause was adopted, after a great deal of criticism and discussion, by a majority of the West Seton Adventurers, and on the 28th April 1890, as receiver of the estate, I wrote to the pursor of the mine, offering to apply to the court for leave to expunge the clause from the lease, if after a two years' experience of its operation a majority of the adventurers desired it.

19,983 and 20,093.—It is stated in 19,983 as follows:—That "in the spring quarter of 1890, East Pool paid "almost exactly one-half of the profit divisible "amongst the adventurers in the form of royalties "to the lord of the mine." Mr. Conybeare also added, "I find that that has been the case also practically in the case of some of the Dolcoath payments." It is not the fact that East Pool paid any such amount of royalties, for although in the spring quarter of 1890 the royalty reserved in the lease amounted to one-half of the profits divisible among the adventurers, such royalty was not paid; and at a special meeting at the mine on the 30th May, at the solicitation of the adventurers, including Mr. Conybeare, who was present, I undertook to ask, and I subsequently obtained the sanction of the court to limit the royalty then and for the remainder of the term of the lease to one-fourth of the profit.

The profit divided from the commencement of the lease in 1873 down to that date, upon a called up capital of less than 4,000*l.*, was precisely 327,520*l.*, free of income tax. To this sum must now be added the further amount of 19,040*l.*, subsequently divided.

The total amount paid in royalty for the same period is 60,347*l.*; considerably less than one-fifth of the profit divided.

Mention was also made by Mr. Conybeare of the Dolcoath payments. With reference to them I wish to observe that on the 28th March 1891, in reply to an application for a reduction of the dues, an alternative offer of reducing them to one-eighth of the gross produce, or limiting them to one-fourth part of the net profits, was made to the committee of management. If the latter alternative was accepted, powers were to be reserved to the landlord enabling him to ascertain the amount of net profits, in connection with which it was stipulated on behalf of the landlord that all supplies and materials should be purchased by tender. The committee of Dolcoath Mine preferred and accepted the first alternative.

EDMUND C. MARRIOTT.

III.

OBSERVATIONS ON SOME OF THE EVIDENCE GIVEN ON LEGAL POINTS TO THE COMMISSION. Handed in by Mr. Walmesley on behalf of the Committee of Proprietors. (Question 20,228.)

I.—OWNERSHIP OF MINERALS.

(19,466.)

The case of mines under the foreshore of the sea and of tidal navigable rivers, is not in reality an exception from the ordinary rule, as the ownership of the surface of the foreshore is also, *primâ facie*, vested in the Crown as part of the *jura regalia*.

The mines in the Forest of Dean and the lead mines in certain parts of the Peak, in Derbyshire, were not vested in the Crown by the Acts referred to. The Crown was already seized of the mines referred to, subject to certain immemorial customs; and the chief object of the Acts appears to have been to define and regulate the customs and make provision for such customs being properly carried into effect.

The mines in the Isle of Man were not vested in the Crown by the Act of Settlement of that Island (in 1703-4). The rights acquired by the Crown by purchase from the Duke of Athol in the year 1765 (see 5 Geo. III. c. 26) were acquired by purchase. The bargain appears from the recitals in that Act.

The vesting of minerals in the Duke of Cornwall by the Act of the 7th & 8th Victoria, chap. 105, was the compromise of a dispute.

It is submitted that the foregoing observations (2, 3, and 4) are important: as it is not the fact that Parliament has from time to time transferred to the Crown new rights with respect to the ownership of minerals,

As regards the foreshore in Durham, the Act 6. (19,468.) referred to was merely confirmatory of an agreement which had been come to as between the bishop and the Crown to settle doubts which had arisen as to the ownership of the foreshore as part of the *jura regalia*, and does not in any way affect or form an exception to the ordinary rule as to ownership of the minerals by the owner of the surface.

The following are important additional exceptions 7. to those referred to as the exceptions to the ordinary rule, which presumes the owner of the surface to be owner also of the subsoil and minerals, viz.:—

1. The case where there has been a severance of the mines from the surface either by—

Voluntary severance, e.g., where land has been conveyed or demised reserving the mines, or *vice versa*; or by

Statutory severance, e.g., where the ownership of the mines has been severed from that of the surface by Act of Parliament, e.g., Road, Railway, or Canal Acts.

2. The case of copyholds and customary freeholds, where the ownership of the minerals or the right to work them is vested in the lord of the manor. In awards under the Copyholds Enfranchisement Acts, the minerals are usually reserved to the lords of the manor.

3. The case of wastes or commons of a manor, where the property in the minerals is vested, *primâ facie*, in the lords of the manor, though this again is not properly an exception from the ordinary rule, as the soil of the wastes and commons is equally the property of the lord of the manors, subject to the rights of the commoners. In awards made under Inclosure Acts, where the property in the minerals was previously in the lord of the manor, such property is usually reserved to him, though it may be otherwise compensated for. In partitions and exchanges made under the Inclosure Acts, mines may also be excepted.

II.—POWERS OF LEASING.

It is submitted that in the case of the hospital in Durham which has considerable mining property, the difficulty might be met under the existing law, as the Charity Commissioners have power to authorise the granting of mining leases of any part of charity lands, if they think such leases would be beneficial to the charity, although such leases are not authorised or permitted by the trust, and such leases are to have the like effect and validity as if they had been authorised or directed by the express terms of the trust (Charitable Trusts Acts, 1853, ss. 21 and 26).

In reference to the remarks on the powers of leasing conferred by the Settled Land Act, 1882, it is submitted that in strict settlements by far the greater number of tenants for life are *unimpeachable for waste*, and would therefore only have to set aside one fourth (not three fourths) of the rent as capital, if they leased under the powers of the Act; and it can hardly be contended that one fourth is too large a proportion for a reasonable man to capitalise from a rental of so wasting a character as mine rental.

It is also submitted that the "contrary intention" referred to in section 11 of the Settled Land Act, 1882 (that is, an intention contrary to the capitalisation of any portion of the mine rent), can be taken to have been expressed in settlements made before as well as after 1882. Mr. Justice Pearson had no difficulty in discovering such an intention in a Settlement dated in 1856. See, *re* the Duke of Newcastle's Estates, 24 Ch. Div., 129, and the same principle was recognised in *re* Garnett Orme and Hargreaves Contract, 25 Ch. Div., 595.

It is submitted that the difficulties suggested would be removed, without any undue interference with the rights of property, if the effect of section 11 of the Settled Land Act could be reversed by legislation as regards future settlements so as to provide that, unless a contrary intention is shown in such settlements, no tenant for life granting mining leases under the powers of the Act should be required to capitalise any portion of the income.

The principle upon which short leases are objected to (where the shortness of the lease does not prevent the coal from being worked) leads logically to the prohibition of all leases of mines, and to forcing the colliery owner to purchase the fee simple rather than

ments, practically, there is now power to sell the fee simple, and a sale would produce no injustice as between tenant for life and remainderman. The object of capitalisation is, while offering to the colliery owner the convenience of a lease instead of obliging him to purchase, to preserve in a rough way the equities between tenant for life and remaindermen.

13. (19,464-6.)

As before observed the difficulty here referred to does not necessarily exist with regard to settlements made either before or after 1882.

14. (19,519.)

With reference to the observation that when a lessor accepts a surrender under the powers of the Settled Land Act (even with the view of renewing at a reduced rent) he must naturally prefer to grant the new lease under the limited power in his own settlement rather than under the more extensive powers of the Act, so as to avoid the necessity of capitalisation, it may be pointed out that it is expressly provided by s. 13, sub-sec. 6 of the Act, that when a surrender is accepted with the view of granting a new lease, such new lease shall be in conformity with the Act.

15. (19,527.)

Reference is made to a question as to whether a tenant for life can, on accepting a surrender and granting a new lease under the Act, allow "shorts" which may have accrued under the old lease to be carried over to the new lease, but it seems quite clear that such a course can, in many cases, be legally taken, having regard to the provisions of the Act (sec. 13, ss. 4) to the effect that on a surrender and new lease the value of the lessee's interest may be taken into account in the determination of the rent to be reserved, and of the nature of the covenants, provisions, and conditions to be inserted in the new lease.

16. (19,529.)

The same provision is contained in the Settled Land Act as is contained in ordinary settlements that the rents to be reserved are to be the best that can be reasonably gotten (see Settled Land Act, s. 7, ss. 2), with the qualification that regard may be had to the circumstances of the case.

17. (19,510-6.)

Besides the modifications of leases which are specified as being sometimes applied for by lessees, and which limited owners find a difficulty in making, viz.:—

Reductions of rent.

Power to set off wayleave rents against dead rents.

Power to carry forward "shorts" to new leases;

there are many other cases in which trustees or limited owners or mortgagees with powers of sale find themselves under legal disability to act in such a way as an absolute owner would probably be willing to act, such as—

To consider applications by lessees for the waiver or modification of covenants (e.g., specific covenants to sink pits or execute works), or to reduce or suspend payment of the dead rent reserved in leases, or to accept surrenders of leases where no power of surrender is contained in the lease and no new lease is proposed to be taken; or in granting leases to reserve dead rents at varying rates, or to insert some of the clauses and provisions which are usual in leases of mines in the district in which the settled land is situate; or in selling, to deal with the minerals apart from the surface or *vice versa*, or to grant easements without having recourse to the Court.

There are also cases of estates held by trustees where no one has the right to exercise the powers of a tenant for life under the Settled Land Acts, e.g., where there is a trust for accumulation of rents to be invested in the purchase of land (see *re* Strangways 34 Ch. Div. 423).

In all these cases it might be advantageous if the powers of trustees and limited owners could be extended so as to prevent their disabilities from interfering with the reasonable encouragement of mining enterprise; but it is submitted that trustees and limited owners should not be given the power of making concessions or arrangements with lessees which might have the effect of injuring the inheritance of their estates, except on proof to the satisfaction of the Chancery Division of the High Court of Justice, or some other competent authority, that the rights of those entitled to the inheritance are preserved or compensated, or that the loss is equitably distributed.

18. (19,517.)

There is no difficulty in a tenant for life reducing the rent during his own time. The difficulty is in binding his successors to the reduction. The necessity for reductions usually arises from a temporary and unforeseen fall in the price of coal. There is no reason why

the remedy should be permanent when the stress is only temporary. The colliery owner, having made a bad bargain, appeals ad misericordiam to the tenant for life in possession; why should the tenant for life relieve him from making out as good a case to the remaindermen, when the remainder falls in, as has been made to the tenant for life?

It is submitted that there would be great danger in allowing tenants for life in all cases the power to permit the recoupment of shorts without any control, as the probable effect of such an unlimited power might be to encourage the reservations of heavy dead rents by the tenant for life, with the view of securing to himself payment for minerals which could not possibly be worked out during his life, and so to take the benefit himself whilst throwing the burden on to the remaindermen.

III.—JOINT OWNERS.

It is submitted that the existing remedy, pointed out by Lord Macnaghten, of partition and sale, is sufficient to meet any difficulty which could arise on this account.

IV.—SURFACE WAYLEAVES.

It is submitted that cases like that of *Hedley v. Fenwick* are altogether exceptional. In that case the lessee, being either careless or misled by the somewhat ambiguous terms of an Inclosure Act, neglected to take the ordinary precaution of providing for the wayleave in making terms for getting the freehold coal.

V.—FORFEITURE OF LEASES.

It is submitted that lessees are not in any practical danger of forfeiting their leases for breach of covenant, for which a money compensation would be a proper and sufficient equivalent. Under the Conveyancing and Law of Property Act, 1881, s. 14, no forfeiture can take place for breach of any covenant or condition in a lease (except a covenant against assignment or subletting, or a condition for forfeiture on bankruptcy, or, in the case of a mining lease, a covenant for allowing the lessor to inspect accounts and weighing machines, or to enter and inspect the mine) without reasonable notice to the lessee requiring him to remedy the breach and to make compensation in money for the breach, and his failure to remedy such breach and make such money compensation; and, if the landlord proceeds to enforce his right of re-entry, the lessee may apply to the court for relief, which the court may grant on such terms as it thinks fit. With regard to the special cases before referred to, in which the power of the court to give relief does not apply, it is submitted that they are not cases in which the breach could be fairly compensated for by a money payment.

(Original signed by) G. H. BLAKESLEY,
(Barrister-at-Law).

IV.

3.—PAPER handed in by Mr. WALMESLEY on behalf of Mr. GILBERT DE L. WILLIS, Secretary to the Irish Landowners' Convention. (Question 20,230).

OBSERVATIONS ON COMPLAINTS MADE BY VARIOUS WITNESSES (as reported in the Evidence appended to the Second Report of the Royal Commission on Mining Royalties) as to the action of Irish landlords and mining proprietors.

Some three or four months ago, Mr. Oswald Walmesley, as Secretary to a Committee of English Mine Owners, was good enough to call my attention to the fact that some of the witnesses examined before the Royal Commission on Mining Royalties, had made complaints of the action of the Irish landlords in their dealings with mining adventurers and other parties who had endeavoured to promote mining enterprise in that country.

By desire of the Executive Committee of the Irish Landowners' Convention I undertook to make inquiries into the allegations made by these witnesses, and I now beg to subjoin, for the information of the Commissioners, such

Appendix A.
Papers handed
in by witnesses.

Appendix A.
Papers handed
in by witnesses.

particulars as I have been able to obtain of the principal cases complained of.

In making these inquiries I encountered much delay and difficulty, owing to the fact that in many cases the witnesses had made these complaints in a general and indefinite way, and without furnishing the names of the landlords whose alleged action was the subject of complaint. The result of this course having been taken is that it remains uncertain to whom some of their allegations were intended to apply. I found that it was rumoured, or supposed, that certain proprietors or landlords were indicated. Sometimes these rumours proved to be correct, and in these cases I subjoin all the information I could obtain. In other cases the landlords who were supposed to be indicated totally deny that the remarks or statements of the witnesses apply to them at all.

Silver Mines, Co. Tipperary.—Two witnesses appear to have made complaints of the action of the landlord in this case; Professor J. P. O'Reilly (11,930-42) and Mr. Thos. Baker (13,647-52). The landlord, the late Lord Dunally, died in 1885, and the principal matters complained of occurred from 25 to 30 years ago (Q. 11,932).

The royalty charged was one-seventeenth upon the net produce, paid in money at the pit's mouth (Qs. 13,649-51), and the witnesses differ as to its character. Professor O'Reilly (Q. 11,933) says it was "a royalty, small in itself, but which just turned the scale from profit into loss." Mr. Baker (Q. 13,649) considers that the royalty was not excessive. The actual amount received by the landlord for royalties during the period when the mine was worked is shown in the following extract from the estate books, which has been furnished to me by Mr. Maurice C. Maude, the agent of Lord Dunally's estates:—

Date of Account.	Particulars of Royalties received from Mining Company.	£ s. d.
1857. January -	Royalties of mines to December, 1855.	170 16 1
1858. July -	Royalties of mines, two years, to December, 1857.	101 10 11
1861. January -	Royalties of mines to April, 1860.	75 9 1
1863. January -	Royalties of mines from 8th September, 1860, to 8th December, 1861.	58 19 7
1863. July -	Royalties of mines, one year, to 31st December, 1862.	111 4 6
1864. July -	Royalties of mines, one year, to 31st December, 1863.	154 9 9
1865. July -	Royalties of mines, one year, to 31st December, 1864.	284 10 6
1867. January -	Royalties of mines, one year, to 31st December, 1865.	88 16 11
1868. January -	Royalties of mines, one year, to 31st December, 1866.	29 10 0
1868. July -	Royalties of mines, one year, to 31st December, 1867.	3 4 9
1869. July -	Royalties of mines, one year, to 31st December, 1868.	7 0 1
1870. July -	Royalties of mines, one year, to 31st December, 1869.	12 15 3
1871. July -	Royalties of mines, one year, to 31st December, 1870.	15 3 3
	Carried forward -	1,113 10 8

Date of Account.	Particulars of Royalties received from Mining Company.	£ s. d.
	Brought forward -	1,113 10 8
1872. June -	Mining company, on account of royalties.	4 4 10
1874. June -	Royalties of mines, two years, to 31st December, 1873.	34 14 3
1877. January -	Royalties of mines to 1st March, 1876.	7 2 0
	TOTAL -	1,159 11 9

Both witnesses agree in making complaint of the fact (which is not disputed) that the landlord demanded a fine of 10,000*l.* for a renewal of the lease or take-note, but there are important discrepancies in their evidence.

Professor O'Reilly says (Q. 11,935) that the application for a renewal was made in 1867 or 1868; that (Q. 11,934) the company was then "at the bottom of its resources," and that their lease had expired; and (Q. 11,935) he imputes that the company had to be wound up immediately, owing to the landlord's demand.

On the other hand, Mr. Baker says (Q. 13,645) that the company was not wound up till 1873, and (Q. 13,652) that the application for a renewal was made while the lease had still seven or eight years to run. He also says (Q. 13,647) that great difficulties were experienced owing to the hardness of the rock, and he makes the important admission that "those difficulties might have been avoided, I think, by another course of mining."

At this distance of time it appears to be impossible to obtain minute particulars as to the reasons or objects which the late Lord Dunally had in view in demanding this fine of 10,000*l.*, but there seemed to be no doubt that his main object was not to extort an unreasonable fine, but to give effect to his own views on matters which had long been in controversy between him and the company as to the best methods for carrying on the business successfully. The agent of the estate has favoured me with the following memorandum on the subject:—

"From what I recollect the company was not considered in a solvent state for some time before the collapse. The closing of the concern was attributed to the expensive methods of manufacture, and bad management."

"It was pretty well known in the neighbourhood that there was a difference of opinion among the directors as to the advisability of carrying on the works, as the produce of the calamine would not pay the working expenses; and we were satisfied that this was the true state of the case, as the company closed their works some years before the expiration of the lease, and had for a considerable time failed to pay any royalty, though the royalty was small.—(Signed) Maurice C. Maude. 27th April, 1892."

Clough Colliery, Co. Kilkenny.—It is understood (though not directly stated) that this is the colliery referred to in Q. 12,035-6, 12,041-5. The witness (Mr. J. McC. Meadows) states that two English gentlemen, "ignorant of the circumstances of the coalfield," took a lease of it at a rent of 2,000*l.* a year, and that the lease contained no clause of surrender except upon the exhaustion of the workable coal.

If the venture had proved profitable the case would apparently not have been mentioned; but it turned out to be a bad bargain, and Mr. Meadows appears to contend that the landlord was in some way to blame because he received a certain amount (estimated by the witness at between 6,000*l.* and 7,000*l.*) for rent during the series of years in which the pit was worked. The landlord died about ten years ago, and the property passed to another branch of his family, and details of the original negotiations are apparently not now obtainable. Mr. Meadows, however, admits (Q. 12,036) that when the rent was proved to be excessive it was reduced from 2,000*l.* to 1,300*l.*, and ultimately to 600*l.*

The present agent of this estate is Mr. Philip O'Reilly, D.L., and any information now obtainable will be found in the following letter from him:—

"Colamber, Rathowen, Westmeath,
"25th April, 1892.
"DEAR SIR,
"In reply to your letter of 23rd inst., enclosing a précis of the evidence given by Mr. Meadows, as to the

Clough Colliery, in the Co. Kilkenny. I regret being unable to give you much information on the matter.

"I was appointed receiver under the courts in 1881, when the rent of the colliery was 600*l.* a year. Mr. Robson was the lessee. Mr. Meadows the manager. I do not know what the rent was previous to 1881. I never saw the lease. The late agent is dead.

"In 1885 Mr. Meadows reported that the coal was running out. I employed a Mr. Mammatt, an experienced mining engineer from England, to examine the mine, and report thereon. I give you the following extract from his report, dated 17th June, 1885:—

"According to the accounts furnished to me by the lessees, they have sold under the present lease to 1st January, 1885, 63,261 tons of coal, realising 30,076*l.* 7*s.* 9*d.* One-tenth of this sum amounts to 3,007*l.* 12*s.* 9*d.*, leaving a balance of 1,192*l.* 7*s.* 3*d.* of minimum rent paid in advance of coal got. . . . I estimate that there were 4*s.* 3*d.* 15*p.* of workable coal remaining in January last, which will produce 17,349 tons. The average price realised during the last seven years for the coal is 9*s.* 6*d.* per ton, and the value, therefore, of the unworked coal will be 8,248*l.* One-tenth of this amounts to 824*l.* 16*s.*, so that there will remain a balance of overpaid rent of 367*l.* 11*s.* 3*d.* At the present rate of working it will take about two years to get the remaining portion of this seam."

"Mr. Robson paid the rent up to the 30th December, 1884, and on the 6th December, 1886, the pit was closed.

"Faithfully yours,
"(Signed) PHILIP O'REILLY."

"G. de L. Willis, Esq.,
Irish Landowners' Convention,
Kildare Street, Dublin."

From the foregoing letter it is clear that the venture was not a profitable one for the lessees, but it is difficult to see how the landlord was to blame. It may also be pointed out that during part of the term the property was under the administration of the Court.

Mr. Mammatt's report also proves that in 1885 the workable coal remaining was only about 17,000 tons, and that at the rate of working at that time this quantity would have been obtained, and the coalfield worked out in about two years. This opinion is contrary to Mr. Meadows' statement (Q. 12,041) that "if there had been a certain rent of, say, 200*l.* a year, and a royalty of one-twelfth or one-fifteenth, possibly the works might be going to-day."

Ballycastle Coalfield; Co. Antrim.—It appears that these collieries were worked down to 1883 under a lease at a rent of 1,000*l.* per annum (Q. 12,230), and were abandoned in that year because the then owner, the late Sir Frederick Boyd, refused to grant a new lease at a rent of 600*l.* Whether he was well advised in this seems to be doubtful, for it is stated (Q. 12,319) that the present owner would be willing to grant a lease at a much lower rent. She has apparently failed, however, to find a tenant upon any terms. The reason for this seems to be due to the fact mentioned by Mr. J. B. Johnstone (Q. 12,317) that "to work the coal properly we would have to go down below 'sea level,' and it is evident that investigations made since 1883 have resulted in an opinion that this could not be done at a profit. A report on this coalfield was made to the Royal Dublin Society in 1886, by Mr. G. H. Kinahan, in which he says:—

"The higher coals, or those above the level of the sea, are worked out. There are, however, two coals, called the 'sea coals,' below the sea level, still unwrought, which have been estimated to contain about 18,000,000 tons of coal; but as far as trials have been made they are unprofitable, on account of the drainage of the sea into the workings; very little, therefore, (if any), of this coal can be profitably raised." (*Scientific Proceedings of Royal Dublin Society*, October, 1886, Vol. V. (N.S.), part 4.)

County Tyrone Coalfield.—Mr. Thos. A. Dickson, M.P., complains (Q. 12,792) that in seeking for a renewal of a lease from "about a dozen" landowners, one of them refused to agree except upon payment of a very large fine. It is a matter for regret that this gentleman's name and address were not mentioned, as it would have enabled inquiries to be made. As the matter stands, it is only possible to point out that further on in his evidence (Q. 12,795), he admits that the largest proprietor in the district (Lord Ranfurly) "never places any difficulty in the way," and that the difficulties arise from the fact that "just in that immediate neighbourhood there are numerous small landowners." These small landowners are in most cases not "landlords" in the usual acceptation of the term; and the difficulties of dealing with them are doubtless similar to those which various witnesses speak of

meeting in attempts to deal with the still smaller landowners who have become proprietors under the Land Purchase Acts.

County Wicklow Mines.—Several statements were made by the late Mr. Parnell, M.P., (Q. 12,667, 12,672), and by Mr. G. H. Kinahan (Q. 13,630-1), complaining of the action of landowners in the county of Wicklow, in the mining district of the valley of Ovoca. Unfortunately no names were given, and I have so far been unable to ascertain to whom most of their statements were intended to apply. My inquiries, however, have elicited the fact that some of the landed proprietors of that district have ceased to look with much favour upon the proposals of mining adventurers, owing to the almost universal collapse and abandonment of the various mines which have been started there from time to time. Their present derelict condition appears to be due to foreign competition, or the unprofitable character of the works, and not to the action of the landed proprietors. In the result, however, it is stated that a valuable right of fishing which once existed in the local river and streams has been destroyed, and the natural scenery of this picturesque district has been greatly defaced by these mining works, while the capital sunk in them by both the local proprietors and others has been lost. It is, therefore, no great wonder that many people look coldly now on projects of the kind in the neighbourhood.

On the other hand I have been informed that most of the larger proprietors are still quite willing to entertain and facilitate any proposals which may seem likely to turn out well, and this view is corroborated by the following particulars of one of the cases mentioned by the witnesses.

Mr. G. H. Kinahan (Q. 13,630) quoted what he called "a very remarkable case" of a mine which was just able to pay its way when subject to a royalty of one-twenty-second, and which had to be abandoned, because, as he alleged, the landlord refused to renew the lease without a renewal fine and a royalty of one-fifteenth. It was ascertained that his remarks applied to a case on the estates of Viscount Powerscourt, and Mr. Kinahan's statements were brought under his notice by Mr. Walmesley. The following is Lord Powerscourt's reply:—

"DEAR SIR, "65, Brook Street, W.
"I remember the circumstances about the case of Mr. Hodgson and the mine at Castlemacadam, in the county Wicklow.

"I sold the estate some years ago to the Rev. Mr. Hallows, rector of that place.

"Mr. Hodgson had been the tenant of my mine for many years, before I was born, I believe, and used to pay a royalty on the ore raised.

"When I came of age in 1857 the royalty amounted to some 1,200*l.* a year. From that time forward it steadily decreased, on account of the competition of the Neapolitan and other sulphur mines, which put their ore on the market at a lower rate than was possible in Ireland.

"The royalty went down to a very small sum yearly, and, of course, I, as the proprietor, made investigations into the reasons. At last Mr. Hodgson volunteered himself, having made large profits in former years, to pay me a dead-rent of 50*l.* a year for five years, to which I agreed.

"Shortly after this Mr. Hodgson died, and the mine became derelict, or nearly so.

"I sold the estate, including the mine, to Mr. Hallows, who is now the proprietor. I believe the mine is only worked for ochre now.

"The statement that the mine is idle because of any increase of royalty on my part is simply untrue. It may be observed that the mine opposite, on the other side of the river, belonging to the Mining Company of Ireland, is also idle, or nearly so. Simply, it does not pay to work them on account of foreign competition.

"It is most unfortunate that so many Irish industries of this character fail, but I think that the authorities of the Geological Survey in Dublin can give very good reasons for their failure from natural causes. Of course, all these things are attributed to the dire influence of landlords; but will any person of any common sense suppose for a moment that any proprietor would be such a fool as to impose impossible terms upon the tenant of a mine, so as to render it unprofitable to work it, thus cutting his own throat, and killing the goose with the golden eggs!

"You may make any use of this you please.
"Yours faithfully,

"(Signed) POWERSCOURT.
"April 5, 1892.
"Oswald Walmesley, Esq.,
"2, Stone Buildings,
"Lincoln's Inn, W.C."

Appendix A.
Papers handed
in by witnesses.

Appendix A.
Papers handed
in by witnesses.

It may be added that Lord Powerscourt's statements in the foregoing letter are largely corroborated by Mr. Kinahan himself, in the following passage, from his report on the sulphur mines of this district, published in the Scientific Proceedings of the Royal Dublin Society, for October, 1886.

"While the great demand for sulphur lasted, vast sums were made by the different adventurers; and as in late years there was a demand for iron ore, it also was a considerable source of profit. The great demand ceased about the year 1865, and afterwards the mines rapidly declined, and now little or nothing is being done" (page 307).

I believe it will be found that the principal cases mentioned or indicated by the witnesses are dealt with in the information contained in the foregoing observations.

G. DE L. WILLIS.

Irish Landowners' Convention,
Offices—4, Kildare Street, Dublin,
August 10, 1892.

P.S.—As regards the terms and conditions of leases granted by mining proprietors in Ireland, it may be pointed out that Mr. J. Mc. C. Meadows in his evidence before the Commission (Q. 12,040) stated that "speaking generally, there is nothing to complain of. In comparison with English leases you may say they are favourable."

V.

ISLE OF MAN.

REVENUE derived by the CROWN from mineral substances in the ISLE OF MAN in the year ended 31st March 1890.

	£	s.	d.
Coal	-	-	-
Iron	-	-	-
Lead and Zinc Blende	-	7,861	19 11
Slate	-	-	-
Stone, gravel, and sand	-	436	17 1
Gold and Silver	-	-	-
Copper and tin	-	16	2 6
Salt	-	-	-
Miscellaneous (including dead rents where no workings)	-	425	18 11
	8,740	18	5

The miscellaneous receipt includes dead or certain rents under leases of "minerals" generally where there have been no workings and royalties from amber and rotten stone.

VI.

Ecclesiastical Commission,
10, Whitehall Place,
London, S.W.

DEAR SIR,
In accordance with the arrangement made with you on the 28th ultimo, I have now the pleasure to enclose a continuation of Parliamentary Return No. 227, Session 1888, for the years ending 31st March 1888, 1889, and 1890. It should be borne in mind that the amounts under Nos. 7 and 8 include rents of foreign coal as well as on coal the produce of the Ecclesiastical Commissioners' own mines.

I am, &c.,
(Signed) A. DE BOCK PORTER.

Herbert Lyon, Esq.,
Royal Commission on Mining Royalties,
6, Old Palace Yard, Westminster, S.W.

COUNTY OF DURHAM.

Mineral Rents, Royalties, Wayleaves, &c.

Year Ending	Amount due							
	1. Coal.	2. Iron- stone.	3. Fire- clay.	4 & 5. Limestone, Freestone, &c.	6. Lead Ore, &c.	7. Wayleaves and Water- courses. Rents.	8. Outstroke, and Shaft Rents, &c.	
	£	£	£	£	£	£	£	
31st March, 1888.	191,624	1,200	1,775	5,282	4,208	17,753	15,401	
31st March, 1889.	180,677	1,200	1,981	5,588	4,125	18,282	15,935	
31st March, 1890.	216,532	1,265	2,341	5,463	5,510	19,292	15,213	

APPENDIX B.

DOCUMENT RELATING TO THE MINING LAWS OF INDIA AND THE COLONIES.

NOTES ON MINING AND THE LAW AS TO OWNERSHIP OF MINERALS IN INDIA AND THE COLONIES, prepared and handed in by MR. WALMESLEY.

The following is a short statement as to the minerals which are found in India and the different Colonies, and as to the laws which govern the ownership and regulate the working of such minerals.

The statement is necessarily incomplete, being prepared from insufficient materials, and is subject to correction and improvement when further materials become available. It will, however, afford some indication of the variety of legislation which exists with reference to the subject matter, and may serve as an index to such legislation, and as the basis of a more complete and authentic statement to be prepared at a later date, if required.

As many of the laws and regulations respecting mining in the Colonies have reference particularly to mining for gold and silver, it may be here observed that grants by the Crown (or Government) of land in the Colonies (as in

England) will not pass gold or silver mines therein unless an intention to transfer them is expressed or necessarily implied (*Woolley v. Attorney-General of Victoria*, 2 App. Cas. 163, and *Attorney-General of British Columbia v. Attorney-General of Canada*, 14 App. Cas. 295). The notes in the 3rd column, as to the ownership of the mines, must, therefore, usually be taken as applicable only to mines other than gold and silver.

It must also be understood that the notes as to the ownership of mines given in this statement have reference to lands which have been alienated by the Crown (except where otherwise stated), and not to the waste, unoccupied, and uncultivated tracts of land, or to the specially reserved mining districts, which in many of the Colonies still remain unalienated in the Crown.

IN EUROPE.

Name.	Minerals.	Ownership.	Remarks.
1. Channel Islands	—	—	—
2. Gibraltar	—	—	—
3. Isle of Man	Lead Copper. Zinc.	In Crown under customary estates (not under Bishop's Lands).	Acquired by purchase from the Duke of Athol (5 Geo. III., c. 26. A.D. 1765).
4. Malta	—	—	—

IN ASIA.

Name.	Minerals.	Ownership.	Remarks.
1. Ceylon	Plumbago. Iron. A little coal. Precious stones.	In surface owner (except where there has been a specific reservation to the Crown).	No one is permitted to gem on Crown lands without a license. (Ceylon Ordinance No. 7, 1882.) There do not seem to be any acts or regulations relating to mines of coal or metals.
2. Cyprus	Silver. Copper.	In Crown	Under Cyprus Ordinance No. 5 (amending Ottoman Law dated 4 Mouharem, 1286), being regulations as to mines and metallic substances, and the granting of concessions and licenses to search for, win, work, and get the same.

N.B.—Under the Ottoman law there are mines, e.g., gold, silver, lead, iron, coal, &c.; minières, i.e., mineral matters got by surface work; and carrières, marbles, &c. (not within law).

Mines cannot be worked but by virtue of an Imperial Iradé. This gives a concession for 99 years, during which period the mines may pass by inheritance or sale (but by sale only under official authorisation).

Persons may search for mines on their own lands, and also on those of others, with their authorisation but not without, except by special official authorisation.

On obtaining a concession the concessionaire pays from 50*l.* to 200*l.* (Turk) according to the value of the mines. He afterwards pays two species of redevance—1st, of 5 paras per dennum of land comprised in the concession (payable to the owner); 2nd, the redevance proper, which varies from 1 to 5 per cent., according to the richness of the mine, and is fixed in the firman of concession.—(Legislation Ottomane droit Administratif, 1875).

The Cyprus Ordinance No. 5, above mentioned, enacted (*inter alia*)—

1st. That concessions should be under the hand of the High Commissioner and the seal of Cyprus instead of an Imperial Iradé.

2nd. That the High Commissioner in Council might suspend the provisions of the regulations of the Ottoman law providing for payment of a fixed surface rent.

3rd. That the rents and royalties payable to Government should be paid into the Island treasury.

Name.	Minerals.	Ownership.	Remarks.
3. Hong Kong	—	—	—
4. India:— Bengal	Coal* and other minerals in large quantities.	The right to mines, &c., in unalienated lands has been reserved to the Government from recent dates in various provinces. In the case of lands previously alienated by the Government in those provinces and in the case of the other provinces (without special reservations), the mines belong to the surface owner.	See the Anglo-Indian Codes—Whitley Stokes (1887), vol. i. p. 727.
Assam	Limestone, some coal and iron		
N W. Provinces and Oudh	Some iron, but no minerals of importance.		
Ajmer	Lead, copper, iron		
Punjab	Rock-salt, some coal of poor quality.		
Central Provinces	Coal and iron		
British Burma	Tin, petroleum, some iron		
Madras	Gold, iron, &c.		
Mysore	Gold		
Bombay	Some iron, but no mines of importance.		

* There were 105 collieries in Bengal in the year 1887, of which 62 were worked during that year, with a total output of 1,319,090 tons, as compared with 1,186,802 tons in 1886.

The total yield of all Indian coal-fields was 1,560,393 tons in 1887, and 1,703,830 tons in 1888.

In the Bengal coal-field collieries are worked entirely by companies and other private owners.—("Moral and Material Progress and Condition of India, 1887-1888.")

N.B.—In Bengal.—The road cess is to be levied on mines, amongst other property.—(Bengal, Act IX. of 1880, s. 6.)

In the Central Provinces.—The right to mines, minerals, coals, quarries, fisheries, and sap from palmyra and cocoa-nut trees are to be reserved to Government from future grants, provision being made for compensation for damage to surface owners.—(Central Provinces Code, Act No. 18 of 1881, sec. 151.)

In Bombay.—Mines and minerals in all unalienated lands to be reserved to Government (subsisting rights of occupants not to be affected).—(Bombay Code, Act No. 5 of 1879, sec. 69.)

In the Punjab.—Mines of metal or coal and gold-washings shall in every case be deemed to be the property of Government. But if Government works, or causes to be worked, any such mines, compensation for damage to the surface of the soil shall be made to the owner of such surface.—(Punjab Code, Act No. 33 of 1871, sec. 29.)

In Ajmer and Merwara.—Except in the case of lands in respect of which istimrari sanads (perpetual grants) have been granted by the Chief Commissioner with the previous sanction of the Governor-General in Council, the Government shall be presumed, until the contrary is proved, to be the sole owner of all mines, opened and unopened, of metal, coal, and other valuable minerals, with full liberty to search for and work the same. Compensation to be made for damage caused to the surface owner; the amount to be determined by the revenue officer.—(Ajmer Land and Revenue, Reg. II. of 1877, sec. 3 (A).)

In British Burma.—A landholder shall have a permanent heritable and transferable right of use and occupancy in his land, subject only—

(a) To payment of revenue taxes, cesses and rates, &c.

Appendix B.

INDIA
AND THE
COLONIES.
Notes on
Mining Laws
by Mr. Wal-
mesley.

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(b) To the reservation in favour of Government of all mines and mineral products, and of all buried treasure, with full liberty to work and search for the same, paying to the landholder only compensation for surface damage as estimated by the revenue officer.—(British Burma Code, Act No. 2 of 1876, sec. 8.)
No duty or royalty appears at present to be charged for tin in the Mergui district, where the workings are carried on by Chinese.—(Report by T. W. H. Hughes, August 1889—India Office.)

Name.	Minerals.	Ownership.	Remarks.
Upper Burma	Precious stones	In Crown, special regulations as to rubies and other precious stones were made by Reg. No. XII. of 1887. (Burma Code, 1889, p. 451.)	"A seven years' lease of the Government monopoly of rubies has been granted. The terms of the lease and the regulations concerning the mines safeguard the rights of the ruby mines' residents to work their claims on the old system, and to have new claims so long as they pay the prescribed royalty on all rubies and sapphires they raise."—"Progress and Condition of India, 1887-8.")
5 Labuan	Coal	In Crown, except as to lands granted to the Labuan Coal Company, and other lands granted prior to 1849.	—

N.B.—All land in this country is now leased by the Government for 999 years, subject to the reservation of coal and other minerals to the Crown, its grantees, lessees, or licensees.—(Labuan Ordinance No. 2 of 1863.)

The Labuan Coal Company have certain rights to purchase lands in fee-simple which are reserved by the last-mentioned Ordinance. Prior to an Act passed in 1849, the grants of land were made without reservation of minerals or royalties to Government; but in the case of lands held under grants made between 1849 and 1863, the coals and minerals are to be held subject to a royalty to be fixed by the Governor.

Name.	Minerals.	Ownership.	Remarks.
6. Straits Settlements Perak.	Tin	Apparently in Crown when not specially granted before 1885.	Tracts known to contain metalliferous deposits for which no lease or other sufficient title previously issued to be considered as Government reserves. (Perak Government General Land Reg., Jan. 31st, 1885, cl. 35.)

N.B.—Mining for tin in Perak has greatly developed within the last ten years, chiefly through encouraging Chinese immigration.

Prospecting licenses are given (for \$25) for six months over areas not exceeding 320 acres.

Permits to mine are given (annual fee \$2) to dig for tin over areas of five acres.

Mining leases for 21 years, not exceeding 25 acres in one block, or more in special cases. Lessee bound to open and work and employ a certain number of miners without intermission, and to pay export duties; also to pay fees, including an annual quit rent of \$1 per acre. The export duty is equivalent to 10 or 11 per cent. on the value of the metal. (See "Report on Tin Mining in Perak and in Burma," W. T. Hall, and "Preliminary Sketch of Tin Mining in Perak and in Burma," T. W. H. Hughes, Superintendent, Government Survey, India, January 1889, and by the latter, August 1889.)

AFRICA.

Name.	Minerals.	Ownership.	Remarks.
1. Cape Colony	Gold Silver. Precious stones. Copper. Iron.	In the surface owner, unless specifically reserved to the Crown.	—
2. Basutoland	—	—	Apparently native chiefs have power to make regulations, and at present permission to search for minerals and precious stones is refused. (Report of Resident Commissioner for 1889, Colonial Office Reports, 1890, No. 70.)

N.B.—Where the mines are not reserved to the Crown the owner of any private property (not subject to a reservation of minerals) on which diggings or mines are proclaimed is to pay 10 per cent. of any rents or royalties received by him to Government for the maintenance of order and good government and protection of life and limb within his mining district.—(Cape of Good Hope Act, No. 19 of 1883, sec. 77.)

Where the mines have been reserved to the Crown the owner of the surface has special privileges with respect to the mines, e.g., he may prospect without license, refuse consent to licensed persons to prospect on his land unless it is situate in a properly constituted "mining district," in which case, also, he has special privileges, including the right to claim certain portions of the mine free from Crown royalty.—(Cape of Good Hope Act, No. 44 of 1887, sec. 5.)

Name.	Minerals.	Ownership.	Remarks.
3. British Bechuana- land.	Precious stones Gold. Silver. Platinum.	As in Cape Colony	Provisions for prospecting licenses and leases of minerals, under proclamation of Sir Hercules Robinson, 25th April 1889 (63 B.B. 1889.)

N.B.—The prospecting licenses do not give any right to prospect on private property without the consent of the owner of such property, and the person prospecting has in any case to give security to make good surface damage. The Proclamation only

*applies to gold, silver, and platinum. As regards precious stones, Division I. of Act No. 19 of the Cape of Good Hope (of 1883) is in force throughout British Bechuanaland.—(See Proclamation, 63 B.B. 1889, above referred to.)

Name.	Minerals.	Ownership.	Remarks.
4. Gold Coast	Gold	—	—
5. Mauritius	Traces of iron Lead. Copper.	—	—
6. Natal	Coal Iron. Copper.	In the case of lands granted before 1887, in surface owner; in the case of lands granted since that date, in Crown.	By the (Natal) Act 17 of 1887, called the Natal Mines Act, 1886, the right of mining for and disposing of all gold, precious stones and precious metals, and all other minerals in the Colony is thereby vested in the Crown, subject to the provisions of that Act, but the Act is not to affect rights previously acquired.
7. St. Helena and Ascension.	—	—	—
8. Sierra Leone	—	—	—
9. Zululand	Gold	—	Proclamation of Governor, 1889, No. 2.

AMERICA (NORTH).

Name.	Minerals.	Ownership.	Remarks.
1. Bermudas	—	—	—
2. Dominion of Canada: Ontario	Gold Silver. Lead. Copper. Iron.	In surface owner	"Crown royalties and reservations abolished, and "no future reservations of gold, silver, iron, "copper, or other minerals to be made out of "Crown lands granted as 'Mining lands.' "Mining claims may be granted by Crown "out of Crown lands) at \$2 per acre."—The General Mining Act (Revised Statutes of Ontario, 1887).
Quebec	Gold Copper. Iron. Plumbago. Traces of lead.	As to grants made up to 1880, in the owner of surface (unless purchased with reservation of mines, in which case owner may purchase mines at \$2 per acre if for gold or silver, and \$1 per acre if for base mines). As to grants made since, in the Crown.	The Quebec General Mining Act of 1880 (Statutes of Quebec), 43 & 44 Vict. c. 12.
Manitoba	Coal Iron-ore and traces of gold, silver, and copper.	In surface owner	No reservation of gold, silver, iron, copper, or other mines or minerals shall be inserted in any patent from the Crown granting any portion of the Dominion lands (Statutes of Canada, 35th Vict. (1872) c. 23. This Act applies exclusively to the lands included in Manitoba and the North-West Territories). Any person may explore for mines or minerals on any unclaimed or unoccupied Dominion lands and may purchase mining locations of 320 acres (80 x 40 chs.) 160 acres (40 chs. sq.) or 80 acres (40 x 20 chs.) at the same price as farming lands, viz., \$1 per acre (same Act, ss. 38 and 40) but the Secretary of State may exempt certain lands from sale (s. 41). And in case of certain lands proving rich in minerals the Secretary of State may withdraw such lands from sale and in lieu thereof institute a system of lease; the rent payable to the Crown under any such lease to be a royalty not to exceed 2½ per cent. on the net profits of working (same Act, s. 38). The Act also contains special provisions as to coal lands, under which claims may be made before survey entitling the claimants to occupy any number of acres not exceeding 640 on payment of \$1 per acre, and entitling them to patents if the mines are continuously worked up to the survey; but the Secretary of State with the view of preventing undue monopoly in coal lands may exempt such lands from sale and settlement under the Act (same Act, ss. 43 to 45).

Recently Mr. Lockwood, who owned 80,000 acres of auriferous lands in the province of Quebec, sold 8,000 acres of them to Messrs. McArthur Bros. & Co. for \$8,000. Shortly afterwards Messrs. McArthur Bros. & Co. sold a portion only of these 8,000 acres for \$50,000.—("Canada," 1889.)

N.B.—The royalties are fixed by statute as follows:—

On gold and silver 2 per cent. on gross output (and an annual charge of \$2 per acre—100 ft. by 150 ft.—if mines not worked).
On coal 9½ cents per ton up to 250,000 tons per annum, 6½ cents afterwards (slack and consumption at works free).
On copper 4 cents upon each 1 per cent. of copper contained in a ton of ore sold or smelted.

On lead 2 cents on ditto.

On iron 5 cents per ton of ore sold or smelted.

On tin and precious stones 5 per cent. of their value. (1884 and 1887 Revised Statutes of Nova Scotia, 5th series.)

Appendix B.
INDIA
AND THE
COLONIES.
Notes on
Mining Laws
by Mr. Wal-
mesley.

Appendix B.
INDIA
AND THE
COLONIES.
Notes on
Mining Laws
by Mr Wal-
mesley.

Name.	Minerals.	Ownership.	Remarks.
New Brunswick -	Coal - Iron. Plumbago. Some gold. Copper. Lead. Albertite, &c.	In owner of surface (but subject to payment of royalties to Crown, except in respect of surface veins).	The exclusive right of digging for and raising coal and other minerals is vested in the owner of the surface, but (except in cases where the owner has a right to mine without payment of royalty) he must obtain a license from the Crown before digging, to be granted subject to the payment of such royalties as the Governor in Council may think fit (surface mines not exceeding 2 ft. thick not subject to royalties*). (Consolidated Statutes of New Brunswick, 1877, ch. 18, ss. 4 to 7.)
North-West Territories.	Coal -	In surface owner -	The same remarks apply as in the case of Manitoba.
Nova Scotia†	Coal - Gold. Iron, &c.	With certain exceptions, referred to below, the mines are vested in the Crown, and as to mines other than gold and silver, for the benefit of the Province.	Surface owner or tenant entitled to compensation for land and easements.

The history of Nova Scotia coal-mining is stated to be as follows, viz. :—In the early part of the present century all the minerals of the Province were granted to the Duke of York, who transferred them to the London jewellers, Messrs. Rundle and Bridge, who sold them to the General Mining Association of London in 1827. The Company worked the mines extensively until 1857, when arrangements were made with the Government whereby the General Mining Association surrendered their claims except to certain large tracts in the various coal districts, and the public were allowed to open mines under leases from the Government.

The grants of land to the early settlers in the province of Nova Scotia contained no regular reservation of minerals. In some instances gold, silver, and precious stones only

were reserved; in other cases gold, silver, copper, lead, &c. were retained for a source of revenue to the Crown. After the agreement with the General Mining Association the Government passed an Act by which they retained in previous grants the gold, silver, coal, iron, copper, lead, tin, and precious stones, whenever reserved, and for the purpose of revenue made the above reservations in all future grants. This Act releases to the surface owner all gypsum, limestone, fireclay, barytes, manganese, antimony, &c., and any of the above reservations whenever they are not specified (as reserved) in the grant. A complete list is published of all the grants, and information as to every grant can be obtained at the Crown Lands Office.—("Canada," 1889.)

Name.	Minerals.	Ownership.	Remarks.
Prince Edwards Island.	—	—	—
British Columbia	Gold - Silver -	As to gold, in free miners, under certificates granted by Gold Commissioners.	Under the Mineral Act (of British Columbia) of 1888, c. 82, relating to gold or other minerals except coal.
Vancouver's Island, &c.	Coal - Iron. Copper, &c. &c.	As to coal, in surface owners (subject to reservation of 5 cents per ton of merchantable coal raised or gotten. No royalty on dross or fine slack).	Acts (of British Columbia) of 1888, cc. 66 and 97.
3. Newfoundland	Copper - Lead. Silver. Gold. Coal.	In Crown -	Any person may search for minerals on any lands in the Colony, and if he finds them, may obtain a lease from the Crown; but if he does not <i>bonâ fide</i> lay out certain sums in developing the mines in each of the first five years of the lease mines to revert to the Crown. Owner to be compensated for damage to surface and for easements. (47 Vict. c. 2. and 48 Vict. c. 3, 1884 and 1885.)

AMERICA (CENTRAL).

Name.	Minerals.	Ownership.	Remarks.
1. Bahamas -	—	—	—
2. Honduras -	Trace of gold - Silver and coal.	In Crown -	All mines and minerals (including coal) are reserved to the Crown, with the right to enter and take, subject to compensation for damage to land or buildings, to be determined, in case of dispute, by arbitration.—(Consolidated Laws of British Honduras, part 34, c. 103, s. 42.)
3. Jamaica -	Gold - Copper. Cobalt. Lead. Manganese.	In surface owners -	Limited owners have power to lease mines for fifty years.—(Laws of Jamaica, 18 Vict. c. 32.)
4. Leeward Islands	Gold - Silver.	—	—
5. St. Lucia -	Iron. Copper.	—	—
6. Trinidad -	Tin. Platinum.	—	—
7. Windward Islands	Coal (poor quality).	—	—

* The only productive seam of coal worked at present is a surface one, 22 inches thick, said to produce an excellent steam coal and is believed to extend over an area of at least 600 square miles.—("Canada," 1889.)
† The value of Nova Scotia coal amounted to 1,373,666 (long) tons.

Appendix B.
INDIA
AND THE
COLONIES.
Notes on
Mining Laws
by Mr Wal-
mesley.

Name.	Minerals.	Ownership.	Remarks.
1. British Guiana	Gold and Silver occasionally.	In Crown -	Governor may give concessions or licenses to persons to work gold, silver, or any valuable mineral other than precious stones on private lands, subject to regulations to be made securing compensation for damage to surface, and determining the amounts to be paid for royalties, &c. to the Colonial Government.—(Ordinance of British Guiana, No. 4 of 1887.)
2. Falkland Islands	Coal -	In surface owner -	The waste lands of the Crown are to be sold in fee simple and by public auction only, though licenses may be obtained for temporary occupation for pastoral purposes, provision being made for reservations in leases, but not in sales.—(Falkland Island Ordinance, No. 4 of 1871.)
3. Pitcairn	—	—	—

AUSTRALASIA.

In Australia, New Zealand, and Tasmania, there appears to be a system by which the Government grant pastoral or agricultural leases of tracts of land which have not been permanently purchased, with power to resume possession for a variety of purposes (including mining); also by which, when mines have been discovered in districts which

have not been permanently purchased, such districts are proclaimed as "mining districts," and let or leased as such by the Governments. The notes below do not refer to such districts, but to the lands which have been sold and permanently alienated by the Governments.

Name.	Minerals.	Ownership.	Remarks.
1. Australia : New South Wales	Gold - Silver. Copper. Tin. Coal. Iron. Antimony.	As to minerals other than gold and silver, in the case of lands granted before 1884, in surface owner, and in the case of lands granted since that date, in Crown.	All grants of Crown Lands made since 1884 are to contain a reservation of all minerals in such land.—(New South Wales Act, 48 Vict., No. 13.)

N.B.—Previous to 1884 (since 1861) minerals were reserved from sales of agricultural land, but could be acquired by paying 2*l.* per acre, and expending 2*l.* per acre in mining.

Under "the Mining Act, 1874" (37 Vict. No. 13, s. 56), the Governor may grant leases of Crown lands for the purpose of mining for any metal or mineral other than gold (which is dealt with in other ways), the areas of leases not to exceed 640 acres for coal mining, and 80 acres for other mineral lots; terms not to exceed 20 years; rent to be 5*s.* per acre per annum, and subject to other conditions mentioned or referred to in the Act.

By the "Crown Lands Act, 1884" (41 Vict., No. 18, s. 91), the Governor is empowered to impose a royalty of not less than 6*d.* per ton on coal raised from Crown lands leased; such royalty to be in addition to or substitution for any rent payable under the Mining Act.

By the "Mining Act of 1889" (52 Vict., No. 20, s. 2), power is given for the Government to resume possession of land sold after that date, or leased under the Act of 1884, which may be found to contain minerals, compensation being given to the proprietor of the land for his interest therein and improvements thereon.

N.B.—The Crown may grant leases of coal mines in Crown lands, reserving a royalty of 6*d.* per acre and 3*d.* per ton of coal raised during the first ten years, and 6*d.* per ton of coal raised during the remainder of the lease, but exceptions may be made in favour of discoverers of new coalfields.—(Queensland Coal Mining Act, 1886.)

Name.	Minerals.	Ownership.	Remarks.
Queensland -	Gold - Copper. Iron. Tin. Coal.	As to minerals other than gold, apparently in surface owner.	All Crown grants are to contain a reservation of gold.—(Crown Lands Act, 1884 (Queensland), 48 Vict., No. 28.)
South Australia	Copper -	As to gold, in Crown; surface owner to be compensated. As to other minerals, apparently in surface owner.	Crown Lands Consolidation Act (South Australia), 1886.
Victoria -	Gold - A little tin. Copper. Antimony. Lead, &c. Some coal.	As to gold and silver, in Crown; but owner of land before 1885 entitled to lease if he applied for it within six months after the passing of the Act. As to other minerals, apparently in surface owner.	Mining on Private Property Act, 1884 (Victoria), 48 Vict., 796. This Act appears to apply only to gold and silver. In respect of minerals (other than gold) leased by the Crown on Crown lands a royalty of two per cent. on the value at the pit's mouth is charged, but it is stated that the Minister of Mines has decided to abolish this royalty (<i>see</i> Iron and Coal Trade Review, August 8th 1890).

Appendix B.
—
INDIA
AND THE
COLONIES.
Notes on
Mining Laws
by Mr. Wal-
mesley.

N.B.—The owner of private land is entitled to compensation for damage by mining for gold and silver, such compensation, if not agreed, being determined by a warden of or in a Court of Mines (established under the Mining Act of 1865). Leases of easements over private lands may be obtained, in which case the compensation is to be ascertained if not agreed upon as before.

Name.	Minerals.	Ownership.	Remarks.
1. Western Australia	Gold. Silver. Lead. Copper. Ironstone.	As to gold in Crown lands, to Crown. As to other minerals, apparently in surface owner.	50 Vict., No. 18 (Western Australia) 1886.
2. Fiji	—	—	—
3. New Guinea	Traces of gold, iron, plumbago, coal.	—	—
4. New Zealand	Gold. Silver. Copper. Iron. Zinc. Tin. Lead. Antimony. Nickel. Coal.	In surface owners where land has been granted by Crown in fee, but lands granted since 1873 may be resumed by the Government for mining purposes (not including coal mining) on payment to the owners of full compensation for the value (otherwise than auriferous or argentiferous) of the lands and improvements resumed.	The Mining Act, 1886 (New Zealand), 50 Vict., No. 51.

The laws of New Zealand relating to mines (other than coal mines) are consolidated and amended by the above-mentioned Act. By the provisions of this Act land in proclaimed mining districts is only to be sold by the Government, subject to special conditions. The Coal Mines Act, 1886 (New Zealand), 50 Vict., No. 31, provides for the leasing of coal mines (under Crown lands) by the Land Boards, and for the regulation and inspection of coal mines. By this Act it is provided (amongst other

things) that where, for the purpose of working any mine, it is required to carry any work on or over or under any private land, or to take any such land, the Government, on the application and at the cost of the person working the mine, may take and vest in him such land as for a public work under The Public Works Act, 1882. The last-mentioned Act provides for compensation to be made to the owner of the land taken.

Name.	Minerals.	Ownership.	Remarks.
5. Tasmania	Gold. Silver. Coal. Iron. Tin. Lead, &c.	As to mines other than gold and silver, in surface owner.	Any person mining on land belonging to a private individual without his consent subject to penalties.—(The Minerals Lands Act, 1884 (Tasmania), 47 Vict. No. 10.) Government subsidies have been given to some extent to prospecting associations, &c., to encourage deep sinkings.

Appendix
C. I.

APPENDIX C.

FOREIGN COUNTRIES.

1.
1.

CORRESPONDENCE WITH FOREIGN OFFICE.

6, Old Palace Yard, S.W.,
April 24, 1891.

SIR, I AM directed by Lord Northbrook, on behalf of this Commission, to inform you that the Royal Commissioners have been appointed to inquire *inter alia* "into the terms and conditions under which mining enterprise is conducted in foreign countries by the system of concession or otherwise and the economical operation thereof," and they would feel much indebted to the

Secretary of State for Foreign Affairs if his Lordship would cause them to be furnished with certain information which it is desirable they should obtain for the purpose of completing this inquiry. The Commissioners have had before them the reports by Her Majesty's representatives abroad on Mining Rents and Royalties and the laws relating thereto (Commercial No. 7, 1887, presented to Parliament in April 1887), but they wish to obtain if possible either *vis à voce* evidence from witnesses, or, in case that is out of the question, replies from experts upon the several heads which are enumerated in the accompanying memorandum. The countries as to which the Commissioners are particularly desirous of obtaining further information are Germany, France, Austria, Belgium, and Italy.

* Act of 1876, principal nearly all alluvial tin.

If any competent witnesses would be prepared to come to England to be examined by the Commissioners, they would be glad to know the nature of the evidence which they could give, and to have an estimate of their expenses and of the honorarium, if any, which it would be proper to offer them, so that application may be addressed to the Lords of the Treasury for sanction to the expenditure.

I have been instructed to take to the Foreign Office the particulars of papers relating to the different countries referred to in the accompanying memorandum and to give any further explanation which may be required.

I have the honour to be,

Sir,

Your obedient servant,

(Signed)

HERBERT LYON,

The Under Secretary of State

Secretary.

for Foreign Affairs.

MEMORANDUM for the INFORMATION of FOREIGN WITNESSES.

In the year 1889 a Royal Commission was appointed by Her Majesty to inquire into "the amounts paid as royalties, dead-rents, and wayleaves on coal, ironstone, iron ore, shale, and other metals worked in the United Kingdom, and the terms and conditions under which those payments are made, and into the economic operation thereof upon the mining industries of the country; and further, to inquire into the terms and conditions under which mining enterprise is conducted in foreign countries by the system of concession or otherwise, and the economical operation thereof." The Commission has for some time been engaged in taking evidence as to the amount of royalties in the British Isles and the conditions on which the same are paid. The evidence so obtained tends to show that, speaking generally, the chief characteristics of the English system appear to be as follows:—

1. The minerals (gold and silver not allied with lead or other base metal excepted) do not belong to the State, but to persons or corporations, who, in the majority of cases, are also the proprietors of the surface.
2. The proprietor does not in most cases work the minerals himself, but leases the right of taking the minerals to a lessee for a term of years varying from 21 to 42 years.
3. The lessee finds all the capital necessary for working the minerals.
4. The lessee pays a "royalty" on the mineral extracted, generally in the shape of so much per ton. The royalties on coal vary from 2d. to 1s. 4d. per ton, on ironstone from 3d. to 10d., and on hematite iron ore, from 7d. to 3s. 9d. per ton.
5. The lessee undertakes to pay a fixed minimum rent, whether he works the mine or not.
6. The lessee is bound either to leave sufficient support for the surface, or to make compensation to the proprietor of the surface for the damage done thereto. He has no power to compel the proprietor or occupier of the surface to sell the surface to him.
7. If the lessee, who holds from one proprietor (A) takes a coalfield from another proprietor (B), he has no power to bring the coal from under B's land through the shaft that he has sunk in A's land. As a rule, A makes him a charge of one penny or more per ton for every ton of coal he brings up through the shaft on his land.
8. The lessee of a mine has no power to secure a right-of-way from his mine to a railway or port of shipment. He has to bargain with the proprietors of the land that has to be crossed over. The payment for this right-of-way is called an "overground or surface wayleave."
9. On the termination of a lease, the lessee has no legal right of renewal, and the mine reverts to the proprietor or lessor, but in general, there is in England a tacit understanding that leases are to be renewed to tenants of good standing.
10. There is no permanent council of mines to decide disputes that may arise between lessees or proprietors of minerals and the proprietors of the surface.
11. The miners in general are paid so much per ton, and are expected to put out a specified quantity as representing the average result of a day's work.
12. The wages of coal miners usually rise and fall with the price of coal, but not strictly in proportion to such rise or fall.

The Commission understand that, as a rule, on the Continent of Europe the right of mining is vested in, and is granted by, the State, and that the State, when granting a concession to work a mine, imposes a certain tax.

As regards (name of country) the Commissioner have had the enclosed papers placed before them, but they are anxious to have the information contained therein confirmed and supplemented.* The points on which it appears desirable to obtain evidence as regards coal and iron mines are as follows:—

1. The steps to be taken by a concessionaire in order to obtain a concession, and an estimate of the legal expenses incurred.
2. The terms and conditions on which the concession is granted; more especially—
 - (a.) The amount of tax payable to the State, including the methods by which the amount is calculated.
 - (b.) The time for which the concession is granted.
 - (c.) The terms and conditions as to working out the minerals.
 - (d.) The right to a renewal of the concession on the expiration of the term.
3. The power of a concessionaire to assign or sublet his concession: the conditions and terms on which any such lease or assignment is granted.
4. The powers of the concessionaire as regards the surface.
5. The powers of a concessionaire of a mine on land belonging to A to send the mineral over land belonging to B, so as to reach a railway or waterway.
6. The powers of one concessionaire as regards a concessionaire of an adjoining mine in respect of drainage and ventilation or underground passage.
7. To what extent are concessions commonly parted with by the original concessionaires to other parties, and on what terms?
8. The incidence of taxes levied on mines for local or communal purposes.
9. The usual hours of working and the wages of miners, and the normal daily output reckoned for a day's wages.
10. The wages and economic position of the miner in mines worked by the State as compared with his wages and economic position in mines worked by a concessionaire.
11. The constitution and powers of the council of mines or of any State department controlling mining industry.
12. Generally the effect of the system in retarding or developing the mining industry.

2.

CIRCULAR TO H.M. REPRESENTATIVES, &C., BERLIN
PARIS, VIENNA, BRUSSELS, AND ROME.

MY LORD,

SIR,

Foreign Office, April 30, 1891.

I ENCLOSE a copy of a letter from the Royal Commission on Mining Rents and Royalties; it will be perceived from this communication that the Commission wish to obtain oral evidence on the points mentioned in the printed memorandum; such evidence might be given either by Government officials, thoroughly cognizant of the questions, or by private persons whether proprietors, lessees, managers, partners, correspondents or agents in London, or other persons interested in mines. It is essential that the witnesses should be quite able to give their evidence in English. Should no oral evidence be obtainable, the Royal Commission wishes to receive written replies to the several questions; these should be prepared by experts and not by mere compilations drawn from laws on mining or other documents. I have to request your Excellency

to make inquiries in any way that may appear to you most advisable, and to report to me to what extent

* These Notes, prepared by Mr. Oswald Walmesley, are printed, for greater convenience, at the beginning of the collection of papers relating to each country.

Appendix
C. I.

Correspondence with the
Foreign Office.

Correspondence with the
Foreign Office.

Commercial,
April 24th.

Appendix
C. I.
Correspondence with the
Foreign Office.

the wishes of the Royal Commission can be met as regards adding as far as possible an estimate of the expenses that would be incurred, both for travelling and maintenance and for the fees or honoraria which should be paid to the witnesses or to the experts who may prepare written replies to the questions.

It would be preferable that any written replies should be prepared in English, but if this cannot be done they

should be sent home in the language in which they are written.

The most convenient time for the witnesses to be heard would be between the 17th of June and the end of July next: any written replies should be sent in before the end of July next.

I have, &c.
(Signed) SALISBURY.

FRANCE.

Appendix
C. II.
FRANCE.
Mr. Walmesley's Notes.
History of law as to ownership of mines.

II.

NOTES as to the MINING LAWS in FRANCE, prepared and handed in by MR. WALMESLEY, and forwarded to the FRENCH GOVERNMENT in accordance with the request of the ROYAL COMMISSION.

Previously to 1791 the law as to the ownership of mines in France appears to have varied in character at different periods. M. Etienne Dupont, Inspector-General of Mines and Professor of the School of Mines at Paris, is of opinion that originally the French law was based upon the Roman law, under which permission to work mines was granted to explorers on payment of one-tenth part of the produce to the Imperial Treasury, and one-tenth part to the owner of the soil; that in the feudal times the rights of the Crown were split up, and, so far as concerns the mines, passed to the feudal lords; but that the kings gradually repossessed themselves of their regal rights in respect of mines, so much so that in the 15th century a chief superintendent of mines was appointed (by Louis XI.), having power to work mines or give others permission to work them, saving the indemnity payable to, and the right of preference given to, the owners of the soil. Other variations of the law succeeded, and under a decision of the Privy Council of 13th May 1698, Louis XIV., notwithstanding his previous edicts, conferred on the owners of the soil the free right of working coal mines—a right which was withdrawn under Louis XV. in 1744, when coal mines were placed, like other mines, under the system of concessions or permissions. The concessions were not, however, previously to 1791, well defined nor well respected by the power which had created them, and the need of a general law of mines made itself felt. In 1781 four inspectors of mines and quarries were appointed, and in 1783 the School of Mines was established in Paris.

The law of 28th July 1791 (passed by the National Assembly of 1789) declared that mines, both metallic and non-metallic, also bituminous substances, coals and pyrites, were subject to the disposition of the nation, in this sense only—that such substances could not be worked but by the consent of the nation, and under inspection. By this law the right of preference in obtaining concessions was given to the owners of the soil, who were also authorised to work mines in their own grounds to the depth of 100 feet without concessions. It also limited the term and areas for which concessions were to be granted to 50 years and 120 square kilometres respectively.

By the Civil Code of France (Art. 552) the owner of the soil was declared to be the owner of everything above and below, but subject to the laws and regulations relating to mines.

On the 21st April 1810 the French Assembly, under the Emperor Napoleon I., after careful preparation and full discussion, passed the law which (with some modifications) still regulates the ownership and management of mines in France.

The preferential rights to concessions given to the owners of the soil by the law of 1791 no longer exist; but the law of 1810 (Art. 6) recognises a claim by the owner of the soil upon the produce of the mines to be regulated by the Act of Concession, and (by Art. 7) the concession confers a perpetual right which is capable of disposition and transmission like all other property, except that it must not be sold in lots or partitioned without a previous authorisation of the Government to be given in the same form as the concession.

By Art. 8 the mines and plant, &c. are declared to be immovable (corresponding with English real) property, whilst the extracted minerals, &c. are declared to be movable, corresponding with English personal property.

It must not, however, be supposed that all the substances which in England are held to be included within the meaning of the word "minerals" are in France the subject of concession, and so practically reserved from the estate of the surface owner.

The law of 21st April 1810 was supplemented by the three following decrees, viz.:—

Decree of 18th November 1810, organising and regulating the duties of the corps of mining engineers.

Decree of the 6th May 1811, regulating the process of collection of taxes on mines (Ag. § 488, &c.). This was afterwards modified by two decrees of the 30th May 1860 and the 11th February 1874, having reference to the system of compounding for such taxes.

Decree of the 3rd January 1830, regulating the police of mines and the steps to be taken for the prevention of, or in cases of, accidents.

A law of the 27th April 1838 provided for a general system of contribution amongst concessionnaires in the event of the flooding of their mining district, and established the right of the administration to withdraw concessions under certain circumstances and subject to certain restrictions.

A law of the 17th June 1840 has reference to salt mines, which had not previously been brought within the provisions of the law of 1810.

A decree of the 23rd October 1852 forbade the union of different concessions without the consent of the administration.

A law of the 9th of May 1866 abrogated the provisions of the law of 1810 (Arts. 73 to 78), which had rendered it obligatory to obtain the previous permission of the administration to the establishment of furnaces, forges, or manufactories of iron, and also the corresponding provisions of the same law (Arts. 59 to 67, 70, 79, and 80), which had made it obligatory upon the owners of minières and the concessionnaires of iron mines to keep the owners of furnaces (maîtres des forges) in their neighbourhood supplied with iron ore, and which had authorised the latter to work the minières in their neighbourhood if not sufficiently worked by the proprietors. Manufactories of iron were in fact before 1866 specially protected industries: the law of that year made them free and brought them within the sphere of the ordinary economic law of supply and demand (Dupont, 440).

The law of 1810 was again modified by the law of 27th July 1880, which substituted a new text for certain Arts. (11, 23, 25, 42, 43, 44, 50, 70, 81, and 82), leaving intact the numerical division and the principal features of the old law. The modifications made by the law of 1880 in effect bear upon the following points, viz.: reduction of the right of protection for dwelling-houses against the opening of new works; diminution of the length of inquiries relative to the institution of concessions; declaration of the mode in which the royalty payable to the owners of the surface is to be ascertained (Ag. § 282); regulation of procedure for occupation of land within the areas of concessions; the power of opening works for safety or communication outside the areas of concessions; extension of the power of official supervision over mines; regulation of the relations between parties simultaneously working mines and minières on the same bed of iron ore; and amplification of the provisions relative to the power of the administration in reference to carrières.

Further legislation on the subject of mines which is now in contemplation is referred to more fully hereafter.

The following table is intended to illustrate the classification of such mineral substances according to the existing French law, with the rules as to ownership, &c. of the different classes:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, viz., the following mineral substances when lying in veins, seams, or lumps, i.e.:— Gold. Silver. Platinum. Mercury. Lead. Iron in veins or seams. Copper. Tin. Zinc. Calamine. Bismuth. Cobalt. Arsenic. Manganese. Antimony. Molybdena. Plumbago, or other metallic matters. Sulphur. Coal (of earth or stone). Fossilised wood. Bituminous substances. Alum or sulphates from metallic bases.* (Art. 2.)	In concessionnaire, or his assigns. Can only be worked by virtue of an Act of Concession from the State, which vests the property in the concessionnaire for ever, but with power to dispose of and transmit the same like all other property, except that it cannot be sold in lots or divided without the consent of the Government given in the same form as the concession.	Partly to the owners of the surface. The royalties payable to the owners of the surface are sometimes proportional to the yield, sometimes fixed, and sometimes partly fixed and partly proportional. They are generally known as "Redevances trefoncières," being regulated by the Acts of Concession. Partly to the Government. The taxes payable to the Government are partly fixed and partly proportional to the yield, and in addition 10 per cent. on the amount of the taxes is to be paid towards a fund in favour of unproductive mines, so as to permit a reduction of the tax in the case of proprietors of mines who had experienced losses or accidents.	The royalties payable to the owners of the surface are regulated under Arts. 6 and 42 of the law of 1810, modified as to Art. 42 by the law of 27th July 1880. The taxes payable to the Government are regulated by Arts. 33 to 36 of the law of 1810.
II. Minières, viz.: Alluvial iron ore† (such as can be worked by open workings or by subterranean works of short extent and not permanent), pyrites suitable to convert into sulphate of iron, aluminous earth and turf.	In surface-owner (Dupont, 432); but when worked by subterranean workings permission must be obtained from, and when worked by open workings a declaration must be made to, the prefect of the Department.	If let to the surface-owner no royalties are payable to the Government.	Law of 21st April 1810, Arts. 57 to 70 (partly abrogated and modified by the laws of 9th May 1866 and of 27th July 1880).
III. Carrières, or quarries of slate, stone, marble, limestone, sand, clay, &c., worked either by open or underground workings.	In surface-owner. Before working a declaration must be made to the mayor and be transmitted to the prefect in order to secure inspection.	As in the case of minières (see above), the Government may, in case of necessity, take materials for road or public works, making compensation for same.	Law of 21st April 1810 (Art. 81), as modified by law of 27th July 1880.

* By a law of 17th June 1840, salt mines and salt springs are added in some respects to the category of mines, but the tax is much higher, viz., 10 frs. per 100 kilos, or about 7s. 6d. per cwt., with a minimum payment for 500 tons each year (Ag. II., 109).
† Ironstone or ore lying in seams, beds, or lumps would also be comprised within the term minières, so long as it could be worked by open workings (Dupont, 431). This arises from the construction of Arts. 69 and 70 of the law of 1810.

Both minières and carrières are subject to the usual licence fees ("patente") payable in respect of all trades and professions. These fees differ in amount according to different classes of trades and professions, and in the case of the working of minières consist of a proportional annual tax of one twentieth on the value of residences only, and of fixed taxes of 5 francs for each undertaking, and 4 francs for each workman. In the case of turf workings the tax in respect of each working is only 2½ francs. In the case of carrières the proportional tax on residences is also one twentieth of the value, and the fixed tax is 5 francs for each undertaking, and 2½ francs for each workman (Dupont, 454 and 487).

Mines, on the contrary, are not subject to licence fees (Art. 32). This exception is confirmed by Art. 17 of the law of 15th July 1880, but only applies when the minerals are sold raw without any smelting, &c.

1. *Proportional to the yield.*—These appear to vary according to the custom of district.

In the coal mines in the basin of the Loire they amount to one-fourth of the gross produce in the case of open workings, and vary from one-sixth to one-twentieth on the gross produce in the case of workings by pits, according to the depth of the pits for seams of two metres thick, and are reduced by one-third to three-fourths for seams varying from less than two metres to less than one-half a metre in thickness. They amount in practice from about 5d. to 7d. per ton, but there are cases in which from fr. 1.75 to fr. 1.85 (equivalent to from 1s. 5d. to 1s. 6d.) a ton have been paid on a production of 350,000 tons.

In the basin of the Aveyron the royalties are reserved on a different scale, said to be much less in practice than the rates above mentioned.

In iron mines the royalty varies from 1d. per metric quintal (i.e., about 1s. 8d. the ton) to about 3d. the ton, and in other cases from about 11d. to about 7d. the cubic metre (Dupont, 140-2).

2. *Fixed.*—These, which appear to be the most useful form of royalties, seem to vary in amount to a great degree, e.g., from 300 francs per hectare (2.471 acres) or about 5l. an acre (in the case of the Salt Mines de L'Est) down to 4d. per hectare (Iron Mines de Rancie); but it is said that royalties of from 4d. to 1d. per hectare are by far the most frequent rates (Dupont, 142).

3. *Partly fixed and partly proportional*, which vary from about 1d. per acre and 2 per cent. on the produce to about 4d. per acre and 1d. per ton of the mineral extracted (Dupont 113).

These royalties payable to the owners of the soil are altogether independent of the indemnity payable to them in respect of occupation of and damage to the surface, which are provided for by Arts. 43 and 44 of the law (as modified in 1830).

The principle on which the royalties payable to the owners of the soil are fixed by the Government in the different districts is not very clear; but it is understood that regard is taken of custom, local usage, prescriptive rights, and precedents of all kinds, the fact or the absence of previous mining operations, special circumstances as to the position of the mines, &c. (F.—G., vol. I., 428).

The owner of the soil has also the right of being heard by the Council of State before the amount of the royalty

† This is so according to Dupont, who puts the lowest tonnage royalty at 80 centimes, but gives no examples. In another author's examples are given in which the lowest royalties for iron are 70 and 80 centimes the ton: possibly in Dupont's book the 8 is a mistake for 80 centimes.

Appendix
C. II.
FRANCE.
Mr. Walmesley's Notes.

Appendix
C. II.FRANCE.
Mr. Walmes-
ley's Notes.Surface land
occupied or
damaged.

is fixed) Arts. 6 and 42 as modified in 1880); but when once the amount is fixed by the Act of Concession it overrides any agreement previously made between the owner of the soil and the concessionaire (Dupont, 147); but the same rule does not apply to agreements as to royalties come to subsequently to the Act of Concession, but even such agreements may be nullified by the ordinary tribunals (Dupont, 151).

In addition to the royalties provided to be paid to the owner of the soil he is entitled to be indemnified in respect of land occupied for the purpose of, or damaged by, the searching for (Art. 10) and working of mines (Arts. 43 and 44 as modified in 1880).

The concessionaire may be authorised by a decision of the prefect of the Department in which the mine is situate to occupy within the boundaries of his concession the ground necessary to the working of his mine, the smelting of minerals, or the washing of coals, and also for the construction of roads and of railways when the latter do not alter the surface of the ground; but the owners of the surface must have been called upon to state their objections. In such case, or in case of occupation by the permission of the Government for searches, the indemnity due to the owner of the surface is fixed at double the net produce of the damaged ground if the occupation is only temporary, and if within one year the land may be cultivated as before the occupation. If the occupation lasts more than one year, and if after the occupation the ground occupied cannot be cultivated as before, the owner of the surface has the option to oblige the mine owner to purchase it at double the value it had before the occupation (Art. 43 of law of 1810, modified by law of 27th July 1880).

As regards canals and railways which cannot be constructed within the boundaries of the concession without altering the surface of the ground, and also as regards the canals, railways, necessary roads and works of vital importance to the mine outside the area of the concession, a decree made in the Council of State may declare them to be works of public utility, and the law of expropriation of 3rd May 1841 may be brought into operation (Art. 44 of the law of 1810, modified by law of 27th July 1880).

Questions arising on the subject of the indemnity have to be dealt with by the civil tribunals, but may be referred by agreement to arbitration (Art. 43 as modified in 1880).

In addition to the indemnity for land occupied, the owner of the surface can also obtain compensation for depreciation of adjoining land (Dupont, 170), but there is nothing to prevent concessionaires and surface owners from coming to mutual agreements with respect to surface damage in substitution for the statutory indemnity (Dupont, 171); and the owner of the soil has a right to be heard before land can be occupied by virtue of an order of the prefect for the searching for, or working of, mines (Dupont, 172).

The owner of the soil is also entitled to compensation for any damage to the surface through working the mines other than by occupation (e.g., by subsidence), but in this case the measure of damage is the actual loss suffered, instead of double the value of the land (Dupont, 174, and Art. 1382 of the Code Civil are applicable).

He has also the right to have security from the concessionaire against damage to inhabited places (Art. 15, and Dupont, 196).

The fixed tax is payable annually according to the extent of the concession, and is at the rate of 10 francs for the square kilometre (Art. 34).

This fixed tax is payable in respect of each concession of mines under the same surface, so that it may be payable several times over in respect of the same surface where there are concessions of different beds of mines one above the other (Dupont, 216).

It also continues payable, whether the mines are worked or not, until the granting of a decree of renunciation of the concession.

The proportional tax is fixed each year by the budget of the State, but is not to exceed 5 per cent. on the net produce (Art. 35).

Reductions or remissions may, however, be and are frequently made in the rate of the payment (Dupont, 243, 247), and considerable allowances are made in estimating the expenses to arrive at the net produce (Dupont, 260).

Dupont gives the total result to the Government for 1878 (omitting fractions) as follows, viz. :—

	Frs.	£
Fixed tax - - -	101,349	
Proportional do. - -	1,966,088	
10 cents additional for relief, &c. - - -	207,043	
Total - - -	2,277,481	or = about 91,090

and calculates that the payments in respect of coal in 1878 amounted to little over 1d. in the ton (267).

The result for 1888 is as follows :—

	Frs.	£
Fixed tax - - -	125,406	= 5,016
Proportional do. (including the 10 per cent.) - -	2,326,030	= 93,040
Total - - -	2,451,436	= 98,056

The above figures do not take into account the royalties payable to owners of the surface.

The concessionaires of mines are also subject to ordinary general taxation, including the impost of 3 per cent. per annum on profits of companies established under the law of 29th June 1872 (Dupont, 272).

No one but the proprietor of the soil can search for mines except with the consent of the proprietors, or by the authorisation of the Government, which is not to permit of searches, &c. within walled-in grounds, or in courts and gardens, or of pits, &c. being opened within 50 metres of habitations or walled-in grounds, without the consent of the proprietors. The proprietor himself can make searches in any part of his property without authority, but must not work without a concession (Arts. 10 to 12). In case of searches by the authority of the Government the proprietor of the soil has a right to an indemnity, payable beforehand (Art. 10).

Any person, whether a naturalised Frenchman or not, acting by himself or in partnership, may demand and obtain a concession (Art. 13), if he proves that he has sufficient means to undertake and carry on the work, and to satisfy the taxes and indemnities imposed upon him by the Act of Concession (Art. 14); and in case of his working under habitations or under other mines in course of working or in their vicinity, he may be called upon to give security for compensation in case of damage (Art. 15).

The Government is free to choose between the various parties seeking for a concession of the same mine; but if the discoverer of the mine does not obtain the concession, he is entitled to an indemnity from the concessionaire, to be regulated by the Act of Concession (Art. 16).

The demand for a concession is made by petition to the prefect of the Department in which the mine is situate, accompanied by a plan of the surface (Art. 30), and particulars of any negotiations with the surface-owner on the subject of his rent (Dupont, 89). It must then be advertised and published for at least two months in a prescribed manner (Art. 23, as modified in 1880). Opposition or concurrent applications may be lodged with the prefect (Art. 26, as modified in 1880).

Form of Act of Concession.—This is composed of two distinct parts, viz., the decree and the list of conditions ("cahier des charges"). A form of an Act of Concession is given below (see p.), from which it will be seen that the first part of the Act of Concession, the decree, sets out the names and descriptions of the concessionaires and the nature and situation of the minerals conceded, and fixes, so far as may be, the royalties or indemnities payable to the surface-owner and the discoverer (if any), and refers to certain general provisions of the law with reference to the taxes payable to the Government, the right of inspection and regulation, the consequences of undue delay in working, the power of abandonment, &c. In the second part, the list of conditions, are set out certain special conditions as to the mode of working the mine and otherwise to which the particular concession is to be made subject. These conditions include the fixing of signs showing the boundaries of the concessions, the preparation and return to the prefect of plans and sections showing the manner proposed for working the mines, and the annual furnishing to the prefect of plans and particulars of the workings in the previous year, and other conditions which may be said to be of a more general nature with reference to the powers of the prefect to order and determine the thickness of barriers to be left, and to determine what works may be necessary in communication with other mines for ventilation and drainage, and specifying the rights of proprietors of other minerals within the same area to which the concession is made subject.

Searches for
mines.

Concessions.

Fixed and pro-
portional taxes
payable to the
Government.Appendix
C. II.FRANCE.
Mr. Walmes-
ley's Notes.

The demand, having been registered at the prefecture, is examined and reported on by the Government engineer of mines (Dupont, 72), who must satisfy himself that it conforms with the regulations. The papers are then transmitted to the Inspector General of Mines, who examines them closely and reports to the Council General of Mines (Dupont, 101).

The Council General considers the project of concession, and transmits it with the opinion of the Council to the Minister of Public Works, by whom it is examined, and modified if necessary. It is then transmitted to the Council of State, and first submitted to the consideration of the Committee of Public Works; then it is considered by the Council in General Assembly, and afterwards a concession may be granted by a decree of the President of the State (Dupont, 102). Until the granting of the decree all opposition is admissible before the Minister of the Interior or the Secretary General of the Council of State (Art. 28).

One concessionaire can obtain several concessions, but on condition that he proceeds actively with the working of each.

Sales of Concessions.—As before observed, concessions are transferable like all other property, but cannot be sold in lots or divided without the consent of the Government (Art. 7).

The following are some examples of sales :—

A concession of copper and silver over an area of 6,230 acres in Corsica, held from the French Government in perpetuity at a dead rent of 286 fr. 80 c. and a royalty of 5l. per cent. on the net profits, was sold in 1886 to the Argenta Mines, Limited. The purchase money was 241,500l., payable as follows, viz. : 200,000l. in fully paid-up ordinary shares, 20,000l. fully paid-up preference shares, 20,000l. debenture bonds, and 1,500l. in cash.

A concession of silver, lead, and zinc ores within an area of about 40 square miles in the Pyrenees of Lentin and St. Lary, held from the French Government in perpetuity, subject to the payment of the ordinary taxes, amounting to about 50l. a year and 5l. per cent. on the net profits, was sold in 1886 by a former company to the Castillon (Pyrenees) Mining Company, Limited. The purchase money was 70,000l., of which 58,000l. was payable in fully paid-up shares, and 12,000l. in cash or shares at the option of the new company.

The concessions of Pierrefitte, Heas, and Garvanie, Palouma and Arau, in the Hautes Pyrenees, France, of mines producing silver, lead, and zinc ores (blende) within an area of 17,000 acres, held from the French Government at a fixed rent of about 40l. per annum, were sold in 1887 to the New Pierrefitte Mining Company, Limited. The purchase money was 23,214l., payable as to 2,000l. in cash, and as to 21,214l. in fully paid-up shares.

A case is given of a lead mine at which from 180 to 200 hands are employed, in which a French contractor has taken over the working of the concession on terms equivalent to the payment of a rent of 1,000l. for one year to the end of which time the mines are to revert to the concessionaire unless a fresh arrangement is come to.

The Rodez Collieries, Limited, was brought out in London in the month of February 1891, having been formed to acquire seven concessions of coal mines in the district under 3,900 acres, the purchase money to be paid to the vendor being 150,000l.

It appears from the prospectus issued by the company that coal in France is protected by an import duty of 1 franc per ton.

The French Mines, Limited, was also brought out in London in the month of February 1890, having been formed to acquire several concessions of gold, silver, and lead. The purchase money to be paid to the vendors in this case also is 150,000l.

Different concessions cannot be united except by the authority of the Government (decree of 23rd October 1852; Dupont, 285), but examples of such unions with the consent of the Government are not uncommon (Dupont, 289), though occasionally the Government refuses to unite several concessions into one concession so as to relieve from the necessity of working under each concession (Dupont, 291).

Forfeiture of Concessions.—In case the working of a concession be reduced or stopped in such a way as to endanger public safety or the requirements of consumers, the prefects, after having heard the owners of the mines, shall make a report to the Home Minister, in order that a decision should be taken (Art. 49, law of 1810). In such cases the decree of concession reserves to the Government the right to withdraw the concession; but this power has rarely been made use of (Dupont, 315).

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In 1838 many mines were left unworked, and the flooding of mines became a public danger; a special law (April 27, 1838) was passed, empowering the Government to force the mine-owners to form syndicates to execute the necessary works to protect their mines and to contribute to the cost thereof *pro rata* of their interest. In case of non-payment of the contribution to such cost, the Government may withdraw the concession, and sell the mine by auction. Notwithstanding the minute provisions of this law, in 1877, out of 1,216 mines, only 499 were worked, and out of 612 coal mines, 277 were abandoned. In order to put an end to this state of things, the Minister of Public Works gave notice to the mine-owners who had stopped work that, if it be not resumed within two months, their concessions would be withdrawn; but these threats were not enforced. From the year 1838 to 1877 only six declarations of forfeiture occurred, and there only appears to have been one since the latter date. In 1883, out of a total number of 1,328 concessions, only 506 were worked (Ag. § 565 note 2). On the 1st January 1888 there were in France 1,362 concessions in existence, of which 452 only were worked.

Ancient Concessions.—Special provisions are made in the law of 1810 as regards concessions previously granted, and also as regards the workers of mines who had not complied with the law of 1791. Many of the most important coal mines in France are still held under such concessions (Dupont, 396). The concessions granted previously to the publication of the law of 1810 were merely confirmed *ipso facto*, the concessionaires being rendered liable to pay the rents to the Government provided for by the law of 1810 (Arts. 51 and 52). The workers of mines who had not complied with the law of 1791 were bound to obtain a concession from the Government in accordance with the law of 1810 (Arts. 53 to 56).

The mode in which these can be acquired within the boundaries of the concession has already been stated. Under Art. 44 of the law of 1810, modified by the law of 27th July 1880, concessionaires can obtain the right to execute work of this description outside the limits of their concession, on the Council of State declaring such works to be of public utility.

This is fully provided for by Arts. 47 to 50 (inclusive) of the law of 1810, amended by the law of 27th July 1880 and numerous other laws, decrees, and ordinances, in accordance with which the Government mining engineers exercise, under the orders of the Minister of the Interior and the prefects, extensive powers of inspection with the view of preventing danger and providing for the preservation of buildings and the safety of individuals. The prefects have also power, at the request of the engineers, to require mine-owners at their own cost to execute works necessary to protect buildings and the surface, and to secure the safety of the public, the mines, the workmen, and of ways of communication, mineral waters, and the water supply for towns, villages, or public establishments at the cost of the concessionaires (Arts. 49 and 50 and decree of 26th March 1845).

By a decree of the 3rd January 1813 (Art. 15) (which applies to "minières" as well as mines, but not to "carrières") mine-owners are required to keep on their premises, in proportion to the number of workmen and the extent of the workings, such remedies and aid appliances as may be required by the Minister of the Interior, and to conform to the regulations approved by him in that behalf. Under this article directions have been issued as to the first aid to be given to persons wounded or injured, and a list of the remedies to be kept on the spot is prescribed. Under Art. 16 of the last-mentioned decree, the Minister of the Interior, on the proposition of the prefect and the report of the Director-General of Mines, is to indicate the mines which, from their importance and the number of workmen which they employ, should keep and maintain at their expense a surgeon specially attached to the service of their undertaking. One surgeon may be attached to several undertakings at the same time by agreement, the expense to be divided amongst the different undertakings in proportion to the extent of their interests.

The same decree (Art. 11) provides that in case of accident in mines, notice must at once be given to the authorities, who (Art. 14) shall have power to take all necessary measures either to put an end to the danger or to prevent the consequences, and (Art. 17) the owners and managers of neighbouring mines are required to furnish all the assistance they can, any expenses (Art. 20) of assistance to wounded men or repair of works being borne by the owners of the mine where the accident occurred. The mining engineers or other authorities must report upon the accidents, and in cases of negligence the mine owners and managers may be punished by imprisonment and fine, besides being made liable in damages.

Way-leaves,
drainage and
ventilation
through adjoining
mines.Inspection and
regulation of
mines.Relief societies,
&c.

Appendix
C. II.FRANCE.
Mr. Walmsley's Notes.

There is nothing approaching to compulsory insurance of workmen in France; but by the law of 11th July 1868 any workmen may make provision for the cases of death or accident, the insurance fund being administered by Government officials, and by the law of 18th June 1880 (modified by the law of 20th July 1886) workmen may make similar provision for the case of old age.

In addition to the public insurance institutions there are numerous private associations or mutual aid societies, the objects of which are usually to make provision for sickness and burial, but occasionally also to provide pensions in case of old age or incapacity for work. These mutual aid societies are divided into three classes, known as: first, free or private societies, which, beyond requiring official authority under the law relating to associations, are under no restriction as to their rules and organisation; secondly, approved societies, which are regulated by State decrees and subject to the approval of their rules by the prefect, and have in return certain legal advantages over the free societies; thirdly, societies recognised as being of public utility.

There are also insurance societies formed in connexion with particular undertakings, differing from the free or authorised mutual societies in this, that the associates have between them the common bond of being workmen in the same undertaking, and are generally bound to belong to the society as long they are in the employment of such undertaking. In other respects the free and authorised societies and the societies in connexion with particular undertakings resemble one another, the objects in both cases being generally to ensure assistance, temporary or for life, and medical aid to sick or wounded workmen, relief to widows and children, and sometimes pensions in old age. In both cases the advantages are assured by the contributions of all those who participate to a common fund, whilst the contributions given by the head of the undertaking resemble the contributions given by honorary members of the mutual aid societies.

There is no legal obligation to form relief funds in connexion with mining undertakings; but, as a matter of fact, nearly all mines have their special relief funds, with special regulations for management of the same. Some of these funds (and this is usually the case) are supported by subscriptions from the workmen, supplemented by contributions from the mine owners; some of them by the workmen alone, and some of them by the mine owners alone. The contributions by the workmen usually average from two to three per cent. of the amount of their wages.

Many proposals have been brought forward of late years for general legislation on the subject of relief funds, but none of them have as yet been carried into effect.

Some of the mining companies make special terms with hospitals for the benefit of their workmen; others have established hospitals; others have established co-operative shops; others erect houses and establish schools for the benefit of their workmen, whilst certain companies make free distributions of coal amongst their workmen.

Mining author-
ity.

At the head of the mining administration is the Minister of Public Works, whilst in each department the prefect is the head of the service, under the authority of the Minister of Public Works. Under the immediate orders of the Minister of Public Works is the Council-General of Mines. This is composed of the Inspectors-General of the first and second class, presided over by the Minister of Public Works, or, in his absence, by a vice-president appointed for a year by the Minister out of the Inspectors-General.

The duties of the Council-General of Mines are to give their opinion as to the applications for concessions, and as to the conditions to which concessionnaires should be subjected, and as to contentious questions submitted to the Minister of Public Works. Below the Inspectors-General of the first and second class come the engineers-in-chief, also divided into two classes, and under these are the ordinary engineers of the first, second, and third classes. To these are added certain inferior officers called "garde mines," who are divided into four classes.

The engineers-in-chief have to render accounts to the prefects of mining works, and to receive and execute their orders relative to inspection; to report to the Director-General, the prefects, and the "procureurs" of the Republic all breaches of the laws and regulations as to mines; to inspect the mines in their departments in turn, under the orders of the Director-General. They have the right to inspect the plans of all ancient concessions of mines which should be deposited at the prefectures, and to take copies to keep at their offices; also minutes of all the plans and maps relative to new concessions which have been applied for or obtained. They propose to the prefects the advertisements and lists of charges for concessions of mines, and they give their opinions on the reports of the ordinary

engineers, whose duties they must fulfil in cases of necessity (Arts. 47 to 50 as modified in 1886).

The ordinary engineers must visit at least once a year all the mines being worked in their sub-department, and in case of a breach of the laws, or of danger or accident, being notified at a working, they must attend at the place and prepare a report for the engineer-in-chief with the view of effecting a remedy. They must notify to the mine-owners defects which they may remark in the workings, and propose such improvements as they may consider desirable. They have to verify the plans attached to applications for concessions, and give their opinions upon such applications, and also on all official matters relative to mines, mines, and carriers. They have to prepare accounts of mine-rents, and take part in the committees of assessment of such rents, and in cases contemplated by Art. 50 of the law of 1810 when a working endangers public safety they propose to the prefect measures of prevention, and cause them to be carried out in the event of the concessionnaires refusing by virtue of decision of the prefect, and in cases of imminent danger they may call upon the local authorities to take immediate preventive measures. They may act as experts in mining matters, and they have other similar duties and powers.

The "garde mines" have to assist the engineers in all that concerns the inspection of mines, mines, and carriers; the collection and copying of surface and underground plans, and the inspection of steam engines and the plant of railways which also forms an independent part of the duty of the engineers of mines.

There is a head office of mines in Paris, and the rest of the country is divided into various districts and sub-districts for the purposes of the mining administration.

The principal objection which is taken to the French system of mining law seems to be that there is too much State control, especially in the matter of granting concessions, it being left to the pleasure of the State whether the mine should be granted or not, and to whom it should be granted; whilst in other countries the discoverer (as in Germany) or the first applicant (as in Spain) is entitled to a grant of the concession; and a well-known French author (Ag. 10) contrasts this position of the mining industry in France, with regret, to that of England, which, he says, has had the happy fortune never to know, as regards the working of mines, any system but that of complete industrial and economic liberty, except so far as State interference has been directed towards avoiding accidents in mines.

It is not surprising to find that the respective claims of the concessionnaires of iron mines, on the one hand, and of the owners of the surface on the other hand, with respect to the boundaries of the mines and of the mines respectively, have given rise to numerous law suits (Dupont, 434); and, although Art. 70 of the law of 1810 (revised in 1886) aims at preventing such difficulties by providing that, when the Minister of Public Works, at the instance of a concessionnaire, forbids the owner of a mine from continuing his workings so as to prevent the working of the mine by the concessionnaire, an ample indemnity is to be paid by the concessionnaire of the mine to the owner of the mine, there is evidently still room for much dispute on the subject (F. G. 93) and Ag. § 684).

Difficulties also seem to arise between the respective concessionnaires of different substances under the same area (F. G. 89), and between the concessionnaires of adjoining mines, in spite of the provisions made by the Acts of Concession K. to O., some of which are considered by competent authorities to be of doubtful validity (Ag. § 115).

Miners usually work eight hours per day. Labourers underground and all men on the surface work 10 hours per day. These hours will not have varied much for many years.

Miners earn from 4 to 5 francs per day.
Underground labourers, 3 to 3.50 francs per day.
Smiths and carpenters, 4 to 5 francs per day.
Surface labourers, men, 3 francs per day.
" women, 1 to 1.50 francs per day.
" boys, 1 franc per day.

As before stated, further legislation is now contemplated, and the Report of a Commission of Deputies presented to the Chamber by M. Jacques Pion in February 1889 contains the text of a proposed new law, by which the Commission propose that the existing mining law should be codified, a variety of alterations being at the same time introduced, such alterations having been principally suggested by four projets de loi submitted to the consideration of the Commission. The following are the principal alterations which are proposed by the Commission, viz. :—

The suppression of the class of minières, and the practical fusion of the substances now belonging to that class

General
remarks.Wages and
working lawProposed
legislation.Appendix
C. II.FRANCE.
Mr. Walmsley's Notes.

FORM OF ACT OF CONCESSION.

1st Part.—DECREEE OF CONCESSION.

(Adopted in 1832.)

NOTICE.—(General clauses, letters A R C, &c.; special clauses, same letters with a number placed on the right, as B¹, B².)

Reference to :

1st. Law of 21 April 1810, modified by the law of 27 July 1880;

or for the concession of mines of iron.

Law of 21 April 1810, modified by the law of 9 May 1866 and 27 July 1880.

2nd. Decree of 18 November 1810.

3rd. Decree of 6 May 1811, modified by decree of 11 February 1874.

4th. Decree of 3 January 1813.

5th. Law of 27 April 1838, and Ordinance of 23 May 1841.

6th. Ordinance of 18 April 1842.

7th. Ordinance of 26 March 1843, modified by decree of 25 September 1882.

8th. Decree of 23 October 1852.

Note.—In addition, when for concessions of mines of salt, of springs, or of wells of saline waters.

Law of 17 June 1840, and Ordinance of 7 March 1841, and also Ordinance of 26 June 1841.

Note.—But in such case the decrees of 6 May 1811 and 11 February 1874 must be excluded.

Articles.

Art. A.—Concession is made to of the mines of included within the limits hereafter stated, Commune of Arrondissement of

Department of

Art. B.—This concession, which shall take the name of Concession of , is limited in accordance with the plan annexed to this decree as follows :

the said limits include a surface of square kilometres hectares.

Art. B¹.—(Special to concessions of mines of iron, not including iron ore in seams, in beds, or meadow ore, which are workable as minières or some of them.) (a.) (In certain cases two articles, B¹ and B², may be included together in the decree.)

This concession does not apply to iron ore in seams, or in beds, or of meadow ore, (b) (in accordance with the cases the three sorts of ore may be kept in, or some of them may be excluded), which may be worked as minières and remain at the disposal of the owners of the said minières in accordance with the terms and conditions of Arts. 57, 58, 68, 69, 70, of the law of 21 April 1810, modified by the laws of 9 May 1866 and 27 July 1880.

Art. B².—(Special for concessions of mines of iron, including iron in seams, in beds, or meadow ore, workable as minières, or including at least some of them.) (Notice (a) of Art. B¹.)

Are now joined to the concession, without prejudice to the rights given to the owners of minières by the paragraph 3 of the law of 21 April 1810, modified by the laws of 9 May 1866 and 27 July 1880, the iron ore in seams, or in beds, or meadow ore (note (b) of Art. B¹), which may be worked as minières.

The limits between the iron ore included in the concession and the ore of the minières joined to the concession which will cause an indemnity to be paid to the owners of the said minières are fixed as follow :

Art. C.—Nothing is now decided as to the deposits of any other mineral the concession of these deposits of mineral may be henceforth granted if needful in the usual forms either to the concessionnaire of the mines of or to any other person.

Art. D.—The rights given to the owners of the land by Arts. 6 and 42 of the law of 21 April 1810, modified by the law of 27 July 1880, on the produce of the mines of which concession is granted are fixed at

Art. D¹.—(a.) (Special in case there is a rent to pay to the inventor.)

Appendix
C. II.FRANCE.
Mr. Walmsley's Notes.

The concessionnaire shall pay to in accordance to Art. 16 of the law of 21 April 1810, and as an indemnity for the discovery of the sum of

Note (a) of D.—As agreed with the Council of State this Article, since the adoption of the form, has been worded as follows:

The indemnity given in accordance with Art. 16 of the law of 21 April 1810 to for the discovery of the deposits (state names of deposits) is fixed to the sum of

Art. E.—The concessionnaire shall comply with the provisions of the conditions of grant annexed to this decree, and which is considered as being an essential part thereof.

Art. F.—If the concessionnaire wish to renounce the whole or part of the concession he shall apply, by means of petition to the prefect, six months at least before the time at which he intends to cease the working of his mines, and he shall join to the said petition:

1. The plan and a description of the works.
2. A certificate delivered by the registrar of mortgages showing that there are no inscriptions of mortgages on the concession, or, if it be not the case, a list of such as may have been taken, together with the deed of removal of such inscriptions, at least for the portion of the deposit which he intends to renounce.

When such documents have been furnished the petition shall be published and advertised for two months in the places and in accordance with the forms fixed by Arts. 23 and 24 of the law of 21 April 1810, modified by the law of 27 July 1880, for the applications for concessions of mines.

The oppositions, if there should be any, shall be received and notified in the forms fixed by Art. 26 of the same law.

The renunciation shall only be effectual when it shall have been accepted, if such be the case, by a decree considered in the Council of State.

Art. G.—This decree shall be published and posted up at the expense of the concessionnaire in the commune in which the concession is situate.

Art. H.—The Minister of Public Works and the Minister of Finance are intrusted, each as far as it concerns him, with the execution of this decree, which shall be printed by extract in the "Bulletin des Lois."

2ND PART.—STATEMENT OF CONDITIONS OF CONCESSIONS OF MINES (Cahier des Charges).

(General clauses, letters A, B, C, &c.; special clauses, A', B', &c.)

Art. A.—Within the delay of from the date of the notification of the decree of concession, boundaries shall be placed at all points used as limits to the concession where it shall be deemed necessary. This work shall be done at the expense of the concessionnaire at the request of the prefect, and in the presence of the engineer of mines, who shall make a written report thereof. Official copies of this written report shall be deposited with the official documents at the seat of the prefecture of the department of and at that of the commune of

Art. B.—Within six months' time from the date of the notification of the decree of concession the concessionnaire shall forward to the prefect the plans and sketches of the mines and of the work already done. These plans to be made on a scale of 0^m.001 per metre compassed to the exact north and divided in squares per 10 millimetres. He shall join to it a statement showing in details the mode of working which he intends to follow.

This mode of working shall also be shown on the plans and sketches.

The levels of the principal points, such as the mouths of the pits and galleries, the points of connexion of the galleries with the pits, and of the galleries between themselves with reference to a fixed horizontal level, shall be marked in metres and centimetres on the plans.

The concessionnaire shall join to it on transparent paper a plan of the surface covering the plan of the works and showing the position of the houses and inhabited places, buildings, ways, mineral waters, spring supplying towns, villages, boroughs and public establishments, canals, water-courses, &c., &c.

Art. B'.—(For salt mines.) Within six months from the date of the notification of the decree of concession, the concessionnaire shall submit to the prefect the statement, the plans, and sketches provided for in Art. 3 of the Ordinance of 7 March 1841.

The plans shall be made to the scale of 1 millimetre per metre compassed to the exact north, and divided in squares per 10 millimetres.

The statement of levels of the principal points, such as the mouths of the pits, galleries, bore-holes, points of connexion of the galleries with the pits, and of the galleries with reference to an horizontal plan fixed and settled, shall be marked in metres and centimetres on these plans.

The concessionnaire shall join to them on transparent paper a plan of the surface, &c., as above.

There shall be as many copies of these plans as there are of communes included in the undertaking.

The above-mentioned schemes, as also the plans in support in accordance with Art. 3 of the Ordinance of 7 March 1841, shall be, before any decision is arrived at, made known to the public in the forms and terms prescribed by the said article.

The bills shall be put at up the request of the prefect and at the expense of the concessionnaire.

Art. B'.—(Special in case in which a proportional rent has been stipulated in favour of the owner of the surface.) The plans and the statement furnished in accordance with the preceding article shall include the drawing and the statement of the surface lands that the field of working is to comprise.

An extract of the declaration made by the engineer of mines shall, at the request of the prefect and at the expense of the concessionnaire, be posted up for one month at the door of the mayoralty houses in all the communes where the concession lies.

Art. C.—The prefect shall refer these documents to be considered by the engineers of mines if it be found that the works contemplated may cause some of the wrongs or dangers anticipated as well in Title V. of the law of 21 April 1810, modified by the law of 27 July 1880, as in the sections II. and III. of the decree of the 3rd January 1813. The prefect shall notify to the concessionnaire his opposition to the execution of the whole or parts of the said works. If the prefect has made no opposition within two months from the day of lodging the documents with the prefecture, the execution of the works by the concessionnaire shall be proceeded with.

Art. C'.—(For salt mines.) The execution of the scheme of works shall be authorised if deemed advisable by the prefect in the cases in which no claim has been made during the inquiry above referred to. If it be otherwise the Minister of Public Works shall decide. If it be found that the works may cause some of the wrongs or dangers anticipated, as well in the Title V. of the law of 21 April 1810, modified by the law of 27 July 1880 as in sections II. and III. of the decree of 3 January 1813, the authorisation shall be given only after making the necessary alterations in the schemes.

Art. C'.—(Special in case there is a proportional rent to pay to the owner of the ground.)

As soon as the concessionnaire shall begin to extract under a new property, he shall be bound to advise the owner of the ground thereof. This owner will be entitled at his own expense to have on the mine an agent to verify the quantity of daily produce of the works.

Art. C'.—(Special to salt mines.) No bore-hole for the working of salt by dissolution shall be allowed to be made within the boundaries of the concession at any horizontal distance of less than metres of all railroads built or to be built, and of less than metres from all canals established or to be established, without prejudice to the future application in case of need of the Art. 50 of the law of 21 April 1810, modified by the law of 27 July 1880.

Art. D.—When the concessionnaire wishes to open a new field of works or establish new pits or galleries from the surface, or to alter the mode of working previously followed, he shall address to the prefect a general plan of the concession, a plan of the works, an explanatory statement, and a corresponding plan of the surface, the whole of it made out in accordance with what is prescribed in the above Art. B.

This scheme shall be followed up as is prescribed in Art. C.

Art. E.—In case the works planned by the concessionnaire shall extend under or in the immediate vicinity of buildings, houses, or inhabited places, other works, roads, mineral springs, springs supplying towns, villages, boroughs, or public establishments, under canals or water streams, or at a horizontal distance less than metres from their sites, the scheme of works will have to be previously submitted to the prefect.

This shall be followed up in the manner prescribed by Art. C. when the interested parties have been heard, and without prejudice to the future application in case of need of the Art. 50 of the law of 21 April, 1810 modified by the law of the 27 July 1880.

Art. F.—In the vicinity of railroads it is forbidden to the concessionnaire to work (for salt mines add "by galleries") at any depth under a space of ground limited on the surface by two lines drawn parallel to the limits of the railroad and its dependencies, and to metres of distance from those limits, if he has not obtained the authorisation therefor by the prefect, given on the report of the engineers of the mines, the railway company, and control service having been heard.

Art. G.—Each year, in the course of January, the concessionnaire shall forward to the prefect the plans and sketches of the works made in the course of the preceding year. The plans shall be made out at the scale of one millimetre per metre, in order that they may be annexed to the general plans referred to in the preceding articles, and including all the details mentioned in the said articles, and shall be verified by the engineer of mines.

The concessionnaire shall annex to them on transparent paper a copy of the plan of the surface prescribed for by the Arts. B. and D., including, with the alterations which may have taken place, the information mentioned in Art. B.

Art. H.—When the concessionnaire shall wish to abandon a portion of the underground works, he shall be bound to make a declaration thereof to the prefecture, and to join to this declaration a plan of the works, as well as a plan corresponding with the surface.

It shall afterwards be proceeded thereon as is prescribed in Arts. 8, 9, and 10 of the decree of 3 January 1813.

Art. H'.—(Special in the case in which a proportional rent is stipulated in favour of the surface owners.)

The declaration of the concessionnaire shall contain the description of the properties which correspond to the field of works it is proposed to abandon. An extract of this declaration, made by the engineer of mines, shall be posted up as is prescribed above in Art. B'.

Art. I.—The openings to the surface of pits and galleries which shall become useless shall be filled up or closed by the concessionnaire in the way which shall be prescribed by the prefect on the proposal of the engineer of mines and at the request of the mayors of the communes of the district in which the openings are situate.

In case of default proceedings will be taken in accordance with what is said in Art. 10 of the decree of 3 January 1813.

Art. I'.—(Special to coal mines, lignite, and anthracite.) The debris and materials spontaneously inflammable shall be carried to the surface as the works are proceeded with, unless a special authorisation be delivered by the prefect on the report of the engineer of mines.

Art. I'.—(Special to mines of fuel.) The concessionnaire must comply with the measures which may be prescribed by the administration to prevent the dangers caused by the presence of inflammable gas and of its explosion in the mines, and bear the burdens which may for the purpose be imposed upon him.

Art. P.—(Special to salt mines.) In cases in which the working of salt takes places by dissolution* the concessionnaire shall be bound to execute all the works which shall be prescribed by the prefect on the report of the engineer of mines for the purpose of ascertaining the position and the size of the excavations underground produced by the action of the waters.

Art. J.—The concessionnaire shall constantly keep in order and up to date on each mine:

- 1st. The plans and sections of the underground works made out at the scale of one millimetre per metre.
- 2nd. A book stating the daily advance of the works, and the circumstances of the working of which it will be useful to keep a record, such as the nature of the deposits, their thickness, their quality, the nature of the roof and side walls, the measure of the waters running in the mine, &c., &c.
- 3rd. A book of daily control of the workmen employed in the works outside and inside.
- 4th. A book of extraction and of sale.

The concessionnaire shall exhibit these plans and books to the engineers of the mines each time that they shall require same.

The concessionnaire shall transmit to the prefect in the form and at the time which shall be named to him the list of the workmen, that of the produce extracted during the preceding year, and a detailed declaration of the net produce of the works liable to tax. (The prescription relating to the declaration of the net produce liable to tax does not apply to salt mines.)

Art. J'.—(Special to cases in which a proportional rent is stipulated in favour of the land owners.) The plans and books mentioned in the preceding article shall contain

* The mode of working by dissolution is that the mine is flooded, and the water is pumped out when the salt has dissolved in it.

an indication of the ground properties under which the working takes place.

Art. K.—(Special to cases in which the deposit lately conceded extends under grounds already conceded for the working of a mine of another kind.)

The concessionnaire shall be bound to allow all the openings which may be made for the working of the mines of by the concessionnaires of these mines, if it is found necessary, in return for an indemnity which shall be fixed by mutual consent or by experts.

In case of dispute as to the necessity or utility of these works, the prefect shall decide on the report of the engineer of mines, the parties having been heard.

Art. L.—(Special to the case in which the deposit lately conceded should extend under grounds already conceded for the working of a mine of another kind.)

If the working of the deposits of the subject-matter of this concession shows that they approach the subject-matter of the concession of , the concessionnaire shall only be allowed to work such part of the deposits the extraction of which shall be found to be without prejudice to the mines of the concession of situated in the vicinity.

In case of dispute on this subject, it shall be decided by the prefect as is stated in the preceding article, and the concessionnaire shall be obliged to comply with the measures prescribed by the administration in the interest of the proper working of the two substances.

Art. M.—If the deposits to be worked in the concession of extend out of this concession, the prefect can order according to the report of the engineers of mines, the concessionnaire having been heard, that a barrier should be reserved untouched in every deposit near the limit of the concession to prevent the workings from being put into communication with those that would take place in a neighbouring concession, and be prejudicial to one or the other of the mines. The thickness of these barriers shall be determined by the order of the prefect, who will regulate the reserve. The barriers shall only be cut through or worked in case the prefect, after having heard the concessionnaire interested, and on the report of the engineers of mines, shall have authorised the work and directed the way in which it is to be executed. In case the usefulness of these barriers should have ceased, a decree of the prefect will permit the concessionnaire to work the part which belongs to him.

Art. N.—In case it should be considered necessary to execute works with the view of putting into communication the mines of two concessions for ventilation and for drainage, or to open means of ventilation, drainage, and assistance to the neighbouring mines, the concessionnaire shall be obliged to permit the execution of such works, and to participate in them in a proportion of his interest.

These works will be ordered by the prefect on the report of the engineers of mines, the concessionnaires having been heard.

In an urgent case the works may be commenced on the simple requisition of the engineer of mines of the department, according to the Art. 14 of the decree of 3rd January 1813.

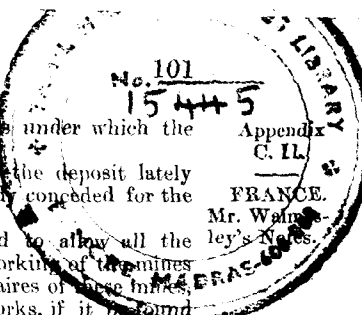
Art. O.—If some deposits of other foreign minerals than those included in the area of the concession of are legally worked by the owners of the soil, or become the subject of a special concession granted to third parties, the concessionnaire of the mines of shall be bound to permit the works which the administration may judge to be useful to the working of such minerals, and even, if it is necessary, give free passage through his own works in return for an indemnity, the amount of which would be determined by mutual agreement or by experts.

Art. P.—(Special to mining concessions in Algeria.)

The administration guarantees to the establishments of the concessionnaires, of which the sites and plans have been fixed between them and the military services, the protection which it grants to all the establishments of settlers.

If the sites and plans fixed necessitate special defensive works, these works will be executed at the expense of the concessionnaire. The concessionnaire must provide the barracks for a garrison to be determined on the demand of the concessionnaire if the military authority judges this garrison to be indispensable.

In the case provided for by the preceding paragraph, the general commanding the division of or his delegates will be judges of the expediency of the measures to take from a military point of view.



III.
CORRESPONDENCE.

1.

SIR, Foreign Office, June 2, 1891.
I AM directed by the Marquis of Salisbury to transmit herewith, to be laid before the Royal Commission on Mining Royalties, the accompanying despatch and enclosures from Her Majesty's Ambassador at Paris.

Lord Salisbury would be glad to be favoured with the views of the Royal Commission with regard to the attendance in London of the two gentlemen who have expressed their readiness to come to this country if it be considered that they could supply any further information orally in addition to that which is contained in the papers herewith inclosed. If their attendance is requested, the question of the payment of their expenses has to be considered.

I am, Sir,
Your most obedient humble servant,
(Signed) JAMES FERGUSSON.

The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir James Fergusson's letter of
June 2nd, 1891.

MY LORD, Paris, May 29, 1891.

I HAVE the honour to transmit to your Lordship herewith a despatch from Sir Joseph Crowe, enclosing the information with regard to mining rents and royalties in France, which I was instructed to procure by your Lordship's despatch, No. 85 of this series, of the 30th ultimo, and which has been furnished by Monsieur Aguillon, Chief Engineer of Mines and Professor of Mining Laws at the Higher School of Mines.

Sir Joseph Crowe reports that Monsieur Aguillon and Monsieur Raoul Duval, a gentleman much interested in mining questions, are both willing to proceed to London, if required, to give evidence before the Royal Commission; but Monsieur Aguillon's memorandum appears so complete that I doubt whether his presence in London will be thought necessary, but I await your Lordship's further instructions on this point.

I beg to return the notes as to mining laws in France enclosed in your Lordship's despatch, which has been revised by Sir Joseph Crowe.

I have the honour to be,
With the highest respect,
My Lord,
Your Lordship's most obedient,
humble servant,
(Signed) LYTTON.
The Marquis of Salisbury, K.G.,
&c. &c. &c.

Enclosure in Lord Lytton's despatch of May 29th, 1891.

MY LORD, Paris, May 29, 1891.

YOUR Lordship asked me to make the necessary inquiries respecting evidence to be obtained from French witnesses upon certain questions to which the Royal Commission on Mining Rents and Royalties are desirous of having replies.

I had to ascertain first whether oral evidence could be got from competent persons able to depose *vivâ voce* in the English language, and, secondly, whether trustworthy written replies could be had from experts.

I consulted my friend M. Fernand Raoul Duval, who would have been a competent witness on account of his experience as an engineer and his connexion with the coal mining companies of the Aveyron, and also because he would have been able to give evidence in English. But M. Raoul Duval thought it would be better to consult an expert who was more of a specialist than himself, and he therefore put me in communication with M. L. Aguillon, ingénieur en chef des mines, and professor of mining law at the Ecole supérieure des mines, with whom I had several interviews. I came to the conclusion that it would be difficult, if not impossible, to find an expert confident enough in his knowledge of the English language to give evidence before the Commission. M. Aguillon I found well acquainted with English, but disinclined to speak it. He said that if the President of the Commission would receive him informally he would give him all the information required. M. Raoul Duval offered to accompany

M. Aguillon to London and be present at the interview. Both gentlemen seemed to think that the best course would be for M. Aguillon to draft replies to the syllabus of questions put by Mr. Lyon, and that, if necessary, they would go over to England for a day or say at the end of July, to confirm or explain the points which might require further elucidation. Neither for the trouble of writing the replies nor for the journey to London would M. Aguillon consent to accept an honorarium. He would charge travelling expenses. For the rest he would consider it an honour to have had the opportunity of being useful to the Commission.

Under these circumstances I left it to M. Aguillon to prepare the replies that were required, and I have the honour to enclose them.

They seem to me to be as exhaustive as they are correct and to the point.

I also went over the notes on mining law enclosed in Lord Salisbury's despatch, and I enclose the copy which has been corrected with Messieurs Raoul Duval and Aguillon's assistance.

I have the honour to be,
My Lord,
With the highest respect,
Your Lordship's most obedient
humble servant,

The Right Hon. (Signed) J. A. CROWE.
The Earl of Lytton, G.C.B.,
&c. &c.

Enclosure in Sir Joseph Crowe's letter of May 29th, 1891.

REPORT TO THE COMMISSION ON THE MINING LAWS
IN FRANCE.I.—Steps to be taken by a Concessionnaire in order to obtain
a Concession.

1. Any person, society, or association which desires to obtain a mining concession must address to the local authorities a request in which must be laid down the limits of the concession asked for.

This request is inquired into for two months, upon the spot, and at the house of the requesting party, by means of advertisements, publications, and insertions in the newspapers; it is also inserted in the *Journal Officiel*.

At the conclusion of this inquiry, the Government (represented by the Minister of Public Works) gives a discretionary decision whether it is proper to grant a concession, and within what limits it should be granted, these limits not exceeding those laid down in the request.

If several persons simultaneously ask for a concession on the same lands, the Government, if it thinks there ought to be a concession, has the right to choose which of these shall be the concessionnaire.

This sovereign power of the Government to decide whether there shall be a concession, what its extent shall be, and in favour of whom, is one of the characteristic features of the French system.

2. The legal expenses of obtaining a concession are limited to the cost of the inquiry, which is nothing more than the cost of advertisement and of insertion in the newspapers; this may amount to 40*l*.

3. But, on the other hand, it is well to recollect that the Government only grants a concession when the requesting party has carried out preparatory works of exploration which have proved that the spot is worth working. The importance of these works may vary, according to the lie of the land, from 500*l*. or 1,000*l*. to 4,000*l*. or 5,000*l*.

If the requesting party obtains the concession, these works ought to be looked upon as technically included in those which have to be performed for and before the working of the mine; this forms no special charge for obtaining the concession.

If the requesting party does not obtain the concession, he loses the sum of his outlay; but that loss was inevitable in case the spot was not fit to be worked.

When several parties are rivals in asking for a concession, the one which has succeeded in obtaining it is expected to give those whom he excludes an indemnity for the preparatory or search works which they have carried out, so far as these works are of service to him, directly or indirectly. The indemnity, which is fixed by the administrative courts, and which it is their habit to be generous in fixing, must be valued in accordance with the usefulness of these works to the concessionnaire.

Generally, in case of competition, the concession is granted to the party whose search works have given the best results; this is a *title*, the value of which may be insisted on; but it is not a *right*, the Government, as it is well to repeat, recognising no right but its own in the granting of concessions.

II.—The Terms and Conditions on which the Concession is
granted.

1. Another characteristic feature of the French system consists in this, that the Government, when it has made up its mind, by the right stated in section I. to grant a concession within a certain circumference, in favour of a certain party, cannot impose at its discretion, save on two points only, any condition peculiar to the concessionnaire, the law alone having fixed or being able to fix the rights and responsibilities of all concessionnaires.

In granting a concession the Government creates a *property* which is and will be regulated by the law; it does not make a *contract*, by means of which it can reserve the right of laying down rules for the contracting parties.

2. The two points on which the Government has the discretion of laying down conditions when it grants a concession are—

(a.) The inventor's indemnity.

(b.) The indemnity or *ground rent* to be paid to the proprietors of the surface.

(a.) If the Government considers that the existence of the mine was entirely unknown, and that some one who has put forward no claim or has not asked for a concession may be considered to have discovered it, to have been the inventor of it, the Government stipulates that the concessionnaire should pay an indemnity to that person.

As a matter of fact such indemnities are unusual, the mine usually having been known already, or else the inventor being the person who has obtained the concession.

This indemnity is commonly fixed at a sum, relatively modest in amount, to be paid at once. Except in one exceptional case, during the last century these indemnities have varied from 40*l*. to 2,000*l*.

The Government in granting the concession has a sovereign right to decide: 1. whether anyone but the concessionnaire is the inventor; 2. who that is; and 3. what indemnity, in nature and amount, shall be paid to him by the concessionnaire.

(b.) In granting the concession the Government must also fix the *royalty* or *ground rent*, that is to say, the indemnity due to the ground landlords whose property lies within the concession, by the mere fact of the grant or of the working of this concession.

The *ground rent* ("redevance tréfoncière") usually consists of a rent of from a farthing to a halfpenny per acre to be annually paid by the concessionnaire to all the ground landlords whose property lies within the concession, without distinguishing whether the concession is worked or not or on what lands it is worked. This is what is called the "*redevance tréfoncière fixe*."

There exists another form of ground rent, called "*proportionnelle*." In this system the rent is only paid to the landlords of those lands underneath which work is proceeding, and while it proceeds, in proportion with what is extracted. The tax is fixed by the Government as soon as the concession is granted. In the coalfields of St. Etienne, where this system is practised, the tariff varies with the depth and the importance of the layers and the manner in which they are worked, from $\frac{1}{4}$ to $\frac{3}{10}$ of the gross value of what is extracted. It is calculated that in this coalfield the rent represents on an average 5*d*. per ton.

This system of proportional ground rent is very seldom met with outside the coalfield of St. Etienne; in certain other places where it has been adopted, as, for instance, in the Aveyron, the rent is very low.

It may be said that the French system is essentially that of a fixed ground rent, of the extremely small amount stated above.

As soon as the concession has been granted, the Government fixes, *ne varietur* and for ever, the system and amount of ground rent affixed to that concession.

3. All the other conditions of the concession are fixed by the law, and may eventually be altered by it.

As the *octroi* of a concession consists in the creation of a perpetual property it is not needful to dwell here on the period for which it is granted, nor on the conditions under which it can be renewed.

It remains for us to examine—

(a.) The taxes due to the State.

(b.) The conditions laid down for working.

Moreover, as the concession may, under certain circumstances and conditions, be withdrawn, it is proper to state what these are.

(a.) Mines have to pay to the state a special tax, which corresponds to the tax paid by all kinds of ground property.

The mines tax consists of two parts:—

1. A *fixed* annual tax, calculated by concession on the basis of 11 centimes per hectare ($\frac{1}{2}$ *d*. per acre) included within the circumference of the said concession; this tax must be paid, even though the concession be not worked.
2. A *proportional* tax, to be eventually paid by the year; this ought to be 5.5 per cent. of the *net revenue* produced by the *works* of the preceding year; this tax is only due if the mine is being worked, and if the works of the preceding year produced a net revenue.

This net revenue is calculated by subtracting from the total of the value of what is extracted (stock at the end of the year included) the total of the expenses incurred in the actual act of extraction.

The value of what is extracted is obtained by multiplying respectively the total of the various kinds extracted by their sale price on the floor of the mine, or brought to the floor of the mine.

Among the expenses may not be included payments on loans or interest on capital, but solely the direct expenses of extraction, such as wages, working expenses, material, and supplies.

The concessionnaire is bound every year to make a detailed statement for the purpose of fixing the proportional tax. This declaration is verified, and, if necessary, revised by the authorities in accordance with a report made by their own agents, particularly by the engineers whose duty is the official surveillance of the mines, and for each department by a special committee in which the concessionnaires are represented. This verification and this renewal of the declarations by the authorities are to be carried out severely and rigorously, notably with the help of the special knowledge possessed by the official engineers; the concessionnaire is not, however, obliged to show his books to anyone; he is free to do so, but not obliged.

The tax is due, and should be paid, in accordance with the calculations finally laid down by the authorities.

If the concessionnaire thinks that he is overtaxed, he may claim a drawback or repayment before the administrative courts, whose special duty it is to examine into the appeals of citizens against all direct taxation; these courts, in case of such appeal, must proceed, before coming to a decision, to a technical examination by experts.

(c.) In principle, a concessionnaire disposes of his mine as a proprietor of his land. He is free to work it as he likes, and even to leave his mine completely unworked, when and for how long he chooses.

At the same time, the law provides that the authorities can force him to work it, or to work it more, "if the working is stopped or restricted to a degree which endangers the public safety or the needs of the consumer," and without there being a legitimate reason for the stoppage or restriction.

If the concessionnaire does not conform to the injunction which the authorities may present to him for this purpose, the concession may be withdrawn. This withdrawal is not a spoliation pure and simple; it is a sort of execution forced upon the authorities on grounds of public utility; the withdrawal consists, in fact, in the power of the authorities to sell the mine by public auction for the profit of the concessionnaire or of his creditors. If, however, no purchaser presents himself, the mine becomes again the property of the State, freely and burdened by no charges which may be made on the forfeiting concessionnaire and his creditors.

In fact, the authorities have only made use of this right seven times since the beginning of the century, and that in cases which were wholly without general importance.

(b.) The possibility of the forfeiture of the concessionnaire and of the withdrawal of the concession is certainly, in theory at all events, a grave check to the French principle of the assimilation of mining property to ordinary property. We must therefore remember that the law provides, besides what has been described, three other ways in which the Government *can*, without in any case being obliged to do so, decree the withdrawal of the concession, namely:—

1. For the combination of mining concessions of the same nature without an authorisation from Government.
2. For failure to pay the expenses due to a syndicate of concessionnaires created by the authorities to insure the completion of a group of mines.

Appendix
C. III.FRANCE.
Report by
Mons.
Aguillon.

3. For failure to repay the works of safety which, ordered by the Government, have been carried out by it, although the concessionnaire refused to have it done.

In these three cases the withdrawal is subject to the same rules as those laid down for the preceding case of the improper non-working of mines.

III.—The power of a Concessionnaire to assign or sub-let his Concession.

The concessionnaire, being by law the proprietor of his concession on the same footing as a proprietor of land, is free to assign either the property of his concession or the right of working it for a time, on such conditions as the interested parties choose to fix in the contract which they draw up to this effect.

In a single case it is necessary to obtain beforehand an authorisation from Government; that is, when the concessionnaire is already a concessionnaire or is working a mine of the same nature. (See Ques. 19, 271.)

In a general way, if the concession is sold, that is to say, ceded as property, the concessionnaire, as regards the authorities, as well as regards a third party, is simply and solely put in the same position, and has the same rights and obligations as the original concessionnaire.

If there is merely a temporary cession of working rights, the concessionnaire, the *amodataire* as he is called, is considered merely as a contractor, representing the concessionnaire, who remains responsible towards the authorities and towards a third party.

The sale of mines is usually conducted in France in the same way as the sale of all other properties, by means of a sum of money paid either as a lump sum or in several instalments.

The temporary cession or *amodiation* is very seldom made use of. When recourse is made to it, it is, at least in the case of mines of any importance, for a considerable period, 30 or 40 years at the least. The *amodataire* habitually pays a rent per extracted ton, but generally there is also a stipulation as to an annual minimum. The rent per ton is commonly fixed definitely for the whole period of the contract.

For coal the rent is often 7*d.* or 8*d.* per ton; as to the minimum, that depends absolutely on what the mine is supposed to be able to produce on an average.

According to circumstances, the parties agree what, when the lease is up, the *amodataire* is to take away and what he is to leave behind him in the way of tools, buildings, &c., with or without indemnity on the part of the concessionnaire, as the case may be.

All disputes between interested parties must go exclusively to the usual courts.

These points should not be insisted on, because, as we must repeat, the working of mines by *amodiation* is altogether the exception in France.

IV.—The Powers of the Concessionnaire as regards the Surface.

With regard to the surface it is necessary to give special attention to:—

1. The occupation of land.
2. The prevention or the repair of injury.

1. In the case of occupation a distinction must be made between:—

- (a.) Lands situated within the circumference of the concession.
- (b.) And those outside.

(a.) On all lands situated within the concession, whatever be their situation with regard to the points underground, in which work is proceeding, or in which the concessionnaire is about to work, the latter has the right to occupy all such ground not built over as shall be necessary for his purpose, with certain reserves around dwelling-houses, whether this ground be necessary for the sinking of pits or galleries, the erection of machinery, shops, storehouses, &c., or for the establishment of roads or railways either to unite the different parts of the mine to one another or to join them to the public ways of the neighbourhood.

If there is no agreement between the proprietors of the surface and the concessionnaire, the latter should obtain from the local authorities an authorisation fixing the situation and extent of the lands which the authorities consider it necessary for him to occupy; the concessionnaire ought besides, and according to the wish of the proprietor, to pay the latter an annual rent amounting to twice the net revenue of the land so long as it is occupied, that is to say: if the occupation is to last more than one year, or if the land would not be susceptible of cultivation, he must buy the land by paying for it double its value.

(b.) Outside the circumference of the concession, the concessionnaire may establish such means of communication (roads, canals, railways) as are necessary to unite the mine to the public ways of the neighbourhood, as well as such pits and galleries as shall be necessary for ventilation and drainage. These routes and these pits and galleries cannot, however, be made unless they are certified as being of public utility, in the same way as if it were a question of public works to be undertaken by the State, by the department, or by the communes.

Besides this reserve, which in practice does not fail to produce a very serious difference, it should also be remarked that the pits and galleries, with their dependencies, must never be established outside the concession for the exclusive purpose of being used in extraction. The concessionnaire may, however, be authorised to employ help, in a subsidiary way, by placing a railway there, or a gallery the formation of which has been rendered desirable by the necessity for drawing away of water.

But he is not permitted to transform a pit which he has been authorised to form for draining purposes into a pit for digging coal out of.

In all these cases of works outside, the concessionnaire ought, if there has been no agreement between the interested parties, to acquire the land by means of the expropriation jury, as the State does when it has public works to execute.

2. The concessionnaire is free to work the mine throughout the whole extent of his concession without, in principle, having to trouble himself about what damage may result to the surface. But, on the other hand, he is obliged to repair all these injuries by paying to the interested parties such indemnities as answer to the loss or depreciation of value which they have suffered.

The authorities under whose surveillance the work takes place, may, however, oblige him to observe certain conditions in order to prevent injuries to certain surface-establishments, such as public roads, canals, railways, or even the dwellings of private persons, and certain springs of water. In these cases, the authorities absolutely forbid working within a fixed zone, or only allow it in a particular manner (by supports and galleries, or with complete heaps of spoil). In fact, the authorities only intervene thus in order to protect railways and canals, and even then they generally intervene by allowing the work to go on within a certain distance from the edges of these latter (usually 30 metres), either to any depth or to a fixed depth. In all other cases it is understood that the miner will take of his own accord such measures as are proper to avoid the payment of such indemnities as he would be condemned to pay in case of damage.

V.—The powers of a Concessionnaire of a Mine to send the miner over lands so as to reach a railway or waterway.

As has been said in the preceding section, no distinction is made in the French system between the situation of subterranean points occupied or to be occupied by mining works as to their relation to surface property. There is only one distinction to be noted, as has been said, according to whether the lands are or are not within the circumference of the concession. As far as more especially concerns the ways of communication needful to reach a railway or a canal, it has also been said, in the preceding section, that the concessionnaire may construct anything of this kind that he requires, not merely inside but outside his concession, and the formalities have been defined, varying according to circumstances, by following which he may proceed to the formation of these works.

VI.—The powers of one Concessionnaire as regards a Concessionnaire of an adjoining Mine.

1. Two concessionnaires who are neighbours possess on each others' mines service for ventilation and drainage of water, but it is the right of the one who bears the service to receive from the one who profits from it an indemnity representing the prejudice which may accrue to him.

If the two concessionnaires cannot come to an agreement regarding the mode in which this service is to be exercised, the authorities fix the conditions under which it is performed. The amount of the indemnity which may be the result is always settled by the courts.

These reciprocal rights of service are strictly limited to the services of ventilation and drainage of water; a concessionnaire may never claim the right of rolling his products under ground in his neighbours' concession.

2. For the drainage of water which might threaten to produce a common inundation throughout a district, the Government, if, after public inquiry it thinks it needful to do so, may force the concessionnaires of a whole group of mines to form themselves into a syndicate for the purpose

of undertaking such works, as pits or galleries, as may be necessary. The expense of such works will be paid to the syndicate by each of the parties interested, and in proportion with his interest. In case of one of these parties omitting to pay his share, his forfeiture is declared, as is described above (§ II. b), and his concession is sold. Out of the price of the sale, and expenses of the sale deducted, the sums due to the syndicate are taken before any other charge is allowed.

No use has ever been made of these regulations.

VII.—Parting of a Concession by the original Concessionnaires to other parties.

Concessions are usually worked by societies, and these societies are usually, and particularly of late, those to whom the concession was originally granted.

Societies are constituted for the purpose of working concessions the property in which was originally transferred to them by an individual or a group of individuals who held it from the beginning, or acquired it afterwards. In exchange for the mine, the transferring parties receive from the society a sum representing its value, either in the form of capital in specie, or in that of shares or parts wholly paid off.

In all this there is nothing special to mines and their working; all these transactions are in principle identical with those which are in use in regard to the working by a society of any other kind of enterprise or property.

The liberty is all the greater in that, on account of the character which the law gives to the working of mines, societies or associations which constitute themselves with the object of working them may take any form and adopt any statutes that they please.

The form most usually adopted now-a-days is very closely, if not exactly, identical with that used by the societies on the share system called "anonymes."

VIII.—The Incidence of Taxes, local or communal.

There are in France no local or communal taxes specially charged on mines. The concessionnaires are subjected, under the same conditions as all other traders, to the ordinary or common law taxes imposed in favour of departments or communes. Such is notably the case with the subventions to be paid for local roads and for *octroi* taxes. So far as specially regards the latter taxes, discharge of the duties on consumption is granted to the concessionnaire *à pro rata* of his products not consumed within the *octroi* radius.

IX.—The usual Hours of Working and the Wages of Miners.

The authorities started, in 1890, an official inquiry into the wages and hours of working of the miners. We can but refer to the statistics of that inquiry as giving the latest figures on these two questions.

It is enough to add certain indications as to the details of the organisation of the miners' work in France.

With the exception of certain special kinds of work—of preparation and repair, performed in three shifts of eight hours each—there is, for the 24 hours, only one shift of working on the face, this is the day shift, or *poste de charbon*, which begins, according to the district, between 4 a.m. and 6 a.m. There is normally a second shift, called the night shift, which begins between 3 p.m. and 5 p.m. In this period propping, repairs, and removing spoil are carried on, kinds of work which could not be executed simultaneously with the coal-winning and removal of the coal. Except in those districts where, on account of the slowness of the layers, the earth has to be removed, the more and more distinct tendency is to clear spoil during the day shift so as to do away with the night shift, except in urgent cases, when repairs have to be attended to as promptly as possible.

Wages are fixed by the job usually for the coal-winners, by load or by measure of volume, or else as the work advances, or concurrently by both these systems at once. In the case of repairs only is the work paid for by the day.

There is, as a rule, no stipulation with regard to a minimum of day labour.

In France there is no scale of wages variable according to the price of coal. Wages, on the contrary, rather tend to be fixed, although with a constant tendency to increase year by year. However, especially of late, whether owing to the amiability of the employers, or in consequence of strikes, the workmen, especially in districts where there has been a considerable rise in prices, have received, in the form of premiums, successive increase with the rise of the price of coal.

X.—Mines worked by the State.

The State neither possesses nor works any mine in France.

XI.—State Department controlling Mining Industry.

1. The service of the surveillance of mines is directed by the Minister of Public Works, and under him by the prefects, who are heads of the system of surveillance, each for his own department. The Minister of Public Works and the prefects, from whom alone proceed all instructions, are supported by the technical agents, who form the body of mining engineers. France is divided into 17 mineralogical *arrondissements*, at the head of which is a chief mining engineer, who is in correspondence with the prefects and the minister. Each mineralogical *arrondissement* is divided into two or three sub-*arrondissements*, confided to the care of an ordinary engineer, who is under the chief engineer and in correspondence with him.

The mining engineers are agents of the State, whose duty it is to watch over the execution of the laws and regulations regarding mines: they collect, on the spot, the information necessary to guide the minister or the prefect in forming his decision, as well as with regard to the occupation of concessions and lands, the protection of the surface, the security of works, the withdrawal of concessions, &c.; they visit mines, either themselves or by means of special agents who are under them, as often as possible; if they meet with things that are going wrong in matters in which the authorities can legally interfere, they draw the attention of the miners to the fact, and call upon them to remedy the error at once; if the matter is more grave they report to the prefect, that he may indicate to the miners what the official regulations on that point are, and have matters put right. If they become aware of infringements of these special laws, regulations, or injunctions, they draw up *procès verbaux* on the case, and transmit these to the courts, in order that the latter may be in a position to fine the offenders.

The Minister of Public Works is assisted by a technical committee, called the General Mining Council, composed of the oldest members of the mining corporation; this council is called upon to advise the minister in the majority of cases in which the latter is called upon to give a decision.

2. Besides their intervention in whatever relates to the constitution of mining property, the authorities whose organisation has just been explained must watch over the mining works, and may interpose in regulating those works either from a technical or an economical point of view. From an economical point of view, the authorities may only interpose in the solitary case which has been examined above (§ II., 3 c.), when the works are restrained or suspended without legitimate cause in such a way as to endanger public safety or the requirements of consumers.

From a technical point of view, they can intervene to guarantee the preservation of the mine, the protection of the surface, the security of the individuals engaged in the works.

In view of the preservation of the mine, the authorities may order the miner to do this, or not to do that, for the purpose of guarding the mine against inundation, sinking-in, or fire.

Enough has been said in § V., 2., with regard to the protection of the surface.

So far as regards the security of persons employed, the authorities have the right, either in the general agency of the works, or in the buildings and tools, to order this to be done, and that not to be done, if by such action they believe that personal accidents can be avoided.

In this triplicity of ideas the principle is that, outside those general rules which it has not been possible to insert in definite regulations—and such rules are rare in France at present—the concessionnaire, acting in the fullness of his liberty as a proprietor, acts and conducts his work as he likes, simply stating his intended procedure beforehand to the authorities, but without having to ask them for or obtain from them a previous authorisation; it is ultimately, by means of veto, prohibition, or injunction, that the authorities intervene when they deem it desirable to do so.

If the concessionnaire does not obey the injunctions which are indicated to him by the authorities, the latter may force him to do so, besides the fines which the courts may be desired to inflict upon him. They may also carry out themselves the works which they had ordered him to carry out, and if the concessionnaire does not repay their expenses, they may pronounce the concession void and sell the mine, as is described in § II. 3 (b).

Appendix
C. III.FRANCE.
Report by
Mons.
Aguillon.

Appendix
C. III.

FRANCE.
Report by
Mons.
Aguillon.

XII.—The effect of the French system.

It is unanimously admitted that fertile results follow the absolute distinction which exists between surface property and the working right of mines. In a country where property is so minutely subdivided as it is in France the reasonable and active working of mines would be impossible on any other system.

The right which the authorities retain of themselves settling the boundaries of a concession has been generally held of a nature to facilitate and assist the act of mining by giving rational limits to it, and by enabling it to become considerable enough to be remunerative. There are, however, inconveniences to be apprehended if the authorities award too amply extended limits, the effect of which may merely be to make certain enterprises extraordinarily prosperous, to the injury of the entire production, and therefore to the detriment of public interests.

Much more discussion has been given to the sovereign powers granted to the Government to decide whether there shall be a concession, and in favour of whom. It appears that the majority inclines to believe that this ancient system of royal rights presents at the present day, from many points of view, as much inconvenience as it does advantage. We are tending to prefer to it a system by which the law itself would fix the conditions of the granting of concessions and the circumstances or the rights in accordance with which the preference between rival demands would be settled. The majority wish that in principle the mine should be given to its discoverer, or to the party, at least, whom the law should consider the discoverer. Some wish that the mines should be put up to auction.

In any case, with very rare exceptions, it is allowed that the continuity of concessions should be considered as a principle not less vital than that of the distinction between property above and below ground. It may be thought by some, although surely by very few, that, on account of the advantages which result from the limited duration of railways, in spite of the difference between the working of railways and that of mines, it would be possible, instead of granting the latter in perpetuity from the first, to grant them originally for a length of time sufficient, in case of failure, for the State to take possession and readjudge the concession to its own profit for a fresh period.

2. The annual tax to be paid to the State according to the net revenue seems to be very satisfactory in theory. In practice the verification produces very unpleasant relations between the miners and the authorities. The great majority of the former would be glad to give up this system for one which might not look so good in theory, but which would be more simple and much less annoying; that is to say, the payment of a tax per ton extracted, whatever the net revenue might be. For coal it would be enough if the tax were from 1*d.* to 1½*d.* per ton, to give a total result equal to the existing tax on revenue. This transformation of a tax on net revenue into a tax on raw produce would not, perhaps, be equally widely wished for if it were a question of duties of a greater relative importance.

L. AGUILLON,

Chief Engineer of Mines,
Professor of Legislation at the Upper
School of Mines.

Paris, 28th May 1891.

2.

6, Old Palace Yard, S.W.,
June 4, 1891.

SIR, I HAVE the honour to acknowledge the receipt of your letter of the 2nd instant, transmitting a despatch with enclosures, from Her Majesty's representative at Paris, and asking for the views of the Commission with regard to the attendance before them of the two gentlemen who have kindly expressed their willingness to give oral evidence upon the subject of this inquiry. I am directed by the Earl of Northbrook to request that the thanks of the Commission may be conveyed to Sir Joseph Crowe for his revision of the notes as to Mining Laws in France, returned to me in your letter, and also to Monsieur Raoul Duval and Monsieur Aguillon for the pains which they have taken to furnish the Commissioners with the information they desire to obtain and for the cordial way in which they have offered their further assistance.

I am also directed to say that after considering the replies which have been made to the memorandum prepared by the Commissioners, a further communication shall be sent as to whether it is thought necessary to

accept the offer of Monsieur Raoul Duval and Monsieur Aguillon to come to London to give further information.

I have, &c.

(Signed) HERBERT LYON,

The Right Hon. Secretary,
Sir James Fergusson, Bart.,
&c. &c.

3.

6, Old Palace Yard, S.W.,
June 10, 1891.

SIR, WITH reference to the memorandum upon Mining Rents and Royalties in France transmitted in your letter of the 2nd instant, which has been prepared by Monsieur Aguillon for the use of this Commission, I am directed to request that the following information may be asked for from Monsieur Aguillon to make his paper quite clear. It appears that in order to obtain powers to cross lands outside the limits of a concession the object must be declared to be of "public utility," and the demand is governed by the same law as that which governs public works undertaken by the State. The Commissioners would wish to know what law is now in force in France on the subject, and what course must be followed both for initiating the proceedings, and for fixing the price to be paid for the land taken in case of dispute.

I am further directed to request on behalf of the Commissioners that Monsieur Aguillon may be complimented upon the clearness and completeness of the information he has furnished.

I have, &c.

(Signed) HERBERT LYON,

The Right Hon. Secretary,
Sir James Fergusson, Bart.,
&c. &c.

4.

SIR, Foreign Office, June 24, 1891.

WITH reference to your letter of the 4th instant, I am directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties, the accompanying further Report, as marked in the margin, by Monsieur Aguillon on mining rents in France.

I am, &c.

(Signed) JAMES FERGUSSON.

The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir James Fergusson's letter of
June 24th, 1891.

Paris, June 19, 1891.

MONSIEUR L'AMBAassadeUR,

IN reply to the wish which your Excellency has done me the favour to express by your letter of the 12th inst., on behalf of the Royal Commission on Mining Royalties, I have the honour to address to your Excellency an additional note to the reply which I have prepared to the Memorandum drawn up by the Commission. This note relates to the proceedings concerning the work carried on by a concessionaire of a mine outside the surroundings of his concession. I have herewith enclosed three decrees which the Commission will perhaps consult with interest.

I am happy to take this opportunity of renewing, through the intervention of your Excellency, to the Commission my offer of every assistance in communicating all the information which it is thought necessary to ask of me concerning France.

I have seen somewhere that the Commission has presented a first report to Parliament. If this is so, and I am not asking too much of your Excellency, I should be very grateful if a copy could kindly be put within my reach, and also, later on, the reports and documents which the Commission shall agree in like manner to publish.

I have the honour to be,

with profound respect,

Monsieur l'Ambassadeur,

Your most humble servant,

(Signed) E. AGUILLON.

To His Excellency Lord Lytton,
H.M. Ambassador.

Enclosure in Mons. Aguillon's letter of June 19th, 1891.

NOTE.—On the Conditions under which a Mining Concessionnaire can, in France, carry out Works outside his Concession.

When a mining concessionnaire in France wishes to carry on, outside the circumference of his concession, works which, by their nature and their object, belong to the class of those which it is legally possible for him to carry on, he can only commence them after having asked for and obtained a declaration of public utility, and after having acquired lands by means of expropriation on account of public utility, in a word, after having acted as the State does when it undertakes public works.

The rules to be applied in this last case are laid down by the law of 3rd May 1841, on expropriation on account of public utility, completed by the Royal Order of 18th February 1834, relative to the inquiry which should precede the declaration of public utility. In accordance with these texts, combined, in the case of mines, with the 44th Article of the Mining Law of the 21st April 1810–27th July 1880, the formalities to be gone through before proceeding to the carrying out of works such as those in question may, definitely, be resumed as follows:—

The concessionnaire addresses a request to the local authorities (the prefect of the department), appending to it the scheme of the works to be carried out (plans and profiles). This request is submitted to a public inquiry in all the interested localities. This inquiry deals with the general outline of the works, their general advantages and disadvantages, in a word, with the scheme treated as a whole. After this inquiry is completed the Government, acting by means of a decree, without its being needful to refer it to Parliament, decides, in a sovereign manner, whether the works are or are not to be declared of public utility. At the same time that it gives this judgment as to public utility, the decision of the Government fixes, if necessary, the general outline and conditions in accordance with which the work must be carried out.

To the present note are affixed, as an example, three decrees drawn up in the most ordinary form, to wit:—

1. Decree of the 17th August 1888 (Mines of Blanzay) for a railway uniting the mine to a railroad or a canal (in this instance a canal).
2. Decree of 28th February 1889 (Coal works of the Bouches-des-Rhône) for a gallery of outlet to the sea, serving also as a gallery of circulation.
3. Decree of the 8th October 1889 (Society of the Houme), gallery exclusively of outlet to a stream. (See Decrees below.)

Provided with this decision of the Government, the concessionnaire proceeds, in conformity with the clauses of the law of the 3rd of May 1841, to a new inquiry, known as the *enquête parcellaire*, or by title II. of the law of the 3rd of May 1841. This inquiry, which is made in each commune, has for its object to warn each proprietor individually of the contents and the situation of the lands belonging to him which the concessionnaire has need of to carry out the work which he has been authorised to execute. This inquiry has also for its object the pointing out how the roads which may be intercepted will take new directions, and to show that the surface waters will find an outlet.

If any private complaints are made in the course of this inquiry tending to lead to modifications in detail of the plans of the concessionnaire, either in the command of the lands indicated by him or in any other way, the authorities judge whether there is any manner by which the plan can be modified. Finally, the prefect delivers what is called the *arrêté de cessabilité*, that is to say, a decision laying down the frontiers of the lands which the concessionnaire is definitely to acquire.

The concessionnaire then causes the expropriation of these lands to be declared by the court of the arrondissement; this is a decision which the court is bound to grant without going into any fresh discussion of the rights of the case, so long as it is proved that all the formalities prescribed by the law have been faithfully observed.

The concessionnaire finally calls upon the jury of expropriation to meet in convocation; the members of this body are selected from among the landlords, tradesmen, or industrials of the neighbourhood. This jury is called upon to fix at its discretion the indemnities due either to the proprietor of the land for the cession of his property or to tenants, farmers, lodgers, &c., for their immediate departure. The jury may, without any appeal being possible, award to each person interested whatever indemnities it pleases, provided that it keeps between the offer of the expropriator and the claim of the expropriated party.

As soon as the indemnity thus fixed has been paid, the concessionnaire may occupy the lands and buildings expropriated; for it should be remarked that, in all the course of this procedure, no difference is made between properties built or not built.

Two remarks remain to be made in order to give precision to the nature and the range of the rights and the obligations of the concessionnaire.

Although it has been undertaken and carried out under the conditions stipulated for State works, that is to say, for public works, the work is and will remain the private property of the concessionnaire; it will be an inseparable dependency of the concession for which it has been carried out, as much as any building, pit, or gallery, constructed within the circumference for the working of the mine.

There is this single difference, however, inside the circumference of the concession. The authorities, by virtue of their right of surveillance over mines, cannot and do not intervene, except during or after the execution of the works, if they have reason to believe them to be a source of danger to the surface or to the workmen; the concessionnaire has no need to obtain their authorisation beforehand, or to have his scheme approved of, as he is obliged to do in the case of works to be executed outside the concession.

E. AGUILLON,
Chief Mining Engineer,
Professor in the Upper National
School of Mines.

I.

DECREE declaring the CONSTRUCTION of a RAILWAY to be of PUBLIC UTILITY which is intended to connect the SAINT-LOUIS PITS of the MINES of BLANZY with the place called PORT-MONTCEAU, at MONTCEAU-LES-MINES.

Articles of the Concession annexed.

Paris, 14th September 1888.

The President of the French Republic, in accordance with the Report of the Minister of Public Works, having regard to the application made on 2nd August 1887 by the company working the collieries of Blanzay for authority to construct a railway intended to connect the Saint-Louis pits with the place called Port-Montceau, at Montceau-les-Mines, where the handling, loading, and embarkation of the coals takes place; and, having regard to the draft scheme presented in support of this application, and particularly the plan by the chief mining engineer in charge of the mineral district of Chalons-sur-Saône, dated the 16th December 1887; and having regard to the documents of the Inquiry of Public Utility, to which the above-mentioned plan has been submitted, and particularly the advice of the Commission of Inquiry of the 25th November 1887; and having regard to the letter of the Prefect of Saône-et-Loire of the 19th December 1887; and having regard to the discussion in the Chamber of Commerce of Chalons-sur-Saône, dated the 13th July 1888; and having regard to the conditions of the concession decreed by the Minister of Public Works, 16th August 1888; and having regard to the law of the 21st April 1810 relative to mines, modified by the law of the 27th July 1880, and particularly Article 44; and having regard to the law of the 3rd May 1841 relative to expropriation on the grounds of public utility, and the regulation of 18th February 1834; and having regard to Articles 20 and 22 of the law of 11th June 1880.

The Council of State having been heard,—

Decrees:

ARTICLE 1.—The construction of a railway intended to connect the Saint-Louis pits of the mines of Blanzay with the place called Port-Montceau, at Montceau-les-Mines, where the handling, loading, and embarkation of the coals takes place, is declared to be of public utility. The present declaration of public utility will be considered null and void if the necessary expropriation for the construction of the railway is not effected within 18 months from the date of the present decree.

ARTICLE 2.—The mining company of Blanzay are authorised to construct this railway at their own cost, risk, and peril, following the route marked on the above-mentioned plan, and in conformity with the clauses and conditions of the concession likewise referred to above. The above-mentioned plan and Articles of the Concession shall be annexed to the present decree.

Appendix
C. III.

FRANCE.
Report by
Mons.
Aguillon.

Appendix
C. III.
FRANCE.
Report by
Mons.
Aguillon.

ARTICLE 3.—The Minister of Public Works is charged with the execution of the present decree, which will be inserted in the *Journal Officiel* and the *Bulletin des Lois*.

Given at Fontainebleau, 17th August 1888.

(Signed) CARNOT.

By the President of the Republic:

The Minister of Public Works,
D. MONTAND.

RAILWAY of the Mining Company of Blanzay between the Saint-Louis pits and the place called Port Montceau.

ARTICLES OF THE CONCESSION.

PART I.

DIRECTION AND CONSTRUCTION.

Route.

ARTICLE 1.—The railway which is the subject of the present concession shall start from the Saint-Louis pits of the mines of Blanzay, and terminate at the place called Port-Montceau, where the handling, loading, and embarkation of the coals takes place.

It shall be constructed in conformity with the plan dated 20th July 1887, which has been presented by the mining company of Blanzay.

Approval of the Working Schemes.

ARTICLE 2.—No work shall be undertaken for the construction of the railway and its annexes, except with the authority of the Administration. For this purpose a duplicate copy of all the plans of the works to be executed shall be drawn up, and submitted for the approval of the Minister, who, if necessary, shall make such modifications as he may see fit. One of these copies shall be sent to the company with the signature of the Minister, the other shall be placed amongst the archives of the Administration.

Before, as well as during the construction, the company shall have the power to propose such modifications in the approved plans as they shall deem advisable; but these modifications can only be carried out provided that the approval of the Administration has been obtained.

Execution of the Works.

ARTICLE 3.—The company shall only use in the execution of the works materials of good quality; they shall conform to all rules of the art of construction, in order to secure perfectly sound work.

All aqueducts, arches, bridges, and viaducts intended to meet the various watercourses and public or private roads shall be built of masonry or iron, except in such cases as may be specially permitted by the Administration.

Boundaries.

ARTICLE 4.—The railway shall be separated from the properties adjacent by walls, fences, or any other boundaries of which the formation and position shall be sanctioned by the Prefect. The company may, by virtue of Articles 20 and 22 of the Law of the 10th June 1880, be relieved from placing boundaries along all or part of the road, but they must furnish special justification in order to be relieved from providing them—

- 1st. Where passing through inhabited localities.
- 2nd. In places adjoining public roads.
- 3rd. Ten yards at least on either side of level crossings and stations.

Barriers and Watch-houses at Level Crossings.

ARTICLE 5.—The Administration shall determine, at the proposal of the company, the kind of barriers to be placed at level crossings, as well as of the shelters or watch-houses to be established.

The company may be relieved from establishing guard-houses, shelters, or even from placing barriers at the crossing of frequented roads.

Control and Supervision of the Works.

ARTICLE 6.—The works shall be executed under the control and supervision of the Administration. They shall be conducted in such a manner as to do the least possible injury to the freedom and safety of traffic. The workshops opening on to public roads shall be lit and watched during the night.

Taking over the Works.

ARTICLE 7.—When the works are completed, they shall be inspected by one or more commissioners selected by the Administration. In accordance with the report of this

inspection, the Administration shall, if necessary, authorise the commencement of traffic on the permanent way.

Delimitation and Cadastral Plan.

ARTICLE 8.—Immediately on the completion of the works, and, at the latest, six months after the commencement of operations on each section of the line, the company shall draw up at their own cost, in the presence of the parties interested, a settlement of boundaries with each neighbouring land-owner, in the presence of a representative of the Administration, as well as a cadastral plan of the railway and of its annexes. They shall also draw up at their own cost, and in the presence of a representative of the Administration, a descriptive statement of all the works of construction which shall have been executed, accompanied by a map and numbered drawings of all the works. A duly certified copy of the projects of delimitation, of the cadastral plan, of the descriptive statement, and of the map shall be drawn up at the expense of the concessionnaires and deposited amongst the archives of the Prefecture.

The lands acquired by the concessionnaires subsequent to the delimitation, in compliance with the requirements of the working, and which for that reason shall become an integral part of the railway, shall, so soon as they are acquired, necessitate supplementary delimitations, and shall be added to the cadastral plan; in addition, all works of construction executed subsequent to the publication of the map shall be added thereto.

PART II.

MAINTENANCE AND WORKING.

Maintenance.

ARTICLE 9.—The railway and all its annexes shall be maintained in good repair to ensure facility and security for traffic.

If, through negligence in its maintenance, or for any other reason, the working should appear dangerous, the Minister shall have the power to suspend the traffic until the line has been repaired, and every cause of danger has disappeared. In case the freedom or security of traffic on the public roads, as well as the free flow of water, should be interrupted, the Administration shall have the power to deal with the matter officially at the expense of the company. The amount of the advances made shall be recovered by means of special taxation levied by express authority of the Prefect (rôles).

Watchmen.

ARTICLE 10.—The company shall employ at their own cost, whenever the necessity shall have been recognised by the Administration, watchmen in sufficient numbers to guarantee the safety of the passage of trains on the permanent way, as well as of the traffic at the point where the railway crosses at the same level public paths or roads.

Measures of Precaution.

ARTICLE 11.—The company shall take all prescribed measures in order to guarantee the safety of the workings.

PART III.

Sundry Clauses.

ARTICLE 12.—If the Government, the department, or the communes shall order or authorise the construction of national roads, departmental or parochial, of railways or of canals, which shall cross the line, the company shall have no power to oppose these works, but all necessary precautions shall be taken to avoid any obstacle to the construction or the service of the railroad, and any expense to the company.

ARTICLE 13.—The company is prohibited from establishing on the permanent way a public transport service for passengers or goods.

ARTICLE 14.—The cost of visit, supervision, and inspection of the works and supervision of the workings shall be borne by the company, and the amount shall be recovered as in the case of public taxes.

ARTICLE 15.—The cost of the registration of the present Articles of the Concession shall be borne by the company.

Seen for acceptance,

Montceau-les-Mines, Feb. 20, 1888.

J. CHAGOT.

Approved,

Paris, Aug 16, 1888.

Minister of Public Works,

D. MONTAND.

* The "rôle" in the case of a mining concession is a list of persons in the commune liable to the payment of taxation either as "patente" (industrial tax), or as "foncière" (land or house). These taxes can only be levied by authority of the Prefect, who by sanctioning them with his signature gives them validity (des rend exécutoires).

Appendix
C. III.
FRANCE.
Report by
Mons.
Aguillon.

individuals in conformity with the undertaking entered into in their names, dated 3rd February 1889.

ART. 4.—The Minister of Public Works is charged with the execution of the present decree, which shall be inserted in the "*Journal Officiel*" and the "*Bulletin des Lois*."

Done at Paris, 28th February 1889.

By the President of the Republic,

CARNOT.

The Minister of Public Works,

YVES GUYOT.

ARTICLES OF THE CONCESSION.

Direction and Description of the Works.

ART. 1.—The works, which are the subject of the present (conditions of the) concession, include—

1. A subterranean tunnel starting from the concession of the lignite mines of Gardanne, and terminating at a point situated on the land belonging to the Coal Company of Bouches du Rhône, north-east of Cape Pinède, near Madrague Cove, Commune of Marseilles.
2. An outlet conduit, starting from the mouth of the subterranean tunnel, and terminating at the sea in Madrague Cove, north of Cape Pinède.
3. A permanent way laid down in the subterranean tunnel, and extending above ground to the places of loading and embarkation of the coal.
4. At the mouth of the tunnel the additional buildings necessary for the boring operations, and the receipt, handling, working, and sale of the products of the works.

The course of the tunnel and conduit shall be in conformity with the general direction indicated on the complete plan, presented on October 19, 1880, by the Coal Company of Bouches du Rhône.

The extensions of the permanent way and the buildings appertaining thereto shall be constructed on that part of the land which has been reclaimed from the sea in Madrague Cove, north of Cape Pinède, which shall be limited, in accordance with the plan dated October 25, 1887, annexed to the decree; on the west by the line of the shore; on the south-west by a straight line passing 100 yards in rear of the extended alignment of the angle of the wharf on the Bassin National; on the south and east by the former limit of the shore; and on the north by the Avenue Mouren. The land thus delineated shall not include any portion of the actual military position of the battery of Cape Pinède.

Approval of the Schemes.

ART. 2.—No works, having for their object the construction of the tunnel, the permanent way, and their annexes, shall be undertaken without the authorisation of the Administration.

With this object, the schemes of all the works to be constructed shall be drawn up in duplicate and submitted for the approval of the Minister of Public Works, who shall make such modifications as he may see fit, when the usual formalities in the case of mixed works have been observed.

One of the duplicate copies of the detailed schemes shall be returned to the Company, approved by the Minister; the other shall be kept amongst the archives of the Administration.

Before, as well as during the construction, the Company shall be empowered to suggest such modifications in the approved schemes as they may think fit; but these modifications shall only be carried out with the approval of the Administration.

Construction of the Works.

ART. 3.—The Company shall use only materials of the best quality in the construction of their works. They shall conform to all the rules of the art of construction in order to obtain perfectly sound work, and to ensure the tunnel being properly supported in those portions which shall be selected by the Administration, as the result of an inspection (jaugeages) carried out under its control at the expense of the Company.

Control and Supervision of the Works.

ART. 4.—The works shall be carried on under the control and supervision of the Administration.

2.

THE PRESIDENT OF THE FRENCH REPUBLIC ON THE REPORT OF THE MINISTER OF PUBLIC WORKS.

Having regard to the application presented on the 19th October 1880, by the Coal Company, Limited, of Bouches-sur-Rhône, to obtain a declaration of public utility for a subterranean tunnel destined to connect the concession of mines of lignite of Gardanne with the sea, near Marseilles.

Having regard to the draft scheme produced in support of this application, especially the plan annexed thereto, dated 19th October 1880.

Having regard to the report of the mixed Commission to whom this draft scheme has been submitted.

Having regard to the opinion of the mixed Commission of Public Works, dated 7th March 1887.

Having regard to the letter of the Minister of Marine of 2nd April 1887, that of the Minister for War of the 16th of the same month, and that of the Minister of Finance of 13th May.

Having regard to the documents of the Inquiry as to Public Utility, to which the above-mentioned draft scheme has been submitted, and especially the opinion of the Commission of Inquiry of 11th August 1884.

Having regard to the declaration presented by various communes interested in the matter, by certain inhabitants or groups of inhabitants of these communes, and by M. Miquet.

Having regard to the reports of the mining engineers of 14th October, 11th November 1882, 16th October, 18th November 1884, 4th December 1885, and 13th January 1886.

Having regard to the reports of the naval engineers of 7th and 19th July 1886.

Having regard to the letter of the Prefect of 4th February 1886.

Having regard to the documents relative to the preparation of the drafts of the decree, and the articles of the concession, and especially the plan of the property to be expropriated, drawn up by the engineers, dated 25th November 1887.

Having regard to the opinion of the Council-General for Bridges and Roads of 29th January 1883 and 23rd December 1886.

Having regard to the opinion of the Council-General of Mines of 6th April 1883, 2nd April 1886, and 24th July 1888.

Having regard to the conditions of the concession decreed by the Minister of Public Works, 28th February, 1889.

Having regard to the engagement undertaken in the name of the Coal Company of Bouches-sur-Rhône, dated 3rd February 1889.

Having regard to the law of 21st April 1810, respecting mines, modified by the law of 27th July 1880, and especially Articles 43 and 44.

Having regard to the law of 3rd May 1841, respecting expropriation in the cause of public utility, and the regulation of 18th February 1834.

The Council of State having been heard,

Decrees:

ART. 1.—The construction of a subterranean tunnel and its annexes, between the concession of the lignite mines of Gardanne and the sea, intended to drain the lignite mines belonging to the Coal Company of Bouches du Rhône in the basin of Fuveau, and the establishment of a permanent way, is declared to be of public utility.

The present declaration of public utility shall be considered null and void if the expropriation necessary to the execution of the works is not completed within three years from the date of the present decree.

ART. 2.—The Coal Company is authorized to construct the tunnel and its annexes at its own cost, risk, and peril, in accordance with the general indications of the above-mentioned plans, dated 19th October 1880, and 25th November 1887, and with conformity to the clauses and conditions of the concession also referred to above.

The said conditions of the concession and the plans, dated 19th October 1880, and 25th November 1887, shall be annexed to the present decree.

ART. 3.—If the boring the subterranean tunnel shall interfere with the systems of springs, or the course of the surface waters to the detriment of the communities or individuals using these waters, the Coal Company of Bouches du Rhône shall indemnify these communities and

*Geological Sketch-Map.*Appendix
C. III.FRANCE.
Report by
Mons.
Aguillon.

ART. 5.—The Company shall furnish, in proportion to the advancement of the boring operations, at their own cost, and under the control of the Administration, a geological sketch-map of the ground traversed, indicating any water arteries which may be met with.

A duly certified copy of this geological sketch-map shall be furnished to the Administration and published at the end of each year, during the whole time that the boring operations are in process of execution.

Maintenance.

ART. 6.—The tunnel, the permanent way, and their annexes shall be always kept in good repair.

Modification of Measures taken for the Protection of the Neighbourhood.

ART. 7.—If the construction of the tunnel and its attendant works renders necessary a modification or increase of the measures taken for the protection of the neighbourhood, the expenses resulting therefrom shall be borne by the Company.

Deposits in the Sea.

ART. 8.—The Company shall take precautions to prevent the drainage of the waters of the tunnel into the sea from occasioning any inconvenience to navigation, or from forming deposits in that portion of the sea between the large breakwater (grande jetée), its extension to the north, and the actual shore, and this, notwithstanding the construction of any works which the State may carry out at this point.

With this object, they shall carry out, at their own expense, all the necessary works which the Administration may require; they shall, at their own expense, modify the works which they may have constructed in whatever way the Administration shall see fit, and the establishment of new works in Madrague Cove shall justify, whether by alterations in the works already existing, or for any other reason of public interest.

If, notwithstanding these measures, the operations of the Company shall cause deposits at any point on the surface above indicated, they shall remove these deposits at their own expense, under the conditions imposed by the Administration.

Means of Access.

ART. 9.—A public road, practicable for carriages, shall be made at the cost of the Company to ensure access to the properties adjacent to the land to be occupied by the Company at the mouth of the tunnel. This road shall skirt the southern and eastern boundaries of the said property of the Company from the line of coast to the limits of the land at present belonging to the Company.

It shall be constructed on the land acquired by the Company, and shall not encroach on any part of the present military position of the battery of Cape Ruede. The course, and transverse and longitudinal designs of this road shall be submitted to examination by Mixed Commissions, and the Administration shall require, if necessary, such modifications as may be deemed advisable.

Fiscal Service.

ART. 10.—The land expropriated at the mouth of the tunnel shall be accessible day and night to the officials of Customs and indirect taxation.

Abandonment of the Works.—Neglect of Maintenance.

ART. 11.—The works shall not be, either wholly or partially, abandoned without the authorisation of the Minister, who shall take all necessary measures of control, security, and preservation.

In the event of public safety and the free flow of water being endangered by neglect of maintenance, or for any other reason, the Administration shall deal officially with the matter at the expense of the Company.

The amount of the advances made shall be recovered by means of instalments (rôles), which the Prefect shall make payable.

Extensions and Branches.

ART. 12.—If the Government should declare other subterranean tunnels to be of public utility, either with or without railways, and forming an extension of the tunnel which is the subject of the present Articles of Concession, or branching therefrom, the Company shall offer no opposition to these branches or extensions.

Concessionnaires of mines who shall open subterranean branch or extension tunnels shall be empowered to make

use of the tunnel belonging to the Coal Company of Bouches du Rhône for the drainage of their mines and the transport of the products of their operations. The monetary conditions of their common use and the transport tariffs shall be fixed by decree, the Company and the said concessionnaires having been heard.

Delay in Execution.

ART. 13.—The boring of the tunnel as far as the Gardanne Concession shall be completed within 20 years, and the appropriation of land expropriated for the reception of the products conveyed by this tunnel, specified in Art. 1 of the present Articles of the Concession, shall be effected within the 10 years following.

In default of the completion of the Company's works within these periods, and in default of the fulfilment of the various obligations imposed on the Company by the present Articles of the Concession, the State shall have the right to retake possession of the land expropriated for the same price at which it was acquired.

Cost of Control.

ART. 14.—The costs of inspection and supervision of the works shall be borne by the Company, and the amount shall be recovered as in the case of public taxes.

Registry.

ART. 15.—The costs of registering the present Articles of Concession shall be borne by the Company.

Seen and approved,

Marseilles, February 3rd, 1889.

The Administrating Director of the
Coal Company, Limited, of
Bouches du Rhône,
BIVER.

Approved,

Paris, February 28th, 1889.

The Minister of Public Works,

YVES GUYOT.

3.

DECREE declaring the ESTABLISHMENT of a SUBTERRANEAN TUNNEL connecting the IRON MINES of VEYRAS with the RIVER d'OUVÈGE to be of PUBLIC UTILITY.

The President of the French Republic on the Report of the Minister of Public Works.

Having regard to the petition presented on the 19th April 1887, the Foundry and Smelting Company of l'Horme, praying for a declaration of public utility for the establishment of a subterranean drainage tunnel, intended to connect the iron mines of Veyras, of which they are the concessionnaires, with the river d'Ouvège at a point above the village of Coux.

Having regard to the draft scheme presented in support of this petition, the plans and sections annexed thereto and especially the general plan of the direction of the tunnel, endorsed on May 25, 1887, by the chief mining engineer in charge of the mineralogical arrondissement of Calais.

Having regard to the documents of the inquiry as to public utility to which the above-mentioned draft scheme has been submitted, and especially the opinion of the Commission of Inquiry dated December 5 and 15, 1887.

Having regard to the opinion of the Chamber of Commerce of Arbenas of October 14, 1887.

Having regard to the reports of the mining engineers of January 18 and 21, 1888, the reports of the engineers of highways and bridges of March 27 and 28, 1888, and the opinion of the Prefect of Ardèche of February 1, 1888.

Having regard to the opinion of the Council General of Mines of July 26, 1888.

Having regard to the conditions of the concession decreed by the Minister of Public Works, October 7, 1889.

Having regard to the engagement entered into in the name of the Foundry and Smelting Company of l'Horme in their letter of July 9, 1889.

Having regard to the Ordinance of April 22, 1843, granting the concession to the iron mines of Veyras.

Having regard to Art. 44 of the law of April 22, 1810, modified by the law of July 27, 1880,

Having regard to the law of May 3, 1841, respecting expropriation on the ground of public utility, and the regulation of February 18, 1834.

The Council of State having been heard.

Decrees:

ART. 1. The construction of a subterranean drainage tunnel connecting the iron mines of Veyras with the river d'Ouvège at a point above the village of Coux is declared to be of public utility.

The present declaration of public utility shall be considered null and void if the expropriation necessary for the construction of the tunnel be not effected within two years from the date of the present decree.

ART. 2. The Iron Company of l'Horme is authorised to construct this tunnel, following the general directions of the course indicated on the above-mentioned plan, annexed to the present decree, and in conformity with the clauses and conditions of the Articles of the Concession (cahier des charges) also annexed.

ART. 3. If the boring of the subterranean tunnel affect the systems of springs or surface watercourses, to the detriment of the communities and individuals making use of these waters, the Iron Company of l'Horme shall indemnify those communities and individuals in conformity with the engagement entered into in their name in a letter dated the 9th July, 1889, above referred to.

ART. 4. The Minister of Public Works is charged with the execution of the present decree, which shall be inserted in the "Journal Officiel" and the "Bulletin des Lois."

(Signed) CARNOT.

Done at Paris, the 8th day of Oct. 1889,

By the President of the French Republic.

The Minister of Public Works,

YVES GUYOT.

ARTICLES OF CONCESSION (CAHIER DES CHARGES).

ART. 1. The tunnel which is the subject of the present Articles of Concession, shall start from the concession of the Veyras iron mines, and lead into the bed of the Ouvège, a little above the village of Coux, the whole following a course in conformity with the indications on the complete plan annexed to the decree of declaration of public utility. This tunnel shall effect the drainage of the iron mines of the concession of Veyras belonging to the Iron Company of l'Horme.

ART. 2. No works for the construction of the tunnel and its annexes shall be undertaken without the authorisation of the Administration. With this object the schemes of all the works to be executed shall be drawn up in duplicate and submitted to the approval of the Minister of Public Works, who shall, if necessary, make such modifications as he may think fit.

One of these copies shall be returned to the Company of l'Horme, concessionnaire of the Veyras mines, with the indorsement of the Minister; the other shall remain amongst the archives of the Administration.

Before, as well as during the construction, the Company shall be empowered to propose such modifications in the approved plans as they may consider right; but these modifications shall only be carried out after having been approved by the Administration.

ART. 3. The Company shall only use materials of good quality in the construction of the works. They shall conform with all the rules of the art of construction, so as to obtain perfectly sound work, and ensure the proper support of the tunnel in such parts as shall be selected by the Administration as the result of an inspection carried out under its control at the expense of the Company.

They shall also, in the event of fissures being formed in the bed of the Ouvège extending to the tunnel, and causing a partial or total disappearance of the waters of the river, carry out all necessary embanking works for damming the fissures and preventing the waste.

ART. 4. The Company shall furnish, in proportion to the progress of the boring works, a geological sketch of the ground traversed, indicating any water arteries which may be met with.

A copy, duly certified, of the geological sketch shall be furnished to the Administration, and published at the end of each year during the whole time that the boring operations are in process of execution.

ART. 5. The works shall be completed and maintained in perfect order by the Concessionary Company of the Veyras mines, under the control and superintendence of the Administration.

ART. 6. The Company shall take proper precautions to prevent the outflow of the waters from the tunnel forming deposits in the river Ouvège, and rendering the water impure.

They shall carry out, at their own expense, all works which the Administration shall consider necessary to this end.

ART. 7. The tunnel and its annexes shall not be wholly or partly abandoned, except with the authorisation of the Minister, who shall take all necessary measures of control, security, and preservation. In case the public safety or the free flow of water shall be endangered by neglect of maintenance or for any other reason, the Administration shall deal officially with the matter at the expense of the Company.

ART. 8. The Concessionary Company of the Veyras mines shall make no opposition to any use which other concessionnaires of mines shall make of their tunnel as an outlet for their waters, nor to the construction of branch or extension tunnels, which shall in future be declared to be of public utility. The monetary conditions for the common use of the tunnel shall be fixed by decree, the Company and the other concessionnaires having been heard.

ART. 9. The cost of inspection and superintendence of the works shall be borne by the Company.

ART. 10. The cost of registering the present Articles of Concession shall be borne by the Company.

Decreed by the Minister of Public Works,

Paris, Oct. 7, 1889.

YVES GUYOT.

4.

Handed in by Mons. Raoul Duval (Q. 19,384).

Translation.

COMPARATIVE CONDITION OF THE COAL INDUSTRY IN THE DEPARTMENTS OF THE NORD AND PAS-DE-CALAIS DURING THE YEARS 1889 AND 1890.

EXTRACTS from the REPORTS of the INSPECTORS OF MINES to the CONSEIL-GÉNÉRAL, handed in by MONSIEUR RAOUL DUVAL.

PITS.

	1889.	1890.
In working—		
Nord	42	42
Pas-de-Calais	60	62
Total	102	104
In preparation—		
Nord	—	—
Pas-de-Calais	5	5
Total	5	5
Production by pit in working—		
Nord	112,367	122,256
Pas-de-Calais	143,568	146,396
Total	130,711	136,647

PRODUCTION.

	1889.	1890.
	Tons.	Tons.
Nord	4,719,423	5,134,774
Pas-de-Calais	8,614,119	9,076,579
Total	13,333,542	14,211,353
Increase in 1890 over 1889—		
Nord	415,351	or 8·8 %
Pas-de-Calais	462,460	or 5·3 %
Total increase	877,811	or 6·6 %

The two departments of the Nord and Pas-de-Calais produced—

In 1860	-	-	2,185,000 tons.
" 1870	-	-	4,313,000 "
" 1880	-	-	8,546,000 "
" 1889	-	-	13,334,000 "
" 1890	-	-	14,211,000 "

Appendix
C. III.FRANCE.
Comparative
condition of
the coal industry in the Departments of the Nord and Pas-de-Calais, 1889-1890.

PERSONS EMPLOYED.

	1889.	1890.
Underground workers—		
Nord - - - - -	13,966	15,251
Pas-de-Calais - - - -	25,485	28,435
Total - - - - -	39,481	43,686
Day workers—		
Nord - - - - -	3,868	4,323
Pas-de-Calais - - - -	7,984	1,336
Total - - - - -	11,852	12,659
Underground workers and day workers—		
Nord - - - - -	17,864	19,574
Pas-de-Calais - - - -	33,469	36,771
Total - - - - -	51,333	56,345

Increase in the number of workmen in 1890:—

Underground workers -	4,205 or 10·6 per cent
Day workers - - - - -	807 or 6·8 „
Total - - - - -	5,012 or 9·7 „

Proportion per cent. of workmen in—

	1889.	1890.
Underground workers	- 77 or 77·5	per cent.
Day workers	- 23 or 22·5	„
Total	- 100 or 100	„

In Belgium the proportion per cent. of workmen was in 1889:—

Underground workers -	75·6 per cent.
Day workers - - - - -	24·4 „
Total - - - - -	100 „

In the Pas-de-Calais there were in 1890:—

	Under-ground.	Over-ground.	Total.
Men - - - - -	25,360	6,656	32,016—87 %
Boys - - - - -	3,075	989	4,064—11 %
Women - - - - -	—	691	691—1·4 %
Total - - - - -	28,435	8,336	36,771—100 %

PRODUCTION PER EACH WORKMAN.

	1889.	1890.
Underground workers—		
Nord - - - - -	Tons. 337	Tons. 336
Pas-de-Calais - - - -	338	319
Total - - - - -	338	325
Underground workers and day workers—		
Nord - - - - -	265	262
Pas-de-Calais - - - -	257	247
Total - - - - -	260	252

In the Pas-de-Calais there were in 1890:—

Days' work, underground -	8,190,396
„ aboveground - - -	3,173,713
Total - - - - -	11,364,109

And the output per man for a day's work has been:—

Underground - - - - -	1,108 kiloms.
Underground and above-ground - - - - -	798 „

WAGES.

	1889.	1890.
Totals—		
Nord - - - - -	20,593,508	25,374,901
Pas-de-Calais - - - -	38,443,922	47,481,045
Total - - - - -	59,037,430	72,855,946
For each workman—		
Nord - - - - -	1.153	1.296
Pas-de-Calais - - - -	1.148	1.291
Total - - - - -	1.150	1.293
Per ton—		
Nord - - - - -	4.36	4.94
Pas-de-Calais - - - -	4.46	5.23
Total - - - - -	4.43	5.12

From the 16th October 1889, the wages of all the miners of the Department of the Nord and Pas-de-Calais were increased 10 per cent. A second increase of 10 per cent. was granted on the 16th August 1890.

In the Pas-de-Calais, the number of working days was—

	Under-ground.	Over-ground.	Total.
In 1887 - - - - -	6,489,170	2,255,213	8,744,383
„ 1888 - - - - -	6,880,961	2,382,653	9,263,614
„ 1889 - - - - -	7,455,430	2,513,721	9,969,151
„ 1890 - - - - -	8,190,396	3,173,713	11,364,109

For which was paid:—

	fr.	fr.	fr.
„ 1887 - - - - -	25,302,848	6,577,636	31,880,484
„ 1888 - - - - -	26,910,485	7,230,145	34,140,630
„ 1889 - - - - -	30,736,436	7,707,486	38,443,922
„ 1890 - - - - -	38,866,629	8,614,416	47,481,045

So that the average price per day was given as:—

	fr. c.	fr. c.	fr. c.
„ 1887 - - - - -	3 00	2 91	3 64
„ 1888 - - - - -	3 91	3 03	3 68
„ 1889 - - - - -	4 12	3 03	3 86
„ 1890 - - - - -	4 74	2 71	4 78

In the Belgian coal mines, which employed in 1889 100,000 men, the average wage of the miner was 932 francs, which is 218 francs or 23·4 per cent. less than that of the miner of the North of France, and 361 francs or 38·5 per cent. less than that of 1890.

Strike of October-November 1889, and of Carvin in 1890.

The aim of the strike of 1889 was chiefly a demand for an increase in wages.

It lasted from 10th October to 23rd November, and affected, in the Pas-de-Calais, 15 companies.

It commenced in the mines of Lens.

It spread to the other mines of the Department of Pas-de-Calais, and affected three companies of the Department of the Nord, Escarpelle, Aniche, and Azincourt.

It was only of long duration in Escarpelle.

In 1890 (there was) only one strike, that of Carvin, (which) lasted 54 days.

DETAILS OF SALES.

Of the Pas-de-Calais in 1890, according to mode of conveyance:—

By road - - - - -	168,265 tons or 1·8 per cent.
By water - - - - -	2,968,867 „ or 32·9 „
By rail - - - - -	5,229,910 „ or 58·0 „
Consumption of the mines - - - - -	643,418 „ or 7·1 „
Total - - - - -	9,010,460 „ or 100 „

Lastly, if the sales are arranged according to the places of consumption, the following results are obtained:—

Pas-de-Calais—	
Consumption of the mines - - - - -	643,418 tons.
Sales in the departments - - - - -	1,477,511 „
Total - - - - -	2,120,929 „ or 23·5 per cent.
Nord—	
Total sales - - - - -	2,530,366 „ or 28·0 „
Other departments 4,203,284 „ or 46·6 „	
Abroad - - - - -	155,881 „ or 1·7 „
Total - - - - -	9,010,460 „ or 100 „

In the manufacture of coke, 249,710 tons of coal were used, in order to produce 176,562 tons of coke.

Selling Prices.

From the reports of the mining engineers, the average price of coal in the Nord was—

In 1890 - - - - -	fr. c. 11 30 per ton.
In 1889 - - - - -	9 10 „

Increase of 2 20 or 24·2 per cent.

The Pas-de-Calais Department has sold its coal at an average price of from 9 to 9·50 francs in 1889. It is admitted that in 1890 the average price was from 11·50 to 12 francs.

CONSUMPTION OF COAL IN THE DEPARTMENT OF THE NORD.

	1889.	1890.
Coal from the Nord - - -	Tons. 2,189,479	Tons. 2,362,760
„ „ Pas-de-Calais - - -	2,328,300	2,511,112
French (coal) - - - -	4,517,679	4,873,872
Coal from Belgium - - -	1,039,941	1,214,994
„ England - - - - -	13,496	91,006
„ Germany - - - - -	2,180	5,790
Foreign (coal) - - - -	1,045,617	1,311,790
Total - - - - -	5,563,296	6,185,662
Increase - - - - -	622,366	or 11·2 %

The Department of the Nord consumes one-sixth of the total amount of coal used in France.

It obtains, besides that from foreign countries, 22·8 per cent. of its consumption, and absorbs almost 13·5 per cent. of the production of the Basin of the Nord and of the Pas-de-Calais.

5.

Handed in by Mons. Raoul Duval (Q. 19,384).

Translation.

THE PROFITS OF THE MINERS OF THE NORD AND PAS-DE-CALAIS DISTRICTS SINCE THE INCREASE OF WAGES IN 1889 AND 1890.

September, 1891.

Towards the middle of the year 1889 the prices of coal increased considerably in England, Belgium, and Germany, in consequence of the increase in metallurgical research, and of industry in general, and also in consequence of the strikes and slackening of the labour of the miners.

In the north of France the prices were low, also the acquirements of the manufacturers, who had supplied themselves from abroad, flowed into the collieries of this district; this, in order to meet the demands, caused an increased development in the output.

But workmen were wanting. They were sought for, and consequently were very exacting. They said, "You have need of us, pay us."

In the month of October they came out on strike, at first at Lens, then gradually at nearly all the collieries.

The committee of coal-owners then intervened, and decreed a general increase of 10 per cent. in the wages.

i 70489.

The demand for coal continued to be active, and the selling prices gradually rose at rates unknown since the coal crisis of 1872-1874.

The result of these high prices was to bring about larger demands of the miners, fresh agitations, the prelude to fresh strikes, which the committee of coal-owners dispelled by a further increase of 10 per cent. in the wages, to date from August 16th, 1890.

Thus the wages of the mineral workers in the north of France had been increased as follows:—

1. Ten per cent. on the 16th October 1889.
2. Ten per cent. on the 15th August 1890.

Twenty per cent. in all.
Let us see what influence these increases exercised on the profits of the miners.

Results of the Increases in Wages, ascertained from the Reports of the Mining Engineers.

The Reports of the Mining Engineers to the General Councils of the Departments of the Nord and Pas-de-Calais furnish, as a rule, very exact information with regard to the wages paid by coal-owners in 1888, 1889, and 1890.

Number of Workmen occupied below and above ground.

1888 - - - - -	48,624
1889 - - - - -	51,333
1890 - - - - -	56,345

Increase in 1890 over 1888, 7,721; or 15·9 per cent. for a total production of—

1888 - - - - -	12,293,398 tons.
1889 - - - - -	13,333,542 „
1890 - - - - -	14,211,353 „

Being an increase in 1890, over 1888, of 1,917,955 tons, or 15 per cent.

The above figures give a clear idea of the activity in the demand for coal in 1889-1890.

Showing the Wages paid.

1888 - - - - -	52,872,001 francs.
1889 - - - - -	59,037,430 „
1890 - - - - -	72,855,946 „

Increase in 1890 over 1888, 19,983,945 francs, or 37·3 per cent.

Average Annual Wage of a Workman below and above ground.

1888 - - - - -	1,087 francs.
1889 - - - - -	1,150 „

Increase to date from October 16, 1889. „

1890 - - - - -	1,293 francs.
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Increase to date from August 16, 1890.

Increase in 1890 over 1888, 206 francs, or 18·9 per cent.

It may be remarked:—

1. That the first increase of 10 per cent. in the wages was only granted in 1889, to date from October 16th for a period of two and a half months.

2. That this first increase has caused its influence to be felt over the whole year of 1890, and that the second increase of 10 per cent., granted on August 16th, has only produced its effect during the last four and a half months.

Thus the increase of 20 per cent. in the wages should only be taken to correspond in the ratio of 13·75 per cent. in proportion to the period of its application in 1890, as compared with the same period of 1888. This increase amounted in fact to 18·9, or 5·15 per cent. more than that officially granted to the workmen. During the year 1891 the workmen will receive in its entirety the official increase of 20 per cent., and in accordance with the figures recited above, in reality 25 per cent., so that one may calculate the annual average salary of the workmen below and above ground in 1891 as 1,359 francs. To these figures of the average annual salaries must be added the accessory benefits, such as free coal, cheap rents, retiring pensions, help in case of sickness, &c.; benefits which, according to the information collected by the State engineers, amount on an average for a day's work—

In the Nord - - - - -	to 0·53 francs.
In the Pas-de-Calais - - -	to 0·41 „

• That is on an average to 0·45 „

(See Pamphlet, No. 19.)

And which increases the average annual salary of 141 francs and the addition as follows:—

In 1888 to -	1,222 francs.
In 1889 to -	1,285 „
In 1890 to -	1,428 „
In 1891 to -	1,500 „ (hypothetical figure).

Appendix
C. III.Average Annual Wages of a Workman below and above
ground in Belgium.

FRANCE. The profits of the mines of the Nord and Pas-de-Calais since 1889-1890.

M. Harzé, Director of Mines for the Minister of Public Works in Belgium, gives (see Pamphlet No. 14) the average wages of the miners in Belgium in 1888 and 1889 as follows:—

In 1888	869 francs.
In 1889	932 "

The figure for 1890 is not yet to hand.

But for Liège, where the wages are generally rather higher than at the collieries of the other provinces, M. Timmerhans, Divisional Director of Mines, gives:—

1888	948 francs.
1889	994 "
1890	1,154 "

These figures show that in Belgium the wages have increased by 20 per cent., as they have in the north of France, but at the same time that the wages in Belgium are less than in the north by about 200 francs, or more than 20 per cent.

Increase in the Price of Coal.

In the middle of the year 1889, as has been previously mentioned, the demand for coal was very active in the Nord; the collieries could scarcely meet the demand, and the prices gradually rose and attained very high rates in 1890.

Nevertheless, the collieries only profited in a very moderate degree from the rise of prices, in consequence of the bargains having been made for a considerable time before the rise.

Thus, according to the mining engineers, the average selling prices in the north were:—

	Fr. c.
In 1888	9 03
In 1889	9 24
In 1890	11 50

Increase in 1890 over 1888, 2·47, or 27·3 per cent.

The profits of the collieries have certainly been greater in 1890 than in 1889 and 1888, but much less than is generally supposed, especially when it is remembered that there had been an increase of cost of production which resulted from the increase of 18·90 per cent. in the wages.

Results of the Increases of Salaries ascertained at different
Collieries.

From the reports furnished by the mining engineers we append the results of the increase of wages, ascertained in different collieries, in accordance with such accurate and complete information as we have been able to obtain.

I.

At the mines of which employ 2,500 miners directly in working, the examination of the pay-books, comprising every person employed at the pits, both below and above ground, furnishes the following:—

A.—Average Daily Salary of all the Workmen.

	Fr. c.
In 1888-89 before the first increase of wages of 10 per cent., of the 16th October 1889	3 57
After this first increase of 16th October 1889 to 16th August 1890	4 15
In 1890 and 1891, after the second increase of 10 per cent. of 16th August 1890	4 46

Increase, 89 centimes or 24·9 per cent., instead of 20 per cent. official increase.

This increase of 24·9 per cent. in the wages of the workmen is brought about in reality, and from other different causes, by an increase in the price of the net cost of labour of 32·9 per cent.

B.—Average Daily Wage of Workmen properly called
Miners, employed in (?) Hewing, Roadmaking,
and initiatory Works.

	Fr. c.
In 1888-89 before the increase in wages of 10 per cent. of the 16th October 1889	4 28

After this first increase of 16th October Fr. c.
1889 to 16th August 1890 - 5 39
In 1890 and 1891, after the second increase of 10 per cent. of 16th August 1890 - 5 77

Increase, 1 fr. 49 c. or 34·8 per cent., instead of 20 per cent. official increase.

This increase of 34·8 per cent. upon the wages of the miners, properly so-called, exceeds by 10 per cent. the increase upon the whole number of workmen employed at the mine.

As a matter of fact, the miners themselves to the number of 1,500 have profited by the rise in wages; the 1,000 other workmen employed for the most part by the day received nothing beyond the official increase of 20 per cent.

II.

At the mines of which employ about 1,600 underground miners, we were given a complete series of pay-sheets from 1st January 1889 to 15th February 1891, which worked out as follows:—

A.—Average Daily Salary of all the Workmen.

	Fr. c.
In 1889, before the first increase of wages of 10 per cent. of the 16th October 1889	3 71
After this first increase of 16th October 1889 up to the second increase of 16th August 1890	4 24
After the second increase of 10 per cent. of the 16th August 1890 up to the 15th February 1891	4 67

Increase, 96 centimes or 25·8 per cent., instead of 20 per cent. official increase.

B.—Average Daily Wage of Workmen, properly called
Miners.

	Fr. c.
In 1889, before the first increase of 10 per cent. of the wages of the 16th October 1889	4 23
After this first increase up to the second increase of 10 per cent. of the 16th August 1890	4 94
Finally, after the second increase of 16th August 1890 up to 15th February 1891	5 57

Increase, 1 fr. 34 c. or 31·7 per cent., instead of 20 per cent. official increase.

Summary.

From the figures given above in this pamphlet it appears that the official increase in the wages of workmen, namely:—

1. Of 10 per cent., 16th October 1889.
2. Of 10 per cent., 15th August 1890.

Total - 20 per cent., has been in reality very considerably exceeded.

A. Amongst all the coal pits of the Nord and Pas-de-Calais the average annual wage of all the workmen above and below ground rose from 1,087 fr. in 1888 to 1,293 in 1890, being an increase of 18·9 per cent., notwithstanding that the two official rises in salary was only applied to the last four-and-a-half months of the year 1890.

Thus, during the year 1891, in which the full benefit of the increase of 20 per cent. will be felt, the average annual salary of each workman will show an increase of 1,359 fr., being an increase of 25 per cent. upon his salary of 1888, without counting the 45 centimes per day, the value of the benefits, which brings the total to 1,500 fr.

B.—At the two mines from which we obtained full and complete reports the daily wages worked out as follows:—

1. For the whole body of workmen employed at the mine, 3 fr. 57 c. and 3 fr. 71 c. in 1888, rose to 4 fr. 46 c. and 4 fr. 67 c. in 1890-1, being an increase of 24·9 per cent. and 25·8 per cent.

2. For the mines properly so-called, 4 fr. 28 c. and 4 fr. 23 c. in 1888, rose to 5 fr. 77 c. and 5 fr. 57 c. in 1890-1, being an increase of 1 fr. 49 c. or 34·8 per cent., and 1 fr. 34 c. or 31·7 per cent.

September 1891.

Translation.

NOTE upon the PROPORTIONAL DUES paid in the coal basin of the NORTH of FRANCE.

The following table is a summary for the last ten years of the returns of the proportional dues in the coal basin of the North of France.

Year.	Output.	Average Price per Ton at the Pit's Mouth.	Amount of Dues payable.	
			Total.	Per Ton.
1.	2.	3.	4.	5.
1882	Tons. 9,484,021	Fr. c. 11 17	Fr. 798,655	Fr. 0·085
1883	9,944,808	11 57	844,972	0·086
1884	9,437,857	11 09	671,372	0·071
1885	9,710,220	10 39	863,791	0·089
1886	10,373,353	9 82	779,963	0·075
1887	11,317,428	9 30	808,834	0·077
1888	12,293,398	9 03	909,076	0·074
1889	13,333,548	9 24	1,028,702	0·077
1890	14,211,353	11 32	1,601,328	0·130
1891	13,483,814	13 32	1,969,373	0·146
Average	11,358,986	—	1,030,859	0·093

The amount of the dues entered as the total in column 4, and the tonnage rate given in column 5, only includes the principal part of the tax, that is to say, 5 per cent. of the net product.

There is, besides, an additional tenth to be paid by the worker, so that the figures in the two above-mentioned columns should be increased by 10 per cent., if it is desired to take into account the actual charge on the worker.

The figures given in column 5 form an average which applies to the whole basin. In order to get a clear idea of the incidence of this average, it should be added, that when the work done, not only by the whole basin, but at each mine, is examined, the amount of the tonnage dues varies during the period 1882-91 between the minimum of 0 for the mines with no net product, and the maximum of 0·25 fr. (the additional tenth not included).

IV.

EXTRACTS FROM "STATISTIQUE DE L'INDUSTRIE MINÉRALE," PP. 2-46, FOR THE YEAR 1888, WITH REFERENCES TO THE STATISTICS FOR 1889 AND 1890. (Qués. 19,346 et seq.)

TOTAL NUMBER and SURFACE of CONCESSIONS granted and worked in FRANCE and in ALGERIA.

On the 1st January 1889 1,407 concessions had been granted in France and Algeria, making a surface total of 11,728 square kilometres.

The following tables, giving the classification of the minerals, indicate the number and proportion of those which were worked in 1888.

NATURE OF SUBSTANCES.	Number of Concessions.		Surface Area of Concessions.		Per-centage of Concessions worked.	
	Granted.	Worked.	Granted.	Worked.	No.	Surface.
FRANCE.						
Combustible minerals	636	293	Hectares. 557,178	Hectares. 357,026	46	64
Iron ore	315	64	151,610	39,040	20	26
Other minerals	279	43	345,562	95,805	15	28
Other substances	82	26	29,525	15,479	32	52
Salt	51	28	28,437	19,521	55	69
Total	1,363	434	1,112,612	526,871	33	47
ALGERIA.						
Combustible minerals	1	—	945	—	—	—
Iron ore	16	2	17,037	2,039	12	12
Other minerals	27	8	42,234	12,281	30	29
Total	44	10	60,216	14,320	23	24
Total (France and Algeria)	1,407	464	1,172,828	541,191	32	46

Appendix
C. III. and IV.

FRANCE.
Note upon the proportional dues paid in the coal basin of the North of France.

Appendix
C. IV.FRANCE.
Abstracts from
Statistique
L'Industrie.

COMBUSTIBLE MINERALS.

Amount of Production.—The production of our collieries, which had increased by 1,378,000 tons in 1887, further increased by 1,315,000 in 1888, and has now reached the figure of 22,603,000 tons, which represents at the pit's mouth a value of 232,995,000 francs. This production is composed of 20,851,000 tons of coal, 1,321,000 tons of anthracite, and 431,000 tons of lignite.*

Production by Departments.—The output of combustible minerals has been effected in 41 departments, amongst which 16 have produced quantities greater than 100,000 tons. The seven departments designated below have together furnished 20,289,000 tons of combustible minerals, that is nearly nine-tenths of the total. Each one, except Allier, shows an increase as compared with the preceding year, thus:—

—	Production.	Augmen- tation.	Diminu- tion.	Variations per cent.
	Tons.	Tons.	Tons.	Tons.
Pas-de-Calais -	7,877,000	757,000	—	+ 10.6
Nord -	4,416,000	218,000	—	+ 5.2
Loire -	3,140,000	196,000	—	+ 6.7
Gard -	1,832,000	14,000	—	+ 0.8
Saône-et-Loire -	1,360,000	92,000	—	+ 7.3
Allier -	851,000	—	32,000	- 3.6
Aveyron -	813,000	50,000	—	+ 6.5
Autres départe- ments.	2,314,000	20,000	—	+ 0.9
Augmentation totale -		1,315,000		+ 6.2

* The "tons" referred to in this memorandum are the French "tonnes" of 2,204 lbs.

GEOGRAPHICAL BASINS.	Number of Concessions worked.	Production.	Augmentation.	Diminution.
		Tons.	Tons.	Tons.
COAL AND ANTHRACITE.				
Nord et Pas-de-Calais (Valenciennes)	31	12,293,000	976,000	—
Loire (Saint-Étienne et Rive-de-Gier, Sainte-Foy-l'Argentière, Communay et le Roannais)	46	3,185,000	196,000	—
Gard (Alais, Aubenas, le Vigan)	18	1,851,000	20,000	—
Bourgogne et Nivernais (le Creusot et Blanzay, Decize, Épinac et Aubigny-la-Ronce, Bert, la Chapelle-sous-Dun, Sincay)	16	1,594,000	97,000	—
Tarn et Aveyron (Aubin, Carmaux, Rodez, Saint-Perdoux)	22	1,147,000	71,000	—
Bourbonnais (Commentry et Doyet, Saint-Éloy, l'Aumance)	13	951,000	—	43,000
Auvergne (Brassac, Champagnac et Bourg-Lastic, Langeac)	11	276,000	—	15,000
Hérault (Graissessac)	6	217,000	9,000	—
Vosges méridionales (Ronchamp)	2	203,000	17,000	—
Creuse et Corrèze (Aulun, Bourgaueuf, Cublac, Meymac et Argenta)	7	175,000	22,000	—
Alpes occidentales (le Drac, Maurienne-Tarentaise et Briançon, Oisans, Chablais et Faucigny)	53	144,000	12,000	—
Ouest (le Maine, Basse-Loire, Vouvent et Chantonay)	12	135,000	—	1,000
Maures (Fréjus)	1	1,000	1,000	—
Pyrénées (Bantelly)	—	—	—	—
LIGNITE.				
Provence (Fuveau, Manosque, la Cadière)	22	387,000	—	45,000
Comtat (Bagnols, Orange, Banc-Rouge, Barjac et Célas, Méthamis)	11	25,000	—	—
Vosges méridionales (Gouhenans, Norroy)	2	9,000	—	—
Sud-Ouest (Millau et Trévezet, Estavar, la Caunette, Simeyrols et la Chapelle-Péchaud)	15	8,000	—	2,000
Haut Rhône (la Tour-du-Pin, Hauterives)	5	2,000	—	—
TOTAL -	293	22,603,000	1,421,000	106,000
FINAL RESULT -			1,315,000	

It will be seen from these figures that the working of the Pas de Calais collieries has further developed in a remarkable manner since 1886, yielding at present 35 per cent. of the total production of France. In the Nord this progress is less accentuated, but still very marked. As regards the basins of the Loire, the Gard, and the Aveyron, which had yielded less in 1886, they have almost regained the average of the best preceding years. The mines of Allier alone, where the output had greatly developed in 1887, have produced a diminished total since 1888, caused by a reduction in the orders from the metal gorges. In the Bouches-du-Rhône the output has become reduced to 365,000 tons of lignite, which is a diminution of 42,000 tons, or of 10 per cent., on that of 1887. We find on the contrary an increased production of 4 per cent. in the Hérault (217,000 tons), of 6 per cent. in the Tarn (334,000 tons), of 9 per cent. in the Haute-Saône (211,000 tons), and of 14 per cent. in the Creuse (173,000 tons). The production of the Haute-Loire has diminished by 6 per cent. (191,000 tons).

The preceding figures comprise without distinction coal, lignite, and anthracite. This latter combustible has been worked in 15 departments, principally in those of the Nord (750,000 tons), of Saône-et-Loire (239,000 tons), and of Isère (138,000 tons). More than four-fifths of the lignite has been drawn from the Bouches-du-Rhône, the rest is produced by 17 other departments.

Algeria contains one single lignite concession, which has been long ago abandoned.

[The total output for 1890 was 26,083,000 tons being an increase of 3,480,000 tons over 1889, this increase being mainly due to the development of the northern coalfields. Statistics for 1890.]

Production by Basins.—The grouping of the concessions by basins, or by geographical groups of basins, gives a much better general impression of the situation of the mining industry. The following list indicates, accordingly, with regard to each of these groups, the number of concessions now being worked, the quantities of coal extracted in 1888, and the differences certified in comparison with the preceding year.

The different mining centres are arranged in the foregoing list in the order which the output of each in 1888 assigns to them.

Number and Wages of Miners.—The number of workmen employed in the coal mines was 105,000, an increase of about 2,000 on that of 1887, and divides in the following manner:—

—	Men.	Women.	Children under 16.	Total.
Under ground -	69,800	—	4,300	74,100
Over ground -	24,100	3,400	3,400	30,900
TOTAL -	93,900	3,400	7,700	105,000

The total of wages was 113,841,000 francs, and the number of working days 30,635,000, which shows the average wage for a day's work to have been, without distinction of age or sex, 3 fr. 71; that is to say, 1 centime less than the average wage of the preceding year.

BASINS.	Annual Wages per Worker.		Daily Wages per Worker.		Annual Output per Worker.		Wages per Ton of Output.
	Pit Workmen.	Day Workers.	Pit Workmen.	Day Workers.	Pit Workmen.	Without Distinction.	
	Francs.	Francs.	Fr. c.	Fr. c.	Tonnes.	Tonnes.	Fr. c.
Nord et Pas-de-Calais -	1888 1,144 1889 1,215 1890 1,378	925 954 1,008	3 89 4 10 4 72	3 01 0 04 3 21	332 338 325	254 260 252	4 30 4 42 5 13
Saint-Étienne -	1888 1,414 1889 1,334 1890 1,392	827 878 996	4 71 4 61 4 91	2 85 3 98 3 47	350 335 318	229 227 225	5 30 5 23 5 81
Alais -	1888 1,334 1889 1,325 1890 1,330	941 991 1,027	4 57 4 58 4 68	3 01 3 15 3 15	256 258 252	170 170 170	7 09 7 11 7 23
Le Creusot et Blanzay -	1888 1,305 1889 1,291 1890 1,365	1,049 1,093 1,072	4 30 4 24 4 49	3 47 3 61 3 56	324 332 348	189 195 190	6 33 6 21 6 31
Aubin et Carmaux -	1888 1,238 1889 1,184 1890 1,273	665 757 636	4 23 4 22 4 31	2 87 2 79 2 77	326 293 292	209 189 186	4 94 5 39 5 59
Commentry -	1888 1,079 1889 1,086 1890 1,099	657 775 850	3 89 3 86 3 92	2 35 2 70 2 94	278 304 315	195 204 216	4 89 4 83 4 73
Lignites de Fuveau (Provence) -	1888 1,072 1889 1,063 1890 1,053	1,021 969 924	3 37 4 38 4 38	3 55 3 34 3 37	211 212 234	156 155 166	6 79 6 66 6 11
Total for the basins of France -	1888 1,178 1889 1,210 1890 1,314	860 905 936	4 03 4 18 4 57	2 95 3 11 3 16	305 303 300	215 219 215	5 04 5 12 5 62

The figure of the wages of the two categories of miners varies in different basins, because of the conditions under which the work is carried on, and of the greater or lesser facilities which the recruiting of miners offers.

It has no connexion with the daily average production per miner, the amount of which is influenced by the thickness and the degree of purity of the seams worked, the strength of the roof, the distance of the shaft from the pit, the way in which the underground transit is effected, and the general system of working.

It will be found that the pit workmen in the basins of St. Étienne and then those of Alais are the best paid. Nevertheless, putting aside the "lignites," the work of the miner has been weakest in the basin of Alais, as in former years, on account of the importance of the sorting

But, thanks to an increase of working days (292 per miner instead of 287), the average of the year's wages has increased by 17 francs and has been 1,084 francs per head.

[In 1889 the total number of workers was 111,000; the average daily wages, without distinction of age or sex, being 3 fr. 87 c., showing an increase of 16 centimes (i.e., just over 1½d.) over the daily wages in 1888. The average yearly wages increased from 1,084 francs a head to 1,120 francs, and that notwithstanding a decrease in the number of working days from 292 to 290.—Statistics for 1889.]

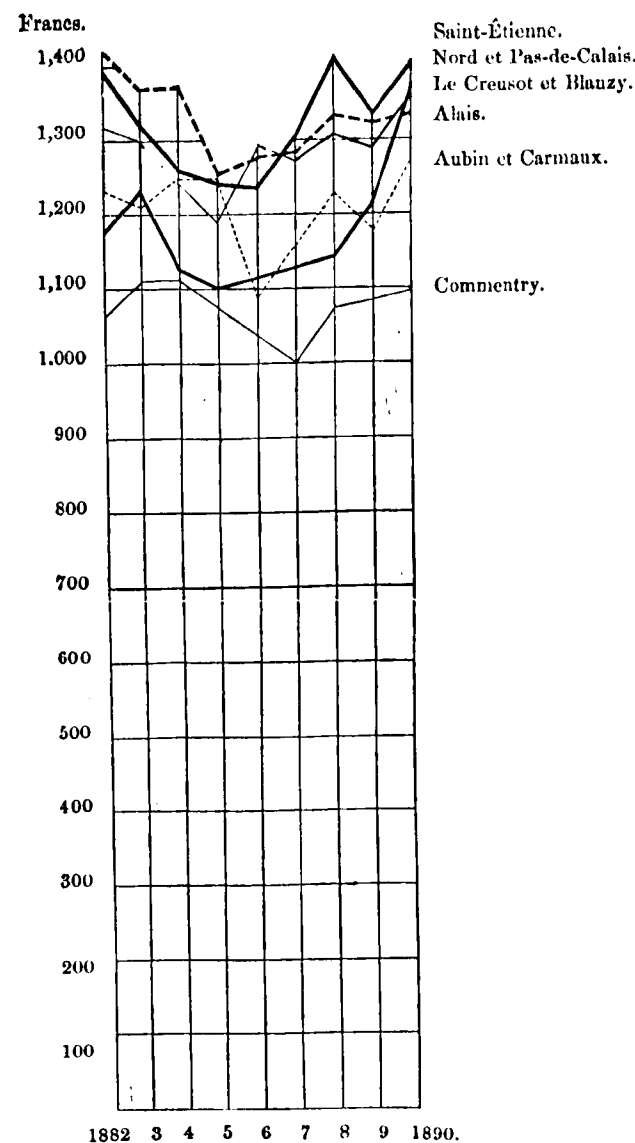
[In 1890 the total number of workers was 121,600; the average daily wages, without distinction of age or sex, being 4 fr. 16 c., showing an increase of 29 centimes (i.e., nearly 3d.) over the average daily wages in 1889. The average yearly wages increased from 1,120 francs to 1,206 francs, the number of working days remaining the same, i.e., 290.—Statistics for 1890.]

Average per Miner of Wages and Production in the Principal Basins.—The following table shows the average rate of wages, the yield per miner, and the cost of manual labour per ton of combustible produced, so far as relates to the principle basins, and to the total of the basins in France:—

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

The variations in wages of underground workers in the different coal basins from 1882 to 1890 is indicated in the following diagram:—



This diagram does not take into account the benefits derived by workers in the form of fire coal, coal at reduced prices, medicine, &c. Such benefits are estimated as equivalent to the following amounts per head:—

	Fr. c.
Pas de Calais	0 41
Nord	0 53
St. Étienne	0 25
Alais	0 24
Le Creusot et Blanzy	0 56

	Fr. c.
Commentry	0 17
Carmaux	0 20
Aubin	0 26

Statistics for 1890.]

Imports and Exports.—The import of foreign coal in 1888 was 10,551,000 tons, deducting 4,000 tons re-exported, [in 1889, 9,981,000 tons, and in 1890 11,603,000.]

The following table shows the amounts imported from the various countries:—

	Coal.	Coke.	Total expressed in Coal.*	Difference compared with preceding years.
	Tons.	Tons.	Tons.	Tons.
Belgium	1888 3,889,009	810,000	5,104,000	— 140,000
	1889 3,733,000	868,000	5,035,000	— 69,000
	1890 4,101,700	823,900	5,340,600	+ 305,100
England	1888 4,079,000	19,000	4,108,000	+ 62,000
	1889 3,825,000	10,000	3,840,000	— 268,000
	1890 4,846,200	12,300	4,864,600	+ 1,024,900
Germany	1888 799,000	358,000	1,336,000	+ 64,000
	1889 685,000	279,000	1,104,000	— 232,000
	1890 712,500	454,100	1,393,800	+ 289,700
Other countries	1888 3,000	—	3,000	—
	1889 2,000	—	2,000	— 1,000
	1890 3,700	100	3,900	+ 1,900
Total	1888 8,770,000	1,187,000	10,551,000	— 14,000
	1889 8,245,000	1,151,000	9,981,000	— 570,000
	1890 9,664,200	1,292,400	11,602,900	+ 1,621,600

* It is supposed that 1 ton of coal represents 1½ tons of coke.

The proportional amounts sent by the three countries from which coal is imported were as follows:—

	1888.	1889.	1890.
Belgium	48	50	46
England	39	39	42
Germany	13	11	12

Of the coal imported from England, 558,000 tons in 1888, 114,000 tons in 1889, and 583,000 tons in 1890 have been consumed on board French ships, and on this no import duty has been raised.

The foreign coal imported into France represents not quite one third of the consumption (32 per cent. in 1888, 30 per cent. in 1889, and 32 per cent. in 1890). The quantities brought into France for the last ten years by different importing countries are indicated on the diagram below.

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

		<i>Coal from Belgium</i>												5,341,000 tons.	
		<i>Coal from England</i>												4,865,000	
		<i>Coal from Germany</i>												1,394,000	
Importation	{	from Belgium	4.820	5.277	5.396	5.570	5.756	5.733	5.321	5.086	5.224	5.104	5.035	5.341	} Millions of tons.
		„ England	3.012	3.404	3.569	3.884	4.368	4.259	4.079	3.921	4.046	4.108	3.840	4.865	
		„ Germany	1.047	1.259	1.255	1.408	1.577	1.678	1.511	1.368	1.272	1.336	1.104	1.394	
		Years -	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	

TABLE showing IMPORTS OF COAL AND COKE.

(Scale 1 millimetre for 200,000 tons.)

It will be seen by this diagram that the importations into France of foreign coal steadily increased until the end of 1883 for Belgium and England, and from 1884 for Germany. Since then they have decreased steadily until these last two years, when they show a slight looking up, excepting Belgian coal, in 1888.

The French exports of combustible mineral rose in 1888 to 629,000 tons, subtracting therefrom 4,000 tons of English coal re-exported. The increase as compared to 1887 is 34,000 tons, but only 19,000 as compared to 1886. The total is composed of 524,000 tons of coal, 26,000 of lignite, and 53,000 of coke (equivalent to 79,000 of coal). Lignite proceeds almost entirely from the Faveau basins, the other combustibles have been principally drawn from the basins of Valenciennes (229,000 tons), of Alais (188,000), of the Loire (76,000), of Creusot and Blanzy (55,000), and of Ronchamp (43,000). (14.) There is an increase in all the basins. The exports are distributed between the different foreign countries as indicated in the following table, which shows the exports for the three years 1888-90.

	Exports.		
	1888.	1889.	1890.
	Tons.	Tons.	Tons.
Belgium	213,000	318,000	302,000
Switzerland	162,000	209,000	252,000
Italy	124,000	208,000	198,000
Spain	63,000	100,000	92,000
Germany	31,000	53,000	38,000
Algeria and French Colonies	24,000	34,000	42,000
Other countries	12,000	21,000	17,000
	629,000	943,000	941,000

The combustibles exported to foreign countries, which scarcely formed 2·8 per cent. of the production of France in 1888 amounted to 3·5 per cent. of the production in 1890. The fluctuations during ten years are indicated by the diagram on page 9. The exportation has varied between the extreme limits of 457,000 tons (in 1882) and of 943,000 (in 1889).

Consumption.—France consumed in 1888 32,674,000 tons of coal, being 1,483,000 (4·8 per cent.) more than in the preceding year. The details are roughly as follows:—

	1888	1889.	1890.
Production -	22,752,000	24,473,000	25,991,000
Imported -	10,551,000	9,981,000	11,603,000
	33,303,000	34,454,000	37,594,000
Deduct exports -	629,000	943,000	941,000
Consumption	32,674,000	33,511,000	36,653,000

Average value of combustible materials at the pit's mouth and at the places of consumption.

The value of coal at the pit's mouth is established according to the statements of the concessionaries, which are examined by the Valuation Committees, conformably to the Decree of May 6th, 1811. As to the sale price at the places of consumption, they are valued approximately by the engineers by means of the data they are able to collect. At the pit's mouth the average sale price of coal of the different basins is as follows:—

Groupes de Bassins.	Average Price at the Pit's Mouth.		
	1888.	1889.	1890.
	Fr. c.	Fr. c.	Fr. c.
Nord et Pas-de-Calais	9 03	9 24	11 32
Loire	12 97	12 82	14 07
Gard	11 71	11 80	12 13
Bourgogne et Nivernais	10 87	11 18	11 83
Tarn et Aveyron	10 53	10 52	11 84
Bourbonnais	11 23	11 33	12 12
Provence	8 95	9 18	9 32
Other basins	12 94	13 55	13 48
Total -	10 31	10 42	11 94

In 1888 prices fell in all the basins with the exception of the Bourbonnais, where the output had decreased, as has already been seen.

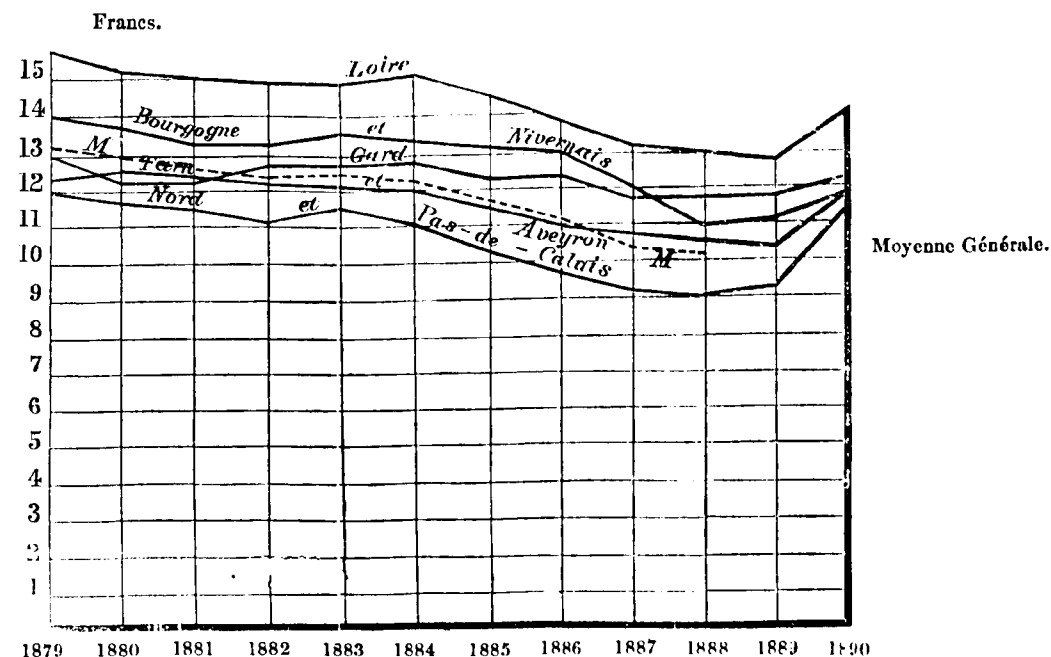
The greatest reduction of price in 1888 was met with, as in 1887, in the group of Bourgogne et Nivernais; the least in that of the Gard. Prices in 1888 exceeded the general average in all the basins, except those of the Nord et Pas-de-Calais and of Provence.

In 1889 prices rose in all basins except in the Loire and the Bourgogne et Nivernais groups.

In 1890 prices rose in every basin, the greatest increase taking place in the northern coalfields.

The following diagram represents for the last 12 years, the mean prices of coal in France, as well as in the principal groups of basins.

The general average is marked by a dotted line:—



AVERAGE PRICE OF A TON OF COAL, &c. in the CHIEF BASINS, and of the TOTAL PRODUCTION IN FRANCE.

As is seen, the differences in price in the various basins, excepting in the Gard, are maintained in an almost steady manner: price being lowest in the northern coalfields where the production is greatest.

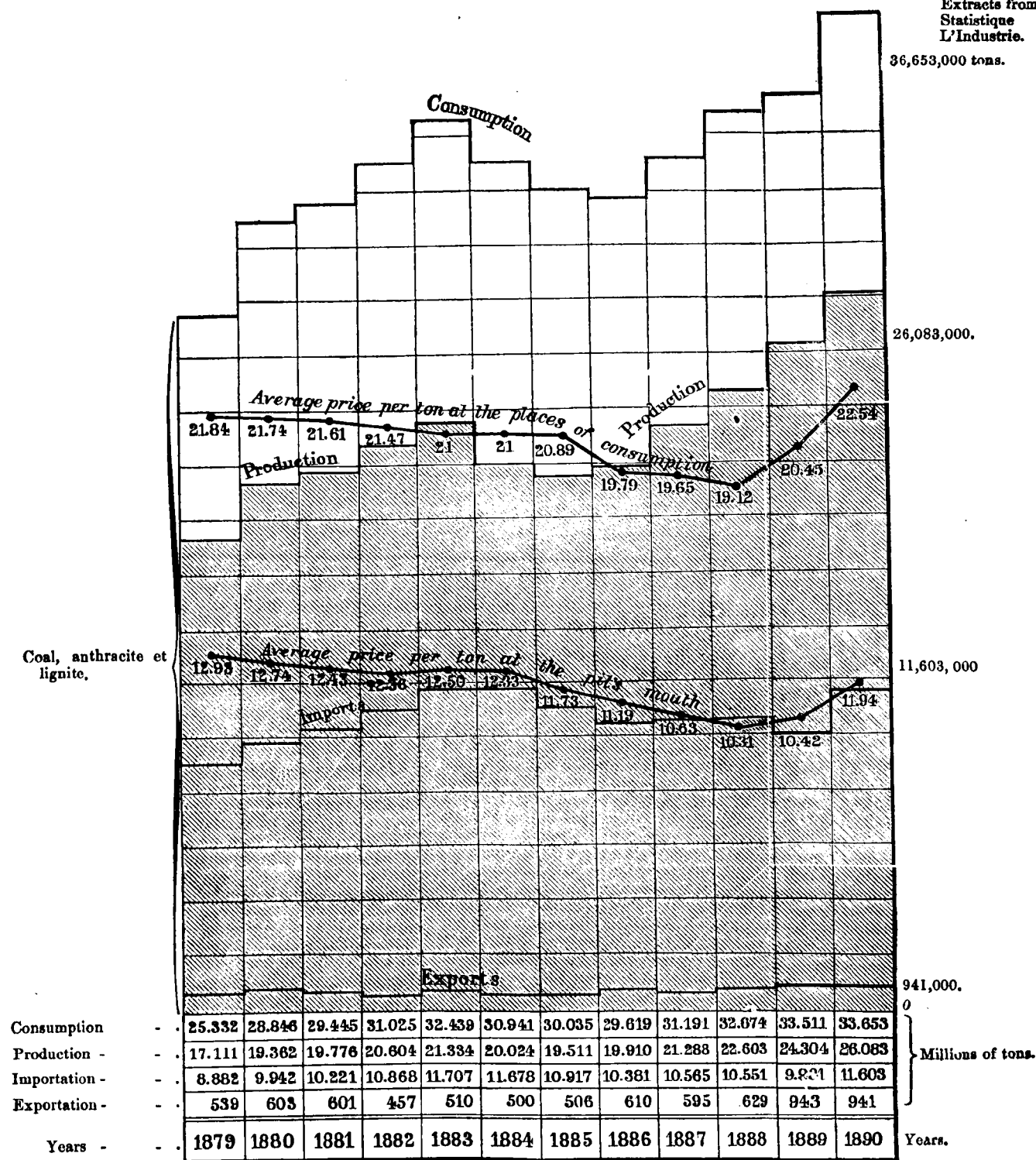
Prices at the Place of Consumption.—At the places of consumption, the general average price, according to the valuation of the engineer, amounts to 19 fr. 12 instead of 19 fr. 65 in 1887 to 20 fr. 38 in 1889, and to 22 fr. 54 in 1890. One can estimate the fall notified during the last 10 years by referring to the diagram on page 9. Various causes influence the average value per ton of the combustible, and, taking one department with another, the difference is sometimes considerable; thus coal is sold at an average of 12 fr. 02 in the Pas-de-Calais. It is only worth 11 fr. 90 in the Nord, which follows next in importance of production, and which receives at the same time large quantities of Belgian coal; it is but 11 fr. 68 in Auvergne, whilst in Haute Saône, where the consumption is of little importance, and the carriage difficult, the average rises to 34 fr. 50. It is important to notice that these average selling prices apply, without distinction, to French coal and foreign combustibles, delivered at their destination. A small sum is levied on the latter, upon their entry into France, by the permanent commission of Custom House dues. The rate of valuation adopted by the Commission was raised from 13 fr. per ton of coal and 15 fr. per ton of coke in 1887 to 15 francs per ton of coal, and 17 francs per ton of coke in 1888, to 22 fr. and 35 fr. in 1889, and to 22 fr. 30 and 35 fr. in 1890 (exclusive of the duty on foreign coal), without distinction of country of origin. It is as well to bear in mind that the price realised by the sale of combustibles, whether at the pit's mouth or at the place of consumption, can only be considered as approximate, and that there must always exist a little uncertainty, however carefully the accounts may be looked into.

The total value of the coal consumed in France was valued at close upon 625 millions of francs in 1888, at 683 millions of francs in 1889, and 816 millions of francs

in 1890. These figures include the taxes levied on foreign coal at the frontier, which amounts to 11,286,333 fr. in 1888, 10,756,778 fr. in 1889, and 12,449,869 fr. in 1890.

IRON ORE.

Iron Ore.—Results of the excavation of mines and of iron ore-works in France.—The production of iron mines in 1888 amounted to 2,276 tons of ore adapted for smelting, of which 34,000 tons of calcined ore (spar ore). The production of iron ore was 566,000 tons, 91,000 tons of which were washed or prepared. The total weight of ore, raw or prepared, amounted therefore to 2,842,000 tons, representing a value of 9,471,000 francs at the pit's mouth, at the average price of 3 fr. 33 per ton. In comparison with the preceding year we find that the production has increased by 263,000 tons, that is, by a tenth, of which 205,000 tons is from the mines and 58,000 tons from the ore. The value of the ton has increased from 0 fr. 09 on the mines, but it has decreased from 0 fr. 44 on the ore, in consequence principally of the lesser proportion of light ore which appears in the total. On the whole the average price of the ton has diminished by about 0 fr. 02. It is quoted at 3 fr. 47 on the ore extracted, and at 2 fr. 80 only upon that drawn from the ore-works. The number of mines in active working was 64, an advance of 3 on the preceding year. The ore-working centres form 40 groups; their number, which had already diminished in 1887, went down to 90, and have been as low as 81. The appended diagram is drawn up so as to show the variations which the production of iron ore has undergone from 1879 to 1890, and the general average price per ton of ore. The examination of this diagram will show that the product which had been steadily declining since 1883 regained a certain amount of activity after 1887. As to the price, it continued to fall until 1888, by reason of the growth of the production of oolite ore, which has a relatively trifling value; but since that year it has slightly risen.



PRODUCTION, CONSUMPTION, IMPORTS and EXPORTS, and AVERAGE PRICE OF COAL, &c.

SCALE { 1 millimètre for 200,000 tons.
5 millimètres for 1 franc.

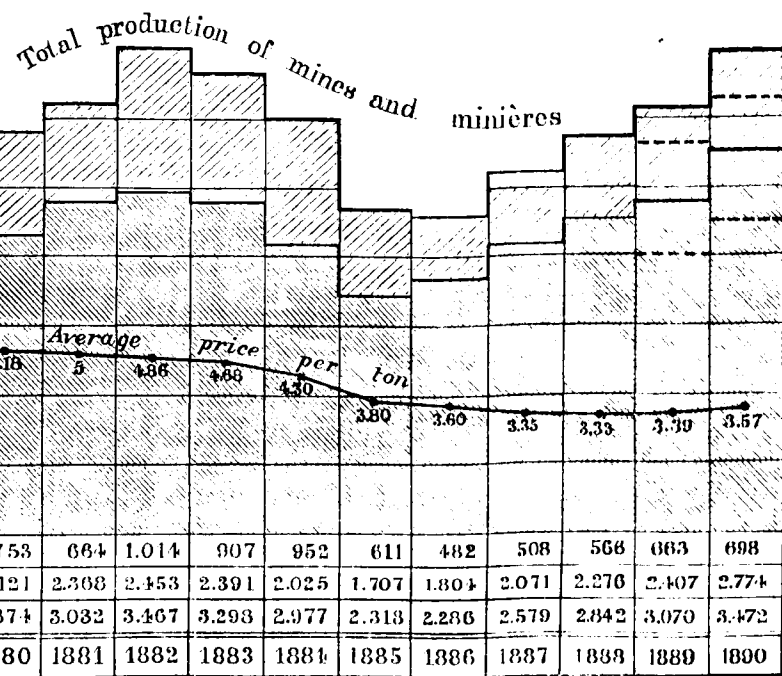
Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'IndustrieProduce of
minières.Produce of
mines de fer.

Minières

Mines

Total Production

Years



PRODUCTION AND AVERAGE PRICE OF IRON ORE IN FRANCE.

Scales { 1 millimètre for 50,000 tons.
5 millimètres for 1 franc.

The different kinds of ore may be divided into five classes in the following manner, in regard to their mineralogical qualities:—

Mineral.	Production in 1888.	Average Price per Ton.	Production in 1889.	Average Price per Ton.	Production in 1890.	Average Price per Ton.
Mineral hydroxyde oolithique	tonnes. 2,456,000	fr. c. 2 75	tonnes. 2,667,773	fr. c. 2 83	tonnes. 2,902,000	fr. c. 2 87
Autres minerais hydroxydés	106,000	8 82	55,823	9 80	78,000	9 45
Hématite rouge et fer oligiste	150,000	6 42	167,074	5 92	262,000	6 54
Hématite brune	86,000	4 78	127,441	6 09	171,000	6 17
Fer carbonaté spathique	44,000	9 15	52,228	9 41	59,000	9 22
	2,842,000	3 33	3,070,389	3 39	3,472,000	3 57

The hydroxyde oolithique ore formed in 1890 a little over 84 per cent. of the general total. It is excavated principally in the Meurthe-et-Moselle, in 33 mining concessions and 12 groups of minières. The iron ore works in the Département of Meurthe-et-Moselle form three distinct groups in the neighbourhood of Nancy, of Longwy, and of Briey. Those which are comprised in this last group (with the exception of one where there have been works fitted up), have remained standing idle, and all the ore raised in 1890 proceeded from the 20 concessions of the Nancy group, and the 13 concessions and the 5 groups of minières belonging to the Longwy group. The works in the neighbourhood of Nancy have produced in 1890 about 1,272,000 tons of ore, and those of Longwy 1,358,000 tons—that is to say—the ‘mines’ 985,000 and the ‘minières’ 373,000 tons.

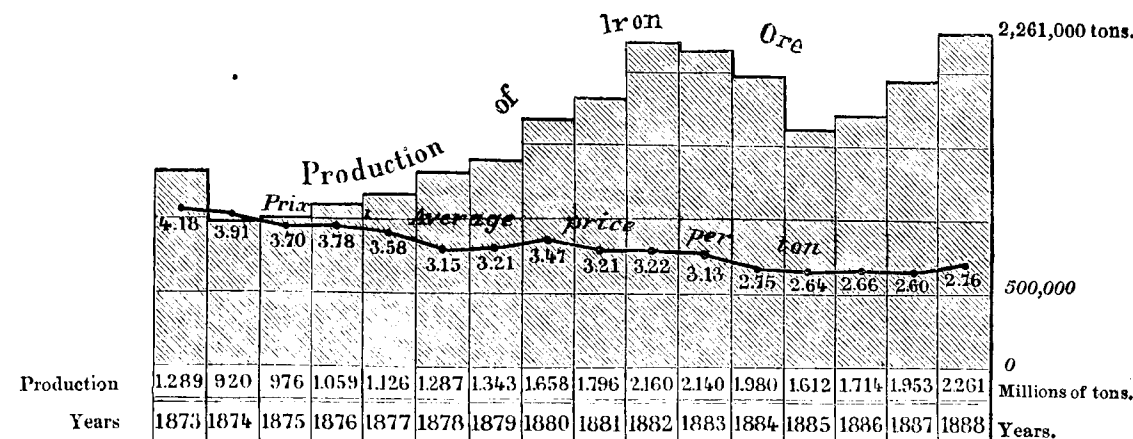
Amongst the important concessions forming part of the Nancy group, must be mentioned those of Chavigny, which produced 217,000 tons in 1888, of Val-de-Fer, 203,000 tons, of Fontaines-des-Roches, 106,000, of Mabarch, 105,000, and among the works in the neighbourhood of Longwy,

the mines and minières of Hassingny, from which 485,000 tons have been extracted, and those of Saulves, which have produced 202,000 tons. Others, namely those of Ludres, Longlaville, and Moulaine, have furnished close upon 100,000 tons.

The produce of the concessions has surpassed by more than 200,000 tons that of the preceding year, and that of the minières by more than 100,000. The entire produce of the department reached 2,261,000 tons. The price of oolitic ore rose slightly in 1888 as has been already seen. In the Meurthe-et-Moselle in particular, it rose from 2fr. 66 per ton to 2fr. 87 on the products of the concessions, and from 2fr. 17 to 2fr. 20 on those of the minières. Nine-tenths of the ore has been consumed in the department, the remainder, about 250,000 tons, was distributed in the Ardennes, the Meuse, and the Nord, or exported into Rhenish Prussia, Belgium, and the Grand Duchy of Luxembourg. Since applying the Thomas Gilchrist process for the dephosphorisation of cast iron, which permits the utilisation of phosphoric ores, the department of Meurthe-et-Moselle has acquired an increasing importance in the supply

of our blast furnaces. For this reason it may be interesting to represent its production since 1873, that is to say, since

the territorial alterations which followed the Franco-German War, in the following diagram:—

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

PRODUCTION AND AVERAGE PRICE OF IRON ORE IN THE DÉPARTEMENT OF MEURTHE-ET-MOSELLE.

Scales { 1 millimètre for 50,000 tons.
5 millimètres for 1 franc.

This diagram shows that the extraction of iron ore in Meurthe-et-Moselle, after having suffered from the crisis of 1883 to 1886, has since then resumed its upward tendency, and that it surpassed in 1888 the maximum which had been reached in 1882. This remarkable impetus is due, as has been above stated, to the creation of a new industry, the manufacture of steel by the Thomas Gilchrist process. The production of this steel, of no account in 1882, amounts at present to more than 150,000 tons, and requires the employment of more than 200,000 tons of cast ore, and about 600,000 tons of ore. After Meurthe-et-Moselle, but very far behind, may be mentioned Haute Sarne, in which 7 mines in excavation have produced together 100,000 tons of the same ore, of which 46,000 tons is purified. This production is almost entirely consumed in the blast furnaces of the department, principally in those of Marnaval, which belong to the same company as the ore-works of Pont Varin. The quantity of ore treated in 1888 in this factory was much more considerable than that of 1887, in consequence of the building of a ‘Martin’ oven for steel. On the other hand, the quantity of ore cleaned in the department of the ‘Nord,’ which was 20,000 tons in 1887, did not surpass 5,000 tons in 1888. Then follows the Saône et Loire, in which the ore (93,000 tons in 1888) is utilised by the Creusot Company, and is used like that of Meurthe-et-Moselle for the production of dephosphorised steel. The other hydro-oxidised ores, of which the production has risen, as has been seen, to 106,000 tons, have been drawn principally from the department of the Gard (49,000 tons), and from that of the Pyrénées-Orientales (33,000 tons). Since last year there has been no excavation of iron ore in the Cher.

Nearly two-thirds of the red hematite, 93,000 tons, have been procured in Ardèche, and drawn principally from the mines of Veyras, La Voulte, and Le Lac, worked by the Horne Company, and by that of Terrenoire, La Voulte, and Bessèges. Nearly all the remainder (33,000 tons) has been supplied by the St. Rémi mine (Calvados). Oligiste iron, the production of which has risen to 23,000 tons, has been almost exclusively obtained from the Diclète mine, situated in the Manche. The greater part of this ore is exported into Germany. The Brown hematite has been worked principally in the Lot et Garonne and in Aveyron, Ariège, Lot, et Loire Inferieure. The Isère has furnished five-sixths of the production of spathic iron, namely, 27,000 tons of smelted ore and 10,000 tons of raw ore. The rest has been obtained from the Pyrénées Orientales, excepting about 500 tons from Savoy. Finally oolitic ore holds the market; it is spread over every part of the territory, either in its natural state or under the form of cast iron or steel ingots. Iron ore, exclusive of oolitic ore, costs more, and is in consequence in less demand. Accordingly the production of these ores rose to 791,000 tons in 1879, 35 per cent. of the total production of France; in 1888 it amounted to no more than 386,000 tons, or 14 per cent.

Workers Employed.—The number of workmen employed in extracting and preparing the iron ore had risen to rather over 5,000 in 1888, to 5,500 in 1889, and to 6,600 in 1890. Of these 1,700 in 1888, 1,850 in 1889, and 2,300 in 1890 were overground workers. The daily average wages for underground and overground workers has been 4 fr. and 3 fr. 38 in 1888, 4 fr. 09 and 3 fr. 32 in 1889, and

3 fr. 27 in 1890. The average for both classes of workers has been 3 fr. 80 in 1888, 3 fr. 82 in 1889, and 3 fr. 27 in 1890. The annual production per head of all workers amounted to the considerable figure of 562 tons of ore proper for smelting in 1888, 561 tons in 1889, and 527 in 1890. It is, however, excessively variable according to the nature of the ore extracted, and in consequence difficult to compare from one year to another. Thus where in 1888 it rises to 783 tons for the hydroxide oolitic ore, it hardly reaches 173 tons in the case of the other hydroxidised ores, and 118 tons for spathic carbonate iron. For oligiste iron and red hematite the production has been 293 tons, and 203 on brown hematite. Finally, in consequence of the increasing predominance of hydroxidised oolitic ores, it increased in 1888 by 31 tons.

Imports and Exports.—Notwithstanding the augmentation of our indigenous productions, the imports of iron ore have increased by 154,000 tons in 1888, 132,000 tons in 1889, and 168,000 tons in 1890. Particulars will be found below, showing the country from which the imports come, as well as the rise and fall as compared with the figures of 1887, in round numbers.

Country.	Imports.		
	1888.	1889.	1890.
	Tons.	Tons.	Tons.
Algiers	25,000	36,000	43,000
Luxembourg and Germany	855,000	918,000	1,032,000
Spain	387,000	434,000	479,000
Belgium	46,000	33,000	38,000
Greece	10,000	10,000	11,000
Italy	6,000	7,000	6,000
Other countries	1,000	2,000	1,000
Total	1,310,000	1,442,000	1,610,000

These figures taken from the Custom House tables show that the minerals coming from Germany, or rather from ‘Luxembourg’ constitute 64 per cent. of the imports. The richer minerals of Spain amount to per cent. 30, and those of Algeria 2 per cent. The total minerals imported are almost equivalent in weight to half the production of the mines and minières.

Exportation, as a whole, has attained the figure of 294,000 tons in 1888, 262,000 tons in 1889, and 258,000 tons in 1890.

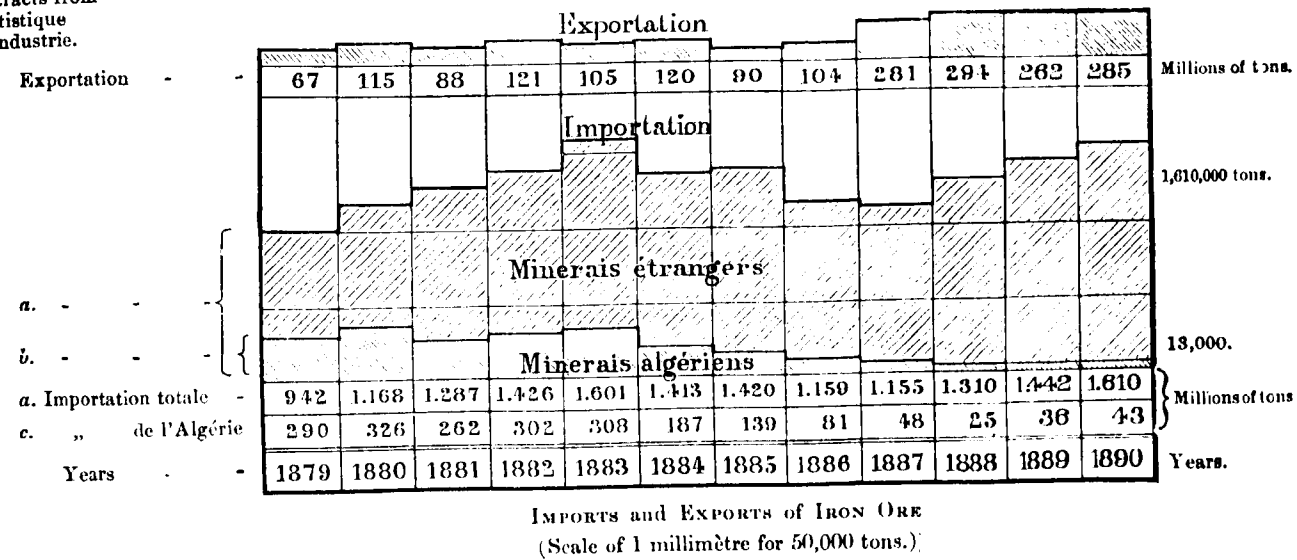
The following table represents the exports to Germany, Belgium, and Holland:—

	1888.	1889.	1890.
Germany	144,000	99,000	81,000
Belgium	110,000	105,000	121,000
Holland	32,000	46,000	59,000

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

The following diagram represents the weight of iron ore imported and exported during the last 12 years. The Algerian ores are distinguished from the others by a darker tint, so that it can be seen at a glance how small their

actual importance is as compared to the place occupied by foreign ores (properly so called) in the victualling of our blast furnaces.



Consumption of Iron Ore in France.—The consumption in our blast-furnaces based, on one hand, on the amount of the home production, less the quantity exported; and on the other, upon the total of the importation, is represented (overlooking the possible variations of the stock) by the following table:—

	1888.	1889.	1890.
Ore, French	2,548,000	2,808,000	3,187,000
„ Algerian	25,000	36,000	43,000
„ Foreign	1,258,000	1,406,000	4,610,000
„ Total	3,831,000	4,250,000	7,840,000

General Summary of the Statistics relating to Mines and other Mineral Workings for the Year 1888.

NAME OF SUBSTANCE.	FRANCE.			ALGERIE.		
	Number of Concessions worked.	Production.	Value at the Place of Production.	Number of Concessions worked.	Production.	Value at the Place of Production.
The subject of concessions.	Combustible minerals	293	tonnes. 22,602,894	francs. 232,995,395	—	—
	Iron ore	64	2,275,573	7,888,572	2	133,256
	Lead and silver	21	19,419	4,213,981	1	451
	Iron pyrites	5	203,814	3,071,905	—	—
	Copper	2	6	1,440	3	15,036
	Zinc	5	20,702	1,482,769	4	8,521
	Manganese	5	11,048	303,788	—	—
	Antimony	5	789	109,763	—	—
	Substances bituminous	24	188,638	1,267,608	—	—
	Calcaire imprégné de soufre	1	3,065	50,573	—	—
	Plombaine	1	15	1,148	—	—
	Rock salt	28	464,205	8,400,626	—	—
	Tourbe	—	159,658	1,756,137	—	—
	Minerais de fer (des minières)	—	566,184	1,582,506	—	250,702
Not the subject of concessions.	Sea salt; Algerian salt	—	167,343	3,587,378	—	25,835
	Substances conceded	454	25,790,168	259,787,563	10	157,264
Total	Substances not conceded	—	893,185	6,923,021	—	276,537
	Total	—	26,683,353	266,713,584	—	433,801

Appendix
C. IV.FRANCE.
Extracts from
Statistique
L'Industrie.

These data, compared with those of 1887, show, for France, an increase of 1,356,000 tons on the total of the products delineated on the chart, and of 8,043,000 francs on the corresponding value. The increase is still greater if the products of the mining concessions only is considered; it rises then to 1,481,000 tons, of 9,878,000 francs value. There have been, in fact, great diminutions in peat and sea salt, substances for which concessions are not granted. The combustible minerals figure very con-

siderably in increase shown = 1,315,000 tons and 6,623,000 francs.

In 1890 the total number of concessions had increased to 463, the total production for France to 31,116,676 tons, and the total value to 359,130,787 francs—the chief increase being in coal.

Miners.—The number of workmen occupied in the excavation of mines was in 1890 134,000. The following table gives the figures from 1888 to 1890:—

		Men.	Women.	Children under 16.	Total.
Mines of coal	Underground	1888	69,791	—	4,325
		1889	73,937	—	4,882
		1890	81,601	—	5,235
	Overground	1888	24,115	3,336	3,392
		1889	25,077	3,842	3,681
		1890	26,497	3,798	4,424
Other mines	Underground	1888	6,324	—	76
		1889	7,213	—	125
		1890	8,453	—	114
	Overground	1888	2,468	410	264
		1889	2,862	547	320
		1890	3,027	565	346
Total	—	1888	102,698	3,746	8,057
		1889	109,169	3,889	9,008
		1890	119,578	4,363	10,119
					114,501

In 1890, of 1,000 persons occupied in mines of every kind there may be reckoned 892 men, 33 women, and 75 children. But while certain mines employ but few workmen, others, on the contrary, to the number of 36, require each more than one thousand, whether in the pit or on the surface. Amongst these last may be mentioned in particular the collieries belonging to the Anzin company, where there are 10,000 miners; those of Lens and Blazy, which employ 6,000 to 7,000 workmen each; lastly, those of Bruay, of Bully-Grenay, of Courrières, and of Nœux, where the number of workmen is between 3,000 and 4,000. On a total of 454 mines granted and worked in 1888 there were only 81 which employed more than 200 workmen, and 104 which have occupied in all more than 200 workmen inside the mine as well as outside. In Algeria about 1,900 workers are employed. Apart from those employed in mines 1,500 workers are employed in

minières, and 1,100,000 in carrières (quarries) so that—of these about 12,000 are employed underground.

Revenue from Mines.—The following table exhibits the total amount of royalties or taxes derived from mines. The fixed royalty, regulated at 10 centimes per superficial hectare of the concessions, whether worked or not, is included in the general total, including the 10 additional centimes. The largest part of the total amount represents the proportional royalty, reckoned at the rate of 5 per cent. of the net revenue, plus the additional 10 centimes. With the exception of the salt mines, which are submitted to a special tax, the net revenue is fixed, for every concession, by the valuation committees, which assemble for this purpose every year. The total of royalties imposed in France and Algeria may be analysed in the following manner, according to the nature of the concession.

	1888.		1889.		1890.	
	FRANCE.	ALGERIA.	FRANCE.	ALGERIA.	FRANCE.	ALGERIA.
Combustible minerals	Francs. 2,091,137	Francs. 104	Francs. 2,156,754	Francs. 104	Francs. 3,458,891	Francs. 104
Iron Ore	84,154	17,163	82,553	17,670	92,651	20,522
Other substances	206,686	15,387	295,133	20,436	435,599	25,766
Totals	2,381,977	32,654	2,534,440	38,210	3,987,141	46,392
Totals	2,414,631		2,572,650		4,033,533	

As is seen, pit coal bears the principal brunt of the special mining tax. More than half this tax has been furnished by the excavations of Pas-de-Calais and the Nord. For a ton of coal the taxes amount to 0 fr. 09 in 1889 and to 0 fr. 13, that is to say, about 1 per cent. of the value of the coal at the pit's mouth. For iron ore the tax has been 9 per cent., and for other substances 1 7 per cent. of the value. In the figures concerning "other substances," the mining grants of mineral salt and salt springs, which are only subjected to the fixed royalty, on account of the special tax imposed upon salt, show only 3,233 francs in 1890. It may be as well to mention that the special tax produced the sum of 32,400,000 francs in 1890.

Revenue of the Mines.—Number of Excavations profitable or unprofitable.—As the concessions are subjected to the payment of a royalty proportionate to their net revenue, a royalty which levied according to the financial results of the working during the preceding year, the Government

is able to ascertain the degree of prosperity of mines more exactly than it is possible to do in the case of any other industry. The precise results may be obtained therefore from the collecting of the accounts completed for the assessment of the taxation. They are indicated in a table which gives for each department: 1. The number of profitable mines, the weight and value of their productions, and the corresponding figure of the net revenue imposed. 2. The number of unprofitable mines, the weight and value of their productions, and the sum total of the deficit allowed by the valuation committee. According to the rules agreed upon between the Department of Public Works and that of the Finance, the expenses to be taken into consideration in valuing the net products of the concessions, do not comprise the interest on the capital employed in these enterprises any more than a certain number of accessory expenses, and in consequence the returns of profitable mines must not be taken in an absolute

sense. Bearing this in mind the results, from a financial point of view, of the excavation of mines in France (not including the grants of mineral salts and salt springs are summed up in the following table:—

SUBSTANCES CONCEDED.	Mines worked at a Profit.		Mines worked at a Loss.	
	No.	Net Revenue taxed.	No.	Deficit admitted by the Valuation Committee.
		francs.		francs.
Combustible minerals	1888	166 36,928,423	127	3,566,314
	1889	171 38,123,116	119	4,165,100
	1890	172 61,799,388	112	4,700,981
Iron ore	1888	26 1,231,093	38	709,820
	1889	26 1,203,928	37	710,958
	1890	29 1,389,562	34	466,258
Other minerals	1888	34 3,200,945	36	1,247,472
	1889	36 4,747,833	49	1,678,456
	1890	42 7,120,934	42	1,282,921
Total	1888	226 41,360,461	201	5,523,606
	1889	233 44,074,877	205	6,554,514
	1890	243 70,309,944	188	6,450,160

The Figures for 1888.—By comparing these figures with those of the preceding year, it will be seen, that in spite of the larger number of profitable mines, the net revenue was lower by 670,793 fr. than that of 1887. The deficit passed by the committee of valuation has on the contrary increased by 87,575 francs. This diminution of the revenue, corresponding to an augmentation of the deficit, must be attributed principally to the fall in the price of coal, a fall which has not been compensated for by that in wages. These last, in fact, were reduced by 0 fr. 13 c. per ton, whereas the value at the pit's mouth underwent a reduction of 0 fr. 32 c., or 19 centimes more. As to combustibles, the profitable mines produced 20,144,000 tons, and only 2,449,000 tons have been taken from the mines which are producing no return, so that 89 per cent. of the coals extracted have been profitable. As regards iron ore and the other substances, the results are less favourable, in fact the unsuccessful mines have not produced less than 513,000 tons of iron ore, and 102,000 of other ores, while the profitable mines have furnished 1,763,000 tons of the former ores and 347,000 tons of the latter. According to these figures, a little more than three-quarters of iron ore only, and nearly the same amount of other ores, have produced material on which duty can be raised.

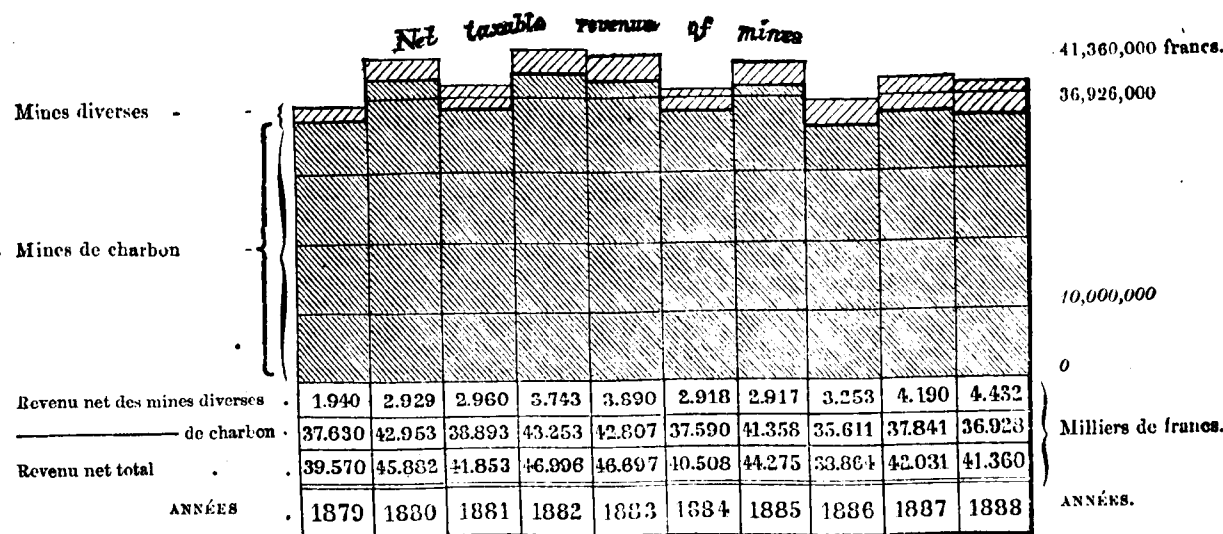
At its present rate, the net revenue raised from profitable mines, compared with the corresponding number of tons,

gives 1 fr. 83 c. per ton of coal, 0 fr. 70 c. per ton of iron ore, and 9 fr. 24 c. per ton of the other substances, composed in great part of metalliferous ores which have already been picked or washed. These figures are lower than the corresponding ones of 1887, which were summed up at 2 fr. per ton for coal, 0 fr. 71 c. for iron ore, and 10 fr. 50 c. for the other substances. To appreciate the degree of prosperity of the mining concessions, it is indispensable to refer to the figures of former years.

The Figures for 1889.—These figures show an increase of seven workings and of 2,714,000 francs in net revenue for mines worked at a profit and of four workings and 1,031,000 francs deficit in the case of mines worked at a loss. The former increase is due to the rise in the price of coal; the latter to the increased expenses of exploration and of starting. Compared with the number of tons raised, the net revenue in mines worked at a profit amounts to 1 fr. 55 c. per ton of coal, 0 fr. 62 c. per ton of iron ore, and 12 fr. 71 c. per ton of other substances.

The Figures for 1890 show that the net revenue in mines worked at a profit amounts to 1 fr. 55 c. per ton of coal, 0 fr. 62 c. per ton of iron ore, and 12 fr. 71 c. per ton for other substances.

The following diagram, which represents the net revenue of mines from 1879 to 1888, shows in proportion what the revenue of the collieries has been:—



NET TAXABLE REVENUE OF MINES.

(Scale of 1 millimetre for 1 million francs.)

It will be seen as much by the study of the diagram as by the figures marked underneath that the revenue of coal mines subject to taxation has been diminishing from

1882 to 1888, if the annual fluctuations are omitted, and that it has fallen from 43,253,000 francs to 36,928,000 francs, whereas that of other mines has risen from 3,743,000

francs to 4,432,000 in the same interval. In Algeria the net taxable revenue has been fixed at 298,000 francs for two iron mines, from which the output has risen to

133,000 tons. Amongst the other working mines, three have presented a net revenue, subject to impost, of 195,000 francs, and four a deficit of 52,000 francs.

BELGIUM.

V.

NOTES on the MINING LAWS in BELGIUM, prepared and handed in by Mr. WALMESLEY, and forwarded to the BELGIAN GOVERNMENT in accordance with the request of the ROYAL COMMISSION.

Formerly, in Belgium, mining was subject in the two following districts to different rights:—

In Hainaut the rights of mining were granted by certain Lords High Justiciaries, who, each in his own district, granted such rights to third parties, reserving certain fixed and proportional rents. The owner of the soil had no recognised rights over the mines.

In Liège, on the contrary, the mines belonged in principle to the owner of the soil. They could not, as a rule, be worked without his consent, though adventurers appear to have had rights under certain circumstances of following seams and otherwise.

The French Laws of 1791 and 1810 relating to mines were, however, subsequently adopted in Belgium, and up to 1830 the French laws and regulations in the matter of mines continued to be applied exclusively to Belgium.

Since the Revolution of 1830, two laws, viz., of the 2nd May 1837 and the 8th July 1865, have modified some points of the Law of 1810, preserving, however, the essential character of that law. The modifications are as follows, viz.:—

The Law of 1837 (Art. 11) recognises a formal right of preference to the concession in the owner of the surface who has a sufficient extent to ensure regular and profitable working, and is possessed of sufficient means to undertake and conduct the work, though the Government may, by the recommendation of the Council of State, depart from this rule in favour of a discoverer or of a concessionaire seeking an extension. As a matter of fact, the Government almost always gives the concession to the owner of the surface, if he applies for it.

The owner of the surface can assign his right of preference to a third party (Dupont, 202), and there are cases in which the proprietor of the surface receives a higher royalty from a concessionaire than the maximum fixed by Government, having agreed to give such a royalty in order to prevent the surface owner from applying for a concession, and such a contract has been held to be legal.

This is the same as in France, viz., mines, minières, and carrières, the first-named only being reserved from the ownership of the proprietor of the surface.

In cases where the proprietor of the soil does not himself obtain the concession he is to be entitled to a fixed royalty of not less than 25 centimes the hectare, and also to a proportional royalty of from 1 to 3 per cent. on the produce of the mine (Art. 9). The exact rate of the proportional royalty is fixed by the Act of Concession, and the amount of the net proceeds is fixed each year by the Committee of Valuation. The fixed royalty is distributed amongst the proprietors in proportion to the extent of their lands within the area of the concession, and the proportional royalty according to the mineral taken, but the surface-owner is not entitled to any payment beyond the fixed royalty unless mineral has actually been worked from under his land (see W. & H., p. 46, § 126).*

As a matter of fact the fixed royalty varies from 25 centimes to 3 francs the hectare (Dupont, 145).

In fixing the royalty it is not permitted to take into account the damage which the works may cause to the surface, which has to be separately provided for, as under the French Law (Dupont, 145). If the land is occupied for less than a year, or at the end of that time can be restored to its former state, the proprietor of the surface is entitled to double the yearly value of the produce (Art. 43);

but if the land is occupied for more than a year, or permanently damaged, the proprietor may require it to be bought at double the value it possessed before the working commenced (Art. 44). This right of occupation can only be exercised by a concessionaire within the area of his concession (W. & H., p. 48, § 127).

These taxes are the same as in France, viz., a fixed tax of 10 francs per square kilometre, and a proportional tax not exceeding 5 per cent. per annum on the net proceeds (as a matter of fact the proportional tax has remained for a long time at the rate of 3½ per cent.). The net proceeds are arrived at by deducting from the gross sales of a mine all working expenses, but excluding any interest on capital outlay; all products of the mine consumed in working it are for the purposes of this valuation assumed to have been sold at cost price, or at a higher price, if the Valuation Committee so decide. The value of any new work or new plant can be deducted for the year in which the outlay is incurred; but if the outlay in any one year under this head exceeds the value of gross sales no allowance for the balance of outlay is allowed to be carried to the next year. No allowance is made for depreciation, but all outlay incurred in any year for keeping up mines or plant is deducted from the gross value of the output for the same year.

The fixed acreage tax is payable under any circumstances; but the Valuation Committee can reduce or exempt the mine-holders from the proportional tax in case of the mine being stopped or of any difficulties occurring in working it.

The Valuation Committee for the proportional tax of mines is composed of seven members, viz.:—

- The Governor of the Province,
- Two members of the Provincial Government designated by the Governor,
- Two proprietors of mines,
- The District Engineer of Mines,
- The Director of Taxes.

It has resulted from the reservation made in Art. 1 of the Law of 1837 that no concessions have since been made of iron mines, and that in consequence the minières of the proprietors of the soil have become extended into regular mines (Ag. 187).

Under the Law of 1837 (Art. 12) the Government, on the recommendation of the Council of State, and after an inquiry, may declare as of public utility the ways of communication necessary in the interests of a mine, in the same way as is provided in France by the Law of 27th July 1880; only in Belgium the indemnity to the proprietor is fixed at double the annual value, including depreciation, cost of reinvestment, and interest for delay (W. & H., § 146), and the Government cannot grant the use of the ways to other industrial establishments besides the mines (Dupont, 371-2). This power of expropriation is quite separate from the right of occupation before referred to, which is only exercisable within the areas of the concession for the establishment of ways strictly necessary for the purpose of the mine (W. & H., p. 51, § 196).

Under the Law of 1865 works cannot be opened within 100 metres of habitations without the consent of the proprietors of the same, if the land on which the works are situate also belongs to them (Art. 11).

A very complete law for the inspection and regulation of mines was passed on the 28th April 1884, superseding previous laws.

Legal provisions are also made for the establishment of relief societies, of which there seems to be a large number established on a similar system to those of France (Ann. Stat., pp. 164-5).

Although Art. 49 of the Law of 1810 applies to Belgium, there is no further provision similar to that enacted by the Law of 1838 in France, and the article has no practical

Taxes payable to the Government.

Valuation Committee.

Iron mines practically belong to owners of surface.

Wayleaves.

Inhabited buildings.

Inspection and regulation of mines.

Relief funds.

Forfeiture of concessions.

effect; and, though there appears to be some difference of opinion on the subject, the balance of opinion seems to be that no forfeiture can in fact be decreed unless it is specially provided for by the Act of Concession (Dupont, 319).

There is a complete staff of mining officials appointed by the Crown, at the head of which is a Director-General, having under him divisional directors and several grades of engineers. It is the duty of these officials, under the authority of the Minister of the Interior, to see to the laws, regulations, and decrees relating to mines being carried into effect.

The powers given to the Council of State by the Law of 1810 are in Belgium exercisable by a Council for Mines, composed of a president and four councillors, nominated by the King, their decisions being subject to the approbation of the King (Law of 2nd May 1837). No concession of mines can be granted against their advice.

Questions as to indemnities by proprietors of mines have to be determined by the civil tribunals.

The following statistics are taken from the Government Report of the Belgian Minister of the Interior for the year 1888: The number of subsisting concessions of coal in the year 1887 amounted to 260 (extending over an area of 143,965 hectares), of which 140 only were being worked. The total production of these was 18,378,624 tons, of a total value of 147,674,000 frs. (or rather less than six million pounds), costing in production 138,933,000 frs. (or over five and a half million pounds), and leaving a net profit of 8,741,000 frs. (or about 350,000*l.*), divided among 90 concessions, the other 50 having been worked at a loss (Annuaire Statistique, 277).

It may be observed that although the production of finished iron and steel has increased in Belgium of late years, on the other hand, the production of raw material from the metallic mines in Belgium has been greatly reduced, the bulk of raw material being now imported from Spain, the North of Africa, and elsewhere, and that the number of workmen employed in the metallic mines of Belgium has decreased from 11,141 in the year 1860 to 1,537 in the year 1887 (Ann. Stat., 276).

The total number of workers underground was 75,445, of whom 3,201 were women, 7,920 boys, and 1,032 girls under 16 years of age; aboveground, 25,294, of whom 3,762 were women, 2,381 boys, and 2,380 girls under 16 years of age (Ann. Stat., p. 277). The hours of work varied from 7 to 14 by day or night, and the daily wages of workers—

Under 14 years of age from 50 frs. to 250 frs. = 5*d.* to 2*s.* 1*d.*
Over 14 and under 16 from 91 frs. to 30 frs. = 9*d.* to 2*s.* 6*d.*
Over 16 years of age from 155 frs. to 450 frs. = 1*s.* 3*d.* to 3*s.* 9*d.* (Ann. Stat. 273).

VI.

CORRESPONDENCE.

1.

Foreign Office,
14th July 1891.
SIR, I AM directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties the accompanying despatch and enclosures as marked in the margin, which has been received from Her Majesty's Chargé d'Affaires at Brussels.

I am, &c.
(Signed) JAMES FERGUSSON.
The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir James Fergusson's letter of July 14th 1891.

No. 82, Commercial.
MY LORD, Brussels, July 9th, 1891.

On the receipt of your Lordship's despatch, No. 23 of this series of the 30th April last, Lord Vivian addressed a note to the Belgian Government stating the desire of the Royal Commission on Mining Rents and Royalties to be furnished with evidence, oral or written, on the several points mentioned in the printed memorandum which accompanied your Lordship's despatch, and asking to be furnished with an approximate estimate of the expenses that would be incurred, both for travelling expenses and for the honoraria which it would be proper to offer to the witnesses, or, in the event of oral evidence not being forth-

coming, to the experts who might prepare written replies to the queries to be sent in before the end of July.

I have now the honour to enclose copy of a report, with seven sub-enclosures from Monsieur de Bruyn, the Minister of Agriculture, Industry, and Public Works, on the above subject which I have received from Prince de Chimay.

From a perusal of this report your Lordship will observe that M. de Bruyn is prepared, should it be deemed necessary, to delegate one of the Government mining engineers to give oral evidence before the Royal Commission, but that in his Excellency's opinion, it is more desirable to reply to the inquiries set forth in the memorandum in writing.

In pursuance of this resolution M. de Bruyn calls attention to the fact that one of the Belgian delegates to the Berlin Labour Conference, Monsieur Harzé, Director of Mines, addressed, in the month of July last, to Mr. David Dale, one of the British delegates at the same conference, at that gentleman's request, a report embodying the replies to the most essential of the questions contained in the memorandum of the Royal Commission and touching upon other peculiarities special to this country. His Excellency adds that he does not consider that he can do better than enclose a duplicate copy of this report.

He further appends some complimentary observations of his own on the several points raised in the list of questions of the Royal Commission, and has marked in the margin of the "Notes on the Mining Law in Belgium," enclosed in your Lordship's despatch above referred to, certain inaccuracies, and made some additions to the information contained therein.

In forwarding these documents I have the honour to ask your Lordship to be good enough to inform me whether the Royal Commission consider them to be a sufficient answer to the questions set out in the memorandum they have issued, or whether they would still desire that oral evidence of the nature indicated by M. de Bruyn should be obtained.

On receiving your Lordship's reply I shall ascertain what honorarium should be offered either for the attendance of the witness in England, if still desired by the Commission, or for the preparation of the report which accompanies this despatch.

I have the honour to be,
With the highest respect,
My Lord,
Your Lordship's most obedient,
humble servant,
(Signed) MARTIN GOSSELIN.
The Marquis of Salisbury, K.G.,
&c. &c. &c.

2.

Report on the Mining Laws of Belgium.

Enclosure in Mr. GOSSELIN's Letter of July 9, 1891,
(see Q. 18,778).

M. DE BRUYN to the PRINCE DE CHIMAY.

Ministry of Agriculture
Industry, and Public Works,
Office of Mines.
Brussels, June 17th, 1891.
M. LE MINISTRE, I HAVE the honour to return the despatch with its enclosure which his Excellency, the English Minister addressed to you and which I shall endeavour to answer as satisfactorily and completely as possible.

The Royal Commission on Mining Rents and Royalties sitting in London has expressed a desire to obtain evidence from competent persons conversant with the mining laws of Belgium, such as State engineers and mine-owners having sufficient knowledge of the English language, or to receive answers in writing to the different points indicated in the memorandum enclosed. I could, if it was still thought necessary, delegate one of our mining engineers, but although wishing to satisfy in every way Lord Vivian's wishes, it seems to me preferable to answer by writing, and so meet the object in view with greater accuracy.

In this connexion, I would bring to your notice that one of our delegates at the Labour Conference of Berlin, Mons. Harzé, Director of Mines, had the honour of sending last July to his colleague, Mr. David Dale, now a member of the Royal Commission, a complete report on the law of mining royalties in Belgium. This work, which was prepared for the honourable member at his request, answers all the most important questions put in the enclosed memorandum, and touches on those points

(M. de Bruyn,
17th June 1891,
7 sub-enclosures.)

which are peculiar to our country. I do not think I can do better than forward to you a copy, which I append (see below).

The Belgian law is, for the matter of that, well described in the "Notes on the Mining Laws," enclosed with the despatch to his Excellency. I have, however, corrected in red ink in the margin some errors, and added here and there some explanations. Nothing remains but for me to offer a few supplementary observations upon the various questions set forth in the memorandum of the Royal Commission.

1. *Application for Concession.*—The applicant addresses his request to the *Deputation Permanente* of the province where the mine is situated. See for all the formalities the Code of Industry and Mines by Wiliquet and Hubert, page 20, *et seq.* The applicant is not liable for any legal expenses.

2. *Clauses and Conditions of the Act of Concession.*—The *cahier des charges* annexed replies to this question.

It must be remembered that the concession is granted for ever (*à perpétuité*).

3. *Transfer by Leases.*—Article 13 of the *cahier des charges* prohibits this description of transfers. Nevertheless in the province of Hainaut leases (*remises à forfait*) do occur in consideration of payments either in kind or in money, but nearly always without limitation of time. The legality of the said article is therefore open to controversy. However that may be the Administration, particularly as regards royalties, only recognises the concessionnaire or the person who has acquired the mine. (See the report by Mons. Harzé below.)

4. 5. *Powers of Concessionnaires with respect to the Ownership of the Surface.*—See "Notes on the Mining Laws," page 127, and the above mentioned report.

6. *Powers of the Concessionnaire with respect to neighbouring Concessionnaires.*—These powers only exist in cases of accident. They are defined as follows by Article 83 of the general regulation with respect to the police of mines. "The mine-owners and directors of mines near to the mine where there may be an accident shall provide all the means of assistance of which they can dispose whether in men or in any other way, without prejudice for an indemnity, if necessary, against the person liable." See also the report of Mons. Harzé below.

7. *Division of a Concession.*—The case of a division of a concession for the purpose of letting it on lease is altogether exceptional and results from an old condition of things. It only exists in the province of Hainaut. A concession is only capable of being divided by a Royal decree issued upon the recommendation of the Council of Mines. Each part then becomes a separate concession. The tendency in Belgium is towards the amalgamation of several neighbouring concessions, these being often of small extent.

8. *Taxes payable to the Commune.*—See the report of Mons. Harzé below.

9. *Usual working Hours and Miners' Wages.*—See "Notes on the Mining Laws," page 128.

10. *Mines worked by the State.*—These do not exist in Belgium.

11. *Powers of the Council of Mines, &c.*—The Council of Mines especially gives its advice with respect to applications for concessions after the report of the "*Deputation Permanente*" of the Provincial council and of the mining engineers. A concession cannot be granted against the advice of the Council of Mines. The same authority also gives its advice with respect to applications for occupation of the surface and for opening up ways of communication. The mining engineers particularly see to the due compliance with the laws and regulations. In case of danger they appeal to the *Deputations Permanentes* for an injunction and other measures of security.

12. *Results of the Development of the Coal Mining Industry.*—These results will appear from the following figures showing the progress of the coal mining industry in Belgium for the last 60 years:—

Periods.	Annual Average Output.
1831 to 1840	2,916,552 tons.
1840 " 1851	4,815,288 "
1851 " 1860	8,085,216 "
1861 " 1870	11,780,626 "
1871 " 1880	15,033,215 "
1881 " 1890	13,323,000 "

On the other hand, in consequence of the exhaustion of the veins or of the increase of the difficulties met with, the working of iron ore and other metallic substances which in 1865 represented a value of 15,903,000 francs and employed 11,813 workmen, has in successive years decreased to, in 1889, the value of 2,722,000 francs, and the employment of only 1,601 workmen.

For the iron ore mining regulation in Belgium see "Notes on the Mining Laws," p. 127, and the report of Mons. Harzé below.

(Signed) L. DE BRUYN.

Minister of Agriculture,
Industry, and Public Works.

3.

Enclosure in Mons. L. de Bruyn's letter of
July 9th, 1891.

MEMORANDUM sent to MR. DAVID DALE, from information obtained through the kindness of MONS. EMILE HARZÉ, Director of Mines at BRUSSELS (see also Q. 18,778).

Of the nine provinces of Belgium, four possess mines. These are the Walloon provinces of Hainaut, Liège, Namur, and Luxembourg. In the Flemish provinces of Antwerp and Limbourg there are a few free workings of surface iron ore, known as *Campine*,* from the name of the district where these deposits are met with. These workings, which are carried on by the owners of the soil or their representatives, are of but slight importance. In 1889 they produced only 6,950 tons of dressed ore, valued at 41,700 francs (say 1,668*l.*)

Of the four mining provinces mentioned above, that of Luxembourg may be neglected, inasmuch as it possesses only mines that are not working, one of these being a small coal concession of no importance. In 1889 this province returned four working mines which afforded occupation to not more than 39 workmen, who produced in subterranean excavations at a slight depth, in ground for the most part communal, 46,800 tons of *minette* iron ore worth 73,100 francs (say 2,924*l.*).

The above facts lead us to confine ourselves in this note to the three provinces of Hainaut, Liège, and Namur.

Each of these provinces contains active coal mines as well as concessions for metallic minerals. The latter are especially numerous in the province of Namur. But by far the greatest number of them have no industrial importance. Consequently in Belgium at the present time there are but six being worked out of 96 concessions of this kind. These six are in the province of Liège, and in 1889 afforded occupation to 869 workmen, and produced—

	Quantity.	Value.
	Tons.	Francs.
Washed iron ore	35,830	178,120
Manganiferous iron ore	20,905	248,450
Galena	194	20,420
Calamine	10,930	563,800
Blende	10,248	731,860
Iron pyrites	5,051	42,950
Totals	83,158	1,785,600

Apart, however, from these workings and those of *campine* ore, there were extracted from underground workings, without concession, in the provinces of Namur and Liège at nine localities 91,946 tons of iron ore, with an aggregate value of 821,396 francs. In this case, as will be pointed out subsequently, these workings for iron ore without concession are carried on in

* These ores are of Upper Tertiary age, and belong to the Diestian system of Dumont.

the name of the proprietor of the soil, rent being charged for his profit.

As regards the working of coal, the essential mineral wealth of the kingdom, the provinces of Hainaut, Liège, and Namur have altogether 132 mines working, which produced 19,869,980 tons of coal, with an aggregate value of 187,718,000 francs.

The production of the separate provinces was as follows:—

	Quantity.	Value.
	Tons.	Francs.
Hainaut - - -	14,447,355	135,701,000
Liège - - -	4,955,620	48,699,000
Namur - - -	467,005	3,318,000
Totals - - -	19,869,980	187,718,000

The number of workmen occupied at the coal mines amounted to 168,382, of which 81,970 worked underground.

Legislation.

Ancient Customs.*—In Hainaut, the feudal lords (*seigneurs haut-justiciers*), usurping the prerogatives of the Sovereign as to the mines, disposed of the coal mines throughout their seigniories. They entrusted them, generally by groups of beds, to companies of workmen, who sometimes handed them over to others.

Seigniorial concessions were not free; they gave rise to dues which have received the name of *cens* and *entre-cens*.

The former is paid in return for the right of opening the pit. The latter represents a share of the product extracted, and varied from one-tenth to one-twentieth of the whole of the coal raised.

In the county of Namur, where little but lead and iron is worked, it was the Sovereign who granted concessions for lead. As for the iron mines, they belonged to the public domain, and were placed at the disposal of iron smelters, who were able to work them in any ground whatever, provided that they paid one-tenth of the value to the owner of the soil.

In the ancient principality of Liège, which included several portions of land enclosed in the territories of the provinces of Namur and Hainaut, only those mines lying under the main roads were attributed to the prince, these roads forming part of his domain.

The master of the surface there was the lord of the mines down to the centre of the earth (*seigneur des mines jusqu'au centre de la terre*).

In the country of Liège, however, the mine could be separated, and was separate from the surface. This was frequently due to the great division of the ownership.

This separation was brought about—

1. By the formal consent of the owner, that is to say, by cession or concession on his part.

The mine was sold on the condition that the purchaser should pay to the vendor a portion of the product of the working, and if there was no agreement to the contrary, this portion was fixed at one-eighth of the raw material produced. This is known as the *droit de terrage* (the right of taking products).

2. By prescription or tacit consent of the owner. He who had mined for 40 days in the sight of, and to the knowledge of the owner, could continue working the vein attacked, paying in the meantime the right of *terrage*.

3. By expropriation. The right of working under the grounds of another become susceptible of acquisition (*conquête*).

In short, it is evident that the mines were considered dependencies of the surface. This principle gave rise to a multitude of small workings of slight depth, of

* All of this summary of the ancient legislation is compiled from several works, notably from the course of lectures given at the University of Liège, by Professor De Pooz, and published under the title of *Points fondamentaux de la législation des mines, minières et carrières*.

which a number, in spite of the action of pumps, were inundated by water. This led to the construction of drainage levels, known as *adits* (*arènes*) for the unwatering and drying the mines that had become unproductive, and for enabling them to be worked. The use, however, of an *adit* level was only permissible under an onerous title.

The owner of the mine saved by the *adit*-level became tributary to the proprietor of the *adit*-level, and was obliged to give up to him a portion of the product of the mine. This portion received the name of *cens d'arène* (*adit dues*). Custom fixed it at one-eighth of the product extracted.

In 1582 an edict of Prince Ernest of Bavaria decided that those who drained veins up to that time submerged, acquired the veins which were rendered capable of being worked, and that they could consequently work them themselves or cede their rights, provided that they acquitted the right of *terrage*, and executed the formalities accompanying acquisition. The owner of the ground and the old workers of the mine were informed that acquisition was contemplated, and they were entitled to preference.

Moreover, there was a *cens de versage* (damage dues) due to the owner of the ground on to which the water was emptied from the mouth of the *adit* or from the shaft. This right consisted of a share, usually one-eighth.

Lastly, there existed the right of *comptage* for the benefit of the individual charged to keep the accounts between the mine masters. An indemnity or contribution was attached to keeping the accounts. It was either a charge on the sum total of the accounts of the company or a portion of the product obtained, usually one-hundredth. The right and this charge were often reserved to the owner of the ground in which the miner opened a shaft or level.

Laws in operation.

The French mining law of April 21st, 1810, forms the substance of the legislation now affecting mines in Belgium. It was preceded by the law of July 12th, 1791, which respected the old workings then in operation, established either by act of concession or by prescription or any other means.

Thus, in the country of Liège, it was considered that a legitimate title to the enjoyment of their workings was possessed by those who worked in virtue of either an agreement made with the owners of the ground or a prescription or an acquisition.

The case was similar in Hainaut for those who extracted material from the earth provided with titles to concession granted by the high justices. Obviously, in order to assure the maintenance, the old concessionaires were required to indicate to the government the titles and the limits of their workings.

The law of 1791 consolidated the charges that affected the existing rights with the exception of those deriving privileges from the feudal system, the latter having been abolished.

Thus, the rights of *terrage* and the rent of *adit* established by custom in the country of Liège for the profit of the owners of the surface and of the *adit*-level have survived.

This, however, is not the case with the rents due to the feudal lords of Hainaut, with the exception of certain transactions that might have to be made between the old concessionaires and the former seigneurs.

Like its predecessor of 1791, the law of 1810 maintained the charges to which the mines might be subject for the profit of individuals, and abolished the old royalties due to the State, by establishing a fixed rent as well as a rent proportional to the net product (profit) of the undertaking. The former rent was fixed at 10 francs per square kilometre of surface of the concession, and the rate of the proportional rent at a maximum of 5 per cent.

In Belgium the proportional rent has been fixed every year by the budget of the State at 2½ per cent., but, as a matter of fact, with the additions, the rate amounts to 3·12 per cent.

According to Article 39 of the law, these rents should form a special fund destined for the expenses of the administration of the mines and for other expenses of general interest relating to the mining industry. In reality this product enters into the receipts, and is absorbed in the State expenses like other taxes.

In concluding this section we may remark that the feudal privileges having been abolished, and consequently the rents paid to the feudal lords of Hainaut,

the ancient right only affects in Belgium certain collieries in the ancient country of Liège. The exercise of the old rights of *terrage*, *arène*, *versage*, and *comptage* had been apt to weigh heavily on the undertaking. The claiming of these rights has frequently caused lengthy law suits, ended in some cases by compromises. Numerous titles, however, have disappeared, and others have been secured by the miners themselves.

On the whole, if there are undertakings onerously burdened by these rights, it may be said that they do not form a heavy charge on the whole of the collieries.

Communal Taxes.

Besides the rents due to the State, mining undertakings have to pay to the communes somewhat heavy taxes. These are fixed either on the annual profit, just like the rent proportional to the profit claimed by the State (rate of one-half to two-and-a-half per cent.), or on the number of hectares conceded included within the territory of the commune interested (several francs per hectare), or again on the number of workmen employed (several francs per unit). Very generally, too, the communes impose a tax of several francs per horse-power on the various motors, always excepting the pumping and ventilating engines.

The establishment of these various taxes have been approved by the Government.

Lastly it must be noted that the mines are obliged by law to assist, by special subvention, in maintaining neighbouring roads which they cause to be subjected to wear, either habitually or temporarily.

Rents to the Owners of the Surface.

The law of April 21st, 1810, not only established rents in favour of the State for all mines, old and new, but it inscribed the principle of a rent to the owners of the surface for every mining concession that should henceforth be granted, concessions with a maintained title, the regulations for which have been complied with up to the present time, always escape from this charge.

Although Article 6 of the law of 1810 ordains the act of concession shall regulate the rights of the landowner on the product of the mine, Article 42 appears to exclude any proportional indemnity varying according to the product of the mine. Moreover, from this law to the promulgation of that of May 2nd, 1837, which will be discussed subsequently, the bills of charges of the mining concessions, taxed in Belgium, under the title of *new concession*, stipulate in favour of the owners of the surface, in the absence of previous arrangement with them, only fixed rents comprised between 0·04 franc and 1 franc per hectare.

The Belgian law of May 2nd, 1837, clearly defines the rights of landowners for every new concession granted, in the following terms:—

"Article 9. The indemnity reserved for the owner of the surface by the Articles 6 and 42 of the law of April 21st, 1810, shall be determined by means of a fixed rent and a rent proportional to the product of the mine. The fixed rent shall be determined by the deed of concession. It shall not be less than 25 centimes per hectare of surface.

"The proportional rent shall be fixed at 1 to 3 per cent. of the net product of the mine;" that is to say, 1 to 3 per cent. of the profit. This rent is to be assessed among all the owners.

The fixed rent has only in very exceptional cases been established at the maximum of 3 francs per hectare. As a rule it does not exceed 1 franc. As for the proportional rent, it has most frequently been taken at the rate of 1 per cent.

It will thus be seen that the rights reserved to the owners of the surface are very moderate. They only affect the mines for which concessions have been granted under the law of 1810 and that of 1835. And, as in Belgium, the ownership of the land is greatly divided, especially in the industrial districts, these rights are only claimed by some large landowners, amongst which are the monasteries (*hospices*).

Obligations derived from private agreements.

In Belgium, notably in Hainaut, certain undertakings are encumbered in consequence of agreements of a private character.

The case is frequently met with in which a mine is ceded by the concessionaire to a company in return for a share of the coal extracted. Frequently, too, this

state of things is brought about by the concessionaire letting a portion of his mine, and receiving a share of the output. At the Couchant de Mons, a district in the west of Hainaut, there even exists an important maintained concession which the old concessionaires have parcelled out to different companies which have to pay to the mother company a proportion of their output.

All these lettings of portions of concessions are known under the name of *forfaits*. They differ from other leases in that their duration is that of the exhaustion of the mineral wealth ceded, except in the case of forfeiture provided for in the agreement.

The mother company, as concessionaire, is alone in relation with the administration, and pays rent to the Government on all the workings in operation in its concession.

The rate is very generally a fraction of the output, allowance being made for the coal consumed. This fraction varies from one-ninth to one-twelfth, and is paid either in money or in kind. As a rule, a minimum of the output is agreed on.

The present tendency is to restrict the number of such companies. When it appears advisable to prolong their existence by a renewal of the lease, this is granted at a rate less onerous than was formerly the case.

Similar agreements are also formed between neighbouring mines for working a portion of the concession by the owner of the adjacent concession when the latter is better situated for undertaking it in an advantageous manner. But by reason of the principle of the unity of the concessions assured, as will be seen subsequently by the obligation of leaving massive partings, such agreements should be submitted to the Government, who authorise, if it is to be done, the breaking down of these partings.

All the cases enumerated in this section are, however, exceptions* if the whole of the mines of the kingdom are under consideration.

Boundaries.

In Belgium the mines must reserve in the interior of their concession a solid mass 10 metres in width along the boundaries. It follows, therefore, that the mass which separates two adjacent concessions will be 20 metres in width.

This obligation, which, as we have just stated, assures the principle of the unity of concession, impedes agreements relative to common ventilation, which would be detrimental to the security of the mines of the country.

Drainage.

As regards mine drainage, there are in Hainaut, for certain superimposed collieries, common means of drainage. Indeed at Mons there is a special company formed for mine drainage (*Société des Pompes*).

As far as possible, each company endeavours to master its water. It, however, happens that by filtration or other cause, the water from one mine penetrates into the adjoining concession from which it is raised. In this case the former must indemnify the latter.

Occupation of the Surface.

Article 11 of the law of April 21st, 1810, modified by Article 1 of the law of July 8th, 1865, gives the Government power to authorise the concessionaire, in spite of the opposition of the owner, to occupy such portion of ground as may be necessary to open shafts or levels, set up engines or shops in the interest of the undertaking. Exception is taken for any portion of ground adjoining houses or walled enclosures belonging to the owner and at least 100 metres from these houses and enclosures. In order to grant authorisation, the Government must consult the Council of Mines, the owner approving. The necessity for the occupation must be shown.

At the end of a year of occupation, the owner may insist on the acquisition of the land used by the mine. Generally the acquisition is effected in the first place. The valuation is made at double the value.

Means of Communication.

The Government may also, Article 12 of the law of 2nd May, 1837, on the advice of the Council of Mines, declare that it is of public utility to establish communications in the interest of a mine. The declaration of public utility is preceded by a very careful inquiry.

* The number of *forfaits* in operation in Hainaut at the present time does not exceed five, two of which are unimportant.

This declaration gives the concessionaire legal power of expropriation. The indemnity due to the landowners is similarly fixed at double the value.

It will be observed that in this case restrictions do not exist as they do in the case of simple occupation of land necessary for the other wants of the mining enterprise.

Working of Iron Ores.

The law of April 21st, 1810, distinguishes between iron mines and iron quarries (*minières*).

Iron mines are iron-bearing masses, the exploitation of which necessitates regular workings on a large scale.

According to the terms of the above-mentioned law, iron mines may be conceded. The concessionaire, however, is bound (1) to supply the smelting works which obtain their ore from the places comprised in the concession, with the quantity required at a price shown on the balance sheet or fixed by the administration; (2) to indemnify the owners from the profit made by the mine in proportion to the capital that they placed in it. This is apart from the other extremely moderate rents provided by the Articles 6 and 42 of the same law.

The iron quarries include the alluvial iron ores obtained by open workings or by small shafts and subterranean levels which cannot be considered as regular workings.

It must be noted that by the action of the service of jurisprudence, the iron-bearing masses, which constitute the mines in the sight of the law, are considered as quarries at the outcrops. These superficial portions could be worked by quarrying, and as the depth increases by small shafts without any regular workings.

The quarries belong to the owners of the land, who usually let them in return for rent to miners. The ironmasters, in default of owners, may work them.

It will be readily understood that the determination of the line of demarcation between mines and quarries (*minières*) in certain iron-bearing masses has frequently given rise to law suits.

There are few iron mines *conceded* in Belgium. All concessions of this kind were granted under the Dutch régime, that is to say, before the end of 1830. The law of April 21st, 1810, demands the intervention of the Council of State for granting every mine concession. Now, the absence in Belgium of an assembly of this kind after its separation from Holland led to the suspension of discussions relative to demands for mine concessions.

This state of things prevailed until the promulgation of the Belgian law of May 2nd, 1837, which, by one of its ordinances, instituted the *Council of Mines*, granting to it the powers conferred on the *Council of State* by the mining law of April 21st, 1810, always excepting demands for concession or extension of iron mines.

This exception had deplorable consequences. A number of small free undertakings arose, established with no idea of general management. The more important ones continued to be dependent on the landowners, notwithstanding the fact that as the depth increased, the workings assumed a regular character.

Certain iron mines conceded only paid the insignificant rents ordained by Articles 6 and 42 of the Law of 1810. Other iron mines also conceded are further affected by Article 70 of the same law. Lastly, the free workings and the quarries are still dependent on the owner of the land.

It will readily be understood that the rents due by contracts with the landowners have varied with the prosperity of the industry and under the influence of the market competition of foreign ores. At the present time these rents vary from 0.50 franc to 1.00 franc per ton.

Belgium contains in the eastern district deposits of ores, of iron, and manganese. Not very rich in iron, these deposits are considered as manganese mines and conceded as such. The rents reserved to the owners of the surface are the fixed and proportional rents, which were considered in reference to coal mines. They are usually 0.25 franc per hectare and 1 per cent. of the net product.

(Signed) EMILE HARZÉ.

Brussels, July 24, 1890.

VII.

Enclosure in M. DE BRUYN's Letter to the PRINCE DE CHIMAY of July 9th, 1891.

CAHIER DES CHARGES.

ARTICLE II.

Precautionary Measures.

The concessionaire shall conduct his works so as to provide for the interests of the consumer, not to compromise the public safety, the preservation of the mine, or the lives of the workmen, or to injure dwellings or valuable waters on the surface. He shall conform for this purpose to the instructions which will be given him by the administration and the mining engineers.

ARTICLE III.

Whenever the concessionaire wishes to open a shaft or any other temporary or permanent work on the surface, he shall previously give notice to the Provincial authorities and accompany the notice with the necessary documents to explain the utility of the proposed work; he shall notify at the same time the general arrangements he proposes to make for the execution of this work.

ARTICLE IV.

At each excavation there shall be provided, for the use of the workmen, in a separate shaft, if the authorities deem it necessary, a system of safe and easy incline ladders, reaching from the surface to the bottom of the works.

ARTICLE V.

The concessionaire shall maintain along and within the limits of the concession barriers of coal or rock of metres in thickness. In case of a breach of this article, he will pay to the State, for each cubic metre withdrawn from these barriers, or beyond them, a sum of 200 francs, without prejudice to the future rights of third parties.

DEMARCATON AND PRODUCTION OF PLANS.

ARTICLE VI.

Within months from the date of the act of concession, boundary marks shall be placed on all the points forming the limits of the concession where it is judged necessary. The work will be done at the expense of the concessionaire under the superintendence of the *Députation Provinciale*, and in the presence of the mining engineer of the district, or his deputy, who will register a "procès verbal." Copies of this "procès" will be deposited in the archives of the Province, and in those of the "communes" below which the concession extends.

The concessionaire will be bound to place similar boundary marks, with special notices, on abandoned shafts, in order to preserve the history of the principal circumstances of the works.

ARTICLE VII.

At the latest within two years from the date of the act of concession, the concessionaire shall send the *Députation Provinciale* in duplicate:—1°. A general *parcellaire* plan of the surface of the concession, showing the position of the shafts, buildings, and other constructions belonging to the excavations. To this plan shall be annexed two vertical projections, on plans parallel to the direction and general inclination of the beds, and indicating the position and depth of the shafts, *l'allure des gîtes dans les parties reconnues*, and the relative height of the principal points on the surface. 2°. For every bed an horizontal plan, and the number of sections and vertical projections necessary for the faithful representation of the works.

All these plans, sections, and projections shall be drawn to the scale of a millimetre to a metre, and divided into squares of a centimetre.

The correspondence of the different plans shall be indicated by means of the same letters or numbers.

ARTICLE VIII.

Every year, after the production of the documents mentioned in the preceding article, the concessionaire shall submit to the engineer in the course of the plans, sections, and projections of the work executed in each bed during the course of

These details will be afterwards entered on the general plans of the works executed in the same beds according to instructions which will be given by the engineer. These plans will be, like the preceding ones, drawn on a scale of a 1,000th and divided in squares marked with the same

ARTICLE XIV.

Whenever a mine belongs to a company, the company will be required to point out, by a declaration made to the registrar of the Provincial Government, one of the directors, or a deputy to whom the necessary power has been given to correspond for the Company, with the administrative authorities, and in general to represent it before the administration as far as demand and replying are concerned. This representative must be domiciled and must reside in Belgium. The members of the Company shall be, moreover, jointly and severally responsible for all and every one of the conditions of their concession for the execution of which they will be expected to make a common choice of domicile, where all ordinary legal processes may be executed as at a private residence.

ARTICLE XV.

Should the concessionaire fail to commence the works within a year from the date of the act of concession, or in the case of a stoppage of the works or of a breach of the foregoing conditions, or of those which are derived from the concession, its revocation may be pronounced without prejudice to any other measures authorised by the laws or regulations.

ROYALTIES.

ARTICLE XVI.

The rate of royalties to be paid to the proprietors of the surface, in accordance with Article 9 of the Statute of May 2, 1837, is regulated as follows: a hectare for the fixed royalty, and per cent. of the net produce of the works for the proportional royalty.

ROYAUME DE BELGIQUE.

MINES DE HOUILLE.

(i.) SALAIRES JOURNALIERS MOYENS.

ANNÉES.	HAINAUT.			NAMUR.			LIÈGE.			ROYAUME.		
	Fond.	Surface.	Total.	Fond.	Surface.	Total.	Fond.	Surface.	Total.	Fond.	Surface.	Total.
1870	-	-	2 90	-	-	2 64	-	-	2 96	3 09	2 21	2 93
1871	-	-	2 83	-	-	2 34	-	-	3 09	3 10	2 20	2 89
1872	-	-	3 75	-	-	3 06	-	-	3 52	3 79	2 48	3 49
1873	-	-	4 90	5 42	2 71	4 67	4 38	2 68	4 06	5 01	2 84	4 51
1874	-	-	4 49	4 42	2 46	3 95	4 25	2 72	3 99	4 44	2 83	4 07
1875	-	-	4 20	4 49	2 50	3 90	4 09	2 54	3 75	4 22	2 76	3 88
1876	-	-	3 72	3 44	2 25	3 36	3 73	2 70	3 57	3 74	2 72	3 50
1877	-	-	3 14	2 90	2 24	2 69	3 26	2 47	3 08	3 17	2 43	2 99
1878	-	-	2 97	2 84	2 23	2 66	3 27	2 42	3 02	3 03	2 46	2 90
1879	-	-	2 91	2 79	2 01	2 52	3 21	2 40	3 15	3 02	2 35	2 83
1880	-	-	3 22	3 16	2 32	2 90	3 47	2 34	3 27	3 27	2 44	3 07
1881	-	-	3 24	3 02	2 03	2 74	3 48	2 51	3 41	3 32	2 44	3 10
1882	-	-	3 40	3 29	2 13	2 95	3 47	2 51	3 40	3 58	2 50	3 20
1883	-	-	3 47	3 53	2 23	3 15	3 63	2 58	3 44	3 62	2 52	3 33
1884	-	-	3 24	3 32	2 26	3 03	3 41	2 43	3 19	3 25	2 39	3 05
1885	-	-	2 91	2 82	1 96	2 58	3 24	2 35	3 08	3 00	2 22	2 80
1886	-	-	2 86	2 78	1 81	2 48	3 20	2 29	3 14	2 95	2 17	2 75
1887	-	-	2 90	2 65	2 00	2 67	3 25	2 32	3 08	3 02	2 21	2 80
1888	-	-	3 03	2 97	1 94	2 86	3 35	2 40	3 18	3 10	2 61	2 98
1889	-	-	3 26	3 23	2 01	2 95	3 52	2 44	3 28	3 42	2 36	3 16

ROYAUME DE BELGIQUE.

MINES DE HOUILLE.

(ii.) SALAIRE ANNUEL. PRODUCTION PAR OUVRIER. VALEUR de cette PRODUCTION.

ANNÉES.	Production Moyenne annuelle.				Salaire Moyen annuel.			Rapport entre le Salaire annuel et la Valeur Produite.	
	Par Ouvrier.		Par Ouvrier.		Par Ouvrier du Fond.	Par Ouvrier de la Surface.	Par Ouvrier du Fond et du Jour.	Par Ouvrier du Fond.	Par Ouvrier du Fond et du Jour.
	Du Fond.	Valeur Produite.	Du Fond et du Jour.	Valeur Produite.					
	Tons.	Frs.	Tons.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.
1870 - -	192	2085	149	1618	926	664	878	44	54
1871 - -	189	2117	146	1635	926	658	864	44	53
1872 - -	205	2731	158	2105	1138	744	1047	42	50
1873 - -	190	4066	146	3124	1503	852	1353	37	43
1874 - -	173	2841	134	2200	1291	824	1184	45	54
1875 - -	177	2710	135	2075	1266	828	1163	47	56
1876 - -	173	2314	132	1788	1102	802	1031	47	58
1877 - -	181	1986	137	1510	884	578	835	45	55
1878 - -	196	1944	150	1488	880	713	842	45	57
1879 - -	207	1944	156	1465	863	672	809	44	55
1880 - -	217	2183	164	1650	982	732	920	45	56
1881 - -	221	2144	166	1610	997	732	531	47	58
1882 - -	223	2230	170	1660	1036	723	926	46	56
1883 - -	225	2238	171	1739	1085	756	1006	47	58
1884 - -	225	2144	871	1630	976	717	914	46	56
1885 - -	224	1987	169	1499	870	644	812	44	54
1886 - -	229	1889	172	1419	840	618	783	42	55
1887 - -	244	1962	182	1463	874	639	815	45	56
1888 - -	246	2064	186	1568	905	762	869	44	55
1889 - -	242	3287	184	1739	990	750	932	43	54

ROYAUME DE BELGIQUE.

MINES DE HOUILLE.

(iii.) SALAIRES à la TONNE mis en regard du PRIX MOYEN de VENTE à la TONNE.

ANNÉES.	HAINAUT.		NAMUR.		LIÈGE.		ROYAUME.	
	Salaire à la Tonne.	Prix moyen de Vente à la Tonne.	Salaire à la Tonne.	Prix moyen de Vente à la Tonne.	Salaire à la Tonne.	Prix moyen de Vente à la Tonne.	Salaire à la Tonne.	Prix moyen de Vente à la Tonne.
	Fr. c.	Fr. c.	Fr. c.	Fr. c.	Fr. c.	Fr. c.	Fr. c.	Fr. c.
1870 - -	5 93	11 07	5 13	7 71	5 89	10 46	5 90	10 86
1871 - -	5 90	11 49	5 05	8 32	6 12	10 62	5 94	11 20
1872 - -	6 66	13 67	6 29	10 26	6 50	12 52	6 61	13 32
1873 - -	9 60	21 90	9 79	16 80	8 07	20 35	9 25	21 40
1874 - -	8 95	16 68	8 19	12 87	8 65	16 19	8 85	16 42
1875 - -	8 67	15 80	8 35	12 07	8 35	14 25	8 58	15 31
1876 - -	7 80	13 84	7 15	10 88	7 91	13 00	7 81	13 55
1877 - -	6 08	11 24	5 94	9 11	6 05	10 37	6 07	10 97
1878 - -	5 60	10 16	4 87	7 56	5 63	9 44	5 59	9 92
1879 - -	5 20	9 54	4 57	7 13	5 36	9 16	5 22	9 39
1880 - -	5 58	10 15	5 28	8 02	5 78	10 03	5 62	10 06
1881 - -	5 55	9 79	4 75	7 30	5 82	9 66	5 59	9 70
1882 - -	5 66	10 11	4 78	7 18	5 79	9 95	5 66	10 00
1883 - -	5 90	10 26	5 20	7 24	5 89	10 19	5 88	10 17
1884 - -	5 32	9 59	5 16	7 12	5 46	9 60	5 34	9 53
1885 - -	4 74	8 88	4 36	6 58	5 09	9 08	4 81	8 87
1886 - -	4 46	8 24	4 06	6 40	4 84	8 45	4 55	8 25
1887 - -	4 41	8 03	4 12	6 37	4 68	8 17	4 47	8 04
1888 - -	4 63	8 40	4 28	6 54	4 87	8 68	4 68	8 43
1889 - -	5 05	9 39	4 57	7 10	5 22	9 83	5 08	9 45

VIII.

MEMORANDUM sent to Mr. J. E. C. MUNRO, by Professor H. DENIS, of Brussels, based on the information contained in the "Statistique Générale des recettes, 1840-80," published by the FINANCE DEPARTMENT of the BELGIAN GOVERNMENT, brought down to 1888, and furnished by the DIRECTOR-GENERAL of MINES.

Taxation of Mines.

The tax is regulated by the law of the 21st April 1810, and by the decree of the 6th May 1811. It is divided into a fixed tax and a proportional tax.

The "fixed" tax is based on the area of the concession, and amounts to 10 francs the square kilometre.

The "proportional" tax, which, by the law of 1810, cannot exceed five per cent. of the net product, has been

fixed by the law of the 27th December 1822, at $\frac{2}{5}$ per cent. Up to 1872 there was added to the fixed tax an "additional tax" of 10 per cent. of the fixed tax, as a compensation fund (a), and a further 5 per cent. was levied on the "primary tax" and the above "additional tax" for the purpose of defraying the expenses of collection.

In addition, the law of the 30th December 1861, imposed a tax of 3 per cent. on the "proportional taxes," in order to defray the expense of making a survey of the mines.

From the beginning of 1873, the distinction made between the taxes levied for defraying the expenses of collection, and the construction of a map was abolished, and the amount of the "additional" tax was fixed at 25 per cent. of the "principal" tax.

The following table gives the amount of the taxation derived from mines from 1870 down to 1888:—

Year.	Quantities on which Taxes are levied.		Primary Tax.	Additional Taxes.			Total of primary and additional Taxes.	Addi- tional to the Profit of the Commune.	General Total.	
	Fixed (10 fr. the square Kilometre).	Proportional (2½% of the net produce).		Compen- sation Fund (a).	Expenses of Collection 5 % on the primary Tax and additional Tax.	Expenses of making Mining Survey 3 % on the pro- portional Tax.				
1840	-	-	Kilomètres. 1,591.00	£ 318,343	£ 8,628	£ 862	£ 474	—	£ 10,108	£ 10,108
1841	-	-	1,607.69	221,386	6,204	620	341	—	7,184	7,184
1842	-	-	1,618.49	231,130	6,452	645	355	—	7,452	7,452
1843	-	-	1,613.85	183,023	5,248	524	288	—	6,061	6,061
1844	-	-	1,677.16	161,170	4,778	477	263	—	5,518	5,518
1845	-	-	1,662.74	170,921	4,965	496	273	—	5,740	5,740
1846	-	-	1,648.25	228,390	6,396	639	352	—	7,388	1 7,389
1847	-	-	1,675.64	205,293	5,830	583	320	—	6,734	6,734
1848	-	-	1,669.76	271,170	7,475	747	411	—	8,633	1 8,634
1849	-	-	1,670.16	193,366	5,530	553	304	—	6,387	6,387
1850	-	-	1,682.33	227,405	6,386	638	351	—	7,376	7,376
1851	-	-	1,682.33	313,627	8,543	854	470	—	9,867	— 9,867
1852	-	-	1,690.83	314,045	8,555	855	470	—	9,877	— 9,877
1853	-	-	1,655.31	304,861	8,298	829	457	—	9,599	— 9,599
1854	-	-	1,670.49	479,711	12,688	1,268	698	—	14,655	— 14,655
1855	-	-	1,666.66	755,286	19,576	1,957	1,076	—	22,611	— 22,611
1856	-	-	1,683.66	920,047	23,702	2,370	1,303	—	27,325	— 27,325
1857	-	-	1,690.34	932,105	24,007	2,400	1,320	—	27,723	— 27,723
1858	-	-	1,701.07	774,595	20,073	2,007	1,104	—	23,185	— 23,185
1859	-	-	1,703.42	760,726	19,728	1,972	1,085	—	22,786	— 22,786
1860	-	-	1,753.97	686,571	17,887	1,788	984	—	20,660	— 20,660
1861	-	-	1,737.46	691,570	18,013	1,801	990	—	20,815	— 20,815
1862	-	-	1,760.39	600,073	14,902	1,490	888	450	18,642	— 18,642
1863	-	-	1,785.33	519,000	13,718	1,371	774	389	16,254	— 16,254
1864	-	-	1,832.03	506,637	13,432	1,343	757	380	15,913	— 15,913
1865	-	-	1,855.08	657,405	16,166	1,616	912	462	19,157	— 19,157

(a) This fund (fonds de non-valeurs) represents a contribution made for the purpose of compensating those concessionaires who can show a loss on their working.

Year.	Quantities on which Taxes are levied.		Primary Tax.	Additional Taxes.			Total of primary and additional Taxes.	Addi- tional to the Profit of the Commune.	General Total.
	Fixed (10 fr. the square Kilometre).	Proportional (24 % of the net produce).		Compensation Fund (a).	Expenses of Collection 5 % on the primary Tax and additional Tax.	Expenses of making Mining Survey 3 % on the proportional Tax.			
	Kilomètres.	£	£	£	£	£	£	£	£
1866	1,921.67	766,161	19,996	1,999	1,126	574	23,651	610(b)	24,261
1867	1,928.79	1,157,578	29,743	2,974	1,679	868	35,265	—	—
1868	1,911.73	1,017,357	26,248	2,624	1,481	763	31,118	—	—
1869	1,962.13	664,930	17,436	1,743	984	498	20,662	—	—
1870	2,016.41	585,378	15,470	1,547	873	439	18,334	—	—
1871	2,018.68	709,196	18,656	1,865	1,048	537	22,010	—	22,010
1872	2,028.55	728,663	19,270	2,890	1,135	552	19,682	—	19,682
1873	2,005.72	1,608,093	41,039	10,260	Included in Col. 4	(c) 51,299	—	—	51,299
1874	2,005.45	4,082,202	102,891	25,722	"	(c) 128,613	—	—	128,613
1875	2,031.08	1,268,909	34,652	8,663	"	(c) 43,315	66	—	43,381
1876	2,036.43	1,031,536	26,637	6,659	"	33,296	38	—	33,334
1877	2,024.23	614,245	16,199	4,050	"	20,249	33	—	20,282
1878	2,024.38	421,369	11,378	2,843	"	14,221	40	—	14,261
1879	2,036.03	372,947	10,171	2,543	"	12,714	33	—	12,747
1880	2,036.02	347,554	9,537	2,384	"	11,921	8	—	11,929
1881	2,036.03	458,027	12,299	3,075	"	15,374	17	—	15,391
1882	2,042.45	384,244	10,457	2,614	"	13,071	16	—	13,087
1883	2,042.47	459,903	12,348	3,088	"	15,436	28	—	15,464
1884	2,043.69	470,718	12,619	3,155	"	15,774	23	—	15,797
1885	2,040.91	426,879	11,522	2,880	"	14,402	9	—	14,411
1886	2,040.91	439,680	11,841	2,961	"	14,803	—	—	—
1887	2,040.91	374,758	10,219	2,554	"	12,773	—	—	—
1888	2,040.91	466,090	12,502	3,133	"	15,635	—	—	—

(a) This fund (fonds de non-valeurs) represents a contribution made for the purpose of compensating those concessionaires who can show a loss on their working.

(b) Assessment for the benefit of the province of Liège, included by inadvertence under the head of the taxation of mines.

(c) In the years 1873, 1874, and 1875 the price of coal was exceptionally high in Belgium.

Leases.

Leases (forfaits) between the concessionaire and a lessee are very rare, not more than five or six existing in Belgium. The State does not recognise the lessee; it deals with the concessionaire only, and ignores the underletting. The following conditions of a lease have been furnished by the Director-General of Mines.

1. The payment of a tax or rent equal to one tenth of the value of the coal or lime raised, or one tenth of the quantity raised, deducting the coal used in the engines required for raising (l'exploitation) the coal; the coal consumed in the repairing workshops (les ateliers de réparations), in the offices and fires for workmen (chauffoirs), as well as coal used for fuel in the houses of the managing director and the engineer.

The engines used for the following purposes are regarded as being used in raising (l'exploitation) the coal:—

1. Winding à l'extraction);
2. Ventilation à l'aérage);

3. Draining (À l'exhausse);

4. (À l'alimentation);

5. Production of compressed air or other agents used underground;

6. Driving the machine tools (les machines outils);

The grids for sorting (les grilles de triage);
The stable arrangements (les appareils des écuries);
The hoists (les monte-charges);
The cranes (grues), &c.

7. The hauling of coal and earth (sur les dommages et au terri).

2. The method of collecting the rent will be determined by the landlord (la société maîtresse). It can only be altered after a notice of fifteen months at least.

3. If the landlord takes the rent in kind, that is to say, if he takes one tenth of the produce, he is to take his share at every pit monthly. If he takes one tenth the value of the coal, payments are to be monthly. The value is to be fixed with reference to quantity and quality by the

average yearly price obtained by the lessee, the following expenses being deducted:—

The cost of warehousing at the pit or waterside.

The rent of stores erected for coal (magassins à charbons).

The cost of transport to the waterside.

The cost of journeys to effect sales (frais de voyages pour la vente).

Discounts and commissions to agents.

Losses on sales (pertes sur ventes).

In case of any dispute as to the accuracy of the documents produced by the lessee as evidence of the price obtained, and of the expenses, the two parties hereto will meet for the purpose of appointing an arbitrator whose duty it will be to verify the figures by comparing them with the books of the lessee. In case the two parties cannot agree, each party will name an arbitrator taken from outside the coal-field if either of the parties require it, and the two arbitrators will determine the amount of the sale price, and the amount to be allowed by way of deduction within the limits aforesaid.

If the arbitrators do not agree within one month after their appointment, they are to nominate an umpire, with a casting vote, within the eight days following. After these eight days have expired, the nomination of an umpire is to be entrusted to the President of the Court of First Instance, on the request of either party.

The tribunal so constituted is to give its decision within one month from its appointment, and remit it to the parties interested. The tribunal is not to be subject to the formalities prescribed by the code of civil procedure.

Whether the question be submitted to one, two, or three arbitrators as aforesaid, the decision is to be given within thirty days.

The remuneration of the arbitrators is to be governed by the fees allowed by law at the time; the cost of the arbitration is to be borne by the losing party.

The arbitrators are to bind themselves to secrecy, i.e., not to divulge the business of the lessee nor the names of his customers.

4. The landlord will have the right to view, by his agents, all the works above ground or underground carried out by the lessee. He may inspect, as he may deem convenient, the pits and the workings of the lessee, and the lessee is to afford him every facility, and to remove every obstacle that might prevent or hinder such inspection.

5. In order to check the raising, the local sales, the shipments, and the nature (la composition) of the coal, the landlord will station, at each of the pits, a certain number of inspectors, who will be appointed and paid by him. The number of such inspectors will be fixed by the landlord.

6. As a contribution to the expense of inspection, the lessee undertakes to pay to the landlord, in addition to the rent of one-twelfth aforesaid, six centimes for every ton of coal (charbon) and (chauffour) for which rent is paid. This amount of six centimes per ton is to be deemed an absolute rent (un forfait absolu); it will not be reduced for any cause whatsoever.

IX.

Belgium. Documents handed in by Mons. Hubert supplementary to his evidence.

1. COMMUNAL TAXES.

(See Q. 18,799.)

An inquiry was made in 1883 as to communal taxes, of which I give the results, as far as I could obtain them:—

PROVINCE OF LIÈGE (5^e et 6^e Arrondissement des mines).

1. Tax on the Power of Engines (Steam and Hydraulic).

Fléron, 1 commune, 0 f. 50 c. per horse-power (5d.), the pumping engines excepted.

Retinne-Angleur, 2 communes, 1 f. 00 c. per horse-power (10d.), the pumping engines excepted.

Tilleur, 1 commune, 1 f. 25 c. per horse-power (1s.), the pumping engines excepted.

St. Nicolas, 1 commune, 1 f. 50 c. per horse-power (1s. 3d.), the pumping engines excepted.

Ans, Awirs, Beyne, 3 communes, 2 f. 00 c. per horse-power (1s. 7d.), the pumping engines excepted.
Romsée, Wandre, 2 communes, 3 f. 00 c. per horse-power (2s. 5d.), the pumping engines excepted.
Ougrée, Grivegnée, 2 communes, 4 f. 00 c. per horse-power (3s. 3d.), the pumping engines excepted.
Ben-Ahin, 1 commune, 5 f. 00 c. per horse-power (4s.), the pumping engines excepted.
Chênée, 1 commune, 6 f. 00 c. per horse-power (4s. 10d.), the pumping engines excepted.

2. Tax on the Number of Workmen employed.

Fléron, Ougrée, Grivegnée, Angleur, 4 communes, 1 f. 00 c. per head.

Romsée, Beyne, Wandre, Soumagore, Bellaire, 5 communes, 2 f. 00 c. per head, 1s. 7d.

Queue du Bois, Mons, 2 communes, 2 f. 50 c. per head, 2s.

Vaux, Retinne, Xhendelesse, Jemeppe, 4 communes, 3 f. 00 c. per head, 2s. 5d.

Flémalle-Grande, Yvoz, Oupeye, Herstal, Glain et Tilleur, 6 communes, 4 f. 00 c., 3s. 3d.

Seraing, 1 commune, 12 f. 00 c., 9s. 2d.

Ans, 1 commune, 4 f. 50 c., 3s. 8d.

Grâce Berleur, 1 commune, 5 f. 00 c., 4s.

St. Nicolas, 1 commune, 5 f. 50 c., 4s. 5d.

Montegnée, 1 commune, 6 f. 00 c., 4s. 10d.

3. Tax on the number of Square Meters of the Heated Surface of Boilers.

Liège, 4 f. 00 c. (3s. 3d.) per square meter under the pressure of 5 atmospheres.

Liège, 5 f. 00 c. (4s.) per square meter above the pressure of 5 atmospheres, the boilers for the service of exhausting water from the mines excepted.

4. Tax on the Surface conceded.

Rocour, 1 commune, 2 f. 00 c. (1s. 7d.) per hectare.

Glain, 1 commune, 6 f. 00 c. (4s. 10d.) per hectare.

Ans, 1 commune, 7 f. 00 c. (5s. 7d.) per hectare.

5. Tax proportional to the Royalty for the State.

Vottem, tax equal to those of the State (fixed and proportional).

Liège, tax equal to 1½ of the State (fixed and proportional).

Ben-Ahin, tax equal to 1½ of the State (fixed and proportional).

Angleur, tax equal to ½ of the State (fixed and proportional).

It must be observed that the same commune levies different taxes on different bases.

Besides the above taxes, some communes have others, e.g., on the horses; and the same colliery may be obliged to pay one tax to one commune and another tax to a neighbouring commune.

For instance, I can give the summary of the different taxes paid in 1890 by a company working a concession of which the output was 180,165 tons.

	F.	c.
Redevance fixe à l'état	85	82
Proportionnelle à l'état	6,907	50
25 centimes additionnels à l'état	1,726	87
14½ centimes additionnels à la province	1,011	54
125 centimes additionnels à la commune de ×	7,413	09
Contributions foncières (7 % du revenu cadastral)	1,665	31
Fond provincial d'agriculture	144	00
Impositions communales (2 % de la valeur des propriétés, 0.30 % pour le service du incendies, taxe pour les égouts additionnelle pour l'instruction)	4,396	81
Taxe par tête d'ouvrier par le commune de ×	33	00
Taxe par hectare concédée sous la commune de × × ×	56	60
	22,900	54
	= of 125 par tonne.	

Appendix
C. IX.
BELGIUM.
Documents
handed in by
Mons. Hubert.

In the province of Namur there is not yet communal taxes on mines (4^e Arrondissement des mines).
In the district of Charleroi (province de Hainaut), 3^e Arrondissement, the commune of—
Roux takes 5 f. per hectare *exploité*.
Jumet takes 8 f. per horse-power, and 33 per cent. additional of the royalties of the State.
Marcinelle takes 10 per cent. additional of the royalties of the State.
Gosselies takes 1 f. per workmen, 4 f. per horse-power, and 30 per cent. additional of the royalties of the State.
Mont sur Marchiennes, 7 f. per hectare worked, and 5 f. per horse-power.
Montigny, 7 f. per hectare worked, and 6 f. per horse-power.
Dampnemy, 3 f. per head of workmen.
Farciennes, 2 f. 50 c. per head of workmen.
Roselies, 3 f. 50 c. per head of workmen.
Châtelineau, 1 f. 25 c. per head of workmen.
Bouffoulx, 2 f. per head of workmen.
Lambusart, 2 f. 50 c. per head of workmen.
Marchienne au Pont, 2 f. 50 c. per head of workmen + 2 f. 50 c. per horse-power + 10 per cent. additional to the royalties.
Châtelot, 2 f. per head of workmen + 10 per cent. additional to the royalties.
Ransart, 5 f. à 8 f. per horse-power.
Gilly, 2 f. per workman + 25 per cent. additional to the royalties.
Couillet, 2 f. per workman + 10 per cent. additional to the royalties.
Several communes impose a fixed total tax on each colliery, for instance—
Lodelinsart, 2,960 f. on the Charbonnages Réunis.
Charleroi, 6,300 f. on the collieries proportionally to their extraction in the commune.
In the second Arrondissement (Centre du Hainaut), the following taxes existed:—
Ville sur Haine, 2 f. per horse-power.
Monceau, 5 f. per horse-power.
Maurage, 4 f. per workman-house, and a tax according to the importance of each industry.
Strepv, 4 f. per head.
Thien, 3 f. per hectare of concession.
St. Vaast, 4 f. per hectare of concession.
Loyal, 3 f. 50 c. per hectare of concession.
Anderlues, 12 f. per hectare of concession.
Carnières, 8 f. per hectare of concession.
Ste. Audegarde, 7 f. per hectare of concession.
Crazegnies, 7 f. 70 c. per hectare of concession.

Roux, 5 f. per hectare of concession.
Pieton, 12 f. per hectare of concession.
Souvret, 8 f. 90 c. per hectare of concession.
Houdeny. Trivierès, Péronnes, taxes according to the importance of each industry.
La Louvière, 2 f. per head + taxes according to the importance of each industry.
Haine St. Pierre, 3 f. per head + 6 f. per hectare conceded.
Courcelles, 3 f. 25 c. per head.
Fonaine l'Evêgne, 6 f. 20 c. per head + 6 f. per horse-power.
La Hestre, 2 f. 50 c. per head.
La Lounère, 2 f. per head + taxes according to the importance of each industry.
Haine St. Paul, 12 f. per hectare + 25 per cent. additional to the royalties of the State.
Houdeny Aimeries, 10 per cent. additional to the royalties of the State + tax according to the importance of each industry.
Forchier, 0d. 4 per ton.
Ressaix, 500 f. (20l.) per pit.

I have no such detailed indications for the first arrondissement of mines (Borinage); but the most general adopted tax is regulated according to the importance of each establishment, and the needs of the commune.

2.

STATISTICS OF THE CONTRIBUTIONS LEVIED IN RESPECT OF ACCIDENTS IN THE MINES.
See Questions 18,863, 18,892-5.

The mines are affiliated to six *caisses de prévoyance* situated in each district. Besides, the greatest part of them have a private *caisse de secours*. The first gives pensions to workmen injured so that they cannot work as before, to wives and children of workmen killed, and to old workmen unable to work in the mine; each *caisse* has a special regulation. The second provides miners with pecuniary and medical aid when they are wounded, sometimes when they are ill, and sometimes gives the same aid to their family. The *caisse de secours* are generally administrated by the manager of the mine, sometimes by a committee of miners.

These *caisses* are maintained by the contributions of owners or of workers, and sometimes of both. Some establishments, comprehending mines and workshops of different kinds (generally metallurgic), have affiliated all their workmen to these *caisses*. These observations were necessary for the following statistics, in which I have not given the figures of the Caisse of Luxemburg relative to small mines and quarries appear.

STATISTICS OF CAISSES DE PRÉVOYANCE ET CAISSES DE SECOURS.

Years.	Numbers of Workmen affiliated.	Wages.	Contributions to the Caisse de Prévoyance proportional to Wages.			Contribution to the Caisse de Secours.		
			Workmen.	Owners.	Total.	Workmen.	Owners.	Total.
Collieries of Mons	1886	26,331	Francs. 18,641,986	Francs. 139,814	Francs. 195,208	Francs. 335,022	Francs. 0	Francs. 384,610
	1887	25,470	18,972,164	142,991	203,283	345,574	0	427,860
	1888	26,750	21,261,748	159,463	205,731	365,199	0	363,837
	1889	28,160	24,369,005	182,767	210,435	393,202	0	388,958
	1890	29,656	30,851,558	231,386	242,495	473,881	0	428,640
Collieries of the Centre Hainaut	1886	13,882	11,703,970	87,778	87,778	175,556	50,222	50,222
	1887	14,349	12,331,926	92,489	92,489	184,978	54,231	54,232
	1888	14,666	13,169,762	98,777	98,777	195,554	57,667	64,112
	1889	14,913	14,428,178	133,472	133,472	266,944	62,350	61,935
	1890	16,042	18,137,155	226,108	226,108	453,616	81,374	81,373
Caisse of the District of Charleroi	1886	33,513	25,843,357	0	387,650	387,650	0	428,883
	1887	34,079	27,062,434	0	405,936	405,936	0	438,082
	1888	34,216	28,980,061	0	434,701	434,701	0	468,287
	1889	36,394	32,134,505	0	482,018	482,018	0	477,181
	1890	39,003	43,244,857	0	648,673	648,673	0	533,376
Caisse of the Province of Namur (Mines and Collieries)	1886	2,027	1,448,691	13,765	13,765	27,530	18,480	9,971
	1887	2,089	1,408,456	12,864	12,864	25,728	19,765	7,787
	1888	2,372	1,278,889	14,467	14,467	28,934	17,549	7,015
	1889	3,149	2,132,851	15,454	15,454	30,908	0	31,948
	1890	3,135	3,249,902	24,617	24,617	49,234	0	22,451
Caisse of the Province of Liège (Mines and Collieries)	1886	23,391	20,481,170	0	356,003	356,003	197,826	342,252
	1887	23,351	21,834,390	0	438,274	438,274	195,220	310,921
	1888	24,469	23,945,430	0	481,452	481,452	193,217	323,546
	1889	26,264	26,492,700	0	533,414	533,414	216,354	202,041
	1890	28,099	32,921,986	0	661,490	661,490	269,648	431,703

Appendix
C. IX.
BELGIUM.
Documents
handed in by
Mons. Hubert.

3.

NUMBER OF HOURS OF LABOUR UNDERGROUND.

See Q. 18,905.

Categories.	1st Arrondissement.			2nd Arrondissement.			3rd Arrondissement.			4th Arrondissement.			5th and 6th Arrondissements.		
	Maxi-mum.	Mini-mum.	Mean.	Maxi-mum.	Mini-mum.	Mean.	Maxi-mum.	Mini-mum.	Mean.	Maxi-mum.	Mini-mum.	Mean.	Maxi-mum.	Mini-mum.	Mean.
Ouvriers à veine -	11½	8½	10½	12	9	10	10½	9½	10	12	8	10	11	5½	8½
Traineurs -	14	9½	12	14	10	11½	13	10	11½	13½	7½	11	12	6½	10½
Coupeurs de voie -	10	8	9½	11	8	9½	10½	9	10	1	7½	10	12		16
Baccommodeurs -	10	7	9½	11	8	9½	11	9	10	11	7½	9½	12	8	9½
Bemblayeurs -	12	8	10	11	9	10	12	9	10	11	7½	10	12	8	10
Ouvriers à la pierre (Creusant les galeries à travers bancs et les puits.)	10	8	8½	8½	8	8½	8½	7½	8	—	—	8	14	8	9½

* This table is the result of an inquiry made by the engineers of mines, in accordance with the request of the Government. The figures in this table contain the time from the moment of going down to that of the arrival of the workmen at surface.

4.

Handed in by Mons. Hubert, Q. 18,869.

FORM A.

Province of Hainault.

Arrondissement of

1st Division of Mines.

Arrondissement.

Proportional Royalty or Quitrent on the Mines (Exercise, 1891).

Mines of the Province of Hainault for which a Concession has been granted.

Commune of

Working condition of Mine.

Commune of

	Designation of the Sites of Drainage and Output.	Depths of the Shafts in Metres.				Average Number of Workmen.	General Expenses of Working.	Productions.			Valuation of the Taxable Net Produce.	Mutations.	
		Of Drainage.	Of Extraction.	At the Ladders.	Of Ventilation.			Qualities.	Quantity.				Value.
									In Hectolitres of Kilog.	In tons of 1,000 Kilog.			
1. Number of order						1. Inside. 2. On the Surface. 3. Total.	In extraordinary Works. 1. Salaries. 2. Other Expenses. 3. Total.	In kinds at the Sorting.				Francs.	Francs.
2. Name and nature of mine													
3. Commune where it is situated.													
4. Names, professions, and residences of the parties working it.													

OBSERVATIONS.

Done and ordered by us, Engineer of Mines, Burgomaster, Councillors, and Assessors of the Commune

To the one thousand eight hundred and ninety-one.

The Engineer Director in Chief of the Arrondissement of Mines.

The Burgomaster, Councillors, and Assessors.

General cost price (deducting extraordinary expenses) { per hectolitre
per ton

General sale price { per hectolitre
per ton.

The Committee of Valuation fixes the taxable net produce at the sum of

Mons the , one thousand eight hundred and ninety-one.

5.

Handed in by Mons. Hubert, Q. 18,870.

FORM B.

5th Arrondissement.

Operations

Mine of

of 18

District.

Designation and Depths of the Sites being worked.				Beds being worked and Average Composition.	
In operation.	Not working or in Reserve.	In course of Construction or with a Shaft about to be sunk.	Ventilation Shafts.		
No. 1 - - 247	—	—	150	A = 0.70 B = 0.40 C = 0.50 D = 0.65 E = 0.40 F = 0.49 G = 0.82 H = 0.40 I = 0.50 K = 1.30	
No. 2 - - 580	—	—	580	Power $\frac{134 \cdot 600}{225 \cdot 600} = 0.597$	
No. 3 - - 322	—	—	315		

	No. 1.	No. 2.	No. 3.
Extraction output.			
Galleries ending in daylight -	2 horizontal, expansive, 240 horse.	—	—
Number, system, and power of engines -	—	2 vertical, expansive, 420 horse.	1 horizontal, 100 horse.
Form and nature of cables -	Flat in alloys.	Flats alloys.	Flat alloys.
Mode of coiling cables -	Reels.	Reels.	Reels.
Output vessels, size and weight -	Berlaines of 8 hect. 260 k.	Berlaines 6 hect. 260 k.	Berlaines 6 hect. 240 k.
Means of guiding in the shafts -	Iron cables.	Steel rails.	Steel rails.
System for stopping cages, cage breaks -	—	—	—
Consumption of coal -	3,170 tons.	2,620 tons.	1,880
Drainage.			
Galleries -	—	1 gallery.	—
Number, power, and system of engines -	1 pd., 500 pr. 170, 1 ps. 85.	1 pd., 400 horse.	1 pd., 570 horse.
System of pumps -	Piston plunger, Rittinger piston plunger.	Forcing pumps.	Forcing pumps.
Depth of drainage -	377 m. 210 m. 150.	345 m.	330 m.
Quantity of water extracted at each depth -	208, 970 m³, 373, 730, 443, 150.	—	—
Consumption of coal -	6,790 tons.	5,270.	6,950
Ventilation.			
Nature -	—	—	—
Number, power, and system of engines -	One of 15 horse, hor. f. cent.	1 Gnibal, 10 horse.	1 f.c., 15 horse.
Average total draught of air supplied per second.	F m³.	" 45 "	7 m³
Consumption of coal -	300 tons.	18 m³	490.
		730 tons	

PARTICULARS OF EXPENSES.

1. Workmen's wages -	£ 1,317,750
2. Employés and manager's salaries -	88,100
3. Building timber and scaffolding of all kinds -	123,300
4. Oil, candles, grease -	22,800
5. Total consumption of coal -	344,400
6. Engines, instruments -	171,600
7. Iron, steel, castings, nails, chains -	74,400
8. Ropes, hemp, tow, cloth -	25,100
9. Gunpowder -	16,600
10. Bricks, lime, mortar, sand, tiles, and masonry -	24,700
11. Straw, oats, forage -	34,400
12. Sundry expenses -	138,950
	<u>2,382,100</u>

Appendix
C. IX.
BELGIUM.
Documents
handed in by
Mons. Hubert.

DESCRIPTION and COST of each of the PREPARATORY
and PRIMARY or FIRST ESTABLISHMENT WORKS
executed during the Year 18 .

Description.	Wages.	Other Expenses.	Total.
No. 1. Baenures (cross cuts).	7,600	5,500	18,100
Digging deeper and lining with cast metal.	38,700	20,800	59,500
No. 2. Baenures (cross cuts).	5,600	2,700	8,300
Loadings and bouthtais (blind shafts).	11,900	3,700	15,600
Underground engine-house.	6,800	5,700	12,500
No. 3. Baenures (cross cuts).	3,800	2,500	6,300
Bouthtai (blind shafts) -	27,800	13,500	41,300
Engine-houses and enclosures (dams).	21,400	4,500	25,900
Primary. One ventilator -	—	20,700	20,700
One underground exhaust or drainage engine.	—	39,100	39,100
Two do. do.	—	90,900	90,900
Purchase of land -	—	2,300	2,300
	123,600	211,900	335,500

SALE OF COAL.
See Q. 18,961.

Species and Quality.	Tons.	Average price per Ton.	Value.
Guilleteux, $\frac{1}{2}$ fat (csb-ble).	146,700	15.34	2,250,200
Recapitulation.	Tons.		Value.
Stock of coal, to 1st January 18	-	1,600	13,400
Total output of the year	-	180,200	2,658,400
Total	-	181,800	2,671,800
Sale -	-	146,700	2,250,200
Consumption -	-	28,700	344,400
Total	-	175,400	2,594,600
Stock on the 1st January 18, the year following.	-	6,400	77,200
Value produced	-	fr. 2,658,400	
Expenses -	-	2,382,100	
Profit -	-	276,300	
Loss -	-	-	
Safety lamps -	-	Mueseler type.	
System and number -	-	1,330.	
Number of horses employed -	-	On the surface, 14. In the works under-ground, 32.	

See Q. 18,916.

—	Workpeople.				Children under 16 Years old.				Total Number.	Average Wages.	General Total.	Average General Wages.	
	Men.		Women.		Boys.		Girls.						
	Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.					
Inside	-	797	4.46	—	—	30	2.07	—	—	827	4.37	} 1,136	3.82
Surface	-	192	3.04	72	1.40	8	1.27	37	0.84	309	3.25		

Average Production		Number of Workdays		Expenses.		
Of a Shaft.	Of the Mine.	Per Shaft.		Ordinary Working.	Extraordinary.	Total.
209	595	288	303	1,194,150	123,600	1,317,750
				852,450	211,900	1,064,350
				Total		2,046,600
					335,500	2,382,100
Average depth of extraction $\frac{53,376,700}{180,200} = 296$ m.				Cost price per ton	11.36	1.86
						13.22

DISTRIBUTION OF PROFITS.

1st. Among the several Concessions and Extensions :—

2nd. Among the several Communes :—

	Tx.	Frs.		Frs.
Concession of 1840 -	29,470	45,200	A. 40-100	61,500
" 1806 -	49,880	76,500	B. 140-100	214,800
" 1826 -	18,440	28,300		
" 1827 -	77,370	118,600		
" 1830 -	1,680	2,600		
" 1845 -	3,360	5,100		
	180,200	276,300	180,200	276,300

Liège, the 18 .
The Engineer of Mines.

Seen and Approved,
The Engineer-in-Chief, Director of Mines.

Appendix
C. IX.
BELGIUM.
Documents
handed in by
Mons. Hubert.

6.
Handed in by Mons. Hubert, Q. 18,876.

FORM C.

PROPORTIONATE ROYALTIES ON THE MINES.

Province of Liège, Mines and Works, District of Mines, Exercise 187.

Standard List for the proportionate royalty on the Mines worked in the Province of Liège. Concession.

Names, Surnames, Professions, and Residences of the Workers, Holders of the Concession, and Articles of Standard List.	Numbers of the Statements.	Names and Nature.	Communes.	Net Income.	Total of the Taxable Net Income.	Mutations.
				Francs.		
			Total			

Done and ordered by us, Members of the Committee of Valuation, for the total taxable net income of mines worked concession, in the province of Liège, at the sum of

At Liège, this one thousand eight hundred

The Engineer-in-Chief of Mines.

The Members of the Committee of Valuation.

7.

Handed in by Mons. Hubert, Q. 18,876.

FORM D.

FIXED ROYALTY ON MINES.

Mines and Works, Province of Liège, 2nd Direction of Mines, District, Exercise 187.

Table of Mines worked concession, in the Province of Liège, during the year one thousand eight hundred and seventy.

Name and Description of the Mine worked, and Number.	Situation.		Names, Surnames, Professions, and Residences of the Workers.	Date of the Application for a Concession.	Provisional extent assigned or attributed to the working, stated in hectares.	Sums to be imposed.	Observations and Mutations.
	Arrondissement.	Communes, beginning with that where the Buildings are situated, serving for the Operations.					

Done and ordered the present table, in conformity with the Imperial decree of 6th May 1811, and stating the total contents of the surfaces of land provisionally assigned and attributed to the working operations of the mines conceded or not conceded in the province of Liège to the amount of the sums to be imposed at hectares are centiares, and

The present table to be transmitted to the Surveyor of Direct Taxes, and to serve him as a standard by which to draw up the list of fixed royalty on the mines worked concession during the year one thousand eight

Done this one thousand eight hundred and seventy.

By the Deputation
The Registrar of the Province.

The Deputation of the
Provincial Council of the Province of Liège.

Appendix
C. IX.

BELGIUM.
Documents
handed in by
Mons. Hubert.

8.

Handed in by Mons. Hubert. See Q. 18,823.

PAYMENTS TO SURFACE OWNERS.

According to a list of concessions and extensions of concessions granted in Belgium from 1837 till 1874, the following royalties were imposed by the Acts of Concession, to be paid to surface owners:—

Fixed Royalty per Hectare.	Proportional to the Net Profit.	Imposed
<i>d.</i>	Per cent.	
2½ and	½	2 times.
2½ "	1	132 "
2½ "	1¼	5 "
2½ "	1½	16 "
2½ "	2	29 "
2½ "	2½	1 "
2½ "	3	15 "
3 "	3	1 "
4 "	2	2 "
5 "	½	2 "
5 "	1	33 "
5 "	1½	24 "
5 "	2	36 "
5 "	3	3 "
10 "	1	13 "
10 "	1½	1 "
10 "	2	3 "
10 "	3	5 "
15 "	1½	8 "
15 "	2	8 "
20 "	2	6 "
20 "	2½	2 "
20 "	3	3 "
25 "	2½	2 "
30 "	3	3 "

The royalties of 2½*d.* per hectare with 1 per cent. of the net benefit were, therefore, the most frequently applied; their percentage is $\frac{13\frac{1}{2}}{33} = 37$ per cent. The proportional royalty of 1 per cent. was applied 178 times ~ 50 per cent.

According to the same list (Annales des Travaux Publics de Belgique, 1875), the Acts of Concession previous to 1837 imposed a fixed royalty of—

<i>s. d.</i>	per hectare	118 times.
0 4	"	1 "
0 6	"	10 "
1 0	"	66 "
1 4	"	4 "
1 6	"	1 "
2 0	"	24 "
2 4	"	1 "
3 0	"	11 "
4 0	"	8 "
5 0	"	18 "
6 0	"	11 "
6 8	"	1 "
8 0	"	14 "
9 0	"	3 "
10 0	"	8 "

9.

Handed in by Mons. Hubert, See Q. 18,961.

ANALYSIS OF THE SALE VALUE OF A TON OF COAL.

Years.	Reward of				Expenses and Consumption.		Total.
	Workmen's Wages.		Capital Benefit.				
	Per ton. Frs.	Per cent.	Per ton. Frs.	Per cent.	Per ton. Frs.	Per cent.	
1868	5'85	53'8	0'81	7'4	4'22	38'8	10'88
1869	5'76	54'8	0'62	5'9	4'13	39'3	10'51
1870	5'90	54'3	0'91	8'4	4'05	37'3	10'86
1871	5'94	52'9	1'04	9'3	4'23	37'8	11'20
1872	6'61	49'2	2'27	17'1	4'44	33'2	13'32
1873	9'25	43'2	5'93	27'7	6'22	29'1	21'40
1874	8'85	53'8	1'56	9'5	6'01	36'2	16'42
1875	8'58	56'0	0'86	5'6	5'87	39'4	11'31
1876	7'81	52'2	0'26	1'9	5'48	40'4	13'55
1877	6'07	55'3	-0'08*	-0'7*	4'82	45'4	10'92
1878	5'59	56'3	-0'10*	-1'0*	4'43	44'7	9'92
1879	5'22	55'6	-0'01*	-0'1*	4'18	44'5	9'39
1880	5'62	55'9	0'23	+2'3*	4'21	41'8	10'06
1881	5'59	57'6	-0'09*	-0'9*	4'20	43'3	9'20
1882	5'66	56'6	0'27	2'7	4'07	40'7	10'00
1883	5'88	57'8	0'25	2'5	4'04	39'7	10'17
1884	5'34	56'0	0'35	3'7	3'84	40'3	9'53
1885	4'81	54'2	0'39	4'4	3'67	41'4	8'87
1886	4'55	55'2	0'30	3'6	3'40	41'2	8'25
1887	4'47	55'6	0'48	6'0	3'09	38'4	8'04
1888	4'68	55'5	0'65	7'7	3'10	36'8	8'43
1889	5'09	55'8	1'10	11'6	3'27	34'6	9'45

* Loss.

10.

SALE OF COAL.

See Q. 18,961.

Species and Quality.	Tons.	Average price per Ton.	Value.
Gailleteux, ½ fat (cobles).	146,700	15'34	2,250,200

Recapitulation.	Tons.	Value.
Stock of coal, to 1st January 18	1,600	13,400
Total output of the year	180,200	2,658,400
Total	181,800	2,671,800
Sale	146,700	2,250,200
Consumption	28,700	344,400
Total	175,400	2,594,600
Stock on the 1st January 18, the year following.	6,400	77,200

Value produced	-	-	fr. 2,658,400
Expenses	-	-	2,382,100
Profit	-	-	276,300
Loss	-	-	-

Safety lamps	-	-	Mueseler type.
System and number	-	-	1,330.
Number of horses employed	-	-	{ On the surface, 14. In the works underground, 32.

X.

MEMORANDUM ON THE BELGIAN MINING
LAW BY MONSIEUR H. HUBERT.1. THE CLASSIFICATION OF MINERAL SUBSTANCES.
(Law of the 21st April, 1810, Chapter I., Articles 1, 2, 3, and 4.

The rules treated of in Article 1 differ according to the classes to which mineral substances belong; but it is easy to arrive at the conclusion that their tendency is all towards one and the same object, that of conciliating as far as possible the interests of the landowners with that of the explorers and the public safety.

When an ore is a combination of several mineral substances coming under the head of mines, and only one of these substances is available from an industrial point of view, this alone can be made the object of a concession.

Thus iron pyrites are reputed sulphur mines, because unsuitable for manufacturing iron, they derive all their value from the sulphur which they contain.

The pyrite, it is true, may be converted into sulphate of iron, owing to which an attempt was made to prove that it is capable of assimilation to pyritous earths employed in the manufacture of this salt, and that it ought, therefore, to be classed under the head of chats; but a sentence of the Court of Appeal at Liéges (21st May 1853), has decided that the iron pyrite is a sulphur mine, and, therefore, a fit subject for a concession.

It must be admitted that when the classification of mineral substances was introduced, it corresponded with the condition of science and manufacturing at the epoch in question. As regards the detailed nomenclature of which each of the three classes has been the object, the Legislature may have supposed that all existing substances had been contemplated therein, and that Chapter 1 of the law would give rise to no practical difficulty.

Experience has, nevertheless, shown the contrary, and it could hardly be otherwise, seeing that the bases of the classification were ill or insufficiently defined in the course of the discussions which preceded the promulgation of the law. The latter not laying down any line of conduct, it is well to try and discover what rules should be followed in classifying substances omitted or unknown at the time it came into force.

The subject is still a matter of controversy.

Our Council of Mines was called upon to examine it on the occasion when the (*Gemme*) Rock salt was brought under its notice, of which salt it was believed that a deposit had been discovered in the province of Luxembourg. In its report of the 1st December 1837, confirmed by that of the 5-12th October 1849, it deems that the Article 1 of the law implicitly involves an absolute rule, in virtue of which every substance, which does not come under the head or denomination of minières and carrières, is with perfect right made to figure in the category of mines.

Defooz, in his treatise on legislation, shares the opinion of the Council of Mines without, however, justifying it.

He asserts that the legislator, having judged it necessary to enumerate the substances to which Articles 3 and 4 (chats and quarries) apply, might have confined himself to limiting Article 2 as follows:—"All other substances are considered as mines." To have done so would have been more simple, in fact, too simple even to admit of the supposition that the legislator had not thought of it.

We know, on the contrary, that his intentions do not imply any such an interpretation, as the committee of the legislative body, charged with the examination of the project of law, decided at its sitting of the 18th March 1810, that there was occasion for adding the words "or other metallic matters" to the word "plumbagine" in the Article 2. All metallic substances are thus placed under the category of mines. The committee did not wish, it said, that an undenominated mine should be contemplated or comprised in the provisions of the law, and the addition it had introduced into the text of the law evidently could not bear the meaning which the Council of Mines and Defooz would have given it.

Bury, in his treatise on the legislation of mines, combats the jurisprudence of the Council of Mines. He denies that, in the terms of Article 1, there is the slightest element to be found of the absolute rule which is declared to be deduced therefrom. Neither does he admit that a mineral or fossi substance omitted in the enumeration of the Law of 1810 has a perfect right to be classed under the head of mines.

Let us add that in its report of the 20th July 1849, the Council of Mines showed itself less absolute in its opinion; on being appealed to as to whether the iron pyrite and the aluminous schist should be assimilated to pyritous and aluminous earths mentioned in Article 3, it gave as its opinion that, supposing their right to be made the subject of a concession were contested, the difference might be submitted to the decision of the tribunals. (The Government had adopted this opinion, whence the sentence above quoted.)

One point seems definitively admitted by administrative and judicial jurisprudence, both in Belgium and France. It is that the nomenclature of substances enumerated in the law demonstrates or describes but does not limit.

As soon as a new or undenominated substance has to be classed, it will be well to bear its nature in mind, that is, to make sure whether it does not contain a metallic substance or a sulphate with a metallic base available for manufacturing or other profitable purposes, which would make it at once come under the head of mines. Such ores are those known as tellurium, titanium, tungsten, nickel, uranium, iridium, &c.; in short, all metals discovered since the promulgation of the law.

This rule, however, ought not to be considered as absolute; indeed, certain authors think that it is well to consider the nature, the mode of deposit, and the conditions under which the substance in question is utilized, and to deduce therefrom by analogy, whether it ought to be classed under the head

Appendix
C. X.
—
BELGIUM.
Memorandum
by Mons.
Hubert.

Appendix
C. X.

BELGIUM.
Memorandum
by Mons.
Hubert.

of mines, minières, or carrières, but with a little reflexion, it must be plain that these elements of appreciation are insufficient, and that other considerations have guided the legislator in making the classification which he has adopted. Thus calcarious matters, slates, porphyry, kaolin, for instance, which are found either in strata or veins, or in heaps, and which are frequently utilized in the same conditions as mines, properly so called, belong to carrières. No argument then can be based on the mode of deposit or utilization of a substance in deciding what class it should belong to.

At the time when the Law of 1810 was passed, money was scarce, fears were entertained of investing it in mining enterprises.

Specialists who aided the Council of State in establishing the classification confirmed by the law, will, doubtless, have been influenced by this circumstance, and will have classed under the head of mines those mineral substances of which the utilization seemed to offer most difficulties, and to demand the employment of a considerable amount of capital.

The most interesting case of an undenominated substance is that of *rock salt* and *salt-water springs*. In France, the law of the 27th June 1840 has got rid of this difficulty by declaring them to be mines.

In Belgium, if the jurisprudence of the Council of Mines were admitted, this classification would be the natural outcome of the Law of 1810 itself, as the Articles 3 and 4 do not mention rock salt, but the grounds on which this body has based its opinions already mentioned are nothing less than peremptory.

To thoroughly acquaint one's self with the state of things, it is well to peruse the discussions which took place in the Council of State at the time when the Law of 1810 was the subject of debate.

Rock salt and salt-water springs had at first been included in Article 2 of one of the last projects submitted to the deliberations of this Council, but these matters were excluded from it by the formal order of Napoleon I., its President. He dispensed with giving any reasons for this suppression, but it is to be presumed that his idea was to preserve to the owners of the land a right which they had enjoyed hitherto—that of utilizing the saline deposits in their property on making a declaration and paying the duty of the excise.

It is worthy of notice that one of the first drafts of the protected law stated that the deposits of rock salt should be annexed to the National Domain, subject to the indemnification of the owners of the land; but this provision having been withdrawn, and rock salt having been intentionally excluded from the nomenclature of mines; beyond doubt, the Legislature wished to maintain, at least by a provisional title, the regulation to which this substance was previously subject.

In view of these historical antecedents, it may reasonably be inquired how the Council of Mines can have issued a report to the effect that deposits of rock salt should be considered as mines, especially as the contrary is to all appearances evident from the discussions which took place in the Belgian Parliament when the Law of the 2nd May 1837 was passed.

To these considerations we may add that in France the resolution of the question by a special law would, doubtless, have been dispensed with if the opinion of our Council of Mines had prevailed there.

Bury is of opinion that the classification of undenominated substances is a matter with which the Administration and the courts of law should have nothing to do, but should leave this responsibility to the Legislature. He points out that such a classification affects questions of property which the law courts might decide sometimes one way, sometimes another, since, as regards species, there is no law to bind them.

If this author's doctrine were admitted, the owner of the land might, while waiting for a decision of the Legislature, dispose as he thought proper of an unclassified substance, and that in virtue of the Article 552 of the civil code which adjudicates the property (soil and ground) to him. Still Bury is of opinion that the utilization of this substance ought, in such a case, to be subject to the police supervision established by the law over the mines, because on the principle of Article 1, every substance ought to belong to one of the three classes established.

It is noticeable that if the Government made a false application of the law in conceding an unclassified substance

or one coming under the head of minières or carrières, the owner of the soil would have a right to bring an action to have the act of concession declared null.

Article 107 of the Constitution gives the judicial power, in fact, the right of appreciating the legality of the acts of the administration, and declaring them null when not in accordance with the laws.*

In France, this authority of the judicial power over the acts of the Administration does not exist, even supposing disputes might have to be settled relating to the proprietorship of mines to which these acts had given rise.

In this matter the French Administration interprets its own acts, but with the concurrence of the Council of State.

In Belgium the solution of similar questions is absolutely and exclusively in the province of the law courts (Article 92 of the Constitution).†

We have still a few words left to say about *mineral waters*. These waters do not come under the classification established by the law either; the question has arisen therefore whether they really constitute a mineral substance which can be assimilated to mines.

In virtue of the common law, the owner of the soil has the power of disposing freely of the waters underground which belong to his property, and the civil code makes no distinctions as regards the nature of these waters.

It does not seem at all possible to class mineral waters with mines.

However, the Council of Mines, which considers rock salt as a mine, would probably not hesitate to declare water impregnated with a sufficient quantity of sodic chloride to be utilized in manufacturing as a fit object for a concession; but it is doubtful whether it will apply its system to mineral waters properly so called, intended for therapeutical purposes.

Springs of this kind are often a great source of wealth for the localities which utilize them, and a general interest may be taken in their preservation and distribution.

In certain countries, notoriously in France, special laws regulate the investigation and utilization of mineral waters, and it would be a good thing if this were soon the case in Belgium also as a safeguard for its springs and to preserve them from private speculation. The Commune of Spa is actually taking steps to obtain from our Legislative Chambers a law for their protection on the lines of the French Law.

2. REGULATIONS AS REGARDS THE APPLICATION FOR A CONCESSION.

ARTICLE 27 of the LAW of 1810.

The law has not defined in what manner the accomplishment of the formalities referred to in this article ought to be proved.

The Council of Mines requires the written proof,‡ that is to say, the production of the advertisements, of the numbers of the daily papers in which the applications have been advertised, and of the certificates of publication delivered by the local authorities.

It is usually the provincial registrar who undertakes the collection and examination of these documents. Nevertheless it is of importance that the applicant make sure for himself that he has all the vouchers in his file of papers, the more so as, if through any cause, no matter what, they should happen to disappear, even through some accident altogether beyond his control, the application would have to be published and advertised over again.§

The Council of Mines has decided,|| and the courts have allowed, that the advertisements and publications, at the places and in the manner indicated by the law of 1810, are essential formalities, adopted in the interest of third parties, and that the omission or irregularity of these formalities is of a nature to invalidate the steps taken and to involve

* Article 107. The courts and tribunals will only apply the general provincial, and local regulations in so far as they are in accordance with the laws.

† Article 92. Suits, the objects of which are civil rights, are exclusively within the province of the tribunals.

‡ Report of the 10th February 1871.

§ Report of the Council of Mines of 8th October 1847.

|| Reports of 15th December 1837 and 10th February 1871.

Appendix
C. X.

BELGIUM.
Memorandum
by Mons.
Hubert.

communicate the reports of engineers to the parties interested. This is done nevertheless, but without reason, as this practice has no other result but to hinder the application without any benefit to the parties concerned.

Gentlemen of the bar, often engaged to defend the interests of applicants before the deputation, would like the discussions to be public and open to criticism. The utility of such a proceeding is very open to dispute, for as soon as the application and the documents supporting it reach the Council of Mines, the latter is obliged to give certified copies of every piece of the file of papers which is pointed out to him by the party interested, who is allowed to submit his observations in writing to that body.

The governor of the province transmits the report of the permanent deputation, with all the documents of the file, to the Minister of Public Works, who, before submitting the grant of the concession to the sanction of the King, is bound to take the opinion of the Council of Mines. This reference to the Council is the result of a royal order.

Let it be borne in mind that, in virtue of section 2 of Article 7 of the law of 2nd May 1837, no concession, extension, or maintenance of concession can be granted contrary to the advice of the Council.

3. SURFACE DAMAGE.

ARTICLES 49 and 50 of the LAW of 1810.

Article 49 says the Council of Mines in its 47th Report, 1885, left to the arbitrary discretion of the (French) Emperor the duty of proceeding by special decree, according to his pleasure; evidently under our (Belgian) constitution this article has no application; it does not give the chief of the State the right of making the forfeiture of a concession, in the cases mentioned, the object of legal proceedings. We have seen in connexion with the "cahier des charges" that this view is far from being admitted by all lawyers.

Article 50 possesses a very high degree of importance in connexion with mines. The Council of Mines has given its opinion that it is equally applicable to minières and quarries underground. This article allows the authorities, represented by the permanent deputation, to take the necessary measures as regards a working mine which might endanger the safety of the public, the preservation of the shafts or the works of the mine, the safety of the miners and that of the dwellings on the surface. These measures may consist in the execution of certain works or the prohibition of a certain portion of the concessions being worked.

It is known that subterranean operations almost always have an effect on the surface of the ground. Subsidesences may occur in the ground more or less serious for the buildings, and springs be dried up or diminished which serve for the uses and requirements of the owners of the soil, owing to these operations. These kinds of damage cannot, of course, in every case, give occasion for the application of Article 50; were it to do so, mining would become impossible in a country so extensively built over as ours. Moreover, it appears from the reports of the Council of Mines that only imminent danger, that is to say, danger which has arisen and actually exists, can justify the intervention of the administration; till this arises, the engineers have to confine themselves to the duty of supervision. It is necessary, too, that the injury caused should, to a certain degree, be general and serious, for instance that the buildings or the water supply of a certain number of people should be threatened by the working of the mine or that works of public utility or of exceptional interest should be endangered thereby. If only private buildings are concerned, the most natural rule seems to be only to apply Article 50 if the damage apprehended be greater than the wealth discovered by the working of the mine, or if the party working it fail to offer sufficient guarantees of solvency. This is the rule which serves as a guide for the action of our administration.

Now, it might be asked whether the owners injured might not apply to the law courts to put an end to the damage occasioned them? The judicial power has, it is true, declared itself incompetent to appreciate the fitness of the measures taken by the permanent deputations in carrying out Article 50; but it has not been called upon hitherto to enact in any case where these deputations would have considered these measures useless. It is hard to think that the tribunal might not declare itself incompetent also in this respect, the more so as Article 15 of the law would allow it to give the owner of the soil a sufficient guarantee.

The Council of Mines has decided that, in case of urgency, the permanent deputation need not hear the workers of the

the nullity of the act of concession in as far as it may concern lands regarding which the formalities of publication and advertising have not been fulfilled.

The proof by attestation or presumptions with more or less foundation cannot supply the written proof of the fulfilment of these conditions.*

All the papers aforesaid being collected together, the governor of the province, acting in the name of the permanent deputation, transmits them, under cover of a note, to the divisional director of mines for him to advise and report thereon.

This functionary is bound to transmit them, for the same purpose, to the chief engineer of the arrondissement (district) where the mine is situated. In his report, the latter certifies the fulfilment or the non-fulfilment of the required formalities, he describes the site and deposit of the mineral substance, object of the solicited concession, and gives his opinion as to its probable richness and the chances of success likely to attend the enterprise of working it; he gives an account of the opposition to which it has given rise, and explains the grounds of said opposition; he exhibits and discusses the rights of the applicants to a concession or an extension of a concession, as well as those of competing applicants, and gives reason for what he states, if there be occasion for doing so; he proposes and justifies the rate of the royalties to be allowed the owner of the soil, and eventually the amount of indemnity to be paid the dispossessed discoverer.

After having made sure that the lands for which the concession is solicited are of sufficient extent to allow of their being worked at a profit, and that there is no need to retrench certain parts from same, either owing to their sterility or with a view to holding them in reserve until their richness be more amply demonstrated, the chief engineer carefully describes the perimeter of the concession or the extension of concession which he proposes to grant, and determines its superficial contents. The surface plans annexed to the application must be signed by him, it being stated who has examined them and found them correct.

Finally he draws up a bill of charges to be imposed on the workers of the mine as long as the concession lasts.

When the land to be conceded is situated in two or more mining arrondissements or districts, the regular course is to take the opinion of each of the engineers as to what concerns their several districts.

According to the jurisprudence of the Council of Mines, the opinion of the chief engineer is an essential formality, and his report ought to be added, in the original document, to the file of papers of the application for the concession.

The divisional director after examining the file of papers, in his turn issues a report as to the application, and, if he think proper, modifies the proposals of the chief engineer.

He sends the whole to the permanent deputation, through the intervention of the governor of the province.

Legally, this college or body ought to send in its report to the Minister of the department concerned at latest one month after the fulfilment of the formalities of publication and advertisement, but experience has shown that this delay is insufficient; moreover, it is never observed, and it is hardly possible that it should be: it most frequently happens that the existence of a deposit profitably available is not proved at the time when the application is made, and it is the applicant himself who solicits that the matter should be deferred; when there are competitors, the latter at times produce voluminous memorials and replies to show they are entitled to the preference, and the examination of these documents takes up a good deal of time; finally, when applicants' rights seem on a par, the administration naturally hesitates before giving its decision, and endeavours to induce them to come to an arrangement.

The investigations to be made by the permanent deputation, in fulfilment of Article 27, cannot be undertaken with the help of persons foreign to the Administration,‡ consequently, this college cannot submit to experts technical matters which have been examined and settled by official agents.

COMMUNICATION of DOCUMENTS constituting the APPLICATION.

A ministerial decree of the 29th October 1840 has decided that the provincial authorities are not bound to

* Report of the Council of Mines of 15th December 1837.

† Report of the 29th October 1873.

‡ Report of the Council of Mines of 8th June 1863.

mine, and its decisions prescribing measures in favour of the surface ought not to be submitted to ministerial approval or to the opinion of the Council of Mines. There are only the measures specially regulated by Articles 3, 4, 5, and 7 of the Imperial Decree of 1813, partly reproduced by Articles 76 and 77 of the general settlement of 1884, which are to be submitted to ministerial approval and the opinion of the Council of Mines, the party working the mine being heard. The law of the 2nd May, 1837, has moreover prescribed it in its Article 7. In any case the parties interested may apply to the minister.

The application of Article 50 is then surrounded with sufficient guarantees, and the Council of Mines has reported that the simple appreciation of the engineers of mines is insufficient to contradict it, that grave presumptions founded on facts are further required.

The worker of a mine who acted in opposition to the decisions come to for the execution of this article would be liable to the penalties stated in Articles 93 to 96 of the law of 1810. The administration can, besides, have the work prescribed by the permanent deputation officially executed at the cost of the holders of the concession.

The prohibition to work a mine or a portion of a mine, issued in fulfilment of Article 50, does not entitle to any compensation. Is this equally the case when the object is the protection of works of public utility undertaken subsequently to the grant of the concession? The fact is that the permanent deputation of Liege has taken several resolutions of the kind, without the parties working mines having asked for compensation.

The Council of Mines has, however, given its opinion that, if the prohibition were pronounced, owing to a fact that had had nothing to do with the party working the mine, and irrespective of the works being properly carried on, the grantee of the concession might have grounds for claiming compensation.

4. IRON ORES.

(ARTICLES 59 to 70 of the LAW of 1810 and 1 of the LAW of 1837.)

The legislation actually in force in our country for iron ores may be summed up in the following manner: In virtue of Article 2 of the law of 1810, iron ores in *lodes* or *strata* are considered as mines; they cannot be worked without a concession, unless they should admit of the mining operations being carried on above ground, in the open air, and even, in this case, a concession would be required, if the working, though still possible, were to last a few years, and then afterwards render the working with shafts and galleries impossible (Art. 69). The law of the year 1837, on the other hand, has suspended the right of conceding iron mines.

The alluvial iron ores are considered as minières, and may be worked, first, by the owners of the soil, second, by ironmasters (Art. 60), when the owners do not wish to work them (Art. 60 and 61) or do not work them in sufficient quantity, or even cease working them for more than a month without due cause (62). In this case, ironmasters ought to be furnished with lawful permission, and pay an indemnification to the owner of the soil (66).

In order to work them himself, the latter is only obliged to make a declaration about them and obtain from the permanent deputation a permission limiting the output (58 and 59). Besides this, the worker can only sell ore after having provided in such proportions as the deputation may fix for the wants of the ironmasters of the neighbourhood, at prices to be amicably arranged or fixed by experts (59 to 65).

From what precedes, it results that ores in heaps which are not alluvial* and those which laid in lodes or strata are workable above ground in the open air, without prejudice to their being worked later on by means of shafts and galleries, are neither mines nor chats and remain at the disposal of the owners of the soil. Since 1837, too, the latter have set about working the iron ore in their grounds, not only in the open air, but even by means of shafts driven to considerable depths. It is more particularly the bed of what is known as "oligiste colithique" of the provinces of Liege and Namur that has been the occasion of operations tolerated by the Government, notwithstanding the protests of the ironmasters. The latter would like to see the system of concessions re-established, which, according to them, would reduce the price

* At the time when the law of 1810 was drawn up ores of the kind deposited like a sediment and so-called "limonite" and those which are found in grains, fragments, or conglomerated with other matter, such as sand, pebbles, clay, in the deeper hollows of the ground, of different ages, were considered as alluvial ores.

of ore at the same time that it would allow of a more considerable development and a greater regularity in the mining operations. The owners working as at present naturally object to this and nothing has been done as yet in the matter.

From the tenor of Article 70, when a minière is converted into a mine, the subject of a concession, the grantee must compensate the dispossessed proprietor in proportion to the income he derived from working it and supply the foundries with the requisite quantity at the price fixed by the act of concession or by the administration.

The owners of ironworks, legally authorised for that purpose, may make investigations in search of iron ores outside their property and work those which they discover or which are known, on the conditions fixed by Articles 60 and following (Art. 80). They may even, after giving due notice to the owners of the soil and compensating them, establish "patouillets" or ore-washers (washing apparatus consisting of a drum in which arms move, fixed to an hydraulic wheel), and washing apparatus as well as cart-roads on other people's land. However, they must make use of their permission within a month (62) and replace the ground under cultivation (63).

The Article 50 of the law of 1810 is applicable to minières as well as the decree of 1813, which has been abrogated, except Articles 3, 4, 5, and 7, relating to mines, by the settlement of 1884.

5. WORKS SUBJECT TO LAW OF 1810.

(ARTICLES 73 to 80.)

The works subject to the law of 1810 are enumerated in Article 73. They are, in a general way, those in which the metal is extracted from the ore or experiences a change in its nature; rolling mills, flattening mills, steel manufactories, works for elaborating steel, come under this category. But iron, copper, brass, and lead foundries, sheet iron and enamelled cast iron manufactories, constructor's workshops, boiler makers, nickel manufactories and zinc rolling mills are not subject to the law of 1810, but to the same rule as dangerous, unhealthy, or inconvenient establishments, fixed by the royal decrees of 29th January 1863, 27th December 1886, 31st May 1887, and the law of 5th May 1888.

Parties holding the permission to establish, maintain, or extend works, ought in virtue of the instruction of the Ministry of 3rd August 1810, sign a bill of charges and pay a sum of from 50 to 300 francs.*

6. QUARRIES.

(ARTICLES 81 and 82.)

Quarries worked in the open air are not subject to any permission, and the operation of working them takes place under the mere supervision of the local police. However, sand pits are regulated by the royal decree of 29th January 1863, as to dangerous, unhealthy and inconvenient establishments.

A law of 15th April 1843 has prohibited the opening of quarries or minières in the open air at less than 20 metres from railways, without authorisation from the Government.

A royal decree of 14th April, 1824, likewise prohibits the opening of quarries underground at less than 565 metres from fortresses, without authorisation from the Minister of War.

When a quarry in the open air in the proximity of a route of communication by land or water may endanger the public safety, the permanent deputation may take the necessary steps to remedy it. (Royal decree of 11th January 1857.)

Quarries underground are subject to a general regulation of 29th February 1852, requiring that their opening and their abandonment be notified to the governor through the intervention of the burgomaster. They are submitted to the supervision of the administration of mines, to Article 50, and to the decree of 1813. They have no right to make researches, occupy or expropriate lands and pay no royalties.

The permanent deputations may subject them to special regulations; among others, they may order them to hold and produce plans of works, to have two distinct issues, to fill up abandoned shafts, to take certain measures for the safe conveyance of workpeople, to ventilate their galleries. (See the regulations as to the phosphate quarries underground of the province of Liege, of 21st January 1891, in the Administrative Memorial, Volume LXI., page 61).

* For everything relating to the formalities to be observed in establishing any kind of works and how they are to be methodically carried out, see the Code of Manufactures and Mines by Wilquet and Hubert.

7. PEAT MOSS AND TURF.

(ARTICLES 83 to 86.)

Peat, moss, or turf pits are considered as chats, and only the owner can work them, with the authorisation of the Government or of the permanent deputation. (Royal decrees of 17th February 1819, 17th January, and 2nd December 1822.)

8. PENALTIES.

(ARTICLES 93 to 96.)

The penalties prescribed at Article 96 only concern infractions of the laws and general regulations. Those of provincial or communal regulations only involve penalties which do not exceed 8 days imprisonment and 200 francs fine, and 7 days and 25 francs fine, respectively.

The indictments in cases of contravention drawn up by the engineers of mines must be affirmed before the magistrate or his substitute within three days and addressed to the procureur du roi (say, Attorney-General).

The judicial action is prescribed by three months when the accused are designated in the indictment, otherwise by six months, reckoning from the day when the contravention has been proved or from the last act of instruction or prosecution. The indictments ought not to be notified to the accused.

9. OF THE ROYALTIES IMPOSED ON THE GRANTEES WHOM THE CONCESSIONS ARE MADE.

Article 33 of the law of 1810 imposes on the grantees the obligation of paying the State a fixed royalty, which according to the terms of Article 34 is 10 centimes a year per hectare, and a yearly royalty in proportion with the produce of the output.

Article 9 of the Law of the 2nd May 1837 has likewise imposed on them a fixed royalty, and a royalty proportioned to the produce of the mine for the benefit of the owners of the soil (surface).

The fixed royalties are perpetual, and due even when the mine is not being worked. They are likewise due for each concession granted in one and the same territory, even when held by a single proprietor owning the whole of them. Still the Council of mines has given its opinion that the extension of the concession of one substance to another gives no right to a further fixed royalty.

The fixed royalty, very moderate, in order not to place any obstacle to the development of the working of the mines, has, however, for its object, to prevent concessions being made too extensive. It affects the whole concession, and not merely the parts that are being worked. The proportionate royalty is paid on the net produce of the preceding year exclusively, without any regard to previous gains or losses being possible.

(Law of 18th February 1833, and Council of Mines, 24th April, 1837.) In Belgium it has hitherto never exceeded 2½ per cent. of the net produce, which with the additional comes to pretty nearly 3½ per cent. of this produce. But the communes make the parties working the mine pay other taxes, which at times are rather considerable, and ought to be sanctioned by the permanent deputation and the Government.

In our country contract is no longer allowed at a fixed price for a term, and the Article 37 of the Law of 1810 is not applied.

The manner of arriving at the net produce has been arranged by the Imperial Decree of 6th May 1811.

In the two first months of each year the party working the mine hands the Engineer of Mines a statement for the past year, showing:—

1st. The gross output.
2nd. The amount of the sale of the produce after deducting the expense of discounts, losses on exchange, remittances, &c., and adding the difference between the stocks at the beginning and at the end of the year, calculated at the average sale price of said year.

3rd. The working expenses, including the wages paid to the workpeople; the cost of materials used up; of the machines and tools required for the working properly, so-called, the general expenses and administration expenses, including the royalties and taxes paid to the State, to the provinces, and to the communes; the indemnities for damages caused by the operations; the expenses incurred in the moral or material improvement of the workpeople; the construction or maintenance of railways or other requisites or apparatus for the working of the mine; finally,

the percentages paid to the administrators, commissaries, or directors of the companies.

The following are not allowed as expenses:—The sums applied to the payment of interest, or to the re-imbursement of shares, debentures, or loans; the investments of shareholders; the sums paid to the founders of joint stock companies; the expenses incurred in the formation of companies; building expenses, or the purchase of houses for working purposes; in short, every expense relating to a previous account.

The party working the mine is not obliged to prove by his books the accuracy of the figures which he supplies, but the Engineer of Mines, if he suspect their accuracy, may tax him officially, taking for his guide the number of workmen employed inscribed on the inspector's register, and the cubic output calculated according to the plans, and fixing the cost price and the sale price according to those of similar mines. The difficulties most frequently arise when the party working the mine utilises the produce himself; generally, in such a case, in fixing the price, matters are made comparatively easy.

The Engineer of Mines draws up a separate statement relating to the working of each mine, except those which are legally united, and calculates the net produce by the difference between the total value of the output and that of the expenses.

The statement furnishes:—The name and nature of the mine; the commune where it is principally situated; the names and residence of the party working it, or his representative; the quantity and nature of the output; their total value; the total amount of the expenses allowed; he makes known the part which corresponds to each of the concessions or extensions; he also states the number of shafts, the number of workpeople, and that of the horses employed, that of the engines, and their power; he makes mention of the claims of the party working the mine, and the net produce declared by him.

This statement is transmitted to the College or Board of Assessors, consisting of the burgomaster and two communal assessors, paying the highest taxes. This college must affix its visa to it. The Divisional Director draws up the standard list of all the mines of the province, according to the working reports from same, as per statement, and transmits the whole to the Governor, who submits it to the Committee of Valuation, composed of the Governor, two members of the Provincial Council, two parties working mines appointed by the permanent deputation, the Divisional Director, and the surveyor of taxes of the province.

This committee adjudicates on all claims, and fixes the amount of the net produce.

The definitive list to be recovered by the tax gatherer is then drawn up by the surveyor of taxes.

The party working the mine may, within three months of the despatch of the notice extracted from the list, apply to the surveyor of taxes for what he may have been over-taxed; for absence or insufficiency of tax he must apply before the 30th June. The resolutions must be passed in a month, or at latest before the 31st July, and be notified to the party working the mine, at the latest by the 31st August, in a registered letter.

The party working the mine may further take action afterwards before the Court of Appeal, and finally he, as well as the surveyor of taxes, can appeal to the Court of Cassation.

The owner of the soil may also appeal against the decisions of the Committee of Valuation (Article 9 of the Law of 1837), and his appeal is judged in the same way as a claim relating to the royalty due to the State.

The special fund established by Article 39 has never existed in Belgium; the law of the 15th May 1846, as to how the general accounts of the State should be kept is besides at present opposed to it. The proportionate and fixed royalties figure in the Budget, and are paid into the State Exchequer, which provides for the expense of the administration of mines by annual credits carried to the Budget of the Department of Agriculture, Manufactures, and Public Works.

Article 40 is applicable to the royalties formerly stipulated for the benefit of the State or the Lords High Justiciaries of Hainault.

Article 41 relates to the price stipulated in capital or revenue for the value of the works, machines, &c., and the royalties to which the working is subject, in virtue of local customs or previous legislation, such as the right of tannage (tax levied by the lord of the manor), and the rent or "cens d'arène" (a similar tax) in the country of Liège.

Appendix
C. X. and XI.
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BELGIUM.
Memorandum
by Mons.
Hubert.

10. POLICE AND SUPERVISION OF MINES. MISSION OF ENGINEERS. ARTICLE 47 OF THE LAW OF 21ST APRIL, 1810, ON MINES. COMMENTARY.

In Belgium the authorities charged with the police of mines are the Ministry of Agriculture, Industry (Manufactures) and Public Works, and the permanent Deputations. They, alone, have the power to prescribe measures for securing the safety of persons and things, each within the limits of its jurisdiction and conforming to the laws and regulations.

The engineers of mines are, in reality, only their agents. Their mission consists in seeing to the execution of the laws and regulations about mines, chats, underground quarries, iron works, and steam engines, as also in taking note of the bills of charges of the concessions and of the measures prescribed by the authorities for the preservation of buildings and waters on the surface, the safe working and the security of dwellings.

It is their duty to pay attention to the scientific work and labours, and the progress of the working operations. Being without authority, they have nothing to order in this respect, but it is incumbent on them to call the attention of the parties working the mine to the improvements to be introduced into the mode of working, and to point out to them the vices, abuses, and dangers they may have noticed in the conduct and arrangement of the works. Their observations, always characterised by good-will and kindly feeling, should be made with tact, so as not to wound the sensitiveness or self esteem of the agents appointed to superintend the direction of the works. Their united efforts will unceasingly tend to promote the prosperity of the mines, without losing sight of the fact that the interest of the holders of the concession, properly understood renders it imperative for them to look after the safety, of the workpeople and the preservation of things on the surface.

When an engineer visits an underground working or an iron works placed under his supervision and notices there an infraction of the laws or of the police regulations, he points it out to the head of the establishment and requests him to put an end to it. If he refuse to comply with this request, the engineer draws up an indictment at his expense, and sends it to the judicial authority for such proceedings as the law requires to be taken in consequence.

Should an accident have happened at a mine, chat, ironworks, or underground quarry, and caused the death or serious injury of one or several of the workpeople, the engineer proceeds to the spot without delay for the purpose of investigating the causes of the accident and taking note of the results; he gives an account of his inquiry, which in the form of an indictment he transmits to the procureur du roi or Attorney-General, with his report of the share of responsibility which may fall upon one or any of the agents appointed to manage or look after the works, in the shape of negligence, imprudence, or inattention to regulations.

The engineers prepare the statements as to the working of the mines, &c. in order to calculate their net produce

and collect the elements of the general statistics of mines, veins of metal, quarries, ironworks, and steam engines.

They proceed to the examination of the plans of mines, particularly when the works have nearly reached the limits of the concession or are on the point of being abandoned. They inspect steam apparatus and have boilers submitted to the tests prescribed by the regulations.

A Royal Decree of the 4th September 1882 likewise instructs them to inspect depôts and magazines of powder and dynamite intended for the use of mines, chats, and underground quarries, and to report on all applications for permission to create, maintain, or modify magazines of this kind.

They further give the Minister, the Governors of the provinces and the permanent Deputations the particulars and information they are asked for, and send them such reports and proposals as they may consider conducive to the efficiency of the service, and to the prosperity of national industry.

The body of engineers of mines consists of a Director-General of Mines, residing at Brussels, of two Divisional Directors, residing one at Mons the other at Liège, and having under their orders a certain number of heads of arrondissement or district (engineers-in-chief, Directors), to whom are attached, under the name of subordinate collaborators, engineers, each charged with the supervision of a mining district.

The divisional Directors, in their capacity of heads of the service, alone correspond with the administrative and judicial authorities, except in what concerns the steam apparatus service, respecting which the heads of arrondissements correspond direct with the provincial authorities.

The Director-General has the general supervision of the service; he gives his vouches for report on such matters as may be submitted to him by the Minister.

The first duty of the engineers is to see, as we have said, that the laws and regulations be observed.

In Belgium, by Article 67 of the Constitution, the power of making regulations and passing decrees or ordinances of polity concerning mines, &c. belonging to the King, on his Minister's responsibility. In virtue of Article 85 of the provincial law of 30th April 1836, the provincial councils have the same power, but their ordinances and regulations are only applicable to mines, chats, quarries, and works of their province, and only in as far as they do not encroach upon what may be prescribed in edicts by the laws or by regulations of general administration still in force. They would be abrogated in all cases, if subsequently a law or general regulation were passed concerning the matters of which they are the object. Thus it is that the general regulation of police of 28th April 1884 has abrogated all provincial regulations previous to it upon that subject.

Before being carried into execution, the regulations emanating from the provincial authorities must be sanctioned by the King.

It is further to be remarked that the judicial authority cannot apply a regulation or a decree emanating from any authority, no matter what it may be, if it be not in conformity with the laws.

GERMANY.

XI.

NOTES as to the MINING LAWS in GERMANY, prepared and handed in by Mr. WALMESLEY, and forwarded to the GERMAN GOVERNMENT in accordance with the request of the ROYAL COMMISSION.

The old German mining law seems to have depended on a variety of laws, regulations, and customs which together made up what is known as the "Common German Mining Right" (Gemeines Deutsches Bergrecht).

This common German mining right seems to have combined the principle of possession by the first occupant with the right of the Crown to grant concessions, and to impose a tax on the produce of the mines. As regards the proprietors of the soil the regulations were very diverse. Some gave nothing to the owners of the soil; others gave them a certain proportion of the produce; others gave them the right to certain shares in the adventure (Erbkuxe). The

greater part of the regulations gave a certain proportion to schools and churches as well as to relief funds (Freikuxe).

The existing state of mining legislation results from various codes or laws which have been drawn up at different dates in the present century, of which the principal is the Prussian Mining Law of 24 June 1865, which has been adopted more or less completely by twelve out of the twenty-six States constituting the Empire of Germany, and which twelve States are said to comprise eight-ninths of the surface and nine-tenths of the mineral production of the whole Empire. These States are Alsace-Lorraine, Anhalt, Bavaria, Brunswick, Hesse-Darmstadt, Prussia, Reuss (younger branch), Saxe-Altenburg, Saxe-Coburg-Gotha (but for Gotha only), Saxe-Meiningen, Waldeck-Pyrmont, and Wurtemberg.

Three States, the Kingdom of Saxony, the Grand Duchy of Saxe-Weimar, and the Principality of Schwarzburg-Sondershausen, follow another type of legislation which is adopted from the legislation of the first-mentioned of these States.

Prussia
the 11 other
es adopting
mining law.

The eleven other States, which are of little importance from a mineral point of view, have adopted legislation founded more or less on the two principal types and the common German mining right.

The Prussian mining law of 24 June 1865 is divided into 250 paragraphs or articles. This law is founded on the principle of the liberty of working mines by the first occupant, and treats such mines as are within the scope of the Act as being free from control on the part of the owner of the soil; it gives the free right of search to every one and everywhere (subject to certain restrictions for the

protection of buildings), and gives the exclusive right of working either to the first finder or to the first petitioner, and continues the right, subject to regulations and inspection, unless some motive of public interest justifies interference. The right of mining is made an immovable property, altogether distinct from the right to the surface as in the French legislation.

The following table shows the general division and rights of property in and to rents of minerals in Prussia and in the German States following the Prussian mining law:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Gold, silver, mercury, iron (with the exception of iron found in marshes), lead, copper, tin, zinc, cobalt, nickel, arsenic, manganese, antimony, sulphur, aluminous and vitriolic minerals, coal, lignite and graphite, salt, and salt springs.	Usually in the first finder or claimant (instituted by the Government) or his assigns. But see note *.	To the Government, ordinarily 2 per cent. on the gross profit of the mine. Certain payments have also to be made to the miners' benefit funds (Knappschaftskasse). In some instances royalties are payable to private individuals under old laws kept in force by the modern Mining Acts.	This is the general effect of the Prussian mining law of 24th June 1865, which has been followed in most of the important mining States in Germany. In some of such States, however, the rents are reserved on different principles, e.g., in Bavaria, where a small fixed rent of about 3d. per hectare is reserved, and the tax on revenue from mines is valued and collected in the same manner as the tax on income from other sources, and in the Duchy of Saxe-Coburg-Gotha, where the rent varies as regards manganese, whilst all other mines pay 4 per cent. on the gross products.
II. All other metals and minerals.	In surface-owner - -	If let, to the owner of the surface.	

* In certain regions of the province of Pomerania only salt mines and salt springs are excepted from the free disposition of the owners of the surface (Art. 210 of law of 1865) and of the other mines, only workings of lignite are subjected to Government inspection.

Iron mines in the Duchy of Silesia, the county of Glatz, Lower New Pomerania and in the Island of Rugen, as well as in the district of Hohenzollern, also belong to the proprietors of the surface (Art. 211).

In the Duchy of Saxe-Altenburg the working of coal (including turf-lignite and graphite) belongs exclusively to the proprietor of the soil.

In Waldeck slate is added to I., and brine springs included in the Principality of Pyrmont.

In Bavaria graphite and gold washings are excluded from I., but iron found in marshes is not excepted.

In Brunswick vitriolic minerals are excluded from I.

In Alsace-Lorraine bituminous substances are added to I., and iron-ore which can be worked by open workings without rendering subterraneous workings impossible is excluded.

In Saxe-Meiningen and Reuss (younger branch), slates and colouring earths are added to I.

No provision is made by the Prussian law of 1865 for payment of royalties to the owners of the surface in respect of the mines which are the subject of concessions. It is to be remarked, however, that the law did not repeal laws previously in force respecting royalties and imposts on mines, which laws were on the contrary explicitly maintained in force by the second paragraph of section 11 of the law of 1865. This would seem to keep in force the "redevances trefoncières," which were payable in respect of the provinces on the left bank of the Rhine under the French law of 1810, and the rights of provisions for the benefit of certain owners of the surface, and of schools and churches under the old regulations previously referred to, in respect of the provinces on the right bank of the Rhine.

The worker of mines has the right to occupy, under the sanction of the administration, land necessary for his working except residences, private buildings, and courts adjoining) at an annual rent, except where the land is purchased. The worker cannot force the surface-owner to sell, but on the contrary the latter can require the former to buy the land if it is occupied or certain to be occupied for more than three years (Art. 13), and, in the case of sale, the surface-owner has a right of pre-emption in case the land is no longer required for the working of the mine. The rent or the purchase money is calculated according to the actual damage caused, and where there is only a temporary occupation without purchase, the worker of the mine may be required to give security against permanent damage. Disputes are settled by deputies appointed by the Administration of Mines and the Govern-

ment of the province, and recourse may also be had to the legal tribunals (Arts. 142 to 145).

The worker of the mines is also (Art. 148) altogether responsible for all damage caused to the surface by his workings whether by his fault or not, but he is not responsible for damage to buildings which are erected in the face of his working (Art. 150).

These are regulated by the ancient law, and are in Prussia all reduced to an impost of 2 per cent. on the value of the gross products of the mines. This value is fixed officially with power for the workers of the mines to show the actual value by producing the results of their sale of the produce of their mines. The impost consists, on the right bank of the Rhine, of two parts, viz., of the rent of 1 per cent. substituted for the old royalty payable to the Crown, and of 1 per cent. in respect of the right of inspection established by a law passed in 1851. The latter portion of the impost is payable in all cases, whilst mines which are subject to the payment of a tenth part in favour of a private proprietor of the Crown rights are exempted from the payment of the first 1 per cent.

On the left bank of the Rhine the Legislature has substituted (by Art. 6 of the law of 20th October 1862) the principle of a 2 per cent. rent on the gross produce for the proportional rent on the net produce payable to the Government under the French mining law of 1810.

The bases on which the impost rest are somewhat intricate, but in practice the matter is regulated by Ministerial instructions of the 23rd November 1864 (a copy of which is set out in Sir E. B. Malet's report from Berlin of 13th November 1886) for the left bank of the Rhine, and of the 29th January 1866 for the right bank. It is said that a revision on the legislation on the impost on mines is generally considered to be a pressing necessity.

As gross produce or output is considered all produce of the mine actually sold or used for the consumption of the mine itself or by the owners (see M.L. of 23rd November 1864, § 2).

Searches for mines can be made by anyone and anywhere except under private buildings and their appurtenances and in their immediate vicinity for a distance of 62^m.8. The explorer, however, is required previously to indemnify the proprietor against damage which he may cause to the ground, and to give security against subsequent damage.

In case the proprietor of the soil refuses to allow searches to be made, recourse may be had to the administration of mines, who will authorise the searches, unless

Appendix
C. XI.
—
GERMANY.
Mr. Walmsley's Notes.

Taxes payable to
the Government

Searches for
mines.

Appendix
C. XI.
—
GERMANY.
Mr. Walmesley's Notes.
Concessions.

motives of public as opposed to private interests, stand in the way; but sometimes it is difficult to distinguish private from public interests; for instance, in a case where the search might threaten to make a spring necessary for agriculture disappear, or might injure a forest of which the preservation might be of public interest.

The right to work a certain substance within a particular area is given by way of preference to the discoverer, that is to say, to the first person who has communicated the fact of his discovery of a layer during the week of the discovery; in default of which it is given to the first person who has petitioned for it in conformity with the prescribed rules. The administration has not to consider whether the mine is workable or not, though it has the right to ascertain whether there is really a vein of mineral or not (mere traces of a substance would be insufficient to establish the right to a concession); but if the existence of a layer (Gisement), that is a bed or a vein or a mass of mineral is established, the discoverer who has made a legal demand within a week from the date of his discovery, or in default the first regular petitioner in order of date has a right to obtain the property in the mine.

An exception to the rule, however, is in the case of a substance which is discovered lying in such connexion with a substance already conceded that the administration consider that the two substances should be worked together; in which case the concessionaire has a right of preference over the discoverer to a concession of the newly-discovered substance (Art. 55). In case of disputes as to the right to a concession it is for the judicial tribunals to decide between the rival claimants.

The claimant has to fix the form and extent of the field to which his claim gives him the right, on the double condition, as a rule, that it does not exceed 219 hectares, and that any two boundaries should not be at a greater distance from each other than 4·185 metres. Occasionally, however, these limits are varied even in Prussia, and many of the States, following the Prussian law, have adopted different limits.

The institution or concession carries with it the right to work and dispose of the minerals mentioned in the concession within a certain specified district. The property is entirely distinct from that of the surface. It is considered an immovable (that is, real) property (Art. 50), and may be alienated (Art. 52), and the worker may carry on his works subject only to the prescribed regulations, and may within the area of his concession carry on all necessary works, conforming as regards his relations with the owners of the soil to the provisions of the law. It is a common practice for concessionaires to sell or let their concessions to companies who undertake the working of the mines.

The concessionaire may also carry on certain works of ventilation and drainage, and even for the more profitable working of his mine under land outside the area of his mine which is not the subject of any other concession, and even in lands which are the subject of other concessions, as long as he does not endanger the workings of the other concessionaires, but no provisions seem to be made for surface works outside the limits of the concession. He has also the right to employ for the purposes of his works substances which are not the subject of his concession, but which are detached in working his mine. If he does not employ them in his mine he must deliver them to the proprietor of the soil (Art. 57).

Several mines may be united, each retaining their independent entity, or (with the consent of the administration which cannot be refused, but is given subject to regulations as to the rights of creditors) may be consolidated into one mine. There is absolutely no guard against companies enlarging their holdings through purchase of other undertakings; in fact this is proceeding very rapidly in all the German coal fields without check.

Concessions may be forfeited if imperious motives of public interest require it (Art. 65); but though there would appear to be a considerable number of mines unworked, and the application of the clause has been frequently demanded, it is stated that the Prussian administration has refused for the last 20 years to make use of it. But if such a forfeiture is proposed to be made the creditors have the right for three months to sell the mine.

Insurance of workmen employed in mines against sickness and accidents is compulsory; as to the former, under a law of 15 June 1883, and as to the latter under a law of 6 July 1884, the two classes of insurance being kept separate.

The law of 1884 provides generally for the formation of trades unions (or Knappschaftsvereine) in the different business districts throughout the empire, for the purpose of carrying out the provisions of the law as to insurance, and for the conduct and regulation of their procedure.

For the purpose of carrying the insurance law of 1884 into effect, a general union for the whole of Germany was started in 1885. The name of this union is "The Miners' Trades Union," and the head office is in Berlin, and the range of this union is divided into eight sections, comprising different mining districts of Germany. Other districts, such as the district of Bochum, have their own "trades union" for carrying the law into effect, with special statutes or regulations for the conduct of their business. According to these it would appear that the contributions of the mine owners vary from 75 per cent. of, to an equal amount with, that of the workmen. The actual amounts paid also vary, but the average amount paid by the mine owners appears from the following table to be equivalent to 100 of 1s., or 12d. per ton of minerals raised in Prussia:—

Year.	Tons raised in Prussia.	Contribution to Fund in Shillings.	By per Ton of Minerals in Decimals of Shillings.
1883	60,222,259	6,892,116	0·090
1884	70,643,871	7,127,320	0·100
1885	71,713,132	7,527,179	0·104
1886	71,002,166	8,173,265	0·115
1887	73,782,326	9,258,235	0·125
1888	79,182,825	9,465,616	0·119
Total	435,846,079	48,454,361	0·111

Special provisions are made by Art. 196 of the law of 1865 for inspection and regulation of mines, having in view:—1. The safety of the works; 2. The protection of life and health of the workmen; 3. The protection of the surface; 4. Protection against workings which might be detrimental to the public interests.

The task of carrying into effect the provisions of the mining law is entrusted, in the first instance, to an official in each mining district, who is called the Revierbeamte; and, in the next place, to a Council called the Oberbergamt, of which there are five in Prussia, having under each of them a certain number of districts. The Oberbergamte again are under the authority of the Minister of Public Works. There is a power of appeal from the Revierbeamte to the Oberbergamt, and from the latter to the Minister of Public Works, and in this country the mining authority alone (and not, as in other countries, in conjunction with the civil authority) has entire jurisdiction in matters relating to mining.

AS TO THE KINGDOM OF SAXONY AND THE GERMAN STATES FOLLOWING THE SAXON MINING LAW.

The modern Saxon mining law is for the most part contained in a law dated the 16th of June 1868. It is only intended here to refer to the chief points in which this law differs from the Prussian mining law.

The essential difference is in the classification of minerals, as the Saxon mining law leaves to the owner of the surface the right of working coal and lignite (1868, Art. 4). This right can only be exercised after a permission given by the Administration, which cannot, however, be refused unless the working area is insufficient. On the permission being given, the mine becomes a separate property from the surface, and can be disposed of separately and is subject to inspection, &c., as if it had been the subject of a concession. The laws of Saxe-Weimar and Schwarzburg-Sondershausen, which follow on the Saxon law, are fixed respectively by laws of the 22nd June 1857 and the 15th February 1860.

No rents are payable to the owners of the surface in respect of the mines which are reserved from their ownership or right of working.

The taxes payable to the State in the kingdom of Saxony appear to be fixed by a special law of 10th October 1864, and to be in the form of a fixed royalty amounting to 3frs. 75c. per hectare for mines of gold and silver, and 2frs. 50c. per hectare for other mines, with the usual tax upon industrial revenue, payable in respect of the income of mines.

In Saxe-Weimar and Schwarzburg-Sondershausen, on the contrary, the mines have to pay a tax on the gross produce, as in Prussia, but which is at the rate of 5 per cent., instead of 2 per cent. They also pay small fixed rents amounting to 15c. to 25c. per hectare.

These, which in Prussia are free to all, can in Saxony only take place by the previous authority of the mining

Inspection
regulation
mines.

Mining ad
ministration.

Royalties

Concessions

authority. Such authority is, however, usually granted to the first applicant, is available for a year (which may be prolonged for six months), and extends to a particular area not exceeding 10 hectares in extent. The search warrant can during its duration be exchanged into a definite right of working. The relations between the explorer and the surface-owner are similar to those established under the Prussian law.

These are granted, not necessarily, as in Prussia to the first finder, but to the first claimant, and if several claimants present themselves simultaneously, that is on the same day, the concession is granted to them in common. It is necessary to prove the existence of a layer, but the proofs required are not as strict or complete as in Prussia. The areas which can be taken are four hectares for superficial mines, and 4,000 square metres for other mines. Each mine of the last-mentioned extent should employ at least two workmen working eight hours per day, excepting Sundays, and larger mines should employ a greater number of men in certain specified proportions.

OTHER GERMAN STATES.

As for the other eleven States of the German Empire, their mineral legislation is not of sufficient importance, and their mineral property is not of sufficient value, to make it worth while to study their mining laws in detail. It is stated that five of them do not possess any mines, that in another (Baden) the mining industry is without interest; that the mines are regulated by laws inspired by the Prussian Code in two States, and partly by that Code and partly by the Saxon Code in two other States, and that finally one State (Oldenburg) has preserved the French law of 1810.

XII. CORRESPONDENCE.

No. 67, Commercial.
May 12.

Sir, I AM directed by the Marquis of Salisbury to transmit to you, to be laid before the Royal Commission on Mining Royalties, a despatch from Sir E. Malet, Her Majesty's Ambassador at Berlin, in reply to the instructions which were sent to his Excellency in the sense of your letter of the 24th ult.

In this despatch his Excellency mentions certain suggestions made to him by Mr. Mulvany, Her Majesty's Consul at Dusseldorf, and asks for instructions as to the reply which he should make thereto. I am to request that you will move the Royal Commission to inform his Lordship what answer they would wish to be returned to his Excellency's inquiry.

I am, &c.
(Signed) T. V. LISTER.

The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir Thomas Lister's Letter of
May 15th, 1891.

No. 67, Commercial.
MY LORD,

I HAVE the honour to inform your Lordship that on receipt of your despatch, No. 45 Commercial of the 30th ultimo, I addressed a letter to Mr. Mulvany, Her Majesty's Consul in Dusseldorf, whom I believed to be experienced in matters connected with mining, asking whether he would be prepared to give oral evidence or to furnish a report for the Royal Commission on Mining Rents and Royalties.

I have now received a reply from Mr. Mulvany, stating that he will be happy to do so and believes that after a further investigation or study of the subject he will be competent to give such evidence as may be required, the more so as he was for some 10 or 15 years directly connected with the management of extensive collieries in Westphalia.

While quite willing to give oral evidence Mr. Mulvany is of opinion that the more convenient and less expensive form would be for him to send in a report on the Schedule of Queries, previous to which it would be desirable for him to visit some of the chief German authorities for information as to main points of law, and some leading owners and managers of mines as to the result of the administration.

I have the honour to request your Lordship's instructions as to the reply which I may make to Mr. Mulvany. Perhaps it would be best that he should in the first place

report and be prepared to give oral evidence afterwards before the Commission if desired.

I have the honour to be,
With the highest respect,
My Lord,
Your Lordship's most obedient
humble servant,
(Signed) EDWARD B. MALET.

The Marquis of Salisbury, K.G.,
&c. &c. &c.

2.
6, Old Palace Yard, S.W.,
26th May 1891.

Sir, I HAVE the honour to acknowledge the receipt of your letter of the 15th instant transmitting a despatch from Sir E. Malet, and asking what reply the members of this Commission would wish should be made to the suggestions of Mr. Mulvany with regard to the information upon the subject of mining rents and royalties which it is desired to obtain from Germany.

I have duly laid your letter with the enclosure before the Earl of Northbrook, Chairman of the Commission, and am directed to inform you that the Commissioners gladly accept Sir E. Malet's suggestion that Mr. Mulvany should in the first place make a report, and afterwards be prepared to give oral evidence if desired.

I have the honour to be, &c.
(Signed) HERBERT LYON,
Secretary.

Sir T. V. Lister, K.C.M.G.,
Foreign Office.

3.
Foreign Office,
18th August 1891.

Sir, I AM directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties, the accompanying despatch from Berlin, as marked in the margin, transmitting a report on Prussian mining laws.

I am, &c.
(Signed) T. H. SANDERSON.

The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir Thomas Sanderson's Letter of
August 18th, 1891.

No. 105, Commercial.
MY LORD,

WITH reference to your Lordship's despatch No. 60 of this series of June 1st last, I have the honour to transmit to your Lordship herewith a report drawn up by Mr. Mulvany, Her Majesty's Consul at Dusseldorf, on the mining laws in Prussia, which he has forwarded to me, together with six tabular statements for transmission to the Royal Commission on Mining Royalties.

Mr. Mulvany states that delay has been caused in waiting for statistics, and that some of the tables are not even yet complete for want of sufficient material up to date, but that he trusts that the information given will meet the requirements of the case.

I have, &c.
(Signed) EDWARD B. MALET.

The Marquis of Salisbury, K.G.,
&c. &c. &c.

Enclosure 2.

REPORT to the COMMISSION on the MINING
LAWS in PRUSSIA.

General Remarks.

The main principles upon which the laws and regulations are based, as to the search for and proving of the existence of minerals under the surface of the earth in Germany, at least in Prussia, are entirely different to those of the United Kingdom, and although at first sight they would appear to be arbitrary, there can be no doubt that under the system generally adopted in this country, of the minerals being the property of the State, far greater facilities are afforded for the development of the resources of the nation than under that of the minerals being the property of the landowners, inasmuch as the exploitation is here thrown open to all capitalists, whilst under the existing laws the landed proprietor, or owner of the surface pure and simple, is sufficiently protected against any injurious effects which do or may arise from the extraction of minerals from under his property; such as the depression of the surface levels, injury of buildings, loss of water, or flooding of lands, injury of quality of water in the same, &c., &c.

Appendix
C. XII. and
XII.
—
GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany by
Mr. Mulvany.

Dealings with
concessions.

Way-leaves.

Union and con-
solidation of
mines.

Forfeiture of
concessions.

Accident and
relief societies.

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany by
Mr. Mulvany.

The field of mining operations is open to those large landed proprietors themselves who have sufficient capital or command of the same to enter into such enterprises, and thus they can, and do, in some cases, derive pecuniary advantage, not only from the minerals under their own lands, but from those of adjacent and smaller freehold property. In point of fact, in many industrial districts of the country, the ownership of the surface is so divided that it would be impossible to carry on deep mining under any other principles.

As a general rule it will be found that apart from the heavy claims which they can enforce against the mine-owners for the surface damages above referred to, the owners of the soil derive immense advantages from the increased value of agricultural products, and of the lands themselves, which invariably follows the opening out and developing of industry in the district in which their property is situated; so that they are fully compensated for any unpleasant results which arise from having such works in their immediate neighbourhood. These claims are in many cases so excessive that colliery owners often find it preferable to purchase landed property and houses to paying such compensation.

Owing to the aversion which, as a rule, the aristocracy and landed gentry have to industrial pursuits, an aversion which in many cases is also to be found in the British Isles, it would under any other law than that existing in Prussia have been impossible to have made such great progress as is recorded in the annals of the mining industry of the last 30 or 40 years, even if the freehold ownership were not so divided.

Under the general movement of social reform, as to better protection of the interests of the working classes by a compulsory insurance, towards providing means of subsistence in cases of accidents and sickness, and for provision of pensions to the aged and infirm, the shortening of working hours, increased rate of wages, the cost of production is being raised to such an extent, as even under the moderate system of trade protection here existing, will in all probability ultimately prove dangerous, if not fatal, to industrial capitalists, and not only to them, but to the manual labourers themselves, notwithstanding the fact that the mine-owners have not to pay royalties to the owner of the soil; it is true there are some anomalous exceptional cases of royalties having to be paid, which in the respective districts undoubtedly retard progress. Taken as a whole, the special tax collected by the State on the minerals sold, which is applied towards the expenses of Government supervision, is so moderate as to have no practical effect on exploitation. Still there is good reason to believe that this tax will be abolished.

Strange as it may appear, I think it will be found, even in the face of the foregoing facts, that owing to the enormous outlay of capital on coal mining in Germany, the expensive system of management, and the greater difficulty, at least in many cases, of working the coal, the cost of production at the pit's mouth is quite as high, if not higher, in Germany than in England, which fact may be easier accounted for perhaps, on taking into consideration other taxes here levied by the State and by the communities for local requirements, in addition to which comes the compulsory insurance referred to.

It will thus be seen that the heavy royalties of England are more than counterbalanced by other taxes and expenses in Germany, so that in view of the great superiority of England's insular position, the British coal and iron trade have still the upper hand in the race of competition.

Well as the German system works, of the State being the original possessor of the minerals, with the power of granting to concessionnaires the freehold ownership in the same as real estate for the purpose of exploitation, by which the industrial progress is so fully developed to the best advantage of the nation, it is difficult to see how this system, even in a modified form, can be adopted in other industrial countries under the laws of which the minerals are the property of the landowner.

The law on mining in Prussia and the greater part of Germany, it is stated, is not in any way based upon the laws of the Romans, but is, as practised, the outcome of German experience and work in this country.

No. 1.

The concessionnaire has simply to prove to the Government mining authorities the existence of the minerals under the surface by borings, by adits, or search shafts, as the case may be. Where borings are requisite, the Government mining inspector of the district has to be informed when and where the seam or vein is touched by the boring tools, and further boring through the minerals must take place in his presence, the result having to be taken to protocol by him as a proof of the discovery of the minerals.

Satisfactory proof being given in this way, the concessionnaire has to send in a formal application for a concession to the Government mining board of the district. If the concessionnaire makes search for minerals on his own landed property, or that of other parties whose consent he has obtained, that of the State is not requisite. In case he cannot procure sanction of the owner of the surface he has to apply to the mining board which has the power to grant the right to search for minerals on private or State lands, subject to certain restriction as to public thoroughfares, public or private buildings, and compensation for surface damages, for which the owner of the soil is entitled to demand the deposit of a proportionate security.

The expenses connected with the procuring of a concession include only stamp duty, and the actual disbursement of the Government authorities.

No. 2.

The concession or right of property for the particular mineral or minerals which have been proved is that of immovables or freehold property, in which the exploitation, subject to the mining laws, rules, and regulations, can be carried on by the concessionnaire, his representatives, or heirs; he has the right to sell or otherwise dispose of the rights of property to a third party, parties, or companies—

(a.) The amount of taxes payable to the State in consideration of the rights to work the minerals is almost nominal, at least, on coal and such like minerals which are produced in large quantities, being charged chiefly to cover Government supervision. On coal, two per cent. is charged on the actual vend, calculated on an estimated minimum selling price, from year to year, according to agreement between the mine owners and Government inspectors, respectively royal mining boards. The other taxes levied by the State are on the land and buildings, especially dwelling-houses, the property of the owner of the mines, which are assessed on a cadastral valuation, and vary in proportion to the requirements of the State.

(b.) For ever, or as long as any mineral of the class for which concession is granted, remains to be worked.

(c.) The mining board may however rule, after giving due notice, that the right of property may be withdrawn from the concessionnaire or owner of the mine, in case he fails to work out the minerals or stops mining operations, and if, by the property thus remaining undeveloped, public interests in the judgment of the mining authorities should be materially injured. The period of notice prescribed under the law of Prussia is six months, a power which, however, is seldom if ever exercised.

The minerals have to be worked subject to the supervision of Government authorities, on a plan of the proposed system of mining operations, which has to be handed to the Inspector of Mines previous to the commencing with the same. A complete survey of the mine has to be made, and kept posted up periodically by a sworn mining surveyor—duplicate plans, in sections, being kept at the offices of the owners of the mine and at the Government mining offices of the district. In case the mine owner proposes to stop mining operations, he is bound to give four weeks' notice to the mining authorities. If under *force majeure*, or unforeseen circumstances, a shorter notice becomes necessary, or an immediate suspension is involved, a notice within 14 days subsequent thereto is required. In short, the working of the minerals is subject to a general supervision of the mining board under the mining laws, rules, and regulations of the country; for instance, all accidents have to be reported immediately to the Government inspector; the mining managers and overmen are appointed subject to his approval, and held responsible to the Government for the safe working of the mine.

(d.) Is answered under (b).

No. 3.

The concessionnaire has full and unlimited power to sell, let, or otherwise dispose of the property in any way he may see fit.

No. 4.

The concessionnaire has no rights, i.e., under the concession, of property whatever as regards the surface, but he has powers under the mining laws to expropriate such lands as, in the opinion of the mining authorities and the Government, are absolutely necessary to the exploitation of the minerals.

No. 5.

He has also powers of expropriation to purchase such land as in the same way shall be proved necessary for the transport of the minerals from, or materials, to the mine, to construct roads, special railways, or waterways for this purpose in connexion with highways, rail, and waterways of the country.

No. 6.

Certain powers are given, in cases of necessity, for the owner of a mine to construct certain auxiliary works, such as those for ventilation and drainage in adjoining concessions or mines, i.e., however subject to the sanction of respective Government mining board, i.e., where the safety of the mine in which such works are proposed shall not be endangered. Any minerals soon in this way have to be delivered to the owner of such adjoining mine gratis, and the owner of the mine who derives, or is to derive, relief by such operations is bound to compensate the other party for any loss or damages sustained. Should the owner of a mine object to such works, then the Government board of mine rules with exclusion of any other court as to whether he should be bound to submit to the work being done or not. As a rule in deep mining underground, connexion is made between the mines of different owners, especially for ventilation purposes for mutual advantage, in order to avoid the expense of additional shaft sinking, but, under divided ownership, this system is calculated, in cases of explosion of fire-damp or inundation from water, to endanger life and property (i.e., in the mine adjoining that in which the accident takes place), unless, indeed, a very complete system of boundary pillars and dam doors is provided for under very strict supervision.

No. 7.

In the Rhenish Westphalian coal district the original concessionnaires or discoverers of the mineral, almost invariably sell their entire right of ownership to capitalists who form joint stock or partnership companies for the sinking of the shafts and working of the minerals. The terms of sale are a matter of agreement between vendor and purchaser, the prices being very much affected by the state of the market. In many cases the vendors receive cash payment for the whole amount, in others they take part payment in shares in the new enterprise.

No. 8.

In addition to the taxes on land and buildings referred to under No. 2 (a) as levied by the State, similar taxes are levied by the communities, which also collect on going concerns an income tax on the profits, on joint stock companies, on their published balance sheets, or in the case of private owners or partnership companies the income is estimated by the tax commission of the respective community.

Should the income be assessed too high, it is of course open to the mine owners to appeal against the same, if necessary, to the Government representative of the district who may call for proof of the actual amount of income by the production of books.

The local requirements of the respective communities include the maintenance of roads, schools, as well as their construction, provision for the poor, and such like. In illustration not only of the amount of taxation for these purposes, but for the State, as also for the miners' funds of the various classes, to which latter the mine owners have under law to provide the larger proportion, I have annexed hereto a tabular statement* taken from the yearly reports of one of the leading and most important colliery companies in the Rhenish Westphalian mining district. From this statement it will be seen that on the average of the four years in question, 1887-1890 inclusive, the cost of all taxes, contribution to miners' funds, and to associations for the protection of mine owners' interests, amount to 48 pfennings; i.e., 0.48 of a mark or shilling per ton on the total amount of coal produced, all of which charges, except Nos. 5 and 7 of the table, i.e., Chamber of Commerce and Coal Owners' Associations, are compulsory.

From the 1st of January 1891, a further burden has been laid on the mine owners in the form of a compulsory insurance of the workmen for maintenance in case of age and infirmity.

The average amount of the communal taxes paid by the same coal company for the four years in question, is 0.05 shilling on the total amount of coal produced within that period.

No. 9.

The usual hours of working vary considerably in different parts of the country, in different classes of mining

* See Table 1.

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany by
Mr. Mulvany.

operations;* but, as a rule, it may be assumed that the time is, overground, 12 hours, including the allowance for the breakfast, dinner, and coffee; underground, eight hours at the face of work in the mine, i.e., exclusive of the time required to reach the same from and return to the surface.

As the miners in most cases live at a considerable distance from the mines, this system entails a daily absence from home of at least 10 or 11 hours. In times of pressure of trade and demand for minerals, overtime is often worked, a 12-hour instead of an 8-hour shift; but experience goes to show that the average production per man per day is thus considerably reduced, and consequently that on the average 8 hours per day continuous work, i.e., allowing of course the necessary time for refreshment, is the most that with advantage can be expected from a miner, and that any departure from this practice means a loss of power, therefore capital to the workmen and money to the employer. This, however, is not a matter of legislation, but arrangement between the mine owners and the labourer.

There are districts probably, where the men work, or are supposed to work, for 9 or 10 hours a day, but they do not and cannot work freely for such a period which exceeds the powers of physical endurance. For a number of years at some of the leading collieries of the Rhenish Westphalian district, it was the practice to change at 4 in the morning, 12 in the day, and 8 in the evening, thus the eight-hour shift included the time required for descending and ascending the shafts in the coal cages. The instructions were that the men should change at the face of work in order to insure continuous production of 16 hours a day, but it was found very difficult to carry out the latter system, it being the habit of the district for the working gang not to await the arrival of their comrades; notwithstanding which, however, the system last referred to was found to be the most rational and economic.

As to wages, the greater part of the work, as in England, is done by contract, the prices varying according to local circumstances, the capabilities of the men, and the state of trade; there is no fixed general principle upon which the prices are determined, nor is there as yet, as exists in many parts of England, rising and falling scale in proportion to the market prices of the minerals.† The average rate of earnings in Germany, of all hands employed at mines (exclusive of officials) over and underground, may be taken during the periods of depressed state of trade at 2s. 4d. per head per day, and in prosperous times like the present, at 2s. 10d. per head per day.

The average rate of daily earnings of the hewers and the other skilled labourers employed in mining operations may be taken in Germany at about 20 per cent. above the foregoing rates.

Taking into consideration the total number of men employed over and underground in the production of coal out of deep mines, the daily output per man, that is in the usual working time, on the average is about 18 cwt. English, and that of the hewers alone about 3 tons English; which latter, however, is a high average.‡

No. 10.

It would appear that the wages of miners in mines, the property of and worked by the State, are somewhat better than in those of companies or private parties. The general organisation, management, and discipline, is doubtless established on a more uniform system, but naturally more searching in the former than in the latter; it will also be obvious that it is in its nature bureaucratic, and therefore less elastic than the more commercial system. It is to be doubted that the economic position on the whole is better, and to judge from the strikes of late years the miners are just as discontented and as difficult to deal with under Government management as under that of private parties.

The annexed table from official sources is of interest as to the rates of wages and hours of work in the various districts of Prussia.§

No. 11.

The general supervision and State control as to the mining laws of the country, and police regulations being strictly adhered to, especially as to due protection of life against accident, is effected under the Minister of Public Works and a General Inspector of Mines, by royal mining boards in the chief mining districts of Prussia, for instance at Dortmund, Bonn, Breslau, Halle, and Klausthal. These mining boards or Government council of mines are constituted on collegiate principles. Each board has its chairman, and all the members are by

* See notes on Table No. 2.
† See Tables Nos. 2, 3, and 3A.
‡ Table No. 4.
§ Table No. 2.

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany by
Mr. Mulvany.

profession, mining engineers, having a practical and theoretical knowledge of that profession, and of the laws of the country, especially those dealing with the branch of industry in question. They are all educated and trained for this particular Government service, for which they must have passed the examinations of each grade or rank in the same, i.e., of Berg or mining Referendar, Assessor and Bergmeister; the chairman has the rank of Bergrath, Oberbergrath, or Berghauptmann, and the principal or general inspector, who resides at Berlin, that of Oberberghauptmann. The supervision in detail is carried out under the boards or Bergämter by Government mining inspectors, who are styled district officials or Bergmeister, the number of such latter officials attached to each board being determined according to the extent of the district, each inspector having under his supervision a clearly defined portion of the same.

Each board works independently to a great extent on its own responsibility, subject, of course, to the existing laws and the general central supervision of Berlin; their powers are very extensive and searching, but generally administered with a fair amount of liberality, under due consideration of the local circumstances and the commercial objects of mining operations.

Each member of the board has a certain department of his own of supervision, for instance, one devotes special attention to points of law, the other to ventilation and the use of explosives, and a third to mechanical appliances, and so on.

Under the existing system of government the powers are exercised chiefly with regard to the general technical principles of mining, so as to insure that the mineral wealth or capital of the nation is exploited or developed to the best advantage, in other words, that the seams of coal or veins of mineral, where opened out, shall, as far as practical, be worked in the most rational way, always, of course, under due consideration of the lives of those employed, and the avoidance of injury of public buildings, towns, rail and waterways. With regard especially to the safety of life and the preservation of the health of those employed underground, attention has to be paid to a full and complete system of ventilation and unwatering of mines, as well as to the use of suitable explosives. In this respect their powers are very extensive, so much so, that the use of the latter can by a simple order be prohibited entirely in certain cases, the use of safety-lamps prescribed, the working of dangerous fire coal-seams forbidden, and even the suspension of mining operations enforced. In every case of serious or fatal accidents to miners, the manager, or his representative, has to report immediately to the Government inspector, whose duty it is to investigate the case in the mine, to take evidence from witnesses to protocol, to report to the board of the district, and in fatal cases to state procurator or barrister, without whose consent interment cannot take place.

For the safe working of mines, the manager and chief overmen in each case are made personally responsible to the Government inspector respectively board of mines, and only such men are approved of for appointment as have passed an examination for such offices, either at the mining school or before the Government inspector of the district.

An important part of the inspector's duty is the periodical examination of the boilers, the testing of such as may from time to time be newly erected or repaired, also the examination and testing of the winding ropes, as to their being constructed of the prescribed material and dimensions, as well as changed when requisite.

All mechanical appliances or machinery over and underground, upon which the safety of men's lives depend, are likewise subject to inspection and approval.

They have to pay particular attention to the ventilation of mines, not only as to the principles upon which it is effected, but as to the direction and dimensions of the air courses, intake and outlet, but as to the prescribed volume of fresh air being carried round the face of work. Only in very extreme cases is any departure from the ascensional principle sanctioned, and then only as a temporary arrangement.

In deep coal mining, in every case, the two-shaft system is prescribed and enforced, i.e., in absence of underground connexion with adjoining mines.

The mining board determine, under the general laws of mining, the amount and strength of pillars of minerals which shall be left standing between concessions of different owners under the superincumbent stratum of the mineral bearing measures—by which the dangers of inundation are supposed to be averted—and for the safety of public buildings, rail and waterways, &c., &c., provided for precautionary measures which are sometimes carried to excess, and thus increase the danger intended to be avoided, in as much as the pillars cause an unequal depression or sinking

of the surface, and, in addition thereto the loss of the minerals in question, especially if due attention is not paid to the angle of breakage. It is now becoming more and more the custom for mining companies to appoint as general managers and managers officials taken from the Government mining service, who are generally glad to take such appointments, in view of the much higher salary they thereby secure. In some cases these very men complain bitterly of the severity of the Government supervision as carried out by certain boards or inspectors, in their over-zeal in adhering to the letter instead of the spirit of the law as it ought to be administered in accordance with the commercial views and requirements of the times. Such are, however, exceptions, so that on the whole the mode in practice of administration—even of that portion of the law which has direct connexion with the mining police regulation—may be considered fairly satisfactory.

In order that the authorities may at all times have a clear insight as to whether the general technical principles of mining are carried out in accordance with the law and general national interests, a complete survey of all mines is kept by sworn Government mining surveyors at the cost of the concessionnaire or owners, and duplicate copies of all plans and sections thereof have to be kept at the office of the respective mines and at the Government office of the district. From this material maps and sections of the district, with minute detail of the surface and underground mines, are published at suitable intervals, with all boundaries of concessions, &c., &c., carefully shown thereon. These publications are of immense value, not only to the State but to mining engineers and mine owners themselves, with, it is true in many cases, the disadvantage to individuals, that the actual relative value of mines is open to all comers who have sufficient knowledge of the subject to read the plans; on the other hand, in view of the fact that the majority of the coal mines are now the property of and worked by joint stock companies, investment in share of the same is rendered thereby so much less of a speculative transaction than in countries where it is almost impossible to obtain reliable information on the point in question. Consequently, in general terms, mining shares are much more marketable paper in this country than would otherwise be the case.

Further than above described the Government mining authorities do not, nor have they the right to, interfere in the system or details of management, technical or commercial; above all, not between the employer and his men, unless, indeed, at the special request of the former or of both parties.

In the late strike they, of course, closely watched the course of events and reported thereon to Berlin.

They have not the power, I believe, to determine the amounts of surface damages to be paid by mine owners, this being a matter, in cases of disputes, for the courts of law.

Thirty-five years ago, and even subsequently, the Government inspectors had immense powers, the mine owner could not even employ or dismiss a miner without his sanction; at that time, however, the mining industry of the country was but in its infancy.

No. 12.

As already stated under General Remarks, beyond all doubt the system of the minerals being originally the property of the State, with the power exercised of granting the freehold ownership thereof by concession to private parties or companies for the express purpose of exploitation irrespective of the owners of the surface lands is the best possible way of developing the mining industry and natural resources of a nation, as proved in Prussia within the last thirty-five years, when a more liberal administration took place, and especially since the reform of the mining laws of 1865, whereby the mine owners were placed on a more independent footing. Previous to that period, however, notwithstanding the facilities for acquiring mining property, progress was greatly retarded by an old-fashioned system of mining police regulations, which were but too prone to be administered under the old Prussian bureaucratic style, namely, according to the letter of the law, utterly regardless of all commercial consequences. The consequence was that even such capabilities as the mining engineers of those days possessed were cramped and all inventive genius rendered futile by the all-powerful mining inspector, whose only guide was the paragraphs of the existing law. In 1855, 1856, and 1857, amongst other extraordinary regulations, no workmen or officials were allowed to descend or ascend even a shaft in the course of sinking, still less that of a mine, otherwise than by ladders, matterless how deep; boilers, ropes, &c., were passed for use not by the actual tested strength, but by the thickness

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany, by
Mr. Mulvany.

could be done without the shaft men being lowered down by the engine rope his protest broke down.

Subsequently the Government mining engineers and officials were sent on tours of instruction to England, from which time the great advantages of the concession system, at least in the coal mining of the Rhenish Westphalian district, have and are being reaped in a fair proportion to the mineral wealth of the country, and now in many respects English mining engineers can study with good results the progress made in this country, i.e., in coal mining. Strange to say other branches, for instance iron ore mines, are behind time, the reason for which is to be sought for chiefly in a want of progress amongst the mining engineers of certain districts, instead of in the system of legislation.

As illustrative of the progress made in the production of coal I have annexed hereunto Table No. 5, and as to prices, No. 6.

T. R. MULVANY.
British Consulate, Düsseldorf,
August 1891.

TABLE No. 1.

EXTRACT FROM THE REPORT OF A LEADING COAL COMPANY IN WESTPHALIA.
Expenditure under the Head of Taxes, Rates, Contributions to Workmen, Funds and Subscriptions to Industrial Associations. In Marks and Pfennings.

	1887.	1888.	1889.	1890.
	Marks.	Marks.	Marks.	Marks.
1. Mining, land, building, and trade taxes -	82,714.02	139,345.67	155,030.19	228,150.00
2. Community taxes -	77,218.82	83,051.48	72,532.99	78,294.29
3. Miner's funds taxes, including workmen's contributions.	172,871.54	287,214.60	327,681.79	395,457.75
4. Contributions to Miner's Trade Association -	50,000.00	106,050.00	116,400.00	123,726.91
5. Contributions to Chamber of Commerce -	180.00	222.00	253.50	256.50
6. Contributions to Mining Association funds -	1,838.80	2,411.10	5,859.70	5,725.70
7. Contributions to Association for the Protection of Mine Owners' Interests at Essen, and Commercial Association for the General Interest of Trade and Commerce at Düsseldorf.	786.00	1,074.00	1,134.00	1,930.90
Total -	385,608.68	619,368.85	678,892.17	833,541.15

	1887.	1888.	1889.	1890.
	Marks.	Marks.	Marks.	Marks.
Representing as follows:				
On the coal sold or vend of the colliery, per ton -	0.45	0.44	0.47	0.56
In per-centage:				
Of the value of the coal -	8.62	8.03	7.46	5.54
Of the total gross profit -	34.25	29.32	28.06	12.52
Of the total net profit -	47.42	45.36	44.17	19.26
On gross production of coal in tons -	880,198.00 (two collieries)	1,452,043.55 (three collieries)	1,468,521.95 (three collieries)	1,531,922.02 (three collieries.)

Appendix to Nos. 2 (a.) and No. 8.

N.B. —One ton German = 1,000 kilogram = 2,205.774 pounds English.

The following statement was subsequently received from
Mr. Mulvany.

As to Table No. I. of my report to the Royal Commission on Mining Royalties, column for year 1890, with reference to questions No. 19,100 to 19,103 inclusive, I find upon revision of the matter that No. 1 of this table—mining, land, building, and trade taxes—equal together 228,150 marks, are all Government taxes, including therein the 2 per cent. on the actual vend, the proportion of which are as follows:—

		Per Ton of Production.
No. 1 -	Bergwerkssteuer (mining taxes).	Marks. Pf. 225,172 74 or 0.1508 per ton.
No. 2 -	Grundsteuer (land taxes).	173 19 or 0.0001 "
No. 3 -	Gebäudesteuer (building taxes).	2,696 07 or 0.0018 "
No. 4 -	Gewerbesteuer (trade taxes).	108 0 or 0.00007 "
Total -	-	228,150 00 or 0.15277 "

The new tax referred to in question No. 19,103 now in force since 1st April 1892 is an additional State tax on declared income.

In making the declaration, i.e., in determining the amount of income subject to such new taxation, the foregoing taxes are allowed previously to be deducted, together with other items mentioned in my evidence.

T. R. MULVANY.
British Consulate, Düsseldorf,
21st May 1892.

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany, by
Mr. Mulvany.

TABLE No. 2.

PRUSSIA.

Miners' Wages.

The following is a Table of the Wages earned by Miners during the first quarter of the year 1890, in some of the principal Mining Districts of the country, made out from official material :—

a. AVERAGE WAGES of all WORKMEN employed, exclusive of Officials and Overseers.

Mining District of	Number of Workmen.	Number of Shifts Worked.		Net Earnings after all Deductions for Working Expenses as well as of Contributions to Compulsory Insurance and Sick Funds.		
		Together.	Per Head.	Together.	Per Head.	Per Shift.
I. Government Mining Board District of BRESLAU :—				Marks.	Marks.	Marks.
1. Mineral coal mining in Upper Silesia.	47,494	3,367,138	71	7,718,596	163	2·29
Compared to fourth quarter of year 1889.	—	—	71	—	154	2·16
2. Mineral coal mining in Lower Silesia.	15,827	1,204,064	76	2,906,602	184	2·41
Compared to fourth quarter of year 1889.	—	—	78	—	185	2·36
II. Government Mining Board District of HALLE :—						
1. Peat coal mining - -	22,098	1,602,739	73	3,762,115	170	2·35
Compared to fourth quarter of year 1889.	—	—	74	—	176	2·37
2. Cupriferous slate mining -	14,194	978,191	69	3,051,013	215	3·12
Compared to fourth quarter of year 1889.	—	—	70	—	216	3·08
3. Rock salt mining - -	3,706	275,977	74	906,917	245	3·29
Compared to fourth quarter of year 1889.	—	—	76	—	243	3·21
III. Government Mining Board District of KLAUSTHAL :—						
1. State ore mining in the Upper Harz.	3,280	241,893	74	488,936	149	2·02
Compared to fourth quarter of year 1889.	—	—	74	—	148	1·99
IV. Government Mining Board District of DORTMUND :—						
1. Mineral coal mining - -	121,354	9,311,322	77	32,600,046	269	3·50
Compared to fourth quarter of year 1889.	—	—	80	—	260	3·27
V. Government Mining Board District of BONN :—						
1. State mineral coal mining, near Saarbrücken.	27,077	1,955,207	72	7,063,909	261	3·61
Compared to fourth quarter of year 1889.	—	—	73	—	252	3·45
2. Mineral coal mining in Aachen -	7,194	539,171	75	1,589,962	221	2·95
Compared to fourth quarter of year 1889.	—	—	80	—	228	2·86
3. Ore mining, right of the Rhine -	30,252	2,093,580	69	5,247,961	174	2·51
Compared to fourth quarter of year 1889.	—	—	72	—	173	2·41
4. Ore mining, left of the Rhine -	4,657	328,529	71	729,877	157	2·22
Compared to fourth quarter of year 1889.	—	—	74	—	161	2·18

N.B.—To the cash earnings is here to be added the money value of the addition for bread flour at mark 0·14 in the first quarter 1890, and at mark 0·11 in the fourth quarter of 1889.

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany, by
Mr. Mulvany.

b. AVERAGE WAGES of the separate Classes of WORKMEN per Working Day or Shift.

Mining District of	Miners, proper, employed Underground.	Other Workmen employed Underground.	Male, Adults, working Overground.	Male, Minors, under 16 Years of Age.	Female Workpeople.	Total Average.
I. Government Mining Board District of BRESLAU :—	Marks.	Marks.	Marks.	Marks.	Marks.	Marks.
1. Mineral coal mining in Upper Silesia.	2·62	2·27	2·02	0·85	0·87	2·29
2. Mineral coal mining in Lower Silesia.	2·62	2·47	2·14	1·04	1·27	2·41
II. Government Mining Board District of HALLE :—						
1. Peat coal mining - -	2·65	2·54	2·17	1·28	1·26	2·35
2. Cupriferous slate mining - -	3·27	2·81	2·90	1·45	—	3·12
3. Rock salt mining - -	3·42	3·38	3·10	1·25	—	3·29
III. Government Mining Board District of KLAUSTHAL :—						
1. State ore mining in the Upper Harz.	2·29	2·49	1·69	0·62	—	2·02
IV. Government Mining Board District of DORTMUND :—						
Mineral coal mining - -	4·00	2·89	2·79	1·23	—	3·50
V. Government Mining Board District of BONN :—						
1. State mineral coal mining, near Saarbrücken.	3·89	3·07	2·86	1·48	—	3·61
2. Mineral coal mining in Aachen -	3·32	2·64	2·40	1·12	1·26	2·95
3. Ore mining, right of the Rhine -	2·80	2·64	2·13	1·21	1·11	2·51
4. Ore mining, left of the Rhine -	2·41	2·49	2·12	0·95	0·90	2·22

N.B.—Here to be added the money value of the addition for bread flour on the average mark 0·14 per shift.

N.B.—The usual hours of working or shift of the miner, proper, underground in the various districts are as follows :—

In UPPER SILESIA, 8 hours for 10 per cent. of the workmen, 10 hours for 33 per cent., and 12 hours for 57 per cent., all inclusive of time for descent and ascent. In LOWER SILESIA 8 hours for 12 per cent., 10 hours for 88 per cent., inclusive descent and ascent. In the CUPRIFEROUS SLATE MINES of Halle, on the average, 9 hours, inclusive descent and ascent. In the PEAT COAL MINES of the same district, 11·6 hours, inclusive descent and ascent. In the ROCK SALT MINES, 8·4 hours. In the ore mines of the UPPER HARZ, on the average, 10·3 hours, inclusive descent and ascent. In the mineral district of DORTMUND, 8 hours (in very hot working places 6 hours), exclusive descent and ascent. In the mineral coal mines of the State in SAARBRÜCKEN also 8 hours, exclusive descent and ascent. In the mineral coal mines of AACHEN district, on the average, 9·6 hours, inclusive of descent and ascent. In the ore mines of the right and left bank of the RUHR, in the Government Mining Board District of BONN, 8·6 respectively, 8·9 hours. The working hours overground are, in general, 10—12 hours, including the usual breakfast, dinner, and coffee time.

TABLE No. 3.

STATISTICS OF WAGES OF THE ROYAL GOVERNMENT MINING BOARD DISTRICT OF DORTMUND, 1879-82.

The average Net Wages are given less all deductions for Tools, Powder, Oil, and Sick and Accident Fund.

	1. Coal and Stone Hewers, and the Putters, and other assistance working in the same Contract.	2. Other Workmen employed Underground	3. All Workmen employed Over- ground, exclusive of Minors.	4. Minors of the age of 14 to 16.	5. Totals, exclusive of Managers, Overmen, and Deputies.
	Marks.	Marks.	Marks.	Marks.	Marks.
1879, 1st quarter - - -	2·61	2·10	2·22	1·04	2·38
2nd " - - -	2·54	2·05	2·20	1·00	2·32
3rd " - - -	2·49	2·02	2·20	1·00	2·29
4th " - - -	2·57	2·04	2·17	1·00	2·33
1880, 1st quarter - - -	2·72	2·06	2·19	1·02	2·40
2nd " - - -	2·69	2·09	2·21	1·01	2·42
3rd " - - -	2·65	2·10	2·22	1·03	2·43
4th " - - -	2·74	2·10	2·19	1·02	2·44
1881, 1st quarter - - -	2·74	2·08	2·22	1·02	2·44
2nd " - - -	2·74	2·09	2·24	1·02	2·44
3rd " - - -	2·79	2·10	2·26	1·02	2·47
4th " - - -	2·89	2·13	2·24	1·03	2·53
1882, 1st quarter - - -	2·94	2·15	2·26	1·03	2·57
2nd " - - -	2·94	2·16	2·29	1·03	2·58
3rd " - - -	3·05	2·22	2·32	1·05	2·65
4th " - - -	3·38	2·26	2·33	1·07	2·70

Appendix
C. XII.

GERMANY.
Report to the
Commission
upon the
Mining Laws
in Germany, by
Mr. Mulvany.

TABLE No. 3A.

GERMANY.

Net Earnings of all hands employed Over and Underground.

Year.	Total Marks.	Per Man per Shift.	Per Man per Year.
UPPER SILESIA: Mineral Coal Mining.			
1887	19,658,793	1.82	492
1888	21,098,263	1.85	516
1889	24,810,467	2.03	575
1890	32,428,639	2.37	671

LOWER SILESIA: Mineral Coal Mining.

1887	8,494,462	2.14	626
1888	8,800,088	2.04	630
1889	9,855,708	2.23	682
1890	11,649,703	2.45	735

HALLE: Peat Coal Mining.

1887	12,131,463	2.13	628
1888	12,604,628	2.23	682
1889	13,790,145	2.33	682
1890	15,925,490	2.50	730

HALLE: Cupriferos Slate Mining.

1887	9,039,719	2.42	700
1888	10,224,931	2.66	757
1889	11,365,656	2.87	802
1890	12,059,424	3.01	853

HALLE: Rock Salt Mining.

1887	2,368,945	3.00	920
1888	3,392,429	3.05	920
1889	3,595,465	3.17	954
1890	3,671,510	3.36	1,012

CLAUSTHAL: Ore Mining.

1887	2,079,851	1.98	588
1888	2,097,543	1.99	592
1889	2,039,997	2.03	603
1890	2,016,288	2.04	613

DORTMUND: Mineral Coal Mining.

1887	78,429,712	2.57	796
1888	88,210,831	2.69	863
1889	105,475,584	3.05	941
1890	132,339,258	3.49	1,067

SAARBRÜCKEN: Mineral Coal Mining.

1887	19,724,610	2.87	814
1888	20,543,330	2.92	842
1889	23,947,936	3.24	933
1890	30,676,009	3.79	1,114

AACHEN: Mineral Coal Mining.

1889	—	2.72	817
1890	—	3.01	878

NASSAU: Ore Mining.

1889	—	2.36	658
1890	—	2.46	676

TABLE No. 3A—continued.

Year.	Total Marks.	Per Man per Shift.	Per Man per Year.
RIGHT SIDE OF RHINE: Ore Mining.			
1889	—	2.11	597
1890	—	2.26	639
LEFT SIDE OF RHINE: Ore Mining.			
1889	—	2.18	626
1890	—	2.22	634

TABLE No. 4.

PRODUCTION OF COAL.

DORTMUND DISTRICT.

N.B.—This Table is interesting in showing that under the advance of mining science the production per Man was more than doubled.

Per Man.	Per Year.
1857	129 tons.
1862	191 "
1867	220 "
1872	209 "
1877	241 "
1882	290 "
1883	307 "
1884	305 "
1885	—

According to Chamber of Commerce, Dortmund:—

1888	314.60 tons.
1889	308.22 "
1890	290.32 "
1891	265.00 "

The falling off in production per head is attributed to the strike of 1889, and to the increased contract prices for work.

TABLE No. 5.

PRODUCTION OF MINERAL COAL.

DORTMUND DISTRICT.

Year.	Tons.	Value Marks.	Total No. of Men.
1858	4,093,427	34,293,627	31,455
1882	25,873,428	118,607,736	94,554
1888	33,201,178	199,207,068	111,198
1890	35,469,290	407,896,835	127,794
1st quarter, 1891	8,917,386	—	134,642

ZOLLVERIM OF GERMANY.

Mineral Coal.

1882	52,118,600	267,252,000	195,958
1888	65,386,100	341,063,000	225,452

TABLE No. 5—continued.

Year.	Tons.	Value Marks.	Total No. of Men.
Peat Coal.			
1882	13,259,600	36,156,000	25,546
1888	16,574,000	40,896,000	29,630

TOTALS OF ALL MINERAL PRODUCTIONS IN GERMANY.

1882	76,872,800	412,899,000	320,662
1888	95,866,100	494,707,000	349,998
1889	—	—	—

PRODUCTIONS IN PRUSSIA.

Mineral Coal.

1888	59,472,500	291,918,891	—
1889	61,436,991	332,581,059	—
1890	64,373,816	479,523,613	—

Of which were produced in the district of—

	Year.	Tons.	Year.	Tons.
Breslau	1888	17,642,284	1889	19,000,875
Halle	1888	22,594	1889	25,409
Klausthal	1888	497,295	1889	572,093
Dortmund	1888	33,223,614	1889	33,855,110
Bonn	1888	8,086,713	1889	7,982,544

TABLE No. 6.

AVERAGE PRICES OF COAL AT PIT'S MOUTH.

DORTMUND DISTRICT.	
N.B.—In most collieries the prices of the year 1878–82, inclusive, were below actual cost of production.	
This Table is taken from Bergban Verein.	
Year.	Marks.
1872	8.59 per ton.
1873	10.95 "
1874	10.98 "
1875	7.21 "
1876	6.09 "
1877	4.94 "
1878	4.45 "
1879	4.15 "
1880	4.57 "
1881	4.58 "
1882	4.19 "
1883	4.60 "
1884	5.54 "
1885	5.38 "
1886	5.44 "
1887	5.43 "
1888	5.93 "
1889	8.50 "
1890	11.47 "
1891	10.04 "

From 1884–91, inclusive, the Chambers of Commerce return.

XIII.

EXTRACTS from the REPORT of the ROYAL COMMISSION appointed in 1890 by the GERMAN EMPEROR to inquire into the CONDITION of the MINERS in the COAL INDUSTRY.

*(Translation.)

I.—WAGES, THEIR AMOUNT AND HOW THEY ARE FIXED.

(a.) Ruhr District.

With regard to this district the complaint is general, that before the strike the wages of all kinds of labourers were too low; it was even maintained that in certain mines in order to earn the necessary means of livelihood the miners had to have recourse to a great number of extra-shifts. In the Oberbergamts district of Dortmund, for instance, the miners who were examined from the following mines, viz.: Minister Stein, Hardenberg, Westfalia, Luise und Erbstollen, Margaretha, Freiberg, &c. have emphasised especially the high rents and taxes, and the high prices of food.

In many places the demand was made that a hewer working properly, should not earn less than 3s. 6d., and a carrier not less than 2s. 6d., and in other places still higher wages were claimed; one delegate, whose family consisted only of his wife and child, maintained that he could not live, according to his position, with only a wage of 4s.

Then there were a great many complaints about the manner in which the wages were fixed in the case of piece-work. It was complained that in the middle of the month when the contract-rates were revised they were changed retrospectively, this was especially the case if it could be foreseen that the earnings would reach a certain maximum. For instance, one miner, of the mine Prosper, shaft I., gives 5s. as such maximum wages. Therefore it was demanded that in future the contract-rate should only be altered if a really important change had taken place in the mine, and that in such a case a method should be adopted which would enable the labourer at the end of the month to have a clear insight into his earnings. To explain this demand it was pointed out in one case that the book of wages only contained the number of shifts and the sum total of the wages. But then, again, it has been stated that if the wages have been insufficient at the end of the month, the contract-rate has sometimes been raised to make it, at least, partially satisfactory. Several requests have been made to fix this contract-rate twice a month. Some information has also been given as to a certain irregularity with regard to the payment of wages, and complaints have been made that no certain pay days had been fixed, once for all.

Besides, the miners complain that when they resumed work, i.e., after the strike, the promises of their superiors had not been kept; or that the increased wages were still insufficient, and that for that reason discontent among them still prevailed.

On the other hand it has been stated that the miners were contented with their wages. The above-mentioned grievances might be looked at from the three following points of view:—

1. According to what agreement between the owners of the mine and the miners are the wages of the latter fixed?
2. What were the wages of the miners before the strike?
3. Have the promises to raise the wages been kept?

1. Contrary to the former legislation which gave an important place to the mining authorities with regard to the fixing of wages, the settlement of these agreements is now (since the law of May 21st, 1860, concerning the duties of mining authorities, &c.) left entirely to the mine owners and the miners. This principle also underlies the paragraph of the General Mining Laws of the 24th June 1865, "On Miners." According to this law, the proprietor of the mine is not compelled to publish regulations with regard to the work, he is only obliged, if he does so, to bring them to the knowledge of the mining authorities, who have no right to interfere with them, unless they are in direct opposition to legal or mining byelaws.

The work done in mining is paid either by the piece or by the shift. The former method is the more common,

* The numbers of each chapter refer to the numbers in the original report.

Appendix
C. XIII.

GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

Piece-work

Weak points of
the contract.Agreements
made with
managers and
others.Views of the
miners.Uncertainty of
wages.Reforms
demanded.

and is used wherever possible. Although this is the case, we find in the regulations which came to our notice in the Ruhr district, only very scanty directions with regard to contracts for piece-work. They are almost exclusively reduced to the simple statement that these contracts are concluded with the manager or his deputies. No regulations at all are issued for the following mines: Hasenwinkel, &c. and many smaller mines. Nothing therefore remains but to explain the intentions of the two parties as to the scale of wages, by referring to the common practice with regard to the settling of contracts for piece-work. This is regulated in general in the following manner: a body of miners agree with the mining officials on the spot to do a particular piece of work measured either by volume or weight at a certain price. The amount of the contract price varies with the greater or less difficulty of working the coal in this particular locality, as the thickness and the purity of the bed, the hardness of the coal, the quality of the surrounding soil, the ruling temperature, and also the general advantages and disadvantages of the working place.

Hence the monthly earnings of one and the same miner fluctuate considerably, as the conditions which determined the contract price turn out favourably or unfavourably, and so increase or decrease the out-put.

Although the examined representatives of the mining managers in the Ruhr district do not admit the weak points in the arrangement of these contracts of which the miners complain, it cannot be denied that various technical difficulties seem to oppose a clear understanding and simple working of these contracts, and also that the mining administrations do not always possess an organisation capable of arriving at a prompt and smooth settlement of their mutual obligations.

That the contracts are made in the mine at the working place, and that they are binding for one month, and that the renewals should take place, when practicable, at the beginning of the new month, are points on which all seem to agree. This seems to be the custom which has gradually established itself. One point still disputed is, who should represent the employer at the negotiation of a contract?

In reality, in smaller mines a verbal agreement is entered into by the miners, and the responsible manager of the works; however, in the larger mines (which form the majority) the manager finds it impossible to go down into all the mines on the first days of the month, therefore he commissions his subalterns, the surveyors, to settle the contracts. In the course of the month, he himself goes over the different places of work by degrees to examine the contracts, and does not hesitate to alter them if he finds them too high, as has been proved by the complaints made.

Therefore the manager and with him the owners of the works start from the original view, that the former alone is authorised to represent the owners of the mine, and that the agreement of the deputies with the miners is only to be regarded as a provisional settlement of the contracts.

On this point the following wishes of the miners do not seem excessive:—

1. That the contracts should be settled once for all at the beginning (except in a few cases).
2. That the miners should be able to see exactly from the beginning to the end of the month how much they earn.
3. That it should not be possible to cancel the contract, if the work should prove favourable.

Looking at the present state of affairs from a legal point of view one must come to the conclusion that it affords cause for grave objections. Since fixed regulations for work are wanting, one has to regard the contract as a "compact of service" concluded by free consent on both sides, and the essential part of such a compact is the payment of a fixed compensation (sec. 870, part 1, tit. 11, Allg. Landrecht). It would be contrary to the principal rules of such a compact, if this compensation depended solely on the will of one of the parties; and also it would not be legally permitted to lower the sum agreed on afterwards, without an essential change having taken place in the conditions, and without the consent of the worker. All these difficulties could perhaps be removed if it were universally settled who should have authority to conclude the contracts, and if the number of authorised officials were large enough to enable them to settle all the contracts really at the beginning of the month.

It remains an open question whether the subject is not important enough to require a thorough reform in the regulations. For instance, instead of simply relying on verbal contracts, which often produce differences of opinion, to enter all contracts into a book kept for this purpose and to which every workman has free access, or to issue

contract-papers (bonds, warrants). In the Ruhr coal district, where verbal contracts are the rule, a certain ambiguity arising from this fact cannot always be avoided. This is especially mentioned in the appendix by the Commission on examining the mine Hanover.

However, one must not forget that the above-mentioned directions which exist in other districts (and of which more will be said below) have all the same met with a good many objections.

If people complain of the want of fixed rules with regard to the contracts, one might point out to them, that the bargains are concluded according to an old custom, with which every miner is acquainted. And then again if differences of opinion arise as to the just valuation of the piece-work or as to a change of terms, they are generally settled in a simple manner satisfying both parties, or in extreme cases by giving notice which both can do.

However, it has been proved by many depositions by different miners that a settlement of these disputes is not always so simple as it is supposed. And of course by giving notice, differences are settled in the simplest and most thorough-going manner, but this creates a situation which offers many inconveniences to both parties. In view of such a state of affairs the miners on almost all mines have expressed a wish for the establishment of a court of arbitration for the settlement of such and other differences. Their ideas as to the appointments and the duties of such a court vary very much, however. Sometimes they have been thinking of a commission of workmen, sometimes they have wished for the decision of the district officer, or of a court formed under his presidency.

Shift wages are used for certain classes of workmen, such as machinists, surveyors, miners, not working underground, &c. No especial complaints have been made against the shift wages.

The wages which were paid in every mine have been ascertained by means of the official statistics, and in the appendix those of the 1st quarter 1888 and the 1st quarter 1889 have been arranged in a table, i.e., the average wages of (a) a miner occupied with preparatory works in the pit, or hewing and transporting; (b) of any other collier working underground.

According to this table it appears that in all the 15 districts of the Oberbergamt of Dortmund, the average wages were:—

	1st quarter. 1888.	1st quarter. 1889.
a. Of a hewer, &c.	2.86s.	3.07s.
b. Of other colliers underground.	2.30s.	2.40s.

The expenses which a miner had to defray in the year 1889 for working materials and personal contributions to the mining unions averaged per head and shift:—

	s.
Lighting materials	0.08
Blasting	0.08
Subscriptions for union	0.13
	0.29

These have already been subtracted from the above given averages.

It has been observed that the miners who have been examined, and especially those who for some reason or other have received less than the average wages, doubted the truth of the above statements by referring to their own books of wages. To understand this circumstance one has to take into consideration that the workers amounting to more than 100,000, concerned in these wages, are scattered over the whole coal district of the Lower Rhine and Westphalia (12 country and three town districts), and that wages vary according to the prices of living in the different mining districts and the averages of the different wages have been taken. These are undoubtedly reliable as far as the critical examination of the conditions of the whole coal district is concerned; but as to the situation of miners of separate mines or of single miners even, they have only a very relative value. For instance, in the mining district of Sprockhövel in the smaller mines, along the Ruhr, at the frontier of the industrial district, workmen who live in scattered dwellings and own land are employed, whilst in the northern districts, Gelsenkirchen, Herne, &c. workmen (often from other countries) live close together and earn their whole livelihood by mining. Therefore one finds in the former case lower wages and cheaper prices, and in the latter, higher wages and higher prices of living.

Varying earning
capacity of the
men.

Besides, one has to consider that the workmen have not all the same capacity for work, they are not equally industrious, and so some work more and some less. And then if illness intervenes, or if after Sundays and holidays shifts are missed (as happens only too often), nobody can be astonished to find a difference of two or three shillings in the wages of the same pit.

To obtain a complete table of wages which would satisfy all doubts, one would have to put together all the wages of the different mining unions, or better, of every single miner in all 15 districts of the Oberbergamt Dortmund for one or several periods.

This has been done, as far as was possible, in the tables contained in the appendix, from which one can see what wages during the month of March 1889 (a period just before the strike) were earned by the different workers, according to a scale varying by intervals of 50s.

According to this, the per-centage of miners earning different wages in the whole coal district of the Lower Rhine and Westphalia is the following:—

7.1 per cent.	have earned 4s. and more.
18.3	" " " " from 3.50s. to 4s.
24.2	" " " " 3.00s. " 3.50s.
19.8	" " " " 2.50s. " 3.00s.
23.1	" " " " 2.00s. " 2.50s.
7.5	" " " " 1.50s. " 2.00s.

Therefore—

49.6 per cent.	have earned more than 3s.
69.4	" " " " 2.50s.

This explains the statements of the workmen who were under examination, several of whom earned, as they themselves declared, 6s. and more, whilst others complained that a hewer could not manage to keep a large family on 2.70s. wages.

The employers will not be able to equalise these fluctuations on account of the above-mentioned differences in the work accomplished by the miners.

Closely connected with the question of wages is the other one, so often discussed during the strike, namely, if the wages were sufficient to live on. The miners were not able to maintain their assertion that the wages did not afford them sufficient means for living. The examinations also have failed to prove that any part of the district had been in distress and need. Besides, by comparing the wages of the miners with those of workmen of other industries, they have not been found to be at a disadvantage.

Besides, it is easily seen, that it is impossible to answer this question in a general way. For it depends on a great many other circumstances how far the workman will be able to make his pay go, such as his industry, his strength, his health, the size of his family, the management of his wife, the probable earnings of his children, the rent, price of food, taxes, &c. There is also to be taken into account the bad habit of many miners, especially of the younger men, to miss a shift after Sundays, pay days, and holidays, which not only deprives them of their wages, but also exposes them to a fine, amounting sometimes to 3s. For instance, during the four months, from January to April 1889, 1,267 shifts have been missed in the mine Friedrich der Grosse, and the fines (imposed for that reason principally) amounted during the same period to 1,488s. or 1s. 3d. per head.

This has induced the administration to offer a premium of 5s. to any miner working all the shifts in a month, and who by so doing earns more than 100s. a month.

In the appendix a table will be found, showing how many men stopped work on certain days during the months of January, February, March, April, and June of last year, in the mine Hibernia.

Therefore, it is very much to the advantage of the miners complaining of too low wages to avoid missing any shifts, since they lose their wages and incur a fine by so doing. There does not seem to be any necessity to increase the wages of the younger workers (schlepper), for it has been proved that even before the strike their wages were so high as to allow these men, who are mostly unmarried, to live in such a way as to cause disturbances of various kinds.

With regard to the raising of wages, it has also to be taken into serious consideration whether the mine owners were really able to pay them, according to the state and condition of their mines. To answer this question fully, it would be necessary to make a close inquiry into the financial circumstances of the different mine owners, which could not be done in the present state of affairs. But, with the exception of several mines, working under especially favourable circumstances, most of the mine owners will only gradually be able to pay off the additional expense they have incurred during the bad years going before. And the rise in the price of coal which took place in the spring

of 1889 could not be expected to influence so soon the financial circumstances of the mine, especially since most of the contracts for supply of coal had been concluded for several months in advance at the old cheaper rates.

During the strike the workers demanded a general rise in their wages (from 15 per cent., afterwards mounting to 20 and 30 per cent.). The employers have shown themselves willing to examine the wages, and if necessary to increase them. In the course of the examination, several of the examined workers (e.g., of the pits Caroline, Zollern, Eintracht, and General Blumenthal) have admitted the impossibility of a general per-centage of higher wages. The examination has further proved that the shift wages, as well as the price of piece-work, have been materially bettered in most places. However, this does not seem to have satisfied all the workers. Several times delegates have declared that they for their part were contented with the wages now earned, but that many of the others workers were not. The reason for this is most likely found in the fact that the delegates generally belonged to the more intelligent and abler workmen, who before the strike already earned more than most of their companions.

The employers declare that the wages have been increased wherever necessity for it existed, and that the discontent of the workers with the wages earned during the month of June is mainly explained by reference to the strike, which caused them to work very much less during this month.

Besides, one ought not to overlook that in many places the shift has been shortened. (See table 11, showing the increase of wages on the mines Rhein-Elbe and Alma.) Table 12 gives the absolute wages for the month of July 1889 on all the pits of the Ruhr district, and table 9, p. 10, shows the same for the month of March 1889. The higher per-centage of miners concerned in the higher wages is evident: 60.8 per cent. (against 49.6 per cent. in March) have earned more than 3s., and 80.1 per cent. (against 69.4 in March) more than 2.50s.

However, if the prices of coal should fall again, they would undoubtedly affect the present scale of wages. But it is worth mentioning that even in the worst years of the mining industry the wages had not been reduced in the same proportion as the coal prices fall, but had remained at a still proportionally high rate.

(b.) Saarbrücken.

The grievances and complaints of the Saarbrücken workers refer to the following points:—

1. Too low wages.
2. That in the course of the month, or towards the end of it, contracts are cancelled.
3. That the administration do not keep the principal contracts.
4. Arbitrariness or inexactitude in the ascertaining of the work done.
5. That the mining officials do not count the whole amount of work done.
6. That the grievances with regard to these matters have not found due consideration by the higher officials.

They are essentially the same grievances as those heard in the Ruhr district.

With regard to the contracts for piece-work in the Saarbrücken State mines, these are regulated by proper work regulations. Before the strike the principal contracts, so-called Hauptgedinge, in the different working districts were sold by auction to the corporation of miners offering to undertake the work for the least price, for three months; or contracts were made for one month in the form of so-called Handgedinge, when a price was arranged, in the same manner as has already been explained.

At first the manner in which the principal contracts for piece-work were concluded did not meet with any objections on the part of the miners. Only afterwards the wish was heard that this custom should be abolished. It was then seen that the workers felt great aversion against this institution, which had been considered to be in their own interest, since it allows them free choice of their place of work, and also of the companions admitted into their corporations. The workers complain that the sale by auction often caused a too great depression of wages. It cannot be denied that this has happened occasionally. Sometimes the work, to begin with, was taxed too low, or the workers vied with each other too much to obtain offers to be made, although it was always a fixed principle to start at these auctions with a normal contract, which was examined from time to time and altered if found not suitable, and not to allow too low offers. In Appendix 13 the way of proceeding in these matters has been explained.

Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.Demand made
during the
strikeIncreases in
wages.

See post, pp.

Complaints in
Saarbrücken
district.

Piece-work.

Arrangement
his contract
by auction.

Appendix
C. XIII.
MANY
acts from
Report of
Royalty
Commission,
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receive a wages
bill.

This principle has found expression in article 5 of the amendment to the work regulations.

However, in accordance with the wishes of the workers, these Hauptgedinge have meanwhile been quite abolished, or at least become very much limited.

The ordinary monthly contracts are to be concluded in future up to the 10th of the month, and be made known to the miners, and to be entered in the contract book; such are the further instructions of the work regulations. In this manner most of the grievances with regard to this point will be settled in future. Besides, in many cases they rest on misrepresentations or misunderstandings; sometimes it is the fault of the miners themselves if the wages they have earned are too low, sometimes officials may have caused a too great depression of wages at the sales by auction. It also cannot be denied that with regard to the regulation of wages, cases have occurred in which the mining officials have not acted strictly according to their instructions, and have incurred the reproach of partiality and carelessness; whilst the workers have neglected the way of appeal open to them, and have not brought their grievances against these officials before the mining inspectors, although in the work regulation this right has been specially granted to them. Therefore it was often the fault of the miners themselves, and if they have omitted this appeal it is no excuse to them if they say they considered this appeal to be impossible, since they have no proof for this statement.

A real cancelling of these Hauptgedinge has not been proved; a workman of the pit Friedrichsthal-Maybach, who had given notice of such a case, had to retract his statement concerning it during the examination.

A special grievance complained of was the fixing of piece-work wages for such haulers (Schlepper) as belong to certain bodies of miners. The first "Bildstocker Protokoll" contains the demand that the haulers should lose "three shifts per month, but only for three years"; afterwards in the second meeting at Bildstock, held at the end of the strike on the 9th of July 1889, it was settled that the haulers should lose "four shifts per month." It has always been the custom that in counting the shifts made by the haulers during the month, to take off several of them in a certain proportion varying for the various classes of haulers. For instance, if such a hauler has made 24 shifts during the month, perhaps six are taken off, so that he is concerned with 18 shifts in the general earnings of the corporation to which he belongs. Supposing he earns 4s. a shift, he would really receive only 18x4=72s. for every shift. This is done, as a rule, till their sixth year of service, never after they have reached the age of 22.

The claims of these haulers have not been admitted, partly on the ground of their youth, and partly on the consideration that their wages were already high enough, compared with those of the rest.* It is easy to see that this demand does not originate solely with the haulers themselves wishing to earn higher wages, but also with their parents, who in this way hope "to receive soon the interest of the capital they have spent on their children." At least this has been clearly shown in a meeting of miners of the pit Von der Heydt. It is true that it has been very difficult for the haulers to obtain posts as hewers, owing to the very slight increase in the number of miners at Saarbrücken, unless they preferred to remove into other districts. According to the appendix to the work regulation the third class of haulers, still existing in a few mines, was abolished, and it was settled that after the completion of the 22nd year no shifts should be taken off, even if the hauler in question had not yet served for six years.

On the mine of Reden the wish had been expressed that the miners at their request should receive a copy of their "bills of wages," but the financial system at that time did not allow the directors to comply immediately with this request. However, beginning with the month of November, in all mines of the district the payment of wages will be made to every worker independently. The calculation of the price for the piece-work will then be given to the foreman of the mining corporation, as also the distribution of the gross amount of wages among the members of the same, to be examined by him, whilst the wages are paid to every miner separately. To prove the correctness of these accounts every receiver gets a "wages bill," stating the balance in his favour, the deductions, and the net receipts. Therefore with this arrangement the request mentioned above has been satisfied.

The average amount of the wages in the first quarter, 1888 and 1889, as well as in the month of June 1889, can be seen in the tables 14-16. From the net wages of the miners underground must be subtracted for every shift—

	s.
For oil, about	0.08
For personal expenses (of forging?)	0.04
Total	0.12

Besides which, all the workers have to pay their subscriptions to their mining corporations, averaging 0.18s. per shift.

In comparing the wages for the month of June 1889 with those of the preceding months, one has to take into consideration the shortening of shifts since the month of May, the disinclination of the miners to work on the first half of the month of June, as also the many holidays in this month (Whitsuntide, Corpus Christi, St. Peter and St. Paul). It is also not improbable that many mining corporations have purposely worked little in order to obtain a higher contract for the next month.

Table 17 shows the wages earned in the Saar mines during the month of March 1889, in a similar manner as table 9 shows them, for the Dortmund district. From this one can see that during the month in question —

10.99 per cent. of the miners earned 4s. and more,	See 1
64.09 " " " 3s. "	

per shift.

It has been proved by the examination that, on the whole, the wages were not insufficient before the strike. Whilst the net wages on all the mines of the district averaged 3.21s. for the first quarter 1889, the wages of ordinary day labourers (as fixed by the administrative authorities) averaged 1.80s. for the boroughs of Ottweiler, Saarbrücken, and Saarlouis, and 2s. for the borough of St. Wendel.

Of course some workers have earned lower wages, but the reasons for this have already been stated with regard to the Westphalian district.

Very often complaints about too low wages were made by men who were physically not able to work hard, through illness or an accident. These people are given light work until they are pensioned, and the wages they receive surpass the value of their work.

For the rest, wages have risen about 20 per cent. for piece-work, and about 10 per cent. for the shift. Further particulars, especially for the mine Heinitz, can be seen in Appendix 18, containing a memorandum dated May 29, 1889.

In the mine Friedrichsthal-Maybach the rise in the price for piece-work averages from 33 to 21 or 22 per cent., and on Sulzbach-Altenwald, 15 to 25 per cent. In the mine Von der Heydt the wages of the hewers have risen 0.22s., all the wages have increased 0.17s. The demands which were made in the second Protocol of Bildstock, dated the 9th of July 1889 (and which deviated from the first one of the 15th of May), that—

1. the average wages for piece-work should be 4s.,
2. for shift wages, 3.30s. to 3.50s.,

are practically realised in the wages paid during the month of June. On the whole the workers are satisfied with their present wages.* An additional advance could only be given if more work were accomplished.

(c.) Aix-la-Chapelle.

At the request of the miners the so-called Hauptgedinge (principal contracts), which were regulated by the existing work regulations, were abolished after the strike. So there are only monthly contracts in the districts of Aix-la-Chapelle. At one mine the demand for fortnightly settlement has been made, and at another it has already been arranged in this manner.

Although with regard to the concluding of contracts here, as in other districts, many points are still left vague and unclear, several grievances brought with this regard have not been found sufficiently important. Tables 19 and 20 show the scale of wages in this district before the strike. The difference in the wages in the different mines must be partly attributed to their greater or less distance from the Dutch frontier, and the competition with the Dutch workers.

*NOTE.—The Commission could naturally only take into consideration the condition of affairs at the time of the examination. The events that took place in December 1889 were not noticed either for this district or the Dortmund one.

Miners better off
than other
workers.

Wages in various
industries.

Complaints of the
miners not
proved.

Demands as to
time of payment.

Demands of
Lower Silesia.

Fixing of wages.

It has not been proved that the wages in any one place have been quite insufficient. On the contrary, it has been shown that in comparison with the workers employed in other large industries in the same district, the miners were certainly better off.

According to authentic information, the wages of the workmen employed in the cloth industries in and about Aix-la-Chapelle averaged in the year 1888 only little over 2s. a day, and the wages of a grown-up man working 12 hours a day, not counting an interval for rest, came to about 2.40s. In the needle industry the wages are somewhat better; in the factories at Aix-la-Chapelle and Burtscheid the average wages were 2.42s. per day; in the factories of the country districts of Aix-la-Chapelle, 2.08s. The average wages of a grown-up male worker amount to from 2.80s. to 3s. for 10 hours work without including an interval for rest.

The average wages of ordinary day labourers as fixed by the Sick Insurance Regulation, amounts to only 1.80s.

The statements of some of the miners of the United Mining Association that the prices for piece-work were fixed at too low a rate, so that they could never earn more than a certain rate, and that the company was often obliged to make certain additions in order to make it possible for their employés to live on them, have not been proved to be true. An inspection of the list of wages has shown that many hewers earn wages of 4s. and more, and that alterations in the monthly contracts, which are registered in an appendix to the contract book, only occurred exceptionally and especially that the raising of the price fixed on beforehand was only found necessary in very few cases. The demands made by the strikers at all the mines were minimum shift wages of 3.50s. for all hewers, and from 15 to 20 per cent. rise of wages for the haulers. The fixing of minimum shift wages is not feasible, as has already been proved. An advance of wages has taken place everywhere, and it amounts to 15 or 20 to 40 per cent. per shift, and from 15 to 20 per cent. for piece-work. At the time of the examination the mine owners would not grant any further increase of wages, and in fact one of them has proved clearly that his finances do not allow him further concessions, since those he made last May meant for him the additional expense of 1,200l. per year. On the whole the workers are satisfied with their present wages, except those on the works of the United Mining Association. And, of course, when in calmer times more work will be accomplished, higher wages will then also be given.

The workers in several mines have asked for a change with regard to the time of payment. At present it is the custom in most mines to pay at the beginning of the new month a certain sum on account, and the principal payment of wages takes place after the middle of the month. Some miners desire to receive their wages in weekly instalments, so as to be able to pay in cash for their household necessities. However, after due consideration both the mine owners and the mining authorities concurred in the opinion that it would be better to retain the present usage, and not to introduce any change, which could only be done with some difficulty and additional expense. Besides, the too frequent payments on account are not in the interest of the miners themselves, since it would hinder their domestic independence.

A special grievance concerns the so-called "tenth" of the "Lehrhauer," which was asked to be abolished. The men belonging to this class of workers were up till now concerned in the piece-work price in the proportion of from 8 or 9 : 10. The reason for this request is explained by the suspicion of the workers that the "tenths" taken away from the "Lehrhauer" were not divided among the other members of the mining corporation, but kept by the mining administration. However, the price lists prove the contrary.

(d.) Lower Silesia.

The demands raised by the miners in Lower Silesia were the recognition of minimum wages (hewers, 3s.; Lehrhauer, 2.50s.; hauler, 2s., 1.80s., 1.60s., varying according to the different mines), and an increase of the present scale of wages of about 10 to 20 per cent. The former demand has been universally refused by the mine owners, who declare it to be impossible.

With regard to the fixing of wages, nothing specially need be said, except that the manner of settling the contracts for piece-work has been duly set forth in proper work regulations, and that the contracts are always entered into special books, which are open to public review. The grievances complained of are similar to those in other districts. One special complaint is that a great partiality is shown in the giving of work, that, for instance, workers that have not obtained the favour of the officials receive

work in especially difficult places, where there is a great deal of water, &c., which, as there is no chance of earning much, they call, "Strafgedinge," or "punishment work." These grievances are not recognised by the administrations, and have also not received confirmation during the examination. Like in the Ruhr district, many of the miners wish for a court of arbitration for the examination of contracts and the settlement of disputes. The administrations of some mines have therefore established a "representation by confidential men." The regulations of the mine owners, with regard to this point, are to be seen in Appendices 21 and 22 of the Report of the Commission.

Tables 23 and 24 give all information with regard to the scale of wages before the strike. The first of them shows that since 1879 wages have been gradually rising, and in later years, after a short period of decrease, wages have increased pretty rapidly.

It has been frequently stated that the wages were not, as a rule, sufficient for maintenance, and one miner of the Fürstensteiner Gruben has even attempted to prove his statement by giving a full account of his household expenses, but he has hardly succeeded in doing so.

One cannot fairly compare the wages paid in Westphalia and Saarbrücken with those in Silesia, since the prices for food in Silesia are far below the market prices of the above-mentioned districts, as is annually stated by the Journal of the R. Prussian Statistical Office. However, table 25, stating the average wages of the textile, glass, and paper industries in the Waldenburger district during the years 1888, and 1889, shows that almost without exception miners are better situated than the workers in those branches of industry. This is also proved by the fact that in the same district many workers employed in various industries leave their work and take to mining, not heeding the dangers connected with this profession, whilst the contrary takes place only very rarely. These circumstances show that the miners could scarcely have been suffering from distress before the strike, not mentioning the fact that a great many clubs exist among the miners of Lower Silesia, the principal object of which is recreation, according to the statement of the authorities.

The rise of wages of 10 per cent., which had been promised by the employers, has universally taken place.

Some grievances have been caused by the circumstance that some of the contracts were concluded on the principle of a 12 hours' work day, and when the day was shortened, and less work was accomplished, the workers, of course, could not earn higher wages. Besides, the rise of wages was followed, according to the report of the county authority, by a rise in the prices for food in and around Waldenburg.

(e.) Upper Silesia.

With regard to the strike in Upper Silesia, it was remarked that, owing to the low educational standard of the miners and the absence of any organisation, the workers themselves were not at all clear as to their demands. Some asked in a general way for higher wages, without giving any explanations, others, evidently exaggerating very much, asked for a fixed scale of wages which was in no proportion to the one in use (3s., 4s., 4.50s. for a hewer, 2.50s. to 3s. for a hauler); besides, they demanded that the wages should be reckoned by the shifts only, and not by piece-work.

It is easy to understand that the mining administrations would not and could not grant this latter request. However, a rise of from 10 to 12½ to 15 per cent. in wages for shift and piece-work has been universally granted on the 1st of May, in many cases retrospective.

The fixing of wages for piece-work, and the contracts for the same, in the coal-pits of Upper Silesia is only subjected to very few rules in the work regulations; on the whole, the method of proceeding is the same as in other districts.

Sales of piece-work by auction do not occur anywhere. In many cases the same price is fixed for all the places of work in the division, since the beds in the Upper Silesian coal mountains show a great similarity to each other with regard to their quality and structure.

The evidence given by the workers does not differ in any essential point from that of workers in the other districts (complaints of fixing the so-called "Zahl" too high, i.e., the normal rate of work to be done—complaints against unjustified alterations of contracts—a wish for publication of the contracts made by means of a "contract board," or by bills of wages given to the mining corporations, so that all the members can see the calculations and divisions of the wages for themselves, besides special bills of wages to the individuals).

Appendix
C. XIII.

GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

See post, pp. 2,
24.

Miners better off
than those in
other industries.

p. 25.

Rise granted.

Demands in
Upper Silesia.

Fixing of wa

* Therefore the usual custom has been embodied in article 9 of the appendix to the work regulation.

Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.Miners required
to do a nominal
day's work.

There is one custom here which was fully discussed, as it is not found in other districts; namely, if a mining corporation does not send up the settled number of waggons, on those days a whole shift is not counted for them, but only half a one or three quarters. This was often done formerly, but according to the mine owners' statements this custom does not cause any decrease in the wages of the whole corporation, since the unpunished members of the shift gain the surplus the others lose.

It is difficult to thoroughly understand this custom, especially since the word "shift" in Upper Silesia does not always mean ordinary time for work, but often, also, a certain amount of work, the so-called "normal work." The mining corporations have a great distrust of these shortenings of shifts, since it was often made a kind of punishment by the lower officials, as has been proved before the Commission, who advised the abolition of this custom.

Tables 26, 27, and 28 state the rates of wages for the principal classes of workers.

The tables prove that (with the exception of a few pits) the wages of the colliers in Upper Silesia have been steadily rising since the year 1879, and where, in latter years, a decrease has been noticed it must be marked that in the spring of 1889 they were still higher than in the beginning of the above-mentioned period.

The lower wages in the districts of Pless and Rybnik are caused by the unfavourable conditions of the market, besides most of the workers in the pits of that district own some land, so that they do not depend solely on their wages as miners, besides they have some other advantages which have to be considered.

It is certain that a rise in the wages has already taken place, and, if all the same, the wages for June did not attain the normal height, it must be ascribed to the shorter shifts and to the consequences of the strike.

After all the workers have not declared themselves satisfied with their present wages, but their employers do not see their way to further concessions.

With regard to the question whether the wages paid before the strike were sufficient to live on, it must not be forgotten that the food prices in Upper Silesia are very much lower than those in other mining districts (especially Westphalia and Saarbrücken). Besides, judging from the frequent absence of miners after Sundays and holidays, one may conclude that there was no distress for want of food.

Table 29 shows how frequent these missings of shifts have become: it gives a list of cases that have occurred in the Florentine mine from the 15th of June to the 16th of August 1889.

II.—DURATION OF SHIFT.

According to the present state of the law, the Government authorities have no influence on the length of shift. It is settled by a free agreement on the part of those concerned as a part of the work-contract. The mining police is only allowed to interfere if it is a case that regards the security of the life and the health of the workers. (Section 196 of the Allgemeine Berggesetz of the 24th of June 1865.)

(a.) Ruhr District.

Looking at it from this point of view, the Königliche Oberbergamt of Dortmund, for instance, has forbidden the employment of workers in a temperature of 29° Celsius for longer than 6 hours.

The Cleve-Märkische Mining Regulation of the 29th of April 1766, which has been in use till the middle of this century, decrees "that the miners in the coal-pits shall remain for 8 hours constantly at work." So we find in this district—contrary to the others—that an 8 hours' shift has been most in use, and that before the strike there were only very few shifts where the shifts lasted 8½, 9, or even 9½ hours. The reason why, after all, so many complaints were made is the following: most miners include the time spent on their descent and ascent in the 8 hours' shift which they demand.

At the beginning of the strike, when a demand to this effect was made, it met with the most decided opposition of the mine owners, so that the miners had to give up this idea. It was settled on the 18th of May that the actual working time should embrace 8 hours, and the mine owners promised, as far as was in their power, that the descent and ascent should not last longer than half an hour each. But the workers wanted to have a clear agreement that the time devoted to their work and the time which the journey to and from their place of work took should not

exceed $8 \times 2 \times \frac{1}{2} = 9$ hours, whilst the mine owners insisted on a clear 8 hours' work. This difference, which caused a short time ago a renewal of disturbances, has been the basis of the examination of the grievances against the length of shift.

On the whole, the complaints were directed:—

1. Against the duration of the descent and ascent (wherever it lasted longer than half an hour).
2. Against want of punctuality in starting, especially in coming back, thus causing the workers to remain longer underground.
3. Against want of order, which also influenced the length of journey.
4. Against the safety (police) appliances whenever they caused delay.
5. Against the fact that if the mine owners insisted on their regulation of the 18th of May, every miner would have to remain 8½ hours in the pit, even in the most favourable case, where all order is maintained.

However, the mine owners maintain that steady 8 hours work, not counting the journey down and up, is the least that must be expected in the maintenance of a well regulated, profitable mining concern. In some exceptional cases (e.g., shaft Pluto) it was possible to reduce the shift to 7½ hours, owing to some exceptional circumstances. It would be worth careful consideration on the part of the Mining Police authorities, whether in some mines where the temperature (though not attaining 29° Celsius) is still higher than normal a suitable reduction of the usual hours of work might not take place.

If the shift were universally limited to less than 8 hours, it would necessitate lower wages for those miners paid by piece-work. And if the prices for piece-work were raised accordingly, the price for coal would go up to such a degree that it would injure the industries depending on the coal districts considerably, and not enable the coal mines of Rhineland and Westphalia to compete with foreign countries.

With regard to the other complaints, there may have been some foundation for them before the strike, but when they were examined by the Commission they were not maintained, and the miners declared themselves satisfied, except in those cases where the descent or ascent took longer than 2½ an hour. It is impossible for the Mining Police, and not their duty either, to superintend the punctuality in starting on the different mines. It is their duty, however, to protect the miners from the dangers of the descent, and if necessary against their own wishes if they are based on indifference against this danger, and therefore they settle how fast the cage may go, and how many persons it can take in at a time. However, the regulations with regard to safety have been re-examined, and in most cases the time could be limited to half an hour each way, according to the miners' wishes.

There are very few cases in which even to-day it takes three-quarters or even an hour.

The number of complaints against point 5 is remarkably small. One might come to the conclusion from this fact that most of the miners are contented with this arrangement, contrary to the opinions expressed by their leaders.

Wherever this is not the case, it would perhaps be advisable to settle the length of shift in the work regulation, and make it a part of the miners' work-contract.

(b.) Saarbrücken.

In the first Protocol of Bildstock, of the 15th May, an 8 hours' shift is demanded, including descent and ascent, whilst in the second "Bildstocker Protokoll" only a 9 hours' shift is asked for. According to section 10 of the work regulation, the shift is said to last 8–12 hours with the exception of pay-days; in reality the shift comes generally to 10 hours inclusive of descent and ascent, and to eight hours only where, on account of pressing work, the day is divided into three parts.

In the mine Von der Heydt, there was formerly an 11 hours' shift. But now (i.e., at the time of the examination) one finds on almost all the fiscal mines of the Saarbrücken district only a 9 hours' shift. In article 1 of the appendix to the work regulation the shift has been fixed to 10 hours inclusive of descent and ascent; but this shift is only in use in four pits, where a 9 hours shift would be considered injurious to the workings of the mine.

No complaints have been raised for the rest against the 9 hours' shift.

Complaints as
to hours.Nine hours
shift.Eight to ten
hours' shift.Effects of
reducing shift.Time taken in
descending and
ascending.Twelve hours'
shift.Demands of men
as to hours.Nine hours'
usual.Number of
extra shifts.Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.Complaints as to
overtime.Evidence of
mine owners.Necessity for
overtime.Objections to
overtime.

The miners who live at a little distance from their mines, and have to come in by train, have expressed a wish that on Saturdays and Mondays their shifts might be fixed with regard to the trains; this wish has been complied with as far as possible.

(c.) Aachen.

In April 1889 the shift on the pit "Anna" came to 9½–10½ hours; on "Centrum" and "Votberg," 10 hours. At present the shift amounts everywhere to from 9–9½ hours inclusive of descent and ascent. Almost all the miners here demand an 8 hours' shift inclusive descent and ascent. However, there does not seem to be any cause for interference with the 9 hours' shift by the proper authorities on sanitary grounds. Besides, it is not at all improbable that, by simplifying the descent, the shift may be lessened.

(d.) Lower Silesia.

There is also in this district a regulation which forbids miners to work underground longer than six hours if the temperature passes 29° Celsius.

According to the work regulations in the Lower Silesian mines the shift comes to 8–10 hours underground, and 12 hours on the surface. With the exception of two pits it is nowhere clearly stated whether the time for descent and ascent is included or not. At the beginning of the strike the universal demand was that the shift should only come to 10 hours inclusive of descent and ascent, and on Saturdays 8 hours. Besides, it has been proved before the Commission that before the strike longer shifts were continually worked in contradiction to the work regulations. Several special grievances have come to light. Thus, some miners objected to their having to lose time in going to a certain room where the roll-call was said; they wished to replace this custom by a system of counters. The mine owners have promised to rectify, as much as lies in their power, all grievances of minor order.

(e.) Upper Silesia.

The work regulations in the Upper Silesian coal mines uniformly maintain a 12 hours' shift, which includes one hour for meals, and besides the time for the roll-call, written criticism of the foremen on the work done, and morning prayers. The mine owners declare that, as they have day and night shifts, their workers who have finished their work are at liberty to leave, even before the 12 hours are passed. Whilst the workers complain that the amount of work set them is too great, and cannot be finished in less than 12 hours, and that even if they have been interrupted in their work by some hitch in the workings, they have to work over 12 hours to get done. They demand a 10 hours' shift. The word "shift" in this district does not only mean "the time of work," but very often it is used to denote a normal amount of work to be done in a certain time. It is taken for granted that a shift is not finished, even after the end of the 12 hours, if the "shift" normal amount of work has not been accomplished. It cannot be denied that to work longer than 12 hours (except in cases of pressing need) exceeds the working strength of any man, and where the mine owners do not voluntarily propose a reduction of this normal shift, it will be necessary for the police to interfere (according to sections 96 ff. of the Universal Mining Law).

Several mining administrations have already reduced their shifts considerably, and do not think that the amount of work accomplished at present by their miners is much less than what was done before.

III.—EXTRA-SHIFTS OR OVERTIME.

Extra-shifts mean in mining language time worked over the usual daily work through extraordinary necessities; this may amount to two hours or more, in an 8 hours' shift a quarter, half, or more.

(a.) Ruhr District.

Through inquiries it appears that only in some few odd mines of the Dortmund mining district no overtime or extra-shifts was worked; in the great majority of the mines extra-shifts were worked during the winter months, in which the demands on the production of the mines always rises.

That the general improvement in all commerce, which has been observed lately, has had some influence in this connexion, is natural. The number of extra-shifts which

have been worked in the period from 1st October 1888 to 1st April 1889 in the coal mines of the district of Dortmund has, in the majority of pits, not exceeded two to four per week. In a number of cases the number has risen to six.

The duration of the single overshifts was generally two to four hours, in some instances six to eight.

The work regulations which have been put in evidence partly contain nothing relating to extra-shifts; often there appears a paragraph that extra-shifts should only be worked in case of danger to the life of the miners, or for the security of the mine; now and then "exceptional cases caused by other conditions" are mentioned, as also that then an "agreement between the underlooker (Betriebsführer) and the miners" should be made.

The regulations only rarely contain the general provisions that the miners "shall work longer than eight hours at the request of the management," more especially when there is an extraordinary demand for coal.

For the latter case is, as a rule, prescribed that timely notice be given, and that no one shall be forced to work more than 10 hours.

After the resumption of work extra-shifts, merely to increase the output, have scarcely been worked. The complaints and the wishes of the miners in this respect vary widely:—

1. In some places they have asked for the complete abolition of this custom, as it is injurious to the working strength. In some pits the same demand has been made from an economical point of view, since by extra-shifts the coal prices and also the wages are depressed.
2. Then, again, the miners of various other pits declare they have no objection to extra-shifts as long as their number does not rise too high, and as long as a day's notice of the intention of the management has been given. No one should be forced to take part in extra-shifts.
3. In some districts the miners do not approve of frequent short extra-shifts (of quarter or half hour for every two or four hours), but prefer the less frequent interpolation of longer extra-shifts in case of need, especially before Sundays and holidays.
4. By others, again, this latter custom is rejected, as it encroaches on the Sunday rest.
5. It is said that sometimes miners were actually forced to take part in extra-shifts. More often it has been stated that miners were always more or less obliged to comply with such request, since otherwise they would expose themselves to disagreeable trouble and disadvantages.
6. In some places, especially where the leaders of the strike were examined, the wish has been expressed that if extra-shifts could not be avoided, they should, at all events, be arranged beforehand with a representation of workers (committee).

The examined representatives of mine owners seem often to be as little acquainted with the exact provisions of the work regulations as the workers. Generally they do not admit the abuses complained of, they especially deny that miners have ever been compelled to work extra-shifts, and maintain that extra-shifts are indispensable, not only in case of urgent work for the safety of the pit, but frequently also for the increase of output.

It is evident that there is a greater demand for coal in winter than in summer, and if extra-shifts were avoided, it would become necessary to increase the number of miners during the winter time only considerably. Granted that it would be possible to procure these additional workers in sufficient numbers, it would remain doubtful whether these men, unacquainted with the workings of a mine, and suddenly placed in the midst of it, would not increase the dangers attendant on mining, not only for themselves, but also for their comrades. Besides, most of these men who have, perhaps, come from a distance would have to be dismissed in spring, and if they did not happen to find any summer work would swell the lists of the unemployed and be a burden on others. And it would be a grave question, leading to serious results, if the home coal industry found itself unable to comply with demand for house coal.

Therefore it appears as if extra-shifts, which are sometimes also caused by interruption of the workings, could not be entirely avoided. On the other hand, it is a question whether the complaints of the miners with regard to the number of extra-shifts, &c., are well founded.

In those rare cases where in some weeks six extra-shifts of several hours have occurred, the miners are not only deprived of their privilege of short shifts, for which the Ruhr coal district is famous, but also considering the great depth in which they have to work, they exceed the limit of

Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.Punishment for
not working
overtime.

work which has been fixed with regard to their health. Besides, it need not be discussed whether the mine owner is not at a disadvantage, since often the fatigue of the miner prevents him from working as hard as usually during the extra-shift. In any case it ought to be settled that no more than two or perhaps three extra-shifts of two or four hours each per week should be worked in cases of pressing demand for coal, whilst naturally the time for urgent repairs, for rescue works, &c., which generally only concerns one part of the body of miners, cannot be limited. No hard-and-fast rule can be given with this regard, since it would always depend on the existing special conditions of every mine, to decide on the admissibility of overtime.

It has been proved that the complaint against force being used against certain miners is not entirely unfounded.

Most mining administrations having ordered an extra-shift did not allow their miners to ascend in the cage unless they had asked the foreman for permission not to join the extra-shift, and had received a written permission warrant. It has not been proved that such a warrant has ever been refused, but it is easy to believe that the miners have often an aversion against undertaking the necessary steps for obtaining such a warrant.

In some mines where some miners had several times not taken part in extra-shifts, without having given notice, they were excluded from the ascent, and in others the miners have been threatened with punishment (fines, exclusion from the ascent, &c.).

Some of the higher authorities have tried to excuse themselves by saying that they did not know of these arrangements.

However, the work regulation states clearly :—

That the ascent should be allowed to those workers who do not take part in the extra-shifts.

It is true, it cannot be denied, that the managers are sometimes at a loss what to do, if certain members of the mining bodies refuse to work (such as the trammer, for instance), since in that case the work cannot be accomplished, or at least it will be seriously impeded.

The former legislation (for instance, the Cleve-Märkische Bergordnung) did not allow the miner the right of refusing to work an extra-shift.

It will hardly be possible for the manager to decide always on the previous day whether an extra-shift will become necessary the next day or not, since accidents cannot be foreseen.

As to the wish of the miners to make the extra-shifts depend on the consent of a workers' committee, it is doubtful whether such an arrangement would satisfy every individual in all cases.

Besides, if the administrations do not voluntarily lend themselves to the foundation of such committees, the present state of law is not such as to entitle it to interfere.

Unfortunately the point of view from which this question is regarded by employers and employed is a very different one. Whilst the workers always insist on the merely conventional part of their relation, the employers are more inclined to think that the miner stands to them in a certain dependent state of service, so that if disputes arise the will of the master decides. This idea is based on the fact that the management of large underground workings imperiously demands a firm will and leading hand, regardless of minor interests, and upholding a firm discipline.

Since, however, the consequences arising from the latter view have not found expression in the present state of law, the only way of settling the question of extra-shifts would be by having it clearly laid down in all its aspects in the work regulations. Employers and employed should then make themselves thoroughly acquainted with these provisions and act accordingly.

It is hardly expected that the administrations will not comply with this request. Then it will remain for the discretion of the proper mining police authorities to decide whether (based on sections 196 ff. of the Allgemeine Berggesetz) it would not be possible to fix the number and maximum duration of extra-shifts, by way of byelaw.

(h.) Saarbrücken.

According to section 11 of the work regulations for the State mines in the Saar district the miners are obliged to work longer than their shift, if it is a case of "pressing work, accidents, or threatening danger."

Before the strike the managements on most mines sometimes prolonged the shift occasionally to 12 hours, if there was an extremely great demand for coal.

To decide whether the complaints made against this treatment are founded or not, it would be necessary to give a clear definition of the words "pressing work."

No objections had been made from the point of view of the police.

Since June 1889 no more extra-shifts take place.

(c.) Aix-la-Chapelle.

The work regulations in this district contain very contradictory directions with regard to extra-shifts, and the obligation on the part of the miners to work them.

As a rule, extra-shifts take place in winter, on an average of two a week for not longer than two hours each; they are worked with the consent of the miners for higher wages, and are declared to be indispensable.

No special complaints have been made.

(d.) Lower Silesia.

The work regulations of all the coal mines in this district that have been put in evidence settle that in "special urgent cases" the workers are obliged to work extra-shifts. It is nowhere stated that the execution of urgent coal orders may be counted as belonging to these special urgent cases. Nevertheless most extra-shifts were worked for that reason, as has been clearly shown before the Commission, and if during the strike the wish for a shortening of these extra-shifts has not been expressed, it is explained by the circumstance that the ordinary 10 hours' shift had got so habitually prolonged for two hours longer, that the miners had lost the sense of treating these two hours as extra-shifts, and their wishes were solely directed towards obtaining a 10 hours' shift. That the longer shifts in Lower Silesia, as compared with Westphalia, have had an ill effect on the health and the duration of life of the miners, cannot be proved by statistics, and is therefore to be doubted.

However, the almost habitually prolonged shift may have caused the disadvantage for the miner (in spite of his higher wages) that sometimes the work demanded by the contract was so high that it could not possibly be done in a 10 hours' shift. Some force must have been used on some mines to compel workers to take part in extra-shifts, since miners have sometimes been punished "for leaving work too soon."

A clear settlement of all these conditions in work regulations is strongly recommended, especially since the colliers themselves (according to evidence) have no objections against extra-shifts, even in cases of great demand for coal, as long as they are told beforehand of the intention of the manager, and on condition that no force is used against them.

Some of the grievances were directed against work on Sundays. The police regulations of the 15th of November 1882 permit only the execution of such works in mines as are absolutely indispensable for the maintenance of the workings, as, for instance, necessary repairs, &c. Other works, especially those of producing coal, may only be done, after a special permission from the proper authorities has been obtained. Such permissions have only been granted in very rare cases (in the district of West Waldenburg only 11 times during the years 1886, 1887, 1888).

Opposite to these grievances we may state the fact that for these Sunday shifts (so-called "repair-shifts") more workers frequently present themselves of their own account than are needed. Besides, the workers have declared themselves willing to work an extra-shift from Saturday night to Sunday, whenever there is a great demand for coal.

(e.) Upper Silesia.

The Upper Silesian work regulations contain the direction that the miners are obliged to work extra-shifts in extraordinary cases; but it is not explained whether these cases include a great demand for coal. In some mines complaints were made against too frequent extra-shifts and against force used against the unwilling miners. Since it has indeed happened in one case that the hewers for want of haulers had to work after their 12 hours' shift an extra-shift of 7 hours, and that in another case the colliers of the night shift from Sunday to Monday had to prolong their work till 6 o'clock on Monday night, it will be necessary to consider whether the mining police had not better try by proper regulations to protect the miners against such treatment.

IV.—FINES.

(a.) Ruhr District.

The demand for the total abolition of fines was hardly anywhere insisted on. The miners admit their necessity, and complain only—

1. That the fines are too high and are too frequently inflicted, and that they are imposed not only by the manager but also by the foremen and overlookers.
2. That there is no court of appeal, and that they are shut out from any share in the management of the benevolent funds, which are generally formed from the fines.

The necessity for fines is found in the peculiar condition under which mining has to be carried on. The neglect or carelessness of one man may endanger the lives of all, or make work for lengthened periods impossible. Hence the strictest rules for work and conduct must be enforced, and this can only be done by a regulated system of fining offenders. Properly framed byelaws are therefore to be recognised, although the unequal position of the two contracting parties enjoins caution in constructing them too strictly.

Fines in the absence of byelaws (as in many mines of the Dortmund District) or for acts not specially mentioned are of very doubtful justification.

Existing byelaws punish contraventions of the work regulations, insubordination, absence from work, breach of contract, with fines from 3s. to 5s. (more rarely up to 10s. or 15s.). Occasionally delay in drawing wages or paying taxes is also fined. But this ought not to be done.

The power of fining is variously distributed, generally it is given to the manager, often to the overlookers, and sometimes to foremen. A right of appeal is conceded by some byelaws to the miners.

The fines are deducted from the wages, and sometimes paid over to the miners' union, but more generally to special benefit funds.

Some few regulations contain no provision for the disposal of fines.

The benefit funds are everywhere intended to assist those incapacitated from working, widows, orphans, &c., and are increased by voluntary contributions and by various small items, according to custom, in certain localities.

The particular cases of grievances which have been investigated are based more on the dissatisfaction of the persons fined than on real hardship.

Rarely have the fines exceeded 3s. This seems too little for those workers who habitually absent themselves from work. Regulations only fixing the minimum fine should not be allowed.

Complaints that on some mines fines have been inflicted by minor officials have been admitted as justified, and this abuse will be remedied.

The few complaints about the absence of a court of appeal do not appear to be groundless. It is worthy of consideration in how far it would be advisable to create an independent court of appeal, bearing in mind that owing to the already mentioned very unequal power of the two parties the usual remedies are practically out of the question.

Appendix
C. XIII.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

The respective demands of the miners may be considered as well founded, in so far as by the rules the fines are handed over to a benefit fund. To use part of this fund in the interest of the owners (which, in one case, has been proved to have been done) gives ground for suspicion.

It has to be taken into consideration that part of the benefit funds are derived directly from the miners themselves, and that, therefore, a refusal to satisfy these demands must increase the general distrust.

(b.) Saarbrücken.

The system of fines at the mines of the Saarbrücken District has been amended. The maximum fine is now 6s. Degradation has been abolished. The fines are all paid over to men's clubs, and on the whole the men appear to be satisfied. A series of complaints was directed more against the application than against the existence of the present system.

(c.) Aachen.

In the Aachen District the maximum fine is 6s., but in practice the usual amount is only 6d. At one mine, for instance, 306 fines were inflicted, amounting in all to 13l. 15s. 2d. Fines are never fixed by minor officials, and require usually the confirmation of the managers. They are used for the benefit of the miners, never in the interests of mine owners.

(d.) Lower Silesia.

The maximum for fines is here also 6s. They are given by the managers, and average from 1s. to 1s. 6d. Complaints have been made that men were only informed at the end of the month that they had been fined, and that their names were placarded.

The amount accruing from fines, increased by various small contributions, is used for benefit funds, whose accounts are periodically published.

(e.) Upper Silesia.

In many mines the regulations respecting fines are not in the hands of the men, but are supposed to be exhibited at the mines. Fines are inflicted by the foremen, and are handed over to benefit funds. Their application has in some cases been mild, in others severe. In three cases regulations have been proved to be wanting. Under those circumstances fines inflicted cannot be legally defended.

V.—GRANTING OF HOUSE COAL.

As the granting of coal for the use of the men has nowhere been taken into account in the fixing of wages, it must depend on the goodwill of the management. In some districts the men are entitled to a certain quantity (in Lower Silesia, for instance, up to 8 cwt. monthly), in others reductions in prices are made to the miners.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

XIV.

TABLE of WAGES for the MINING DISTRICTS of the OBERBERGAMTSBEZIRK of DORTMUND. (A.) First Quarter of the Year 1888.

NAMES OF DISTRICTS.	I.—MINERS WORKING UNDERGROUND. (Principal Work, Excavations and Transport.)				II.—OTHER MINERS EMPLOYED UNDERGROUND. (Extension of Mines and Accessory Work.)				III.—WORKERS ON THE SURFACE EXCEPT YOUNG PERSONS AND WOMEN.				IV.—YOUNG PERSONS (14-16 YEARS OLD)				REMARKS.										
	Number of Workers		Shifts worked. Total Number.		Wages earned, after deduction of all Working Expenses.		Wages for One Shift without Deductions.		Number of Workers.		Shifts worked. Total Number.		Wages earned, after deduction of all Working Expenses.		Wages for One Shift without Deductions.			Number of Workers.		Shifts worked. Total Number.		Wages earned, after deduction of all Working Expenses.		Wages for One Shift without Deductions.			
																										Total.	
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.		s.	d.	£.	s.	d.					
Nördlich Dortmund ...	2,595	213,790	82	548,241	2'56	2'57	79,037	2'37	2'37	79,037	2'35	2'35	167,091	2'23	2'35	85	6,565	77	6,166	0'94	1'06	£.	s.	d.	£.	s.	d.
Oestlich Dortmund ...	4,453	356,859	80	965,620	2'71	2'80	188,594	2'10	2'30	1,144	102,261	80	225,293	2'20	2'32	224	17,682	79	17,865	1'01	1'13	To find the net wages per shift deduct from the gross wages:—					
Westlich Dortmund ...	5,102	421,443	82	1,167,645	2'77	2'88	140,526	2'33	2'55	1,373	115,315	84	274,511	2'30	2'51	230	17,566	78	19,294	1'08	1'20	In Class I.					
Witten ...	4,011	335,397	84	863,277	2'57	2'83	98,170	2'37	2'57	1,021	86,724	85	203,488	2'34	2'46	129	9,526	74	9,986	1'02	1'14	" 11 for blasting materials					
Sprockhövel ...	1,275	103,605	81	238,183	2'08	2'34	31,259	2'06	2'26	438	33,673	77	60,384	2'06	2'15	79	3,694	75	6,657	1'13	1'25	" 8 " lighting					
Dahlhausen ...	4,850	395,350	82	1,061,869	2'77	2'86	172,862	2'15	2'35	1,373	121,349	88	271,327	2'22	2'34	353	28,348	80	31,451	0'94	1'06	" 12 " subscriptions to mining unions.					
Bochum ...	5,653	471,678	83	1,324,540	2'81	2'82	236,292	2'25	2'45	1,999	189,564	85	425,684	2'36	2'48	297	23,453	80	24,314	1'03	1'15	In Class II.					
Herne ...	4,083	368,776	79	1,073,576	2'91	2'92	212,304	2'38	2'58	1,502	115,919	89	285,295	2'32	2'44	264	20,462	75	20,460	1'00	1'12	" 8 for lighting materials.					
Recklinghausen ...	4,998	387,316	78	1,167,871	2'90	2'93	238,673	2'27	2'47	1,940	91,367	88	328,420	2'49	2'61	225	17,094	77	18,369	1'08	1'20	" 12 subscriptions to mining unions.					
Gelsenkirchen ...	6,499	489,653	75	1,543,717	3'23	3'54	518,324	2'34	2'54	1,556	106,011	79	265,379	2'49	2'61	357	24,298	68	24,235	1'00	1'12						
Essen ...	5,587	424,024	76	1,314,185	3'10	3'41	283,141	2'40	2'60	1,278	101,487	79	254,296	2'53	2'65	255	18,768	74	18,294	0'97	1'09						
Frohnhausen ...	4,403	328,103	75	987,717	2'91	2'92	203,078	2'36	2'56	1,155	83,777	73	186,347	2'38	2'50	299	21,515	74	18,461	0'88	1'00						
Oberhausen ...	6,795	513,271	76	1,487,270	2'90	3'21	214,213	2'36	2'56	1,458	116,684	90	275,624	2'36	2'48	414	29,898	72	27,392	0'91	1'03	In Classes III. and IV.					
Altendorf ...	1,872	188,196	72	387,664	2'58	2'69	59,192	2'10	2'39	468	34,191	73	73,570	2'16	2'28	177	12,886	73	12,507	0'95	1'07	" 12 for subscriptions to mining unions.					
Werden ...	969	59,636	74	139,563	2'66	2'99	16,001	2'39	2'59	242	18,189	75	36,025	2'02	2'14	42	2,837	67	2,550	0'94	1'06						
Total and average ...	63,555	5,007,808	79	14,300,278	2'86	3'17	2,701,606	2'50	2'50	1,66	1,394,337	84	3,238,065	2'34	2'46	8,419	267,249	75	257,597	1'00	1'12						

(B.) For the First Quarter of the Year 1889.

NAMES OF THE DISTRICTS.	I.—MINERS WORKING UNDERGROUND. (Principal Work, Excavations, and Transport.)				II.—OTHER MINERS WORKING UNDERGROUND. (Extension of Mines and Accessory Works.)				III.—WORKERS ON THE SURFACE, EXCEPT YOUNG PERSONS AND WOMEN.				IV.—YOUNG PERSONS (14-16 YEARS OLD).				REMARKS.			
	Number of Workers.		Wages earned, after deduction of all Working Expenses.		Number of Workers.		Wages earned, after deduction of all Working Expenses.		Number of Workers.		Wages earned, after deduction of all Working Expenses.		Number of Workers.		Wages earned, after deduction of all Working Expenses.					
			Shifts worked.	Total.			Shifts worked.	Total.			Shifts worked.	Total.			Shifts worked.	Total.		Shifts worked.	Total.	Shifts worked.
			For One Worker.	For One Shift.	Wages for One Shift without Deductions.		For One Worker.	For One Shift.	Wages for One Shift without Deductions.		For One Worker.	For One Shift.	Wages for One Shift without Deductions.		For One Worker.	For One Shift.		Wages for One Shift without Deductions.		
Nördlich Dortmund ...	3,162	355,972	81	720,455	2'81	2'81	65,114	2'22	2'43	82	78,890	90	173,812	2'20	2'33	96	8,310	1'05	1'18	To find the net wages per shift deduct from the gross wages:— In Class I. " 8 for blasting material. " 8 " lighting " 13 " subscriptions to mining unions. " 29
Oestlich Dortmund ...	5,043	406,754	81	1,168,298	2'87	3'16	210,574	2'32	2'53	83	120,619	82	277,263	2'31	2'44	260	19,879	1'01	1'14	
Westlich Dortmund ...	5,396	421,960	78	1,248,379	2'96	3'25	164,074	2'40	2'61	80	131,014	77	332,532	2'57	2'70	251	18,452	1'00	1'22	
Witten	4,214	351,790	85	1,024,518	2'91	3'20	112,624	2'45	2'66	86	92,803	89	221,210	2'38	2'51	149	12,110	1'05	1'13	
Sprockhövel ...	1,378	111,403	81	300,511	2'70	2'99	41,156	2'35	2'56	81	36,956	79	79,988	2'16	2'29	98	7,166	1'23	1'36	
Dahlhausen ...	4,846	385,682	80	1,152,043	2'99	3'28	220,941	2'29	2'50	83	134,454	88	285,779	2'29	2'42	308	31,282	1'13	1'26	In Class II " 8 for lighting materials. " 13 " subscriptions to mining unions. " 21
Bochum	6,198	498,114	80	1,495,689	3'00	3'29	262,933	2'44	2'65	82	189,802	87	453,843	2'39	2'52	360	28,586	1'06	1'19	
Herne	5,019	410,475	82	1,248,904	04	3'33	238,322	2'48	2'69	83	122,727	90	294,725	2'40	2'53	325	25,221	1'03	1'16	
Becklinghausen ...	6,523	512,304	79	1,568,654	3'05	3'34	220,403	2'57	2'78	79	100,849	84	249,968	2'48	2'61	265	20,322	1'10	1'23	
Gelsenkirchen ...	7,741	613,062	79	2,056,037	3'35	3'64	322,260	2'36	2'57	78	134,831	80	337,539	2'50	2'63	338	24,670	1'07	1'20	
Essen	5,970	450,804	76	1,613,746	3'36	3'65	322,260	2'44	2'65	83	112,853	79	288,852	2'56	2'69	286	21,280	0'99	1'12	
Frohnhausen ...	4,960	397,087	74	1,197,552	3'26	3'55	233,674	2'38	2'59	78	92,014	75	231,832	2'52	2'65	344	24,854	0'95	1'08	
Oberhausen ...	7,988	597,143	75	1,860,337	3'15	3'44	241,729	2'42	2'63	78	143,175	80	336,572	2'35	2'48	494	34,804	0'98	1'11	
Altendorf	2,908	161,319	73	478,545	2'96	3'25	61,856	2'36	2'57	74	56,369	72	87,148	2'40	2'53	201	14,062	1'04	1'17	
Werden	972	72,843	75	221,994	3'05	3'34	19,007	2'55	2'70	56	21,933	89	50,349	2'30	2'43	62	4,696	0'98	1'11	
Total and average ...	71,620	5,619,672	78	17,276,622	3'07	3'36	2,937,879	2'40	2'61	80	1,538,759	82	3,701,362	2'41	2'54	3,927	295,417	1'0	1'18	

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.Table showing the TOTAL NUMBER of WORKERS and the NUMBER earning various RATES of WAGES per SHIFT during
the MONTH of MARCH 1889 in the different COAL MINES of the OBERBERGAMTSBEZIRK of DORTMUND.

NAME OF THE MINING DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS, THE FOLLOWING NUMBER HAVE EARNED DURING MARCH 1889 PER SHIFT						TOTAL.
		4s. and upwards, exclusive.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
I. NORTH DORTMUND	Hörder Kohlenwerk	19	104	283	331	289	93	1,119
	Courl	7	83	198	227	295	32	842
	Massener Tiefbau	25	55	234	145	257	63	779
	Monopol	126	119	206	153	191	68	863
	Königsborn	114	47	107	222	252	70	812
	Caroline	—	4	44	107	59	34	248
	Total	291	412	1,072	1,185	1,343	369	4,663
	Per cent.	6.2	8.8	23.0	25.4	28.9	7.7	—
II. EAST DORTMUND	Ver. Stein und Hardenberg	53	271	343	227	300	35	1,223
	Ver. Westfalia	67	148	184	253	323	181	1,156
	Glückauf Erbstolln	—	55	301	269	151	98	814
	Luise und Erbstolln	36	123	209	181	91	62	702
	Margaretha	10	18	170	149	146	40	533
	Gneisenau	18	76	228	205	214	20	761
	Ver. Schürbank und Charlottenburg	9	31	64	115	88	111	418
	Ver. Bickfeld	1	24	95	117	113	86	436
	Crone	—	16	87	157	157	48	465
	Freie Vogel und Unverhofft	—	20	136	88	81	53	378
	Freiberg und Augustenshoffnung	—	27	115	102	45	37	326
	Gottessegen	7	28	55	69	43	68	270
	Friedrich Wilhelm	7	12	57	44	47	14	181
	Total	208	849	2,044	1,916	1,799	853	7,669
	Per cent.	2.7	11.1	26.6	25.0	23.5	11.1	—
III. WEST DORTMUND	Ver. Germania	125	335	559	419	404	111	1,953
	Erin	195	394	215	279	229	49	1,271
	Zollern	45	92	155	139	110	29	570
	Ver. Dorstfeld	—	6	309	127	144	68	654
	Tremonia	64	126	116	147	138	56	647
	Graf Schwerin	9	87	160	117	121	26	520
	Borussia	7	38	228	164	114	33	584
	Hansa	50	125	171	168	133	11	652
	Westhausen	2	8	170	146	106	34	466
	Ver. Carls Glück und Planetenfeld	36	41	118	81	128	44	448
	Holthausen u. Ver. Henriette	9	6	109	142	95	10	371
	Adolf v. Hansemann	36	1	7	13	11	—	68
	Total	488	1,259	2,317	1,942	1,733	471	8,210
	Per cent.	6.0	15.3	28.2	23.7	21.1	5.7	—

* These statements refer to the workers in the Classes I., II., III. of the official table of wages (mining officials and young persons were not taken into consideration).

Appendix
C. XIV.
GERMANY.
Extracts from
the Report of
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NAME OF THE MINING DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED DURING MARCH 1889 PER SHIFT						TOTAL.
		4s. and upwards, exclusive.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
IV.—WITTEN	Neu Iserlohn	18	333	494	205	329	153	1,532
	Mansfeld	38	209	213	130	224	71	885
	Ver. Hamburg	15	14	146	309	144	61	689
	Ver. Franziska Tiefbau	1	21	108	189	144	85	548
	Bruchstrasse	23	70	173	128	186	62	642
	Siebenplaneten	25	57	176	80	119	20	477
	Ringeltaube	5	8	59	178	95	20	365
	Ver. Wiendahlbank	35	80	121	44	44	69	393
	Ver. Wallfisch	17	24	86	23	25	4	179
	Total	177	816	1,576	1,286	1,310	545	5,710
	Per cent.	3.1	14.3	27.6	22.5	23.0	9.5	—
V.—SPROCKHÖVEL	Helene Nachtigall	25	45	104	177	191	34	576
	Ver. Bommerbänker Tiefbau	10	3	95	159	110	81	458
	Ver. Trappe	1	27	90	99	99	59	375
	Blankenburg (incl. Rummelskir- chen und Julius)	4	33	36	79	55	33	240
	Deutschland	—	14	20	46	8	1	89
	Ver. Stock und Scherenberg	4	6	36	32	17	6	101
	Alte Haase	—	—	23	25	20	6	74
	Herzkämper Mulde	—	—	3	22	83	2	110
	Wodan	—	—	4	—	14	2	20
	Johannes-Seegen	—	—	—	—	8	2	10
	Hermann	—	—	—	4	—	—	4
	Neugottseggedich	—	1	2	2	—	3	8
	Dreckbänker Erbstolln	—	—	6	5	—	—	11
	Hammerthal	—	—	6	—	—	3	9
	Rabe	—	—	—	—	2	2	4
	Total	44	129	425	650	607	234	2,089
	Per cent.	2.1	6.1	20.4	31.1	29.1	11.2	—
VI.—BOCHUM	Hannover	51	445	623	203	431	160	1,913
	Centrum	50	129	338	301	416	154	1,388
	Holland	54	176	270	236	349	149	1,234
	Fröhliche Morgensonne	13	83	149	191	182	124	742
	Heinrich Gustav	8	31	254	230	186	128	837
	Ver. Präsident	15	88	167	226	369	33	898
	Vollmond	31	149	192	133	143	97	745
	Amalie	8	43	152	140	135	28	506
	Caroline	10	99	91	83	147	29	459
	Ver. Carolinenglück	14	59	90	87	122	19	391
	Prinz von Preussen	39	102	71	84	164	38	498
	Herminenglück Liborius	33	35	59	101	102	23	353
	Total	326	1,439	2,456	2,015	2,746	982	9,964
	Per cent.	3.3	14.4	24.6	20.2	27.6	9.9	—
VII.—HERNE	Shamrock	153	323	197	227	331	42	1,273
	Pluto	208	355	429	287	335	262	1,876
	Königsbrube	240	311	264	189	279	46	1,329
	Constantin der Grosse	60	191	317	210	291	150	1,219
	Ver. Hannibal	57	97	301	139	190	80	864
	Lothringen	32	119	169	129	146	42	637
	Mont Cenis	76	110	118	86	147	28	565
	Total	826	1,506	1,795	1,267	1,719	650	7,763
	Per cent.	10.6	19.5	23.1	16.3	22.1	8.4	—

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

NAME OF THE MINING DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED DURING MARCH 1889 PER SHIFT						TOTAL.
		4s. and upwards, exclusive.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
VIII.—RECKLING- HAUSEN.	Unser Fritz	98	314	301	122	277	45	1,157
	von der Heydt	34	136	232	95	149	87	733
	Julia	27	148	246	166	185	82	854
	Victor	47	237	295	189	178	41	987
	Friedrich der Grosse	26	119	397	166	230	141	1,079
	Recklinghausen	139	468	401	238	360	78	1,684
	Ewald	26	118	214	117	127	33	635
	General Blumenthal	71	161	121	122	167	69	711
	König Ludwig	19	148	154	64	136	26	547
	Schlägel und Eisen	91	106	120	109	127	54	607
	Total	578	1,955	2,481	1,388	1,936	656	8,994
	Per cent.	6.5	21.7	27.6	15.4	21.5	7.3	—
IX.—GELSENKIRCHEN	Hugo	141	250	290	202	219	47	1,149
	Graf Moltke	39	229	370	217	349	34	1,238
	Graf Bismarck	309	367	310	216	410	27	1,639
	Nordstern	35	135	147	72	111	36	536
	Rhein-Elbe und Alma	321	961	217	600	518	51	2,668
	Consolidation	171	663	632	285	650	175	2,576
	Hibernia	290	352	206	196	265	28	1,337
	Wilhelmine Victoria	213	403	351	308	261	32	1,568
	Total	1,519	3,360	2,523	2,096	2,783	430	12,711
	Per cent.	12.0	26.5	19.8	16.5	21.9	3.3	—
X.—ESSEN	Eintracht Tiefbau	73	263	392	258	238	81	1,305
	Zollverein	379	494	375	321	481	53	2,103
	Dahlbusch	401	779	221	265	198	74	1,938
	Bonifacius	14	163	415	282	312	100	1,286
	Königin Elisabeth	105	330	332	194	126	45	1,132
	Friedrich Ernestine	12	79	148	54	131	28	452
	Graf Beust und Ernestine	1	47	197	53	88	56	442
	Herkules	12	53	82	70	81	5	303
	Total	997	2,208	2,162	1,497	1,655	442	8,961
	Per cent.	11.1	24.7	24.2	16.7	18.6	4.7	—
XI.—FROHNHAUSEN	Helene Amalie	147	376	389	290	301	88	1,591
	Kölner Bergwerks-Verein	210	303	129	237	231	67	1,177
	Neu-Essen	161	211	114	83	180	18	767
	Ver. Sälzer und Neuack	50	243	254	88	166	—	801
	Ver. Hagenbeck	14	138	250	119	117	39	677
	Victoria Mathias	50	76	84	74	153	22	459
	Wolfsbank und Neuwesel	90	210	158	124	115	23	720
	Carolus Magnus	32	167	89	50	46	34	418
	Ver. Hoffnung und Sekretarius Aak	10	50	159	46	94	28	387
	Mathias Stinnes	5	115	58	51	159	21	462
	Total	922	1,889	1,684	1,162	1,562	340	7,459
	Per cent.	11.0	25.3	22.6	15.6	20.9	4.6	—

Appendix
C. XIV.GERMANY.
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NAME OF THE MINING DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED DURING MARCH 1889 PER SHIFT						TOTAL.
		4s. and upwards, exclusive.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
XII.—OBERHAUSEN	Prosper	90	400	614	468	1,475	155	3,202
	Oberhausen	225	340	373	331	504	127	1,900
	Concordia	143	284	280	243	291	89	1,330
	König Wilhelm	68	589	118	414	61	82	1,332
	Deutscher Kaiser	81	204	141	119	148	64	757
	Altstaden	107	199	120	114	121	28	689
	Westende	23	152	130	88	138	53	584
	Ver. Wiesche	2	38	175	41	117	34	407
	Roland	38	85	102	36	106	30	397
	Ver. Sellerbeck	9	47	157	81	89	55	438
	Humboldt	5	32	139	103	72	42	393
	Ruhr und Rhein	3	21	32	55	36	24	171
	Ver. Rosenblumendelle	—	13	41	34	30	17	135
	Total	794	2,404	2,422	2,127	3,188	800	11,735
	Per cent.	6.9	20.4	20.6	18.1	27.2	6.8	—
XIII.—ALTENDORF..	Altendorf	17	85	215	110	94	52	573
	Eiberg	11	4	110	91	99	14	329
	Charlotte	—	11	140	54	48	24	277
	Johann Deimelsberg	17	53	175	169	69	30	513
	Ludwig	29	73	118	62	62	18	362
	Steingatt	11	49	67	73	49	28	277
	Heisinger Tiefbau	69	34	42	38	30	2	215
	Heinrich	16	40	70	41	27	26	220
	Prinz Wilhelm	8	8	44	47	14	—	121
	Kaiserin Augusta	—	1	27	27	8	2	65
	Victoria	—	2	25	19	24	8	78
	Prinz Friedrich	—	5	27	12	3	4	51
	Total	178	365	1,060	743	527	208	3,081
	Per cent.	5.8	11.8	34.4	24.1	17.1	6.8	—
XIV.—WERDEN	Langenbrahm	43	134	177	114	153	49	670
	Ver. Portingsiepen	7	44	95	120	13	2	281
	Pauline	15	54	63	40	46	—	218
	Richardt	10	18	55	48	17	2	150
	Paul	—	3	26	19	1	—	49
	Erbenbank	—	—	—	—	1	—	1
	Total	75	253	416	341	231	53	1,369
	Per cent.	5.5	18.5	30.4	24.9	16.8	3.9	—
XV.—DALHAUSEN	Hasenwinkel	27	109	256	91	182	146	811
	Dannenbaum	45	118	214	223	214	161	975
	Ver. Maria Anna und Steinbank	9	113	295	225	240	107	989
	Julius Philipp	51	154	167	109	117	39	637
	Prinz Regent	34	73	136	140	162	141	686
	Baaker Mulde	32	54	98	135	138	87	544
	Friederika	98	146	114	181	282	125	946
	Ver. General und Erbstolln	47	63	71	136	145	65	527
	Carl Friedrich Erbstolln	—	9	101	90	111	81	392
	Friedlicher Nachbar	1	6	67	165	95	63	397
	Ver. Dalhauser Tiefbau	15	30	93	146	91	27	402
	Ver. Engelsburg	—	—	19	91	77	21	208
	Flora	—	—	2	6	11	2	21
	Total	359	875	1,633	1,738	1,865	1,065	7,535
	Per cent.	4.8	11.7	21.7	23.1	24.7	14.0	—

SUMMARY OF FOREGOING TABLE.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

MINING DISTRICT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED DURING MARCH 1889 PER SHIFT						TOTAL
	4s. and upwards, exclusive.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
	No.	No.	No.	No.	No.	No.	
I. Nördlich Dortmund ...	291	412	1,072	1,185	1,343	360	4,663
II. Oestlich ...	208	849	2,044	1,916	1,799	853	7,669
III. Westlich ...	488	1,259	2,317	1,942	1,733	471	8,270
IV. Witten ...	177	816	1,576	1,286	1,310	545	5,710
V. Sprockhövel ...	44	129	425	650	607	234	89
VI. Bochum ...	326	1,439	2,456	2,015	2,746	982	9,964
VII. Herne ...	826	1,506	1,795	1,267	1,719	650	7,763
VIII. Recklinghausen ...	578	1,955	2,481	1,388	1,936	656	8,994
IX. Gelsenkirchen ...	1,519	3,360	2,523	2,096	2,783	430	12,711
X. Essen ...	997	2,208	2,162	1,497	1,655	442	8,961
XI. Frohnhausen ...	822	1,889	1,684	1,162	1,562	340	7,459
XII. Oberhausen ...	794	2,404	2,422	2,127	3,188	800	11,735
XIII. Altendorf ...	178	365	1,060	743	527	208	3,081
XIV. Werden ...	75	253	416	341	231	53	1,369
XV. Dahlhausen ...	359	875	1,633	1,738	1,865	1,065	7,535
Total I to XV. ...	7,682	19,719	26,066	21,353	25,004	8,089	107,913
Per cent.	7.1	18.3	24.2	19.8	23.1	7.5	—

Of the TOTAL NUMBER (1,415) of the MINERS in the PIT HIBERNIA, there suspended work arbitrarily:—

Day of the Week.	Date.	Number of Men.	Day of the Week.	Date.	Number of Men.
Wednesday ...	2nd January...	134	Monday ...	1st April ...	111
Monday ...	7th " ...	47	" ...	8th " ...	112 (payment on ac-
Tuesday ...	8th " ...	67 (payment on ac-	" ...	15th " ...	96
Monday ...	14th " ...	197	Tuesday ...	23rd " ...	139
" ...	21st " ...	63	Thursday ...	25th " ...	77 (pay-day).
Friday ...	25th " ...	52 (pay-day).	Monday ...	29th " ...	103
Monday ...	28th " ...	160			
Monday ...	4th February	61 (carnival).	Monday ...	3rd June ...	34
Friday ...	8th " ...	49 (payment on ac-	Saturday ...	8th " ...	52 (payment on ac-
Monday ...	11th " ...	95	Tuesday ...	11th " ...	100 (lottery)
" ...	18th " ...	114	Monday ...	17th " ...	54
" ...	25th " ...	142 (pay-day).	" ...	24th " ...	33
Monday ...	4th March ...	170	Tuesday ...	25th " ...	24 (pay-day).
Friday ...	8th " ...	53 (payment on ac-			
Monday ...	11th " ...	86			
" ...	18th " ...	57			
Tuesday ...	26th " ...	108 (pay-day).			

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.SHIFT-WAGES and WAGES for PIECE-WORK on the Mine ver. RHEIN-ELBE and ALMA.
Shafts RHEIN-ELBE I. and II.

	WORKERS.	EARNINGS.	
		Formerly. s.	Now. s.
a. GRUBENARBEITER ... (Miners employed under ground.)	Pferdetreiber (horse drivers) ...	2.00	2.30
	Bremser und Abnehmer (breaksmen and unloaders) ...	2.00—2.30	2.25—2.70
	Schlepper (haulers) ...	2.40—2.50	2.60—2.80
	Kabelzieher (those that draw the cables) ...	2.40—2.50	
	Anschläger (hewers) ...	3.20—3.50	3.30—3.75
	Gehülfen (assistant workers) ...	2.80—3.00	3.10—3.30
	Aufschieber am Schacht (those who put the waggons in the cages) ...	2.60—2.80	2.70—3.00
	Schacht-Reparaturhauer (shaft repairers) ...	3.25—3.50	3.50—3.75
	Zimmerhauer (timber hewers) ...	2.50—2.80	2.80—3.20
	Bahn-Reparaturhauer (permanent way repairers) ...	3.00	3.10—3.20
	Kohlenhauer (coal hewers). Das Gedinge pro Meter wird um 5 bis 15 Pf. erhöht (the piece-work is increased by 5 to 15 Pf. a meter).	—	—
	Querschläger (cross hewers). Das Gedinge pro Meter wird um 1 bis 15 M. erhöht (the piece-work is increased by 1 to 15 M. a meter).	—	—
	Schachttauefer (shaft sinkers) ...	3.50—3.75	4.00
	Drittführer (third leaders) (?) ...	4.00	4.50
	Hauer—a. im Schwichtlohn (hewers—a. in shift wages) ...	2.80—3.00	3.50
b. TAGESARBEITER ... (Miners employed on the surface.)	Bergeausklauber ...	1.00	1.25
	Nummer-Ausnehmer und Wagenreiniger (those who take out the numbers and clean the waggons) ...	1.00	1.20—1.30
	Aufschieber am Schacht (those who put the waggons in the cages) ...	1.50	1.70
	Sieberei (for riddling) ...	2.30	2.40—2.50
	Verlader (loaders) ...	2.20	2.30—2.50
	Platzarbeiter (place workers) ...	2.30	2.50
	Abschlepper (trammers) ...	2.50	2.60—2.70
	Tafelführer (table conductors) (?) ...	—	—
	Dreher (winders or turners) (?) ...	3.40	3.70
	Schmiede (blacksmiths) ...	2.90—3.30	3.20—3.60
	Zuschläger (hewers) ...	2.40	2.60
	Hufschmied (shoeing-smiths) ...	3.30	3.70
	Schlosser (locksmiths) ...	3.00—3.20	3.20—3.50
	Monteur-Gehülfe ...	3.00	3.20
	Schreiner (carpenters) ...	3.00—3.10	3.20—3.50
	Kesselschürer (stokers) ...	2.80	3.00
	Rottenarbeiter (labourers) ...	2.30—2.50	2.40—2.60
	Lampenputzer (lamp cleaners) ...	2.30	2.40—2.50

Appendix
C. XIV.

TABLE showing the TOTAL NUMBER of WORKERS and the NUMBER earning various RATES of WAGES per SHIFT during the MONTH of JULY 1889, in the different COAL MINES of the MINING DISTRICT of DORTMUND.*

GERMANY.
Extracts from
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Commission,
1890.

NAME OF THE DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING JULY 1889:—						TOTAL.
		4s. and upwards.	From 3s. 6d. to 4s., exclusive.	From 3s. 6d. to 3s., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. 6d. to 2s., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
I. NORTH DORTMUND	Hörder Kohlenwerk	49	94	284	292	286	104	1,109
	Massener Tiefbau	36	134	177	194	189	45	775
	Courl	32	104	248	234	162	20	800
	Monopol	162	170	180	134	182	37	865
	Königsborn	170	139	91	167	162	41	770
	Caroline bei Holzwickede	1	25	66	93	35	28	248
	Total I.	450	666	1,046	1,114	1,016	275	4,567
	Per cent.	9.9	14.7	22.3	24.6	22.3	6.2	—
II. EAST DORTMUND	Ver. Stein und Hardenberg	357	234	133	289	110	11	1,134
	Ver. Westfalia	182	212	176	181	276	70	1,097
	Glückauf Erbstolln	20	211	265	179	88	37	800
	Margaretha	12	73	224	64	155	39	567
	Ver. Schürbank und Charlottenburg	13	74	115	98	96	57	453
	Crone	10	116	141	99	93	36	495
	Ver. Bickfeld Tiefbau	18	86	82	88	122	43	439
	Gneisenau	113	229	187	130	176	5	840
	Freie Vogel und Unverhofft	41	103	59	70	65	24	362
	Freiberg und Augustenshoffnung	—	20	96	114	50	56	336
	Gottesseggen	31	50	43	50	36	60	270
	Friedrich Wilhelm	25	54	74	65	25	—	243
	Luise und Erbstolln	132	164	208	114	70	10	698
	Total II.	954	1,626	1,803	1,541	1,362	448	7,784
	Per cent.	12.4	21.0	23.3	19.9	17.6	5.8	—
III. WEST DORTMUND	Ver. Germania	611	335	266	374	201	41	1,828
	Erin	552	209	83	267	72	29	1,212
	Zollern	116	101	119	99	69	17	521
	Ver. Dorstfeld	—	238	168	55	152	35	648
	Tremonia	138	103	94	130	73	26	564
	Graf Schwerin	123	98	86	104	61	19	491
	Borussia	111	137	83	94	65	21	511
	Hansa	217	131	87	125	100	44	704
	Westhausen	57	135	52	78	111	38	471
	Kaiser Friedrich	17	91	86	57	115	7	373
	Ver. Carsglück und Planetenfeld	12	80	144	98	86	29	449
	Adolf von Hansemann	37	—	9	20	13	—	79
	Total III.	1,991	1,658	1,277	1,501	1,118	306	7,851
	Per cent.	25.4	21.2	16.3	19.1	14.1	3.9	—
IV. WITTEN	Neu-Iserlohn	457	387	158	221	325	15	1,563
	Ver. Hamburg	75	162	209	128	89	59	722
	Mansfeld	237	147	138	161	149	40	873
	Siebenplaneten	145	83	79	72	60	16	455
	Ver. Franziska Tiefbau	115	125	75	96	131	42	584
	Ringeltaube	22	120	81	82	36	25	366
	Bruchstrasse	201	103	83	125	146	25	683
	Ver. Wiendahlbank	93	107	82	53	55	20	410
	Ver. Wallfisch	22	69	54	17	30	10	202
	Total IV.	1,367	1,303	959	955	1,021	202	5,857
	Per cent.	23.3	22.3	16.4	16.3	17.4	4.3	—

* These statements refer to the workers in the classes I., II., III. of the official table of wages. (Mining officials and young persons were not taken into consideration.)

Appendix
C. XIV.

GERMANY.
Extracts from
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1890.

NAME OF THE DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING JULY 1889:—						TOTAL.
		4s. and upwards.	From 3s. 6d. to 4s., exclusive.	From 3s. 6d. to 3s., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. 6d. to 2s., exclusive.	From 1s. 6d. to 2s., exclusive.	
		No.	No.	No.	No.	No.	No.	
V. SPROCKHÖVEL	Helene Nachtigall	88	126	106	146	131	29	626
	Ver. Bommerbänker Tiefbau	17	99	151	67	87	21	442
	Ver. Trappe	9	69	126	90	73	23	390
	Blankenburg	4	45	74	74	45	43	285
	Ver. Stock und Scherenberg	1	9	21	49	9	5	94
	Deutschland	—	8	44	25	13	—	90
	Alte Haase	—	9	32	32	15	14	102
	Herzkämper Mulde	—	2	2	79	32	1	116
	Johannes Segen	—	—	6	—	2	—	8
	Wodan	—	—	4	8	4	—	16
	Hermann	—	—	2	—	1	—	3
	Neugottseggedich	—	—	—	5	2	2	9
	Dreckbänker Erbstolln	—	—	6	6	—	—	12
	Hammerthal	1	11	—	1	4	1	18
	Rabe	—	—	4	6	6	—	16
	Total V.	120	378	578	588	424	139	2,227
	Per cent.	5.4	17.0	26.0	26.4	19.0	6.2	—
VI. DAHLHAUSEN	Hasenwinkel	157	188	120	107	195	94	861
	Ver. Maria Anna und Steinbank	286	173	146	158	158	49	970
	Dannenbaum	235	178	191	169	151	70	994
	Prinz Regent	96	130	116	129	118	62	651
	Julius Philipp	198	159	104	74	85	40	660
	Baaker Mulde	24	117	131	77	64	39	452
	Friederika	262	139	77	290	179	57	1,004
	Ver. General und Erbstolln	174	75	68	85	72	30	504
	Carl Friedrich Erbstolln	9	111	117	87	46	36	406
	Ver. Dahlhauser Tiefbau	92	125	76	57	55	28	433
	Friedlicher Nachbar	4	69	149	85	70	29	406
	Ver. Engelsburg	78	67	20	99	19	5	288
	Flora	—	4	7	3	7	1	22
	Total VI.	1,615	1,535	1,322	1,420	1,219	540	7,651
	Per cent.	21.1	20.1	17.3	18.6	15.9	7.0	—
VII. BOCHUM	Hannover	558	458	130	282	314	13	1,755
	Centrum	435	198	114	270	298	71	1,386
	Ver. Präsident	181	115	125	393	49	21	884
	Holland	243	241	167	314	189	42	1,196
	Fröhliche Morgensonne	180	112	140	168	99	43	742
	Heinrich Gustav	86	198	149	137	182	54	806
	Amalia	59	101	144	84	98	20	506
	Prinz von Preussen	78	86	90	109	94	13	470
	Caroline bei Harpen	55	113	72	75	80	22	417
	Vollmond	161	172	93	87	173	42	728
	Ver. Carolinenglück	63	87	41	89	81	5	366
	Herminenglück Liborius	79	58	45	69	49	9	309
	Total VII.	2,178	1,939	1,310	2,077	1,706	355	9,565
	Per cent.	22.8	20.3	13.7	21.7	17.8	3.7	—

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
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Commission,
1890.

NAME OF THE DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING JULY 1889:—						TOTAL.
		4s. and upwards.	From 3s. 6d. to 4s., exclusive.	From 3s. 6d. to 3s., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. 6d. to 1s., exclusive.	From 1s. 6d. to 3s., exclusive.	
		No.	No.	No.	No.	No.	No.	
VIII.—HERNE	Pluto	557	338	225	246	403	31	1,800
	Shamrock	456	193	166	222	176	37	1,250
	Ver. Konstantin der Grosse	299	237	177	192	252	63	1,220
	Königsgrube	144	250	296	274	242	32	1,238
	Ver. Hannibal	157	253	105	109	161	47	833
	Mont Cenis	56	127	101	72	86	12	454
	Lothringen	166	145	86	95	104	29	625
	Total	1,835	1,543	1,156	1,210	1,424	251	7,419
	Per cent.	24.7	20.8	15.6	16.3	19.2	3.4	—
IX.—RECKLING- HAUSEN.	Von der Heydt	195	126	121	70	151	30	693
	Julia	225	169	95	89	169	25	772
	Friedrich der Grosse	152	312	158	156	231	12	1,021
	Victor	363	96	120	194	90	24	887
	Unser Fritz	284	284	170	136	222	23	1,119
	Recklinghausen	630	358	193	271	254	31	1,737
	Ewald	148	218	144	114	80	28	732
	General Blumenthal	242	148	103	149	135	33	810
	König Ludwig	149	141	57	125	67	22	561
	Schlägel und Eisen*	101	147	86	99	131	16	580
	Total IX.	2,489	1,999	1,247	1,403	1,530	244	8,912
	Per cent.	27.9	22.4	14.0	15.7	17.2	2.8	—
X.—GELSENKIRCHEN	Nordstern	155	103	91	95	85	—	529
	Hugo	285	247	180	215	132	33	1,092
	Graf Moltke	338	327	119	182	150	44	1,156
	Graf Bismarck	412	292	240	229	347	61	1,581
	Ver. Rhein-Elbe und Alma	1,208	170	270	612	268	—	2,528
	Consolidation	954	423	180	306	634	115	2,612
	Hibernia	545	242	102	268	157	25	1,339
	Wilhelmine Viktoria	558	315	243	349	96	9	1,570
	Total X.	4,455	2,119	1,425	2,256	1,869	283	12,407
	Per cent.	35.9	17.1	11.5	18.2	15.1	2.2	—
XI.—ESSEN	Eintracht Tiefbau	448	259	131	281	162	31	1,312
	Dahlbusch †	1,235	73	201	376	88	11	1,984
	Zollverein	1,005	250	209	323	350	16	2,153
	Ver. Bonifacius	373	284	103	292	161	29	1,242
	Königin Elisabeth	329	256	249	178	125	28	1,165
	Graf Beust und Ernestine	82	152	33	84	50	26	427
	Friedrich Ernestine	111	132	43	110	66	3	465
	Herkules	80	81	49	47	38	8	303
	Total XI.	3,663	1,487	1,018	1,691	1,040	152	9,051
	Per cent.	40.5	16.4	11.2	18.7	11.5	1.7	—
XII.—FROHNHAUSEN	Ver. Helene und Amalie	464	278	189	210	86	25	1,253
	Cölnher Bergwerksverein	346	198	101	277	89	15	1,026
	Neu-Effen	287	151	93	119	140	55	845
	Carolus Magnus	140	135	48	69	39	27	458
	Ver. Sälzer und Neuack	347	169	99	140	103	—	858
	Ver. Hagenbeck	133	228	92	126	65	30	674
	Viktoria Mathias	133	65	69	138	55	11	471
	Wolfsbank und Neuweasel	245	245	75	125	51	23	764
	Mathias Stinnes	146	58	42	159	53	11	469
	Ver. Hoffnung und Sekretarius Aak	77	112	55	68	86	12	410
	Total XII.	2,318	1,639	863	1,431	767	209	7,227
	Per cent.	32.4	22.7	11.9	19.5	10.6	2.9	—

* As the works were interrupted during the month of July 1889, the figures for the month of August have been given here instead.
† As in the month of July cr. 6 shifts had struck, and the regularity of the works being interrupted through this, the figures for August have been given here.

Appendix
C. XIV.GERMANY.
Extracts from
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Commission,
1890.

NAME OF THE DISTRICT.	NAME OF THE PIT.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING JULY 1889:—						TOTAL.
		4s. and upwards.	From 3s. 6d. to 4s., exclusive.	From 3s. 6d. to 3s., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. 6d. to 1s., exclusive.	From 1s. 6d. to 3s., exclusive.	
		No.	No.	No.	No.	No.	No.	
XIII.—OBERHAUSEN	Prosper	517	415	360	508	358	165	2,723
	Oberhausen	500	332	265	395	451	117	2,060
	Concordia	355	307	199	222	262	52	1,397
	König Wilhelm	149	678	137	349	54	42	1,409
	Deutscher Kaiser	255	139	79	99	127	51	750
	Alstaden	209	179	124	121	63	24	720
	Westende	214	84	42	109	85	30	564
	Ver. Wiesche	41	32	129	65	72	28	367
	Roland	83	140	35	38	97	27	420
	Ver. Sellerbeck	134	96	98	74	91	64	557
	Humboldt	16	48	124	97	54	28	367
	Ruhr und Rhein	18	34	27	32	41	9	161
	Rosenblumendelle	—	17	47	24	29	18	135
	Total XIII.	2,491	2,501	1,666	2,533	1,784	655	11,630
	Per cent.	21.4	21.5	14.3	21.8	15.4	5.6	—
XIV.—ALTENDORF...	Altendorf	19	148	152	122	81	53	575
	Eiberg	138	48	63	43	35	26	353
	Ver. Charlotte	81	69	86	63	12	35	296
	Johann Deimelsberg	65	22	56	106	32	17	298
	Ludwig	117	76	64	38	79	28	402
	Heisinger Tiesbau	173	23	17	15	12	9	249
	Steingatt	47	66	37	59	30	45	284
	Heinrich bei Ueberruhr	36	54	73	32	22	28	245
	Prinz Wilhelm	31	35	38	18	1	—	123
	Kaiserin Augusta	—	2	—	16	8	1	61
	Viktoria	—	34	14	22	6	14	90
	Prinz Friedrich	6	29	11	6	5	2	59
	Total XIV.	713	606	595	540	323	258	3,035
	Per cent.	23.5	19.9	19.6	17.9	10.6	8.5	—
XV.—WERDEN	Langenbrahm	146	168	58	82	146	58	658
	Ver. Pörlingsiepen	62	91	47	95	15	—	310
	Richardt	22	26	35	45	12	2	142
	Pauline	46	90	44	22	13	—	215
	Paul...	1	8	23	6	7	—	45
	Erbenbank	—	—	—	1	—	—	1
	Total XV.	277	383	207	251	193	60	1,371
	Per cent.	20.2	28.0	15.0	18.3	14.1	4.4	—

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

SUMMARY TO THE FOREGOING TABLES.

MINING DISTRICT.					OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING JULY 1888:—						TOTAL.
					4s. and upwards.	From 3s. 6d. to 4s., exclusive.	From 3s. to 3s. 6d., exclusive.	From 2s. 6d. to 3s., exclusive.	From 2s. to 2s. 6d., exclusive.	From 1s. 6d. to 2s., exclusive.	
					No.	No.	No.	No.	No.	No.	
I. North Dortmund					450	666	1,046	1,114	1,016	275	4,567
Per cent.					9.9	14.7	22.3	24.6	22.3	6.2	—
II. East „					954	1,626	1,803	1,541	1,362	448	7,784
Per cent.					12.4	21.0	23.3	19.9	17.6	5.8	—
III. West „					1,991	1,658	1,277	1,301	1,118	306	7,851
Per cent.					25.4	21.2	16.3	19.1	14.1	3.9	—
IV. Witten					1,867	1,303	959	955	1,021	252	5,857
Per cent.					23.3	22.3	16.4	16.3	17.4	4.3	—
V. Sprockhövel					120	378	578	588	424	139	2,227
Per cent.					3.4	17.0	26.0	26.4	19.0	6.2	—
VI. Dahlhausen					1,615	1,535	1,322	1,420	1,219	540	7,651
Per cent.					21.1	20.1	17.3	18.6	15.9	7.0	—
VII. Bochum					2,178	1,939	1,310	2,077	1,706	355	9,565
Per cent.					22.8	20.3	13.7	21.7	17.8	3.7	—
VIII. Herne... ..					1,835	1,543	1,156	1,210	1,424	251	7,419
Per cent.					24.7	20.8	15.6	16.3	19.2	3.4	—
IX. Recklinghausen					2,489	1,999	1,247	1,403	1,530	244	8,912
Per cent.					27.9	22.4	14.0	15.7	17.2	2.8	—
X. Gelsenkirchen					4,455	2,119	1,425	2,256	1,869	283	13,407
Per cent.					35.9	17.1	11.5	18.2	15.1	2.2	—
XI. Essen					3,663	1,487	1,018	1,691	1,040	152	9,051
Per cent.					40.5	16.4	11.2	18.7	11.5	1.7	—
XII. Frohnhausen					2,318	1,639	863	1,431	767	209	7,227
Per cent.					32.1	22.7	11.9	19.8	10.6	2.9	—
XIII. Oberhausen					2,491	2,501	1,666	2,533	1,784	655	11,630
Per cent.					21.4	21.5	14.3	21.8	15.4	5.6	—
XIV. Altendorf					713	606	595	540	323	258	3,035
Per cent.					23.5	19.9	19.6	17.9	10.6	8.5	—
XV. Werden					277	383	207	251	193	60	1,371
Per cent.					20.2	28.0	15.0	18.3	14.1	4.4	—
Total I. to XV.					26,916	21,382	16,472	20,511	16,796	4,427	106,504
Per cent.					25.3	20.1	15.6	19.3	15.7	4.1	—

TABLE of NET WAGES earned during the FIRST QUARTER of the Year 1888 on the CROWN COAL MINES of the
DISTRICT of SAARBRÜCKEN.

Number.	DESCRIPTION OF THE WORKS FOR WHICH THE WAGES WERE EARNED.	EARNED NET WAGES FOR A REALLY WORKED SHIFT.											REMARKS.		
		In the Pits of the Mining Inspections.										At the Scales of the Pit Mouth		At the Wharf.	On an Aver- age.
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.				
		Shillings.													
1	a. Preparatory work {hewer (principal cut- tings, transport) }hauler	—	—	3.40	—	3.48	3.58	3.78	3.73	3.52	—	—	—	3.56	Average.
		—	—	3.03	—	2.56	2.87	2.79	2.79	2.53	—	—	—	2.72	
		—	—	3.25	—	3.29	3.44	3.43	3.51	3.20	—	—	—	3.35	
	b. Cutting and unload- {hewer ing. }hauler	—	—	2.63	—	2.92	3.06	3.10	3.11	2.89	—	—	—	2.98	
		—	—	2.56	—	2.17	2.58	2.42	2.40	2.38	—	—	—	2.40	
2	Extension of mines {hewer and accessory work. }hauler	—	—	3.03	—	3.24	3.05	3.03	3.04	2.98	—	—	—	3.02	
		—	—	2.21	—	2.20	2.25	2.17	2.16	2.12	—	—	—	2.19	
3	Transport, loading and {hewer riddling (?) of the }hauler	—	—	2.72	—	2.71	3.07	3.05	3.35	3.29	—	—	—	2.83	
		—	—	1.54	—	1.99	2.06	1.68	1.86	1.58	—	—	—	1.86	
	Total (average) {hewer }hauler	—	—	3.31	—	3.40	3.44	3.57	3.58	3.41	—	—	—	3.43	
		—	—	2.67	—	2.30	2.66	2.44	2.56	2.40	—	—	—	2.47	
4	Working of the engines	—	—	2.76	—	2.68	2.76	2.79	2.78	2.57	—	—	—	2.73	
5	Working of the forges and re- pairing shops	—	—	3.22	—	2.91	3.28	3.43	2.87	2.89	—	—	—	3.12	
6	Management of the materials and other day works, including the production of gas	—	—	2.34	—	2.91	2.42	2.80	2.55	2.03	—	—	—	2.61	
7	The washing of coal and the coking	—	—	—	—	—	—	2.99	—	—	—	—	—	2.99	
	Total average	—	—	3.10	—	3.18	3.28	3.29	3.33	3.07	—	—	—	3.19	

Number.	DESCRIPTIONS OF THE SPACE OF TIME AND THE CLASS OF WORKERS ON WHICH THIS CALCULATION IS BASED.	NET WAGES EARNED ON A CALENDAR DAY.												REMARKS.	
		On the Pits of the Mining Inspections.										At the Scales at the Pit Mouth.	At the Wharf.		On an Aver- age.
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.				
		Shillings.													
1	Miners	—	—	2'37	—	2'46	2'55	2'74	2'69	2'43	—	—	—	2'53	
2	Mining officials	—	—	4'09	—	3'81	3'80	4'10	4'02	3'74	—	—	—	3'96	
	Total number	—	—	2'41	—	2'50	2'58	2'77	2'72	2'47	—	—	—	2'56	

Appendix
C. XIV.GERMANY.
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1890.

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C. XIV.
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TABLE of NET WAGES earned during the FIRST QUARTER of the YEAR 1889 on the CROWN COAL MINES of the MINING DISTRICT of SAARBRÜCKEN.

Number.	DESCRIPTION OF THE WORKS FOR WHICH THE WAGES WERE EARNED.	NET WAGES EARNED FOR A REALLY WORKED SHIFT.												REMARKS.	
		In the Pits of the Mining Inspections.										At the Scales at the Pit Mouth.	At the Wharf.		On an Aver- age.
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.				
1	a. Preparatory work (principal cuttings and transport). { hewer hauler }	3'66	3'4	3'32	3'53	3'78	3'73	3'77	3'77	3'52	3'46	—	—	3'62	Average.
		2'66	2'68	2'93	2'36	2'71	2'73	2'92	2'83	2'58	2'76	—	—	2'71	
		3'40	3'24	3'18	2'4	3'45	3'52	3'48	3'51	3'22	3'20	—	—	3'38	
		3'22	3'12	2'78	2'95	2'93	3'00	3'04	3'16	2'87	2'50	—	—	3'05	
	b. Cutting, unloading, &c. { hewer hauler }	2'84	2'39	2'63	2'19	1'94	2'26	2'35	2'45	2'30	2'00	—	—	2'35	
2	Extension of mines and accessory work. { hewer hauler }	2'78	3'04	3'07	3'00	3'46	3'18	3'08	3'11	3'07	3'36	—	—	3'11	
		2'25	2'10	2'12	1'96	2'04	2'11	2'12	1'89	2'07	3'08	—	—	2'09	
3	Transport, loading, and riddling (?) of coals. { hewer hauler }	2'56	2'82	2'73	2'52	2'73	3'01	3'05	3'39	3'20	2'94	—	2'51	2'83	
		1'83	1'96	1'55	2'03	1'78	1'95	1'66	1'50	1'53	2'11	—	2'64	1'82	
	Total (average) { hewer hauler }	3'50	3'34	3'26	3'39	3'67	3'57	3'56	3'61	3'43	3'42	—	2'51	3'40	
		2'41	2'43	2'62	2'26	2'32	2'44	2'40	2'46	2'39	2'06	—	2'64	2'42	
4	Working of the engines ...	2'51	2'83	2'69	2'68	2'74	2'74	2'73	2'83	2'64	2'50	—	3'00	2'71	
5	Working of the forges and repairing shops ...	2'70	3'43	3'25	3'02	3'02	3'32	3'36	3'10	2'95	2'81	—	3'20	3'16	
6	Management of materials and other day works inclusive of the production of gas ...	2'78	2'72	2'46	2'86	2'90	2'67	2'71	2'61	1'95	2'17	2'76	—	2'66	
7	The washing of coal and the coking ...	—	—	—	—	—	—	2'96	—	—	—	—	—	2'96	
	Total average ...	3'17	3'11	3'05	3'11	3'33	3'33	3'29	3'34	3'08	3'04	2'76	2'59	3'21	

Number.	DESCRIPTION OF THE SPACE OF TIME AND THE CLASS OF WORKERS ON WHICH THIS CALCULATION IS BASED.	NET WAGES EARNED ON A CALENDAR DAY.												REMARKS.	
		On the Pits of the Mining Inspections.										At the Scales of the Pit Mouth.	At the Wharf.		On an Aver- age.
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.				
	1st Quarter of the Calendar Year 1889.														
1	Miners ...	2'56	2'41	2'32	2'45	2'62	2'39	2'77	2'75	2'40	2'47	2'44	2'08	2'56	
2	Mining officials ...	3'97	4'09	3'83	4'12	3'87	3'84	4'03	3'85	3'70	3'64	5'11	3'94	3'94	
	Total number ...	2'60	2'46	2'36	2'50	2'66	2'61	2'79	2'78	2'43	2'51	3'06	2'23	2'59	

TABLE of NET WAGES earned during the MONTH of JUNE 1889 on the CROWN COAL MINES of the MINING DISTRICT of SAARBRÜCKEN.

Appendix
C. XIV.
GERMANY
Extracts from
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1890.

Number.	DESCRIPTION OF THE WORKS FOR WHICH THE WAGES WERE EARNED.	NET WAGES FOR A REALLY WORKED SHIFT.													REMARKS.
		In the Pits of the Mining Inspections.										At the Scales.	At the Wharf.	On an Average	
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.				
		Shillings.													
1	a. Preparatory work { hewer hauler	4'01	3'69	3'53	3'73	3'58	4'19	3'71	4'15	3'88	3'75	—	—	3'83	Average.
		2'82	2'72	2'90	2'40	2'57	3'69	2'91	3'19	2'87	2'98	—	—	2'87	
	Principal cuttings and transport	3'78	3'48	3'34	3'47	3'34	4'00	3'46	3'91	3'63	3'50	—	—	3'50	
	b. Cutting and unloading, &c. { hewer hauler	3'25	3'14	3'24	3'18	2'93	3'27	3'13	3'25	2'79	—	—	—	3'15	
		2'80	2'42	2'62	2'42	2'23	2'50	2'44	2'45	2'35	2'06	—	—	2'45	
2	Extension of mines and accessory works. { hewer hauler	2'97	3'40	3'33	3'35	3'57	3'52	3'22	3'36	3'17	3'30	—	—	3'35	Average.
		2'33	2'25	2'25	2'36	2'17	2'45	2'31	2'31	2'04	2'13	—	—	2'29	
3	Transport, loading, and riddling of coal. { hewer hauler	3'29	2'84	2'99	2'87	2'97	3'21	3'16	3'22	2'39	3'04	—	2'71	2'97	Average.
		1'58	1'61	1'86	2'02	1'87	1'88	1'83	1'74	2'07	—	—	2'62	1'90	
	Total (average) ... { hewer hauler	3'81	3'59	3'48	3'63	3'55	3'97	3'55	3'92	3'72	3'69	—	2'71	3'69	Average.
		2'51	2'43	2'63	2'38	2'37	2'90	2'46	2'66	2'54	2'79	—	2'62	2'54	
4	The working of the engines ...	2'59	2'90	2'86	2'75	2'90	3'03	2'94	3'07	2'74	2'69	—	2'22	2'87	Average.
	Working of the forges and repairing shops ...	2'85	3'48	3'46	3'39	3'16	3'49	3'56	3'33	2'97	2'78	—	3'37	3'32	
6	Management of the materials and other day work, including the production of gas ...	3'22	2'93	2'63	3'07	3'28	2'69	2'80	3'01	2'21	2'04	2'70	—	2'87	Average.
7	The washing of coal and the coking ...	—	—	—	—	—	3'15	—	—	—	—	—	—	3'1	
	Total (average) ...	3'45	3'32	3'22	3'35	3'28	3'76	3'32	3'68	3'40	3'25	2'70	2'70	3'41	

Appendix
C. XIV.

TABLE of NET WAGES really earned during the Month of MARCH 1889 in the MINING DISTRICT of SAARBRÜCKEN.

GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

NAME OF MINE.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER SHIFT DURING THE MONTH OF MARCH 1889:—											REMARKS.
	5s. 6d. to 6s.	5s. and under 5s. 6d.	4s. 6d. and under 5s.	4s. and under 4s. 6d.	3s. 6d. and under 4s.	3s. and under 3s. 6d.	2s. 6d. and under 3s.	2s. and under 2s. 6d.	1s. 6d. and under 2s.	Under 1s. 6d.	Total Number of Miners.	
Kronprinz ...	—	8	40	257	352	459	331	231	77	27	1,782	* The wages marked denote the net wages exclusive of the personal expenses for the purchase of new tools (the whole equipment), lighting materials, and the contributions to the union's funds.
Per cent ...	—	0·45	2·25	14·42	19·75	25·76	18·57	12·96	4·32	1·52	100·00	
Gerhard ...	—	9	8	147	442	1,170	657	367	116	—	2,916	
Per cent ...	—	0·31	0·27	5·04	15·16	40·12	22·53	12·59	3·95	—	100·00	
Von der Heydt ...	—	18	21	109	464	803	682	390	105	63	2,655	
Per cent ...	—	0·68	0·79	4·11	17·48	30·24	25·69	14·69	3·95	2·37	100·00	
Dudweiler ...	—	8	47	149	644	992	538	253	227	12	3,870	
Per cent ...	—	0·28	1·64	5·19	22·44	34·56	15·75	5·81	7·91	0·42	100·00	
Sulzbach ...	—	60	111	319	545	701	418	303	126	13	2,596	
Per cent ...	—	2·31	4·28	12·29	20·99	27·00	16·10	11·67	4·66	0·50	100·00	
Reden ...	—	3	9	337	1,109	907	647	183	188	—	3,383	The expenses for tools and light fall generally only on the workers underground, and average from 0·02 to 0·04s. per shift. The contributions to the unions' funds are expected from all workers, but their amount varies. Average 0·18s. per shift.
Per cent ...	—	0·09	0·26	9·96	32·78	26·81	19·13	5·41	5·56	—	100·00	
Heinitz ...	2	13	159	464	901	1,459	717	368	138	45	4,266	
Per cent ...	0·05	0·30	3·73	10·88	21·12	34·20	16·81	8·63	3·23	1·05	100·00	
König ...	3	28	70	290	658	741	476	169	146	38	2,619	
Per cent ...	0·12	1·07	2·67	11·07	25·12	28·29	15·18	6·45	5·58	1·45	100·00	
Friedrichthal ...	—	—	1	82	392	494	487	211	131	21	1,819	The classes that earn from 1·50s. — 2s. and from 2s. — 2·50s. consist principally of half invalids and drivers. Those mentioned in the last class, earning less than 1·50s., are principally young persons.
Per cent ...	—	—	0·06	4·51	21·55	27·16	26·77	11·60	7·20	1·15	100·00	
Göttelhorn ...	—	—	—	—	65	66	38	25	7	—	201	
Per cent ...	—	—	—	—	32·34	32·84	18·90	12·44	3·48	—	100·00	
Bergfaktorei Kohlwaage ...	—	—	—	—	—	—	10	—	—	—	10	
Per cent ...	—	—	—	—	—	—	100·00	—	—	—	100·00	
Hafenamt zu Malstatt ...	—	—	—	—	1	30	29	56	—	—	116	
Per cent ...	—	—	—	—	0·86	25·86	25·00	48·28	—	—	100·00	
Total ...	5	147	466	2,154	5,573	7,822	5,030	2,556	1,261	219	25,233	
Per cent ...	0·02	0·58	1·85	8·54	22·08	31·00	19·93	10·13	5·00	0·87	100·00	

VERFÜGUNG.

- pp.
3. The shift wages are regulated as follows:—
Shaft timber hewer, in the shaft, 3·80s.; formerly, for piece-work, 3·50s.
on the surface, 3·50s., formerly, for piece-work, 3s.
Signal giver 3·25s., formerly 3s.
Mason, more than 6 years work time, 3·25s.; formerly 3s.
less 3s.; " 2·80s.
Timber hewer 3·40s., formerly 3·30s.
Builders 3·30s., formerly 2·80s. to 3s.
Hewers in the lamp shop 2·80s., formerly 2·60s.
Schlämmer 2·80s., formerly 2·60s.
Young persons under 16 years, 10s. per shift more than before.
Drivers 20s. per shift more than before.
Grooms 2s., formerly 1·80s.

Heinitz, the 29th May 1889.

Königliche Berginspektion VII.

GEZ. G. GRÄFF.

TABLE of WAGES on the COAL MINES near AIX LA CHAPELLE.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

NAME OF MINE.	ARBEITERKLASSE. (Class of Workers.)	Period during which the Wages were paid.		Amount of Wages for one Shift.
		Quarter. Month.	Year.	
Works of the United Company of Coal Mines in the Wurm-District (average of all the shafts).	Bei der eigentlichen Gewinnungsarbeit (for the real work of winning coal).	I. Quarter ...	1888	s. 2·86
		I. " ...	1889	3·01
		June ...	1889	3·20
	Bei der Aus- und Vorrichtung (for preparatory work).	I. Quarter ...	1888	2·79
		I. " ...	1889	2·37
		June ...	1889	3·15
	Beim Grubenausbau (at the extension of mines).	I. Quarter ...	1888	2·69
		I. " ...	1889	2·73
		June ...	1889	2·90
	Bei der Förderung—Transport (bringing the coal up).	I. Quarter ...	1888	2·02
		I. " ...	1889	2·03
		June ...	1889	2·18
Coal Mine Maria near Hönigen	Bei der eigentlichen Kohlegewinnung (for the real work of winning coal).	I. Quarter ...	1888	2·99
		I. " ...	1889	3·18
		June ...	1889	3·31
	Bei der Aus- und Vorrichtung (for preparatory work).	I. Quarter ...	1888	2·94
		I. " ...	1889	3·27
		June ...	1889	3·47
	Beim Grubenausbau (for the extension of mines).	I. Quarter ...	1888	2·77
		I. " ...	1889	2·96
		June ...	1889	3·05
	Bei der Förderung (for transport) ...	I. Quarter ...	1888	2·13
		I. " ...	1889	2·18
		June ...	1889	2·28
Coal mine Anna, near Alsdorf. (Shaft, Hermann und Franz.)	Bei der eigentlichen Kohlegewinnung (for the real work of winning coal).	I. Quarter ...	1888	2·34
		I. " ...	1889	2·39
		June ...	1889	2·56
	Bei der Aus- und Vorrichtung (for preparatory work).	I. Quarter ...	1888	2·03
		I. " ...	1889	2·12
		June ...	1889	2·21
The same mine. (Shaft Wilhelm)	Hauer (hewer) ...	I. Quarter ...	1888	3·07
		I. " ...	1889	3·10
		June ...	1889	3·55
	Schlepper (driver) ...	I. Quarter ...	1888	2·29
		I. " ...	1889	2·40
		June ...	1889	2·65
	Hauer (hewer) ...	I. Quarter ...	1888	3·03
		I. " ...	1889	3·12
		June ...	1889	3·54
	Schlepper (driver) ...	I. Quarter ...	1888	2·48
		I. " ...	1889	2·52
		June ...	1889	2·86

Appendix
C XIV.
GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

NAME OF MINE.	ARBEITERKLASSE. (Class of Workers.)	Period during which the Wages were paid.		Amount of Wages for one Shift.
		Quarter. Month.	Year.	
Coal mine Centrum. (Shaft Louise.)	Hauer (hewer)	I. Quarter	1888	2.42
		I. "	1889	2.47
		June	1889	3.19
	Schlepper (driver)	I. Quarter	1888	1.99
		I. "	1889	2.16
		June	1889	2.68
Coal mine Reservegrube. (Noth- berg.)	Hauer (hewer)	I. Quarter	1888	2.50
		I. "	1889	2.52
		June	1889	3.16
	Schlepper (driver)	I. Quarter	1888	1.76
		I. "	1889	1.88
		June	1889	2.47
Coal mine Nordstern near Alsdorf	Gesteinsbauer (stone hewer)	I. Quarter	1888	3.17
		I. "	1889	3.89
		June { 1st half 2nd " }	1889 {	3.49 3.71
	Gesteinschlepper (drivers)	I. Quarter	1888	2.32
		I. "	1889	2.48
		June { 1st half 2nd " }	1889 {	2.36 2.68
	Kohlenbauer (coal hewer)	I. Quarter	1888	2.95
		I. "	1889	3.67
		June { 1st half 2nd " }	1889 {	3.36 3.67
	Kohlenschlepper (coal driver)	I. Quarter	1888	2.29
		I. "	1889	2.62
		June { 1st half 2nd " }	1889 {	2.65 2.75
	Zimmerbauer (timber hewer)	I. Quarter	1888	2.95
		I. "	1889	3.33
		June { 1st half 2nd " }	1889 {	3.32 3.99
	Maschinen- und Kesselwärter (engine guard and boiler guard).	I. Quarter	1888	2.45
		I. "	1889	2.48
		June { 1st half 2nd " }	1889 {	2.57 2.65
	Holzarbeiter und Schmiede (carpenters and smiths).	I. Quarter	1888	2.28
		I. "	1889	2.30
		June { 1st half 2nd " }	1889 {	2.29 2.28
	Magazin- und sonstige Tagearbeiter (maga- zin and other day labourers).	I. Quarter	1888	1.59
		I. "	1889	1.66
		June { 1st half 2nd " }	1889 {	1.59 1.64

TABLE showing the AVERAGE WAGES in the MINES of the UNITED COMPANY in the WURM DISTRICT for the
1ST QUARTER, 1888; 1ST QUARTER, 1889; and JUNE 1889.

	Winning of Coal.	Preparatory Work.	Extension Works.	Transport.	Engines.	Day Labourers.
	s.	s.	s.	s.	s.	s.
Boccart I. Quarter, 1888	2.90	2.75	2.55	1.67	2.30	1.77
" I. " 1889	3.06	2.77	2.55	1.67	2.26	1.75
" June 1889	3.42	3.22	2.73	1.83	2.43	1.93
Laurweg-Laugenberg I. Quarter, 1888	2.67	2.67	2.44	2.06	2.30	1.91
" I. " 1889	2.80	2.65	2.47	1.95	2.34	2.03
" June 1889	2.94	2.89	2.70	1.99	2.46	2.07
Kämpchen I. Quarter, 1888	2.73	2.75	2.67	2.10	2.25	2.11
" I. " 1889	2.83	2.89	2.68	2.02	2.23	1.95
" June 1889	3.00	3.14	2.86	2.24	2.50	2.05
Teut I. Quarter, 1888	2.94	2.87	2.86	2.01	2.33	2.08
" I. " 1889	3.10	3.03	2.89	2.02	2.35	2.07
" June 1889	3.18	3.05	3.07	2.11	2.43	2.27
König Mager I. Quarter, 1888	3.02	2.85	2.87	2.03	2.38	1.97
" I. " 1889	3.13	3.01	2.91	2.06	2.41	1.37
" June 1889	3.39	3.35	3.10	2.21	2.54	2.11
König Flamm I. Quarter, 1888	2.87	2.83	2.77	1.90	2.57	2.13
" I. " 1889	3.17	3.12	2.99	2.23	2.67	2.10
" June 1889	3.29	3.11	3.10	2.38	2.75	2.20
Gouley I. Quarter, 1888	2.97	2.94	2.79	2.19	2.29	1.95
" I. " 1889	3.13	3.01	2.82	2.27	2.27	2.06
" June 1889	3.37	3.29	2.91	2.38	2.52	2.20
Alle Gruben Quarter 1888	2.86	2.79	2.69	2.02	2.31	1.97
" I. " 1889	3.01	2.87	2.73	2.03	2.33	1.97
" June 1889	3.20	3.15	2.90	2.18	2.50	2.14

Appendix
C. XIV.
GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

TABLE showing the AVERAGE WAGES EARNED by those receiving SHIFT WAGES, HEWERS, and DRIVERS, in the years 1879 to the first half of 1889.

NAME OF PIT.	1879.			1880.			1881.			1882.			1883.			1884.			1885.			1886.			1887.			1888.			1889.		
	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.	Shift Wages.	Hewers.	Haulers.
Glückhiff-Grube ...	2.20	2.26	1.53	2.19	2.31	1.54	2.20	2.37	1.56	2.22	2.39	1.58	2.21	2.41	1.58	2.19	2.38	1.59	2.17	2.32	1.56	2.21	2.27	1.56	2.21	2.27	1.56	2.21	2.27	1.56	2.21	2.27	1.56
Friedenshoffnung ...	2.04	2.27	1.49	2.02	2.23	1.57	2.05	2.21	1.61	2.10	2.30	1.67	2.10	2.32	1.68	2.06	2.21	1.64	2.08	2.23	1.63	2.01	2.22	1.63	2.01	2.22	1.63	2.01	2.22	1.63	2.01	2.22	1.63
Fuchs-Grube ...	2.29	2.29	1.81	2.30	2.37	1.82	2.31	2.43	1.83	2.35	2.45	1.87	2.37	2.49	1.91	2.37	2.46	1.92	2.39	2.45	1.92	2.39	2.48	1.93	2.39	2.48	1.93	2.39	2.48	1.93	2.39	2.48	1.93
Kons. Fürstensteiner Gruben ...	1.96	1.92	1.48	1.98	2.07	1.55	2.07	2.20	1.60	2.06	2.23	1.59	2.10	2.13	1.63	2.16	2.16	1.63	2.18	2.20	1.65	2.18	2.18	1.69	2.03	2.14	1.70	2.15	2.17	1.85	2.19	2.49	1.92
Kons. Melchior-Grube	2.16	2.12	1.67	2.10	2.15	1.63	2.18	2.34	1.67	2.20	2.25	1.72	2.14	2.62	1.87	2.16	2.43	1.78	2.21	2.24	1.75	2.25	2.32	1.82	2.24	2.36	1.82	2.24	2.36	1.82	2.24	2.36	1.82
Carl Georg Victor- Grube ...	2.10	2.24	1.61	2.12	2.24	1.58	2.10	2.28	1.43	2.09	2.21	1.50	2.14	2.28	1.55	2.13	2.31	1.60	2.16	2.33	1.61	2.15	2.27	1.55	2.10	2.28	1.61	2.15	2.27	1.55	2.10	2.28	1.61
Gustav-Grube ...	1.96	1.94	1.47	1.98	1.97	1.47	1.98	1.87	1.32	1.91	1.93	1.39	2.13	2.14	1.42	2.07	2.12	1.41	2.02	2.19	1.45	1.96	2.32	1.46	1.95	2.14	1.52	2.26	2.31	1.72	2.34	2.45	1.71
Abendrothe-Grube...	1.88	2.04	1.37	1.81	2.15	1.49	1.85	2.13	1.50	1.85	2.17	1.54	2.89	2.21	1.56	1.91	2.22	1.56	1.90	2.25	1.56	1.91	2.17	1.59	1.72	2.24	1.67	1.98	2.47	1.80	1.90	2.42	1.71
Segen Gottes-Grube	2.03	2.16	1.55	2.05	2.17	1.59	2.01	2.27	1.66	2.03	2.20	1.70	2.02	2.21	1.76	2.04	2.27	1.79	2.03	2.26	1.80	2.07	2.24	1.80	2.10	2.30	1.87	2.39	2.38	1.94	2.54	2.37	1.96
David-Grube ...	1.00	1.86	1.48	1.29	2.23	1.49	1.64	2.20	1.66	2.21	2.21	1.74	2.26	2.26	1.78	2.26	2.26	1.78	2.13	2.30	1.83	2.24	2.62	1.81	2.32	2.55	1.85	2.44	2.48	1.94	2.48	2.38	1.93
Kons. Neuc Caesar- Grube ...	1.99	1.93	1.47	1.97	2.01	1.49	2.01	2.03	1.51	1.82	2.03	1.51	1.83	2.04	1.57	1.83	2.07	1.62	1.82	2.12	1.66	1.82	2.08	1.64	1.83	2.10	1.68	2.05	2.32	1.85	2.05	2.36	1.77
Rudolf-Grube ...	1.91	1.78	1.21	1.94	1.86	1.35	2.20	1.95	1.28	1.87	2.05	1.56	1.89	2.07	1.42	1.94	2.09	1.53	1.71	1.91	1.44	1.69	1.72	1.33	1.84	1.69	1.31	1.54	1.89	1.41	1.47	1.99	1.37
Wenzeslaus Ferdinand (Wen- zeslaus Grube) ...	1.85	1.76	1.30	1.83	1.83	1.35	1.70	1.83	1.33	1.87	1.74	1.30	2.07	2.15	1.56	2.21	2.12	1.57	2.15	2.10	1.56	2.17	2.13	1.58	2.15	2.08	1.55	1.95	1.96	1.61	1.95	1.84	1.43

TABLE of NET WAGES earned by the MINERS of the EXAMINED COAL MINES of LOWER SILESIA during the Month of
MARCH 1889.

NAME OF MINING DISTRICT.	NAME OF MINE.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER WORK DAY DURING THE MONTH OF MARCH 1889:—											Total Number of Miners.
		From 5s. to 6s.	From 5s. and under 5s. 6d.	From 4s. 6d. and under 4s.	From 4s. and under 4s. 6d.	From 3s. 6d. and under 3s.	From 3s. and under 3s. 6d.	From 2s. 6d. and under 2s.	From 2s. and under 2s. 6d.	From 1s. 6d. and under 1s.	From 1s. and under 1s. 6d.	From 6d. and under 1s.	
A. EAST WAL- DENBURG.	Kons. Segen Gottes ...	10	109	257	1.7	25	—	—	—	—	—	—	518
	Per cent. ...	1.93	21.04	49.61	22.59	4.83	—	—	—	—	—	—	100.00
	Neue kons. Caesar ...	1	31	120	66	33	7	—	—	—	—	—	258
	Per cent. ...	0.39	12.02	46.51	25.58	12.79	2.71	—	—	—	—	—	100.00
	Kons. Wenzeslaus ...	2	54	86	69	—	—	—	—	—	—	—	211
	Per cent. ...	0.95	25.59	40.76	32.70	—	—	—	—	—	—	—	100.00
	Kons. Rudolph ...	1	4	63	72	70	5	—	—	—	—	—	215
	Per cent. ...	0.46	1.86	29.30	33.49	32.56	2.33	—	—	—	—	—	100.00
	Total A. ...	12	146	494	341	197	12	—	—	—	—	—	1,202
	Per cent. ...	1.00	12.14	41.10	28.37	16.39	1.00	—	—	—	—	—	100.00
B. WEST WAL- DENBURG.	Kons. Fuchs ...	6	44	334	707	626	255	47	—	—	—	—	2,019
	Per cent. ...	0.30	2.18	16.54	35.02	31.00	12.63	2.33	—	—	—	—	100.00
	Ver. Glückhiff ...	2	5	6	8	36	241	976	939	1,326	258	98	3,885
	Per cent. ...	0.05	0.13	0.16	0.21	0.93	6.20	25.12	24.17	34.18	6.64	2.56	100.00
	Kons. Fürstensteiner ...	4	44	294	605	692	93	51	—	—	—	—	1,783
	Per cent. ...	0.22	2.47	16.49	33.93	38.81	5.22	2.86	—	—	—	—	100.00
	Kons. Friedenshoffnung...	5	21	269	660	790	134	76	—	—	—	—	1,955
	Per cent. ...	0.26	1.07	13.76	33.76	40.41	6.85	3.59	—	—	—	—	100.00
	Kons. Abendrothe ...	2	90	195	231	75	26	619	—	—	—	—	619
	Per cent. ...	0.32	14.54	31.50	37.32	12.12	4.20	—	—	—	—	—	100.00
	Kons. Melchior ...	12	89	120	72	18	11	322	—	—	—	—	322
	Per cent. ...	3.73	27.64	37.27	22.36	5.59	3.41	—	—	—	—	—	100.00
	Kons. Gustav, Carl Georg Victor, Elise und Jenny	2	34	313	434	567	253	64	—	—	—	—	1,667
	Per cent. ...	0.12	2.04	18.78	26.03	34.01	15.18	3.84	—	—	—	—	100.00
	David, David Zubehör und Reinhold ...	3	67	215	152	24	6	467	—	—	—	—	467
	Per cent. ...	0.64	14.35	46.04	32.55	5.14	1.28	—	—	—	—	—	100.00
	Total B. ...	2	5	6	8	53	401	2,432	3,875	4,456	1,110	369	12,717
	Per cent. ...	0.02	0.04	0.05	0.06	0.42	3.15	19.12	30.47	35.04	8.73	2.90	100.00
	Total A. ...	12	146	494	341	197	12	—	—	—	—	—	1,202
	Per cent. ...	1.00	12.14	41.10	28.37	16.39	1.00	—	—	—	—	—	100.00
	Total ...	2	5	6	8	53	413	2,578	4,369	4,797	1,307	381	13,919
	Per cent. ...	0.01	0.04	0.04	0.06	0.38	2.97	18.52	31.39	34.46	9.39	2.74	100.00

STATISTICS OF WORKERS in the DISTRICT of WALDENBURG, at the end of June 1889.*

1.	2.	3.	4.	5.	6.
Reference Number.	KIND OF INDUSTRIES.	Number of Industries in the year 1889 on the 1st of July.	Number of Workers in the year 1889 on the 1st of July.	RATE OF WAGES paid in the years 1888-89 (1st of July):— a. For Male Workers. b. " Female " c. " Young "	
1	a. Linen spinning	3	946	1888. a. 2.11 s. b. 1.10 „ c. 0.68 „	1889. a. 2.20 s. b. 1.14 „ c. 0.76 „
	b. Mechanical weaving	5	2,281	a. 1.70 s. b. 1.18 „ c. 0.77 „	a. 1.76 s. b. 1.26 „ c. 0.76 „
	c. Wool spinning	1	192	a. 1.65 s. b. 1.05 „ c. 0.80 „	a. 1.60 s. b. 1.05 „ c. 0.80 „
	d. Shoddy manufactory	1	105	a. 2.20 s. b. 0.90 „ c. 0.60 „	a. 2.20 s. b. 0.90 „ c. 0.80 „
	e. Bleaching, dyeing, and printing establishments	5	755	a. 1.59 s. b. 0.95 „ c. 0.80 „	a. 1.61 s. b. 0.98 „ c. 0.86 „
2	Glass manufactory	2	240	a. 2.30 s. b. None. c. 0.97 s.	a. 2.04 s. b. None. c. 1.00 s.
3	China manufactory	3	2,797	a. 1. Painters and turners 2.30s. 2. Day labourers 1.40 „ b. ... 0.90 „ c. ... 0.75 „ These wages cannot be fixed but approximately on account of different statements, but they have risen evidently since 1888.	a. 1. Painters and turners 3.00s. 2. Day labourers 1.60 „ b. ... 0.95 „ c. ... 0.60 „
4	Metal and machine industry	2	461	a. 2.24 s. b. None. c. 0.66 s.	a. 2.20 s. b. None. c. 0.70 s.
5	Potteries	1	33	a. 2.50 s. b. 1.00 „ c. 0.80 „	a. 1. Potters 2.50s. 2. Day labourers 1.60 „ b. ... 1.00 „ c. ... 0.80 „
6	Brick works	1	28	a. 1.40 s. b. None. c. „	a. 1.50 s. b. 1.10 „ c. None.
7	paper manufactory	1	184	a. 1.60 s. b. 1.00 „ c. 0.90 „	a. 1.65 s. b. 1.20 „ c. 0.95 „
8	Regulator watches manufactory	4	1,047	a. 2.23 s. b. 1.19 „ c. 0.75 „	a. 2.45 s. b. 1.31 „ c. 0.90 „

* In all branches of industry production has increased, and in some prices have risen. Generally speaking industries have improved during the past year.

With regard to the branches given under 1 e, 2, 3, 4, in some factories the work time has been prolonged, whilst in one factory under 1 e and one under 8 the work hours have been shortened.

TABLE of AVERAGE WAGES earned on the examined COAL MINES of UPPER SILESIA from 1879-1887.

NAME OF MINE.	1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.	
	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.	Hewers.	Other Workers paid by the Piece.
Kons. Paulus-Hohen-	2.02	1.34	2.02	1.40	2.20	1.54	2.35	2.42	2.32	1.59	2.50	2.36	2.48	2.35	1.57	2.43	2.35	1.57
zollern	2.43	1.42	2.46	1.51	1.99	1.62	2.12	2.14	2.58	1.60	2.18	2.55	2.18	2.53	1.60	2.15	2.53	1.60
Kons. Florentine ...	2.07	1.41	2.66	1.55	2.10	1.55	2.05	2.32	2.56	1.55	2.43	2.51	2.31	2.56	1.57	2.43	2.56	1.57
Kons. Heinitz	2.44	1.43	2.83	1.47	2.05	1.54	3.00	2.07	2.61	1.73	3.09	2.67	3.08	2.71	1.68	3.02	2.73	1.68
Gräfin Laura	2.07	1.25	2.83	1.30	2.70	1.39	2.67	2.19	2.39	1.49	2.07	2.36	2.13	2.36	1.66	2.03	2.32	1.66
Hedwigsmusch	1.85	1.32	1.80	1.46	1.89	1.00	1.95	2.37	2.69	1.63	2.37	2.69	1.92	2.44	1.67	2.00	2.43	1.59
Brandenburg	2.20	1.54	2.23	1.66	2.36	1.66	2.38	2.82	2.82	1.85	2.46	2.87	2.01	2.36	2.79	2.48	2.77	1.64
Königsgrube	2.35	1.65	2.07	1.78	2.27	1.83	2.40	2.10	2.10	1.49	1.99	2.42	1.43	1.33	2.25	2.04	2.26	1.42
Königin Luise-Grube ...	2.09	1.34	1.91	1.41	1.94	1.45	2.09	2.52	2.52	1.45	2.09	2.42	1.46	2.33	1.41	2.22	2.05	1.40
NeueKons.-Radzionkau ...	—	—	—	1.56	2.10	1.53	2.09	2.09	2.09	1.51	2.27	2.49	1.60	2.31	1.63	2.41	2.46	1.59
Ver. Karsten-Centrum ...	1.99	1.33	2.11	1.43	2.17	1.48	2.28	2.19	2.19	1.48	2.15	2.15	1.51	2.18	1.48	2.29	2.30	1.46
Ver. Mathilde	1.92	1.20	1.96	1.36	2.05	1.42	2.09	2.19	2.19	1.51	2.26	2.21	1.48	2.15	1.51	2.18	2.25	1.46
Lythandra	1.82	1.28	2.43	1.42	2.19	1.45	2.07	2.38	2.38	1.45	2.07	2.32	1.45	2.15	1.51	2.18	2.25	1.46
Gottes Segen	2.03	1.50	2.06	1.60	2.28	1.77	1.32	2.55	2.55	1.77	1.32	2.55	2.07	2.33	1.81	2.45	2.09	1.51
Kons. Deutschland ...	—	—	—	—	—	1.70	2.48	2.44	2.44	1.70	2.48	2.44	2.44	2.44	2.44	2.44	2.44	2.44
Schlesien-Grube	2.00	1.24	3.10	1.43	2.46	1.52	2.38	2.67	2.67	1.52	2.38	2.67	1.52	2.38	1.64	2.21	2.66	1.64
Kons. Giesche	2.16	1.41	2.04	1.35	2.05	1.64	2.15	2.32	2.32	1.64	2.15	2.32	1.64	2.15	1.56	2.32	2.32	1.56
Ferdinand	1.66	1.09	1.67	1.37	1.53	1.38	1.52	1.88	1.88	1.38	1.52	1.88	1.38	1.52	1.43	1.59	2.32	1.43
Kons. Carlsegen	1.39	0.95	1.56	1.48	1.51	1.35	1.44	1.35	1.35	0.91	1.44	1.35	1.35	0.91	1.12	1.74	1.66	0.91
Kons. Wanda	1.94	1.16	1.79	1.19	1.87	1.34	1.96	2.14	2.14	1.34	1.96	2.14	1.34	1.96	1.38	1.88	2.17	1.38
Myslowitz	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kons. Cleophas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mar-Grube	2.23	1.36	2.33	1.38	2.38	1.69	2.10	3.22	3.22	1.69	2.10	3.22	1.69	2.10	2.31	3.31	2.17	2.31
Hohenlohe-Grube	1.96	1.45	2.02	1.51	1.80	1.55	2.37	2.41	2.41	1.55	2.37	2.41	1.55	2.37	1.73	2.54	2.05	1.73
Wuerfloo-Grube	1.09	0.85	1.74	1.21	1.69	1.15	2.01	1.83	1.83	1.15	2.01	1.83	1.15	2.01	1.59	2.39	2.31	1.59
Brade-Grube	1.54	1.09	1.57	1.12	1.57	1.17	1.53	1.65	1.65	1.17	1.53	1.65	1.17	1.53	1.71	1.50	1.59	1.71
Emanuelsegg	1.26	0.95	1.39	1.04	1.60	1.11	1.74	1.88	1.88	1.11	1.74	1.88	1.11	1.74	1.38	1.65	1.92	1.38
Beutenhück and Kaiserin Elisabeth ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Appendix C. XIV.
GERMANY
Extracts from the Report of the Royal Commission, 1890.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

TABLE of WAGES on the examined COAL MINES of UPPER SILESIA during the First Quarter, 1888, First and Second Quarters, 1889.

NAME OF MINE.	THE NET WAGES EARNED AMOUNT FOR ONE DAY'S WORK OR ONE SHIFT.—									
	a. HEWER.			b. HAULER.			c. SHIFT WAGES.			
	1889.			1889.			1889.			
	First Quarter.	April.	May.	First Quarter.	April.	May.	First Quarter.	April.	May.	June.
Kons. Radzionkau ...	2.21	2.32	2.32	1.43	1.47	1.47	1.99	2.11	2.11	2.11
Ver. Karsten-Centrum ...	2.22	2.27	2.27	1.47	1.56	1.56	2.33	2.45	2.45	2.45
Gräfin Laura ...	2.78	2.71	2.71	1.69	1.71	1.71	2.43	2.24	2.24	2.24
Kons. Paulus-Hohenzoll ...	2.41	2.52	2.52	1.56	1.57	1.57	2.33	2.10	2.10	2.10
Kons. Florentine ...	2.66	2.70	2.70	1.63	1.69	1.69	2.29	2.20	2.20	2.20
Kons. Heinitz ...	2.40	2.66	2.66	1.54	1.59	1.59	2.52	2.50	2.50	2.50
Mar ...	2.46	2.74	2.74	2.17	2.17	2.17	2.04	1.89	1.89	1.89
Kons. Deutschland ...	2.89	2.71	2.71	1.55	1.66	1.66	2.12	2.10	2.10	2.10
Kons. Schlesien ...	2.37	2.386	2.386	1.545	1.570	1.570	2.457	2.428	2.428	2.428
Ver. Mathilde ...	2.19	2.41	2.41	1.51	1.47	1.47	1.84	1.93	1.93	1.93
Lythandra ...	1.54	1.77	1.77	1.23	1.44	1.44	1.50	1.47	1.47	1.47
Komb. Gottessegen ...	1.68	1.81	1.81	1.36	1.37	1.37	1.50	1.58	1.58	1.58
Beaten-glück und Kaiserin Elisabeth ...	1.75	2.08	2.08	1.13	1.22	1.22	1.60	1.42	1.42	1.42
Emma ...	2.92	2.79	2.79	1.57	1.54	1.54	2.11	1.81	1.81	1.81
Kons. Giesche ...	2.79	2.87	2.87	1.61	1.69	1.69	2.34	2.37	2.37	2.37
Ferdinand ...	1.70	1.68	1.68	1.43	1.51	1.51	1.60	1.69	1.69	1.69
Kons. Wanda ...	2.17	2.14	2.14	1.19	1.11	1.11	2.12	1.69	1.69	1.69
Kons. Carlsegen ...	2.38	2.48	2.48	1.37	1.56	1.56	2.45	2.20	2.20	2.20
Myslowitz ...	2.91	2.94	2.94	1.78	1.59	1.59	2.82	2.41	2.41	2.41
Kons. Cleophas ...	2.36	2.46	2.46	1.64	1.59	1.59	2.36	2.40	2.40	2.40
Waterloo ...	2.41	2.45	2.45	1.54	1.61	1.61	2.60	2.55	2.55	2.55
Kons. Hohenlohe ...	2.36	2.47	2.47	1.49	1.54	1.54	2.21	1.91	1.91	1.91
Hedwigswanach ...	2.43	2.62	2.62	1.55	1.59	1.59	2.37	2.44	2.44	2.44
Kons. Brandenburg ...	2.79	2.86	2.86	1.65	1.62	1.62	2.45	2.55	2.55	2.55
König ...	2.87	2.89	2.89	1.78	1.71	1.71	2.63	2.44	2.44	2.44
Königin Luise ...	1.92	1.95	1.95	1.39	1.46	1.46	1.54	1.51	1.51	1.51
Emanuelsegen ...										

TABLE of NET WAGES earned by the WORKERS of the examined COAL MINES of UPPER SILESIA during MARCH 1889.

NAME OF MINING DISTRICT.	NAME OF MINE.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER WORK-DAY (MARCH 1889) :—											
		From 5s. 6d. to 6s.	From 5s. and under 5s. 6d.	From 4s. 6d. and under 5s.	From 4s. and under 4s. 6d.	From 3s. 6d. and under 4s.	From 3s. and 3s. 6d.	From 2s. 6d. and under 3s.	From 2s. and under 2s. 6d.	From 1s. 6d. and under 2s.	From 1s. and under 1s. 6d.	From 6d. and under 1s.	Total Number of Miners.
A. DIE STAATS-BERGWERKE.	König	—	—	3	5	34	77	493	444	1,224	314	313	2,907
	Per cent. ...	—	—	0.10	0.17	1.17	2.65	16.96	15.27	42.11	10.80	10.77	100.00
	Königin Luise ...	—	1	6	42	139	673	1,230	1,004	2,220	883	301	6,499
	Per cent. ...	—	0.02	0.09	0.65	2.14	10.36	18.91	15.45	34.16	13.59	4.63	100.00
	Total A. ...	—	1	9	47	173	750	1,723	1,448	3,444	1,197	614	9,406
	Per cent. ...	—	0.01	0.10	0.50	1.84	7.97	18.32	15.39	36.61	12.73	6.53	100.00
B. REVIER KAT-TOWITZ.	Kons. Hohenlohe*	—	—	—	—	—	—	—	—	—	—	—	—
	Per cent. ...	—	—	—	—	—	—	—	—	—	—	—	—
	Waterloo* ...	—	—	—	—	—	—	—	—	—	—	—	—
	Per cent. ...	—	—	—	—	—	—	—	—	—	—	—	—
	Emanuelssegen ...	—	—	—	2	—	—	2	33	159	141	86	423
	Per cent. ...	—	—	—	0.47	—	—	0.47	7.80	37.59	33.34	20.53	100.00
	Brade	—	—	—	—	—	6	—	16	113	106	57	298
	Per cent. ...	—	—	—	—	—	2.01	—	5.37	37.92	35.57	19.13	100.00
	Total B. ...	—	—	—	2	—	6	2	49	272	247	143	721
	Per cent. ...	—	—	—	0.28	—	0.83	0.28	6.80	37.72	34.26	19.83	100.00
C. REVIER KÖNIG-SHÜTTE.	Lythandra	—	—	—	—	2	17	28	51	94	29	39	251
	Per cent. ...	—	—	—	—	0.80	6.77	11.16	20.32	37.45	11.55	11.95	100.00
	Ver. Mathilde ...	—	—	—	—	1	46	205	373	604	363	244	1,835
	Per cent. ...	—	—	—	—	0.05	2.50	11.17	20.32	32.90	19.77	13.29	100.00
	Komb. Gottessegen ...	—	—	—	—	—	18	—	246	129	298	129	820
	Per cent. ...	—	—	—	—	—	2.20	—	30.00	15.73	36.34	15.73	100.00
	Total C. ...	—	—	—	—	3	81	233	670	827	690	403	2,907
	Per cent. ...	—	—	—	—	0.10	2.79	8.02	23.05	28.45	23.73	13.86	100.00
D. REVIER BEU-THEN.	Kons. Brandenburg*	—	—	—	—	—	—	—	—	—	—	—	—
	Per cent. ...	—	—	—	—	—	—	—	—	—	—	—	—
	Kons. Florentine*	—	—	—	—	—	—	—	—	—	—	—	—
	Per cent. ...	—	—	—	—	—	—	—	—	—	—	—	—
	Mar*	—	—	—	—	—	—	—	—	—	—	—	—
	Per cent. ...	—	—	—	—	—	—	—	—	—	—	—	—
	Hedwigsmusch ...	—	—	2	2	10	26	158	204	201	195	121	919
	Per cent. ...	—	—	0.22	0.22	1.09	2.83	17.19	22.20	21.87	21.22	13.16	100.00
	Kons. Paulus Hohenzollern	—	—	—	18	10	70	295	841	546	325	319	2,424
	Per cent. ...	—	—	—	0.74	0.41	2.89	12.17	34.69	22.53	13.41	13.16	100.00
	Kons. Heinitz ...	—	—	—	10	13	64	184	243	414	88	160	1,176
	Per cent. ...	—	—	—	0.85	1.11	5.44	15.65	20.66	35.20	7.48	13.61	100.00
	Gräfin Laura ...	—	—	—	1	12	32	562	317	853	200	171	2,148
Per cent. ...	—	—	—	0.05	0.56	1.49	26.16	14.76	39.71	9.31	7.96	100.00	
	Total D. ...	—	—	2	31	45	192	1,199	1,605	2,014	808	771	6,667
	Per cent. ...	—	—	0.03	0.47	0.68	2.88	17.98	24.07	30.21	12.12	11.56	100.00

* The table of wages has not been sent in.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

Appendix
C. XIV.GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

SUMMARY.

NAME OF MINING DISTRICT.	NAME OF MINE.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER WORK-DAY (MARCH 1889) :—											Total Number of Miners.
		From 5s. 6d. to 6s.	From 5s. and under 5s. 6d.	From 4s. 6d. and under 4s.	From 4s. and under 4s. 6d.	From 3s. 6d. and under 3s.	From 3s. and under 3s. 6d.	From 2s. 6d. and under 2s.	From 2s. and under 2s. 6d.	From 1s. 6d. and under 1s.	From 1s. and under 1s. 6d.	From 6d. and under 1s.	
E. REVIER TARNOWITZ.	Neue kons. Radzionkau	—	—	—	—	—	6	236	141	242	81	—	706
	Per cent. ...	—	—	—	—	—	0·85	33·43	19·97	34·28	11·47	—	100·00
	Ber. Karsten-Zentrum	—	—	—	—	4	35	236	189	120	90	—	674
	Per cent. ...	—	—	—	—	0·59	5·19	35·02	28·04	17·84	13·35	—	100·00
	Total E.	—	—	—	—	4	41	472	330	362	171	—	1,380
F. REVIER RATIBOR.	Emma	1	—	—	1	—	4	8	61	110	264	68	512
	Per cent. ...	0·20	—	—	0·20	—	0·78	1·56	11·91	21·48	51·56	12·31	100·00
	Beatensgluck und Kaiserin Elisabeth	—	—	—	—	—	—	7	101	173	73	—	354
	Per cent. ...	—	—	—	—	—	—	1·98	28·53	48·87	20·62	—	100·00
	Total F.	1	—	—	1	—	4	8	68	211	437	136	866
G. HERRSCHAFT MYSLOWITZ-KATTOWITZ.	Kons. Cleophas	—	—	5	1	14	62	131	102	162	140	92	709
	Per cent. ...	—	—	0·70	0·14	1·97	8·74	18·48	14·39	22·85	19·75	12·98	100·00
	Ferdinand	—	—	—	—	5	93	124	149	269	220	132	992
	Per cent. ...	—	—	—	—	0·50	9·37	12·50	15·02	27·12	22·18	13·31	100·00
	Kons. Giesche	—	—	1	15	85	183	284	320	566	723	385	2,563
H. STANDESHERRSCHAFT BEUTHEN.	Per cent. ...	—	—	0·04	0·59	3·32	7·14	11·08	12·49	22·09	28·22	15·03	100·00
	Myslowitz	—	—	—	—	44	157	211	209	208	153	—	983
	Per cent. ...	—	—	—	—	4·48	15·99	21·49	21·28	21·18	15·58	—	100·00
	Kons. Wanda	—	—	—	—	—	—	—	67	—	15	—	82
	Per cent. ...	—	—	—	—	—	—	—	81·71	—	18·29	—	100·00
H. STANDESHERRSCHAFT BEUTHEN.	Karlsegen mit Pachtfeld Ruhberg	—	—	—	—	2	18	65	9	59	64	—	217
	Per cent. ...	—	—	—	—	0·92	8·30	29·95	4·13	27·49	29·49	—	100·00
	Total G.	—	—	6	16	104	384	714	847	1,282	1,350	841	5,544
	Per cent. ...	—	—	0·11	0·29	1·88	6·92	12·88	15·28	23·12	24·35	15·17	100·00
	Kons. Deutschland	—	—	—	—	6	295	270	590	—	94	—	1,255
H. STANDESHERRSCHAFT BEUTHEN.	Per cent. ...	—	—	—	—	0·48	23·51	21·51	47·01	—	7·49	—	100·00
	Pachtfeld Güttmannsdorf	—	—	—	—	—	9	—	5	—	—	—	14
	Per cent. ...	—	—	—	—	—	64·29	—	35·71	—	—	—	100·00
	Pachtfeld Falvabahnhof	—	—	—	—	—	26	4	—	—	3	—	33
	Per cent. ...	—	—	—	—	—	78·79	12·12	—	—	9·09	—	100·00
H. STANDESHERRSCHAFT BEUTHEN.	Pachtfeld Heyduck	—	—	—	—	—	3	—	2	—	—	—	5
	Per cent. ...	—	—	—	—	—	60·00	—	40·00	—	—	—	100·00
	Kons. Schlesien	—	—	—	3	10	20	89	123	158	73	57	538
	Per cent. ...	—	—	—	0·56	1·88	3·75	16·70	23·08	29·64	13·70	10·69	100·00
	Total H.	—	—	—	3	10	26	396	419	759	73	154	1,840
	Per cent. ...	—	—	—	0·16	0·55	1·44	21·52	22·77	41·25	3·97	8·37	100·00

SUMMARY.

NAME OF MINING DISTRICT.	NAME OF MINE.	OF THE TOTAL NUMBER OF MINERS THE FOLLOWING NUMBER HAVE EARNED PER WORK-DAY (MARCH 1889) :—											Total Number of Miners.
		From 5s. 6d. to 6s.	From 5s. and under 5s. 6d.	From 4s. 6d. and under 4s.	From 4s. and under 4s. 6d.	From 3s. 6d. and under 3s.	From 3s. and under 3s. 6d.	From 2s. 6d. and under 2s.	From 2s. and under 2s. 6d.	From 1s. 6d. and under 1s.	From 1s. and under 1s. 6d.	From 6d. and under 1s.	
Total A.	Staatswerke	—	1	9	47	173	750	1,723	1,448	3,444	1,197	614	9,406
	Per cent. ...	—	0·01	0·10	0·50	1·84	7·97	18·32	15·39	36·64	12·73	6·53	100·00
" B.	Revier Kattowitz	—	—	—	2	—	6	2	49	272	247	143	721
	Per cent. ...	—	—	—	0·28	—	0·83	0·28	6·80	37·72	34·26	19·83	100·00
" C.	" Königshütte	—	—	—	—	3	81	233	670	827	690	403	2,907
	Per cent. ...	—	—	—	—	0·10	2·79	8·02	23·05	28·43	23·73	13·86	100·00
" D.	" Beuthen	—	—	2	31	45	192	1,199	1,605	2,014	808	771	6,667
	Per cent. ...	—	—	0·03	0·47	0·68	2·88	17·98	24·07	30·21	12·12	11·56	100·00
" E.	" Tarnowitz	—	—	—	—	—	4	41	472	330	362	171	1,380
	Per cent. ...	—	—	—	—	—	0·29	2·97	34·20	23·92	26·23	12·39	100·00
" F.	" Ratibor	1	—	—	1	—	4	8	68	211	437	136	866
	Per cent. ...	0·12	—	—	0·12	—	0·46	0·92	7·85	24·37	50·46	15·70	100·00
" G.	Herrschaft Myslowitz-Kattowitz	—	—	6	16	104	384	714	847	1,282	1,350	841	5,544
	Per cent. ...	—	—	0·11	0·29	1·88	6·92	12·88	15·28	23·12	24·35	15·17	100·00
" H.	Standesherrschaft Beuthen	—	—	—	3	10	26	396	419	759	73	154	1,840
	Per cent. ...	—	—	—	0·16	0·55	1·44	21·52	22·77	41·25	3·97	8·37	100·00
	Total Oberschlesien	1	1	17	100	335	1,447	4,316	5,578	9,139	5,164	3,233	29,331
	Per cent. ...	0·00	0·00	0·06	0·34	1·14	4·93	14·72	19·02	31·16	17·64	11·02	100·00

TABLE showing how many SHIFTS have been missed in the MINE FLORENTINE.

DATE.	DAY.	SHAFT REDENSBLOCK.			SHAFT SCHWERIN.			DAY LABOURERS.				
		Hewers.	Drivers.	Per cent.	Hewers.	Drivers.	Per cent.	Male.	Per cent.	Female.	Per cent.	TOTAL.
June	15	34	31	12·5	7	25	9·7	14	13	35	9·1	146
	16	Sunday.										
	17	33	35	13·1	5	20	7·6	3	2·8	20	5·2	116
	18	19	23	8·10	10	14	7·8	4	3·7	22	5·6	92
July	13	64	68	25·4	32	34	20·0	16	15·5	58	16·2	272
	14	Sunday.										
	15	17	17	6·5	20	11	9·4	5	4·0	37	10·4	197
	16	18	22	7·7	7	11	5·4	5	4·8	21	5·9	84
August	14	39	42	15·6	12	47	18·0	8	8·3	20	1·2	168
	15	19	30	9·4	14	20	10·8	3	3·0	15	4·1	101
	16	16	30	9·0	13	10	7·0	4	4·0	26	7·2	99

Appendix
C. XIV
GERMANY.
Extracts from
the Report of
the Royal
Commission,
1890.

Appendix
C. XV.GERMANY.
Taxation of
Mines by
Dr. Arndt.

XV.

THE TAXATION OF MINES. By DR. AD. ARNDT.
(Translated from the *Jahrbücher für nationalökonomie und Statistik*, 1881.)

PART I.

THE taxation of mines is regulated in very different ways by the legislation of various countries. In some places mining operations enjoy fiscal privileges. In Prussia, for instance, they are relieved from "trade duty," and in France from "patent duty." On the other hand, in most countries mining is heavily taxed, and that in modes not weighing upon other commercial enterprises. There are in these cases duties and taxes which, besides and independent of the personal taxation of the proprietors of the mine on their income from it, as taxation on real property and the like, are charged directly upon the act of mining. These taxes are paid, in the first place, to the State; secondly, to the landlord of the piece of ground under which the mining operations are carried on; and, thirdly, to churches and schools.

I. The mining taxes paid to the State differ very greatly in different countries:—

- (a.) Sometimes these taxes consist in the payment directly to the State of a certain portion (10th, 20th, 50th) of the gross return of the mine, without any consideration of ultimate net return.
- (b.) In other countries (France, Belgium, Alsace-Lorraine, Sardinia) the State takes a fixed share (2, 2½, or 5 per cent.) of the net return yielded by the mine.
- (c.) In other countries still (Austria, Saxony, Wurtemberg) the mines themselves, besides and independently of the income taxes paid by the proprietor on his return from them, pay to the State as if they were human beings.
- (d.) Sometimes the State charges, according to the size of the area of the mines, certain land and limitation taxes.
- (e.) In past times there were a large number of special duties and fees, known under various obsolete names, which were paid to the State in consideration of various rights retained by the prerogative of the reigning prince.

II. Taxes paid to the owner of the land are raised in two ways:—

- (a.) There are countries (France, Belgium, Portugal, Anhalt, Greece) in which the person who works the mine pays a ground rent, the amount of which is fixed by the State, either according to the extent of his operations or the net return of his profits, to the proprietor of the soil below or upon which the mining operations are carried on.
- (b.) In older law there still exist "adventures" (*Kuze*), which are the landowner's share of the produce of the mine.

III. In a similar way, by ancient law, there still exist free church and school shares, by which the churches and schools in question can claim a certain part of the income of the mine. All mines worked in Prussia previous to 1st of October 1865 still pay church and school shares. Since that date no such fresh claim has been admitted. The free shares which used to be taken for the local poor and for the miners' fund were entirely abolished in Prussia by the miners' law of April 19, 1854.

The mining taxes described above in I., II., and III. were and are levied only on mines in the narrow and judicial meaning of that word. In this sense mining (*Bergbau*) is understood when and so far as the permission to dispose of certain minerals (mine-minerals, which used to be called royal minerals) is lawfully distinguished from property in the soil, when and so far as it is not the landowner as such, but certain persons, whose only business is with the minerals, who obtain this permission from the State. In the legal sense it is not mining when the landowner himself, as such, undertakes the disposition of the minerals. For example, in Prussia the profitable dealing in fragments of marble, limestone, and gypsum is not considered as mining, because it is the landowners themselves, as such, who conduct it. It is not looked upon as mining to collect such fragments off the surface of the ground or from below the surface. It is the same in France, Belgium, Sardinia, Bavaria, and the greater part of Prussia, where the coal and peat are not allowed to be worked by the landowner, but are to be considered as conceded, and then must be charged upon them the lawful mining taxes. But, on the other hand, in the kingdom of Saxony, in the province of Saxon Prussia and in West Prussia, where coal and peat are not let out, there is no mining duty charged on the revenue from coal and peat.

It is not, in such cases, a matter of any importance whether the mining works are subterranean or above ground, whether they are under the special charge of mining authorities or under the general inspection of the local police, and whether the taxes are called mine duties or simply inspector's taxes. But it is to be noticed that, in the Prussian province of Saxony, the peat-holes are under the charge of special mining authorities and yet pay no analogous inspection taxes.

In Great Britain, all mines are part of the landowner's property, and so there are no mining taxes in that country.

The fact that mining taxes are only raised when and so far as the minerals are removed out of the jurisdiction of the landowner must, as will be further shown later on, be explained from the circumstance that the mining duties, so far as they are paid to the State, were not originally considered as a portion of the general revenue flowing in to the State from taxation, but as price, duty, or payment for the right extended by the sovereign master of the mines to private persons to carry on mining operations for their own profit. The history of mining taxes is, therefore, closely connected with the history of mining legislation generally, which latter deals with the rights in minerals from the working of which the landowner is excluded. The history of mining law appears to me, however, to be in many ways still very obscure and abstruse. Nothing more shall be attempted here than is absolutely necessary for the comprehension of the history of mining taxation.

There were mining taxes in ancient Greece itself. The Commonwealth of Athens was the proprietor of large mining establishments in Laurion and at Pangaea. The State did not carry on mining operations itself, but allowed whoever wished to do so to work mines within certain defined limits. The worker of the mine had to pay the State a single entrance fee, and 1/10th of the gross returns. That this fee was not of the nature of a tax, but the payment for being permitted to rent the mine, and perhaps also was considered as the rent of a lease, is obvious. We learn that want of punctuality in paying these fees to the State might result in the forfeiture of the mine.

The Roman State also possessed large and valuable mining districts in its provinces. It used to be supposed that the State farmed out its mines directly to private individuals, or companies, in return for a sum of money. But there has recently been discovered a fragment of the mining regulations for Vipaska, which goes far to prove that it was not the mines themselves but the returns which were leased. In each mining regulation, the manager of the mines (*procurator metallorum*) appointed by the State, farmed out or sold the separate mines (*piteri*), to private individuals to be worked under certain conditions, and only the prices to be paid by the latter, perhaps portions of the returns, flowed in to the person who farmed out the mines. That these prices (*pretia*), which the workers of the individual mines paid to the State or to those to whom these prices were farmed by the State, were not taxes, may be taken as beyond question.

In regard to the mines belonging to private individuals in the Roman Empire, a difference must be made between those on Italian and on provincial soil. The Romans regarded the profits of mining as "fruits of the ground," in the same light as the collecting of sand, the breaking of stones in the field, or the produce of fruit and wine. We know nothing of any separate taxation of Italian mines; they were doubtless included in the general census of property. Italian mining enterprise, moreover, almost ceased towards the end of the Republic; according to a phrase of Pliny, it was even forbidden by an order of the Senate.

There is, on the other hand, abundant record of taxation of provincial mines in the Imperial constitutions. The Roman State, and, relatively, the Roman Emperor, was the recognised proprietor of the provincial soil, and the provincial inhabitants were nominally his tenants, who had to pay taxes to the State for the enjoyment of their tenancy. It is plain from the documents we possess that the Roman State was lord and possessor of all mines situated in the provinces, and that it charged special duties for permission to work such mines. These taxes consisted, in analogy with the ground-taxation of land in the provinces, of a share in the gross product of the mines. Not infrequently the workers of the mine had to pay a share of their money value. In other cases, the tax was fixed in such a way, that, instead of a definite quantity of the ore extracted, a certain sum of gold was paid, as, for example, a solidus for every 25 lbs., or, after Justinian, for every 20 lbs. of copper.

Sometimes the miners were allowed to keep all they extracted, and had to pay a definite tax fixed in relation to the supposed value of the mine. Thus, in the gold-

washing and gold-mining districts of Pontus and Asia, seven scrupuli per head and per year were paid. This was the case elsewhere in the Eastern Roman Empire. A common rule for ascertaining the amount of the mining taxes does not seem to have existed in the Roman Empire. In however many different ways the mining taxes were estimated, the result seems nevertheless to have always been that the worker of the mines was only paid for his labour, and that all the rest belonged to the State and the landowners. The abundance of cases in which the workers of the mines tried to obtain remission of their back-standing mine taxes is a proof of this fact. To complete the picture, it is needful to add that in the Roman Empire there existed everywhere numerous gangs of mine slaves and mining colonists who were bound exclusively to a single mine, who were as a rule exceedingly harshly treated, and who were subjected to severe drudgery and heavy taxation.

It is a matter of dispute whether the mining regulations of the Middle Ages were or were not connected with Roman law. Recent German jurisprudence, however, denies that there existed such a connexion, the opposite view being held by the authorities of Italy, England, France, Spain, and Portugal. I myself lean to the latter opinion. I am, moreover, convinced that at latest towards the end of the Roman State everywhere over the Roman Empire the landowner no longer possessed the right to work such minerals as were found upon his soil to the exclusion of all other persons, but that everybody who was provided with a permit from the authorities, had a right to search wherever he liked—except under the buildings erected by others—for certain minerals (*nobiles lapides*), and that everybody after once more receiving permission from the authorities might work the mines so discovered by giving security to pay certain high royalties. I agree with the English and Italian judicial authorities in believing that the mediæval regulations with regard to mines stood in direct connexion with the conditions under which mines were worked in Roman Empire.

Modern German law professors consider that originally in the Middle Ages the landowner as such had the exclusive right to appropriate the minerals underneath the land he owned, until after the epoch of the Hohenstaufens, when the German Emperors arrogated this right of working minerals in mines to themselves. Then, underneath the open undivided common land (*Allmande*) the inhabitants of the parish had the right to mine. These views are not shared by foreign writers or by the older German authorities, and both the mining regulations and the codes of the Middle Ages point in quite another direction, while in antiquity itself such theories find no confirmation. According to Vol. III., Art. 66 of the *Sachsenspiegel*, no ground landlord could dig lower than a spade could reach in any part of his own land without permission from the Royal Courts, nor, without such permission, could he erect any mining buildings. On the open common land, according to Vol. III., Art. 86 of the *Sachsenspiegel*, the inhabitants of the parish were not allowed of their own accord to dig or fence about the land for their own purposes, and still less to engage in mining operations. I am convinced that all mining property was rather in the hands of the sovereign in early times. No one could engage in mining operations without permission from the Royal Courts, and those who obtained such a permission were obliged to carry on the work underneath ground belonging to some other person.

The right of the monarch to deal with the minerals to the exclusion of the landowner, and to grant the profits arising from them in return for taxes paid to persons other than the landlord was called from the twelfth century onwards a "Regal," because it was one of those privileges which the kings enjoyed by virtue of their royal office, and which no territorial lord could enjoy except by a direct grant from the sovereign. Like all other royal rights this right of mining from the tenth century onwards passed over into the possession of the territorial lord, in the earliest times by special royal grants, and later without any such. With the royal right of mining went the right also to let the mines to private persons for a rent. The right to raise mining taxes on such operations was to so great an extent the practical main import of the mining royalty, that sometimes, instead of the grant of the mining royalty, the grant of the right to collect mining taxes was legally given.

According to the Golden Bull of Emperor Karl IV. of the year 1356, chap. IX., all spiritual and temporal electors without special royal grant possess "universas auri et argenti fodinas atque mineras stanni, cupri, ferri, plumbi, et alterius cujusque metalli, et etiam salis tam inventus quam inveniendas," and also the right to levy mining taxes upon them within their electoral dominions. In the

Peace of Westphalia of the year 1648 (Art. 8, § 1), it was recognised that all the sovereign princes of the Empire had the right not only over the royal right of mining but also of collecting duties on mines which existed within their several dominions.

In France, the kings maintained their title over the royal right of mining, and also to levy mining taxes against the feudal lords. In England, the right of mining and the right of taxation was successfully proved to belong to the king and not to the ground landlord. As a further link in the chain of casual evidence connecting the right of mining with the mining duties, it is well to note the following facts:—

On the 30th of May 1413 King Charles VI. issued a patent against the feudal lords ("ceux qui ont juridictions hautes, moyennes et basses") in which he declared that to himself and not to the feudal lords belonged all mines existing within his dominions, and to himself and to no others the mining titles also. Because all mines in the whole of his kingdom belong to the king, the latter decides that any miner in any place, even under buildings belonging to others, is permitted to carry on mining operations, if he pays a tenth to the king ("parmi payant à nous notre dixième franchise").

King John of England declares, in a patent of October 29th, 1201, that all the tin-works existing within his whole realm are his property. On this, his possession of property, the king grounds his rights to allow miners to dig for tin wherever they will "ubique in moris et a fodiis" "Episcoporum et Abbatum comitatum." In consideration of the royal permission to mine for tin, the patent goes on to say that the tin miners must pay the proper tax to the King, and must carry on their operations only in his interest. The patent rests on most ancient rights recognised in the common law of England. Thus King John of England asserted his right, as King Charles VI. of France did, freely to grant the power of mining to everyone and to levy mining duties on each mine, not in the ordinary way of taxation, but as a right of mining belonging to him (and not to the feudal lord).

The right of the English king to grant tin-working permissions, in return for duties, on the land of other persons, called forth a growing opposition from the land-lords. In two charters of Edward I. of the year 1305, for the counties of Cornwall and of Devonshire, the tin royalty of the king with its consequences (declaration of liberty to mine and right over dues) is only acknowledged in the cases of the two named counties. Under the rule of Edward III. the Parliament issued a "declaration, limitation and exposition" of the above-mentioned charters of the year 1305, by which it was agreed that the royal mining officers for the future should not be allowed to mine for tin "in any meadow land, nor woods, nor among houses." At the time of Charles I. it had become law that new tin mines might only be started upon "wastrel lands." In a deed of November 23rd, 1262, King Henry III. of England claimed all the copper and gold mines in his whole realm as his property. Edward I. declared in the year 1276 that all mines for metals in Ireland belonged to him. But under Queen Elizabeth it was decided "in the great Case of Mines" that only auriferous and argentiferous ores, without reference to the proportion of precious metal which they contained, belonged to the Crown. At the present time, by law, only pure gold and silver mines are considered to be within the prerogative of the Crown. As there are no longer any such mines the royal mining rights have practically ceased to exist in England. At the same time, of course, the Crown has ceased to enjoy the right of passing on mining privileges to a third person in return for mining duties.

According to the practical legislation of the day in England, minerals are not royal property, they are not freely given to whomsoever may take the trouble of searching for them, but they belong exclusively to the landowner; and no mining taxes are levied in the interests of the State. As they belong to the landowner, the latter can grant to a third party the right to collect the minerals, in return for proper compensation. Elsewhere than in England, the sovereigns have almost everywhere recognised the right of the landowner to deal as he pleases with the minerals. In Hungary, from the earliest times, all mines, wherever placed, belonged to the king. But the king regularly resigned the right of mining to third parties in return for certain certain taxes (*Urbure, Urbur*), and under the inspection of royal officials they frequently gave, by special grace, to all the inhabitants of certain towns, liberty to search for minerals, and instructed their officers to set apart certain mining districts for those who were lucky enough to succeed. In the case of gold mines, the tenth, and of other metals the eighth part of the entire gross product of the mines had to be paid as *urbure* or *urbur*.

Appendix
C. XV.GERMANY.
Taxation of
Mines by
Dr. Arndt.

In England royal rights become restricted to gold and silver.

In Hungary the mines belong to third parties.

Appendix
C. XV.

GERMANY.
Taxation of
Mines by
Dr. Arndt.
In Bohemia and
Moravia kings
grant rights of
search.

As large revenues came in to the king from the mines, it was provided in what way the mines were to be conducted, so as to keep up this return. The landowner received a third part of the *urbure*, but had to supply the miners with wood for their implements and huts.

The kings of Bohemia and Moravia, too, formerly exercised the royal right of mining, and made it serviceable by permitting mines to be worked only in consideration of paying certain dues, and abiding by fixed regulations. Thus, between 1249 and 1251, the king gave permission to the citizens of Iglau "ex plenitudine graciae nostrae et favoris regia auctoritate et libera voluntate" to search for minerals wherever they pleased, and even in the estates of others. The discoverer would be rewarded with the lease of a certain mining locality. The worker of the mine was obliged to pay to the king, if it was gold, $\frac{1}{10}$ th, and if of other ores, $\frac{1}{10}$ th, as the *urbure* and other taxes as well, and had to conduct operations in the mines leased to him in a manner which was particularly set down. The contents of the so-called Kuttenberg Mining Law of King Wenzel II., circa 1300, are much the same. By that law the king received the following taxes:—

1. The *Urbure* in its more limited sense, i.e., *una octava sine omni expensa*.
2. Five thirty-twoths of the gross returns.
2. A Schichta in nona parte fabili; and
4. A sixteenth of what the chief donee received from the second donee.

If these taxes were too heavy for any one, he might consider, says the king, whether he chose any longer to carry on mining operations under the regulations of the king's mines. But he, the king, was at liberty to administer the Crown lands exactly as he saw fit. The king thus claims his right to mining dues expressly on the ground of his property in the mines themselves. The king made it the duty of the ground landlord to set apart, free for each mine 16 building plots and a sufficient pasture plot, in return for which he was to receive a third part of his octava, and $\frac{1}{2}$ nd more from the gross product of the mine, the latter as *pars agrorum*, part of his fields.

To the Margraves of Meissen was granted by the Emperor and the empire the royal right of mining within their Margravine. They set a bailiff over the mines, to whom they delegated the authority to lease mines on behalf "of them, the Margraves," through their entire principality. The Margrave's share was one third of the net return of each mining enterprise. The ground landlord might claim a $\frac{1}{3}$ nd as his *pars agrorum*. The mines were to be worked in such a way as to be for the use and profit of the sovereign, that is to say, to ensure him a good sum for his share. If for three days running the mine was not worked in the prescribed way, the possessors lost their right to it, and the bailiff was allowed to re-let it, in the interest of the Margrave, to whomever he chose. The advantage of the sovereign is laid down in the Freiberg Ordinance as being the object of mining enterprises.

It would take us too long to examine all the numerous German mining regulations. In the course of the historical development of Germany there came to be as many lords claiming royal rights of mining as there were sovereign princes, and there were many others who, having no original right to it, had obtained it within their own possessions by special grace of the Emperor or of a reigning prince. Almost all these possessors of royal rights of mining (Bergherrn) issued express orders, all of which agree in taking for granted that the exclusive right of mining for minerals belongs to the Bergherr. This exclusive right, which some jurists interpret as an actual property in the minerals extracted and others as a fee on occupation, was exercised by the Bergherr in the following different ways:—

1. By virtue of the royalty they retained certain minerals for their own profit.
2. They reserved to themselves, by virtue of the royalty, certain lands for their own exclusive mining enterprise. Such reservations became workable in virtue of the simple declaration of a mining official.
3. They leased, with or without raising taxes, within large districts, and in virtue of the royal right of mining, to certain persons the exclusive right of digging for and making a profit out of certain minerals.
4. They declared by virtue of the royalty the mining for minerals to be free in this sense, that, so far as certain minerals or certain portions of land were not reserved for mining purposes by the Bergherr or by persons named by him, every one was free to mine where he liked. The man who discovered minerals under these circumstances was allowed to enjoy the profit of his discovery after the payment of certain taxes, never exceeding a tenth. But when the mines were in this way assigned to the miner, they still remained the property of the Bergherr. The

mining adventurers had only a very limited right of use, a so-called sub-possession. The mining taxes made their appearance as the results of the royal rights of mining; the proof of this is that the Bergherr could pass on the right of mining to a third party. It is said in the Churtrier Mining Ordinance of July 22, 1561: "Since We as sovereign prince have right over our royalties from all ores and metals to claim the legal tenth part."

As the mining duty is the price for granting the right to mine, and is not a tax, it belonged, and still belongs, to the private Bergherr. Thus the Counts Schlick, although they had no sovereign status nor authority to collect taxes, claimed their royal rights of mining. By the treaty of April 1, 1534, King Ferdinand I. of Bohemia and Arch-Duke of Austria distributed the lesser metals to the Bohemian Orders, and kept only the precious ones for himself. Since then the mining duties on the lesser metals have belonged to the Bohemian Orders, and the Crown has no claim on any but the precious metals. By the treaty of 1534, too, the Lords of the Orders of the Duchy of Silesia, which then belonged to Bohemia, relinquished their exclusive administrative right over the lesser minerals and their authorities to levy mining duties, on the ground that it was their pleasure to declare mining to be free, and no longer to exercise it exclusively for their own profit.

In the former kingdom of Poland the right of mining was, since 1573, in the hands of the nobles. They also claimed the right of levying mining duties. These latter were also only levied on the sovereign minerals. But the mining royalty had a different extent. According to German common law, and according to Saxon law, property in coal and peat was not included in the royal right of mining, and therefore subjected to no mining duties. In Silesia, iron was considered as belonging to the owner of the ground, and not of as belonging to the State. The Silesian iron mines accordingly, until the Prussian law of October 20, 1862, which regulated what taxes were to be levied in the entire monarchy on all mines of iron ore in the State, paid no mining taxes whatever.

In the interest of his own revenues it was the habit of the Bergherr to regulate the management of private mining establishments by his own officials. The latter carried on the entire business; in Prussia, for example, they fixed the amount of the shares of profit to be paid to the mining adventurers, or the sums to be paid in by the latter. They engaged labourers, surveyors, overseers, &c. For all these acts of the State officials, the mines were charged special payments. The high duties which the State levied from the mines as an expression of its right to preserve to itself the most valuable minerals and the richest mines, and its patronising direction of private mining, called forth an increasing spirit of opposition from the mining interests. To many, the royal right of mining itself grew to appear an encroachment on the rights of the ground landlord. It was in France that the newer legislation in mining matters first took its development.

PART II.

Until the great Revolution the kings remained in possession of the right of mining, and it was a matter for their choice whether they should give the right to certain persons or to the public at large. As a rule, they did not make mining absolutely free, but allotted to certain persons and companies the exclusively right of mining. When the National Assembly was being constituted in 1791, some proposed "que les mines et les minières font partie de la propriété foncière," others "que les mines et les minières sont à la disposition de la nation." The latter formula is said to have been that of Mirabeau. Such was the sense of the French mining law of July 28, 1791. On the strength of this decree of the nation, the State authorities henceforth had the duty of allotting mining concessions to the adventurers. The law in question comes to no decision with regard to taxes. The previous mining taxes, as the matter of fact, ceased to be levied. By a decision of the Council of State of the 4th of Thermidor, An X., the Government held itself bound to levy special taxes on the concessionaries of mining concessions. Besides this, in the territories conquered by France, certain special mining taxes were sometimes paid under the "régie de l'enregistrement." Finally, mines in conquered districts were often leased privately or by public auction. Everywhere the mines were subjected to the universally levied "contribution foncière" of the year 1790. These land taxes in the intention of the constituted

In Poland
mining rights in
hands of nobles.

Law of 1810.

General Assembly, and in view of the wide-spread physiological tendency of France in those days, were to be the only ones (*impôt unique*). But so early as 1791 the constituted General Assembly concluded to levy fresh taxes. The land tax, which exists to-day in France, and to which mines are subjected at the present day, was levied upon all immovable property, portions of the soil as well as buildings. It is re-enacted by the law of the 3rd of Frimaire, An VII. (23 November 1798), and belongs to the "impôts de répartition," that is to say, to the class of taxes the total amount of which is fixed by the State Householders' Act, and is divided among the various parties liable. The division is regulated by the net product of the piece of land. It amounts to a species of "charge réelle." The piece of ground itself is regarded as the chargeable object. ("Le propriétaire n'est quelque sorte qu'un agent qui l'acquiesce pour elle et avec une portion des fruits, qu'elle lui donne." Fournier, p. 9.) As net product is treated whatever remains over when all the expenses of cultivation and of maintenance are paid. In this land tax are included "mines, minières et carrières" on the basis of the surface of the ground they occupy.

The "salines, salins, et marais salants" were in the same way "à raison de leur surface" entered in the category of the best lands ("meilleures terres labourables"). The buildings connected with salt-works were treated as ordinary buildings.

The "Code des Mines" of April 21, 1810, which is the mining law still in force in France, expressly declares that all special duties which have been paid by mines to the State, either on the ground of laws, ordinances, and regulations, or according to the concessional agreements, or by virtue of demesne or auction leases, are hereby annulled, and in clauses 34 and 35 a special mining tax is introduced. According to the Code, mines can only be worked by virtue of an act of concession granted by the Council of State. The grant of the concession depends wholly on the decision of the authorities, neither the ground landlord, nor the person who has first discovered the mine, has anything to do with the concession. Attention is paid to the interests of the ground landlord only in so far as in the deed of concession it may be laid down that the concessionaire has to make certain payments to him. The taxes to the State which the Code des Mines, maintaining the general land tax, introduces for mines, are the fixed "redevance fixe") and the proportional tax ("redevance proportionnelle"). The former amounts to 10 francs for each square kilometer of the mining district conceded. The latter will be fixed each year by the State, but never so as to exceed five per cent. of the net return. By the decree of 6 May 1839 the proportional tax was fixed for ever at five per cent. of the net return. The adventurer may demand a tax inspection. The levying of additional centimes ("pour remises des receveurs des finances, frais de perception et non valeurs"), as well in case of the fixed as of the proportional tax, is regulated so as to form a reserve fund for the Minister. Out of this fund the Minister has the power to pay the mining taxes on behalf of any possessor of a mine who through accident or misfortune happens to be in distress. Finally, the Imperial Decree of 6 May 1811 orders the levying of special "centimes pour frais de réception."

The mining taxes of the Code des Mines are made to correspond to the gross tenth then levied throughout Germany, and are regarded by their author as extremely reasonable ("extrêmement modique"). Originally these duties, whether the fixed or the proportional mining taxes, were not considered as a part of the State finances, but were expended in the interests of French mining. Later practice has given these duties a more financial and fiscal character.

The mining taxes of the French law are levied only from "mines," and not from earths in which minerals are found ("minières") or from quarries ("carrières"). The distinction lies in the fact that to work the first a concession and in the second case only a permission is required, whilst the working of the third is not under the cognisance of the police, but regulated by the ground landlord. A concession is required to mine for gold, silver, platinum, quicksilver, lead, iron, copper, tin, zinc, calamine, bismuth, cobalt, arsenic, manganese, antimony, molybden, graphite, or other metallic objects sulphur, all kinds of mineral coal, fossil wood, bitumen, alum, and sulphuric combinations with metallic bases. Iron, however, only belongs to mines when it is found in strata or layers, in opposition to the alluvial iron (meadow ore), which is the property of the ground landlord. Those mines which are subjected to concession are excluded from the administrative jurisdiction of the ground landlord, and are placed under that of the State. The "minières" and "carrières," on the other

Appendix
C. XV.

GERMAN
Taxation of
Mines by
Dr. Arndt.

hand, belong to the ground landlord, and the Government cannot let these out, as it can the mines, to persons making application. The only case in which the State can do this is when the ground landlord is not willing to take up the working of the "minières" himself. The "minières" include the meadow ore, silicious earths, which can be used in the preparation of vitriol, alum-earth, and peat, and may be worked by the ground landlord on his applying for a permission. To the "carrières" belong slate, sandstone building and other stone, marble, granite, chalk, gypsum, porcelain clay, tarrars, basalt, lava, marl, sand, &c., all which may be worked without permission.

Thus only those minerals which are absolutely under the administration of the State, and fully disengaged from the rights of the ground landlord, are subjected to mining taxation in France. For this reason they are free from the "impôt de la patente," which is levied on the "minières" and "carrières." The "impôt de la patente" was introduced with free trade in the law of March 2, 1791, into France. This patent duty consists of a fixed and of a proportional duty. The fixed duty is calculated according to tariffs laid down by law in proportion to the population of the communes in which the trade is carried on, and in proportion to the importance and profit of each trade. It consists for "minières" and meadow-iron works of 5 francs, with addition of 3 francs for each workman, to a maximum of 200 francs per annum; for "carrières" also 5 francs, with addition to 3 francs for each workman, to a maximum of 300 francs per annum. The immunity of mines from patent duty extends only to the produce and the sale of produce. Trade with these, as for example, the small retail trade in coals in public shops, is subjected to the patent duty. The turning of coal into coke is treated as a mere improvement for sale, and is not subjected to the patent duty. The concessionaries of rock-salt works and salt springs pay no patent duty, because salt and salt springs are by the law of 17th June 1840 appended to the category of mines. On the other hand, by the law of 20th December 1876, a duty of 10 francs per 100 kilos is levied on salt.

French legislation with regard to mining taxation has been imitated in various countries.

In Belgium the French Mining Law of 21 April 1810 is in force. Salt is, by a special decision of the Belgian Council of State of December 1, 1837, considered as a "mine" in the sense of the said law. Articles 32 to 37 of the law of 21 April 1810 are still in force in Belgian law. There also exists in Belgium the fixed tax of 10 francs for each square kilometer of conceded mining surface of land and the proportional duty on net returns. The latter, in practice, consists of only 2 per cent. of the net returns, as against 5 per cent. in France.

The net returns are fixed by the returns of the previous year.

In Luxemburg, also, the French Mining Law of 21st April 1810 is in force. The very important iron mines in that country, from their position and character, fall mostly under the category of "minières," and are accordingly free from all mining taxation.

The Greek Mining Law of 22nd August 1861 is founded upon the French one, and rests, as that does, upon the distinction between "mines," "minières," and "carrières." The product of the mines can only be obtained by right of a concession (Art. 5), granted by the Government. The statement of concession fixes the share in the returns of the mine to be given to the proprietor of the surface of the land. The owners of mines have to pay to the State a fixed mining tax of 30 centimes on each hectare of the ground conceded, and a proportional tax on the net return ("sur les produits des mines avec la seule déduction des frais du matériel et des travaux de l'exploitation"), which tax is fixed each year by the budget, and in no case may exceed 5 per cent. of the net return of the mine.

The Sardinian Mining Law of 20th November 1859 agrees in all essential points with the French Law. It makes a distinction between mines and quarries. According to Article 13, into the former category come all mines which contain tunnels, strata or things out of which are extracted gold, silver, platinum, iron, copper, lead, zinc, tin, antimony, quicksilver, manganese, and other metals; also sulphur, sulphates of iron, copper and zinc, aluminium, alum, magnesium, bitumen, asphalt, graphite, can, by Article 15, only be worked on the basis of a royal commission. The mining concessionaire has, by Article 59, to pay a fixed tax (*tassa fissa*), and a proportional tax (*tassa proportionale*) to the Treasury. The fixed tax amounts to 50 centesimi for each hectare of the upper

Impôt de la
patente.

BELGIUM.

LUXEMBURG

GREECE.

Distinction
between mines,
minières, and
carrières.

Appendix B.
C. XV.
GERMANY.
Taxation of
Mines by
Dr. Arndt.
TURKEY.

surface of the concession, in no case to be less than 20 lire (Article 60). The proportional tax, by Article 61, is to consist of 5 per cent. of the net return of the mine, and is to be fixed each year by the Governor of the province at the suggestion of the mining engineer.

The Turkish Mining Law of 17th July 1861 ordains that the extraction of mineral substances is only to be permitted in virtue of an imperial *Irade*, and that the concessionaries must pay taxes to the State, which taxes are to be fixed in proportion to the richness of the mines which are to be worked.

SPAIN.

The mining legislations of Spain and of Portugal show the same affinity to French mining law.

The Spanish Mining Law of 6th July 1859 is based on the supposition that all minerals set forth in its Article I. are the property of the State, and that no one is able to work them without a concession from the Government.

The mines so depending on a State concession have to pay the following taxes:—According to Article 80, every actual mine has to pay 200 or 300 reals, and all heaps of mining rubbish or slag 400 reals, on each 40,000 square metres of surface occupied. For each permission to explore ("permiso para investigacion") 200 reals per annum, and 120 reals for drawing out the document of concession, are charged. Besides this, by Article 84, a gross tax of 3 per cent. (without abatement of any expenses whatever) is levied on the mine. But from this tax all mineral fuels, ironstone, calamine, blends and their products, coke, iron, and zinc were expressly exempted for a period of 20 years from the date of the promulgation of the said law.

PORTUGAL.

The mining law for the kingdom of Portugal and Algarve of 31st December 1851 also rests upon the distinction between the right of administration of certain minerals and the right of ground property. The product and enjoyment of all metallic substances, as well as the product of salts and fuels, which require mining operations and fixed establishments for their extraction, are the object of a concession which must be obtained from the State (Art. 19). The mining concessionaries are obliged, by Article 38, to pay to the owner of the upper surface of their mining district a proportionate share of the net product ("producto liquido"), which must never be more than 2½ per cent. They have to pay to the State a fixed and a proportional tax. The former consists of 80,000 reis per annum for 10,000 square metres. The latter is not to exceed 5 per cent. of the net product. All locations desired for concession after the publication of this law enjoy, by Article 42, full exemption from taxation for two years after the date of the concession.

HOLLAND.

In Holland, the French Mining Law of 21st April 1810 is in force. The proportional mining tax is 2½ per cent. of the net product.

RHINE, left side.

In the Prussian Rhine Province, on the left-hand side of the Rhine, the French duties are paid in accordance with the law of 20th October 1862.

BAVARIA.

In the same way, in Bavarian Rhine Palatinate, the rules of the French Mining Taxation Law are made the basis of the law of April 6, 1869, as regards duties levied on mines.

RUINE-HESS.

In the Grand Ducal Hesse Province of Rhine-Hesse, the French Mining Law of 21st April 1810 is the basis of the law of 28th January 1869 for the Grand Duchy of Hesse. The taxation of mines in the said province is at present based on French law.

The German
"Bergrecht."

The countries of the so-called German Mining Right ("Bergrecht"), to which more attention will now be given, agree with the countries of the French Mining Right in so far as that in both the right of administration of mining materials is distinguished from the right of administration of ground property, and that only the minerals which are removed out of the power of administration of the ground landlord, and not others, are subjected to mining taxation. In general, the countries of the so-called German Mining Right are distinguished from those of the French Mining Right, in the fact that in the one case the grant of the ownership of mines in existing law is connected with certain judicial regulations, whereas in the other it is subjected to the free judgment of the official authorities.

PRUSSIA.

So far as Prussia, which is one of the countries of the so-called German Mining Right is concerned, there was lacking in the case of this kingdom any general basis for the taxation of mines until the Mining Law of 20th October 1862 was passed. It has been already mentioned that for one division of Prussia, the Rhine Province on the

left bank of the Rhine, the French system was adopted in the framing of this law. For those parts of the country which lie on the right bank of the Rhine there existed 12 distinct mining ordinances, and in almost all cases a merely subsidiary right, that of the General Prussian Land Law. All these laws were based upon the royal right of mining, and took for granted the right to levy taxes on the mines subject to the right. The taxes were considered as the price for the transmission of the authority to mine from the lord of the royalty to a private individual. They are only levied by the State when the possessor of the State authority is lord of the royalty as well. On the track of this primal tax there followed a variety of lesser mining duties.

The three revised mining ordinances of Friederich II. and the Prussian Land Law were the main authorities for these taxes.

The revised (Cleve-Mark) Mining Ordinance of Friederich II. for the Duchy of Cleve, Principality of Meurs, and County of Mark, of the 2nd April 1766, gave permission to every one who had already received a concession from the Mining Department to dig in all parts of the ground for all royal minerals, except salt, which the State retained for its exclusive benefit. Those who worked the mines must pay a tenth of the net product to the sovereign. In the case of coal, this is to be calculated on the entire money return; in the case of other mines, the sovereign takes upon himself the necessary expenses for pockets, washings, and huts in the preparation of the ore. In each mine, out of 128 ordinary shares (i. e. shares) two must be reserved for the sovereign, two for the persons on whose ground the mine is opened, two for keeping up church and school, and two for the poor box. In place of the sovereign's two free shares, there was substituted on the 17th of August 1766 a sovereign's free-share tax, which was abolished by section 6 of the law of the 12th of May 1851. The two shares for the poor box were set aside by section 9 of the relief law of 10th April 1854.

In coal mines, two of the ordinary 128 shares are put aside for the sovereign. The ground landlord receives no ground share, or free share, but, in their place, the "Traddle," a gross tax, consisting of 2½ or 3½, according to the amount of the ground used by the mine. "For the maintenance of the mining officials" the mines have further to pay the so-called quarter-money. Moreover, all mines, whether being worked or not, each quarter have to pay certain taxes "for the preservation of their rights" in each mining property. Finally, special fees of various amount and nature were raised according to a special tariff.

The revised (Silesian) mining ordinance for the Duchy of Silesia and the County of Glatz, of the 5th of June 1769, and the revised (Magdeburg-Halberstadt) mining ordinance for the Duchy of Magdeburg, Principality of Halberstadt, County of Mansfeld, &c., of the 7th December 1772, agree minutely with one another. They start from the position that all minerals which, as being royalty belong to the sovereign are to be leased out for mining purposes, with his permission. Rock salt and salt springs are reserved to the sovereign for his own use. Those who lease the royal minerals within a fixed district are obliged to pay a tenth of the gross return, quarter and contract money, as well as fees, all of which agree in essential respects with those laid down in the mining ordinance for Cleve-Mark. But, in disagreement with the latter, the mines are obliged, out of 122 ordinary shares, to set aside six free, namely, two for the ground landlord, two for the maintenance of church and school, and two for the poor box. The two last-mentioned shares were abolished by section 9 of the poor law of 10th April 1854.

The General Land Law of Prussia describes the minerals which are subjected to royalties as objects without a master, in which no one but the State has any right of property. The State lays the royal minerals open to mining operations freely, so far as it does not retain for its own exclusive use certain mining localities. According to section 98, Part II., heading 16, the tenth part of all metals and minerals which leaseholders obtain must be paid to the State.

On the cost of product of these metals and minerals—see section 99—the State makes no claim for a tenth. In default of special regulations of the provincial mining ordinances the mines enjoy a freedom from tenths for six years. Coal mines do not enjoy this exemption. Besides the tenth, the leaseholders must pay quarter-money for the maintenance of the mining officials. Finally, every mine, whether it is being worked or not, and every other sort of mining property, is charged every quarter the contract money, due to the Mining Department, in accordance with section 104, Part II., heading 16. The neglect

SILESIA

PRUSSIA

to pay contract money for four successive quarters renders the mine liable to return to the State. Contract and quarter-moneys have by section 108 to be paid to the State, even by the proprietors of private mining royalties.

As will be seen from what has been said, the mining taxation of Prussia was very heavy, amounting often to as much as 15 or 20 per cent. of the gross return. Such a burden as this, is severe competition with those mines which were free from all fiscal taxation, would have been more than private mining enterprise would have been able to support, if the State had not fixed such a price for the products of its own as well as of private mines as sufficed to ensure for them a sufficient working profit. Mining was protected against foreign competition by the high cost of carriage, and by the duties charged on articles when imported. Finally, it was specially the case with the coal, that this mineral, in the law of May 26, 1818, had a protective duty of 5 groschen in the eastern province, and of 4 groschen in the western province on every 10 hundred-weight. In the year 1850 the duty was fixed by tariff as 1½ silver-groschen on the hundredweight of coal. By the aid of the duty the Silesian coal, in the year 1850, drove English coal out of the field in Berlin. In order to facilitate the exportation of home mining products, for some time after 1830, the tenths were not levied on Westphalian coal passing into Holland. Nevertheless the burden of the mining taxation was generally felt.

The requirements of the mining interest were mainly these:—

1. The alleviation the mining taxes;
2. The abolition of the State system of patronage;
3. The abolition of the right of the State to reserve, with the exclusion of private competition, the most valuable mining localities;
4. The introduction of protective taxation.

On the 28th of July 1848 the deputy Harkort in the National Assembly proposed the equalisation of the mining taxes of the right bank of the Rhine with those of the left bank, which were much smaller, on the basis of the limit of 5 per cent. of the net return. On the 15th of August 1848 the National Assembly agreed to:—

1. The revision of the law of mining property;
2. The empowering of the Government provisionally to bring the mining taxation down to a limit of 5 per cent. of the net receipts, even if the works should have to be discontinued or lessened in consequence.

This decision became law by an Order in Council of the 21st of September 1848.

In 1851 a legal regulation made another change in the old condition of things. The law of the 12th of May 1851, with regard to the conditions of co-partnership in a mine throughout the whole extent of the monarchy, with exception of the districts lying on the left bank of the Rhine, limited the patronage system to a signal extent, and gave proprietors an increase of influence in the administration of the mine.

Another law of the same day, which, in like manner, dealt only with the right bank of the Rhine, brought down the mining tenth to a twentieth, abolished the free-share taxes of the sovereign, the quarter-money and other duties, amounting in all to 24 different taxes, and ordained in their stead, for all mines that were working, and so long as they found a sale for their products, an inspection tax amounting to 1 per cent. of the gross returns. The inspection taxes were charged also on mines worked or leased by private possessors of the right of mining, as, among other things, the said tax was understood to take the place of the quarter-money, but according to section 108, Part II., heading 16, of the General Land Law, this must be paid by the private possessor of the right of mining himself. The contract money remained, but was fixed at one thaler a year for each mine let by the State without regard to whether it was being worked or no.

PART III.

In the year 1860 legislation proceeded further in the direction already indicated. A law of May 21st of that year limited the State right of supervising a mine to the preservation of the continuance of the mine, the safety of the buildings, the surface of the ground (in the interests of private and public business), and the life and health of workmen. Another law of the same day abolished all fees and taxes in relation to the administration of mines. A further step was taken by the law of May 22, 1861, relating to the lessening of mining taxation throughout the whole extent of the monarchy, with exception of the districts lying on the left bank of the Rhine. This law reduced the twentieth of the 1st of January 1862 by about a fifth, and decreed that every spring, when the receipts from this

tax had reached the sum of a million thalers, a further reduction of a fifth should be made, until the tax amounted to 2 per cent. of the returns. This system of legislation found its final development for the whole extent of the monarchy in the Mining Law of 20th October 1862. This liberated the iron ore mines from 1st January 1863 onward, from all mining taxes to the State, and reduced the 4 per cent. mining tax of the law of 22nd of May 1861 from the 1st of January 1863 to 3, from the 1st of January 1864 to 2, and from the 1st of January 1865 to 1 per cent. The inspection duty remained in force, the contract money was abolished on the 1st of January 1865, but all previous exemptions from tenths and from inspection duty, so far as they were not based on private titles, were done away with. Finally, in the left-hand Rhine provinces, upon the abolition of the French mining duties, on the 1st of January 1865, a 2 per cent. mining tax was raised on the value of the product of the mine at the time of its sale, iron ore works being excluded.

On the other hand, mines are exempted in Prussia, in consequence of a decree of the Cabinet of January 9, 1823, regarding the freedom from taxation of mines granted in fee, &c. (Collection of Laws, page 16), from the payment of ordinary trading duties. Mines not granted in fee were obliged to pay the trading duties; but as a matter of fact, the coal mines in the former Saxon portions of Prussia, though not enfeoffed, were subjected to no trading duties. Mines in Prussia are not charged with land tax in respect to the locality leased by them.

The General Mining Law for the Prussian States of June 24, 1865, which is based on the distinction between the right of administration over minerals and the right of administration of the landowner, and, further, on the lawful title founded upon a claim based on legal documents of the claimant to the acquisition of the property in a mine in a particular locality has, by section 245, confirmed all the previous regulations with regard to the payment, demand for, and levying of mining taxes.

Hence, since the 1st of January 1865, in the whole extent of the Prussian State the gross taxation of all leased mines (except coal mines) is fixed at 2 per cent. Of this 2 per cent. 1 per cent. is understood in all districts on the right-hand side of the Rhine to be inspection duty. The 2 per cent. mining tax was introduced into the former kingdom of Hanover by Article XXI. of the Ordinance of 8th of May 1867; into Hesse, Frankfurt, and the former Bavarian portion of Prussia, by Article XVII. of the Ordinance of 1st of June 1867; into Schleswig-Holstein by Article IX. of the Ordinance of 12th of March 1869; and into Lauenburg by Article VII. of the Law of the 6th of May 1868.

Rock salt, salt springs, and salts found in connexion with rock salt in the said localities are not subjected to the mining tax of 2 per cent. On the other hand, according to section 2 of the Ordinance respecting the levying of a tax on salt of the 9th August 1867, the salt intended for home consumption pays a duty of two thalers per centner net weight.

The mining taxes are levied, we may repeat, in Prussia also only on leaseable minerals, which are subjected to mining royalty, or as people are now accustomed to call it, "Bergheheit," and which are withdrawn out of the administration of the landowner. Those minerals which belong to the landowner, as, for example, coal in the former Electoral Saxony, are subjected neither to mining taxation nor to the so-called inspection duties. The right to tax mines is so closely connected with their being leased by the State, that those mines which, on the basis of earlier laws, are already leased away, continued to be subjected to mining taxation under the rule of the general mining law, even when the latter decides that the minerals belong to the landowner. This is the case, for example, in fluor-spar mines in the districts formerly under the jurisdiction of the electors of Cologne, which contain quarries for millstones, tiles, gypsum, and marble, and which were leased before the general mining law came into operation. Further, by section 1 of the General Mining Law, so far as this is not set aside by the provincial deviation in section 210ff, gold, silver, quicksilver, iron, with the exception of meadow ore, lead, copper, tin, zinc, cobalt, nickel, manganese, arsenic, antimony, and sulphur, alum and vitriolic earths, coal, peat, and graphite, with rock salt and all such salts, and salt springs as are found in the same locality, are removed out of the administration of the landowner, and can be only worked on the authority of a grant from the State.

The four specified laws, namely, the laws of the 12th of May 1851, 21st of May 1860, 22nd of May 1861, 20th of October 1862, are now only employed when the lease of the mine has been given by the State, and not when this has been done by a private possessor of the right of mining. Those mines which are leased out by private

Appendix
C. XV.
GERMANY.
Taxation of
Mines by
Dr. Arndt.
Taxes on iron
abolished.

Result of Prussian
legislation.

State mines.

Private mines.

REPORT to the ROYAL COMMISSION ON MINING
ROYALTIES by Dr. jur. Georg Heinrich Wahle, Königl.
Sächs. Bergamtsdirector. Freiberg i. Sa., 22. II. 1892.

As regards the Mining Law of Saxony.

In Saxony there are mines working:—

1. All minerals that contain metals (metalliferous substances, chiefly silver, lead, tin, zinc, arsenic, bismuth, cobalt, iron); and
2. Coal (inclusively, lignite, stone coal and brown coal, hard and soft coal).

The metalliferous mines of Saxony, existing more than 700 years, and, in former centuries, procuring great wealth to the country, are now only to be worked with a considerable pecuniary aid of the State (2 to 3 millions of marks a year).

Coal mining only gained its importance during the last 50 years, and has reached at present the greatest height of its produce. It is lucrative for all those who are concerned in it, in spite of the greatest difficulties that must be overcome.

In the metalliferous mines (including the smelting works, which are not subject to the mining law), about 10,000 miners are employed now; in the coal mines about 30,000.

Both branches of the mining industry are subject to the Saxon mining law of June 16th, 1868, but are dealt with according to different principles.

Metallic minerals are excluded from the rights of the surface-owner, and are granted by the State to every applicant for search and working.

Coal belongs to the owner of the surface, and may be explored and worked by him or anyone else charged by him with it.

To both the branches of the mining industry only refer those regulations of the mining law which depend on the concession system (concerning mining police, inspection of mines, expropriation, indemnification for damages, neighbours' rights, co-ownership and partnership, companies and corporations, employers and labourers, employment of women, young persons, and children, master and workmen, arbitrations, insurance funds, &c. &c.).

Reply to Memorandum.

In order to obtain a grant for working a mine, the applicant must present a petition in two copies to the council of mines (Bergamt). This petition must contain:—

- a. The name of the metalliferous minerals the claimant wishes to gain;
- b. An exact description and the precise limits of the claim (land) he proposes to work, in the horizontal projection of the superficial area;
- c. Some proof or scientific evidence that such minerals will, in all probability, be found;
- d. The name to be given to the mine;
- e. The name, profession, residence (permanent address) of the applicant.

At the request of the council of mines the claimant has to present a plan of the land for which he is desirous to obtain the concession, and to give a security for the payment of the expenses. The amount of these expenses varies from 50 to 500 marks, according to the extent of the concession desired, and the circumstantiality of the inquiry.

2.—a. The concessionaire has to pay for the concession a quarter by tax to the State (Ginbenfeldstener). This quarterly tax amounts to 30 pfennig for gold and silver, 20 pfennig for all other metals per unit (measuring unit=Maasseinheit).

One unit of a claim is equal to 1,000 square lachters=4,000 square meters (excepted concessions for superficial mines, seldom or ever desired and granted,—one unit of a claim for streamwork=4 hectares, and for heap, halde, and slime works=40 hectares). The number of units of one concession is unlimited; each concession can embrace several units. The council of mines (Bergamt) can grant to the applicant as many as he desires to have, if the land is not yet occupied. Some concessions for greater mines contain up to 500 units (equal to 2,000 hectares).

b. A minute distinction is made between the right of searching metalliferous minerals and the right of working (gaining) those minerals:—

- (a) In order to obtain an exclusive right of exploring a certain district the explorer must request the council of mines (Bergamt) for a license to search. This license to search is given for one year, and may be prolonged for six months only when unavoidable delays take place. The license extends to particular area not more than 100,000 square lachters (equal to 400,000 square metres). The license to search, which gives the preference of the concession, is seldom exercised in Saxony, because the existence and nature of minerals (all layers) is thoroughly known throughout all the country.
- (b) The right of working a mine and of gaining metalliferous minerals is granted for perpetuity (without temporary limits).

c. The concessionaire must pay the tax (a) and work the mine; he must employ at least two men per week-day eight hours for the first unit; three men for two to six units; four men for seven to twelve units, and so in proportion.

If he does not do so, the council of mines (Bergamt) is authorised to punish him, or to withdraw the concession from him, but this power is seldom or ever exercised.

The council of mines may dispense the concessionaire from these regulations and so always does if he applies for it.

d. There is no term fixed for the concession, but for the license of search (b. &c.). If a license of search is expired, it cannot be renewed before three years.

3. The concessionaire is allowed to assign or sublet his concession to anybody else. He needs no permission for doing so.

He must give notice of the lease or assignment to the council of mines (Bergamt), and to the court of justice (Amtsgericht), that they are always informed who is working the mine.

4. The worker is responsible for all damages done to the surface, but not for damages done to houses built in front of his working or after the beginning of working.

The surface-owner must—as he likes—either sell or lease him the land necessary for working the mine. Then the worker has to pay the value of it or an annual rent. Disputes as to land are settled by the council of mines (Bergamt) and the local government (Amtshauptmann, Stadtrath). If the surface-owner is not satisfied with the amount of the compensation settled by the local authorities, he can appeal to the legal court of justice (Ordentliche Gericht).

5. The concessionaire of a mine on land belonging to A has the power to send the minerals over the land belonging to B so as to reach a railway or port or shipment; but he must indemnify B. There is no difference whether the land that has to be crossed over thereby belongs to the owner of the surface under which the mine is worked (A) or to any other surface-owner (B). Both must leave the way and can demand an indemnification from the worker. The right of mining is real property and distinct from property in the surface.

(6.) The worker may construct works for underground passage or for drainage or ventilation (or even for more profitable working) in adjoining mines, if he does not disturb, by it, the works of the neighbour, and makes compensation to him for the damage done thereto. Disputes as to such works are decided by the council of mines (Bergamt) only, any other court of justice being excluded on this case.

7. The original concessionaire may part with the concession to other parties as he likes. He is not bound to ask anybody for it. He must only give notice to council of mines (Bergamt) and to legal court of justice (Amtsgericht).

Dismemberments of the concessions are not exercised.

8. The following taxes are levied:—

A. From metalliferous mines—

- a. To the State—
 - (a) the tax fixed for the concession;
 - (b) the usual income tax;
 - (c) the common tax, for the land and buildings, belonging to the owner of the mine (Grundsteuer).
 - (d) contributions to the legal fire insurance fund.
- b. To the community, the communal dues for churches, schools, and other communal purposes.
- c. Contributions for the miners' fund and insurance.

c. in brown-coal mines:—

Year.	Marks per Year.	Marks per Day.
1888	559.06	1.86
1889	559.77	1.87
1890	586.10	1.95

C.—Normal daily output reckoned for a day's wages:—

Year.	Metalliferous Mines.	Stone-coal Mines.	Brown-coal Mines.
	tons.	tons.	tons.
1889	0.0231	0.713	1.140
1890	0.0236	0.690	1.220
	Marks.	Marks.	Marks.
1889	2.32	6.37	3.37
1890	2.91	6.75	3.65

In 1890 one workman brought to the mine-owner a daily profit of 0.71, 3.45, 1.70 marks.

10. There is no difference between the wages and economic positions of the miners in mines worked by the State and those worked by a concessionaire. The State, when working a mine, does not pay common taxes to the State, but is subject to all other regulations of the mining law.

11. The mining law is carried into effect first by a council of mines at Freiberg (Bergamt).

The members of this council are partly jurists, partly mining engineers; one president (Bergamtsdirector) and four councillors. Besides them, there are still the following functionaries at the Bergamt:—5 district functionaries, i.e., inspectors of mines, 1 surveyor, 8 assistant officials, and several subaltern officers (chancery clerks, &c.).

While all officials of the Bergamt have their residence at Freiberg, the inspectors of mines have theirs in the different districts of the country where mines are working. There are 2 at Freiberg itself, 1 at Zwickau, 1 at Chemnitz, and 1 at Dresden.

The worker may appeal from council of mines to the Ministry of the Finances (Finanzministerium). In some cases he has to appeal to the Government Board (Kreishauptmannschaft) at Dresden, and to the Ministry of the Interior (Ministerium des Innern) at Dresden, with regard to position of workmen, miners' fund, insurance.

The inspectors of mines have constantly to enter, inspect, and examine all mines in their districts, and report to Bergamt the state in which they found the mines.

The Bergamt has the following powers:—

- To examine and to make inquiries into the state of all mines of the country at any time;
- To establish general and special rules for the security of mines;
- To punish for contraventions;
- To give licenses for search and grant concessions;
- To certificate working warrants for coal mines (Abbauscheine ausstellen);
- To decide the disputes between mining owners and their neighbours or surface owners, between miners and their workers (with regard to strikes, wages, miners' relief funds, &c. &c.);
- To control the plans of mines, the surveyors, the mining schools, the workers' associations and corporations, workers and partnership, the miners' funds and insurance;
- To mediate the supplies of the State for the mining industry;
- To confer distinctions and prizes on workers and miners;
- To make experiments with regard to the security of mines;
- To survey the improvement of managers and overman captains (Heiger);

d. To the land owner—

- (a) royalties (shares in the adventure) when existing from olden times;
- (b) an annual rent for occupying surface not belonging to the worker.

e. Contributions to the compulsory mine-owners' association (Reviervverband).

B. From coal mines—

a. To the State—

- (a) the usual income tax;
- (b) the usual tax for land, and building belonging to the owner of the mine (Grundsteuer).

b. To the community, the communal taxes for churches, schools, and other communal purposes.

c. To the miners' fund, and insurance.

d. To the surface-owner the tenth of the produce if so stipulated (as at Zwickau).

9.—A. The usual hours of working are:—

a. In metalliferous mines—

(a) Underground—

Either
Two shifts of six hours (from 6 o'clock in the morning till 6 o'clock in the afternoon, including a pause of 1 to 1½ hours);

or
1½ to 1½ shifts of eight hours (from 4 o'clock till 12 o'clock in the morning, or from 12 o'clock till 8 o'clock in the afternoon, with a pause of ½ hour per shift);

or
One shift of ten hours (from 4 o'clock in the morning till 2 o'clock in the afternoon, and 3 o'clock in the afternoon till 1 o'clock in the morning, with a pause of 3½ hours).

(b) Overground—
12 hours (from 6 to 6 o'clock).

b. In stone-coal mines—

Either
Eight hours without the way to and from work (from 6 to 2, from 2 to 10, from 10 to 6 o'clock) or (from 4 to 12, from 12 to 8, from 8 to 4 o'clock) but including a pause of ½ hour; that is the most usual;

or
10 hours from bank to bank (from 6 to 4 and from 8 to 10 o'clock), including a pause of half to 1 hour;

or
11 hours from bank to bank (from 6 to 5), including a pause of half-an-hour;

or
12 hours from bank to bank (from 6 to 6), including a pause of 1 to 2 hours.

The day-workman and the night-workman change every week. In hot mines the hours of working are less in number than in cool ones.

c. In brown-coal mines—

12 hours from bank to bank (from 6 to 6 o'clock), including a two hours pause; only in the daytime.

B. Wages (gross wages without deductions)—

a. in the metalliferous mines:—

Year.	Marks per Year.	Marks per Day.
1888	615.68	2.05
1889	632.30	2.11
1890	660.16	2.20

b. in stone-coal mines:—

Year.	Marks per Year.	Marks per Day.
1889	948.46	3.16
1890	989.90	3.30

Appendix
C. XVI.SAXONY.
Report by
Dr. Wahlé.

To control and to inspect everything referring and belonging to the mining industry;
To advance the development of the mining industry. &c. &c.

12. The general effect of the Saxon system has indeed been very good as to the development of mining industry.

SUMMARY of the GERMAN MINING LAW.

SAXON LAW of June 16th, 1868.

The notes as to "German Mining Law" contain many errors with regard to the "Saxon Law."

1.—Metalliferous Mines.

We exactly distinguish—(a.) Licence of search; and (b.) Concession of working (gaining).

(a.) The license of search only gives exclusive right to explore the land. These licenses are given by the council of mines (Bergamt) to the claimant for one year, and may be prolonged six months only. They may extend to no more than 100,000 square lachters—to 400,000 square metres—to 40 hectares.

The search warrant gives the preference for the concession, if several applicants request the same concession at the same time. The right to claim a license of search is seldom exercised in Saxony, because all mineral layers of the country are for centuries well-known to all mining people.

(b.) Concessions to work metalliferous mines, and to gain metalliferous minerals, are granted by the Bergamt without any temporal limitation (for perpetuity) just as in Prussia. The area (Grubenfeld) may be of any form or extent, just as the applicants desire.

The tax fixed for the area is paid to the State, not per hectare, but per unit of claim (Maasseinheit, equal to 4,000 square meters), namely,—
30 pfennige quarterly for gold and silver.

20 " " other metalliferous minerals.

Every applicant may obtain as many units as have not yet been occupied before by another applicant or concessionnaire. An unit for streamworks amounts to seven hectares and for heap (halde) and slimeworks to 40 hectares. But concessions for such works are not claimed at present in Saxony.

2. Coal Mines.

The right of working coal (stone coal, brown coal, lignite, &c.) belongs to the surface owner. The surface owner either works the coal himself or sells or leases his right to one or to several other people. The right of working coal sold by the surface owner to another person is separate property from surface property, and may be disposed of separately. The court of justice (Amtsgericht) enters this right as a separate one into the register of landed property (Grund- und Hypothekenbuch). The terms and conditions under which sales of the right of working coal are made are very different. At Zwickau, the surface owners, who do not work the coal themselves, sell their right to a company, but reserve for themselves the tenth of the gross produce. At Lugau-Oelsnitz (near Chemnitz) the surface owners sell their right without this reservation, but at higher prices. The worker needs no permission of the Government Board (Regierung) or mining authorities to work the coal, but he must give notice of the beginning, all suspensions, and the end of working, to the council of mines (Bergamt), so that the work may be inspected and controlled by the latter. If the worker wants an over-ground passage from his mine to a railway, or anything like that, or works for drainage or ventilation and under-ground passage in the adjoining, and if the surface owner, or the mining neighbour, object to such works the worker must have a working warrant, certificated by the council of mines (Abbauschein). In this warrant the council of mines confirms that the coal field (Grubenfeld) is large enough and convenient for profitable and rational working.

Questions for Germany.

(1.) In Saxony the owners of coal mines have never paid a mining tenth or royalty to the State or to old private proprietors of Crown rights, but only the tenth on the gross produce to the surface owner, if the latter has reserved it for himself in selling the right of working a coal mine. The owners of metalliferous mines have, since 1852, not been subject to a payment of one tenth to the old private proprietors of Crown rights.

Free shares (Freikuxe), however, for the surface owner, for towns, for communal purposes (churches, schools, &c.), and for the miners' relief funds (Knappschaftskasse) have not been abolished by the mining laws of May 22nd, 1851, and June 16th, 1868. A free share (Freikux) gives claim to the 128th part of the yearly net gain of a mine.

(2.) The concessionnaire and the owner of a coal mine (having a working warrant) have the power of obtaining surface way-leaves within and outside the limits of the concession or coal-field (Grubenfeld). The right of working a mine is separate property and distinct from the property on the surface. It is, therefore, indifferent whether the surface way is situated within or outside the concession or coal-field.

The right of expropriation for mining purposes is exercised according to the rules of the mining law. Disputes as to expropriation between workers and surface owners are decided in the first and second instances, not by judicial, but by mining authorities and Government Board, to the exclusion of all other courts. Judicial authorities may only be appealed to by surface owner if he is not satisfied with the decision of Government Board with regard to the amount of the compensation granted to him.

The inquiry is equal to that of other judicial inquiries. The surface owners have the opportunity of stating objections, and may present their claims, in writing or orally, in both instances. The proceedings are recorded in the same way as in common judicial lawsuits.

3. Any investigation of the means possessed by an applicant for working a concession is not made before the concession is granted. That would not be of any use, because the means of the concessionnaire may change every day. The concessionnaire has only to pay a security for the expenses of the inquiry to the council of mines.

4. The concessionnaire has to pay the tax to the State, whether he works the mine or not, and may be punished by the council of mines if he has no permission to suspend the working.

If the penalties are without success, the council of mines may withdraw the concession. This power is seldom or ever exercised. The concessionnaire, who presents a well-founded petition, obtains the permission to suspend the working for several years (two to four years usually).

5. In Saxony 195 concessions have been granted in 1890—132 of them have been worked, 63 not. As metalliferous mining has existed in Saxony more than 700 years, it is no more profitable at present, and therefore attended with great difficulties. Now many metalliferous mines are not worked, because the value of silver and lead is very low. The competition of other countries (especially America and Australia) is too great and powerful, and—only few mines excepted—the ores grow poorer with the greater depth of the mines (300 to 700 metres). Private people are no more inclined to invest money in ore mines, the profit of which is so fluctuating and changeable.

Notwithstanding, most concessionnaires will not give up their rights in the hope of better success in future.

6. There is no limit to the size of a concession. As far as land is not yet occupied (mining free=bergfrei), it may be demanded by an applicant and granted to him by the council of mines. The division of the concessions into units (4,000 square metres) only takes place for the purpose of calculation of the tax, fixed and of the number of miners which must be employed by the concessionnaire. The more units are demanded by a concessionnaire the higher, of course, is the amount of the taxes he has to pay, and the greater the number of miners to be employed.

7. By the German law of June 22nd, 1889, the compulsory insurance of labour has not been introduced into the mining industry, where it has already existed for a very long time, but only higher charges were put on mine-owners and miners. Mineowners and miners in Germany were of old bound to pay contributions to a fund, from which the miners received relief in cases of illness, accident, invalidism, old age, and death. These contributions have only been changed by:—

1. the German law of June 15th, 1883, concerning illness;
2. the German law of July 6th, 1884, concerning accidents;
3. the German law of June 22nd, 1889, concerning invalidism and old age.

At present both mineowners and miners have to pay to the funds more than formerly. The increase of this charge is shown in Tables I., II., and V. annexed to this report.

8. There exist in Saxony* no taxes on the gross product and no other taxes imposed upon mines (apart from the

* I have been told that also in Russia the mining tax on the gross product is known as a very bad and antiquated duty, and will be fallen into disuse soon.

Appendix
C. XVI.SAXONY.
Report by
Dr. Wahlé.

fixed concession-tax) in addition to those payable upon other property. All mines (coal mines and metalliferous mines) have only to pay the usual income-tax to the State and all other taxes and duties to the State and to the community like any other branch of industry and trade. There is only imposed on metalliferous mines the tax fixed for concessions and search-warrants.

This tax is per unit (4,000 square metres) quarterly—

For gold and silver - 1 mark 30 pfennigs.
" other concessions - 1 " 20 "
" search-warrants - 1 " 10 "

Coal mine owners do not pay any tax or duty, besides the common taxes, to the State and to the community.

The Tables II.—VIII. annexed to this report show the taxes and duties imposed on a coal mine of three different districts (Lugau - Oelsnitz near Chemnitz, Zwickau, Plauenischer Grund near Dresden). No mine is exempted from any other taxes in consideration of the tax fixed for concessions and search-warrants. But the fixed concession tax is often remitted by the Minister of Finances to those metalliferous mines which have to work with great difficulties.

10. The practical effect of the Saxon mining law has proved by experience as a very good one. The Saxon metalliferous mines, being worked for a period of more than 700 years, would, without doubt, have been given up

already a long time ago but for the concession system and the support of the State. Coal mining, subject to the disposition of the surface owner, has excellently thriven in Saxony in the last 50 years. *Suum cuique!*

In Saxony experience has shown that the system of concession is fit for the changeable mining on veins (Gänge—of silver, lead, copper, iron, and other metallic minerals); but that the mining industry on coal seams (Flötze) can also thrive very well if the right of working is entirely left at the disposal of the surface owner.

11. The coal miners in Saxony have to deal with much more difficulties than those of England and the rest of Germany (great pressure of ground, irregularities of coal beds, frequent displacement and cross-lodes, impure coal seams, high temperature, from 20 to 30 degrees Réaumur, foul air, fire-damp, much water, shifting sand, &c. &c.).

Therefore most accidents* take place in the Saxon coal mines, in spite of the best regulations and the severest inspection by the mining authorities of the State. Perhaps the Saxon statistic is better and more exact than in other countries.

The amount of the production is very small, because the deposits of minerals are very poor by nature.

The total amount of stone-coal produced in Germany and Saxony is as follows:—

In Germany.			In Saxony.		
Year.	Tons.	Value, Marks.	Tons.	Value, Marks.	Per Cent. of German Produce.
1886 - - -	58,056,600	300,728,000	4,249,022	32,199,006	7.32
1887 - - -	60,334,000	311,077,000	4,293,416	35,215,939	7.12
1888 - - -	65,386,100	371,063,000	4,359,085	36,533,078	6.67
1889 - - -	67,342,200	385,080,000	4,234,713	37,839,951	6.29
1890 - - -	?	?	4,150,842	41,156,604	?

Price (Value) of One Ton sold.			
Year.	In Germany.	In Saxony.	Per Cent. of German Prices.
	Marks.	Marks.	
1886 - - -	5.18	7.58	146
1887 - - -	5.16	8.20	159
1888 - - -	5.22	8.38	161
1889 - - -	5.89	8.94	152
1890 - - -	?	9.91	?

TABLE I.

In Saxony (1890) a mineowner paid upon an average for a workman:—

	Marks.	Pfennig.
1. Into the miners' fund for illness (Knappschaft-Krankenkasse) According to the German law of 15, VI. 1883 only	10	04
2. Into the insurance against unhappy accidents (Knappschaft-Berufsgenossenschaft für die Unfallversicherung) German law of 6, VII. 1884.	7	19
Specialty:	17	20
3. Into the miners' fund for invalidism and old age, including for the widows and orphan children (Knappschaft-Pensionskasse) According to the German law of 22, VI. 1889, excluding the widows and orphan children	27	42
	15	—

Remarks.

1. The mineowners have to pay into the miners' fund against illness (Knappschaft-Krankenkasse) at least half as much as the miners (1).
2. The insurance against accidents (2) is only paid by the owners.
3. The workmen must contribute to the funds No. 3 as much as the mineowners. The German empire contribute a share of the payment during sickness and old age (3).

* Cases of death in accidents are rarer in Saxony than in other countries. In Saxony also the most unimportant accidents are advertised to the council of mines since 1888. Since 1884 the miners give notice of every little accident (inconsiderable contusions of a finger and so on).

TABLE II.

Production, value, working cost, profit of a coal mine at Gersdorf (Lugau-Oelsnitz near Chemnitz).

Year.	Products. German tons (= 13,333 hecto- liters, 1 hl. = 75 kilogrammes.)	Value of a ton upon an average when sold.	One ton raised needs :				Sum of the work- ing cost of a ton.	Net profit per ton raised.	Remarks.
			Wages.	Materials.	Contribu- tions to the insur- ance funds.	General charges, expenses, and costs.			
		Marks.	Marks.	Marks.	Marks.	Marks.	Marks.	Marks.	
1883	94,777	7.68	3.64	1.33	0.11	0.78	5.86	1.82	
1884	90,995	7.98	3.59	1.39	0.08	1.03	6.09	1.89	
1885	85,735	8.54	3.93	1.75	0.19*	1.11	6.98	1.56	
1886	98,686	9.49	3.95	1.27	0.18	0.89	6.29	3.20	
1887	114,955	10.20	4.03	1.45	0.19	0.63	6.30	3.90	
1888	123,278	10.59	4.12	1.43	0.21	0.72	6.48	4.11	
1889	116,447	10.77	4.52	1.38	0.25	0.65	6.80	3.97	
1890	114,401	12.07	4.92	1.53	0.27	0.74	7.46	4.61	

* Beginning effect of the law of 6, VII. 1884 (insurance against unhappy accidents).

TABLE III.

The GENERAL COSTS of the same MINE as in Table II. (No. 7), 1890.

The Produ- ction required for	Obligations Interest.	Maintenance of the Shafts and Underground Workings.	Maintenance of the Machines and Kettles.	Maintenance of the Coal- washing Houses.	Maintenance of the Loading Works.	Maintenance of the Ropes.	Maintenance of the Inventories.	Maintenance of the Ventilation.	Maintenance of the Overground Houses and Buildings.	Maintenance of the Ways and Roads.	Maintenance of the Railway of this Mine.	Inspection of the Kettles.	Indemnification of the Damages of the Surface.	Expenses of the Mining Sur- veyor.	Insurance against Fire.	Other Things.	Salaries of the Directors.	Travelling Expenses.	Office Expenses.	Expenses of Printing, News- paper, Proclamations, &c.	Taxes and Duties.	Expenses of the Mining and other Authorities.	Inspection and Revision of the Books.	Postage.	Banking Provisions.	Other Provisions.	General Costs.
Per Cent. of all General Costs.	31.8	2.28	2.52	3.53	2.06	10.20	1.65	0.31	1.58	1.89	0.48	0.26	1.73	0.62	1.28	0.03	10.57	2.02	0.64	1.60	14.80	0.10	0.47	1.98	1.28	2.37	1.63
Per Ton raised Pennies (sum 0.74 marks).	23.5	1.7	1.9	2.6	1.5	7.5	1.2	0.2	1.1	1.4	0.3	0.2	2.0	0.4	0.9	0.0	7.8	1.5	0.5	1.2	11.0	0.1	0.3	1.4	0.9	1.7	1.3

TABLE IV.

REPARTITION of the PROFIT of the same COAL MINE as in Table II. and III.

YEAR.	Gross Receipt of a Ton raised.	The Gross Receipt has been distributed as follows:—													
		Increase of the Count for Arrange- ments (New Works).		Payment of the Loans.		Diminish the Stock.		Augmenta- tion of the Rest Capital.		Tantième (Share in Profits) of the Sur- veying Council (Aufsichts- rath).		Tantième of the Directors and other Function- aries.		Dividends.	
		Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.
1888	Marks. 4.11	4.07	Marks. 0.21	12.76	Marks. 0.52	18.22	Marks. 0.75	3.23	Marks. 0.13	3.20	Marks. 0.13	0.12	Marks. 0.21	52.50	Marks. 2.16
1889	3.97	14.60	0.68	6.16	0.25	14.16	0.76	3.25	0.13	3.25	0.13	5.33	0.21	53.25	2.11
1890	4.61	5.23	0.24	16.08	0.74	21.60	1.00	2.84	0.13	7.38	0.34	0.34	0.34	40.87	2.16

This is equal to a paying interest of 12—13 per cent. of the capital.

TABLE V.

Production, value, working cost, profit of a certain coal mine at Twirkan.

Year.	Products, German Tons.	Value of a sold Ton upon an average.	One Ton raised needed—				Sum of the gross working Costs of a ton raised.	Net Profit per Ton raised.	Remarks.
			Wages.	Materials.	Contribu- tions to the Insur- ance Funds.	General Costs.			
		Marks.	Marks.	Marks.	Marks.	Marks.	Marks.	Marks.	
1883	171,412	7.54	3.56	1.22	0.18	0.55	5.51	2.03	
1884	180,973	7.22	3.45	1.16	0.21*	0.53	5.35	1.87	
1885	196,826	7.75	3.42	1.10	0.21	0.58	5.31	2.44	
1886	227,693	8.38	3.53	1.11	0.22	0.47	5.33	3.05	
1887	234,703	8.78	3.57	1.17	0.26	0.59	5.59	3.19	
1888	241,840	8.81	3.54	1.21	0.27	0.55	5.57	3.24	
1889	237,477	9.47	3.77	1.27	0.28	0.58	5.90	3.57	
1890	230,670	10.66	4.26	1.36	0.31	0.65	6.58	4.08	

* The German law of October 7, 1884, has had here no great influence, because this mining company had already insurances against unhappy accidents.

TABLE VI.

General costs of the same Mine as in Table V. (No. 7), 1890.

The Production required for	Interests of the Loans.	Maintenance of the Ways and Roads.	Drainage, Pumping, and other General Expenses.	Trade Duty, Income Tax, Ground Tax, and other Taxes and Duties.	Reparation of the Kettles, Engines, Machines, and other Things.	Discount, Banking- provision, Exchange, &c.	Reparation of Houses and Buildings.	Salaries, Tantiemes (Shares in Profit), Travelling Expenses, Postage Office Expenses, &c.
Per cent. of all general costs.	1.63	0.48	22.13	26.71	11.04	1.01	2.96	34.04
Per every ton raised, pennies.	1.1	0.3	14.4	17.4	7.2	0.6	1.9	2 1

TABLE VII.

Repartition of the Profit of the same Mine as in Tables V. and VI.

YEAR.	Gross Receipt of a Ton raised.	This gross receipt has been applied as follows :																		
		Payment of the tenths to the Surface Owners.		Payment of the Loans.		Diminution of the Stock.		Increase of the count of the new Buildings.		Augmenta- tion of the Stock for purchase of Area.		Diminish- ment of the Coal Field count.		Jubilee.		Transfer of Balance for the next Year.		Dividends.		
		Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Cent.	Per Ton.	Per Ton.	Per Cent.	Per Cent. of the Capital
1888	Marks. 3'24	17'44	Mrks. 0'57	2'72	Mrks. 0'09	3'50	Mrks. 0'11	2'91	Mrks. 0'09	2'91	Mrks. 0'09	2'15	Mrks. 0'07	1'16	Mrks. 0'04	0'28	Mrks. 0'01	66'96	Marks. 2'07	166'7
1889	3'57	17'10	0'61	2'53	0'09	4'52	0'15	3'24	0'12	2'70	0'10	2'00	0'07	—	—	0'56	0'02	67'55	2'41	181'2
1890	4'08	17'00	0'69	2'29	0'09	3'91	0'16	2'95	0'12	3'43	0'14	1'82	0'07	—	—	0'10	0'01	68'52	2'80	202'9

TABLE VIII.

Production, working Costs, wages, profit of the Royal Coal Mine at Z (near Dresden).

YEAR.	Coal produced.	Coal sold.	Value of the sold Coals.	Price of the sold Hectolitres upon an Average.	Number of the Functionaries and Workmen.	Daily Output of a Miner per Shift.	Yearly Wages of a Miner upon an Average.	Yearly Output per Workman.	Yearly Wages of every Workman upon an Average.	Wood per 100 Hectolitres Coal raised.	Other Materials per Hectolitre raised.	Wages, Salaries, Tantiemes per Hectolitre raised.	Net Profit per Hectolitre raised without the count for New Works.	Price of the purchased Woods per one cubic meter.
1888	Hecto-litres. 3,383,616	Hecto-litres. 3,207,498	Marks. 239,949.629	Pennies. 74.81	1,201	Hecto-litres. 23.81	Marks. 1024.51	Hecto-litres. 2,872	Marks. 946.06	Cubic Metres. 0.2247	Pennies. 10.24	Pennies. 32.35	Pennies. 25.07	Marks. 17.34
1889	3,396,620	3,325,536	248,327.542	74.67	1,211	22.80	1083.77	2,859	1,002.67	0.2117	10.74	34.52	22.48	17.44

AUSTRIA-HUNGARY.

XVII.

NOTES ON THE MINING LAWS IN AUSTRIA-HUNGARY, prepared and handed in by MR. WALMESLEY, and forwarded to the AUSTRIAN GOVERNMENT in accordance with the request of the COMMISSION.

The old Austrian mining law seems to have depended, like the old German mining law, upon a number of regulations applicable to different districts, supplemented by the common German mining right.

The old mining law of Austria and Hungary was, however, codified and united by the Law of 23 May 1854, which explicitly repealed the ancient law both written and customary, maintaining, however, rights of mining acquired under the ancient law. Some alterations have since been made in the law, and others are projected.

The general mining law—"das allgemeine Berggesetz," i.e., the one common mining law of the Austrian Empire—is in force in Hungary.

The "Judex-Curial" Conference, however, recognised certain points of difference in the law as applied to Hungary. The most important of these points regards the working of coal mines, which cannot in Hungary be worked without the permission of the owners of the land.

The remaining differences are concerned chiefly with the forms of procedure in the mining offices, with the entries in the mining registers (Bergbücher), and with the jurisdictions of the Courts.

Although the Austrian mining law was passed nine years earlier than the Prussian mining law of 1865, the two laws have considerable resemblance to each other, being both to some extent evolved from the ancient German mining right. There are, however, extensive differences in detail between the two laws.

The Law of 1854 consists of 286 paragraphs or articles. It gives the working of such mines as are reserved from the ownership of the surface proprietor, not to the first occupant, as in Prussia, but to the first claimant who proves the existence of a workable field. If several claimants present their petitions on the same day, the mine is granted to them in common, unless they can agree to divide it (Art. 53). The right of search is not, as in Prussia, free, but can only be made by permission of the mining authority. A peculiarity of the Austrian law is that the worker of the mines has the right to work all the substances reserved from the ownership of the soil within the limits to which his concession extends (Art. 123), and

not, as in France and Prussia, some particular substance specified in the Act of Concession only. The right of mining, as in France and Prussia, is an immovable property wholly distinct from the ownership of the surface. Another peculiarity is the division of the reserved mines into two classes, called deep workings (Grubenmasse) and surface workings (Tagmasse), respectively, as to which classes different regulations apply.

Practically the same substances are reserved from the ownership of the surface in Austria as in Prussia, but the definition in Austria is indicative rather than specific, as in Prussia, and cannot therefore be conveniently stated in tabular form. The substances reserved are such as are capable of being used as metals, sulphur, alum, vitriol, or salt (the latter being a State monopoly), vitriolic springs, graphite and bitumen, and all kinds of coal and lignite (Art. 5); all other substances belong to the proprietor of the surface, and by exception from the general law in Galicia, Cracovia, and Bukowina the right of searching for and working minerals, oils, and ozokerit, and all bituminous substances except coal, belongs to the owners of the surface, and, as before observed, in Hungary coal cannot be worked without the permission of the owners of the surface.

No rents are payable to the owners of the surface in respect of the reserved mines themselves.

The worker of the mines has the right to occupy such portions of the surface as are necessary for him under the supervision, and in case of dispute by means of the intervention of the Administration, on paying a simple indemnity if the use is only to be temporary; but he must proceed by a regular system of expropriation, and buy the land, if the occupation is likely to be lengthy. He has a right to buy land and water rights for all purposes of his works either within or outside the limits of his field. In case of disputes the mining authority determines, in union with the "political" authority, on the necessity for the occupation and the situation and extent of the lands to be occupied. The indemnity is fixed by experts, and the occupation may take place on payment of the sum fixed. Buildings, enclosed courts, gardens, and enclosed grounds are excepted from the lands which may be taken, and the restriction extends to an area of 38 metres round the buildings.

The worker of the mines has to repair all damage occasioned to the surface by his workings, but is not liable in respect of buildings and erections established within the limits of his mine without the consent of the authority.

Ownership of mines.

Surface occupied or damaged.

Searches for mines.

Concessions.

Taxes payable to the Government.

The taxes payable to the Government by the Act of 1854 were partly fixed and partly proportional upon the gross produce of the mine, the fixed taxes being at the rate of only four florins (say 8s.) for each Freischürf Grubenmasse or Tagmasse, and even this amount may be reduced for very poor or broken-up mines, the mining authorities having the power to reduce the payment on each freischürf from four florins to two florins.

The tax on the gross profits has been repealed by a Law of 28 August 1862, which has substituted for it a tax upon revenue fixed in principle at 5 per cent. on the net revenue, to which has since been added three-fifths by virtue of the law of 26 June 1863, or 8 per cent. in all.

All businesses in Austria pay an income tax to the Government of 5 per cent. on the net profits.

There is also a payment to be made towards the "Land"; i.e., the general fund of the province in which the business is being carried on.

There is a further payment to be made towards the local funds.

These two last payments vary according to the necessities of the provinces and parishes. Under unfavourable circumstances a business (mines are considered as such) may have to pay

- (1) 5 per cent. to the central government.
- (2) 5 per cent. to the "Land" or province.
- (3) 5 per cent. to the parish.

In all 15 per cent. of the net profits.

N.B.—(2) and (3) are levied by the Provincial Parliament.

Searches for mines cannot be made even by the owner of the soil without the permission of the mining authority, within certain limits in the mining district, given in principle for one year only, but renewable indefinitely from year to year (Art. 16). The permission, however, does not of itself give an exclusive right to the person making the search; but a right to free diggings (Freischurf) can be acquired by following certain rules, by which means private circles of 400 metres in radius round the points indicated can be acquired. Such permissions (Schurfbewilligung) are given to all who apply for them. Free shares (Freischürfe) are registered according to priority of declaration at the District Mining Office (Revierbergamt).

In order to keep legal possession of a freischurf it is necessary to show that 27 days' work (eight or ten hours) have been done upon it in the year (Art. 174).

As the object of the mining authorities is to encourage mining, they have the power of allowing the work done on one freischurf to be considered as sufficient for several.

Where there are no rival competitors freischürfe can practically be held on the payment of the four florins a year.

The payments become due at the end of each quarter.

As long as the dues are paid a polite excuse for not having done the required work, with a promise that work shall be done, satisfies the authorities, who are very lenient on this point.

The explorer cannot commence his work until after he has acquired from the surface proprietor, after the decision of the mining authority in case of opposition, the land necessary for the purpose, and given security for ultimately making good damage (Art. 27).

The right of searching in a free digging may be alienated on making a simple declaration to the mining authority. The searcher may not dispose of the produce of his digging without the consent of the mining authority; but he can, if he discovers a workable field, obtain one or more measures of mines or concessions.

The right to these is created by proving that the free share or free shares contain workable minerals; and here the "free digger" has the advantage over the searcher for mines in Prussia, as the "free-digging" gives him the opportunity of proving the workability of the field without opposition, and so gives him "the concession" if there is anything worth having. No mine can, in the first instance, consist of less than a simple measure; but, if there is sufficient unoccupied land, any person may take in the first instance four ordinary measures (or 18 hectares), or, in the case of coal, four double measures (or 36 hectares), always in connexion with the point of discovery in the centre. These can be united with other fields, so as to form a maximum of 36 hectares in the case of mines other than coal, and 72 hectares in the case of coal; but there is nothing to prevent one person or one society, conditionally on undertaking the necessary obligations of working, from acquiring as many distinct fields of working as they please. The deep workings (Grubenmasse) give the right to all substances reserved from the ownership of the soil within

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Appendix C. XVII.

AUSTRIA-HUNGARY. Notes on the Mining Laws by Mr. Walmsley.

the area taken. This principle is peculiar to the Austrian and the Spanish mining rights alone.

The surface workings (Tagmasse) are about double the size of the deep workings, and only give a right to the superficial mines (such, however, as are reserved from the ownership of the soil alone). They cannot, however, exist with deep workings, and can only be granted in places where deep workings have not already been granted.

The mine-worker is required to maintain continuous working, though authority may be given for delay. There is no fixed rule as to the degree of activity which is requisite; it has to be settled in each case according to the circumstances by the Administration (Arts. 170, 174, and 243). The rules as to working before referred to, however, have to be observed; in default of which fines of from five to fifty florins, or, in case of repeated negligence, of double those amounts, may be inflicted. In case of persistent negligence the mine may be forfeited (Art. 240). Mines may also be surrendered, in which case they may be sold by the creditors (Arts. 263-5).

Sale of Concessions.—Concessions can be and are freely sold. The following are some examples:—The mining rights at Silberleithen and Biberwier, in the Upper Inn Valley, were sold about the year 1879 to a German Syndicate for 30,000 florins (2,500*l.*) The ore raised is chiefly zinc, with some lead ore.

The concession for the gold mine at Hainzburg, in the Zillertal (Tirol), was sold in 1880 or 1881 to an American Syndicate. This mine is now abandoned.

N.B.—There is a specimen from this mine marked Zillertal (Tirol) in the Geological Museum at South Kensington.

A Hamburg firm bought the concession for working petroleum and asphalt at Seefeld in 1888, and paid 30,000 florins for it.

Many concessions in Styria for working all kinds of mines have changed hands by purchase. The same remark applies to the provinces of Carinthia, Carniola, &c., &c.

The concessions over an area of about 50,000 English acres at Erczepaták (Carpathian Mountains) were purchased by the Transylvanian Gold Mining Company, Limited, about 1888, for 60,000*l.*, of which 20,000*l.* was to be paid in cash, and 40,000*l.* in fully paid up shares, the purchase money including mining rights, goodwill, and plant.

The concessions over an area of above 10,000 English acres at Eibenthal, in Hungary, were purchased by the Danube Collieries and Minerals Company, Limited, in 1829, for 100,000*l.*, of which 40,000*l.* was payable in cash and the balance, at the option of the Directors, either in cash or shares. It is stated that they are subject to a Government tax of about 100*l.* per annum.

The concession of silver lead mines at Rabenstein, Sarnthal, Tirol, on which very little money had been expended, was purchased in 1876 for about 2,000*l.*

The worker may execute, with the permission of the mining authority, any works outside his boundary, either for ventilation or for the more convenient extraction of his minerals (Arts. 85 and 86), and works common to several mines may be established by the permission of the mining authority (Arts. 87-89). Necessary works may also be established through adjoining mines, and use may even be made of the workings and roads belonging to adjoining mines on providing a sufficient indemnity. It is stipulated (Art. 195) that this indemnity should be in part a proportionate part of the cost of maintenance, and for the rest an interest which must not exceed 10 per cent. of the cost really saved by the mine making use of the works. In all cases the mine availing itself of the privilege is responsible for all damage caused to the other mine (Art. 196). All the indemnities in case of disagreement have to be fixed by the mining authority, with the right of appeal to the judicial tribunals.

Full provision is made for inspection and regulation of mines, and the mining authority has power to appoint a person to take charge of the working of a mine when the incompetency of the manager places the security or preservation of the workings in danger (Art. 224). The mining authority can stop the workings or even pronounce a forfeiture of the mines if the regulations are not complied with. The mining authority has also to see that the working is proceeded with without interruption and with sufficient activity.

Each mine has a code of regulations, "Dienst-Ordnung," which has to be approved of by the mining authorities (Revier-Bergamt, or district mining office) and by the political authorities. The Dienst-Ordnung has the force

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Way-leaves.

Inspection and regulation of mines.

History of laws as to ownership of mines.

Notes on the Mining Laws of Austria-Hungary, by Mr. Walmsley.

Appendix C. XVI. and XVII.

SAXONY. Report by Dr. Wahlé.

Appendix
C. XVII.AUSTRIA-
HUNGARY.
Notes on the
Mining Laws
by Mr. Wal-
mesley.
Relations
between em-
ployer and
workmen.

Relief societies.

Mining
authority.

of law. Each workman has, upon being engaged, his attention called to the Ordnung, and has to submit to the fines and penalties, and to the power of dismissal for bad conduct which the Ordnung sanctions. Cases of infringement of the Dienst-Ordnung are tried before the district law court. An appeal can be made by either party to the mining office.

The law makes provisions respecting contracts of service, and the terms on which masters and workmen can respectively give notice. On quitting a mine each workman has to receive a certificate, stating his class, the length of his service, and the relief society to which he belongs, and he cannot be received into another mine without such certificate (Art. 208).

Each mine must have its own society or be affiliated to a fund common to various workings, and established with the approval of the mining authority.

The statutes and the contributions paid by men and owners, respectively, at present vary in different mines. The following appears to be the usual arrangement, viz.: The miners have to pay 4 per cent. of their wages towards the relief fund until a considerable fund is accumulated, when their contribution is reduced to 2 per cent. The masters have to contribute a sum equivalent to one-third of the miners' contribution for six years. The fund is administered by the mine-owner and a committee of the men, under the supervision of the Government.

It is, however, understood to be the intention of the Government that for the future all mines are to be placed under one and the same set of regulations.*

The payments are to be everywhere the same, and they will be:—

From the men (1)—4 per cent. of their wages.

From the owners (2)—A sum equal to that paid by the men.

This change will be put in force as soon as possible.

One of the departments of the Minister of Public Works is a mining department, with a staff of officials for the management of such department, and a permanent committee for mining matters. The empire is divided into different mining districts. At the head of a collection of such districts is a mining official (Berghauptmann) assisted by a number of counsellors (Bergräthe) and mining engineers. There are four such mining officials for the whole of the part of the empire on the west side of the Leitha, having under them a varying number of district officers.

The four are:—

1 in Prague for Bohemia.

1 in Vienna for provinces of Upper and Lower Austria, Salzburg, Moravia, Silesia, and the Bukowina.

1 in Klagenfurt for Styria, Tirol and Voralberg, Carinthia, Carniola, Görz and Trieste, Istria and Dalmatia.

1 in Cracow (Krakau) for Galicia.

In each separate district there is a mining office (Revierbergamt), which is presided over by a commissioner (Revierbeamte), who is subordinate to the Berghauptmann of his collection of districts. The Revierbeamte keeps a register of the searching permits and freischürfe. In principle he is the ordinary authority before whom all matters come in the first instance. His duty is to see that the mining law is properly administered in his district, and that the mining revenue is collected by the revenue officers, &c. Grants of searching permits and freischürfe are made by the district office, but the concessions are made through the Berghauptmann's office. Mining disputes which are of such a nature as not to come into the category of ordinary common law cases ("Civilstreitigkeiten") are tried by the district mining offices (Revierbergamt), the "Berghauptmannschaften," and in the last instance by the department of the Ministry of Agriculture in Vienna, under which the Berghauptmannschaften stand. This last is the Court of Appeal and the Court of last instance in purely mining cases. Civil cases arising out of mining disputes are tried by the Landcourt of the province in which the mine lies, as the court of first instance. The court of second instance is the upper Landcourt of the province, and the court of last instance is the "Oberste Gerichtshof" ("Highest Court") in Vienna.

If questions arise between adjoining concessionnaires they are dealt with by the mining authority of the district, but if between a worker of mines and a surface-owner they are referred to a commission consisting of the mining commissioner of the district, the mayor or other municipal officer, and local experts presided over by a "political" officer. Appeals may be carried up from one mining

* It may be observed that relief societies for all kinds of workmen and women, even domestic servants, are being introduced, and are obligatory.

authority to that immediately above, but not further, so that only decisions made in the first instance by the Berghauptmann can be appealed against to the Minister of Agriculture.

The mining authority may impose fines (varying from 1 to 200 florins) on the workers of mines for contravention of the mining law.

The Government may work mines (and do so extensively in Bohemia), but before doing so have to go through exactly the same formalities as private individuals, taking out freischürfe, &c., and if a private individual gets precedence the Government cannot turn him out.

British and Austrian mines cannot be properly compared, owing to the great difference of the circumstances under which they are found. Most British mines are found in places not much above sea-level. In Austria the metalliferous mines are usually found in mountainous districts, where they crop out, and where the land is of very little value for other than mining purposes.

The principal coal fields of Austria are in Bohemia, Silesia, and Moravia, which are all rich agricultural countries. Of the Alpine provinces Styria and Carinthia have the most important fields.

The Southern Railway of Austria, a branch of which runs from Trieste to Vienna, and which passes through Styria, uses chiefly Moravian and Silesian coal, although it is compelled by law to use a certain amount of Styrian coal from Trifail.

For most of the smelting at the celebrated ironworks in Styria charcoal is used, as the coal to be obtained is not good.

In the Tirol there is only one small coal mine, at Häring, in the lower valley of the Inn. This mine is worked by the Government.

In the Alpine Provinces, and especially in Tirol, the mines are mostly at high altitudes,* where the land is of very little value.

As a general rule the same remark would appear to apply to metal mines all over the world, viz., that they are situated in districts where the value of the land for agricultural purposes is not high.

In mountainous countries the mines are generally at high altitudes, or, if they are situated lower down, they are in barren rocky places.

The average wage paid per day of eight or ten hours in Tirol for a good miner is from 1.30 krs. to 2 fls.—2s. 2d. to 3s. 4d.

The men at Rabenstein are satisfied if they earn an average wage of 1.50, or 2s. 6d. a day. They can live well with such a wage.

The ten-hour shift, divided by one hour for a meal, is preferred to an eight-hour shift without a break.

The men come on at 7 a.m. and work till 12, when they dine; at 1 p.m. they come on again and work till 6.

The rate of wages varies slightly according to the valley, the density of the population, and the means of communication.

If a mine is very high up in the mountains, the wages of the men who work all the year round must be higher than those of men in better placed mines. Wages of men who only come in summer would not be higher than in more favoured places, as there is a very plentiful supply of labour in the country in the summer months from North Italy.

The wages of miners in Carinthia and Carniola and in Styria are lower than in Tirol, as the necessities of life in the first-named three provinces are cheaper than in Tirol.

Miners' wages in the above-named provinces are about 20 % less than in Tirol.

The above remarks apply only to metal mines.

It is understood that wages paid in coal mines in Austria would be about the same as those given as the miners' wages in Tirol.

The miners of Trifail in Styria struck last autumn for an increase of wage and shorter hours.

The wage was to be 2 fls. (3s. 4d.) a day, and the hours reduced from 10, and even 12, to 8. A compromise was effected between the men and owners which led to a resumption of work. It is believed that the wages were increased to 2 fls. (3s. 4d.), but the hours remained the same as before.

As the coal mines are situated in thickly populated districts which are rich agriculturally, labour and the necessities of life are both cheaper than in the districts where the metal mines are situated, and the men who work in the latter, although the conditions under which they work are more favourable than those of the coal miners, are paid about the same wages as are paid to the colliers.

* The Government mine of Schnee Berg is on a mountain 8,400 feet above the sea.

General
remarks.No. 79,
Commercial.No. 79,
Commercial.
Report.Wages and
working hours.

Mining royalties.

Royalties.

Salt.

Who is able to
obtain a conces-
sion.

Foreigners.

XVIII.
CORRESPONDENCE.

SIR,
Foreign Office, August 7, 1891.
I AM directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties, the accompanying despatch from Vienna, as marked in the margin, transmitting a report on mining royalties in Austria.
I am, &c.
(Signed) P. W. CURRIE.

The Secretary,
Royal Commission on Mining Royalties,
6, Old Palace Yard, Westminster.

Enclosure in Sir Philip Currie's letter of August 7th, 1891.

MY LORD,
Vienna, August 4, 1891.
WITH reference to your Lordship's despatch, No. 33 of this series, of the 11th of June last, I have the honour to transmit herewith a report, in German, on mining royalties in Austria, which has been drawn up by Dr. Moriz Weiss, for presentation to the Royal Commission on Mining Royalties.

I have, &c.
(Signed) A. PAGET.

The Marquis of Salisbury, K.G.,
&c. &c. &c.

Enclosure in Sir Alfred Paget's letter of August 4th, 1891.

REPLY TO THE MEMORANDUM OF THE COMMISSION.

I. The steps to be taken by a concessionaire in order to obtain a concession, and an estimate of the legal expenses incurred?

Before answering this question the following points must be explained:—

- (1.) In which cases is the permission of the mining authorities indispensable to work a mine?
- (2.) Who is authorised in Austria-Hungary to work a mine?

Concession for the working of a mine can only be granted by the competent mining authority, and only for the prospecting and working of such minerals as are called "vorbehalten" or reserved. Under "vorbehalten" or reserved minerals one understands those minerals found in their natural beds, which are reserved for the exclusive disposal of the sovereign of the country, according to his rights as a ruler (Bergregale). These are, according to the mining laws, all those which can be made use of on account of their contents of metal, sulphur, alum, vitriol, or common salt, besides cement-waters, graphite, and mineral tar, and also all kinds of black and brown coal. Deviating rules with regard to coal in Hungary will be given Ad. II.

All other minerals do not come under the head of mining royalties, and can be worked without a special concession of the mining authorities. Such are, for instance, turf, quartz, limestone, talc apatite, &c., &c.

However, all minerals which contain salt are reserved for the monopoly of the State. If in some place a source or bed of salt is discovered, the proper authorities must be made acquainted with the fact, who will either begin the working of the salt mine, or if this is not found convenient, will shut up the salt-springs or render them useless. In both cases the proprietor of the estate or the building on which the spring is discovered is to be indemnified. Besides, the authorities may grant the concession for the production of salt to private persons, on condition that they should hand over the entire produce of salt to the authorities, who would indemnify them accordingly.

Any person who can acquire and possess immovable property in Austria-Hungary, is able to obtain a concession for the purchase and possession of mines, and therefore a distinction has to be made between natives and foreigners.

The latter, i.e., persons that do not belong to the United States of Austria and Hungary, can only obtain a concession for the purchase and exploration of a mine, if there is "reciprocity" between Austria-Hungary and the State to which they belong, i.e., if Austrians or Hungarians in the State in question are treated like natives with regard to the acquisition of immovable property. In doubtful cases the foreigner has to prove that this is the case.

But if it is proved that the foreign State does not treat Austrians or Hungarians as fairly as his own subjects with this regard, then "retortion" is exercised, i.e., these foreigners are treated in Austria-Hungary in the same manner as Austrian or Hungarian subjects are treated in their country. For instance, Montenegrins are not able to obtain a concession for mining in Austria.

A concession can be granted by the State or a community to single persons, several persons combined, joint stock companies, or mining companies.

To admit the formation of foreign joint stock companies it suffices if such companies are legally constituted according to the laws of the place where they are formed.

The concession to prospect for reserved minerals is granted by the assignment of a prospecting plot, and the concession for the manipulation of these minerals by the grant of a "Bergwerksmatz" (mining measure?).

The allotment of prospecting plots ensues on the prospecting concession granted by the mining authorities, and the contractor can also obtain the exclusive right of prospecting for a certain district (Freischurf).

The mining concessions ("Bergwerksmasse") granted for the manipulation of reserved minerals may be either a "Grubenmass" (mine measure) or a "Tagmass" (surface measure); the former grants the right to manipulate all minerals discovered in the allotted prospecting plot, and the latter only those minerals which are found near the surface or do not grow into the hard rock. Of which distinction see more in a later chapter.

(a.) Prospecting for reserved minerals (Schürfung).

The right of landed property does not solely confer the right to prospect.

Whoever wants to prospect on his own or somebody else's soil requires the permission of the mining authorities, since the landowner has not the right to dispose of reserved minerals. The petition for the grant of a prospecting concession has to be sent in to the district mining office to which the plot in question belongs, or, if the petition is made by word of mouth, a protocol has to be drawn.

The expenses incurred consist solely in the stamps for the petition, 50 kr. per sheet, and in the stamp for the prospecting concession, 1 fl.

The petition must be signed by the petitioner or his authorised agent, who has to enclose his letter of authorisation, which need not be a special one, but an ordinary one will do.

The petition must contain the name, profession, and dwelling place of the petitioner, and also the description of the prospecting plot.

As prospecting plots may be described certain plots of ground according to the ground cataster of the district mining office in question, the best is to name the districts of the catastral and local communities, the law and tax circuits, even the entire district of the mining office may be named as the prospecting plot, provided that the limits of the latter are given. Such a petition should be worded in the following way:—

(50 kr. Stamp.)

To the (most worshipful) Imperial and Royal Mining Office.

Mr. N. N., factory owner in S., has empowered me to request you to grant him a concession to prospect in the district of S. I enclose 1 fl., the cost of the stamp for the concession, and also my credentials, which I beg you to return. S., July 4th, 1891. M., Solicitor, Street No.

The concession to prospect is only granted for one year; however, it can be prolonged from year to year if the mining authorities have convinced themselves that the concessionaire has actually begun to prospect. The prolongation must be requested by the following petition, before the year is over:—

(50 kr. Stamp.)

To the Imperial and Royal Mining Office.

I enclose the concession to prospect in the district of S., dated the 6th of July 1891, No. , with the request to prolong the same for another year. S., July 2, 1892. N. N., factory owner in S.

The concession to prospect does not grant the exclusive right to prospect in the said district, for at the same time concessions to prospect may be granted to several persons. An exclusive right to prospect in a certain district can only be obtained if the prospector describes to the mining authorities the point where he wishes to begin prospecting. From the time that the notification arrives at the mining office, the prospector obtains the exclusive right to prospect at this point (free prospect), i.e., no one but the

Appendix
C. XVIII.
AUSTRIA-
HUNGARY.
Report to the
Commission
by Dr. Weiss.
Joint stock com-
panies.
Foreign joint
stock companies.
Prospecting con-
cession.
Bergwerks-
masse.
Prospecting
plots.
Duration
Prolongation.
Petition for fr-
prospect.

Appendix
C. XVIII.AUSTRIA-
HUNGARY.
Report to the
Commission
by Dr. Weiss.

owner of the prospecting field has the right to prospect within a radius of 425 m., and he has to set up a wooden sign-post in the middle of the circle, on which is written on a brass plate "Free Prospect No. of N. N." Of course, the intending prospector must be in possession of a concession to prospect at all. However, he can send in a petition for one or several free prospects at the same time with the general petition for a prospecting concession.

The cost of the concession for a free prospect amounts to a 50 kr. stamp, and the notification must contain the exact situation of the prospecting works (the starting point), and the place of the prospect sign-post, the direction of which must be described minutely by the points of the compass, starting from any fixed point. This notification will then be confirmed by the district mining office.

Example of a notification for a free prospect:

"To the Imperial and Royal Mining Office.

"By reason of the prospect concession granted to me the 29th March 1884, Z. 612, I give notification of the following free prospects:

"1. In the cat. community local parish tax district political district from the north corner of the wooden barn belonging to the rectory in 58.79 m., after hour 24, and from the south corner of the brick dwelling-house, No. 112, in 24.65 m., after hour 15. The prospect sign-post will be erected at a distance from the prospecting works of 5.69 m., after hour 15.

"2. In the community, &c., on the cadastral plot, No. 317, from the point where plots Nos. 317, 466, and 468 join 10 metres, after hour 12 distant. The prospecting sign stands at the starting point.

"3. In the cadastral community &c. on the plot of John N., at a distance of 37.92 metres after 21 hours from the prospecting sign, which will be placed in the south-east corner of plot No. 158."

Date.

Signature.

The right of free prospect is only valid as long as the prospecting concession lasts, it is, therefore, in the interest of every owner of a free prospect to ask in time for a prolongation of the same.

b. Manipulation of reserved minerals.

The prospecting concession grants only the right to dig for reserved minerals but not to manipulate the same. Even before making use of the minerals, perhaps won through prospecting, the prospector must ask for the permission of the district mining office (stamp for petition 1 fl.), or he will be liable to a fine of the value of the minerals which have been used or sold.

The reserved minerals contained in a certain district do not belong to the owner of the land, but to the mining contractor who has discovered the strata by dint of prospecting, and who has obtained the possession of these minerals through a special concession (see Question IV.).

Whoever wants to obtain the rights of ownership over reserved minerals occurring within a certain specified limit, and the right to manipulate the same by the necessary works, must send in a written petition to the office of surveyance of mines and not to the district mining office; since otherwise the petition would certainly be refused.

A person, however, can only take steps for such a concession, after he has made a find in his free prospect and the opening of the mine already allows a judgment on the character, quality, and depth of the discovered strata, as concessions are only granted when the mine promises to be worth working. It is calculated, as a rule, that for one opening, one mine measure is granted, and for coal, a double measure is given.

A mine measure comprises a rectangle of 45,116 square metres, the shorter side of which must be not less than 106 m. long, and extends to an unlimited height and depth. A double measure consists of two mine measures joining each other with their longest sides.

In case that the field is still free, the petitioner may receive for one opening as much as up to four single mine measures, or four double measures if it is to be a coal mine; however, they must be joined.

With regard to minerals that are found on the surface, in the beds of rivers, &c., a surface measure is granted, which may not exceed an area of 115,000 square metres; this extends only to the adjoining firm rocks. If there are already mine measures existing on the same plot, they must be respected, since the possession of the latter grants the right to manipulate all reserved minerals found in the granted field included those occurring near the surface.

Mountainous parts between different mine-measures have naturally not a rectangular form but an irregular boundary. They are called "Überschar" (surplus measures), and may only be granted to mine-owners whose mines adjoin the same.

The petition for a grant must be written on stamped paper (1.50 fl. for first sheet, 50 kr. each following), and sent in by the petitioner himself or his authorised agent, and also contain a proof of the discovery made, and a chart of the strata in the cadastral measure of 1:2880 (15 kr. stamp). Such a petition must be followed within two months by the view (Freifahrung) of the place on the part of the district mining office. The following persons must be present on the spot:—The representatives of the owner of the land, the owner of the adjoining free prospects and mines, and of any railways interested in the land, and the proper administrative authorities.

On the view (Freifahrung) a protocol is drawn up, and if no obstacle occurs then the surveyor makes out the lease, and the right of ownership is registered in the mining book. The mensuration of the ground, and the placing of the boundary stones must ensue within a year. It must be done by an authorised mining engineer, who is paid by the contractor. Every landowner must consent to the placing of the boundary stones on his soil, for which he will receive a suitable compensation. If no agreement can be arrived at with regard to this compensation, it has to be settled by the authorities of the community.

II. The terms and conditions on which the concession is granted, more especially—

- The amount of tax payable to the State, including the methods by which the amount is calculated?
- The time for which the concession is granted?
- The terms and conditions as to working out the minerals?
- The right to a renewal of the concession on the expiration of the term?

Every mine-owner who does not live in the district of the mining authority to which his mine belongs, must appoint a suitable deputy, living in the district, who has to look after the lawful administration of the mine. However, the owner has to bear the entire responsibility as regards the payment of royalties and the observation of the laws.

It is generally the manager of the mine who is appointed deputy. If the owner of the mine manages the works himself, and proves himself incapable, and thus endangers the safety of the mine, the surveyor is entitled to interfere by appointing a capable manager at the owner's risk and expense. This can also be done when a manager appointed by the owner proves himself inefficient.

Questions B. and D., viz., the time for which the concession is granted, and the right to a removal of the concession on the expiration of the term, have already been fully discussed under Section I., so it shall only be mentioned here that concessions for free prospects are only granted for one year, however, with the right of renewal, whilst grants of mine measures are made for indefinite periods. By the latter concession, all minerals contained in the granted mine measures pass over into the possession of the owner of the mine (Verjährt?). Mining concessions do not become prescribed; however, they may expire either by the owner's abandoning the mine on his own accord, or by the authorities withdrawing the concession in consequence of punishable neglect of the obligations and duties on the mine-owner's part. See Ad. C., the special cases mentioned in which this takes place.

Now it only remains to answer Questions A. and C., regarding the amount of tax payable to the State, including the methods by which the amount is calculated, and the terms and conditions as to working out the minerals.

Ad. A. Every mining measure granted is subject to a tax, to be paid at regular intervals.

This tax amounts to 4 fl. a year for every single mine measure of 45,116 m², and for every surface measure of 115,000 m² (measure tax). The tax for surplus measures is calculated from the above fixed rate, in proportion to the area of the measure. This measure tax has to be paid in quarterly rates to the tax office, and rests on the mining object, at the same time holding the mine-owner, in person, liable for the payment of it. This tax is levied on every mine measure granted, whether the mine to which it belongs is being worked at the time or not, also, whether it is worked at a loss or at a gain.

For every free prospect likewise, a regular tax of 4 fl. a year has to be paid (free prospect tax). This tax is levied in the same manner as the measure tax.

Überschar (sur-
plus measure).Reduction of
taxes.

Income tax.

Method of calcu-
lation.

The measure tax can be reduced to half for a definite or indefinite period if it is levied on mine or surface measures with very poor or very scattered pits, which can only be worked at very disproportionate cost. However, if this takes place, it is done without any consideration of the private circumstances of the mine owner. The same holds good of free prospect taxes. The petition for reduction of the taxes for mine measures or free prospects has to be sent in to the district mining office, stamp free, and has to be addressed to the Ministry of Agriculture, who alone can grant such a request.

At the same time, all mines and foundries, and all works closely connected with mines, such as, for instance, furnaces, coke factories, &c., as also, in short, all work buildings, to the erection of which the mine owner is authorised by reason of his concession, are subject to the first class of income tax. This is also the case with the mines and foundries belonging to the State, with the exception of the salines.

As regards the method of calculating the income tax, first class, it amounts to 5 per cent. of the income in ordinarium, to this is added the extraordinary additional payment of the same amount as the ordinarium, so that the State tax amounts to 10 per cent. of the income. To this must be added the taxes for local or communal purposes, of which more is said, Ad. VIII.

The tax is fixed by the mining authorities taking the net proceeds of the preceding year as the base. The calculation of the net proceeds liable to taxation is done in the following manner:—

From the proceeds, which consist of the amount received for the sold produce of the mine, and of the value of the private consumption of the same, the following reductions for current expenses of the management must be made:—

- The general administrative expenditure for salaries, allowances in kind, for partner meetings, for pensions, and for fees of chancery.
- The mining expenses proper for preparatory works, excavations, transport, drainage, and ventilation.
- The expenses for the dressing, smelting, and refining works connected with the mine.
- The cost of keeping the buildings, the engines, the dwelling-houses of the officials, inspectors, and workmen in good repair, and of keeping the animals that are used for the works.
- The expense of renewing and preserving the necessary stores of materials tools, &c.
- The measure taxes.
- Contributions to brotherhoods (clubs), for school and sanitary purposes, assistance to other mines in case of need, compensation for voluntary services rendered.
- Rent for mines which are not the property of the contractor, or for the permission to work the mine, rent for the necessary land to be rented from the land owner, rent for the manipulation buildings, also for the houses of the officials, inspectors, and workmen.
- Insurance premiums. Losses through customers who have become bankrupt, or through partial or total annihilation (destruction) of the mining or smelting produce.
- The cost of establishing stores and depôts near the mine and at a distance.

After the net proceeds have been calculated in this manner the government tax of 10 per cent. is reckoned off.

The following items, however, may not be subtracted from the gross amount:—The earnest money for the mine, as well as the purchase price for it, the cost of the purchase of the ground and of the erection of buildings and other work places, the amount of capital withdrawn from the undertaking or paid back, and the interest from the capital invested.

The income tax is generally levied at the place of the enterprise; however, if it is the case of a company not domiciled at the seat of the mines, &c., then 20 per cent. of the taxes are levied at the domicile of the company, and the remaining 80 per cent. there where the mines, &c. are situated.

Ad. C.

The mining concession does not only grant the right to manipulate the reserved minerals found in the granted field, and to dispose of them, but the mine owner may also take possession of the minerals that are not reserved, if he has need of them, for the working of his mine; for instance, to erect buildings, &c. (cement, hydraulic limes, fire-proof minerals, &c.). If the latter is not the case, then the mine owner is obliged to offer the unreserved minerals which have been worked out to the owner of the ground against payment of costs for working and transport, and

the latter has to decide within four weeks whether to accept the offer or not, or else they become the property of the mine owner.

Every owner of a free prospect or a mine is obliged to keep his mine in good working order, i.e., the mine must be worked without interruptions, according to regulations, and must be safeguarded as much as possible against any danger for persons and property.

For the constant working of a free prospect it is prescribed that a sufficient number of workmen should be at work on every work-day during eight hours. However, the owner of several connected free prospects can receive permission from the district mining office to keep only one mine working (connexion of free prospects) for all free prospects.

Every owner of a free prospect has to report at regular intervals of six months to the district mining office on the success of his prospecting. The neglect of this regulation is fined from 5 to 50 fl., and finally with the withdrawal of the free prospect. However, in practice, the regulations with regard to the work required are not strictly insisted on.

For the constant working of every shaft in a mine measure it is required that a sufficient number of miners should be employed for eight hours on every work-day, and also that every principal shaft should be kept open for transport, so that the mine can be worked as properly as possible.

The mine owner can request the district mining office to allow him to suspend the works if this appears necessary in consequence of want of a market, money difficulties, fire, transactions about inherited property, lack of water, landslips, erection of machinery, &c. This suspension of works is only granted for one year, unless, after careful examination of the circumstances, it is deemed expedient to grant a longer period.

If the working of a mine is stopped without permission, a fine is imposed of up to 100 fl., or even the concession may be withdrawn. However, this rule also is not always strictly adhered to, but in many cases a greater leniency is shown.

When the excavations are done imperfectly, or in such a manner that further openings are, through that, rendered more difficult, or prevented, and when the principal shaft is not kept in a good state fit for passage, the district mining office has the right to interfere, and, in case of pressing danger, may order the repair of the ill-conditioned shaft at the expense of the mine owner; also, in such cases, fines from 10 to 200 fl. are imposed, or, if these rules have been repeatedly neglected, the concession is withdrawn.

Every mine owner has to take the utmost possible care to provide for the safety of the people at work on the mine, and to prevent damage of property. To this end he must make use of all those appliances which science and experience have taught. To these necessary safety regulations belong especially—

- The proper fencing of pits, to prevent people and animals from falling into them.
- The rendering of the shafts and galleries secure from falling in.
- The building of necessary woodwork supports for transport galleries more than 18 m. deep; the rendering of the ascent and descent secure by a daily examination of all necessary machinery, cages, ladders, stairs, &c.
- The prohibition of such tools which endanger the safety of the workmen.
- The special attention directed towards parts of the mine that are liable to be set on fire, and the immediate use of the safety appliances and fire-engines.
- The care taken of proper ventilation, to prevent the formation of dangerous gases.
- The use of good safety lamps in dangerous places.

If these safety regulations are neglected, the mine owner is liable to be fined; and, if bodily injuries, or death of men, are thereby caused, he is committed for trial, besides being obliged to pay a certain compensation.

III. The power of a concessionaire to assign or sublet his concession; the conditions and terms on which any such lease or assignment is granted?

Concessions for prospecting can be, like other concessions, assigned to another person by a common agreement, last bequest, &c.; but the mining authority must first receive notice of this transaction. If prospecting works are begun by the new owner before having sent in a proper notification,

Appendix
C. XVIII.AUSTRIA-
HUNGARY.
Report to the
Commission
by Dr. Weiss.
The keeping in
working order c
Free prospects.The mine
measure.

Suspension.

The excavating
works.Prevention of
danger of life
and damage o
property.

mine in question such as the situation of the beds, richness of the same, distance from the pit-mouth, already extant galleries, &c., but also on the individuality, the industry, and skill of the miners.

Therefore different figures would have to be quoted for different mines, and these again vary at times and are not always the same.

In general it may be said that in coal mines 1 hewer (Häuer) produces in a surface mine 5-6 tons, in a pit a hewer produces in brown coal mines about 1·6 ton if the strata is considerable, and in coal mines where the mineral is harder, about 1 ton per shift. The average amount of mineral produced per average shift by all workers employed in pits (hewers, trammers, carpenters, &c.) comes to about 1 ton for the former and about 0·5 T. 0·4 T. for the latter.

In consideration of the fact that the amount of work accomplished by one worker varies in different mines and in different parts of the same mine, it is often arranged that in order to regulate the work of the miners they are paid for piece-work.

-work.

The management tries to find out how much a workman working diligently can do per shift, taking the state of the mine in question into consideration; then it is calculated how much a workman must earn per day to keep himself. Thus by division one obtains the wages paid for one ton produced, to the workman in question. In a similar manner the wages for piece-work of all other kind of

miners are calculated; and thus one obtains the average wages which may be exceeded by diligent skilful workers.

As regards the wages themselves, they vary very much, not only in different parts of the country, but also in different kinds of mines (coal mines, ore mines, &c.).

Average figures for the whole of Austria would hardly give sufficient insight into these matters, since the prices of food and cost of living vary considerably in different parts; the official statistics compiled for the ministry of agriculture are therefore given for the different provinces separately.

Bohemia.—Bohemia is the richest land in Austria with regard to mineral produce and mines. Of the total area of mine measures granted to concessionaires in Austria amounting to 170,830·6 Ha., 98,257·2 hectare, are situated in Bohemia. And of the total number of miners employed in Austria (with the exception of those working in salines) 100,497, almost half, viz., 49,889 are in Bohemia, and of the total number of workers employed in smelting works in Austria, viz., 13,461, about 6,517 are in Bohemia.

It is, therefore, the state of wages and of the miners in this province which allows the best insight into the Austrian labour questions, and will therefore be fully discussed.

The following tables will show the average wages per day of the different kinds of workers in the different mining districts earned during the year 1889 :—

Amount of
wages.

(a.) IN PIT COAL MINES.

In the Mining Districts.	Overseer or Foreman.		Hewer.		Trammer.		Surface Worker.		Female Worker.		Children.	
	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.
Prag - - - - -	1	59	1	34	—	77	—	70	—	51	—	46
Schlan - - - - -	1	88	1	50	1	—	—	75	—	50	—	—
Pilsen - - - - -	1	85	1	32	—	98	—	75	—	51	—	—
Mies - - - - -	1	70	1	48	1	10	—	75	—	45	—	—
Kuttenberg - - - - -	1	65	1	17	—	77	—	74	—	55	—	—
Brüx - - - - -	1	45	1	—	—	—	—	80	—	—	—	—
Total Average - - -	1	69	1	30	—	92	—	—	—	50	—	46
In the year 1888 - -	1	57	1	12	—	81	—	—	—	45	—	45

(b.) IN BROWN COAL MINES.

In the Mining Districts.	Overseer or Foreman.		Hewer.		Trammer.		Surface Worker.		Female Worker.		Children.	
	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.
Kuttenberg - - - - -	1	36	—	96	—	93	—	87	—	90	—	—
Falkenau - - - - -	1	62	1	34	1	18	—	91	—	62	—	—
Ellbogen - - - - -	1	54	1	40	1	30	—	96	—	66	—	—
Kamotau - - - - -	1	32	1	15	—	97	—	78	—	61	—	—
Brüx - - - - -	2	—	2	08	1	26	1	15	—	70	—	—
Teplitz - - - - -	1	96	1	70	1	32	1	06	—	70	—	—
Budweis - - - - -	1	25	—	87	—	67	—	57	—	—	—	—
Total Average - - -	1	58	1	36	1	09	—	90	—	70	—	—
In the year 1888 - -	1	51	1	28	1	05	—	57	—	67	—	57

(c.) IN IRONSTONE MINES.

In the Mining Districts.	Overseer or Foreman.		Hewer.		Trammer.		Surface Worker.		Female Worker.		Children.	
	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.
Prag - - - - -	1	31	1	10	—	73	—	67	—	32	—	—
Pilsen - - - - -	1	25	—	83	—	70	—	60	—	—	—	—
Kuttenberg - - - - -	1	50	—	76	—	60	—	60	—	—	—	—
Ellbogen - - - - -	2	—	—	83	—	70	—	55	—	—	—	—
Kamotau - - - - -	1	—	—	87	—	—	—	—	—	—	—	—
Teplitz - - - - -	—	—	1	—	—	—	—	—	—	—	—	—
Budweis - - - - -	1	50	—	85	—	80	—	60	—	—	—	—
Total Average - - -	1	43	—	89	—	71	—	60	—	32	—	—
In the year 1888 - -	1	42	—	90	—	71	—	65	—	46	—	4

(d.) IN OTHER MINES.

In the Mining Districts.	Overseer or Foreman.		Hewer.		Trammer.		Surface Worker.		Female Worker.		Children.	
	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.
Prag - - - - -	1	40	1	15	—	66	—	70	—	36	—	—
Pilsen - - - - -	1	32	—	82	—	73	—	62	—	35	—	—
Mies - - - - -	1	60	1	—	—	65	—	55	—	40	—	—
Kuttenberg - - - - -	1	58	—	77	—	60	—	60	—	31	—	—
Falkenau - - - - -	1	32	1	15	1	05	—	79	—	53	—	—
Ellbogen - - - - -	1	48	—	85	—	68	—	76	—	60	—	—
Teplitz - - - - -	1	45	1	05	—	95	—	85	—	—	—	—
Budweis - - - - -	1	35	—	89	—	75	—	65	—	—	—	—
Total Average - - -	1	44	—	96	—	76	—	69	—	43	—	—
In the year 1888 - -	1	40	—	89	—	71	—	62	—	39	—	44

(e.) IN SMELTING WORKS.

In the Mining Districts.	Smelters.		Day Labourers.		Female Workers.		Children.	
	fl.	kr.	fl.	kr.	fl.	kr.	fl.	kr.
Prag - - - - -	1	47	—	—	—	53	—	55
Pilsen - - - - -	1	04	—	75	—	—	—	—
Teplitz - - - - -	1	50	—	—	—	—	—	—
Kuttenberg - - - - -	—	60	—	40	—	—	—	—
Falkenau - - - - -	1	05	—	90	—	53	—	—
Ellbogen - - - - -	1	—	—	—	—	—	—	—
Kamotau - - - - -	1	30	—	—	—	60	—	—
Budweis - - - - -	—	60	—	—	—	—	—	—
Total average - - -	1	07	—	68	—	55	—	53
In the Year 1888 - -	1	05	—	69	—	56	—	55

The following institutions and establishments for the welfare of the miners existed at the close of the year 1889 :—

1,162 workmen's houses with 5,480 dwellings which afforded shelter for 4,791 families and 1,762 unmarried workers, 18 lodging-houses with 882 beds, 17 hospitals, 7 schools belonging to the works, 1 crèche, 2 kinder gartens, 20 co-operative stores, 9 flour and bread stores, 1 shop for ready-made clothes, 4 workman's kitchens, 3 savings banks, 1 school for girls and women to teach sewing and other work, 1 asylum and several baths.

Many mine owners have besides given considerable contributions for the foundations of schools, or have paid themselves for the schooling of the children of their workmen, and have also insured their workmen against bodily injury or death at different insurance companies, even if the men had subscribed themselves to their clubs, or "Bruderladen."

Lower and Upper Austria.—The average wages for piece-work are :—

For hewers, 1·65 fl.—1·72 fl. per day.
For mine carpenters, 1·47 fl.—1·71 fl.
For workers in culverts ("tauber?"), 1·16 fl.—1·19 fl.
For trammers, 1·11 fl.—1·13 fl.

The shift wages for artisans amounted to 1·10 fl.—1·40 fl., those of day labourers to 80 kr., those of female workers to 52-60 kr., and those of young persons to 58-64 kr.

The following institutions exist for the welfare of the workers in Upper Austria: 114 workmen's houses, which afforded dwellings to 545 families and 312 unmarried workmen, then an elementary school, 2 kindergartens, 2 schools for women's work and music, 2 co-operative stores, 1 steam bath.

Salzburg.—In gold mines the wages are as follows :—

For hewers, 1·10 fl.—1·45 fl.
For carpenters, 1·05 fl.—1·30 fl.
For day labourers, 90 kr.—1·10 fl.
For the trammers, 80 kr.—90 kr.

In copper mines :—

For hewers, 2·09 fl.—2·29 fl.
For carpenters, 1·30 fl.—2 fl.
For trammers, 50 kr.—1·30 fl.
For finishers, 1 fl.—1·30 fl.

For first smelters 1·30 fl.
For second smelters, 1·05 fl.—1·15 fl.

In iron mines :—

For hewers, 1·05 fl.—1·84.
For carpenters, 1 fl.—1·28.
For blast-furnace workers, 1·03 fl.—1·40 fl.
For iron-founders, 1 fl.—3 fl.
For day labourers, 80 kr.—1·10 fl.

Moravia.—The following average wages are paid for a 10 hours' shift in the important mining district of Mährisch Ostrau :—

For hewers, 1·76 fl.
For carpenters, 1·66 fl.
For "hundestösser," those pushing underground waggon, 1·05 fl.

For trammers and pit boys, 78 kr.
For machinists and stokers, 1·20 fl.—1 fl.
For artisans, 1·52 fl.
For loaders, 1·37 fl.

For day labourers, 82 kr.
For female workers, 49 kr.

In the pit-coal mines of the district of Rossitz the average wages per day are the following :—

For hewers, 1·10 fl.—1·32 fl.
For trammers, 85 kr.—1·03 fl.
For cleaners (säuberer?), 63 kr.

For female workers, 40-80 kr.
In the district of Mährisch Frubau-Boskowitz a hewer earned 55-80 kr., and as trammer 40-70 kr.

In the South Moravian Crown coal basin a hewer earned 80 kr.—1·40 fl., and a trammer 50 kr.—90 kr.

As regards the ironstone and graphite mines, the average daily earnings of a hewer amounted to 60 kr.—1·10 fl., of a trammer to 50 kr.—80 kr., and of a cleaner, 35 kr.—45 kr.

In the two world-famed iron smelting works of Mährisch-Ostrau and Witkowitz the average wages are as follows :—

Of a smelter, 3·51 fl.—3·98 fl.
Of an assistant, 2·72 fl.—2·98 fl.
Of a loader of dross or slag, 1·95 fl.—2·28 fl.

Of a "gichter," those employed at the terrace or mouth of a furnace, 2·49 fl.—2·77 fl.

Of an iron carrier, 1·95 fl.—2·18 fl.
Of a worker who has to do the weighing 1·97 fl.—2·37 fl.

Of a "müllerführer" (one who carries away the rubbish or mull), 1·77 fl.—2·14 fl.

Appendix
C. XVIII.AUSTRIA-
HUNGARY.
Report to the
Commission by
Dr. Weiss.

Of a machinist and boiler watcher, 1.30 fl.-1.60 fl.
And of a day labourer, 80 kr.

In the smelting works situated near Blansko, the wages of a blast-furnace worker amounted to 80 kr., and for a former, 50 kr.-1 fl.

Silesia.—The daily wages earned in the large pit coal miners vary according to their having an 8 hours or a 10 hours' shift. They are as follows:—

A hewer, 94 kr.-1.80 fl.

One who pushes underground waggons, 70 kr.-1.20 fl.

For a trammer, 43 kr.-92 kr.

For a machinist, 30 kr.-1.46 fl.

For a stoker, 70 kr.-1.46 fl.

For a cokes worker and charger, 92 kr.-1.48 fl.

For an artisan, 95 kr.-1.84 fl.

For a day labourer, 60 kr.-85 kr.

And for a female day labourer, 30 kr.-52 kr.

In the other mines the average earnings of a worker amounted in the different classes of workers from 30 kr.-95 kr.

At the smelting works and the foundries connected with them the following average wages were earned:—

A smelter, 1 fl.-2.30 fl.

One employed at the terrace of a furnace, 1.10 fl.-1.80 fl.

A former, 50 kr.-2.80 fl.

An assistant and artisan, 45 kr.-1.35 fl.

With regard to institutions for workmen, the following were in existence in all the different mines and smelting works of Silesia; 847 workmen's houses in which (wherein) lived 3,569 married and 1,967 unmarried workers, 17 widowers and 13 widows, 14 hospitals, 3 schools, 1 crèche, 7 co-operative stores, 7 grocer and butchers' shops, 3 providential relief clubs, 4 baths, 1 workmen's kitchen, and 1 savings bank. (The latter belongs to a mine of Prince Salm.)

The workmen belonging to the mines of Wilczek, in Polish Ostrau, and to the mines of the Archduke Albrecht, at Karwin, received with their houses little gardens; besides plots of ground belonging to the works were allotted to them for very little rent. Many mine owners who have no schools of their own on their works pay the money for the schooling of their workmen's children.

The workmen employed in the mines of Prince Salm at Polish Ostrau are expected to deposit their savings in the savings bank. For this purpose they receive a savings bank book bought for them at the expense of the management who take charge of it.

The result was that at the end of the year 1889, 155 savings books with a total deposit of 17,490.92 fl. could be produced.

Steiermark.—In many mines the eight hours' shift was introduced, and in others the introduction of the eight hours' shift is in contemplation.

The average wages are:—

for a hewer, 1.10-1.32 fl.,

for a trammer, 86 kr.-1 fl.,

for female workers, 53-65 kr.

and for carpenters, masons, and smiths, about 1.30 fl.

In the mining district of Leoben, the greater part of the body of miners is lodged gratis in 681 buildings. At most of the works the workmen get their burning materials for nothing, only at some works they have to pay a little for it.

Workmen are able to get plots of ground either for nothing or on payment of a very low rent of from 9 to 12 fl. an hectar. 17 works possessed supply stores, besides there were three co-operative stores; 17 works had either properly arranged hospitals or large sick rooms.

In the district of Graz there were 354 houses belonging to mining works, in which lived 171 married and 18 unmarried workers, for nothing; 862 married and 639 unmarried workers on payment of rent amounting from 50 kr. to 3.30 fl. a month. Besides 429 families near coal mines had 174,096 mr. of ground allotted to them gratis, and 988 families 484,503 mr. on payment of a monthly rent of 10 to 80 kr. an Ar. Near the ore mines 22 families were allowed to make use of 24,655 mr. of ground without any payment. At 15 mines stores were in existence supplying the ordinary means of subsistence; they could show a yearly of 172,836 fl.

Six hospitals were entertained for the nursing of sick miners.

In the district of Cilli, in the coal mines of the Trifail Coal Mining Company at Trifail, Krastung, and Oistro, the miners live in 146 houses belonging to the company, and in one building belonging to the Krastnigg Club, also in 31 colony houses on land belonging to the company. They have to pay a low rent, or some of them none at all.

Krain.—The average wages are about the same as those in Steiermark.

Of the workmen, 460 married ones, and 150 unmarried ones, live in 78 houses belonging to the mines; besides, 40 workmen live in houses rented for them by the management, for which they have not to pay.

At the mine Savor, the married workmen who had no dwellings allotted to them received a monthly payment of 1 fl. instead.

Galicia.—The average daily wages are as follows:—

Hewers, 1 to 1.60 fl.

Trammers, 40 to 50 kr.

Day labourers, 45 kr.

Female workers and young persons, 30 kr.

For the production of bituminous minerals (ground oil, ground wax, &c.) the following wages are paid; a borer, 50 kr. to 1.20 fl. a shift, a hewer, 50 kr. to 80 kr., an ordinary day labourer 40 kr. to 80 kr., and a woman at the pumps 20 kr.

The average earnings amount, for instance, in the mining district of Drohobier per shift and head in the ground wax mines 82 kr., in the rock oil mines, 92 kr.

Besides, all miners are legally obliged to belong to a club "bruderlade," i.e., an insurance bank which has to pay to the miners in case of illness a daily contribution, and in case of their being invalided, a certain general pension.

The means for this are brought together by subscriptions of the miners and contributions of the mine owners.

X. The wages and economic position of the miner in mines worked by the State as compared with his wages and economic position in mines worked by a concessionaire.

Of the total figure of mining measures in Austria, amounting to 170,830.6 hectar, the State owns 5,571.2 hectar, or 3.27 per cent. (Ärar, public treasury), the greatest part of which, namely, 4,614.3 hectar, is situated in Bohemia. Besides, most of the salt-mines belong to the State, being under the "Salinärar" ("treasury of salines"). The wages in the mines belonging to the State are about as high as those in private mines, only the miners of the former enjoy some special privileges with regard to annuities and support in case of distress, as will be explained lower down.

In the salines of Upper Austria a workman earns on an average 60 kr. to 1.06 fl. per day, so that the annual earnings of a workman employed in a mine amount to about fl. 270 on an average, and those employed in smelting works to about fl. 300. But besides that, the sum of fl. 86,784 was spent in the year 1889 by the ("Ärar") Treasury for provisions, educational grants, and gifts, also for sick funds and dispensary expenses in the province of Upper Austria solely, quite independently from the assistance rendered by the clubs and unions.

In Salzburg the wages per shift and for piece-work average 60 kr. to 1.02 fl. in mines, and 70 kr. to 1.07 fl. in smelting works. Independently from the assistance rendered by the clubs (Bruderlade), the (Ärar) Treasury spent in the year 1889 fl. 11,889 for commissions and grants, and 2,722 fl. for doctors' fees and medicines; altogether, with pensions and help in distress, fl. 16,799.

In Galicia, where 1,044 men are employed in the salt mines, and 432 in the salt works, the average wages per head and shift amount to from 50 kr. to 1.06 fl. in the former, and from 76 kr. to 1 fl. in the latter. And the sum spent by the Treasury for the benefit of their workmen (commissions, grants, sick funds, medical attendance, medicines, and assistance, &c.), amounted to 102,708 fl. in the year 1889.

XI. The constitutions and powers of the council of mines, or of any State department controlling mining industry.

For the administration of mining law and the economical management of mines, competent mining authorities (Bergbehörden) exist, whose duties consist especially in granting the mining concessions, and in superintending the proper legal working of mines (mining police). Therefore, they have to see that concessionnaires fulfil all the duties which their concessions impose on them, and in case of special measures being needed for the preservation of the mine or its connexion with public interests, they have the duty to interfere. All necessary examinations are officially conducted.

Mining authorities are especially obliged:—

(a.) To have all mines of their district inspected from time to time by some of their experts, who must report to them on their state and condition.

For this purpose the district inspector has to descend into all the shafts to see into their condition, and to be especially careful with those, which are more than others dangerous (on account of fire, explosions, &c.). The manager has to accompany the inspector on his inspection.

Total amount
of mine measures
belonging to the
State in Austria.

Wages.

organisation
of mining
authorities.

Mining authorities.

Rights and
duties of such.

If the latter discovers any defects, he orders them to be altered; if this is not done, the mining police sends an order for repair; in cases of impending danger, the district inspector has the right to order the immediate repair at the mine owner's expense, and see that it is done himself, if necessary making use of compulsory means, such as calling constables or even military forces to his aid. If the manager has proved himself to be inefficient, the inspector can appoint a new manager at the mine-owner's expense.

If it is a question of an accident which caused either the death or bodily injury of one or several persons, the district inspector together with the local political authorities has to inquire into the causes of the accident, and send in an explicit report to the Attorney General who might want to institute proceedings against those who caused the accident, and also to the office of surveyor of mines, which might have to order further measures for safety.

(b.) To let their deputies be acquainted with the plans for working and the maps, of course under the promise of official secrecy, so that their maps may be made out and corrected accordingly.

(c.) To issue all directions and rules which are necessary to ensure obedience to the prescriptions of mining law.

(d.) In case of dangerous occurrences, which threaten to increase and endanger the mine in general, to have a local inspection, especially if their aid has been requested by those concerned in it, and, if the measures taken by the management do not prove to be sufficient, to give the necessary orders.

If events happen which endanger the safety of persons, buildings, plots of land, medicinal springs, pumps, &c., the mining authorities generally order the necessary safety measures in conjunction with the local political authorities.

The mining authorities are composed of the District Mining Offices, the Mining Surveyal Offices (Berghauptmannschaften), which consist of the Surveyor of Mines (Berghauptmann) or his deputy, of referees, assistant officials, and of the necessary secretaries, writers, servants, &c., and the Ministry of Agriculture, as highest authority in mining matters. In the employ of the mining authorities are expert sworn mining engineers and measurers of mines.

In Austria there are four mining surveyal offices, subordinated to which are 26 district mining offices.

Against decisions of the district mining offices, in the first instance, an appeal can be made to the mining surveyal office in the second instance, whose decision in those cases is final. However, against decisions of the mining surveyal office in the first instance an appeal can be made to the Ministry of Agriculture.

In those cases in which the mining authorities are called upon to settle contradictory claims of private persons, the latter are also entitled to seek justice in the ordinary course of law.

The mining surveyal offices have, in the first instance, the following rights:—

To grant the formation of mining districts, i.e., to allow neighbouring mine-owners to unite for the purpose of establishing common institutions, principal openings, waterworks, roads, railways, hospitals, schools, &c.;

To grant mine-measures, &c., to permit the union of mine-measures granted separately

To give permission to divide a single mine-measure;

To grant swallets;

To decide on the extent and the execution of powers contained in the mining concessions;

To sanction deeds of partnership and formation deeds of mining companies;

To permit the dissolution of partnership;

To decide on the obligation of taking over certain duties, and of the extent of the same, if the parties concerned cannot come to terms;

To sanction the union of several "Bruderladen," i.e., of the sick and invalid funds, which exist in every mine, and whose purpose it is to support the miners in times of sickness, and to insure a life-rent to them if they get incapacitated for work, either through old age, illness, or an accident

To inflict sentences of punishment if the mining law is violated (fines, and sometimes deprivation of concession);

To settle all disputes between the contending parties, unless these fall under the jurisdiction of the law; for instance, the ascertaining of mine boundaries when new galleries are opened, differences with regard to prospecting works, &c.

To order the proceedings of the authorities with regard to the withdrawal of concessions.

The district officials have to inquire into all these matters and report on them to the Mining Surveyal Office.

The Surveyor of Mines has to keep his close attention on everything which belongs to the prosperity and welfare of mines in his district, and always to be ready to seize the necessary measures to promote the interests of the mine or to prevent danger. He has to report important observations and occurrences to the Ministry of Agriculture.

The district mining official has to get thoroughly acquainted with the conditions of his district. He must always be well informed about the topographical, geognostic, and judicial conditions of the district, and know the state of the works, of the produce of the market, of the facilities for transport, and the condition of the workers in the different mines, and be acquainted with the newest improvements for the working.

For the preservation and maintenance of private rights in connexion with the peculiar circumstances of mining, mining tribunals have been instituted; however, for the exercise of mining jurisdiction, which forms only a branch of the civil jurisdiction or civil law, no proper places for the courts of law exist, but in connexion with the ordinary law courts of first instance, which according to their geographical situation seem suitable, so called "Bergsenate" mining senats have been formed. These senats consist of the chairman and two councillors, of whom one at least must be a qualified mining judge, besides of two mining experts, i.e., technically trained assessors belonging to either a mine or smelting works, and a substitute assessor.

Mining
tribunals.

These law courts of first instance authorised to exercise mining law decide in all questions of real rights to mines and their belongings, therefore in questions of rights of property to granted mine-measures, servitudes and mortgages on mines, in all disputes arising from disturbances of property and violation of contracts (trespassing on other mine-measures). They decide if a field is declared to be free on account of a concession being withdrawn, they settle disputes about indemnifications for the use of other people's mines, their appliances for drainage, ventilation, and transport, for the making of assistant shafts and openings in the neighbouring fields, &c. They decide in disputed questions with regard to the management of the "Bruderladen" sick funds, first, if subscriptions are due and not paid, and about the duties to the members of the Bruderladen; in questions with regard to the property and the use of swallets (Grubenwasser), with regard to deeds of partnerships, with regard to differences between officials and workmen, violation of compacts, &c. These law courts have also to keep the mining register of all mines contained in their district, and to make all necessary estimates, inventories, offerings for sale, &c., and introduce the "sequester" (executor), if need should be.

Besides, for the representation of the mining industry in particular, chambers of commerce and industry have been established, whose members are chosen from the industrials and manufacturers of the district. Among other things, they take impending bills into consideration which touch upon commercial and industrial interests and send in their opinions to the Minister of Commerce, as also sometimes suggestions for bills.

XI. Generally the effect of the system in retarding or developing mining industry.

The rules and regulations in force in Austria-Hungary with regard to the obtaining and exercise of mining concessions have had a great influence on the development of the mining industry.

It is evident that the prospecting for minerals and their manipulation does not only demand a great deal of technical knowledge, but also sufficient capital, and therefore if this important branch of industry were left entirely to private enterprise on the part of the landowners, it would often be a serious question whether the latter possess the necessary funds and technical knowledge. Besides, in many cases a strata of minerals extends underneath the property of several landowners, and it would be almost impossible to work different mines scattered on the larger

Appendix
C. XVIII.AUSTRIA-
HUNGARY.
Report to the
Commission by
Dr. Weiss.

Appendix
C. XVIII. and
XIX.

AUSTRIA-
HUNGARY.
Report to the
Commission by
Dr. Weiss.

or smaller plots belonging to different owners, and to this would come the additional difficulty of arriving at an agreement between the owners with regard to the working of the mines. As these minerals, which occur only in a few places and under peculiar circumstances, are of such great importance in satisfying human wants, it has been arranged in Austria-Hungary to make them entirely independent from the landowner and the above-mentioned chances. Thus it has come about that a landowner has no right of property on the minerals contained in his land, but that a special right of property (*Bergwerthes eigentum*, mining property) can be granted to him or some one else.

This system has specially promoted the establishment of mines.

Altogether the mining law in Austria-Hungary has always shown the endeavour to encourage those mining enterprises which are of great value with regard to national economy. Concessions are therefore only granted when good openings have been made which are worth working. Before concessions are granted, these openings are examined by the mining authorities, whose duty it is to refuse the concession if they find that the opening does not justify the establishment of a mine, but that it has been made by persons who intend either to use it as a speculation, or to attain secondary objects, or to deceive ignorant and credulous people.

On the other hand, the mining law is only too anxious to encourage emulation among prospectors in a hopeful locality, by granting prospecting concessions for the same district to several persons; however, if a prospector intends to work seriously he can always insure himself from disturbances by obtaining a free prospect for his field.

Besides, the authorities endeavour to preserve already existing mines as much as possible, therefore the law grants special benefits to such mines that are situated in

unfavourable localities, by assuring to them the aid of their more favourably situated neighbours. (Mining-servitudes.)

A fundamental condition for the development of the mining industry is the right of expropriation granted by the Mining Law to the mine owner, according to which he is able to obtain the necessary land for his mine and the works belonging to it, even without the consent of the land owner. It was only this law which made it possible to conduct the mining industry in a profitable manner, which was of the greatest importance for the economical development of the State.

On the other hand, it seems only just that the mine owner should be under the obligation, laid upon him by the Mining Law, to keep the works in his prospects, pit and surface mines constantly going; to enable him to make the best possible use of the mineral treasures in his keeping. Considering the many special privileges which the mining industry enjoys on account of its great economical importance, and among which the right of expropriation stands foremost, it seems quite justified to use a certain legal constraint in order to insure a profitable working of the mines which are protected by the State in such a sufficient manner. Thus it is not only prevented that the land owner is subjected to unnecessary limitations and annoyances, but also it is made impossible that a field can be blocked or closed without any urgent necessity.

Finally, it may be remarked that in order to ensure the complete trust of the mine owners in the impartial management of mining affairs, the Mining Law has ruled that officials which are appointed to belong to the mining authorities may not have any direct interest in the mines in their district submitted to their personal supervision; not only they themselves but their wives or their children may not possess or purchase mining property in their District.

Vienna, August 1st, 1891.

DR. MARITZ WEISS.

ITALY.

XIX.

NOTES on the MINING LAWS in ITALY, prepared and handed in by Mr. WAMESLEY, and forwarded to the ITALIAN GOVERNMENT in accordance with the request of the COMMISSION.

The unity of Italy as a kingdom has not as yet led to a general consolidation of the different laws with reference to mines which prevailed in the independent States of which the present kingdom is made up. These laws still subsist, and are of a varied character. Many forms of ownership exist with regard to mines in different parts of the country.

The "application of the laws" is clearly laid down by the Italian Government in the "Rivista del Servizio Minerario nel 1883," viz.:

"In Upper Italy, in the ex-Pontifical States, and in the old kingdom of Sardinia (Continent of Italy and Island of Sardinia), mines are given by the Government in concession, with preference to the discoverer.

"In Sicily and the Neapolitan Provinces the sulphur mines are reserved for the owner of the soil; all other mines can be conceded by the Government to him who makes the demand, should the owner of the soil not work them.

"In Tuscany mines (except those of Elba and Piombino, which belong to the Public Domain) are at the free disposal of the owners of the soil."

Thus the principle of "accession" and the "regalien" system both appear in the legislation, and it may be pointed out in addition that, as regards the iron mines in the Island of Elba and Piombino, and also until recently (and perhaps still to some extent) as to the mines in the ex-Pontifical States, the principle of "domaniality" has been recognised, the mines being considered to belong to the Crown, with power to deal with them at discretion.

These seem to be the general principles on which mines are dealt with in the kingdom, though it is understood

that there are many old laws still on the statute-book relating to mines which are now in disuse.

Since the kingdom became united, various projects have from time to time been brought forward for establishing a uniform law based on one or other of the particular systems before referred to, but so far these projects have all fallen through, though there is now a prospect (which will be fully referred to later on) of uniformity being established in the law relating to mines to some extent, the existing laws as to the proprietorship of minerals not being disturbed.

There are however, a few points on which remarks may be made which may be fairly applicable to the whole country, for instance, as regards the regulation and inspection of mines.

A Royal Decree of the 23rd December 1865 subjected all workings of mines, quarries, turf, and mineral manufactories in the provinces, to which the law of Piedmont of 1859 was not applicable, to police regulations, relative to the security of the surface and of the persons engaged about the works. By this law all workings are placed under official inspection, which is exercised by the Engineers of Mines, under the authority of the Minister of Agriculture, Industry, and Commerce, and of the Prefects and sub-Prefects, who have power to prescribe (after hearing the mine owner) all measures proper to put an end to any cause of danger. The administration has also the right, in case of neglect, to execute the prescribed works at the cost of the mine-owner (Art. 5).

In case of accidents the mine-owner ought at once to inform the syndic of the district and the Engineer of Mines. In cases of urgency the syndic can take all necessary steps, with a right of requisition upon neighbouring mine owners, at the expense of the mine owner concerned (Art. 14).

All working of mines is prohibited within an area of 20 metres around court gardens and walled-in places, and within an area of 100 metres round buildings, canals, and private springs of water, failing the consent of the parties

Regulation and
inspection of
mines.

interested, or the works being admitted and declared to be without danger by the judicial authority. On the other hand, the judicial authority may, at the instance of private owners, prevent or regulate the working of mines outside the areas before referred to, if such workings endanger courts, gardens, buildings, canals, or springs (Art. 6).

Similar provisions are made for the protection of public property, such as roads, railroads, and canals (Art. 7).

Mine owners are required to keep plans of their underground workings, and to remit copies of such plans every year to the Government engineers.

Mine owners are also required to keep about their works necessary appliances for aid in proportion to the number of workmen and the nature and situation of the works (Art. 12).

In the month of February 1890 a Bill was presented by the Government to the Chamber of Deputies for the compulsory insurance of workpeople, including miners, against accident, even in establishments worked by the State, the Provinces, or the Communes.

The Bill fixes the proportion of the premium to be paid by employers and employed. The risks can be underwritten either by the "Cassa Nazionale" or by private companies duly authorised. The Bill has already passed through Committee with slight modifications, but has not yet passed the Senate.

In order to provide for the proper inspection of the mines and other technical duties, the Minister of Agriculture, Industry, and Commerce commands the services of the engineers of the Royal Corps of Mines. The territory of the State is divided into 10 mining districts, in each of which one or more engineers are stationed, under the control of a central inspector resident in Rome.

The Royal Corps of Mining Engineers is now composed as follows, viz.: 2 inspectors, 9 chief engineers, 21 engineers of the 1st, 2nd, and 3rd class respectively, 6 geological engineers, 1 student engineer, 24 assistant engineers of the 1st, 2nd, and 3rd class respectively, 3 draughtsmen (this work, as a rule, is done by assistant engineers), and 7 writers. Total, 73 persons.

There are three schools of mines, Agordo, Caltanissetta, and Carrara, and a school for Capi Minatori (a cross between mining captains and corporals) at Iglesias. "Rivista del Servizio Minerario nel 1888," pages 89 to 91.

In considering the subject of mining in Italy the following facts should be constantly borne in mind, viz.:

1. That landed properties are cut up into very small parcels through the operation of the law of inheritance.
2. That mines are usually situated in high and poor land.
3. That the general taxation of the country is extremely heavy.

No Government statistics, published of late years, have given the number of Royal Concessions in force; however, they must be at least 500 (this is exclusive of mines worked in Sicily and Tuscany without Royal concessions). Out of this number in the year 1888 about 200 are represented by the Government as having been worked.

In some districts the number of mines unworked is much greater in proportion than in others; the particulars (taken from reports of the Government mining engineers) given below will illustrate the extent to which the power of revocation is made use of.

During the year 1888 eight concessions were granted and two revoked. The following table gives the number of concessions and permits of research granted and revoked in 1888.

District.	Concessions.		Permits of Research.	
	Granted.	Revoked.	Granted.	Revoked.
Bologna	1	—	5	—
Turin	—	—	7	30
Iglesias	4	2	27	13
Vincenza	—	—	29	26
Rome	—	—	32	—
Genoa	—	—	1	—
Milan	3	—	6	23
Total	8	2	107	101

The rights of research in force are as follows:

In 1887 the total number	-	467
In 1888 the total number granted	-	107
In 1888 the total number revoked	-	574
Total number remaining in force at end of 1888	-	101
	-	473

Aperietur—rights of research—granted for Sicily. 4.

It is said that great laxity prevails with respect to the enforcement of the regulations as to working of mines under concession, and that at least three-fifths of the mining concessions in force are not worked in conformity with the conditions of the concessions, and that many are not worked at all. It is also stated that not one-fourth of the permissions of research are worked in conformity with the stipulations and conditions of the mining law; that these facts are of public notoriety, and are admitted by the corps of Royal Mining Engineers.

Miners and other underground workpeople work 48 hours per week; surface hands from 10 to 12 hours a day, according to the season of the year. In mines there is both day and night work, the miners' wages being the same for eight hours' work, whether they labour by day or night.

The following table shows the rate of wages paid at a mine in the north of Italy from 1869 to 1889, with cost of wages per ton of gold ore extracted during the same period:—

Date.	Blacksmiths per day.	Carpenters per day.	Miners on day work.	Miners on contract.	Labourers day work.	Wages per ton on excavation of ore.
1869	lire. 2'50	lire. 2'25	lire. 1'70	lire. 2'36	lire. 1'50	lire. 11'13
1874	3'00	2'50	2'00	2'36	1'60	9'33
1879	3'50	2'75	2'00	2'45	1'60	7'55
1884	3'50	3'00	2'50	2'80	2'00	12'92
1889	3'50	3'00	2'50	2'80	2'30	12'96

Miners (on day-work and contract), therefore, appear to have received an average of lire 2'34 = ls. 10½d., and labourers an average of lire 1'8 = ls. 5½d. per day during the period referred to.

From the preceding remarks it will be apparent that in order to understand the existing state of mining law in Italy, it is necessary to follow separately the history of the law as to mines in each of the States which go to make up the entire kingdom. The different States must again to some extent be subdivided according to their former history. It is proposed to give a short sketch here of the history of each State or portion of a State in which a separate law prevails as to mines, following the order in which the different laws are stated in the Blue Book before referred to.

PIEDMONT.

In the 16th century the Duke of Savoy, Charles II., laid down a general law upon the subject of mines. In the second half of the 18th century various alterations of the law took place. During the French occupation the French laws of 1791 and 1810 were successively applied, but they were abolished on the return of the Kings of Sardinia to the possession of the country. In 1822 King Charles Felix issued Letters Patent to regulate the matter based principally on the French law of 1791, and recognising a right of preference to the concessions in the owner of the surface. In 1840 Charles Albert established a complete mining code abolishing all previous laws on the subject, which code forms the basis of the existing law. This code transferred the right of preference to the concession from the owner of the soil to the discoverer. In other respects the law greatly resembled that of France.

Appendix
C. XIX.
ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Wamesley.

Wages and
hours of work-
ing.

Different
mining laws.

Notes on the
Mining Laws
of Italy by Mr.
Wamesley.

History of law
as to the owner-
ship of mines.

The effect of the existing law of 1859 (in 171 Articles) is briefly but correctly stated in the Blue Book before referred to (p. 20). By this law minerals are divided into

two classes only, the property in which is owned as shown in the following table:—

PIEDMONT.

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines.	Ownership.	To whom Royalty or Mining Tax is payable.	Remarks.
I. Mines, comprising veins, layers, or beds of gold, silver, platinum, iron, copper, lead, zinc, tin, antimony, arsenic, bismuth, cobalt, nickel, mercury, manganese, and other metals; sulphur, sulphates of iron, copper, and zinc, manganese aluminium, alum, bitumen, asphalt, graphite, anthracite, coal, and lignite.	In the concessionnaire from the State, the concession being given by preference to the discoverer, who may either be the owner of the soil or a stranger, who has made a search in accordance with the regulations, and established the existence of a workable mine.	To the Government. 1st a fixed tax of 50 centimes per hectare, and 2nd, proportional royalty tax of 5 per cent. of the net profits ascertainable by the prefect. N.B.—The latter rent has been of late years replaced by the general income tax (Tassa di ricchezza mobile)* amounting to 13·20 percent. on the net profits of the undertaking.	Law of 1859, Arts. 59 to 63.
II. Quarries, comprising turf and quarries of metalliferous sands and earths, stone for building and sculpture, chalk, slate, marble, sand, quartz, barytine, fluorine, and in general all rocks from which neither metallic nor combustible substances can be extracted, and not comprised in the 1st class.	In the owner of the surface, who is simply subject to police regulations for protecting the public safety. The workings must not be undertaken until after a declaration made to the sub-prefect, accompanied (if the workings are to be underground) by a plan.	If let, to the owners of the surface.	

* N.B.—The Ricchezza Mobile (Italian income tax) is paid on the net working profit of a mine, not on the produce, as stated in the Blue Book, p. 20. It is charged on all businesses alike, not specially on mining profits.
N.B.—By Article 14, mines of salt and saltpetre are excluded from the application of the law (being a Government monopoly).

No provision is made by the law for payment of rents to the owners of the surface, except in respect of land occupied.

For land temporarily occupied within or without the area of the concession, the owners of the surface are entitled to an annual indemnity of double the value of the net income which they could be shown to have produced; but should the occupation last for more than a year, or cannot be restored, the surface owner can require it to be bought, without (it is said) any corresponding power on the part of the concessionnaire to require him to sell. In this case the value is taken at the ordinary rate, and not doubled as under the French law. The concessionnaire can be required to give security beforehand in case of works under buildings or inclosed places, or in their vicinity (Art. 81); but the concessionnaire may be excused from doing so if he proves that he has executed the necessary works to prevent any future danger (Art. 82).

In case of works outside the area of the concession the ordinary law of expropriation on the plea of public utility must be followed (Art. 83).

The principles of indemnity and recompense between neighbouring and underlying and overlying mines laid down by the French law of 1810 in respect of water (Art. 45) are adopted by the law of Piedmont (Art. 75), and extended to all cases of damage by one mine to another.

These cannot be undertaken even by the owner of the surface, except by permission of the administration granted by the prefect of the province after a public inquiry (Arts. 20 and 23). The prefect, subject to an appeal to the Minister, can either grant or refuse the permission (Art. 22), and his choice is not restricted in the case of concurrent applications, though it is usual to give priority to the applicant who has made the first regular application. A permit may be obtained even in cases where the proprietor of the land has refused his consent (Art. 20); but if the applicant has obtained the consent of such proprietor, he must unite it to his application (Art. 21), and it is said that, if he has not obtained the consent, he must at least prove that he has asked for it (Ag. § 1316). The permission of search fixes the boundaries within which it may be made, and the mineral for which it is granted; the duration is limited to two years, but it may be prolonged for a year (Art. 24), and prorogued at the pleasure of the Government even for years; and it may be revoked if the works are interrupted for three months, except in case of *force majeure* (Art. 24). It may be disposed of on declaration being made to the sub-prefect (Art. 28); but it does not give permission to dispose of the products of the search without a special authorisation of the Government (Art. 34).

The permission does not give the right, without the formal permission of the proprietors interested, to make explorations in places enclosed by walls, or in courts or gardens, or to bore or open pits or galleries within a radius of 100 metres from dwellings, or the walled enclosures belonging to them, or within a radius of 40 metres from other walled enclosures (Art. 31). A special permission is required to follow the works to within a distance of less than 20 metres from roads, or less than 100 metres from canals, aqueducts, and watercourses (Art. 32). If the search results in proving, to the satisfaction of the Government, the existence of a workable mine, the discovery (Art. 35 says) shall be declared, after which the mine will be concessionable.

When the search is over, if successful, the administration proceeds, on the application of the party interested, to the "declaration of discovery," which is made by the decision of the Minister of Public Works on the report of the engineers of mines (Art. 35). This declaration confers on the person in whose favour it is made a right of preference to a grant of the concession. Whilst waiting for the concession the holder of the right of research may be authorised to continue his works (Art. 36).

The finder and his assigns have the right of preference to obtain the concession of the mine declared discovered if within six months from the declaration of the discovery they put in a regular application and prove the necessary technical and financial ability of themselves or their partners to conduct the working, and comply with the conditions of the concession (Art. 40). In default of such application and proof within the six months, the finder shall be, by the decision of the Minister of Public Works, declared to have lost his right of preference, and the concession can then be granted to another applicant, in which case the discoverer has a right to an indemnity to be paid by the grantee of the concession, the amount of which may be settled amicably between them, or otherwise is fixed by the act of concession.

No concession can exceed 400 hectares, about 988 English acres in extent, but the same concessionnaire can obtain several concessions even in the same neighbourhood. A concession only extends to the substance or substances of which the position has been declared discovered, and which are expressly mentioned in the act of concession. The mine when conceded forms a separate immovable property which is distinct from the surface and perpetual, and capable of transfer like all other property, except that it must not be sold in lots or divided without an authority given by Royal decree. But as regards transfer, Art. 15 of the law provides that transfer *inter vivos* can only take place under the conditions indicated in the act of concession.

These conditions usually are as follows, viz. :—

To strictly observe the conditions of the mining law.

To pay a discoverer what he is entitled to.

To work the mine in a businesslike manner.

To pay the State tax of 50 cents per hectare.

Sales and Leases of Concessions.—These appear to be of not unfrequent occurrence, but the terms of the arrangements, being purely a matter of private agreement, vary considerably. The following examples may be quoted:—

The workers of lignite in Sardinia, in Umbria, &c., who have taken concessions from the original concessionnaires, pay the concessionnaires an average royalty of 1 lire per ton exported from the mine.

In Lombardy and in Sardinia the workers of zinc mines who have taken concessions from the original concessionnaires pay an average royalty of 6 lire per ton of calcined calamine. Those who undertake the mining of lead, and lead and silver, or mixed undertakings, in Sardinia are liable to varying amounts of royalties of from less than 8 to more than 12 lire per ton, though it appears that the lead and silver mines of Italy are of poor quality.

It must be borne in mind that out of about 207 metalliferous properties really worked not 60 are worked to a profit. It is consequently not surprising to find that concessions are not freely sold or leased, and that a large proportion of the concessions which are worked, are worked by the concessionnaires themselves.

Surrender of Concessions.—Under Arts. 96 to 100 of the law the concessionnaire or owner who desires to surrender the property of a mine must make a formal petition to the prefects of the province (Art. 96); it must not contain any condition whatsoever (Art. 97).

After the petition has been presented no further excavations may be made in the mine. Ladders, bridges, &c., necessary for the working and maintenance of the mine must be left, but have to be paid for afterwards by a new concessionnaire (Art. 98).

After the registration of the declaration of surrender, and after the visit of the Government mining engineer (Art. 100) to ascertain the state of the mine, &c., and after the necessary instructions given by the prefect for the safety of the mine, the declaration of surrender is published on three successive Sundays at the sub-prefecture and commune where the property is situate.

Ordinary creditors of the party surrendering can put up the mine for sale, having obtained a decree of the local tribunal of commerce to that effect. Should there be a mortgage or mortgages on the mine, either the Government or the creditors, privileged or otherwise, can demand the sale. The order or decree would be made by the local civil tribunal, as in the case of ordinary creditors. The usual formalities prescribed by the civil codes are exactly the same as in the case of any other real estate mortgaged in favour of a creditor (Arts. 660, 662, and following of the Codes of Civil Procedure). Should no offer be made on attempted sale by public auction, the tribunal pronounces judgment, declaring the mine free and returned to the State. To complete all formalities up to time of sale about four months are necessary.

When no creditors come forward at the time of the publication of the surrender, and no mortgages are found to be registered against the property, the surrender is accepted by royal decree. This decree is published, and, after the expiration of 40 days, the Government can dispose of the mine and grant a new concession of it. It will therefore be seen that about six months are required to liberate a mine from date of surrender when mortgages or creditors are in question; when there are no creditors or mortgages, two months suffice.

Forfeiture of Concessions.—This is only provided for in one case—that is, where the concessionnaire of a mine which has been unworked for two years does not resume working after notice has been given to him by a ministerial decree (Art. 111). The right of forfeiture is, however, only a power which may be exercised by the administration, and is not obligatory. It is pronounced by the minister, on the recommendation of the Council of Mines. Appeal, however, can be made against the ministerial decree to the Council of State, and, if pronounced, gives rise to exactly the same results as a surrender, except that a sale has to be attempted whether there are mortgage creditors or not. As a matter of fact, the power does not appear to be often exercised. A case is given of the concession of a gold mine in the province of Novara which has not been worked for more than 20 years, but the concessionnaire has never been denounced by the Government engineers.

As before observed, permission to execute works necessary for ventilation and drainage outside the areas of concessions may be obtained by concessionnaires by means of the law of

expropriation for purposes of public utility. Owners of mines have a right of way for their minerals to the nearest communal or provincial road or waterway, subject to their making good any damage they may cause. It is said, however, that communal roads, as a rule, pass close to most important mines; and that, when they do not, trunk roads are frequently made by mine owners to join the communal roads.

These are provided for by Arts. 84 and 85 of the law, under which, whenever the safety of persons or of the working of a mine is in danger, the engineer of mines, who must be informed, proposes the necessary measures to the prefect; and the latter, after giving the concessionnaire an opportunity of being heard, prescribes the steps which he considers necessary to be taken, and which, except in cases of urgency, are not obligatory until the approval of the minister has been obtained; but may finally be executed by the administration at the cost of the concessionnaires.

Arts. 89 and 95 enact similar provisions to those of the French law as to procedure in case of accident to persons, and as to the supply of remedies and the employment of surgeons, with separate penalties in case of non-observance of the different obligations of the law.

LUCCA.

The law of Lucca of the 3rd May 1847 resembles the law of Piedmont of 1859, the most striking difference being that it recognises in the owner of the soil a right of preference to the permission of research and (subject to provisions for the benefit of the discoverer) to a grant of the concession (Ag. § 1341). The law of Lucca does not specify the substances which are the subject of concession, but includes in such category all metallic and demi-metallic substances.

The concessionnaire should pay to the State a royalty fixed by the administration, based on the value of the minerals extracted, which may, by agreement, be altered into a fixed annual payment (Art. 61.)

For land taken within the limits of the concession, double yearly value must be paid, if the land is only occupied for a short time; after one year the landowner can compel the concessionnaire to buy at the real value; if the land is mortgaged, only one-fourth of the indemnity becomes payable to the owner, and three-fourths to his creditors.

These can only take place by permission of the owners of the surface, or by a permission of the Government, given on condition of an indemnity being paid to such owner of land for damage that may be done, to be fixed by agreement or by experts, and for which the owner can require security to be given. Permissions only last for a year, but may be prolonged if there is a likelihood of discovery, and may be revoked if the work is delayed for a month. Any discovery must be notified to the Government, when, if it is ascertained that a workable mine really exists, a concession may be granted; and, pending such grant, special permission may be given.

These can only be granted after the mine has been discovered and the practicability of working it has been admitted by the Government. The application must be published for forty days, during which time any one may protest against the concession being granted.

A right of preference to a grant of the concession is given during a period of three months from the date of the discovery to the person who has made the discovery under the previous conditions, on his proving that he is possessed of sufficient means to work it. In the event of his not obtaining the concession, he is to be awarded an indemnity (to be fixed by the Government), by the act of concession, and in addition is to be reimbursed the cost of the works executed by and the value of the minerals extracted by him (Art. 35). After the discoverer, the law recognises a right in the owner of the soil, who proves his ability to work the mine, to the concession, and it is only in the event of neither of those parties demanding a concession that the Government can choose at discretion between other parties who may have applied for it simultaneously, and can prove their ability to work the mine.

In any case the Government fixes the limits of the concession at discretion, but usually adopts the limits asked for in the application. The concessions are perpetual, and may be disposed of subject to any condition which may be inserted in the act of concession (Art. 31). The concession may be forfeited not only (as in Piedmont) in case of failure to work for two years, but also in case the mine is in such a disorderly state that the administration considers that it would be impossible that it should be repaired (Art. 63).

Appendix
C. XIX.
ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Walmesley.
Generally.

MODENA AND REGGIO (EMILIA).

With a few trifling exceptions the rest of the law is similar to that of Piedmont. The law does not, however, contain any provisions relative to the relations between neighbouring or overlying or underlying mines. The subject is not of much practical importance, as there are only worked under this law two concessions, one of silver lead and one of lignite. (Government Mining Report for 1887.)

The law of the 9th August 1808 emanated from Napoleon I., and naturally forms a sort of cross between the French laws of 1791 and 1810. It will only be necessary to draw attention here to the points in which it differs from the law of 1810. The law is only of theoretic interest, as it is understood that no concessions are worked under it.

Mineral substances are divided into two classes only, that of "mines," which cannot be worked except by virtue of a concession, and that of "quarries," which are left to the free disposition of the owner of the soil, under reserve of the right of extraction by reason of public requirements.

No royalties are payable by law to the owner of the soil in respect of the minerals comprised in the first class.

Explorers and concessionaires have the right to occupy the lands which are necessary for their working on paying the owners beforehand the value of the presumed probable damage, or of the land occupied, with the addition of a sixth part of the same value (Art. 31). The concessionaires are also responsible for all the damage which the working of the mine may occasion.

Anyone may make these for a period of six months which period may be prolonged by the administration (Art. 9). If the owner of the soil opposes the carrying on of the searches he may be restrained by the Government, and the explorer has the same rights and obligations towards him as a concessionaire would have.

These can only be granted for 50 years at the most (Art. 11), and can extend over an area of six Italian square miles (Art. 12). They are only available for the substance named in the act of concession (Art. 36).

The Government, after due publication, has power to decide at discretion if there is ground for a concession. If there is, the concession may be granted within boundaries fixed at the discretion of the Government according to the following rules:—If the mine is notoriously known as discovered, and is unworked, the owner of the soil has the right of preference if he proves that he has the necessary means, and he asserts his rights within three months from the date of the first application. In default, the mine is granted to the first petitioner who has made his application in form. If the mine has not been previously known, the first finder or applicant has the preference if he proves the necessary means, the finder being considered the first person who has pointed out the mine, at least so that the

contrary cannot be proved by any third person. If the finder is excluded by reason of not proving himself possessed of the necessary means, he has a right to an indemnity from the concessionaire, to be fixed by agreement, or in default by the administration. Whenever a new concession becomes necessary by the discovery of a new substance within the field of a mine, the first concessionaire has the right of preference (Art. 36). At the expiration of a concession the concessionaire has the right of preference to a renewal of it if he has performed his obligations (Art. 38).

Special conditions may be inserted in the act of concession (Arts. 26 and 28).

Dealings with Concessions.—Concessions may be disposed of at pleasure, but the transferees should make a declaration within three months to the administration proving their means to work, and the transfer is not effective until it has received the approval of the administration (Arts. 43 to 45).

Forfeiture of Concessions.—This may be incurred (1) through not having commenced working within four months from the date of the concession (Art. 48). (2) Through the work being stopped for more than six months without good reason. (3) Through the different conditions of the Act of concession not being complied with. (4) If the working of the mine is not continued as actively as the administration thinks proper. (5) Through default in making the declaration within three months of a transfer by gift or sale. The forfeiture is in all these cases pronounced by the Minister of the Interior on the report of the prefect after hearing the concessionaire (Art. 51).

Surrender of Concessions.—The concessionaire may give up his concession on giving three months' previous notice to the administration.

Both in the case of forfeited and surrendered mines, or when the concession has lapsed, the concessionaire is forbidden to work the mine; he has only the right to sell the mineral already extracted, the unfixed machinery at surface, and tools, but cannot take away ladders, pit-work, wood-work of galleries, or anything else necessary to keep open the access to, and to continue the internal working of, the mine (Art. 53). Whenever a new concession is granted, the new concessionaire shall pay to the former one, or his heirs, the value of the effects left on the mine, which are recognised as useful for the keeping up of the same, at a just estimate to be determined by agreement, or by experts named by the parties, or by the tribunal (Art. 54).

At the end of each year mine owners must give particulars of the work executed, with plans for working in the succeeding year, indicating the number of workmen occupied and the gross and net produce of the undertaking (Art. 39).

Regulation of
mines.

NEAPOLITAN STATES.

The general law is contained in an Act of the 17th October, 1826. By this law the mineral substances are divided into two classes, subject to the incidents respectively shown in the following table, viz.:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Royalties or Mining Taxes payable.	Remarks.
I. Metallic and semi-metallic mines, coal, bitumen, alum, and sulphates with metallic base.	Apparently in the surface owners, who may work themselves or grant the right of working to third parties, and without any concession from the Government; but the Government may grant the right of working mines to third parties if, after a warning and sufficient delay, the owners of the surface do not work them.	To the surface owners when concessions are granted, the amount being fixed by agreement, or in default by the courts. As regards mines of sulphur in the Island of Sicily a tax called <i>Aperietur</i> is payable on the mine being first opened. The amount so payable in respect of each mine opened is 127 fr. 50 c. (or about 5 <i>l.</i>).	Arts. 2 and 15. This tax was originally levied under a royal decree of the 8th October 1808, which was continued in force by a Ministerial Circular of the 21st February 1868.
II. Mines of sulphur and plaster and quarries of stone, marble, granite, sand, slate, &c., and all other substances not comprised in the first class.	In the owners of the surface, to whose free disposition they are left without any restriction.	If let to the owners of the surface.	(Art. 17.)
Salt mines form a separate class.	On the mainland in the Crown and on the Island of Sicily in the surface owners.	To the Crown or the surface owner, as the case may be.	(Art. 16.)

N.B.—A peculiarity of this law appears to be that the worker of a mine which has been opened on one property may follow it into an adjoining property without the owner of the latter being able to prevent it; but in this case the latter has a right to be compensated, such compensation to be mutually agreed on or fixed by the arbitration of a judge (Art. 15). This right, apparently, is only applicable to mines which are worked under private grants; as, in the case of concessions, the boundaries of each concession have to be stated. The right seems to be analogous to that which is recognised by the law of the United States of America.

Appendix
C. XIX.

ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Walmesley.

Regulation and
inspection of
mines.

General
remarks.

These are payable in the manner shown in the above table, and are subject to all the usual taxes. It is stated that the workers of sulphur mines, when not themselves the owners of the surface, usually pay to the latter by force of agreements between the parties, not regulated by special laws, and under the title of rent or royalty, a fraction of the entire gross yield of the sulphur; this fraction is sometimes paid in kind, that is to say, in the condition of pure sulphur. It is also stated that in the Island of Sicily the royalty varies generally from 20 to 25 per cent. of the produce, but sometimes is less, and at other times the higher limit is exceeded, and examples are given of such royalties reaching even up to 40 per cent. Nor are there wanting in Sicily cases of royalties on an ascending scale—that is, progressive with the duration of the leases; as also of royalties fixed according to the varying price of the sulphur. We are also told of nine years' contracts, for which the lessee has to pay the rent or duty of 11 per cent. for the first three years, of 13 per cent. in the following three, and of 15 per cent. in the last three. In other contracts we find the fixed rent or duty of 10 per cent. for the years in which the average price of the sulphur stands at between 8'50 and 9'50 lire per cwt., that of 11 per cent. for averages of 9'50 to 10'50 lire, and that of 12 per cent. for prices above 10'50 lire.

There are, besides, stated to be contracts which fix a minimum duty, on less than which the lessee can never count, whatever may be the produce of the mine. Other contracts instead take as their base a fixed figure of production and reckon the duty upon this. For example, one contract fixed the rent or royalty at 8,000 cwt. of sulphur while the produce was less than 32,000 cwt.; when this output was exceeded, there remained simply a royalty of 25 per cent. By virtue of another contract the owner receives the duty of 40 per cent. on a specified output of 222,000 cwt., he gets therefore 88,800 cwt. or sulphur, whatever the actual yield of sulphur may be.

Besides the burden of the duty, certain contracts involve also the obligation of sinking a sum of capital money which has exceeded in certain cases even 100,000 lire.

In the Neapolitan or mainland provinces of the ex-kingdom, the duty is on an average somewhat less heavy than in Sicily, varying actually from 10 to 20 per cent. of the gross produce. In these provinces, and in the island, there are a few examples of sulphur mines for which an annual sum of money is paid to the owner under the name of "fittanza" (rent).

It seems doubtful if, with the recent low prices of sulphur, the royalties mentioned above could be maintained.

The length of leases in Sicily varies considerably, that is, from 9 or 10 to 30, up to 50 years; at present the idea of long leases prevails. On the mainland, the term most generally in use is that of 10 years; still, there exist some contracts which extend it even to 20 years.

Where concessions of mines are granted, the concessionaire is bound to make good damage caused to the surface; in default of agreement the matter is settled by the ordinary tribunals.

In default of the owner of the surface working the mines, there appears to be power for the Government to grant concessions of mines to persons who prove their ability to undertake and pursue the working, and to pay all indemnities to which they may become liable (Art. 2). The discoverer has a right of preference, or, if the concession is granted to another, to an indemnity to be fixed by the Government.

The concessions are to be granted for metalliferous mines, according to the law of 1859; but the proprietor of

the soil has a right to receive compensation from the concessionaire (Art. 15).

It appears, however, that, as a matter of fact, only one concession for a metalliferous mine has been granted under the law of 1826, viz., of a mine in the province of Reggio Calabria—which is unworked.

Forfeiture of Concessions.—According to the law, these are to be decreed if the works are not commenced within two years from the date of the concession (Art. 13).

In addition to the rules established by the general decree of the 23rd December 1865 (applicable to all mines throughout the country not subject to the Piedmontese law of 1859), a special law of the 31st January 1851 lays down certain rules as to the manufacture or treatment of sulphur. Establishments for these purposes can only be started after a declaration to the administration, and are prohibited, except by special permission, within a certain distance from inhabited places and cultivated lands.

The mining industry of the Neapolitan States and Sicily does not appear to be very important or flourishing. The mines worked in the former States (in the year 1888) were as follows:—

Produce.	Mines.	Minerals.	Produce.
Chieti - - -	3	Asphalt, bitumen, and stone.	10,760
Catanzaro - - -	7	Sulphur - - -	47,526
Avellino - - -	2	Sulphur - - -	30,699
Caserta - - -	1	Petroleum (well) - - -	240
" - - -	1	Asphalt - - -	840
Cosenza - - -	1	Rocksalt - - -	8,240
Total - - -	15		98,296

The Government Engineer's Report for 1888 as to excavations for minerals in the province of Messina, in the Island of Sicily, is as follows, viz.:—

"Several of the small but numerous excavations of the province of Messina have continued to be worked, but in a very irregular manner, the work being limited even to a few days during the year.

"This year better and more detailed statistics have been obtained, which enable one to ascertain that this industry, although developed under most difficult conditions, and in the hands of persons almost devoid of means, and ignorant of all technical knowledge, is not without a certain importance. The principal minerals that form the scope of the mining industry are: antimony, grey copper, and copper pyrites, silver-lead, ore and blende. The mining works consist, except in very rare cases, of very superficial excavations. Frequently advantage is taken of the denudation of some metalliferous veins, produced by land-slips, of frequent occurrence in these soils, composed of argillous mica schist, and these veins contain the small metalliferous deposits. These small veins, you will observe, are not described as regular well-defined lodes or veins, but are spoken of as containing deposits."* ("Rivista del Servizio Minerario nel 1888," p. 51.)

In spite, however, of apparently unsuccessful results of mining in the Neapolitan States and Sicily, it appears that mines are sometimes disposed of in those countries for considerable sums, as will be seen from the following published particulars of English companies, viz.:—

Name of Company.	Property.	Where situate.	When registered.	How held and purchase money.
Giona Sulphur Co., Limited.	Sulphur mines -	Racalmuto, Sicily -	1886 - Formed to take over undertaking of a former company.	The new Company paid 1,500 <i>l.</i> for the property, subject to three mortgages, amounting together to 18,500 <i>l.</i>
Sicilian United Copper Mines, Limited.	Copper mines -	Novara, Sicily -	1888 -	Under purchase for 85,000 <i>l.</i> in fully paid shares.

The produce of the sulphur mines of Sicily is subjected to a special export duty of 10 frs. per ton.

LOMBARDO VENETIA.

These States were formerly governed by the Austrian Mining Law of the 23rd May 1854, the provisions of which are fully set out under the head of "Austria-Hungary." In 1859 Lombardy was annexed to the kingdom of Sardinia, and the mines of the country were shortly afterwards placed under the Piedmontese law of the same

year. Venetia still continues under the Austrian Mining Law of 1854.

* It will be seen that the above extract from the Government Engineer's Report does not extend to mines of sulphur, which is the chief mineral product of the Island of Sicily, and as to which the following particulars are taken from the Government reports for 1888:—DISTRICT CALTANISSETTA (*Whole of Island of Sicily*).—The quantity of sulphur produced during 1888 was 322,042 tons, of a value of lire 21,512,405 (851,532*l.*); during 1887, 300,802 tons, of a value of lire 20,905,739 (827,518*l.*). The increased production during 1888 was therefore 21,240 tons, of a value of lire 606,666 (24,014*l.*). This production was obtained by 25,024 workpeople. The average free-on-board price at shipping port was 53s. 5d. per ton during 1888, whereas it was 55s. 7d. in 1887.

Appendix
C. XIX.

ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Walmesley.

The mining industry is inconsiderable, as will be seen from the Government return for the Venetian Provinces in 1888 :

Province.	Mines.	Minerals.	Tons.	Value.	Work-people.
Belluno -	1	Copper -	12,060	lire. 120,160	202
Vicenza -	5	Lignite and bituminous schist.	17,559	187,337	226
Totals -	6		29,619	307,497	428

The quality of both the copper (that is, the per-centage of metal in the ore) and of the lignite is said to be poor. A fixed annual tax of lire 9.88=7s. 10d., is payable for each "misura" (=12,544 square perches), in respect of which a permission of research or a concession is granted.

PARMA.

The mining industry subject to the provisions of this law is unimportant.

Properly speaking, there are no metalliferous mines.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, all metallic and coal, lignite, different bituminous matters, sulphur crystals, marble, monumental stone, and in general all mineral substances which are not in common and constant use, and mineral* springs.	In the State, to concede them to third parties.	To the State, viz., 5 per cent. of the net produce which may be converted by the administration into a fixed annual sum. If the mine is not worked the tax must still be paid, and is calculated according to the last previous results.	It is believed that the tax is merged in the <i>Ricchezza Mobile</i> .
II. Quarries. Marl, lime-stone, brick-earth, and sand.	In the owner of the surface, still the State may grant a concession of these substances to any one who has discovered an entirely new and special mode of applying them (Art. 22 of law).	If let, to the owner of the surface; if conceded, apparently to the State as above.	N.B.—In case of doubt as to the legal classification of any substance, it is to be determined by a decision of the administration (Art. 14 of the decree).

* This is said to be the only law which classes mineral springs amongst mines.

Surface land occupied or damaged.

The surface owner has the right to be indemnified by the concessionaire against loss of revenue or damage caused by the workings either through occupation of land or execution of the works.

Royalties.

The royalty payable to the State is mentioned in the preceding tables. No royalty or rents are payable by law to the owners of the surface.

Searches for mines.

These cannot be made without the consent of the owner of the surface, which, however, he cannot refuse in the case of an authority given by the administration. He is entitled only to be recompensed the loss of revenue which he sustains through the occupation, and the repair of the damage resulting from the execution of the works.

Every discovery of a mine must be made known to the authorities by the discoverer within a fortnight, under the penalty of his losing all the rights to which his discovery might otherwise entitle him.

Concessions.

On receiving information of the discovery the administration determines whether to work the mine or to concede it; if the latter, the discoverer has the first right to a concession on proving that he has the necessary technical and financial ability; after him, the owner of the soil, subject to the same condition; and after those two the Government can give the concession to any one at discretion. If the discoverer does not obtain the concession, he is entitled to an indemnity, to be fixed by the Act of Concession, for the outlay he has made. A concession only confers the right of working the substance specified in it within the area indicated by it; but the concessionaire of one substance has the right of preference to a concession of any other substance within the same area. The concession is only granted for the period fixed by the Government, which is determined by having regard to local circumstances, the nature of the substances to be extracted, the difficulties of extraction, and the capital which must be considered necessary for the undertaking. But the concessions may be renewed with the right of preference by

The following are the concessions and permits of Research in force:

("Rivista del Servizio Minerario 1887.")

	Value.	Workpeople.
PROVINCE OF PARMA : <i>Concessions.</i>		
Three petroleum wells producing 149 tons crude oil.	lire. 46,900	68
One mineral spring - - -	33,740	3
PROVINCE OF PIACENZA : <i>Searches.</i>		
Two petroleum wells producing 10 tons crude oil.	6,000	15
One copper, no ore yet discovered -	—	9

The law is laid down by an Act of 21st June 1852, supplemented by a ministerial decree of the 8th July 1852. This law possesses several special features, which will appear from the following notes. In the first place it divides mineral substances in the manner appearing in the following table, viz. :

General remarks.

for and working of marble on the communal lands. The law recognises priority of occupation and discovery, secures royalty to the commune, and provides for forfeiture in case of failure to work.

It is stated that there are no metalliferous mines, and only one lignite mine worked in the province. This lignite mine is unimportant, producing only 5,012 tons, of a value of lire 42,103, and employing 70 workpeople. The total tax payable to the Crown at 50 cts. per hectare of ground (in 1888) amounted to 227 lire, about 9l. 1s. 7d. There are many valuable quarries worked under the system of Este, with special limitations (viz., in the district of Carrara under the law of February 1751, and in the Massa district by the regulations of July 1846), but such substances do not seem to come under the scope of the inquiry to be made by the Royal Commission.

PONTIFICAL STATES.

The principle of absolute ownership by the Crown of all mineral substances capable of being worked seems to have been recognised from an early period, the Sovereign Pontiffs being in the habit of granting permissions to work such mines, without any special formality, to whom they pleased, and for whatever periods and upon whatever conditions they thought proper. The existing legislation applicable to the States seems to differ in different portions of such States, according to the date of their annexation.

In the States known as "The Marches," which were annexed in 1860, the Piedmontese Law of 1859 has been made applicable.

In the provinces of Forli, Rome, and Perugia the system of searches for and concessions of mines has been regulated to some extent by Royal decrees of 23rd March 1865, and 17th June 1872, which have extended to those provinces similar principles to those of the Piedmontese Law of 1859.

It would seem, however, that the provinces of Bologna, Ferrara, and Ravenna still remain subject to the general principles of ownership by the Crown which formerly prevailed, apparently because no occasion has arisen to apply them (Ag., § 1346).

It is understood that the decree (Regolamento) of the 23rd December 1865 as to regulation of mines now applies to all the provinces.

It will be seen from the following table that there is only one metalliferous mine worked in the ex-Papal States, aluminium, the others being mines of asphalt and lignite, the latter belonging to the Torni Company, the production being used in the establishments of that Company :

Province.	Mines.	Minerals.	Tons.	Value.	Work-people.
Chieti -	3	Asphalt, &c. -	6,077	lire. 289,305	574
Rome -	3	" -	173	11,326	27
" -	1	Aluminium -	6,050	30,250	93
Perugia -	5	Lignite -	94,713	912,444	1,027
Totals -	12			1,233,325	1,721

General remarks.

TUSCANY.

In this part of the country, under a Grand Ducal "motu proprio" of 1788, except in the Island of Elba and Piombino (where the minerals are reserved to the Crown as part of the public domain), the ownership of the soil carries with it that of the mines (see Report of Consul General Colnaghi, 1882).

The mines are accordingly dealt with by sale or lease, much as in England. At the present time in Tuscany the workers of many of the most important mines are also owners of the mines, having bought the mines, or in some other way acquired the perpetual right to work. Where, however, the worker is not himself the owner, the latter, in proportion with the right granted, receives payments which vary considerably according to time, place, person, and other circumstances, there being no special rule regulating such matters. Some agreements accordingly provide for a joint interest in profits, others reserve to the owners of the surface a certain per-centage of the gross produce, or a royalty in money for every ton of mineral extracted, or a fixed dead rent; then there are agreements of a mixed character, and there are also sliding scales; thus, for example, it is stated that some workers of mercury mines contribute to the owners of the surface from

Appendix
C. XIX.

ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Walmesley.

14 to 20 per cent. of the profits; others, a fixed dead rent of from 2,000 to 6,000 lire, and sometimes, besides the dead rent, 5 per cent. of the gross produce. Certain owners of cinnabar-producing lands receive the annual rent of from 50 to 70 lire per hectare.

There are copper mines which contribute 9 per cent. of the mineral extracted, others pay 5 lire per ton. The royalty paid by some workers of antimony varies from 10 to 14 lire per ton, that paid by manganese mines from 5 to 8 lire.

Lignite bears a royalty of one lire per ton, or of a fixed annual sum, which sometimes amounts to 20,000 lire; some mines pay 5 per cent. of the gross produce.

Iron Mines of Elba.—These mines belong to the public domain. They have been re-let quite recently to a Mr. Tonnetta, but the conditions of the contract have not yet been made known. The policy of the Government with respect to their iron mines has been to put such a heavy royalty on ore exported (viz., lire 4.25 (3s. 5d.) per ton for unwashed mineral, and lire 5.25 (4s. 2d.) per ton for washed mineral exported) as practically to prohibit its shipment. The object of this prohibitive policy has been to induce capitalists to erect furnaces in the kingdom, but it has been thwarted, owing to the high prices ruling abroad for hematite.

The royalty for ore used in Italy is only 50 cents per ton, 4½d., and, notwithstanding this, the home demand for the ore in 1888 was only 9,104 tons (see table below).

It is understood that the last contractors of the mines were able to get out without much loss, but declined to contract again, even on far more favourable terms.

It appears that the bulk of the iron ore of Elba is shipped to America, as, indeed, is proved by the following table.

TABLE of Production and Exportation of Iron Ores extracted from the Royal Mines of Elba.

	Tons.		Tons.
Production in 1888 -	154,830	Shipped to America -	115,557
Remaining in stock from 1887 -	40,995	" England -	61,240
		" France -	9,924
		Used in Italy -	9,104
	195,825		195,825

As before stated, there is now a prospect of the laws relating to minerals in the country being consolidated to some extent under the following circumstances, viz. :

Within the last few months a Commission of Deputies has been sitting to consider a draft Bill presented in November 1889 by the Minister of Agriculture, Industry, and Commerce "on expropriations, partnerships, police of "workings in mines, quarries, and turf, and on searches "for minerals."

This Commission, in March of the present year, issued a long and interesting report, of which it may be worth while to give here a short analysis.

The report commences by referring to the draft Bill, and states that there exist actually 16 different schemes of law (progetti), of which it gives a list (the dates extending from 1862 to 1889), none of which had been approved by the two Houses of Parliament.

The report then treats of the different subjects as to which it is proposed to legislate, dividing them under the following sections and headings :

SECTION I.—EXPROPRIATIONS AND PARTNERSHIPS.

The provisions referred to under the first part of this heading seem to be adapted to some extent from Art. 83 of the Piedmontese law of 1859, which enables concessionaires to execute outside the areas of their concessions the necessary works for ventilation and drainage of their mines by having recourse to the system of expropriation on the ground of public utility.

The second part of the same heading deals with the system of compulsory partnerships, which it is proposed to establish in order to deal with the difficulty of mining on any extended scale in consequence of properties in Italy being split up into small proprietorships. The notion appears to be that where there are different workings in what should naturally constitute one mine, and which would be more easily and regularly worked if it belonged to one owner, the various owners should to some extent

Appendix
C. XIX. and
XX.
ITALY.
Notes on the
Mining Laws
of Italy by Mr.
Walmesley.

become partners, in order to carry out works for the common good, with the risk of expropriation (on the usual terms) of any one who wishes to withdraw himself from the partnership. The principle of such compulsory partnership already exists in the Piedmontese law of 1859, which (Arts. 73, 74, 76 and 77) gives to the administration power to require different neighbouring concessionaires to form a syndicate in order to carry out a common plan of working, and to undertake and carry out works for the common good of all when a necessity arises either from motives of public safety or to secure the preservation of the mines concerned. The principle indeed seems to have been originally adopted in the French law of the 27th April 1838, and to have been extended by the Piedmontese law to all cases which might arise in working mines, and not limited (as by the French law) to the case of apprehended flooding only. The report fully acknowledges the difficulties which the constitution of compulsory partnerships presents, and considers the subject minutely with the view of ascertaining in what cases it would be reasonable to constitute such partnerships. The outcome of the consideration is a recommendation that the power of enforcing contribution towards works for the common benefit should be limited to such works as merely require an original capital outlay and a subsequent small expenditure to prevent decay, such as drainage galleries and ventilation shafts, but should not extend to works which would require a considerable annual expenditure, especially with the application of mechanical apparatus, such as pumping works or mechanical ventilation. Beyond this it is not proposed to go, though it is pointed out that the true method of making the industry fruitful and profitable would be to unite together the different portions so as to make them into one single mine; but it is remarked that such union should be the result of voluntary and friendly agreements between those interested, and certainly not of compulsion. The Commissioners also report that they consider that the importance and nature of the provision demands that the partnership shall be constituted not by ministerial decree but by Royal decree, after an administrative inquiry, and hearing both the parties interested and the Council of Mines. They also refer to the provisions which already exist in the Civil Code and in the laws as to public works for constituting partnerships in reference to irrigation works, roads, and replanting; and, after remarking that this is the first time that compulsory partnership has been proposed for works of private interest, as showing the gravity of the proposal, they go on to consider what provisions should be made against private rights being too severely injured. They point out the difficulty which small proprietors might be in if they required to raise capital on so uncertain a property as that of a mine, and, on the other hand, the risk that the majority would be in if they had to expropriate the portions of the mine belonging to the minority on the strength of mere valuations of such an uncertain property. The Commissioners propose to meet the difficulty by giving members of the minority power to pay their contribution by way of annuities extending over 20 years and secured on their shares of the mines. If they prefer, they are to be entitled to give up their shares of the mine to the others, receiving an indemnity on the usual principles of the law of expropriation for the sake of public utility. Where the ownership of the mines arises from a concession distinct from the ownership of the soil, the whole concession must be expropriated; but where by law the ownership of the mine is combined with that of the soil, the expropriation must extend both to the surface and the subsoil, but only to that portion of land containing the mineral which can share in the profits of the partnership.

SECTION II.—POLICE OF WORKINGS.

The provisions recommended under this section are, for the most part, textual reproductions of the regulations promulgated on the 23rd December 1865, giving to such regulations the force of law, and extending them to the whole country, and establishing effective penalties to secure the observance of the law. The Commissioners remark that the general principle to be followed in regulating the police of mines is that the mining corps and the administration ought always to have for their object the prevention of danger, but should never impose on the worker a given system of working, the art of mining having no fixed rules, and the manager being entitled to be the free judge of the system of excavation which he should follow; and that the mining corps, exercising a diligent watch, ought to do its best to prevent the workers omitting, through ignorance or avarice, necessary precautions, but should not enjoin what system is to be adopted.

SECTION III.—GENERAL PROVISIONS.

The Ministry, by their Bill, proposed to consolidate the laws of the country as to the ownership of mines by adopting the system of concession throughout the country, giving to the owner of the soil the right of preference to the concession. The majority of the Commission, however, decided against this proposal, and the Commissioners subsequently decided unanimously to strike out all provisions of the Bill affecting the existing rights of ownership. The report contains a full statement of the reasons which had led the Commissioners to this conclusion, and in doing so enters into an elaborate exposition of the various principles on which the different forms of ownership of mines are believed to have been based, and classifies the different laws of the country as being founded on—1. The Industrial right, which grants the ownership of the mine to the discoverer. 2. The Territorial right, which recognises the owner of the soil as also owner of the sub-soil. And 3. The Mixed right (viz., that proposed by the Ministry), which recognises in the owner of the soil the right to work the minerals under his own land without the need of a concession, but which, if he does not work them, gives to the Government the right of granting by decree a concession of such minerals to the discoverer, leaving, however, to the owner of the soil a certain time for undertaking the working of the minerals himself, which (as the report observes) is equivalent to a real right of preference. A stranger taking the concession is further bound to make compensation to the owner of the soil.

The Commissioners, after giving a full analytical exposition of each of the three systems, indicate their preference for the first of those systems, as being more fruitful for the mining industry where property (as in Italy) is much divided. They point out, however, that in England and in North America, where (to use their own words) "private properties are very extensive, where capital exists in abundance and can be obtained at a low rate of interest, and where there exists a strong spirit of co-operation in joint-stock enterprises, the territorial system was never an obstacle to mining industry."

The Commissioners go on to say that no one can deny the difficulties of consolidation. They recognise that in the controversy about consolidation there comes in the factor of "custom," and that in the different districts of Italy each one prefers the law by which it has been governed up till now; and they come to the conclusion that consolidation cannot be an easy work, and that it is not strictly necessary, though it would be useful to the industry if a way of rendering one legislation acceptable to all could be discovered.

The text of a Bill has since been agreed upon between the Commission and the Ministry embodying to a great extent the recommendations of the Commissioners in their report with respect to the law of expropriation and partnership, and as to police of mines, but declaring (Art. 28) that the mineral laws existing in the various parts of the kingdom are to remain in force so far as they are not contrary to the proposed law, and omitting all the provisions contained in the original Bill of the Ministry relative to the institution of ownership of property in minerals. Certain mining regulations (Art. 29) and the establishment of a General Council of Mines (Art. 30) are also provided for. The Council of Mines is to consist of eight members, that is, of two inspectors of mines, three members of the Judicial Bench, and three experts in mineral and metallurgical sciences, and is to be constituted according to, and exercise all over the country, the functions conferred upon the Council of Mines by the Piedmontese Act of 1859.

XX.

CORRESPONDENCE.

1.

Foreign Office,
December 1, 1891.

SIR, I AM directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties, a despatch from Her Majesty's Ambassador at Rome.

I am, &c.
(Signed) JAMES LOWTHER.

The Secretary,
Royal Commission on Mining
Royalties.

Enclosure in Sir James Lowther's letter of
December 1st, 1891.

(No. 169, Commercial.) Rome,
November 24, 1891.
MY LORD, On receipt of your Lordship's Despatch, No. 19 of this series, of the 30th of April last, I at once acquainted the Italian Government with the desire of the Royal Commission on Mining Rents and Royalties to obtain oral evidence or written replies to the questions set forth in the enclosure to your Lordship's despatch.

On the 18th of May a reply was received from the Italian Foreign Office, stating that the matter had been referred to the Ministry of Commerce, and that an answer would be sent in due course. Since that date Mr. Dering, who was in charge of Her Majesty's Embassy during the summer, has not failed to press the matter on the attention of the Government, and I have now succeeded in eliciting the enclosed reply from the Ministry of Foreign Affairs in response to a renewed application which I made on Friday last.

As your Lordship will perceive, the Government is not even yet in a position to supply the required information. Answers to some of the questions of the Royal Commission could, it appears, only be obtained by application to the mining officials in the different districts, and to the private persons connected with the industry, and although the task has necessarily been a slow one, the desired particulars will very shortly be collected.

The delay that has occurred is, I think, a proof that the Italian Government is endeavouring to obtain trustworthy and useful statistics, and I trust that when I am at length enabled to forward them to your Lordship they may still prove of service to the Royal Commission.

I have, &c.
(Signed) DUFFERIN AND AVA.
The Marquis of Salisbury, K.G.
&c. &c. &c.

Enclosure in the Marquis of Dufferin's letter of
November 24th, 1891.

Rome,
November 23, 1891.
MONSIEUR L'AMBASSADEUR, With reference to my note of the 13th of May last, No. 38,562, I have the honour to inform your Excellency that my colleague the Minister of Agriculture, Industry, and Commerce has assured me that he will shortly put me in a position to supply the British Government with the desired information respecting Italian mining legislation and the exploitation of Italian mines.

The delay which has occurred in collecting these particulars is due to the fact that some of them, and in particular those which refer to the exploitation of minerals and to contracts respecting them, have necessitated application to the district mineral offices, and to private persons connected with the industry.

I avail, &c.
(Signed) O. D'ARIO.
His Excellency The Marquis of Dufferin and Ava,
&c. &c. &c.

2.

Foreign Office,
December 12, 1891.
SIR, WITH reference to your letter of the 3rd instant, I am directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Royal Commission on Mining Royalties, a further despatch from Rome, containing information respecting Italian mining laws.

I am, &c.
(Signed) T. H. SANDERSON.
The Secretary,
Royal Commission on Mining Royalties.

Enclosure in Sir Thomas Sanderson's letter of
December 12th, 1891.

(No. 178, Commercial.) Rome,
December 9, 1891.
MY LORD, With reference to my despatch of this series, No. 169, of the 24th ultimo, I have now the honour to forward to your Lordship copy and translation of a note, together with its enclosures which I have received from the Italian Government in reply to the queries addressed by me to them on the 6th of May last in reference to mining royalties and rents in Italy.

Your Lordship will perceive that the Italian Government have been at pains to furnish comprehensive replies to the series of questions submitted to them at the suggestion of

the Royal Commission on Mining Royalties, and express the hope that the information supplied will be satisfactory. Some of the bulkier publications forwarded with the Marquis di Rudini's notes will be transmitted to your Lordship by the messenger leaving Rome on the 11th instant, and I have taken upon myself to express to his Excellency the thanks of Her Majesty's Government, as well as my own, for the trouble they have taken in supplying the enclosed information.

I have, &c.
(Signed) DUFFERIN AND AVA.
The Marquis of Salisbury, K.G.
&c. &c. &c.

Enclosure 1 in the Marquis of Dufferin's letter of
December 9th, 1891.

December 7, 1891.
MONSIEUR L'AMBASSADEUR, WITH reference to the note which I had the honour to address to your Excellency on the 23rd of last month, I have to inform you that my colleague of the Ministry of Commerce, in order to be able to reply more clearly to the 12 questions asked by the English Commission with regard to the organisation of mines in Italy, has thought proper to answer each of these queries in a separate paper, enclosing the necessary documents.

It is worth mentioning that there are in Italy 14 regulations still in force, the mining laws not having as yet been united. In respect to this subject, the pamphlet, "Legislazione mineraria in Italia," which is enclosed in the answer to question 12 should be consulted, the pamphlet in point containing a paper showing the various laws with a notice on the information on which these laws are based.

In the volume "Leggi minerarie dell' Europa," your Excellency will find answers to various questions respecting legislation. In the said volume the mining laws of the different European States are dealt with, and in the introduction the dispositions of the said laws are treated of and compared in different chapters. In fact, in the said introduction a great division is made, that is, of the countries in which property in mines is joined to the possession of the surface, and those countries in which such property is distinct and conferred by Government concession. In the first category a notice of each law is given, and in the second the essential differences which distinguish each law are treated of, an examination being made, in different chapters, of the classification of minerals the right of property in the same, compensation due to the proprietor of the soil, digging for minerals, the concession of mines, the rights of the discoverer, and finally, the general characteristics of mining concessions, and the expiring of the same.

It will therefore be sufficient to refer to the separate chapters of the said introduction to have the answer to the seven first questions which deal with the method in which a concession is made and the obligations of the concessionaires; but, for greater clearness, my colleague, the Minister of Commerce has thought fit to give the replies to each separate question in as many separate papers; the answers are, however, limited to the Law of 1859 in force in Piedmont, Liguria, Lombardy, and in the Marches, Romagna, and almost entirely in Lazio, and which is further in force in Sardinia, where the yield of minerals is very considerable.

I have said that the mining regulations still in force in Italy are 14 in number; I must, however, remark that the principal centres of mining are Sicily for sulphur, Sardinia for lead, silver, and zinc, Tuscany for iron, lignite, copper, boric acid, &c.

In Tuscany the proprietor of the soil is owner of the minerals under the surface, without any restriction; the same right is found in Sicily as regards sulphur, except that a low tax for "apeietur" is charged; in these two mining centres the action of the Government is limited to police regulations.

In Sardinia, another most important mining district, the Law of 1859 is in force, as also in Piedmont, Lombardy, Liguria, the Marches, and Romagna, and it is for this reason that, as we said above, the answers to the queries relate to this law alone; the more so, that in most districts, the other principal laws, such as the Lucca Law, the Parma Law, and the Napoleonic Law, contain dispositions analogous to the Law of 1859.

Other most important laws are the Austrian Law of 1854 still in force in Venetia with limited application in Italy; in this case the English Commission will have received full information from Austria: the Parma and Napoleonic Laws (see *Legislazione mineraria in Italia*, pages 7 and 9), which have only been applied to a few mines of petroleum and other minerals. However, in the more important

Appendix
C. XX.ITALY.
Report to the
Commission by
the Marquis
di Rudini.

questions this law is also treated. It is further necessary to repeat that all the explanations as regards laws are to be found in detail 41°. In the annexed volume, "Mining Law of Europe," "Leggi minerarie d'Europa." 2. In the two volumes of "Repertorio delle Miniere" containing the laws and regulations. 3. In the pamphlet "Legislazione mineraria in Italia" annexed to the answer to the query No. 12.

Hoping that I have thus been able to give the required information, &c.,

(Signed) DI RUDINI.
His Excellency
The Marquis of Dufferin.

Enclosure 2 in the Marquis of Dufferin's letter of
December 9th, 1891.

REPORT to the COMMISSION on the MINING LAWS
in ITALY.

Question No. 1.

The steps to be taken by a concessionaire in order to obtain a concession, and an estimate of the legal expenses incurred.

The principle is first laid down that no one can obtain a concession without the mine having been previously declared to be discovered. (Art. 39 of the Law of 1859, p. 730, in the volume "The Mining Laws of Europe.") In the first place, any individual who intends to search for minerals must obtain from the prefect a permit of search, which may be prolonged up to a period of three years and even afterwards renewed. When the search has had a successful result, the prospector claims the declaration of discovery. The prefect instructs the engineer of mines to make a report on the work carried out and on the importance of the deposits found. The request is then sent in to the Ministry of Agriculture, Industry, and Commerce, which, after consultation with the Council of Mines, issues the decree for the declaration of discovery and for offering the mine to concession. The discoverer has a claim of priority to the concession, provided that he can show that he possesses the necessary means (p. 730, Art. 40), and presents his application within six months from the declaration of discovery. With the application the plan of operations is set forth in triplicate; the engineer of mines judges of its correctness and lays down the boundaries (Arts. 42 and 43, p. 731). The prefect publishes the application over three successive Sundays (Art. 43), and then, all eventual opponents being fully informed, the application is forwarded to the Ministry, which, after consulting the Council of Mines and the Council of State, takes the necessary steps to secure the Royal Decree of concession (Arts. 49 and 50).

The expenses to be incurred by the concessionaire are those involved in the verification of the plan and the cost of publication (Art. 43). These vary according to the difficulties encountered in drawing up the plan and the number of communes in which publication has to be made. In round numbers they come to about 1,000 lire (40l.).

Question No. 2.

The terms and conditions upon which the concession is granted; more especially—

- the amount of tax payable to the State, including the methods by which the amount is calculated;
- the time for which the concession is granted;
- the terms and conditions as to working out the minerals;
- the right to a renewal of the concession on the expiration of the term.

The two chapters in the introduction to the "Mining Laws of Europe," entitled "Mining Concessions and Rights of the Discoverer," p. xlix, and "General characteristics of Mining Concessions," p. liv, deal with this question.

(a.) The Government levies a fixed tax of 50 centimes per hectare of surface conceded (Art. 60, p. 734).

The proportional tax of 5 per cent. referred to in Art. 61, &c., has been repealed. At the present time mines have been assimilated to all other forms of industry and pay income tax (Ricchezza mobile) at a ratio of 13·20 per cent. of the nett annual profits.

(b.) In the provinces in which the Law of 1889 is in force, the concession is for perpetuity (Art. 15, p. 726). On the other hand, under the Law of Parma (Art. 17, p. 766), and under the Napoleonic Law (Art. 11, p. 710), it is temporary.

(c.) The conditions to which the working out of minerals is subject are determined by chapter IV. of the Law of 1859 (Arts. 57 to 83, pp. 733 to 738).

(d.) The right to a renewal of the concession is non-existent under the Law of 1859, the concession being in perpetuity. In the case of the other two laws here alluded to the first concessionaire has the right of priority.

Nevertheless, the Government may revoke the concession of a mine of which the working has been abandoned (Arts. 111–117 of the Law of 1859, p. 743).

Question No. 3.

The power of a concessionaire to assign or sublet his concession: the conditions and terms on which any such lease or assignment is granted.

Art. 15 (Mining Laws of Europe, p. 720) of the Law of 1859 prescribes that the mine becomes property, new, perpetual, alienable, and transmissible like all other forms of property, always saving, in regard to the transmissibility by deed *inter vivos*, such reservations as may have been made in the deed of concession itself.

As a matter of fact, conditions of such a nature are very rarely inserted in the deed of concession.

Nevertheless, Art. 68 (p. 735) prescribes that a mine cannot be sold in lots nor divided without an authorisation to be granted by Royal decree, with the consent of the Council of State, after consulting the Council of Mines. And Art. 69 prescribes that if the heirs of a concessionaire wish to possess the mines in concession, the works shall be placed under a single direction, and conjointly managed in the common interest.

Question No. 4.

The powers of the concessionaire as regards the surface.

The concessionaire has the right of occupying so much of the surface of his field of concession as is necessary for opening the mines, for the deposit of material, or for the workshops necessary for the washing of the mineral produce in general, to the extent which the proper activity of the mine renders necessary. (See Art. 29, p. 728, Arts. 78, 79, 80, 81, and 82, pp. 737 and 738 of the "Mining Laws of Europe.")

Question No. 5.

The powers of a concessionaire of a mine on land belonging to A. to send the mineral over land belonging to B., so as to reach a railway or waterway.

Neither the Mines Law of 1859, nor any other law contains any especial dispositions on this head.

Mines are, therefore, in this respect assimilated to property on the surface, which, if enclosed on every side, has the right of passage over other people's ground; but when that right of passage has once been obtained cannot claim another shorter passage to get to the railway or waterway without coming to terms with the owners of the ground over which the road would pass.

A project of law dealing with this question has been presented to Parliament which proposes to give Government the power to declare works of public utility the uniting of mines, quarries, or peat-beds with railways or waterways.

Question No. 6.

The powers of one concessionaire as regards a concessionaire of an adjoining mine in respect of drainage and ventilation or underground passage.

Art. 83 (p. 738, Mining Laws) prescribes that works, even outside the area of the concession, which require to be undertaken for ventilation and for drainage of the water from the mine are included among those for which recourse may be had to the declaration of "public utility." Therefore, the concessionaire has the right of carrying out the said works outside his own field, whether it be within the area of another concession or on land not under concession. Demonstration is required of the utility of the work, and the prefect grants the forced expropriation of the land necessary for such works.

Question No. 7.

To what extent are concessions commonly parted with by the original concessionaires to other parties, and on what terms?

See the answer to Question 3.

As a rule the Government does not intervene in such acts of cession. It may be stated, however, as a general rule, that mines are worked by the same parties, generally companies with large capitals, who received the concessions.

It will be borne in mind that concessions can only be granted for mines first declared discovered.

It is therefore necessary first to have a permit of research, which lasts for a term of three years and more if extended and renewed. And it is during this period that frequent

cessions take place; but when the mine has once been discovered, since it is necessary in order to obtain the concession to prove possession of the means of developing it (Art. 38); if the discoverer has not these means he cedes his rights to another who has, and who intends to develop the mine.

Therefore, after the act of concession, traffic of an abusive nature does not take place.

Question No. 8.

The incidence of taxes levied on mines for local or communal purposes.

District of Bologna.

No communal tax of a local character falling directly on mines in this district; in this category neither the taxes on manufactured goods lately extended to stationary engines, octroi on food, hearth-tax, and the municipal tax known as the *tassa di famiglia*, nor those deriving from public works already carried out and paid for by a commune, such as the right of way on a road or over a bridge situated in the area of a concession, can be included.

District of Caltanissetta.

There are no local or municipal taxes on the mines in Sicily, except perhaps the small taxes of the chambers of commerce for workmen and merchants.

District of Florence.

No mine of the district is subject to any communal or other local tax which only falls on the mining industry.

District of Genoa.

Of the taxes falling on mines there is none which is communal or local.

Such taxes are the following Government taxes:—

- Fixed concession tax and income tax.
- Ground tax and tax on manufactures.
- Water tax.
- Tax on motive power.
- Chamber of commerce tax.
- Tax on servants and carriages.

District of Iglesias.

In Sardinia, besides the additional centesimi levied on some Government taxes, the only communal tax falling on mine is the "esercizio" tax (on the working of the mine), which is not exclusively levied on mines, but is applied to all industries and trades.

The tax in accordance with the Law of August 11, 1870, cannot exceed:—

	Thousand of Inhabitants.
Lire 300 (12l.) for traders in towns above	80
" 250 (10l.) " " "	80 to 40
" 200 (8l.) " " "	40 " 20
" 150 (6l.) " " "	20 " 5
" 100 (4l.) " " "	5 " 2
" 50 (2l.) " " "	less than 2

The amounts reached in 1890 for the principal communes having mines were as follows:—

6l. for Iglesias.
4l. " Fluminimaggiore.
2l. " Guspini.
2l. " Gunnessa.
16s. " Serbarin.
14s. " Narcao.
8s. " Villamassargin.

District of Milan.

No communal or other taxes of a local character on mines. For some mines belonging to the communes it is customary to levy an annual rent, but this is always moderate, limited generally to from 50 to 400 lire (2l. to 16l.) a year.

District of Naples.

No mine is charged with communal or other tax of a local character.

District of Rome.

Except the communal octroi taxes which fall variously according to the commune on products which enter the communes themselves, in which are included those products deriving from the mines, there are no communal or local taxes which specially fall on the working of mines.

District of Turin.

There are no commercial or local taxes levied on mines, which have for base a claim different from that borne by the right of possession of the surface.

District of Vicenza.

Workers of mines pay to the communes a tax for working the mine like all other manufacturers, but they are not subject to any special tax.

Question No. 9.

The usual hours of working and the wages of miners, and the normal daily output reckoned for a day's wages.

District of Bologna.

The hours of labour do not exceed eight in any mine for any category of workmen. With regard to wages, the workmen may be divided into two classes: the first comprises those who are paid by the day, such as loaders, masons, smiths, carpenters, machinists, stokers, bricklayers, and overseers; the second class, which is paid for work done, comprises miners, excavators, and drivers. The salary of the first of these classes varies according to the nature of the work from a minimum of lire 1.25 nett (*i.e.*, after deduction of the expenses which are generally charged against the workmen) and a maximum of lire 2.50 (also nett), which is the usual salary of the mechanics.

As regards the workmen paid by the piece, the minimum daily wage for miners may be reckoned at lire 1.25 nett, the mineral brought down being paid for either by the cubic metre, or else at so much for each ton placed at the bottom of the shaft, or in the galleries where it is loaded, in which case it is measured by the number of truck loads carried, each truck containing from a half to two fifths of a cubic metre. The wages of the excavators employed in burrowing the galleries across sterile rock are very nearly the same as the above, and amount to lire 1.10 to lire 1.30. They are generally calculated on each lineal metre of progress, seeing that the section (of the gallery) is nearly always the same, the expense of powder, oil, maintenance, utensils, &c. devolving on the excavators themselves.

Finally, the nett wages of the transporters, who are paid in proportion to the number of trucks they drive and the distance they have to traverse, amount to about lire 1.20 nett.

District of Caltanissetta.

In the mines in Sicily, which for the most part are sulphur mines, and for the rest salt or asphalt mines, the work is paid by the piece, and the mineral extracted by each excavator and conveyed to the outside of the mine by the various labourers is measured by cubic measure outside the mine, the measures being different in different localities, but it is under consideration to substitute a volume of 4 metres as the unit of measurement. Wherever machines are used for extracting the mineral the work is paid for by the waggon load.

The hours of work are not fixed, so that they increase in proportion as the rate of wages diminishes, and *vice versa*. When wages are good the workmen do not work on an average more than six hours a day.

The duration of the work in a year is on an average 220 days inside the mine, and 160 days outside the mine.

The average wages of the miners or quarrymen paid by piece work amounted on an average in the last few years to lire 1.35 per day.

District of Florence.

The working hours in the various mines in the district are regulated as follows:—

Iron Mines at Elba (above ground), 12 hours nominal, with an interval of two or three hours according to the season which is equivalent to nine or ten hours of effective labour.

Copper, Lead, and Mercury Mines, from seven to ten hours of effective labour after deduction of the hours of rest. In these mines gangs of workers sometimes alternate day and night, but this is seldom the case.

Lignite Mines, from eight to nine hours effective work inside the mine, and from nine to ten hours outside.

Wages are sometimes paid for piece work and sometimes by the day, according to the following rules:—

Iron Mines at Elba.—So much for every ton of mineral extracted and delivered at the depôts or at the sea, in addition in certain cases to so much for every ton of earth dug out.

Copper Mines.—So much the cubic metre for the excavation for the miners, and so much a ton for the breaking up, transport, and metallurgic treatment.

Mercury Mines.—The workmen are all paid by the day.

Appendix
C. XX.ITALY.
Report to the
Commission
by the Marquis
di Rudini.

SPAIN.

XXI.

Appendix
C. XXI.
SPAIN.
Notes on the
Mining Laws
in Spain, by Mr.
Walmesley.

History of law
as to ownership
of mines.

NOTES ON THE MINING LAWS IN SPAIN, prepared and handed in by MR. WALMESLEY.

From the earliest period at which there is any authentic record of the law as to the ownership of mines in Spain (A.D. 1256) they are spoken of as being reserved to the Crown, who might, however, concede them to third parties; but in early periods the concessions appear only to have been made for the life of the king who granted them.

What is considered in reality the first Spanish law on mines was issued by Don John I. at Briviesca in 1387. By this law all mines were declared to belong to the Crown, but every native of Spain was authorised to search for and work mines on his property, or on the property of others with their permission, but paying two third parts of the net profits to the Crown. These rights could not, however, be exercised in cases where special concessions had been granted, such as appear to have been frequently granted and revoked by the Crown, and which were all finally abolished by a law completed in the year 1584, under Philip II.

The Law of 1584 continued in force until 1825, and therefore deserves some attention. By this law any person (either a Spanish subject or a foreigner) might work any mines which he discovered, subject to compliance with certain regulations as to registering the circumstances of their discovery and as to subsequent regular working.

The extent of such mines (which were granted as and subdivided into "pertenencias") was limited, but the discoverer was entitled to take several pertenencias. The worker of the mines was obliged to observe certain conditions, including a condition that he should employ four workmen for each pertenencia, under risk of the "denunciation," a system corresponding with what is known in Australia as "jumping," under which he might lose his rights, which passed to the denunciator if he proved that the mine had not been occupied, i.e., worked by a minimum of four men per pertenencia for four months. Gold mines

had to pay half the gross produce, and silver mines from one-half to one-tenth, according to the yield per Spanish cwt. of silver lead, to the Crown. A special administration was constituted to deliver concessions of and exercise inspection over and try questions relating to mines.

Under the Law of 1825 the mining legislation extended to beds of precious stones, and all metallic, and combustible, and saline substances, except beds and springs of ordinary salt (which were reserved to the Crown, and held as a monopoly). The mines were considered as *res nullius*, which any one without distinction of nationality could search for (on making compensation for damage to the soil), and acquire the right to work.

Other mineral substances, such as sand, clay, and chalk, were considered as the property of the owner of the surface.

The size of the pertenencia was increased, and in principle one person could only acquire two pertenencias in contiguity, but to this rule there were exceptions. The property of the concessionaire was perpetual, and could be transferred and disposed of like other property, subject to regulations as to inspection, including the obligation to work regularly, under risk of "denunciation." Such surface land as was required by the owner of the mines could be acquired on paying an indemnity to the original owner of the surface.

In 1849 a new classification of mineral substances was made which introduced a class corresponding to the *minères* of the French system, and other alterations were made in the details of the mining law. Other alterations of the law were made in 1859.

The whole law of mining was amended and consolidated in 1868, and the law then decreed (subject to some alterations made in 1871 and 1884) constitutes the existing mining law of Spain.

This law recognises the ownership of certain mineral substances as belonging to the State, which, however, can only dispose of them in accordance with the provisions of the law. Mineral substances are divided by the law into three classes, according to the following table, which follows the sections of the law, viz:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Substances (which may be described as <i>carrières</i>) comprising in general all materials of construction, such as slate, sand, stone, lime, marble, and clay, and other substances of an earthy nature.	In the surface owner -	If let, to the surface-owner -	Art. 2 of Law of 1868.
II. Substances (which may be described as <i>minères</i>) such as metalliferous alluvial soil, alluvial iron ore, ochres, metalliferous deposits from old workings, turf, pyrites, aluminous and fuller's earths, saltpetre, phosphates of lime, baryta, fluorspar, steatites, &c.	In the surface-owner, but if he does not work them, and the working is declared to be of public utility, they may be acquired by third parties as if they were mines. The surface-owner may, however, instead of working the mines himself, let them to some one else.	If let, to the surface-owner - If the owner works them himself he is free of any Government charge, but if they become the subject of concession (under the circumstances mentioned in the preceding column), they become subject to the Government taxes, as in the case of mines.	Art. 3 of Law of 1868. A Royal Order of the 26th February 1884 adds asbestos to this clause, and it is understood that the classification is to be considered as indicative rather than limitative.
III. Mines, viz., all metalliferous substances obtained by mining and anthracite coal, lignite, petroleum, and mineral oils, graphite, certain saline substances, sulphur, copperas, and precious stones.	In concessionaire or his assigns.	To the Government. Fixed taxes of 10 pesetas (or francs) per hectare for precious stones and metalliferous substances, and of 4 pesetas per hectare of other mines; and proportional taxes of one per cent. of the gross produce—that is, of the total value of the mineral extracted, without any deduction for the cost of extraction.	The rents are fixed under a Law of the 25th July 1883.

No royalties are payable to the owners of the surface in respect of the mines which are the subject of concession. The taxes, which are payable to the Government, are mentioned in the preceding table.

The owner of the mines usually agrees with the owner of the surface as to the land which may be required for the purpose of the mine, but in the event of their not agreeing, the owner of the mine may apply to the

Surface drainage.

Appendix
C. XXI.
SPAIN.
Notes on the
Mining Laws
in Spain, by M.
Walmesley.

Governor of the Province for permission to acquire the land by expropriation under the law referring to public utility. In the application of this law the respective advantages to the public of the working of the mines on the one hand, and the cultivation of the soil on the other, is taken into consideration,* and, if the expropriation takes place, the surface-owner must be properly indemnified, the purchase money being ascertained by an official valuation of the actual value of the land required, to which a further amount of 20 per cent. is added.

Any one may make searches for mines in public lands by making excavations of not exceeding ten metres in length, but on private lands it appears that such searches cannot be made except by permission of the surface-owner.

These are granted to the first applicant (who may be a private individual or a company), provided that he takes not less than four "pertenencias" (the modern "pertenencia" being a square of 100 metres by 100 metres) adjoining each other, so that a concession contains at least 40,000 square metres, except when it is an enclosure between two or more mines, and less than four pertenencias; it is then called a "demasia," and may be given to one of the concessionaires of the adjoining mines, but if none of them apply for it within three years of the last concession, it may be given to anyone who applies for it.

Any number of pertenencias may be included in one concession, so long as they adjoin each other. The applicant is not required to prove the existence of mineral on the land, or that he has sunk any shaft, or commenced any searching operations. The application for the concession must be made to the Governor of the Province, stating specifically the circumstances of the proposed concession. The application is published in the Official Gazette, and will be granted if not opposed for sixty days, on the land being proved to be free (from existing concessions). The land is marked out, and a plan and report are prepared by the Government Mining Engineer of the Province. Certain fees (not of any great amount) have to

* The working of mines is generally acknowledged as being of public utility, and it is not therefore necessary for the concessionaire to show the benefits which will arise to the public.

be paid, and the concession is granted by the Governor of the Province and registered. The ordinary form of concession is given at the end of this statement.

When the concession is granted it is perpetual (the system of "denunciation" being done away with), and can only lapse on failure to pay the taxes payable to the Government for a period of twelve months.

It is also capable of transfer, like all other immovable property, and may be divided at pleasure, but not into areas of less than one pertenencia each, and can be worked or not at the pleasure of the concessionaire or his assigns. There is ample authority for stating that the concessions are frequently dealt with by way of sale or lease. The following observations have recently been made by a Spanish lawyer of great experience on the subject:—

"The concessionaires of mines in Spain are generally disposed to sell the same, and in the majority of cases ask for excessive prices, although they soon reduce and limit their demands when they are convinced of the sincerity of the purchaser, and more particularly if the purchase money is to be paid on the execution of the contract. They are not in the habit of being favourable to granting leases, although they accept such when the private individual or the company has and offers guarantees for the due carrying out of the same. Generally, these contracts are made for the term of twenty or thirty years, and upon the payment of a percentage of the products obtained, and increasing or reducing the same according to a scale that is usually fixed, taking as a basis (e.g. in the case of lead mines) the price of pig lead in the London market. Some such contracts have been made in this district. 'La Real Compania Asturiana' of Belgium, and 'T. Sopwith & Co., Limited,' of London, have made contracts for leases. It is almost always usual to mention a fixed price to provide for the event of the lessee during his contract desiring to acquire the property of the mine or mines let on lease, and the lessor undertakes to sell the same at the price agreed upon, which is more or less, according to the term of lease which may have expired."

The following are some examples of dealings with concessions in Spain:—

DEALINGS WITH CONCESSIONS.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase Money.	How payable.
Andalusian Silver Mining Company, Limited.	Silver lead, 1,412 acres.	Linares, Spain.	1887	Under concession from Spanish Government in perpetuity; rental 228 <i>l.</i> a year.	70,000 <i>l.</i>	In fully paid up shares.
Monte del Oro Mining Company, Limited.	Gold, silver, and other minerals within an area of about 80 acres.	Province of Cordoba, Spain.	1886	Under concession from Spanish Government in perpetuity, subject to usual small annual payment and tax of one per cent. on minerals produced.	25,000 <i>l.</i>	In fully paid up shares or in cash (it was paid in cash).
*Orconera Iron Ore Company, Limited.	-	-	1873	-	-	-
Pradena Silver Mines, Limited.	Silver mines over an area of about 300 acres.	Spain.	1888	Under concession from Spanish Government.	35,000 <i>l.</i>	In fully paid up shares.
Rio Tinto Company, Limited.	Iron ore over a property of 16,000 acres.	Province of Huelva.	1873	-	3,331,005 <i>l.</i> (cost of mines account).	-
Salamanca Tin Company, Limited.	Tin mines over an area of 1,030 acres.	Spain.	1887	Under concession from Spanish Government.	85,000 <i>l.</i> and 75,000 <i>l.</i> , and a royalty of 12 per cent. on the dressed ore.	Cash. In fully paid up shares subject to redemption before October 1891, on payment of 20,000 <i>l.</i>
San Cebrian Railway and Collieries Company, Limited.	About 2,200 acres of coal mines, and a narrow-gauge railway 11 miles in length.	Province of Palencia.	1885	-	165,000 <i>l.</i>	In fully paid shares.
Spanish Copper Company, Limited.	Sulphur and copper mines.	Province of Huelva, Spain.	1883	Under two leases granted by the concessionaire in perpetuity at the annual rental of 200 <i>l.</i> each (400 <i>l.</i> per annum).	75,000 <i>l.</i>	In fully paid up shares.
†Somorrostro Iron Ore Company, Limited.	Iron ore	-	1880	-	-	-
Tharsis Sulphur and Copper Company, Limited.	Sulphur and copper	-	1886	-	Said to pay 4 <i>s.</i> per ton royalty.	-

* No details as to the acquisition of properties by this Company are published, but it appears to have paid high dividends, amounting to 40 per cent. in 1884.

† The same remarks as have been made respecting the Orconera Iron Ore Company, Limited, apply to this Company, the dividends amounting to, for 1886-7, 40 per cent.; for 1887-8, 45 per cent.; and for 1888-9, 65 per cent.

Proprietors of mines (that is, the owners of the surface, as to mines of the first and second classes, and owners of concessions, as to mines of the third class), having the power to cede the working of such mines to others, can and do lease them for terms of years. It is usual to let

them for five or ten years, renewable at the option of the lessees, subject to a royalty, a minimum or dead rent, and to the regulations regarding the working of mines, and to conditions, including a condition determining the minimum number of workmen to be constantly employed in

are undoubtedly made, as will be seen from the following instances:—
The concessions of mines of antimony and gold at Oporto, over an area of about 260 acres, held from the Portuguese Government in perpetuity, at the usual taxes, with certain leases of surface and pinewoods at rents of 40*l.* per annum, were sold in 1887 to the Lixa Mining Company, Limited, for the sum of 54,500*l.*, of which 28,000*l.* was payable in cash, and 26,500*l.* in fully paid-up shares.
The concessions of copper mines over an area of about 850 acres were sold in 1888 to the Portuguese Consolidated Copper Mines, Limited, for 50,000*l.*, payable in cash or shares at the option of the company.
These, where required, can apparently be obtained under the law of expropriation before referred to.
This is provided for, as a penalty for breach of the obligation imposed on the concessionnaire, and especially

in the following cases: if he fails to furnish the plan of his concession within six months after the delivery of the provisional grant; if the works are not commenced within two months after the final grant of the concession; if the mine is not kept in a constant state of active work; if the concessionnaire does not take the necessary measures during a specified time in case of danger resulting from bad management of the works; and when, in consequence of improper working, the ultimate working out of the mine is rendered difficult or impossible.
The law provides for inspection of workings and searches to assure the safety of the workmen and the protection of the soil, and this right of inspection extends to mines of the third class or carrières.

Inspection a regulation of mines.

Mining authority.

The control of and management of mines is entrusted to a Committee of Public Works and Mines, which is subordinate to the State Department of Public Works, Commerce and Industry (Blue Book, p. 20).

LUXEMBURG.

XXIII.

LUXEMBURG.

NOTES ON THE MINING LAWS, PREPARED AND HANDED IN BY MR. WALMESLEY.

The French Legislation of 1810 was introduced into the Grand Duchy of Luxembourg at the date of its annexation to France under the First Empire. So far as concerns mines, open workings, quarries and peat bogs, this legislation still continues in force. Special laws have, however, been enacted in recent years respecting the valuable oolitic iron-ore deposits which have been discovered, and which are the only minerals of any importance worked in the country. The first of these laws (viz., that of the 15th March 1870) applies only to the iron-ore deposits in the valley of the Alzette, in the canton of Esch. Before the passing of this law numerous open workings had, on the one hand, been opened by surface owners under the name of minières, and the State had, on the other hand, granted important concessions of mines in the same iron-ore deposits to the Prince Henri (Railway and Mining) Company. In order to meet the difficulties which might otherwise have arisen as to the boundaries between the mines and the minières, the law of 1870 provided that the iron-ore deposits of the canton of Esch were to be considered as coming under the head of mines forming the subject of concession, when the bed lay at certain depths, differing as regards the right and left banks of the River Alzette; the practical

effect, it is said, being to limit the workings of the proprietor of the surface to a depth of 34 metres on the right bank and of 35 metres on the left bank of the river (Ag. § 1358). The law also provided (Art. 2) that no further concessions should be granted until the passing of a further law on the subject.

This second law is dated the 12th June 1874, and is only applicable to iron-ore and manufactures of iron, and does away with the obligations imposed by the law of 1810, securing a right to supply by the manufactories from the mines or minières of iron (as was done for France in 1866). The Act, in effect, brings all alluvial iron-ore within the category of minières, and places all stratified ironstone outside the canton of Esch in the category of mines (Ag. § 1360). It stipulates explicitly (Art. 1) that every concession must be made by a law, thus implying that it may be granted for such a period and upon such conditions as the Legislature may choose to make. This is said to be a recognition of the principle of "domaniality," by which the State makes a contract with the concessionnaire for the enjoyment of a portion of the State domain, and not merely confers upon him the title to a property which it delivers to him. It follows from this that the State keeps the right to reserve whatever rent the mine is capable of paying, and this the State is authorised to do (Arts. 3 and 5) either in the shape of a rent per ton (une redevance par tonnage) or an annual rent, which may be considered as a composition for a tonnage rent.

The ownership of minerals in Luxembourg may, therefore, be classified as follows, viz.:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, viz., the same substances as are contained in the category of mines under the French law, except that in the canton of Esch all iron ore at depths varying according to whether the land is situate on the right or left bank of the River Alzette, and that outside the canton of Esch, all stratified ironstone is also to be considered as coming under this head.	In the concessionnaire (or his assigns), who can only obtain a concession by virtue of a law. The concessions are usually granted to the owners of blast furnaces erected in the country, or for works of public utility. The concessions appear to be usually granted for an unlimited period, but the payment of the rent is only extended over a limited period, e.g., 50 years.	Partly to the Government, who may charge a tonnage rent (toccage) or a fixed rent by way of composition of the tonnage rent, proportionate to the rental value of the mine; and Partly to the owners of the surface, the amount being fixed at 5 per cent. of the sum paid to the Government, but not to exceed 10 centimes per ton of the mineral worked.	It is understood that the taxes on concessionnaires amount to from 0.025 fcs. to 0.65 fcs. (1 <i>d.</i> to 1 <i>d.</i>) per ton, besides communal (parish) and other duties variable with the circumstances of the case, except in the case of concessionnaires holding their concessions for works of public utility, who pay in all 10 cents=1 <i>d.</i> per ton of ore extracted;* but these taxes are in addition to the sums agreed to be paid for the granting of the concessions. It appears from an Act dated the 7th July 1874, that the owners of certain blast furnaces have agreed to pay to the State for 50 years in respect of the mines conceded to them a rent of 130,000 fcs., being at the rate of about 750 fcs. per hectare, calculated to be equivalent to 4 fcs. 60 c. to 5 fcs. per waggon (of 10 tons), or about 5 <i>d.</i> per ton.

* It is understood that an interesting question has lately been raised before the Council of State, viz., whether the worker is liable to pay, in addition to the 10 centimes per ton, the tax (impôt mobilier) on the working capital. The Council of State has not yet decided the question.

CLASSIFICATION OF MINERAL SUBSTANCES—continued.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
II. Minières, viz., all iron deposits which are not legally the subject of concessions.	In the surface owner or his assigns; but they must not be worked except by permission, which cannot be refused except on grounds of public safety or health; and the permission fixes the conditions which are to be observed by the workers with the same objects in view; and it may be suspended, or even revoked, in case of non-observance of such conditions, or of danger to public safety or health, or even to a neighbouring working.	If let to the surface owner, no royalties are payable to the Government; but a law of the 4th December 1863, burdens all open workings of minerals with a tax of 2 per cent. on the approximate value of the ore extracted, after deducting the expenses of working; and see the provisions of the law of 25th December 1869, given on the other side.	This tax affects both mines, minières, and carrières, which are worked by open workings, and in the case of mines is in addition to the rents payable to the Government and surface owners.
III. Carrières comprising the same substances as under the French law of 1810.	In ditto (as in the case of France).	Ditto (as in the case of France).	

Surface land occupied or damaged.

Searches for mines.

Concessions.

Land occupied for the purpose of working mines must be paid for at double the value, at the choice of the owner of the surface, either of the amount of the damage, or of the value of the ground occupied (Arts. 7 to 11).

These, it is understood, are regulated in accordance with the French law of 1810.

These, as before mentioned, can only be granted by virtue of a law, and are usually granted (1) to the owners of blast furnaces erected in the country, who will smelt the ore on the spot, or (2) as a subsidy for works of public utility. A form of concession (understood to be the latest granted by the Government) is given below.

Concessionnaires are at liberty to sell or sub-let their concessions so long as they keep within the terms of their respective conventions. The Prince Henri (Railway and Mining) Company forms an exception as regards sale.

The leases made between concessionnaires and sub-concessionnaires may be for a lump sum, a yearly rental or royalty (toccage).

The original concessionnaires have in some cases made toccage contracts, as in the case of the Prince Henri Company and the original workers, under which a royalty is payable for, in some cases, 40 years.

According to the terms of a recent law (of the 25th December 1889) respecting the duty on mining operations, there is levied by the State, on the working of iron mines and open workings, in the measures both conceded and non-conceded, a tax of $\frac{1}{2}$ per cent. on the selling price of the ore.

This duty is payable both on the quantity of ore sold to third parties, and on that used by the proprietors or concessionnaires of the lands for supplying their works either in the country or abroad.

The duty is levied on the average sale price of the ore in the various basins during the year for which the duty is imposed.

The mine duty is subject to communal (parish) charges, both for the making of parish roads and for the additional per-centages proper (centimes additionnels).

The above law of 25th December 1889 does not annul or detract from the provisions of Art. 4 of the Convention law of March 1869, in favour of the concessionnaires of the Prince Henri Railway as regards the dues and charges imposed upon them with respect to their mining operations, nor the conventions-interpretations which followed, nor similar conventions made with other concessionnaires.

The workers of mines have the right to occupy all the surface land other than the site of buildings and adjoining enclosures which are necessary for the working of their mines, including necessary roads and ways (not confined to the areas of the concessions), on paying an indemnity for land occupied as stated previously (Arts. 7 to 11). They may also be authorised by the adminis-

tration to establish ways of safety in adjoining mines or even minières, on paying compensation for damage (Arts. 14 to 16).

The French decree of the 3rd January 1813 (Art. 13), enabling the authorities in case of accidents in mines to take the necessary measures to put an end to the danger and to prevent evil consequences, is established as part of the law of Luxembourg.

There is no compulsory system of insurance, but it is understood that the iron-smelting companies usually effect collective insurances with foreign assurance companies by way of meeting accidents which may befall their men.

This is similar to the mining administration of France, the Director-General of the Interior being at the head of the Administration. The powers of the Administration are considerable.

The Director-General may (law of 1874, Art. 13) (subject to appeal to the Council-General) interdict all works undertaken contrary to the laws or regulations, or may (Art. 6) (subject to a similar appeal) suspend any part of the working in case it is conducted contrary to the conditions of the act of concession or of the regulations, and in such cases forfeiture may even be proceeded for before the tribunals.

The very special feature of the Luxembourg mining legislation is the recognition of the system of "domaniality." This system has, it appears, been adopted advisedly, as the French system of gratuitous concessions of mines has been entirely condemned in the country. It might consequently be supposed that the worker of mines in this country was at a disadvantage with those of the adjoining countries who obtain their concessions gratuitously; still it is understood that the iron workings of Luxembourg have been able to show profits even in bad times.

The miners generally work 10 hours daily, or 60 hours per week.

Wages are as follows, viz.:—

Miners earn from 3.50 to 5 fcs. per day.
Underground labourers from 3 to 4 fcs. per day.
Smiths and carpenters from 3.50 to 4.50 fcs. per day.

Surface labourers' men from 2.50 fcs. per day.

There is no law against the employment of women in mines, but public opinion is against the practice, and it does not exist.

Boys are prevented by law from working in mines under the age of sixteen.

Appendix C. XXIII.
LUXEMBURG.
Notes on the Mining Laws in Luxembourg by Mr. Walmesley.

Relief societies &c.

Mining authority.

General remarks.

Wages and working hours.

CHAPTER XIII.

TRANSLATION OF THE TEXT OF THE LATEST MINE CONCESSION GRANTED BY THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBURG.

BETWEEN the Government of the Grand Duchy of Luxembourg, represented by M., Director General of the Interior,

AND the Société Anonyme des Hauts Fourneaux et Forges de, represented by M., administrateur délégué (managing director), domiciled at, has been concluded the following convention:—

Article 1.—Is granted in concession by the Government of the Grand Duchy of Luxembourg to the Société des Hauts Fourneaux et Forges de aforesaid, the mines of oolitic hydrate of iron in the measures capable of being conceded by the State, and underlying the place called in the section and commune of

This concession, as defined by the plan annexed to these presents, is bounded on the south by the line D E F G H, along the zone de protection, ten mètres wide, adjacent to Lorraine.

On the north and east it adjoins the boundary A B C D, separating the concessible district from the property workable open-cast, forming part of the belonging to the commune of; finally on the west it is bounded by the line H A, more particularly defined by the road between and adjoining the districts known as and

Thus, embraced by the polygonal figure A B C D E F G H, this concession contains including all the concessible portion of the, which contains altogether, but from which are deducted the expenses de protection, to be preserved along the Lorraine frontier, measuring

Article 2.—The limits of the concession are definitely fixed by the plan signed by the parties and annexed to the present convention, of which it forms an integral portion.

The Concessionnaire Company accepts the deposit of the plan as definitely fixing the limits of the concession and its conveyance, without any necessity for the intervention of the surface owners.

In execution of this plan, the representatives of the Concessionnaire Company shall shortly proceed to mark out the district on the ground, the limits being checked by the Government engineers.

If it be ascertained, even after the final marking out, and at any period whatsoever of the working, that among the lands conceded there be measures not concessible in accordance with the law of 15th March 1870, the Concessionnaire Company will be entitled either to additional lands or to a reduction of price proportionate to the value thus deficient.

Article 3.—The Government of the Grand Duchy only guarantees to the Concessionnaire Company the proprietorship of the mines; that is to say, it guarantees no yield of the mines; nor does it guarantee the quality per-centage of metallic iron, or nature of ore, the concession being granted only on the reputation of the lands conceded being ore-bearing.

In the event of any let or hindrance to the working by third parties, the Concessionnaire Company will have the right to take such measures as may be advised for putting a stop to the hindrance, and for obtaining compensation for any damage that may ensue from such let or hindrance.

Article 4.—Remain reserved by the State the lodes of any mineral other than iron, which may be found in the concessions granted by these presents.

Article 5.—The Concessionnaire Company may work the measures with perfect liberty, selecting the most suitable seams; the company will be held bound to work the mines in accordance with recognised methods, and, en bon père de famille (like a good family man), it (the company) will take all necessary measures so as not to compromise the complete working out of the measures, either during the operation of the present convention or at its close; it will conform to the laws, enactments, and regulations as to the working of mines in the Grand Duchy of Luxembourg; it will provide the necessary timbering for the workings, keep up pillars

of sufficient thickness, and line the workings with masonry wherever required by the nature of the measures.

Article 6.—In return for the advantages granted by the present convention, the Concessionnaire Company undertakes to pay every year to the Government of the Grand Duchy of Luxembourg, for fifty consecutive years, a rent of 32,925 francs (=1,303*l.*)

The first payment of this rent is to be made on the 31st day of December 1887, and the last on the 31st day of December 1937, at the office of the Receiver, Esch-sur-Alzette.

The State undertakes to pay the royalty due to the surface-owner.

As the price of the concession is payable in fifty years, the Concessionnaire Company is entitled to work each year the fiftieth part, or 50 ares = 1½ acre. Consequently, if in one year more than this area be worked, the excess shall be paid to the State on the basis of 37,500 francs (=1,484*l.*) per hectare (about 2½ acres), unless the total area worked since the granting of the concession be less than that which the Concessionnaire Company had the right to work.

The excess thus paid during one or more years shall be allowed for during the following years, during which the Concessionnaire Company shall work beyond the average.

Reports drawn up each year in June and December by the Ingénieur des Mines (Government Mining Engineer), and checked by the Concessionnaire Company, will constitute a record of the areas actually worked.

Article 7.—The Government undertakes not to grant gratuitous concessions, but to allow the Concessionnaire Company to profit by any legislative measure which may improve the condition of iron-masters.

Article 8.—The Concessionnaire Company may compound its annual payments by paying their present worth at 5 per cent., or by partial repayments, the whole without prejudice to the advantage secured by Article 7.

Article 9.—The Concessionnaire Company may cede or farm the whole or part of its concession on condition that the sub-concessionnaire or tenant provide all necessary guarantees of solvency.

The sub-concessionnaire or tenant is legally reputed solvent if he provide a bail ensuring the execution of all the engagements to the State provided by the present convention.

The Concessionnaire Company has the right to dispose of its concession as it pleases, if the yearly payments have been compounded in accordance with Article 8.

All the provisions of the present convention are applicable to the tenants, sub-concessionnaires, or assigns of the Concessionnaire Company.

Article 10.—In the event of the Concessionnaire Company using or ceding the conceded ore for traffic, the present convention may be annulled with damages in favour of the State.

Article 11.—The Government is empowered to require from the Concessionnaire Company sufficient security, either by bail or by mortgage, for the payment of three years' rent as above reserved.

Article 12.—The Government is empowered to stop the working temporarily if the Concessionnaire Company be two months in arrear with the rent.

The Concessionnaire Company becomes in arrear by the mere fact of the date expiring on which the rent is due, and without the necessity of any legal formality. Interest at the rate of 5 per cent. becomes legally due on all sums not regularly paid to date.

If there be any danger in delay, the Government may stop the working at any time, even before the expiration of the period for which the rent is due. A delay of more than two months may be granted for payment of the rent if there be no danger in delay, or if the Concessionnaire Company have worked less than the average provided for by Article 6. The granting of delay carries with it de plein droit suspension of all hostile measures provided for by the present article.

Article 13.—If the year's rent be more than six months in arrear, the Government may apply to the Courts to cancel the agreement, and also for damages in proportion to the loss incurred by the State through non-execution of the contract.

In this case, as well as in all others in which the Government has the right of cancelling the convention by virtue of the general provisions of the law of 15th March 1870, the Concessionnaire Company shall be held bound to pay to the Government, as compensation for the loss of the concession, a sum equal to the value of the concession at the date of its cancellation.

regulation of mines and open workings, all proceedings for cancelling will be stayed, if, before final judgment, the Concessionnaire Company satisfy the claims of the Government.

On the other hand, if the cancelling be pronounced, the Government has recourse against the Concessionnaire Company or its legal representative.

Delay of more than six months may be granted for payment of the rent in the cases provided for by the last paragraph of the preceding article; and the granting of such delay carries with it de plein droit the suspension of all proceedings for cancelling the agreement.

The provisions of Article 2 of the law of 21st May 1879, which approves the compromise convention of 18th March 1879, as to the mining concessions dealt with by the law of 7th July 1874, are applicable to the present convention.

Article 14.—In all cases in which the present convention is cancelled, by virtue of the above stipulations, or owing to any other cause, and also at the expiration of the term, the Concessionnaire Company, or its legal representatives, are entitled to remove from the concession the working plant which they have added, and which may be withdrawn without prejudice to the mine, subject, however, to paying to the Government all the royalties due, and subject also to the option of taking over at a valuation by the Government, or other concessionnaires, of all objects which they may consider useful for working.

Article 15.—The Concessionnaire Company is responsible before the law for all damage which its working may cause the surface-owners or other persons.

UNITED STATES OF AMERICA.

XXIV.

NOTES ON THE MINING LAWS IN AMERICA (UNITED STATES OF), prepared and handed in by Mr. WALMESLEY.

In considering the subject of the mining laws of this country, there should be constantly kept in mind the distinction which exists between the Federal public lands and lands owned by the States or by private individuals, the latter class being divided into State lands and strictly private lands. The separate States, however, own their lands by the same title as private individuals, namely, by grants from the Crown, in the case of the 13 original States, and from the Federal Government in the case of the more modern States. Having regard to the important distinction before referred to between public and private lands, it is proposed in these notes to deal with the laws affecting the two different classes of land, so far as may be, separately.

It is also necessary, in order to comprehend the state of the law as to mines in this country, to have regard to the general law of the country as to the alienation of public lands to individuals or companies, it being distinctly to be understood that, as a general rule, if public lands are granted to individuals or companies, no matter for what purpose, agricultural or otherwise, or at what price, and whether they are known to contain minerals or not, all mines beneath the surface, as well as the surface itself, pass to the grantee.*

Originally the Government of the United States sold off extensive tracts of land by ordinary grant in fee simple, but by an Act of Congress of the 10th of May 1808, a system of sale in detail was established, the main features of which continue to the present day. Under this law

* An exception to the common law rule here stated is furnished by the case of private lands bought from the Government since the passing of the Mining Law of 1872, in the States and territories to which that Act applies. Such lands are owned subject to the right of the locators of lodes having their tops or apexes in lands adjoining, to "possess and enjoy" the said lodes in their downward course through the (otherwise) private land.

Article 16.—The Government undertakes to apply, and cause to be applied, in the sense most favourable for mine workers the provision of Article 25, paragraph 5, of the Specification of 27th February 1869, annexed to the law of 19th March 1869, in such a manner that the railways conceded or to be conceded, oppose no obstacle to any private lines that may be laid to facilitate the economical working of mining property.

The Government undertakes, moreover, not to renounce by new conventions the right of decreeing expropriation on account of public utility in cases wherein the right of expropriation may be considered as applicable to the iron industry in accordance with existing laws.

Article 17.—The Concessionnaire Company must elect a single administrative domicile, which it will make known by a declaration addressed to the member of the Government charged with the direction of mines.

Article 18.—Any disputes to which the interpretation of the present convention may give rise are to be settled, in the first instance, by three arbitrators, to be appointed, through the initiative of one or other of the parties, by the President of the High Court of Justice.

Article 19.—The present convention is not to come into force until after it shall have received the sanction of the sovereign. It will be registered at the fixed rate of 5 francs (=4*s.*), and a copy delivered gratuitously, excepting the fee of the conservator.

Made double at Luxemburg, the 20th November 1886.

(Signed) (Signed)

no sale of public lands may be made until after survey by Government officials, when land may be bought in sections, through the medium of the Land Office, at the minimum price for (agricultural land) of 1.25 dollars per acre. The purchaser receives a title deed called a "Patent" (signed by the President or some one appointed to represent him, and sealed with the seal of the United States), which confers upon him the fee simple or absolute ownership of the surface and the subsoil. Certain rights of ship of the surface and the subsoil. Certain rights of preference were, however, formerly accorded to squatters, settlers, or those who had established "homesteads"—that is, to the first occupants of the land, who had improved it, either by cultivating it or by building houses upon it. Such persons might occupy the land and, after survey and payment of the price of 1.25 dollars per acre, might become entitled to the absolute ownership. This privilege, however, only extended to agricultural lands as distinguished from mineral lands or other land reserved for purposes of public utility.

Until recently there was no special Federal legislation as regards mines; the old (common law) patents gave a title both to the surface and to the minerals beneath the land which they comprised without any restriction, as they still do in the States of Wisconsin, Michigan, and Minnesota which were excepted from the provisions of the recent Federal mineral legislation. (See Revised Statutes, s. 2345.) Mineral lands forming part of the public lands (which appear to be all practically situate in the Western States and territories) are now subject to the special provisions of an Act passed in 1872, which will be more particularly referred to hereafter. The Government or Administration of each State or territory only intervenes as a rule by regulations made exclusively for the protection of the workmen employed in the mines.

A patent of land from the United States passes to the patentee all the interest of the United States, whatever it may be, in everything connected with the soil, or forming any portion of its bed or fixed to its surface; in short, everything embraced within the term "land." The above is the language of the Supreme Court of California

Appendix
C. XXIV.
UNITED STATES.
Notes on the
Mining Laws
in the United
States, by Mr.
W. W. Almesley.

(see 17 Cal., 199), in certain celebrated cases, in which agricultural grants made by the Mexican Government before the acquisition of California by the United States were subsequently confirmed by the latter, and patents issued accordingly. The original grant by Mexico confessedly did not convey the precious metals in the soil: but it was held that the patent of the United States did so nevertheless, and this doctrine has been repeatedly reaffirmed by the Courts of the United States. It is true that the United States has at times withheld mineral lands from sale: has at other times fixed special conditions for their sale; has excepted them from railroad grants, &c. But when (without fraud) a piece of land, not officially known and described as mineral land, has been sold to a private party or granted to a State or a Railroad Company, and a patent has been issued for it, the patent gives the complete common-law right—and more too—for it waives what the common law reserves, the right of the sovereign to the precious metals. There is but one exception—namely, that of the right of the locators of lodes having their tops or apexes in lands adjoining, to “possess and enjoy” the said lodes in their downward course through the (otherwise) private land.

Gold and silver

In the State of Pennsylvania it is understood that gold and silver mines are reserved to the Penn family, whilst the State of New York has a special law on the subject of such mines, though it is understood that in neither of the last-mentioned States is the subject of practical importance, as no such mines have been discovered in either of them. The law of New York is set out in the Blue Book before referred to, pp. 43-45. The Federal Government, as such, never appears to have set up any claim of right of sovereignty in or over the precious metals.

The Federal Mining law.

“The motive underlying the earliest congressional legislation touching the public mineral lands was to secure a revenue therefrom. To this end the system of leasing the lead and copper mines was adopted in 1807, with its attendant agencies, accountings, &c. After a trial of nearly forty years the system was pronounced a failure, and in 1846 the mines were offered for sale, with a preference right in those who had leases or were in the occupation of the mines. When the gold mines of California were discovered, and the varied mineral wealth of the Pacific coast was brought to the attention of Congress, several revenue Bills were introduced at different times, and were earnestly debated; but the notorious failure of the lease system in the Mississippi valley, and the difficulties in the way of securing a revenue otherwise, gave success to the friends of free mining in 1866.”*

The proprietorship of the minerals is not necessarily inseparable from that of the surface; as a matter of fact, under the Federal Mining Act of 1866, the United States sold numerous mines without selling the surface above them. All that it granted in such cases as to the surface was an easement—that is, the preferential right to use it for mining purposes. The same surface was, to this extent, sold over and over again to different parties, and sometimes owned besides by citizens not miners, who built houses upon it. Only the miners (in the order of priority of claim) could take it if they needed it, paying for the damage done to other occupants. The Act of 1872 abrogated this state of affairs; and now the United States issues no patents for mines alone. Its mining patents always convey a full title to land, and the ownership also of all the minerals therein (with the exception, heretofore noted, of the extra-lateral lode-rights of adjoining owners).

It may here be remarked that the actual law of the United States of America as to mining seems to have been founded to a great extent upon customs which had grown up in California previous to the passing of the first Federal mining law. These customs do not, however, appear to have been derived to any great extent from the law of Mexico, to which country California originally belonged. The only principle common to the Mexican law and the customs of the early miners in California seems to have been that of the tenure of a mining-claim by continued occupancy and working. The principle of a demarcation of surface-area, limiting the underground rights, and the principle of a royalty payable to the Government, the two

* Extract from the Mining Laws, Rules, and Regulations published by the Tenth Census Office of the United States in 1885.

leading characteristics of the Mexican system, found no lodgment whatever in California. On the other hand, the principle of longitudinal measurement (so many feet of a lode in linear extent, or so many feet along the course of a stream, whatever the width of the lode or “gulch” might be) and the principle of the right to follow a lode “on its dip,” between the end limits of the claim, wherever it might go, which were the two leading and controlling features of the California system, had never existed in Mexico. In fact, it would be surprising that the California system was so utterly unlike that of Mexico, but for the historical explanation that, although California had belonged to Mexico, there was no mining in California until after the annexation; that the alluvial mining which then began was quite unlike the deep mining of the Mexicans; and that the miners themselves were adventurers from all parts of the world, among whom the old Californians formed a small part only; as a rule, indeed, they were engaged in other occupations.

Even as regards the one point in which the Mexican and Californian systems agree, the importation of that principle into the Californian system was probably not due to Mexican influence. The principle of possessory tenure, dependent upon continued work, is probably German in origin, and passed from Germany to other countries. Together with all the other peculiarities of the Californian system, it was adopted under the pressure of the peculiar circumstances of the case, a great rush of population to the gold-fields, more people than room for them, no courts, no surveyors, and an overwhelming necessity for simple rights of property, based on priority and possession, and determinable by mere tape-line measurement, without surveying. These causes adequately explain the whole result.

For 18 years after the annexation of California the mining law of that country depended entirely upon the miners' customs, regulating not only dealings with the mines, but also with water required in connection with the mines.

The law of 1866 differed from that of 1872, in that it provided for the sale of a lode, with an easement as to surface, whereas the Act of 1872 provided for the sale of the land. Again, the law of 1866 did not make the rights of the locator dependent upon his possession of the “apex” of the lode he discovered, and on which he located his claim. The law of 1872, hence called “The Law of the Apex,” makes the whole ownership of a lode dependent upon the possession of the apex. (See section 2322, Revised Statutes.)

The law of 1872 is set out in the Revised Statutes of America (reprinted with Amendments in 1878), by which it is declared, under Title xxxii. s. 2318, that in all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly provided by law; and (s. 2319) that all valuable mineral deposits in lands belonging to the United States are thereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase by citizens of the United States, and those who declare their intention to become such,* under regulations prescribed by law and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

It has resulted from the recognition of the principle of combined ownership of the surface and the mines that a division is made of public lands with reference to mines, not by dealing with the different mineral substances apart from the surface, but by dividing lands known to contain minerals from purely agricultural lands; the mineral lands being again divided amongst themselves according to the classification shown in the following Table. It must, however, be observed that the division has reference to the original grants made by the Federal Government as “Lord paramount” of part of the public domain, corresponding with grants from the Crown in England, and does not in anywise affect private, or appropriated, lands.

* Under an Act passed in 1880 claimants for patents of mineral lands who are not residents of the land districts in which such lands are situated may make the applications and the necessary affidavits through their authorised agents. It is no doubt under this provision that many persons who are not and do not intend to become citizens of the United States obtain patents.

Searches for mines.

Patents.

CLASSIFICATION OF MINERAL LANDS.

Mineral Lands.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Vein or lode lands, i.e., lands containing veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits (s. 2326).	In first occupant who is a citizen of the United States, or declares his intention to become such, and makes a claim to be afterwards completed by Patent granted by Government on proof of expenditure of 500 dollars in labour or improvements and on payment of 5 dollars per acre and fees.	If let, to the locator of the claim or his assigns. The Government of each State has the right to impose taxes on the produce of the mines, but this is not generally done; such a tax, however, appears to be imposed in the State of Nevada (Law of 28 February 1871), and in the State of South Carolina (as regards mining or dredging of phosphate rock in the navigable rivers alone (see Blue Book, p. 46).	The extent of such claim is left to local regulations, provided that it shall not exceed 1,500 feet in length or 300 feet in width on each side of the vein at the surface, and provided also that local regulations shall not fix the maximum width of a lode-location at less than 25 feet on each side of the middle of the vein at the surface, except where adverse rights existing prior to May 10, 1872, render such limitation necessary (s. 2320).
II. Placer lands, i.e. lands containing all forms of metallic deposit except veins of quartz or other rock in place.	In ditto, the price paid for acquisition, however, being only 2½ dollars per acre.	Do. do.	Ditto, the extent of placer claims is limited to 20 acres for individuals and 160 acres for associations, but placer claims do not give the right of following veins into adjoining lands, the rights of the locator being strictly confined to the area of his claim.
III. Coal lands	In ditto, the price being not less than 10 dollars per acre when lands distant more than 15 miles from any completed railway, and not less than 20 dollars per acre when within that distance (s. 2347).	Do. do.	The extent of claims on coal lands is limited to 160 acres for individuals or 320 acres for associations, but an association of not less than four persons can obtain 640 acres on proving that they have expended 5,000 dollars in labour or improvements (s. 2348).

Section 2352 provides that nothing in the preceding five sections shall authorise the sale of lands valuable for mines of gold, silver, or copper. But these five sections comprise the law as to the acquisition of coal lands, and the only purpose of section 2352 is to forbid the acquisition of a large tract as coal land, if it is at the same valuable for mines of these metals. In that case it must be acquired in smaller parcels, under the provisions of the statute covering gold, silver, and copper mines. (Sections 2319, 2320.)

The category of agricultural lands is made by the surveyors of the Government. Whether a limestone or chalk quarry shall be acquired by an agricultural or by a mining patent, depends how the land has been classed. If the regular Government land survey has not yet been made, the land could be located under sections 2325 and 2329. The popular term for such a location of a lime quarry is “lime-placer.”

There is a special law (statute of 1877, ch. 18) as to saline lands under which they may be sold (except in States which have not had a grant of salines by Act of Congress) at a price not less than 1.25 dollars per acre.

As soon as a claim is made in accordance with the regulations of the district, the claimant has a right to search not only for the mineral substance, the existence of which is supposed to have been acknowledged to justify the regularity of the location, but also for all other minerals which may exist within the boundaries of the claim; and the locator of a vein in rock may, even before obtaining his patent, follow the vein in a downward course with all its dips, angles, and variations outside the vertical limits of his claim.

This extra-lateral right is limited by vertical planes drawn through the end-lines of his location, which end-lines must be parallel. The locator cannot go beyond these planes. And if the location is defective in essential particulars (e.g., has not parallel end-lines), the extra-lateral right is forfeited.

By section 2324 it is provided that patents may be obtained on application showing compliance with conditions under oath; applications to be posted and filed in Land Office and to be published. Claimants to prove that they have expended 500 dollars worth of labour on improvements.

By section 2326 it is provided that adverse claims are to be decided by the Court, and, these being disposed of and 5 dollars per acre of claim and fees being paid, patents are to be issued.

It must be understood that by the mere fact of the location, or occupation, made in conformity with the laws and customs, a person acquires with respect to mineral lands (by a system analogous to that which is followed with respect to agricultural lands, the right to which is acquired by occupation) a private right of possession within a certain area, called a “claim,” the limits of which are fixed by the laws and customs. The locator of a claim may deal with it and transfer it at pleasure, without the obligation of obtaining a patent; but under the express condition of conforming strictly to the rules of law or custom as to the minimum amount of annual work; in default, the claim becomes forfeited without any authoritative declaration, and any other person may locate it. The minimum amount of work required to be done is fixed by the laws of the State or the customs of the district in which the lands are situated, subject to the provisions of s. 2324 of the Federal Law, by which the minimum amount of labour expended or improvement made on each claim in the course of every year should not be of less value than 100 dollars.

A distinction between the system of acquiring mineral land and agricultural land is that in the case of the former the survey is made by the United States deputy mineral land surveyor at the expense of the applicant, covers only the claim applied for, and need not be connected or “tied” to the general system of land surveys; whereas agricultural land is only conveyed by the Government after the section and township lines have been run, and then only according to these boundaries—nothing less than 40 acres in a piece—the square mile (640 acres) being divided, by lines N. and S. and E. and W., into sections of 160 acres each, and these into quarter sections of 40 acres.

It follows from what has been said that claims may be united or divided at the will of their owners, subject to the necessary conditions prior to the acquisition of a patent being duly performed in respect of each claim.

It will also be seen that, until the acquisition of patents, claims may become forfeited through non-observance of conditions without any previous official declaration, in which case the land becomes open to occupation and location as in the first instance.

By section 2323 owners of tunnels run for the development of a lode or the discovery of mines have the right and possession of all veins or lodes within 3,000 feet from the face of such tunnel on the line thereof not previously known to exist to the same extent as if discovered from the surface (though patents cannot be obtained by tunnel-

Appendix
C. XXIV.
UNITED STATES.
Notes on the
Mining Laws
in the United
States, by Mr.
W. W. Almesley.

Union and
division of
claims.

Forfeiture of
claims.

Rights in respect
of tunnels.

owners until they have located claims on the surface covering the lodes discovered), but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

Under section 2,337, the owner of mineral lands can, at the time of obtaining his patent for such lands, have included in his patent non-mineral land used or occupied by him for mining or milling purposes, but the extent of such non-mineral land included in the patent is not to exceed five acres, and payment must be made at the same rate as for the mineral land.

Under section 2,338, in the absence of necessary legislation by Congress, the local Legislature of any State or territory may, as a condition of sale, provide rules for working mines involving easements, drainage, and other necessary means to their complete development; and it is provided that such conditions shall be fully expressed in the patent. The conditions referred to are the ordinary police regulations providing for safety, and in some cases determining the manner in which the cost of mine-drainage shall be assessed upon the mines benefited, &c.

The miners of each mining district may make regulations not in conflict with the laws of the United States or of the State or territory in which the district is situated governing the location, as to the manner of recording, amount of work necessary to hold possession of a mining location, subject to certain requirements (*inter alia*) that on each future location not less than 100 dollars worth of labour shall be performed or improvements made in each year. (Section 2324.)

All the business connected with the public land is managed by a special administration of the Federal Government called "The General Land Office," at Washington, directed by a Commissioner under the authority of the Minister of the Interior. The work of the Land Office is divided into two branches, that of surveys and that of sale. For the surveys there is in each state a Surveyor-General, who has under him a staff of deputy-surveyors. For the other branch of the work the country is divided into districts having each a registrar, who is the administrative agent, and a receiver, who deals with the funds. The Statute (s. 2,334) provides that the Surveyor-General is to appoint surveyors in each land district containing mineral lands, and provides for the cost of surveys and of publication of notices, to be paid by the applicants, and empowers the Commissioner of the General Land Office to establish the maximum charges for such surveys and publications.

Adverse claims are (under s. 2,326) to be determined by proceedings in a court of competent jurisdiction.

The decisions of the Commissioner of the General Land Office are subject to appeal to the Secretary of the Interior, and from the latter to the courts, the final tribunal being the United States Supreme Court.

The Federal Law authorises the same person to occupy an indefinite number of claims even adjoining one another, unless there is something in the law of the particular State or in the custom of the district in which the claims are situate to the contrary; and even these, it appears, cannot prevent the acquisition of any number of claims by individuals through purchase. Each claim, however, must be the subject of a separate application and patent; and it is said that the principal difficulty arising from the Federal Mining Law is that it divides the mineral lands into ownerships so small as to make it a very expensive matter to get together an area large enough for really extensive and permanent mining improvements.

It is understood that numerous law suits formerly arose about the boundaries of claims, but that they now seldom arise on that account, as the boundaries of claims are officially determined and permanently marked.

The principal source of law suits under the existing law is said to be the uncertainty attaching to the apex-right or extra-lateral right of the apex-owner. When a miner has worked through his own ground, and is found extracting ore from beneath the surface owned by another, he is of course liable for trespass unless he can clearly show that he has followed all the way a vein upon which he has a valid extra-lateral right. Proof of this is sometimes difficult. Expert evidence is required to establish the existence and continuity of the alleged lode. The regularity and validity of the lode-location may be attacked, &c.

The Federal Law has, however, distinctly provided for two cases which might otherwise be the subject of frequent dispute.

In the first of these cases, namely, where veins intersect, it is provided (s. 2336) that priority of title shall govern, that is, the owner of the claim whose title is the

earliest in date has a right to all the mineral at the point of intersection, but the other is to have a right of way through the space of intersection for the convenient working of his mine. In the other case, namely, where two or more veins unite, it is also provided (s. 2336) that priority of title shall govern—that is, the owner of the claim whose title is the earliest in date takes the whole vein below the point of union, including the space of intersection.

Although the statute law seems to leave a great deal to be decided by custom (see ss. 2319 and 2320), it is stated that litigation over mining "customs" has now almost ceased. The customs themselves have been superseded by local legislation in the States, as well as by the provisions of the Federal Statutes.

It may be observed that when once agreements are entered into in America there can be no interference with them by any State legislation, it being a fundamental law laid down in the Constitution of the United States) that no State shall "make any *ex post facto* law or laws impairing the obligation of contracts." It is also to be noted that the Federal Law as to public mineral lands herein-before referred to does not in any manner affect rights previously acquired. Indeed the law specifically provides (s. 2340) that nothing which it contains shall be construed to impair in any way rights or interests in mining property acquired under existing laws; and, as regards water rights, it expressly declares (ss. 2339 and 2340) that wherever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes have vested and accrued, the same are to be recognised and the owners protected; and the right of way for the construction of ditches and canals for the purposes specified is to be acknowledged and confirmed; although, if the person constructing any ditch or canal injures or damages the possession of any settler on the public domain, he is to be liable to the party injured for such injury or damage; and all patents granted, or pre-emption or homesteads allowed, are to be subject to any such vested and accrued water-rights, or rights to ditches and reservoirs used in connexion therewith, as aforesaid; finally, the law declares (s. 2352) that nothing which it contains is to destroy or impair any rights which might have attached previously to the passing of the law.

The moment a valid mining claim is located on the Federal public land, that moment the land ceases to be public, and is, as the courts have declared, "withdrawn from the public domain."

It may be laid down as a general proposition that the owners of mines, whether patentees, or grantees from patentees, or proprietors of the fee by any other chain of title, or States, can do what they like with their property; even titles to patents may be alienated to any person whatever (s. 2326); consequently any private individual or company having acquired mineral lands can sell them, or lease them, or otherwise to dispose of them at pleasure. Private lands (comprising in this term the bulk, if not the whole, of the lands in the Eastern States) are consequently free from the scope of the Federal legislation, and are left to be dealt with on the basis of absolute freedom of contract.

The holder of a patent is exactly in the position of the owner of real estate in fee simple by an ordinary deed, except that the patent is a clearer title, more easily searched and free from many collateral uncertainties.

Mines are accordingly dealt with in the United States in the same manner as in England, except that the rents or royalties reserved are frequently much higher. This is sufficiently shown by the evidence given by Sir Lowthian Bell before the Royal Commission on the Depression of Trade and Industry in 1885. In the statement put in by him and set out in the Appendix to the Second Report of that Commission (App. A., Part I.), he makes the following observations (p. 339):—

"I met with many similar instances in the United States. The mines on Lake Superior are rich in them. Skilled geologists, with energetic minds, pushed on into this then unknown region—indeed, so little known at the present day that I found the native Indians still living in its vast tracts of unclaimed land. One enterprising speculator purchased from the State a property of 40 acres for a few thousand dollars. By him it was agreed to be let to a second, who agreed to pay a royalty of 2s. per ton on the ore to the original purchaser; and the new owner, after an expenditure of 3,000l. to 4,000l., passed the property on to a third, who paid for the privilege of working the ore, in addition to the royalty of 2s. per ton, the sum of 75,000l., leaving thus a profit to the second holder of 71,000l. or thereabouts."

II. As to private
lands.

Dealings with
mines.

The following remarks are also taken from Sir Lowthian Bell's "Notes of a Visit to the Coal and Iron Mines and Iron Works in the United States" (2nd Edition, published in 1875):—

As to anthracite mines in Pennsylvania), p. 13—

"A coal speculator who was fortunate and sagacious enough in the early career of this important branch of mining industry to purchase coal lands, pays as interest little, often nothing, in the way of royalty. A lessee of coal afterwards paid about 1s. per ton, but this in recent years has risen to 2s., or even as high as 2s. 3d."

As to bituminous coal, p. 14—

"The royalty paid varies from 11d. to 1s. 4d."

Kanawba Valley (Ohio and Chesapeake Railway), p. 15—

"The royalty given me was low, viz., about 6d. per ton; but anyone wishing to invest money in coal lands on the banks of the Kanawba may do much better than this, for they can be purchased at something under 1l. an acre, although, when immediately adjoining the railway, as much as 5l. an acre is obtained."

Magnetic iron-ore (in the State of New Jersey, Hibernia Mine), p. 23—

"The royalty paid is nearly 3s. per ton, and probably in any new lease it would be even higher."

(In the State of Pennsylvania, Cornwall Mine) p. 24—

"The mine, or quarry rather, is private property, hence there is no royalty to be paid. It was stated to me that as much as two millions sterling had been offered for this mine . . . but it was declined."

Limonite or brown hematite (in the State of Pennsylvania), p. 28—

"The landowners, usually small farmers, receive a royalty varying from 1s. 10d. to 2s. 10d. per ton."

The mines in private lands appear to be dealt with in much the same manner as in England, the royalties varying according to:—1st. Proximity to market. 2nd. Quality of mineral (*e.g.*, anthracite may be worth 2s. or 2s. 6d. per ton royalty,* whilst bituminous coal has at present little or no royalty value). 3. Cost of working. It is usual to reserve royalty by way of a proportionate part of the selling price, a minimum being fixed and the royalty ascending by scale in proportion to the increase in selling price. There are various ways of ascertaining the basis: in some cases the selling price at the works is taken; in other cases, and more frequently, the price at

New York Harbour, which is unquestionable, is taken. On iron-ore the royalty varies from 15 cents to 75 cents, or even 1.00 dollar per ton. The latter prices are more rare, and the average is probably less than 50 cents.†

It is also usual to provide for regular payment and working, either by a fixed certain rent, with power to recoup, as is usual in England, or by requiring a certain amount of tons to be paid for every year.

A form of lease, stated to be the ordinary form, is given in the Blue Book before referred to, p. 45.

The writer, when visiting some oil wells and natural gas wells in the neighbourhood of Pittsburgh, with the members of the British Iron and Steel Institute, in the autumn of 1890, was informed by an American gentleman interested in one of the properties on which the wells were sunk that the royalty paid to the owner of the land in respect of the oil wells was usually 5 per cent. of the produce when the rent was fixed before the oil was found; but that in his case the rent was not fixed until after the oil was found, and was then fixed at the rate of 10 per cent. of the produce; but that in the case of the natural gas wells the rent was usually a fixed annual royalty of 400 dollars or 500 dollars.

As regards payment of taxes, this is also a matter of agreement, and it is sometimes arranged that the tenant should pay all, sometimes that the landlord and tenant should contribute in equal shares, and sometimes that the landlord should pay all.

It is stated that all the British companies operating mines in the Pacific States and territories have purchased patented lands.

The following list of British mining companies which have been formed for the purpose of working mines in the United States of America, containing particulars (taken from a publication‡ in England) in many cases of the sums paid for the purchase of mines, will convey some idea of the mode in which such mines are dealt with:—

* The royalty upon anthracite is calculated upon the coal sent to market (after large waste in mining, crushing, screening, and sizing), and varies usually with the class or size of coal. A probably fair average on the whole tonnage is one shilling.

† This statement of the basis of calculation applies almost exclusively to anthracite. The cases in which the selling price is taken into account as determining directly a variable royalty on any other mineral product are extremely rare. It is, however, common in gold and silver mines for lessees to pay as royalty a certain percentage of gross or of net returns, which, of course, would depend indirectly upon the selling price of the product.

‡ "Burdett's Official Intelligence for 1892."

BRITISH MINING COMPANIES OPERATING IN THE UNITED STATES OF AMERICA.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
Amador Gold Mine Limited.	Gold mine, 90 acres -	Jackson, California -	1889	Under U.S. patents, except 6 acres which are held by location.	£ 200,000	In shares.
American Belle Mines, Limited.	Eight claims in the Red Mountain district.	Ouray Colorado. County.	1890	Five claims under U.S. patents.	350,000	133,000l. in fully paid shares, the balance in cash.
Arizona Copper Company, Limited.	Copper mining and cattle ranching.	Arizona - -	1884 (bought from a former Company).	—	—	—
Breckenridge Company, Limited.	Oil and coal over 6,000 acres, with mineral rights over further land.	Kentucky - -	1885 (bought from a former Company).	—	535,000	35,000l. in cash balance in fully paid shares.
Calaveras Consolidated Gold Mining Company, Limited.	Six gold mining claims nearly 1½ mile in length.	Calaveras California. County.	1888	—	70,000	15,000l. in cash, balance in deferred shares.
Colorado Coal and Iron Company.	—	Colorado - -	1880 (consolidated).	—	—	—
Colorado Silver Mining Company, Limited.	Silver mine - -	Georgetown, Colorado -	1887 (reconstructed)	—	—	—
Comstock Mining Company, Limited.	Silver mines - -	Park City, Utah - -	1888	Under U.S. patents, rights acquired for 99 years from 1st March, 1888.	200,000	50,000l. in cash, balance in fully paid shares.
Cortez Mines, Limited	Silver mines - -	Eureka Nevada. County.	1888	Twenty-nine claims under U.S. patents.	290,000	In fully paid shares.

British Mining Companies operating in the United States of America—continued.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
Dickens Custer Mines, Limited.	Mines - - -	Norton Hill, Custer County, Idaho.	1889 (reconstructed)		£	
Elmore Gold Company, Limited.	Gold mine - -	Alturas County, Idaho.	1889 (reconstructed)			
Esmeralda, Limited -	Gold mine - -	Esmeralda County, Nevada.	Ditto.			
"Flagstaff," Limited -	Silver lead mines -	Utah Territory -	Ditto.			
Flat-top Coal Land Association.	Over 200,000 acres of coal and timber land of the Flat-top Coalfield.	Virginia and West Virginia.	1887	The Association does not mine or operate its lands, but leases on royalty.		
"Garfield," Limited -	Gold and silver mines	Nevada - - -	1889 (reconstructed)			
Gold King, Limited -	16 placer claims of 160 acres each on the banks of the River San Miguel.	Montrose County, Colorado.	1888	—	270,000	20,000 <i>l.</i> in cash, 250,000 <i>l.</i> in fully paid shares.
Golden Gate Alluvial Syndicate, Limited.	The bed of the Feather River, formerly known as "Lewis" Claim, and now as "The Golden Gate" Claim.	Oroville, California -	1888	—	28,500	In fully paid shares.
Hambly Mountains Gold Mines, Limited.	Freehold gold-bearing gravel and quartz over an estate of about 3,500 acres.	North Georgia -	1886	—	250,000	15,000 <i>l.</i> in cash, 235,000 <i>l.</i> in cash or shares at option of Directors.
Idaho Mining Company, Limited.	Mining claims -	Idaho - - -	1889 (reconstructed)			
Ilex Gold Mining Company, Limited.	Mines and other properties at Rich Gulch.	Calaveras County, California.	1887	—	45,000	21,000 <i>l.</i> in cash, 16,000 <i>l.</i> in fully paid preferred shares, 8,000 <i>l.</i> deferred shares.
Jay Hawk and Lono Pine Consolidated Mining Company, Limited.	Mining claims -	Montana - - -	1891 (reconstructed)			
Kaiser Gold Mine, Limited.	12 gold mines -	Arizona - - -	1888	Under lease for 99 years from 1st September 1888, at yearly rent of 1 <i>l.</i> for each of 12 claims.	180,000	15,000 <i>l.</i> in cash, 66,666 <i>l.</i> in shares, 98,334 <i>l.</i> in cash or shares at option of Directors. It is understood that by an arrangement made with vendor the sale has been cancelled.
Kohinoor and Donaldson Consolidated Mining Company, Limited.	Mines - - -	Colorado - - -	1880	—	—	—
"Maid of Erin" Silver Mines, Limited.	Silver mines -	Leadville Lake County, Colorado.	1891	Two claims, and a third held under lease for 5 (since extended to 10) years.	575,000	In fully paid shares.
Mammoth Gold Mines, Limited.	Mining properties -	Tucson, Arizona -	1880	—	464,000	380,000 <i>l.</i> in fully paid shares, 72,000 <i>l.</i> in debentures, and balance in cash.
Missouri Lead Mining and Smelting Company, Limited.	Gold and silver mine under properties embracing an area of 1,190 acres.	St. Clair, Franklin County, Missouri.	1879	—	65,000	7,010 <i>l.</i> in cash, 12,990 <i>l.</i> in A. shares, 45,000 <i>l.</i> in B. shares.
Montana Company, Limited.	The Drumlummon Silver and Gold Mine.	Marysville, Montana -	1883	Under U.S. patents	500,000	300,000 <i>l.</i> in cash and balance in fully paid shares. The Company's capital was in 1884 increased by 60,000 <i>l.</i> to purchase the Old Standard property.
Mount Carbon Company, Limited.	Coal and timber on Mount Carbon estate comprising about 10,000 acres of land.	Fayette County, West Virginia.	1884	Under lease for 999 years, at rent of 6 cents per ton on all coal and coke sold, and 3 cents per ton on all slack or small coal sold as such; other rents for timber, &c.	8,000	Fully paid-up shares
Mount Jefferson Gold Mining Company, Limited.	Gold mine - - -	Tuolumne County, California.	1888	—	98,000	3,000 <i>l.</i> in cash and 95,000 <i>l.</i> in fully paid shares.
Mudjill Mining Company, Limited.	Silver mining property, consisting of eight claims.	Fairplay Park County, Colorado.	1888	—	59,200	31,200 <i>l.</i> in cash, balance in fully paid shares.
New California, Limited.	California Mine of Colorado and other mines.	Gilpin County, Colorado.	1886 (reconstructed)			
New Gold Hill Company, Limited.	Gold Hill Estate of about 1,000 acres.	North Carolina -	1888 (reconstructed)			

British Mining Companies operating in the United States of America—continued.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
New Guston Company, Limited.	Silver mines known as the Guston lode mining claim.	Red Mountain District, Ouray County, Colorado.	1887 (reconstructed)		£	Since reconstruction the Company has acquired for 15,390 <i>l.</i> two adjacent claims known as the "Little Annie" and "Smuggler," secured by U.S. patents, and has recently purchased the Elmore Patentee Mining claim for \$40,000.
New Hoover Hill Gold Mining Company, Limited.	Freehold mineral property, comprising 283 acres of land.	Randolph County, North Carolina.	1884 (replaced older Company).			
New Russell Gold Mining Company, Limited.	Gold mine - - -	Montgomery County, North Carolina.	1887 (reconstructed)			
New Viola Company, Limited.	The Viola and adjoining properties.	Idaho - - -	1889 (reconstructed)			
Old Lout Mining Company, Limited.	Silver-lead properties, upwards of 50 acres in extent, situate in the Poughkeepsie Gulch.	San Juan County, Colorado.	1888	Under U.S. patents as to four claims, the remaining two claims being held under the assessment law.	Originally purchased by the Mines Company for 69,000 <i>l.</i> and sold to the Old Lout Company for 80,000 <i>l.</i>	39,000 <i>l.</i> in cash, balance in fully paid shares. 45,000 <i>l.</i> in cash, balance in fully paid shares.
Original Pittsburg (Grass Valley) Gold Mines, Limited.	Gold mining over about 40 acres of freehold.	Grass Valley District, Nevada.	1888 (reconstructed in 1890 as the New Pittsburg, &c. Company)	Under U.S. patents	90,000	In fully-paid up shares.
Ouray Gold Mining Company, Limited.	Gold, silver, and lead mines.	Ouray, Colorado -	1887	Ditto - -	95,000	5,000 <i>l.</i> in cash, balance in fully paid shares.
Pittsburg Consolidated Gold Mines, Limited.	Gold mining - - -	Nevada - - -	1887 (reconstructed in 1890.)	—	65,000	38,334 <i>l.</i> in cash, balance in fully paid shares.
Richmond Consolidated Mining Company, Limited.	Gold, silver, and lead mines.	Eureka, Nevada -	1871	Under U.S. patents		
St. George Gold Mining Company, Limited.	1,840 acres of freehold mining land (including the Dean Mines).	White County, Georgia.	1886	—	50,000	2,000 <i>l.</i> in cash, 3,000 <i>l.</i> in fully paid preference shares, 45,000 <i>l.</i> in fully paid ordinary shares.
Sam Christian Gold Hydraulic, Limited.	Gold Mining property, comprising about 1,350 acres (of which 1,000 are freehold).	Montgomery County, North Carolina.	1887	—	150,000	In fully paid shares.
Shenango Railway and Mercer Coal Company, Limited.	Railway property and 465 acres of freehold and mining rights under 45,000 acres of mineral lands.	—	1880			
Sierra Buttes Gold Mining Company, Limited.	The Sierra Buttes Gold Mines; also the Plumas Eureka Mine, and the Uncle Sam Mine.	California - - -	1870	—		The Uncle Sam Mine was purchased in 1889 for 30,000 <i>l.</i>
Silverton Mines, Limited.	Silver mines - - -	Colorado - - -	1887 (reconstructed)			
Slide and Spur Gold Mines, Limited.	Gold mining - - -	Boulder County, Colorado.	1887	Under U.S. patents	375,000	In fully paid shares
Tarryall Creek Gold Mining Company, Limited.	The Tarryall Gold Placer Estate, covering an area of 550 acres of placer mineral land.	Park County, Colorado.	1887 (reconstructed)	Under U.S. patents	86,000	10,000 <i>l.</i> in cash, 10,000 <i>l.</i> in two yearly instalments from profits 66,660 <i>l.</i> in fully paid shares.
Twin Lakes Hydraulic Gold Mining Syndicate, Limited.	Placer gold mining properties.	Leadville, Colorado -	1883	—	38,630	22,000 <i>l.</i> in cash, and 16,630 <i>l.</i> in deferred shares.
Valley Gold Company, Limited.	Gold properties consisting of about 300 acres of auriferous alluvium.	San Bernardino County, California.	1886 (reconstructed 1890)	—	70,000	35,000 <i>l.</i> in cash, 20,000 <i>l.</i> in fully paid deferred shares, 15,000 <i>l.</i> in fully paid ordinary shares.
West Mountain Mining Company, Limited.	—	Bingham, Utah -	1888 (reconstructed)			

UNITED STATES.
Notes on the Mining Law in the United States, by Mr. Walmesley.
Separation of minerals from surface.
Wayleaves on private lands.

That a private owner can, at will, alienate his property in minerals while continuing to hold the fee of the soil is as unquestionable in the United States of America as it is in England. A State can, of course, do the same, but as a rule do not do so. The almost or quite universal practice is to sell the land outright with everything in it.

Wayleaves on private lands are usually a matter of agreement, but in Pennsylvania there is one exception to this rule, viz., that, under the Mines Regulation Act, in case it is absolutely necessary for the purpose of ventilation or drainage only, one owner may ventilate or drain through another owner's property, making compensation, to be ascertained, in case of difference, by a jury. In the State of Massachusetts also there is a special law (see Public Statutes of Massachusetts, ch. 189, ss. 19 to 28) under which owners of mines or mineral deposits and of low lands, swamps, &c., which on account of adjacent lands belonging to other persons, or occupied as highways, cannot be approached, worked, drained, or used in the ordinary manner without crossing such lands or highways, may be authorised to establish roads, drains, ditches, tunnels, and railways to such places in the manner thereby provided. The parties desiring to make such improvements must apply to a certain body known as the County Commissioners, giving security for the costs of the application, and the Commissioners, after inquiring into the circumstances, and hearing all parties, may, if they consider it necessary, proceed to lay out and establish the improvements in such a way as shall do as little injury as is practicable, and shall ascertain the damage which, in their opinion, the proprietor of the adjacent lands will sustain, and shall apportion the damage equitably among all parties to be benefited, having regard to the benefit each will receive. Where repairs afterwards become necessary, a majority of the persons benefited may cause such repairs to be made and may compel contributions on the basis of the award from each person benefited; any person aggrieved may appeal to a jury. If the improvements are situate in a town the application is to be dealt with by the Town Authorities, with power of appeal to the County Commissioners.

It is understood that Railroad Acts for the establishment of public railways can also be obtained in most of the States without much trouble or expense.

The State of Pennsylvania possesses special laws for inspection and regulation of coal mines, there being separate regulations with respect to the anthracite and the bituminous mines respectively. These laws naturally have regard to the health and safety of the persons engaged in the mines. With this view they lay down certain rules as to keeping plans, double communication between the mine and the surface, ventilation, safety lamps, &c. A staff of inspectors is provided to see to the observance of the law and prosecute offenders. The Courts have power under certain circumstances to stop the workings. Persons who have sustained injury through a contravention of the law are entitled to recover damages from the offender, and penalties are prescribed for breaches of the law, either by masters or workmen. In fact, the provisions are very similar to those of the English Coal Mines Regulation Acts, but do not provide for "special rules."

Similar laws for the regulation of coal mines exist in the State of Illinois; also in other States where coal is mined, such as Ohio, Alabama, Virginia, &c.

Working men's relief or insurance societies are voluntary. There is no State legislation on the subject.

In many cases the employer and employed voluntarily unite to provide for the disability of the workman, as in the case of the Lehigh Coal and Navigation Company, where the beneficial fund is created and maintained by the following contributions made monthly, viz., the Company pay to it one cent. for every ton of coals produced at the mines; the inside workmen employed on the property pay to it one per cent., and the outside workmen one half per cent. of their earnings, but no one has to pay more than one dollar a month. Provision is thus made for the contributors and their families in case of accidents occurring in the service of the Company.

In some parts of the country (as the result of private purchases), the mineral lands have got into a few hands; for instance, in the State of Pennsylvania about 70 per cent. of the anthracite coal fields appear to be owned by ten large corporations. (See "Mineral Resources of the United States," published in 1883, p. 25.) It is said that the Philadelphia and Reading Coal and Iron Company bought for 30,000,000 dollars or thereabouts 80,000 acres of anthracite coal land, and issued bonds for the amount which were guaranteed by the Philadelphia and Reading Railroad Company. In West Virginia, again, it is said that coal lands are generally held in large grants and often under conflicting titles, and we are told that many of the tracts to which a clear title could be found are so involved by mortgages, that they can only be taken as a whole by large capitalists, and cannot be divided to suit the requirements of individual operators. The river bottoms and lower slopes are said to be often held under different titles by small farmers who control the approach to the coal lands in their rear. (See "Mineral Resources of United States" published in 1885.)

Wages vary widely in the different States. Probably 1 dollar 25 cents to 2 dollars per day is about the wages for miners east of the Missouri; in the far West, 2 dollars 50 cents to 3 or 4 dollars. The most common rate in the West is understood to be 3 dollars per day. The "shift" is in many cases, but not always (only in deep mines, it is understood), eight hours long; otherwise, ten hours.

The following extracts from the New Tariff Law of 1890 may be found useful in considering this subject:

The Law provides as follows:—"That on and after the 6th day of October 1890, unless otherwise specially provided for in this Act, there shall be levied, collected, and paid upon all articles imported from foreign countries, and mentioned in the schedules herein contained, the rates of duties which are by the schedules and paragraphs respectively prescribed," viz. (inter alia)—

SCHEDULE C.—METALS.

Iron Ore, including manganiferous iron ore, also the dross or residuum on burnt pyrites, 75 cents per ton = 3s. 1d. per ton.

Iron in pigs, &c., three-tenths of one cent per lb. = 1l. 7s. 8d. per ton.

Bar iron rolled or hammered, comprising flats not less than one inch wide, nor less than three-eighths of one inch thick, eight-tenths of one cent per lb. = 3l. 13s. 10d. per ton.

Railway bars made of iron or steel, and railway bars made in part of steel, T rails and punched iron or steel flat rails, six-tenths of one cent per lb. = 2l. 15s. 5d. per ton.

Bar iron, various rates according to classes.

Boiler plates ditto, up to 45 per cent. *ad val.*

Steel plates, 25 per cent. *ad val.*

Copper imported in the form of ores, $\frac{1}{2}$ cent. on each lb. = 2l. 6s. 2d. per ton of fine copper contained therein.

Rolled plates, 35 per cent. *ad val.*

Lead ore and lead dross, $\frac{1}{2}$ cents. per lb. = 6l. 18s. 6d. per ton.

Pigs and bars, per lb. 2 cents = 9l. 4s. 8d. per ton.

Antimony, as regulus or metal, 10 per cent. *ad val.*

Metallic mineral substances, in a crude state, and metals unwrought not specially provided for, 20 per cent. *ad val.*

Manufactured articles or wares not specially enumerated or provided for composed wholly or in part of iron, steel, lead, copper, nickel, pewter, zinc, gold, silver, platinum or any other metal, and whether partly or wholly manufactured, 45 per cent. *ad val.*

SCHEDULE N.—SUNDRIES.

Coal slack or culm, such as will pass through a half-inch screen, 30 cents per ton of 28 bushels, 80 lbs. to the bushel = 1s. 3d. per ton.

Coal, bituminous and shale, 75 cents per ton of 28 bushels, 80 lbs. to the bushel = 3s. 1d. per ton.

Coke, 20 per cent. *ad val.*

General remarks as to the law relative to mining on private lands.

III. Generally. Wages and working hours.

Import duties.

XXV.

REPLIES RECEIVED FROM MR. ANDREW CARNEGIE TO QUESTIONS ADDRESSED TO HIM BY MR. DALE.

1. To what mineral does this return relate? Coking coal and ironstone.
2. To what district does this return relate? Coking coal in the Connellsville district, Western Penna. Ironstone in the Lake Superior district.
3. How are the minerals in such district generally worked; i.e.,
(a.) By the proprietor?
or (b.) By the lessees?
or (c.) If by both, in what proportion generally?
In the Connellsville district, generally by the proprietors.
In the Lake Superior district, ironstone; generally worked by the lessees.
In the case of Connellsville coke, almost exclusively by the proprietors. In the case of Lake Superior ironstone, almost exclusively by the lessees.
4. For what term of years are leases now usually granted? Lake Superior ironstone, generally for fifteen (15) years. Connellsville coke, twenty (20) years.
5. What powers of surrender and restrictions on assignment do leases usually contain? No power of surrender given, but full power of assignment, the original lessor being held responsible.
6. What certain or fixed rent is usually reserved in relation to—
(a.) Acreage?
or (b.) Acreage per foot thick?
or (c.) Tonnage?
A small annual minimum usually required.
From about one-quarter to one-half of the estimated product.
7. What tonnage, acreage, or other measure of royalty is usually reserved in respect of the minerals actually wrought, stating the maximum and minimum as well as the general average?
How far is it customary for this to vary by sliding scale with the selling price of the mineral?
And in such case, how does the royalty vary in relation to the selling price?
Royalties in Lake Superior region generally fall 10 to 20 per cent., after a certain amount is mined, in each year.
I know of no case where a sliding scale exists.
8. What power is usually given to make up, by subsequent workings, fixed rents paid in advance?
No fixed rents paid in advance.
9. What is the mode in which payment for—
(a.) Underground wayleaves?
(b.) Shaft rents?
(c.) Surface wayleaves?
is usually calculated?
Stating whether by a rental per annum, per acre, per ton, or by a proportion of the selling price of the produce; giving the usual wayleave reserved as well as the maximum and minimum?
No royalties charged upon coal used, except what actually goes to market and is sold. The lessors being free to use all that is necessary, and also to supply their employees without paying royalty, as the royalty collected is usually upon the ton of coke produced and sold.
10. Are there any customary provisions as to free coal for colliery uses, and, if so, state whether by a percentage on the quantity of coal raised by or an allowance of the exact quantities consumed?
Reversion of the property to original owner, with the improvements thereon.
11. What are the usual provisions in respect to forfeiture for non-observance of covenants?
Houses and buildings of temporary description usually erected, such as will answer during the continuance of the lease. Machinery, usually of excellent character, which belongs to the lessor, and which can be removed at the expiration of lease.
12. Are houses and buildings, or other permanent erections, and of what description, usually erected by mining lessees, and do they revert to the proprietor on the expiration of the lease, and, if so, on what terms?
Renewals of mining leases are yet few in number in the United States. No custom yet established.
13. What are the usual customs in the renewals of mining leases in respect of—
(a.) Improvements;
(b.) Overpaid or unrecouped dead-rents?
In the Lake Superior ironstone districts land is worthless. In Connellsville district, the surface is generally retained by the farmer, necessary rights of way being granted with the mineral right without extra charge.
No serious difficulty between owners and lessees has ever arisen in our experience.
14. Is there frequently a severance of ownership as between the surface and the minerals underlying it, and do difficulties consequently arise?
If so, how are they met?

Appendix
C. XXV.
UNITED STATES.
Replies to questions from Mr. Carnegie.

Inspection and regulation of mines on private lands.

Relief societies, &c.

Appendix
C. XXV.
UNITED
STATES.
Replies to
questions from
Mr. Carnegie.

15. Has any difficulty arisen in consequence of joint-ownership, either as to minerals or surface?

No.

16. Are any difficulties found in obtaining access from mines to a railway or shipping place over or through the land of intervening proprietors; and, if so, how are they met?

Mining States have general mining laws, which cover this matter. Free railway laws prevail in most, if not all, of the States. Any five men can organise a railway company, obtain a charter from the State for \$s., and go ahead. This charter gives them the right to condemn property, paying full value therefor, as assessed by the viewers (valuators). The Republic is blessed with *free* trade in railways.

17. Is the working of mines to any substantial extent, hindered, or rendered less profitable, by the difficulty of obtaining facilities of drainage and ventilation through adjoining mines?

So far, I know of no serious difficulties that have arisen upon these points. There is a thorough understanding that the government of the people tolerates no "dog in the manger" policy. If any operator could not obtain necessary drainage and ventilating facilities through neighbouring property, a general law could be obtained without difficulty, giving to all parties such rights, upon payment for injury done his neighbour, if any: this to be determined by official viewers (valuators). Such a law was passed by the State of Pennsylvania in regard to the construction of pipe lines to convey natural gas, and also to convey oil. Public sentiment will not permit any owner to take undue advantage. The question simply is: What is this necessary privilege worth in a free and open market? Upon payment of this, it must be granted.

18. Are minerals being worked under leases of old dates to any large extent, if so, to what extent, on materially different terms to those above described; and what is the material difference, and how long, approximately, will it continue?

We have no leases of long dates. The country is yet too young.

19. Are there any other matters coming within the scope of this inquiry to which your association desires to direct the attention of the Commission?

I might mention that the royalties upon ironstone, Superior region, range from 40 to 50 cents per ton, ironstone, shipped, the latter price being charged up to a certain amount, and the lower price for a surplus. In the case of Connellsville coal, the usual charge has been 20 cents (10d.) per gross ton of coke shipped. Recent leases are at 1s. per ton upon coke, but I can only think of three leased properties in the district. All the others are worked by the owners of the mineral rights, these having been purchased at prices ranging from ten pounds (10l.) per acre up to one hundred pounds (100l.) per acre, which has recently been paid for first-class coking land. This is the maximum price so far, but the tendency is still upward.

20. What have been the average prices obtained at the pit's mouth for—

- (a.) Large or round coal?
(b.) Unscreened coal?
(c.) Small coal?
(d.) Coke?

About 5s. per gross ton—2,240 lbs.

About 4s. per ton.

Tenpence to a shilling per ton.

The lowest price reached per ton was 3s. 6d. per ton, loaded on cars. Present price between 7s. and 8s.

raised between January 1873 and December 1889, stating, if possible, the lowest and highest prices in each year?

Amount raised for 1873 by our company, about 3,000 tons per day. Amount of coke produced December 1889, seventeen thousand (17,000) tons per day. Price between 7s. and 8s. (10,500 ovens) on the cars at pit mouth.

21. Would anyone, and, if so, who, be prepared to give evidence upon the subjects referred to the Commission as representing, generally, the views of your association?

ANDREW CARNEGIE.

XXVI.

REPLIES received from Mr. Commissioner WRIGHT to Questions addressed to him by Mr. DALE.

Department of Labor,
Washington, D.C.,
August 13, 1890.

MY DEAR SIR,
Yours of June 18th, asking for information for Mr. David Dale, a member of the Royal Commission on Mining Royalties, relative to mining royalties in the United States, was duly received, and now also I acknowledge the receipt of yours of August 2nd, relating to the same subject. Immediately on the receipt of yours of June 18th, we communicated with the Geological Survey, the only Government office of which we could hope to secure such information as Mr. Dale desired, and the delay in furnishing the information has been caused by the delay in securing it by the Survey, and even now the information is not complete, but it is the best that can be furnished.

It is enclosed herewith in the form of answers to Mr. Dale's inquiries.

I also send you, for the use of Mr. Dale, a pamphlet relating to mining laws and regulations thereunder.

Trusting what I send you will be of some value to Mr. Dale.

I am,

Very respectfully,

(Signed) CARRON D. WRIGHT,
Commissioner.
Mr. Frank C. McGhee,
Special Agent, &c.,
Manchester, England.

BITUMINOUS COAL.

MINING ROYALTIES.

1. Does the Government of the United States receive anything in the way of royalties from those working—

- Coal mines?
Lead mines?
Silver mines?
Iron ore mines?
Copper mines?
Gold mines?

If so, how much, and where are the mines situated?—Not unless mining on Government lands, and we know of no such cases.

2. The same information in regard to any of the States?—None.

3. Do any of the States own coal mines?—No; there are some institutions that do.

a. If so, are they worked by the State, or leased to individuals?

b. If leased, what are the conditions, and what amount is received by the State per ton in royalty?

4. In cases where coal mines are let on lease by the owners, is it usual for lessees to pay a fixed sum per ton on the coal raised, or is the royalty based on the selling price of coal? Same in regard to iron ore?—Fixed sum per ton.

5. What is the usual rate per ton paid by lessees of coal mines in Pennsylvania?—15 cents. Illinois?—10 cents. West Virginia?—12 cents. Indiana?—9 cents. Or other States?

Also iron ore?

6. Does amount paid vary with thickness of seam?—Yes, and quality also.

7. Is it usual to allow lessees free coal for colliery use?—The coal for colliery use is never counted, as the royalties are paid only upon shipments, and subject to railroad weights.

8. Do the improvements, houses, &c. erected by the lessee usually revert to the owner of mines on expiration of lease?—This is subject to terms of lease, which generally provide that buildings and improvements be removed within a certain time after termination, otherwise claimed by lessor.

9. How long do leases usually run?—For a period sufficiently long to mine out all the coal in the land covered by lease.

10. Is there frequently a severance of ownership as between the surface and the minerals underlying it?

Yes. And do difficulties consequently arise?—Never in properly drawn agreements.

11. If so, how are they met?

If it can be done conveniently, give the average prices obtained at pit mouth (say, in Pennsylvania) for years 1873 to 1889 inclusive for—

- a. Large or round coal (bituminous)?
b. Unscreened coal?
c. Small coal?
d. Coke?

	1889.	1888.	1887.	1886.	1885.
	Per Gross Ton.	Per Gross Ton.	Per Gross Ton.	Per Gross Ton.	Per Gross Ton.
a. Large or round coal (bituminous) (as coal).	\$ 1.20	\$ 1.20	\$ 1.20	\$ 1.15	\$ 1.15
b. Clearfield, run of mine (un-scrreened coal).	.90	.90	.90	.90	.90
c. Gas coal, slack (small coal).	.15	.15	.15	.13	.13
d. Coke	—	—	—	—	—

In case of mineral lands belonging to the general government, what steps are necessary for a claimant to make entry different from the mode of entering agricultural lands? (This can be easily obtained from the General Land Office.) See Pamphlets.

Any other information you may deem expedient in regard to royalties or working of coal mines.

(This refers to bituminous coal entirely.)

In addition to the foregoing, I will state that, as a rule, coal and iron ore mines in the United States, as a rule, are worked by the owners, therefore the question of royalties assumes very small proportions.

Those who work the mines generally own the soil above, or buy, absolutely, from the owners of the soil the minerals underneath it.

"COAL LAND LAW AND REGULATIONS THEREUNDER.

"N.]

"Department of the Interior,
General Land Office,
Washington, D.C.,
July 31, 1892.

"GENTLEMEN,
"The following Sections of the Revised Statutes provide for the sale of coal lands in the United States:

"TITLE XXXII.—CHAPTER SIX.

"MINERAL LANDS AND MINING RESOURCES.

"Sec. 2347. Every person above the age of twenty-one years, who is a citizen of the United States, or who has declared his intention to become such, or any association of persons severally qualified as above, shall, upon application to the register of the proper land office, have the right to enter, by legal subdivisions, any quantity of vacant coal lands of the United States not otherwise appropriated or reserved by competent authority, not exceeding one hundred and sixty acres to such individual person, or three hundred and twenty acres to such association, upon payment to the receiver of not less than ten dollars per acre for such lands, where the same shall be situated more than fifteen miles from any completed railroad, and not less than twenty dollars per acre for such lands as shall be within fifteen miles of such road.

"Sec. 2348. Any person or association of persons severally qualified, as above provided, who have opened and improved, or shall hereafter open and improve any coal mine or mines upon the public lands, and shall be in actual possession of the same, shall be entitled to a preference-right of entry, under the preceding section, of the mines so opened and improved: Provided, That when any association of not less than four persons, severally qualified as above provided, shall have expended not less than five thousand dollars in working and improving any such mine or mines, such association may enter not exceeding six hundred and forty acres, including such mining improvements.

"Sec. 2349. All claims under the preceding section must be presented to the register of the proper land district within sixty days after the date of actual possession

Appendix
C. XXVI
UNITED
STATES.
Replies to
questions from
Mr. Wright.

Entry of coal
lands. 3 March
1873, c. 273, s. 1,
v. 17, p. 607.

Pre-emption
of coal lands.
Ibid., s. 2.

Pre-emption
claims of coal
land to be pre-
sented within
sixty days, &c
Ibid., s. 3.

Appendix
C. XXVI.UNITED
STATES.Replies to
questions from
Mr. Wright.Only one entry
allowed.
Ibid., s. 4.Conflicting
claim.
Ibid., s. 5.Rights reserved,
Ibid., s. 6.

and the commencement or improvements on the land, by the filing of a declaratory statement therefor; but when the township plat is not on file at the date of such improvement, filing must be made within sixty days from the receipt of such plat at the district office; and where the improvements shall have been made prior to the expiration of three months from the third day of March eighteen hundred and seventy-three, sixty days from the expiration of such three months shall be allowed for the filing of a declaratory statement, and no sale under the provisions of this section shall be allowed until the expiration of six months from the third day of March eighteen hundred and seventy-three.

"Sec. 2350. The three preceding sections shall be held to authorise only one entry by the same person or association of persons; and no association of persons, any member of which shall have taken the benefit of such sections either as an individual or as a member of any other association, shall enter or hold any other lands under the provisions thereof; and no member of any association which shall have taken the benefit of such sections shall enter or hold any other lands under their provisions; and all persons claiming under section twenty-three hundred and forty-eight shall be required to prove their respective rights and pay for the lands filed upon within one year from the time prescribed for filing their respective claims; and, upon failure to file the proper notice, or to pay for the land within the required period, the same shall be subject to entry by any other qualified applicant.

"Sec. 2351. In case of conflicting claims upon coal lands where the improvements shall be commenced after the third day of March eighteen hundred and seventy-three, priority of possession and improvement, followed by proper filing and continued good faith, shall determine the preference right to purchase; and also where improvements have already been made prior to the third day of March eighteen hundred and seventy-three, division of the land claimed may be made by legal subdivisions to include, as near as may be, the valuable improvements of the respective parties. The Commissioner of the General Land Office is authorised to issue all needful rules and regulations for carrying into effect the provisions of this and the four preceding sections.

"Sec. 2342. Nothing in the five preceding sections shall be construed to destroy or impair any rights which may have attached prior to the third day of March eighteen hundred and seventy-three, or to authorise the sale of lands valuable for mines of gold, silver, or copper."

"RULES AND REGULATIONS.

"Under the authority conferred by said section 2351, the following rules and regulations are issued for carrying into effect the provisions of said law:—

"1. Sale of coal lands is provided for—

"by ordinary private entry under section 2347.

"By granting a preference right of purchase, based on priority of possession and improvement under section 2348.

"2. The land entered under either section must be by legal subdivisions, as made by the regular United States survey. Entry is confined to surveyed lands, to such as are vacant, not otherwise appropriated, reserved by competent authority, or containing valuable minerals other than coal.

"3. Individuals and associations may purchase. If an individual, he must be twenty-one years of age and a citizen of the United States, or have declared his intention to become such citizen.

"4. If an association of persons, each person must be qualified as above.

"5. A person is not disqualified by the ownership of any quantity of other land, nor by having removed from his own land in the same state or territory.

"6. Any individual may enter by legal subdivisions, as aforesaid, any area not exceeding one hundred and sixty acres.

"7. Any association may enter not to exceed three hundred and twenty acres.

"8. Any association of not less than four persons, duly qualified, who shall have expended not less than \$5,000 in working and improving any coal mine or mines, may enter, under section 2348, not exceeding six hundred and forty acres, including such mining improvements.

"9. One person can have the benefit of one entry or filing only. He is disqualified by having made such entry or filing alone, or as a member of an association. No

entry can be allowed an association which has in it a single person thus disqualified, as the law prohibits the entry or holding of more than one claim either by an individual or an association.

"10. Lands that are sufficiently valuable for gold, silver, or copper to prevent their entry as agricultural lands, cannot be entered as coal lands; and you will not allow any entry to be made under the above-named provisions of law of lands valuable for their deposits of said minerals.

"11. The present rules relative to 'hearings to establish the character of lands,' contained in General Land Office Regulations of October 31, 1881, issued under the mining laws, will, as far as applicable, govern your action in determining the character of lands sought to be entered as coal land.

"12. The price per acre is \$10 where the land is situated more than fifteen miles from any completed railroad, and \$20 per acre when the land is within fifteen miles of such road. The price of land, however, must be determined by its distance from a completed railroad at the date of payment and entry, irrespective of the preference right of entry.

"13. When application is made to purchase coal land at the rate of \$10 per acre, you will, in all cases, require satisfactory proof that the land applied for is, at date of entry, situated more than fifteen miles from any completed railroad. This proof may consist of the affidavit of the applicant, or that of his duly authorised agent, corroborated by the affidavit of some disinterested credible party showing personal knowledge of the facts.

"14. Where the land lies partly within fifteen miles of such road and in part outside such limit, the maximum price must be paid for all legal subdivisions, the greater part of which lie within fifteen miles of such road.

"15. The term 'completed railroad' is held to mean one which is actually constructed on the face of the earth; and lands within fifteen miles of any point of a railroad so constructed will be held and disposed of at \$20 per acre.

"16. Any duly qualified person or association must be preferred as purchasers of those public lands on which they have opened and improved, or shall open and improve, any coal mine or mines, and which they shall have in actual possession.

"17. Possession by agent is recognised as the possession of the principal. The clearest proof on the point of agency must, however, be required in every case, and a clearly defined possession must be established.

"18. The opening and improving of a coal mine in order to confer a preference right of purchase must not be considered as a mere matter of form; the labour expended and improvements made must be such as to clearly indicate the good faith of the claimant.

"19. These lands are intended to be sold, where there are adverse claimants therefor, to the party who, by substantial improvements, actual possession, and a reasonable industry, shows an intention to continue his development of the mines in preference to those who would purchase for speculative purposes only. With this view you will require such proof of compliance with the law when lands are applied for under section 2348 by adverse claimants, as the circumstances of each case may justify.

"20. In conflicts where improvements have been or shall hereafter be commenced, priority of possession and improvement shall govern the award when the law has been fully complied with by each party. A mere possession, however, without satisfactory improvements, will not secure the tract to the first occupant when a subsequent claimant shows his full compliance with the law.

"21. After an entry has been allowed to one party, you will make no investigation concerning it at the instance of any person, except on instructions from this office. You will, however, receive all affidavits concerning such case, and forward the same to this office, accompanied by a statement of the facts as shown by your records.

"22. Prior to entry it is competent for you to order an investigation, on sufficient grounds, set forth under oath, of a party in interest, and substantiated by the affidavits of disinterested and credible witnesses.

"MANNER OF OBTAINING TITLE.

"23. When title is sought by private entry the party will himself make oath to the following application, which must be presented to the register:—

"I—, hereby apply, under the provisions of the Revised Statutes of the United States, relating

to the sale of coal lands of the United States, to purchase the — quarter of section —, in township —, of range —, in the district of lands subject to sale at the land office at —, and containing — acres; and I solemnly swear that no portion of said tract is in the possession of any other party; that I am twenty-one years of age, a citizen of the United States (or have declared my intention to become a citizen of the United States), and have never held nor purchased lands under said Act, either as an individual or as a member of an association; and I do further swear that I am well acquainted with the character of said described land, and with each and every legal subdivision thereof, having frequently passed over the same; that my knowledge of said land is such as to enable me to testify understandingly with regard thereto; that said land contains large deposits of coal, and is chiefly valuable therefor; that there is not to my knowledge, within the limits thereof, any vein or lode of quartz or other rock in place bearing gold, silver, or copper, and that there is not within the limits of said land, to my knowledge, any valuable deposit of gold, silver, or copper. So help me God.

"24. Thereupon the register, if the tract is vacant, will so certify to the receiver, stating the price, and the applicant or his duly authorised agent must then pay the amount of purchase money.

"25. The receiver will then issue to the purchaser a duplicate receipt, and at the close of the month the register and receiver will make returns of the sale to the General Land Office, from whence, when the proceedings are found regular, a patent or complete title will be issued; and on surrender of the duplicate receipt, such patent will be delivered, at the option of the patentee, either by the Commissioner at Washington or by the register at the district land office.

"26. This disposition at private entry will be subject to any valid prior adverse right which may have attached to the same land and which is protected by section 2348.

"27. *Second.* When the application to purchase is based on a priority of possession, &c., as provided for in section 2348, the claimant must, when the township plat is on file in your office, file his declaratory statement for the tract claimed sixty days from and after the first day of his actual possession and improvement. Sixty days, exclusive of the first day of possession, &c., must be allowed.

"28. The declaratory statement must be substantially as follows, to wit:

"I —, do solemnly swear that I am — years of age, and a citizen of the United States (or have declared my intention to become a citizen of the United States), that I never have, either as an individual or as a member of an association, held or purchased any coal lands under the provisions of the Revised Statutes of the United States relating to the sale of coal lands of the United States, and I do hereby declare my intention to purchase, under the provisions aforesaid, the — quarter of section —, in township —, of range —, of lands subject to sale at the district land office at —, and that I came into possession of said tract on the — day of —, A.D. 18—, and have ever since remained in actual possession continuously; that I have located and opened a valuable mine of coal thereon, and have expended in labour and improvements on said mine the sum of — dollars, the labour and improvements being as follows: [here describe the nature and character of the improvements]; and I do furthermore solemnly swear that I am well acquainted with the character of said described land, and with each and every legal subdivision thereof, having frequently passed over the same; that my knowledge of said land is such as to enable me to testify understandingly with regard thereto; that there is not, to my knowledge, within the limits thereof any vein or lode of quartz or other rock in place bearing gold, silver, or copper, and that there is not within the limits of said land, to my knowledge, any valuable deposit of gold, silver, or copper. So help me God.

"29. When the township plat is not on file at date of claimant's first possession the declaratory statement must be filed within sixty days from the filing of such plat in your office.

"30. One year from and after the expiration of the period allowed for filing the declaratory statement is given

within which to make proof and payment; but you will allow no party to make final proof and payment except on notice to all others who appear on your records as claimants to the same tract.

"31. A party who otherwise complies with the law may enter after the expiration of said year, provided no valid adverse right shall have intervened. He postpones his entry beyond said year at his own risk, and the Government cannot thereafter protect him against another who complies with the law, and the value of his improvements can have no weight in his favour.

"32. Each claimant at the time of actual purchase must make affidavit as follows:—

"I —, claiming under the provisions of the Revised Statutes of the United States relating to the sale of coal lands of the United States, the right of purchase to the — quarter of section —, in township — of range —, subject to sale at —, do solemnly swear that I have never had the right of purchase under the aforesaid provisions of law either as an individual or as a member of an association, and that I have never held any other lands under its provisions; I further swear that I have expended in developing coal mines on said tract in labour and improvements the sum of — dollars, the nature of such improvements being as follows: —; that I am now in the actual possession of said mines, and make the entry for my own use and benefit and not directly or indirectly for the use and benefit of any other party; and I do furthermore swear that I am well acquainted with the character of said described land, and with each and every legal subdivision thereof, having frequently passed over the same; that my knowledge of said land is such as to enable me to testify understandingly with regard thereto; that the same is chiefly valuable for coal; that there is not, to my knowledge, within the limits thereof any vein or lode of quartz or other rock in place bearing gold, silver, or copper, and that there is not within the limits of said land, to my knowledge, any valuable deposit of gold, silver, or copper. So help me God.

"33. The application, declaratory statement, and the affidavit required at the time of actual purchase, the forms of which are given above under paragraphs 23, 24, and 32, may be sworn to any officer authorised by law to administer oaths, but the authority of such officer must be properly shown.

"34. Any party duly qualified under the law, after swearing to his application or declaratory statement, may, by a sufficient power of attorney duly executed under the laws of the State or Territory in which such party may then be residing, empower an agent to file with the register of the proper land office the application, declaratory statement, or affidavit required at the time of actual purchase, and also authorise him to make payment for and entry of the land in the name of such qualified party; and when such power of attorney shall have been filed in your office you will permit such agent to act thereunder as above indicated.

"35. Where a claimant shows by affidavit that he is not personally acquainted with the character of the land, his duly authorised agent who possesses such knowledge may make the required affidavit as to its character; but whether this affidavit is made by principal or agent it must be corroborated by the affidavits of two disinterested and credible witnesses having knowledge of its character.

"36. Nothing in these regulations shall be so construed as to prevent a party from proving his citizenship or age, or establishing the status of the lands sought to be entered, in accordance with ordinary rules of evidence; and any proof regularly introduced for that purpose that would be competent in a court or before a commissioner charged with the ascertainment of facts may be considered.

"37. Assignments of the right to purchase will be recognised when properly executed. Proof and payment must be made, however, within the prescribed period, which dates from the first day of the possession of the assignor who initiated the claim.

"38. The 'Rules of Practice in cases before the United States district land offices, the General Land Office, and the Department of the Interior,' approved December 20, 1880, will, as far as applicable, govern all cases and proceedings arising under the sections of the Revised Statutes above quoted providing for the sale of coal lands of the United States.

"39. You will report at the close of each month as 'sales of coal lands' all filings and entries in separate

Appendix
C. XXVI.UNITED
STATES.Replies to
questions from
Mr. Wright.

Appendix
C. XXVI.
UNITED
STATES.
applies to
questions from
Mr. Wright.

abstracts commencing with number one and thereafter proceeding consecutively in the order of their reception. Where a series of numbers has already been commenced by sale of coal lands you will continue the same without change."

"N. C. McFARLAND,
Commissioner.

"To Registers and Receivers
Department of the Interior,
July 31, 1882.

"Approved.
H. M. TELLER,
Secretary."

"GENERAL LAND OFFICE.

"Circular of October 31, 1881, including Circulars of September 13th 1878, April 27, 1880, September 23, 1880, and later Circulars. Edition 1889.

"UNITED STATES MINING LAWS, AND REGULATIONS THEREUNDER.

"Department of the Interior,
General Land Office.

"GENTLEMEN,
Your attention is invited to the Revised Statutes of the United States and the amendments thereto in regard to—

"MINING LAWS AND MINING RESOURCES.

"TITLE XXXII.—CHAPTER 6.

"Section 2,318. In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law.

"Sec. 2,319. All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

"Sec. 2,320. Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, heretofore located, shall be governed as to length along the vein or lode by the customs, regulations, and laws in force at the date of their location. A mining claim located after the tenth day of May, eighteen hundred and seventy-two, whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface, nor shall any claim be limited by any mining regulation to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the tenth day of May, eighteen hundred and seventy-two, render such limitation necessary. The end-lines of each claim shall be parallel to each other.

"Sec. 2,321. Proof of citizenship, under this chapter, may consist, in the case of an individual, of his own affidavit thereof; in the case of an association of persons unincorporated, of the affidavit of their authorized agent, made on his own knowledge, or upon information and belief; and in the case of a corporation organized under the laws of the United States, or of any state or territory thereof, by the filing of a certified copy of their charter or certificate of incorporation.

"Sec. 2,322. The locators of all mining locations heretofore made or which shall hereafter be made, on any mineral vein, lode, or ledge, situated on the public domain, their heirs and assigns, where no adverse claim exists on the tenth day of May, eighteen hundred and seventy-two, so long as they comply with the laws of the United States, and with state, territorial, and local regulations not in conflict with the laws of the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which

lies inside of such surface-lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side-lines of such surface locations. But their right of possession to such outside locations. But their right of possession to such outside portions thereof as lie between vertical planes drawn downward as above described, through the end lines of their ward as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges. And nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim, to enter upon the surface of a claim owned or possessed by another.

"Sec. 2,323. Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel, to the same extent as if discovered from the surface; and locations on the line of such tunnel of veins or lodes not appearing on the surface, made by other parties after the commencement of the face, made by the same is being prosecuted with tunnel, and while the same is being prosecuted to reasonable diligence, shall be invalid; but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

"Sec. 2,324. The miners of each mining district may make regulations not in conflict with the laws of the United States, or with the laws of the State or territory in which the district is situated, governing the location, manner of recording, amount of work necessary to hold possession of a mining-claim, subject to the following requirements; the location must be distinctly marked on the ground so that its boundaries can be readily traced. All records of mining-claims hereafter made shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. On each claim located after the tenth day of May, eighteen hundred and seventy-two, and until a patent has been issued therefor, not less than one hundred dollars' worth of labour shall be performed or improvements made during each year. On all claims located prior to the tenth day of May eighteen hundred and seventy-two ten dollars' worth of labour shall be performed or improvements made by the tenth day of June, eighteen hundred and seventy-four, and each year thereafter, for each one hundred feet in length along the vein until a patent has been issued therefor; but where such claims are held in common, such expenditure may be made upon any one claim; and upon a failure to comply with these conditions, the claim or mine upon which such failure occurred shall be open to relocation in the same manner as if no location of the same had ever been made, provided that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such location. Upon the failure of any one of several co-owners to contribute his proportion of the expenditures required hereby, the co-owners who have performed the labour or made the improvements may, at the expiration of the year, give such delinquent co-owner personal notice in writing or notice by publication in the newspaper published nearest the claim, for at least once a week for ninety days, and if at the expiration of ninety days after such notice in writing or by publication such delinquent should fail or refuse to contribute his proportion of the expenditure required by this section, his interest in the claims shall become the property of his co-owners who have made the required expenditures.

"Sec. 2,325. A patent for any land claimed and located for valuable deposits may be obtained in the following manner: any person, association, or corporation authorized to locate a claim under this chapter, having claimed and located a piece of land for such purposes, who has, or have, complied with the terms of this chapter, may file in the proper land office an application for a patent, under oath showing such compliance, together with a plat and field notes of the claim or claims in common, made by or under the direction of the United States Surveyor-General, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat previous to the filing of the application for a patent, and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in such

Owners of
tunnels, rights
of.
10 May 1872,
c. 152, s. 4,
v. 17, p. 92.

Regulations
made by miners.
10 May 1872,
c. 152, s. 5,
v. 17, p. 92.

Adverse claim,
proceedings on.
10 May 1872,
c. 152, s. 7,
v. 17, p. 93.

Description of
vein-claims on
surveyed and
unsurveyed
lands.
10 May 1872,
c. 152, s. 8,
v. 17, p. 94.

Pending appli-
cations; existing
rights.
10 May 1872,
c. 152, s. 9,
v. 17, p. 94.

Conformity of
placer claims
to surveys,
limit of.

Patents for
mineral lands,
how obtained.
10 May 1872,
c. 152, s. 6,
v. 17, p. 92.

Appendix
C. XXVI.

UNITED
STATES.

Replies to
questions from
Mr. Wright.

9 July 1870,
c. 235, s. 12,
v. 16, p. 317.
Subdivisions of
ten-acre tracts;
maximum of
placer locations.
9 July 1870,
c. 235, s. 12,
v. 16, p. 217.

Conformity of
placer claims
to surveys;
limitation of
claims.
10 May 1872,
c. 152, s. 10,
v. 17, p. 94.

What evidence
of possession,
&c., to establish
a right to a
patent.
9 July 1870,
c. 235, s. 13,
v. 16, p. 217.

Proceedings
for patent for
placer claim, &c.
10 May 1872,
c. 152, s. 11,
v. 17, p. 94.

Surveyor-
General to
appoint sur-
veyors of mining
claims, &c.
10 May 1872,
c. 152, s. 12,
v. 17, p. 95.

rock in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims; but where the lands have been previously surveyed by the United States, the entry in its exterior limits shall conform to the legal subdivisions of the public lands.

"Sec. 2,330. Legal sub-divisions of forty acres may be subdivided into ten-acre tracts; and two or more persons, or associations of persons, having contiguous claims of any size, although such claims may be less than ten acres each, may make joint entry thereof; but no location of a placer claim, made after the ninth day of July, eighteen hundred and seventy, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States surveys; and nothing in this section contained shall defeat or impair any *bona fide* pre-emption or homestead claim upon agricultural lands, or authorize the sale of the improvements of any *bona fide* settler to any purchaser.

"Sec. 2,331. Where placer claims are upon surveyed lands, and conform to legal subdivisions, no further survey or plat shall be required, and all placer mining claims located after the tenth day of May eighteen hundred and seventy-two, shall conform as near as practicable with the United States system of public land surveys, and no such rectangular subdivisions of such surveys, and no such location shall include more than twenty acres for each individual claimant; but where placer claims cannot be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands; and where by the segregation of mineral lands in any legal subdivision a quantity of agricultural land less than forty acres remains, such fractional portion of agricultural land may be entered by any party qualified by law, for homestead or pre-emption purposes.

"Sec. 2,332. Where such person or association, they and their grantors, have held and worked their claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereon under this chapter, in the absence of any adverse claim; but nothing in this chapter shall be deemed to impair any lien which may have attached in any way whatever to any mining claim or property thereto attached prior to the issuance of a patent.

"Sec. 2,333. Where the same person, association, or corporation is in possession of a placer claim, and also a vein or lode included within the boundaries thereof, application shall be made for a patent for the placer claim, with the statement that it includes such vein or lode, and in such case a patent shall issue for the placer claim, subject to the provisions of this chapter, including such vein or lode, upon the payment of five dollars per acre for such vein or lode claim, and twenty-five feet of surface on each side thereof. The remainder of the placer claim, or any placer claim not embracing any vein or lode claim, shall be paid for at the rate of two dollars and fifty cents per acre, together with all costs of proceedings; and where a vein or lode, such as is described in section twenty-three hundred and twenty, is known to exist within the boundaries of a placer claim, an application for a patent for such placer claim which does not include an application for the vein or lode claim shall be construed as a conclusive declaration that the claimant of the placer claim has no right of possession of the vein or lode claim; but where the existence of a vein or lode in a placer claim is not known, a patent for the placer claim shall convey all valuable mineral and other deposits within the boundaries thereof.

"Sec. 2,334. The Surveyor-General of the United States may appoint in each land district containing mineral lands as many competent surveyors as shall apply for appointment to survey mining claims. The expenses of the survey or vein or lode claims, and the survey and subdivision of placer claims into smaller quantities than one hundred and sixty acres, together with the cost of publication of notices, shall be paid by the applicants, and they shall be at liberty to obtain the same, at the most reasonable rates, and they shall also be at liberty to employ any United States deputy-surveyor to make the survey. The Commissioner of the General Land Office shall also have power to establish the maximum charges for surveys and publication of notices under this chapter; and, in case of excessive charges for publication, he may designate any newspaper published in a land district where mines are situated for the publication of mining notices in such district, and fix the rates to be charged by such paper; and, to the end that the Commissioner may be fully

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

Verification of
affidavits, &c.
10 May 1872,
c. 152, s. 13,
v. 17, p. 95.

Where veins
intersect, &c.
10 May 1872,
c. 152, s. 14,
v. 17, p. 95.

Patents for
non-mineral
land, &c.
10 May 1872,
c. 152, s. 15,
v. 17, p. 95.

What condi-
tions of sale
may be made
by local Legis-
lature.
26 July 1866,
c. 262, s. 5,
v. 14, p. 252.

Vested rights
to use of water
for mining, &c.;
right of way
for canals.
26 July 1866,
c. 262, s. 9,
v. 14, p. 253.

Patents, pre-
emptions, and
homesteads
subject to
vested and
accrued water
rights.
9 July 1870,
c. 235, s. 17,
v. 16, p. 218.
Mineral land
in which no
valuable mine
has been discovered,
open to homo-
steads.
26 July 1866,
c. 262, s. 10,
v. 14, p. 263.

Mineral lands,
how set apart
as agricultural
lands.

informed on the subject, each applicant shall file with the register a sworn statement of all charges and fees paid by such applicant for publication and surveys, together with all fees and money paid the register and the receiver of the land office, which statement shall be transmitted, with the other papers in the case, to the Commissioner of the General Land Office.

"Sec. 2,335. All affidavits required to be made under this chapter may be verified before any officer authorised to administer oaths within the land district where the claims may be situated, and all testimony and proofs may be taken before any such officer, and, when duly certified by the officer taking the same, shall have the same force and effect as if taken before the register and receiver of the land office. In cases of contest as to the mineral or agricultural character of land, the testimony and proofs may be taken as herein provided on personal notice of at least ten days to the opposing party; or if such party cannot be found, then by publication of at least once a week for thirty days in a newspaper, to be designated by the register of the land office as published nearest to the location of such land; and the register shall require proof that such notice has been given.

"Sec. 2,336. Where two or more veins intersect or cross each other, priority of title shall govern, and such prior location shall be entitled to all ore or mineral contained within the space of intersection; but the subsequent location shall have the right of way through the space of intersection for the purposes of the convenient working of the mine. And where two or more veins unite, the oldest or prior location shall take the vein below the point of union, including all the space of intersection.

"Sec. 2,337. Where non-mineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes, such non-adjacent surface ground may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location hereafter made of such non-adjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this chapter for the superficies of the lode. The owner of a quartz mill or reduction works, not owning a mine in connexion therewith, may also receive a patent for his mill site, as provided in this section.

"Sec. 2,338. As a condition of sale, in the absence of necessary legislation by Congress, the local Legislature of any State or territory may provide rules for working mines, involving easements, drainage, and other necessary means to their complete development; and those conditions shall be fully expressed in the patent.

"Sec. 2,339. Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognised and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same, and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed; but whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

"Sec. 3,340. All patents granted, or pre-emption or homesteads allowed, shall be subject to any vested and accrued water rights or rights to ditches and reservoirs used in connexion with such water rights, as may have been acquired under or recognised by the preceding section.

"Sec. 2,341. Wherever, upon the lands heretofore designated as mineral lands, which have been excluded from survey and sale, there have been homesteads made by citizens of the United States, or persons who have declared their intention to become citizens, which homesteads have been made, improved, and used for agricultural purposes, and upon which there have been no valuable mines of gold, silver, cinnabar, or copper discovered, and which are properly agricultural lands, the settlers or owners of such homesteads shall have a right of pre-emption thereto, and shall be entitled to purchase the same at the price of one dollar and twenty-five cents per acre, and in quantity not to exceed one hundred and sixty acres; or they may avail themselves of the provisions of chapter five of this title, relating to 'Homesteads.'

"Sec. 2,342. Upon the survey of the lands described in the preceding section, the Secretary of the Interior may designate and set apart such portions of the same as are

clearly agricultural lands, which lands shall thereafter, be subject to pre-emption and sale as other public lands, and be subject to all the laws and regulations applicable to the same.

"Sec. 2,343. The President is authorised to establish additional land districts, and to appoint the necessary officers under existing laws, wherever he may deem the same necessary for the public convenience in executing the provisions of this chapter.

"Sec. 2,344. Nothing contained in this chapter shall be construed to impair, in any way, rights or interests in mining property acquired under existing laws; nor to affect the provisions of the Act entitled 'An Act granting to A. Sutro the right of way and other privileges to aid in the construction of a draining and exploring tunnel to the Comstock lode, in the State of Nevada'; approved July twenty-five, eighteen hundred and sixty-six.

"Sec. 2,345. The provisions of the preceding sections of this chapter shall not apply to the mineral lands situated in the States of Michigan, Wisconsin, and Minnesota, which are declared free and open to exploration and purchase, according to legal sub-division, in like manner as before the tenth day of May eighteen hundred and seventy-two. And any *bona fide* entries of such lands within the States and named since the tenth of May eighteen hundred and seventy-two, may be patented without reference to any of the foregoing provisions of this chapter. Such lands shall be offered for public sale in the same manner, at the same minimum price, and under the same rights of pre-emption as other public lands.

"Sec. 2,346. No Act passed at the first session of the thirty-eighth Congress, granting lands to States or corporations to aid in the construction of roads or for other purposes, or to extend the time of grants made prior to the thirtieth day of January eighteen hundred and sixty-five, shall be so construed as to embrace mineral lands, which in all cases are reserved exclusively to the United States, unless otherwise specially provided in the Act or Acts making the grant."

"REPEAL PROVISIONS."

"TITLE LXXIV."

"Sec. 5,595. The foregoing seventy-three titles embrace the statutes of the United States, general and permanent in their nature, in force on the 1st day of December one thousand eight hundred and seventy-three, as revised and consolidated by commissioners appointed under an Act of Congress, and the same shall be designated and cited as the Revised Statutes of the United States.

"Sec. 5,596. All Acts of Congress passed prior to said first day of December one thousand eight hundred and seventy-three, any portion of which is embraced in any section of said revision, are hereby repealed, and the section applicable thereto shall be in force in lieu thereof; all parts of such Acts not contained in such revision, having been repealed or superseded by subsequent Acts, or not being general and permanent in their nature: Provided, that the incorporation into such revision of any general and permanent provision, taken from an Act making appropriations, or from an Act containing other provisions of a private, local, or temporary character, shall not repeal or in any way affect any appropriation, or any provision of a private, local, or temporary character contained in any of said Acts, but the same shall remain in force; and all Acts of Congress passed prior to said last-named day, no part of which are embraced in said revision shall not be affected or changed by its enactment.

"Sec. 5,597. The repeal of the several Acts embraced in said revision, shall not affect any act done, or any right accruing or accrued, or any suit or proceeding had or commenced in any civil cause before the said repeal, but all rights and liabilities under said Acts shall continue, and may be enforced in the same manner as if said repeal had not been made; nor shall said repeal in any manner affect the right to any office, or change the term or tenure thereof.

"Sec. 5,598. All offences committed, and all penalties or forfeitures incurred under any statute embraced in said revision prior to said repeal, may be prosecuted and punished in the same manner and with the same effect, as if said repeal had not been made.

"Sec. 5,599. All acts of limitation, whether applicable to civil causes and proceedings or to the prosecution of offences, or for the recovery of penalties or forfeitures, embraced in said revision and covered by said repeal, shall

26 July 1866,
c. 262, s. 11,
v. 16, p. 253.

Additional
land districts
and officers,
power of the
President to
provide.
26 July 1863,
c. 262, s. 7,
v. 14, p. 252.

Provisions of
this chapter
not to affect
certain rights.
10 May 1872,
c. 152, s. 16,
v. 17, p. 95.
9 July 1870,
c. 235, s. 17,
v. 16, p. 218.

Mineral lands
in certain States
excepted.
18 February 1873,
c. 159, v. 17,
p. 465.

Grant of lands
to States or
corporations
not to include
mineral lands.
30 January 1865,
Res. No. 10,
v. 13, p. 507.

What revised
Statutes
embrace.

Repeal of Acts
embraced in
revision.

Accrued rights
reserved.

Prosecutions
and punish-
ments.

Acts of limita-
tion.

Arrangement
and classifica-
tion of sections.

Acts passed
since De-
cember, 1, 1873,
not affected.

not be affected thereby, but all suits, proceedings, or prosecutions, whether civil or criminal, for causes arising or acts done or committed prior to said repeal, may be commenced and prosecuted within the same time as if said repeal had not been made.

"Sec. 5,600. The arrangement and classification of the several sections of the revision have been made for the purpose of a more convenient and orderly arrangement of the same, and therefore on inference or presumption of a legislative construction is to be drawn by reason of the title under which any particular section is placed.

"Sec. 5,601. The enactment of the said revision is not to affect or repeal any Act of Congress passed since the 1st day of December one thousand eight hundred and seventy-three, and all Acts passed since that date are to have full effect as if passed after the enactment of this revision, and so far as such Acts vary from or conflict with any provision contained in said revision, they are to have effect as subsequent statutes, and as repealing any portion of the revision inconsistent therewith.

"Approved June 22, 1874."

"The following is an Act of Congress approved June 6, 1874:

"An Act to amend the Act, entitled 'An Act to promote the development of the mining resources of the United States,' passed May tenth, eighteen hundred and seventy-two.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the provisions of the fifth section of the Act, entitled 'An Act to promote the development of the mining resources of the United States,' passed May tenth, eighteen hundred and seventy-two, which requires expenditures of labour and improvements on claims located prior to the passage of said Act, are hereby so amended that the time for the first annual expenditure on claims located prior to the passage of the said Act shall be extended to the first day of January eighteen hundred and seventy-five."

"The following is an Act of Congress approved February 11, 1875:

"An Act to amend section two thousand three hundred and twenty-four of the Revised Statutes relating to the development of the mining resources of the United States.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that section two thousand three hundred and twenty-four of the Revised Statutes be, and the same is hereby amended, so that where a person or company has or may run a tunnel for the purpose of developing a lode or lodes, owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, whether located prior to or since the passage of said Act, and such person or company shall not be required to perform work on the surface of said lode or lodes in order to hold the same as required by said Act."

"The following is an Act of Congress approved May 5, 1876:

"An Act to exclude the States of Missouri and Kansas, from the provisions of the Act of Congress entitled 'An Act to promote the development of the mining resources of the United States,' approved May tenth, eighteen hundred and seventy-two.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that within the States of Missouri and Kansas, deposits of coal, iron, lead, or other mineral be, and they are hereby excluded from the operation of the Act entitled 'An Act to promote the development of the mining resources of the United States,' approved May tenth, eighteen hundred and seventy-two, and all lands in said States shall be subject to disposal as agricultural lands."

"The following is an Act of Congress approved June 3, 1878:

"An Act authorising the citizens of Colorado, Nevada, and the territories to fell and remove timber on the public domain for mining and domestic purposes.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that all citizens of the United States, and other persons *bona fide* residents of the State of Colorado or Nevada, or either of the territories of New Mexico, Arizona, Utah, Wyoming, Dakota, Idaho, or Montana, and all other mineral districts of the United States, shall be, and are

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

hereby, authorised and permitted to fell and remove for building, agricultural, mining, or other domestic purposes, any timber or other trees growing or being on the public lands; said lands being mineral, and not subject to entry under existing laws of the United States, except for mineral entry in either of said States, territories, or districts of which such citizens or persons may be at the time *bona fide* residents; subject to such rules and regulations as the Secretary of the Interior may prescribe for the protection of the timber and of the undergrowth growing upon such lands, and for other purposes: Provided, the provisions of this Act shall not extend to railroad corporations.

"Sec. 2. That it shall be the duty of the register and the receiver of any local land office in whose district any mineral land may be situated, to ascertain from time to time whether any timber is being cut or used upon any such lands, except for the purposes authorised by this Act, within their respective land districts; and, if so, they shall immediately notify the Commissioner of the General Land Office of that fact; and all necessary expenses incurred in making such proper examinations shall be paid and allowed such register and receiver in making up their next quarterly accounts.

"Sec. 3. Any person or persons who shall violate the provisions of this Act, or any rules and regulations in pursuance thereof made by the Secretary of the Interior, shall be deemed guilty of a misdemeanor, and, upon conviction, shall be fined in any sum not exceeding five hundred dollars, and to which may be added imprisonment for any term not exceeding six months."

"The following is an Act of Congress approved January 22, 1880:

"An Act to amend sections twenty-three hundred and twenty-four, and twenty-three hundred and twenty-five of the Revised Statutes of the United States concerning mineral lands.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that section twenty-three hundred and twenty-five of the Revised Statutes of the United States be amended, by adding thereto the following words: 'Provided, that where the claimant for a patent is not a resident of or within the land district wherein the vein, lode, ledge, or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section by the claimant for such patent may be made by his, her, or its authorised agent, where said agent is conversant with the facts sought to be established by said affidavits: and provided, that this section shall apply to all applications now pending for patents to mineral lands.'

"Sec. 2. That section twenty-three hundred and twenty-four of the Revised Statutes of the United States be amended, by adding the following words: 'Provided, that the period within which the work required to be done annually on all unpatented mineral claims shall commence on the first day of January succeeding the date of location of such claim, and this section shall apply to all claims located since the tenth day of May, anno domini eighteen hundred and seventy-two.'

"The following is an Act of Congress approved March 3, 1881:

"An Act to amend section twenty-three hundred and twenty-six of the Revised Statutes relating to suits at law affecting the title to mining claims.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that if in any action brought pursuant to section twenty-three hundred and twenty-six of the Revised Statutes, title to the ground in controversy shall not be established by either party, the jury shall so find, and judgment shall be entered according to the verdict. In such case costs shall not be allowed to either party, and the claimant shall not proceed in the land office or be entitled to a patent for the ground in controversy until he shall have perfected his title."

MINERAL LANDS OPEN TO EXPLORATION, OCCUPATION, AND PURCHASE.

"1. It will be perceived that by the foregoing provisions of law the mineral lands in the public domain, surveyed or unsurveyed, are open to exploration, occupation, and purchase by all citizens of the United States, and all those who have declared their intentions to become such.

STATUS OF LOSE CLAIMS LOCATED PRIOR TO
MAY 10, 1872.

" 2. By an examination of the several sections of the Revised Statutes it will be seen that the status of lode claims located previous to the 10th May 1872, is not changed with regard to their extent along the lode or width of surface.

" 3. Mining rights acquired under such previous locations are, however, enlarged by such Revised Statutes in the following respect viz.: The locators of all such previously taken veins or lodes, their heirs and assigns, so long as they comply with the laws of Congress, and with State, territorial, or local regulations not in conflict therewith, governing mining claims, are invested with the exclusive possessory right of all the surface included within the lines of their locations, and of all veins, lodes, or ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such locations at the surface, it being expressly provided, however, that the right of possession to such outside parts of said veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward, as aforesaid, through the end lines of their locations so continued in their own direction that such planes will intersect such exterior parts of such veins, lodes, or ledges; no right being granted, however, to the claimant of such outside portion of a vein or lode to enter upon the surface location of another claimant.

" 4. It is to be distinctly understood, however, that the law limits the possessory right to veins, lodes, or ledges, other than the one named in the original location, to such as were not adversely claimed on May 10, 1872, and that where such other vein or lode was so adversely claimed at that date, the right of the party so adversely claiming is in no way impaired by the provisions of the Revised Statutes.

" 5. In order to hold the possessory title to a mining claim located prior to May 10, 1872, and for which a patent has not been issued, the law requires that ten dollars shall be expended annually in labour or improvements on each claim of 100 feet on the course of the vein or lode until a patent shall have been issued therefor; but where a number of such claims are held in common upon the same vein or lode, the aggregate expenditure that would be necessary to hold all the claims, at the rate of ten dollars per 100 feet, may be made upon any one claim; a failure to comply with this requirement in any one year subjecting the claim upon which such failure occurred to relocation by other parties, the same as if no previous location thereof had ever been made, unless the claimants under the original location shall have resumed work thereon after such failure and before such relocation. The first annual expenditure upon claims of this class should have been performed subsequent to May 10, 1872, and prior to January 1, 1875. From and after January 1, 1875, the required amount must be expended annually until patent issues. By decision of the honourable Secretary of the Interior, dated March 4, 1879, such annual expenditures are not required subsequent to entry, the date of issuing the patent certificate being the date contemplated by statute.

" 6. Upon the failure of any one of several co-owners of a vein, lode, or ledge, which has not been entered, to contribute his proportion of the expenditure necessary to hold the claim or claims so held in ownership in common, the co-owners, who have performed the labour or made the improvements as required by said Revised Statutes, may, at the expiration of the year, give such delinquent co-owner personal notice in writing, or notice by publication in the newspaper published nearest the claim for at least once a week for ninety days; and if upon the expiration of ninety days after such notice in writing, or upon the expiration of one hundred and eighty days after the first newspaper publication of notice, the delinquent co-owner shall have failed to contribute his proportion to meet such expenditures or improvements, his interest in the claim by law passes to his co-owners who have made the expenditures or improvements as aforesaid. Where a claimant alleges ownership of a forfeited interest under the foregoing provision, the sworn statement of the publisher as to the facts of publication, giving dates and a printed copy of the notice published, should be furnished, and the claimant must swear that the delinquent co-owner failed to contribute his proper proportion within the period fixed by the statute.

PATENTS FOR VEINS OR LODES HERETOFORE
ISSUED.

" 7. Rights under patents for veins or lodes heretofore granted under previous legislation of Congress are enlarged by the Revised Statutes so as to invest the patentee, his heirs or assigns, with title to all veins, lodes or ledges throughout their entire depth, the top or apex of which lies within the end and side boundary lines of his claim on the surface, as patented, extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of the claim at the surface. The right of possession to such outside parts of such veins or ledges to be confined to such portions thereof as lie between vertical planes drawn downward through the end lines of the claims at the surface, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges; it being expressly provided, however, that all veins, lodes, or ledges, the top or apex of which lies inside such surface locations, other than the one named in the patent, which were adversely claimed on the 10th May 1872, are excluded from such conveyance by patent.

" 8. Applications for patents for mining claims pending at the date of the Act of May 10, 1872, may be prosecuted to final decision in the General Land Office, and where no adverse rights are affected thereby, patents will be issued in pursuance of the provisions of the Revised Statutes.

MANNER OF LOCATING CLAIMS ON VEINS OR LODES
AFTER MAY 10, 1872.

" 9. From and after the 10th May 1872, any person who is a citizen of the United States, or who has declared his intention to become a citizen, may locate, record, and hold a mining claim of fifteen hundred lineal feet along the course of any mineral vein or lode subject to location; or an association of persons, severally qualified as above, may make joint location of such claim of fifteen hundred feet, but in no event can a location of a vein or lode made subsequent to May 10, 1872, exceed fifteen hundred feet along the course thereof, whatever may be the number of persons composing the association.

" 10. With regard to the extent of surface-ground adjoining a vein or lode, and claimed for the convenient working thereof, the Revised Statutes provide that the lateral extent of locations of veins or lodes made after May 10, 1872, shall in no case exceed three hundred feet on each side of the middle of the vein at the surface, and that no such surface rights shall be limited by any mining regulations to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the 10th May 1872, may render such limitation necessary; the end lines of such claims to be in all cases parallel to each other. Said lateral measurements cannot extend beyond three hundred feet on either side of the middle of the vein at the surface, or such distance as is allowed by local laws. For example: four hundred feet cannot be taken on one side and two hundred feet on the other. If, however, three hundred feet on each side are allowed, and by reason of prior claims but one hundred feet can be taken on one side, the locator will not be restricted to less than three hundred feet on the other side; and when the locator does not determine by exploration where the middle of the vein at the surface is, his discovery shaft must be assumed to mark such point.

" 11. By the foregoing it will be perceived that no lode claim located after the 10th May 1872, can exceed a parallelogram fifteen hundred feet in length by six hundred feet in width, but whether surface-ground of that width can be taken, depends upon the local regulations or State or territorial laws in force in the several mining districts; and that no such local regulations or State or territorial laws shall limit a vein or lode claim to less than fifteen hundred feet along the course thereof, whether the location is made by one or more persons, nor can surface rights be limited to less than fifty feet in width, unless adverse claims existing on the 10th day of May 1872 render such lateral limitation necessary.

" 12. It is provided by the Revised Statutes that the miners of each district may make rules and regulations not in conflict with the laws of the United States, or of the State or territory in which such districts are respectively situated, governing the location, manner of recording, and amount of work necessary to hold possession of a claim. They likewise require that the location shall be so distinctly

marked on the ground that its boundary may be readily traced. This is a very important matter, and locators cannot exercise too much care in defining their locations at the outset, inasmuch as the law requires that all records of mining locations made subsequent to May 10, 1872, shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located, by reference to some natural object or permanent monument as will identify the claim.

" 13. The statutes provide that no lode claim shall be recorded until after the discovery of a vein or lode within the limits of the claim located, the object of which provision is evidently to prevent the appropriation of presumed mineral ground for speculative purposes to the exclusion of *bona fide* prospectors, before sufficient work has been done to determine whether a vein or lode really exists.

" 14. The claimant should, therefore, prior to locating his claim, unless the vein can be traced upon the surface, sink a shaft, or run a tunnel or drift, to a sufficient depth therein to discover and develop a mineral-bearing vein, lode, or crevice; should determine, if possible, the general course of such vein in either direction from the point of discovery, by which direction he will be governed in marking the boundaries of his claim on the surface. His location notice should give the course and distance as nearly as practicable from the discovery-shaft on the claim, to some permanent, well-known points or objects, such, for instance, as stone monuments, blazed trees, the confluence of streams, point of intersection of well-known gulches, ravines, or roads, prominent buttes, hills, &c., which may be in the immediate vicinity, and which will serve to perpetuate and fix the *locus* of the claim and render it susceptible of identification from the description thereof given in the record of locations in the district, and should be duly recorded.

" 15. In addition to the foregoing data, the claimant should state the names of adjoining claims, or, if none adjoin, the relative positions of the nearest claims; should drive a post or erect a monument of stones at each corner of his surface-ground, and at the point of discovery or discovery shaft should fix a post, stake, or board, upon which should be designated the name of the lode, the name or names of the locators, the number of feet claimed, and in which direction from the point of discovery; it being essential that the location notice filed for record, in addition to the foregoing description, should state whether the entire claim of fifteen hundred feet is taken on one side of the point of discovery, or whether it is partly upon one and partly upon the other side thereof, and in the latter case, how many feet are claimed upon each side of such discovery point.

" 16. Within a reasonable time, say twenty days after the location shall have been marked on the ground, or such time as is allowed by the local laws, notice thereof, accurately describing the claim in manner aforesaid, should be filed for record with the proper recorder of the district, who will thereupon issue the usual certificate of location.

" 17. In order to hold the possessory right to a location made since May 10, 1872, not less than one hundred dollars' worth of labour must be performed, or improvements made thereon annually until entry shall have been made. Under the provisions of the Act of Congress approved January 22, 1880, the first annual expenditure becomes due and must be performed during the calendar year succeeding that in which the location was made. Expenditure made or labour performed prior to the first day of January succeeding the date of location will not be considered as a part of, or applied upon, the first annual expenditure required by law. Failure to make the expenditure or perform the labour required will subject the claim to relocation by any other party having the necessary qualifications, unless the original locator, his heirs, assigns, or legal representatives have resumed work thereon after such failure and before such relocation.

" 18. The expenditures required upon mining-claims may be made from the surface or in running a tunnel for the development of such claims, the Act of February 11, 1875, providing that where a person or company has, or may, run a tunnel for the purpose of developing a lode or lodes owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, and such person or company shall not be required to perform work on the surface of said lode or lodes in order to hold the same.

" 19. The importance of attending to these details in the matter of location, labour, and expenditure will be the more readily perceived when it is understood that a failure to give the subject proper attention may invalidate the claim.

TUNNEL RIGHTS.

" 20. Section 2,323 provides that where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel, to the same extent as if discovered from the surface; and locations on the line of such tunnel of veins or lodes not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins or lodes on the line of said tunnel.

" 21. The effect of this is simply to give the proprietors of a mining tunnel run in good faith the possessory right to fifteen hundred feet of any blind lodes cut, discovered, or intersected by such tunnel, which were not previously known to exist, within three thousand feet from the place or point of commencement of such tunnel, and to prohibit other parties, after the commencement of the tunnel, from prospecting for and making locations of lodes on the line thereof and within said distance of three thousand feet, unless such lodes appear upon the surface or were previously known to exist.

" 22. The term 'face,' as used in said section, is construed and held to mean the first working-face formed in the tunnel, and to signify the point at which the tunnel actually enters cover; it being from this point that the three thousand feet are to be counted, upon which prospecting is prohibited as aforesaid.

" 23. To avail themselves of the benefits of this provision of law, the proprietors of a mining tunnel will be required, at the time they enter cover as aforesaid, to give proper notice of their tunnel location by erecting a substantial post, board, or monument at the face or point of commencement thereof, upon which should be posted a good and sufficient notice, giving the names of the parties or company claiming the tunnel-right; the actual or proposed course or direction of the tunnel; the height and width thereof, and the course and distance from such face or point of commencement to some permanent well-known objects in the vicinity by which to fix and determine the *locus* in manner heretofore set forth applicable to locations of veins or lodes, and at the time of posting such notice they shall, in order that miners or prospectors may be enabled to determine whether or not they are within the lines of the tunnel, establish the boundary lines thereof, by stakes or monuments placed along such lines at proper intervals, to the terminus of the three thousand feet from the face or point of commencement of the tunnel, and the lines so marked will define and govern as to the specific boundaries within which prospecting for lodes not previously known to exist is prohibited while work on the tunnel is being prosecuted with reasonable diligence.

" 24. At the time of posting notice and marking out the lines of the tunnel as aforesaid, a full and correct copy of such notice of location defining the tunnel claim must be filed for record with the mining recorder of the district, to which notice must be attached the sworn statement or declaration of the owners, claimants, or projectors of such tunnel, setting forth the facts in the case; stating the amount expended by themselves and their predecessors in interest in prosecuting work thereon; the extent of the work performed, and that it is *bona fide* their intention to prosecute work on the tunnel so located and described with reasonable diligence for the development of a vein or lode, or for the discovery of mines, or both, as the case may be. This notice of location must be duly recorded, and, with the said sworn statement attached, kept on the recorder's files for future reference.

" 25. By a compliance with the foregoing much needless difficulty will be avoided, and the way for the adjustment of legal rights acquired in virtue of said section 2,323 will be made much more easy and certain.

" 26. This Office will take particular care that no improper advantage is taken of this provision of law by parties making or professing to make tunnel locations, ostensibly for the purposes named in the statute, but really for the purpose of monopolizing the lands lying in front of their tunnels to the detriment of the mining interests and to the exclusion of *bona fide* prospectors or miners, but will hold such tunnel claimants to a strict compliance with the terms of the statutes; and a reasonable diligence on their part in prosecuting the work is one of the essential conditions of their implied contract.

Negligence or want of due diligence will be construed as working a forfeiture of their right to all undiscovered veins on the line of such tunnel.

"MANNER OF PROCEEDINGS TO OBTAIN GOVERNMENT TITLE TO VEIN OR LODE CLAIMS.

"27. By section 2,325 authority is given from granting title for mines by patent from the Government to any person, association, or corporation having the necessary qualification as to citizenship and holding the right of possession to a claim in compliance with law.

"28. The claimant is required in the first place to have a correct survey of his claim made under authority of the surveyor-general of the State or territory in which the claim lies; such survey to show with accuracy the exterior surface boundaries of the claim, which boundaries are required to be distinctly marked by monuments on the ground. Four plats and one copy of the original field notes, in each case, will be prepared by the surveyor-general; one plat and the original field notes to be retained in the office of the surveyor-general, one copy of the plat to be given the claimant for posting upon the claim, one plat and a copy of the field notes to be given the claimant for filing with the proper register, to be finally transmitted by that officer, with other papers in the case, to this Office, and one plat to be sent by the surveyor-general to the register of the proper land district to be retained on his files for future reference.

"29. The claimant is then required to post a copy of the plat of such survey in a conspicuous place upon the claim together with notice of his intention to apply for a patent therefor, which notice will give the date of posting, the name of the claimant, the name of the claim, mine, or lode; the mining district and county; whether the location is of record, and, if so, where the record may be found; the number of feet claimed along the vein and the presumed direction thereof; the number of feet claimed on the lode in each direction from the point of discovery, or other well-defined place on the claim; the name or names of adjoining claimants on the same or other lodes; or, if none adjoin, the names of the nearest claims, &c.

"30. After posting the said plat and notice upon the premises, the claimant will file with the proper register and receive a copy of such plat, and the field notes of surveyor of the claim, accompanied by the affidavit of at least two credible witnesses, that such plat and notice are posted conspicuously upon the claim, giving the date and place of such posting; a copy of the notice so posted to be attached to, and form a part of, said affidavit.

"31. Attached to the field notes so filed must be the sworn statement of the claimant that he has the possessory right to the premises therein described, in virtue of a compliance by himself (and by his grantors, if he claims by purchase) with the mining rules, regulations, and customs of the mining district, State, or territory in which the claim lies, and with the mining laws of Congress; such sworn statement to narrate briefly, but as clearly as possible, the facts constituting such compliance, the origin of his possession, and the basis of his claim to a patent.

"32. This affidavit should be supported by appropriate evidence from the mining recorder's office as to his possessory right, as follows, viz.: Where he claims to be a locator, a full, true, and correct copy of such location should be furnished, as the same appears upon the mining records; such copy to be attested by the seal of the recorder, or if he has no seal, then he should make oath to the same being correct, as shown by his records; where the applicant claims as a locator in company with others who have since conveyed their interests in the lode to him, a copy of the original record of location should be filed, together with an abstract of title from the proper recorder, under seal or oath as aforesaid, tracing the co-locator's possessory rights in the claim to such applicant for patent; where the applicant claims only as a purchaser for valuable consideration, a copy of the location record must be filed under seal or upon oath as aforesaid, with an abstract of title certified as above by the proper recorder, tracing the right of possession by a continuous chain of conveyances from the original locators to the applicant, also certifying that no conveyances affecting the title to the claim in question appear of record in his office other than those set forth in the accompanying abstract.

"33. In the event of the mining records in any case having been destroyed by fire or otherwise lost, affidavit of the fact should be made, and secondary evidence of

possessory title will be received, which may consist of the affidavit of the claimant, supported by those of any other parties cognizant of the facts relative to his location, occupancy, possession, improvements, &c.; and in such case of lost records, any deeds, certificates of location or purchase, or other evidence which may be in the claimant's possession, and tend to establish his claim, should be filed.

"34. Upon the receipt of these papers the register will, at the expense of the claimant (who must furnish the agreement of the publisher to hold applicant for patent alone responsible for charges of publication), publish a notice of such application for the period of sixty days, in a newspaper published nearest to the claim, and will post a copy of such notice in his office for the same period. In all cases sixty days must intervene between the first and the last insertion of the notice in such newspaper. When the notice is published in a weekly newspaper ten consecutive insertions are necessary; when in a daily newspaper the notice must appear in each issue for the required period.

"35. The notices so published and posted must be as full and complete as possible, and embrace all the data given in the notice posted upon the claim.

"36. Too much care cannot be exercised in the preparation of these notices, inasmuch as upon their accuracy and completeness will depend, in a great measure, the regularity and validity of the whole proceeding.

"37. The claimant, either at the time of filing these papers with the register, or at any time during the sixty days' publication, is required to file a certificate of the surveyor-general that not less than five hundred dollars' worth of labour has been expended or improvements made upon the claim by the applicant or his grantors; that the plat filed by the claimant is correct; that the field notes of the survey, as filed, furnish such an accurate description of the claim as will, if incorporated into a patent, serve to fully identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the *locus* thereof.

"38. It will be the more convenient way to have this certificate indorsed by the surveyor-general, both upon the plat and field notes of survey filed by the claimant as aforesaid.

"39. After the sixty days' period of newspaper publication has expired the claimant will file his affidavit, showing that the plat and notice aforesaid remain conspicuously posted upon the claim sought to be patented during said sixty days' publication, giving the dates.

"40. Upon the filing of this affidavit the register will, if no adverse claim was filed in his office during the period of publication, permit the claimant to pay for the land according to the area given in the plat and field notes of survey aforesaid, at the rate of five dollars for each acre and five dollars for each fractional part of an acre, the receiver issuing the usual duplicate receipt therefor. The claimant will also make a sworn statement of all charges and fees paid by him for publication and surveys, together with all fees and money paid the register and receiver of the land office; after which the whole matter will be forwarded to the Commissioner of the General Land Office and a patent issued thereon is found regular.

"41. In sending up the papers in the case the register must not omit certifying to the fact that the notice was posted in his office for the full period of sixty days, such certificate to state distinctly when such posting was done and how long continued.

"42. The consecutive series of numbers of mineral entries must be continued, whether the same are of lode or placer claims.

"43. The surveyor-general must continue to designate all surveyed mineral claims as heretofore by a progressive series of numbers, beginning with lot No. 37 in each township; the claim to be so designated at date of filing the plat, field notes, &c., in addition to the local designation of the claim; it being required in all cases that the plat and field notes of the survey of a claim must, in addition to the reference to permanent objects in the neighbourhood, describe the *locus* of the claim with reference to the lines of public surveys by a line connecting a corner of the claim with the nearest public corner of the United States surveys, unless such claim be on unsurveyed lands at a remote distance from such public corner, in which latter case the reference by course and distance to permanent objects in the neighbourhood will be a sufficient designation by which to fix the *locus* until the public surveys shall have been closed upon its boundaries.

"ADVERSE CLAIMS.

"44. Section 2,326 provides for adverse claims, fixes the time within which they shall be filed to have legal effect, and prescribes the manner of their adjustment.

"45. Said section requires that the adverse claim shall be filed during the period of publication of notice; that it must be on the oath of the adverse claimant; and that it must show the 'nature,' the 'boundaries,' and the 'extent' of the adverse claim.

"46. In order that this section of law may be properly carried into effect, the following is communicated for the information of all concerned.

"47. An adverse mining claim must be filed with the register of the same land office with whom the application for patent was filed, or in his absence with the receiver, and within the sixty days' period of newspaper publication of notice.

"48. The adverse notice must be duly sworn to by the person or persons making the same before an officer authorised to administer oaths within the land district, or before the register or receiver; it will fully set forth the nature and extent of the interference or conflict; whether the adverse party claims as a purchaser for valuable consideration or as a locator; if the former, a certified copy of the original location, the original conveyance, a duly certified copy thereof, or an abstract of title from the office of the proper recorder should be furnished, or if the transaction was a mere verbal one he will narrate the circumstances attending the purchase, the date thereof, and the amount paid, which facts should be supported by the affidavit of one or more witnesses, if any were present at the time, and if he claims as a locator he must file a duly certified copy of the location from the office of the proper recorder.

"49. In order that the 'boundaries' and 'extent' of the claim may be shown, it will be incumbent upon the adverse claimant to file a plat showing his entire claim, its relative situation or position with the one against which he claims, and the extent of the conflict. This plat must be made from an actual survey by a United States deputy surveyor, who will officially certify thereon to its correctness; and in addition there must be attached to such plat of survey a certificate or sworn statement by the surveyor as to the approximate value of the labour performed or improvements made upon the claim by the adverse party or his predecessors in interest, and the plat must indicate the position of any shafts, tunnels, or other improvements, if any such exist, upon the claim of the party opposing the application, and by which party said improvements were made.

"50. Upon the foregoing being filed within the sixty days as aforesaid, the register, or in his absence the receiver, will give notice in writing to both parties to the contest that such adverse claim has been filed, informing them that the party who filed the adverse claim will be required within thirty days from the date of such filing to commence proceedings in a court of competent jurisdiction to determine the question of right of possession, and to prosecute the same with reasonable diligence to final judgment, and that should such adverse claimant fail to do so, his adverse claim will be considered waived, and the application for patent be allowed to proceed upon its merits.

"51. When an adverse claim is filed as aforesaid, the register or receiver will indorse upon the same the precise date of filing, and preserve a record of the date of notifications issued thereon; and thereafter all proceedings on the application for patent will be suspended, with the exception of the completion of the publication and posting of notices and plat, and the filing of the necessary proof thereof, until the controversy shall have been adjudicated in court, or the adverse claim waived or withdrawn.

"52. The proceedings after rendition of judgment by the court in such case are so clearly defined by the Act itself as to render it unnecessary to enlarge thereon in this place.

"53. The proceedings to obtain patents for claims usually called placers, including all forms of deposit, are similar to the proceedings prescribed for obtaining patents for vein or lode claims; but where said placer claim shall be upon surveyed lands, and conform to legal subdivisions, no further survey or plat will be required, and all placer mining claims located after May 10, 1872, shall conform as nearly as practicable with the United States system of public land surveys and the rectangular subdivisions of such surveys, and no such location shall include more than

twenty acres for each individual claimant; but where placer claims cannot be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands. But where such claims are located previous to the public surveys, and do not conform to legal subdivisions, survey, plat, and entry thereof may be made according to the boundaries thereof, provided the location is in all respects legal.

"54. The proceedings for obtaining patents for veins or lodes having already been fully given, it will not be necessary to repeat them here; it being thought that careful attention thereto by applicants and the local officers will enable them to act understandingly in the matter and make such slight modifications in the notice, or otherwise, as may be necessary in view of the different nature of the two classes of claims, placer claims being fixed, however, at two dollars and fifty cents per acre, or fractional part of an acre.

"55. By section 2,330, authority is given for the subdivision of forty-acre legal subdivisions into ten-acre lots, which is intended for the greater convenience of miners in segregating their claims both from one another and from intervening agricultural lands.

"56. It is held, therefore, that under a proper construction of the law these ten-acre lots in mining districts should be considered and dealt with, to all intents and purposes, as legal subdivisions, and that an applicant having a legal claim which conforms to one or more of these ten-acre lots, either adjoining or cornering, may make entry thereof, after the usual proceedings, without further survey or plat.

"57. In cases of this kind, however, the notice given of the application must be very specific and accurate in description, and as the forty-acre tracts may be subdivided into ten-acre lots, either in the form of squares of ten by ten chains, or of parallelograms five by twenty chains, so long as the lines are parallel and at right angles with the lines of the public surveys, it will be necessary that the notice and application state specifically what ten-acre lots are sought to be patented, in addition to the other data required in the notice.

"58. Where the ten-acre subdivision is in the form of a square it may be described, for instance, as the 'S.E. $\frac{1}{4}$ of the S.W. $\frac{1}{4}$ of N.W. $\frac{1}{4}$,' or, if in the form of a parallelogram as aforesaid, it may be described as the 'W. $\frac{1}{2}$ of the W. $\frac{1}{2}$ of the S.W. $\frac{1}{4}$ of the N.W. $\frac{1}{4}$ (or the N. $\frac{1}{2}$ of the S. $\frac{1}{2}$ of the N.E. $\frac{1}{4}$ of the S.E. $\frac{1}{4}$) of section _____, township _____, range _____, as the case may be; but, in addition to this description of the land, the notice must give all the other data that is required in a mineral application, by which parties may be put on inquiry as to the premises sought to be patented. The proof submitted with applications for claims of this kind must show clearly the character and the extent of the improvements upon the premises.

"Inasmuch as the surveyor-general has no duty to perform in connexion with the entry of a placer claim of legal subdivisions, the proof of improvements must show their value to be not less than five hundred dollars, and that they were made by the applicant for patent or his grantors.

"59. Applicants for patent to a placer claim, who are also in possession of a known vein or lode included therein, must state in their application that the placer includes such vein or lode. The published and posted notices must also include such statement; and the vein or lode must be surveyed and marked upon the plat; the field notes and plat giving the area of the lode claim or claims and the area of the placer separately. If veins or lodes lying within a placer location are owned by other parties, the fact should be distinctly stated in the application for patent, and in all the notices. It should be remembered that an application which omits to include an application for a known vein or lode therein, must be construed as a conclusive declaration that the applicant has no right of possession to the vein or lode. Where there is no known lode or vein, the fact must appear by the affidavit of claimant and one or more witnesses.

"60. When an adverse claim is filed to a placer application, the proceedings are the same as in the case of vein or lode claims already described.

"QUANTITY OF PLACER GROUND SUBJECT TO LOCATION.

"61. By section 2,330 it is declared that no location of a placer claim, made after July 9, 1870, shall exceed one hundred and sixty acres for any one person or association

of persons, which location shall conform to the United States surveys.

"62. Section 2,331 provides that all placer mining claims located after May 10, 1872, shall conform as nearly as practicable with the United States systems of public surveys and the sub-divisions of such surveys, and no such locations shall include more than twenty acres for each individual claimant.

"63. The foregoing provisions of law are construed to mean that after the 9th day of July 1870, no location of a placer claim can be made to exceed one hundred and sixty acres, whatever may be the number of locators associated together, or whatever the local regulations of the district may allow; and that from and after May 10, 1872, no location made by an individual can exceed twenty acres, and no location made by an association of individuals can exceed one hundred and sixty acres, which location of one hundred and sixty acres cannot be made by a less number than eight *bona fide* locators; and no local laws or mining regulations can restrict a placer location to less than twenty acres, although the locator is not compelled to take so much.

"64. The regulations herein-before given as to the manner of marking locations on the ground, and placing the same on record, must be observed in the case of placer locations, so far as the same are applicable; the law requiring, however, that where placer claims are upon surveyed public lands the locations must hereafter be made to conform to legal subdivisions thereof as near as practicable.

"65. With regard to the proofs necessary to establish the possessory right to a placer claim, section 2,332 provides that 'where such person or association, they and their grantors, have held and worked their claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this chapter, in the absence of any adverse claim.'

"66. This provision of law will greatly lessen the burden of proof, more especially in the case of old claims located many years since, the records of which, in many cases, have been destroyed by fire, or lost in other ways during the lapse of time, but concerning the possessory right to which all controversy or litigation has long been settled.

"67. When an applicant desires to make his proof of possessory right in accordance with this provision of law, you will not require him to produce evidence of location, copies of conveyances, or abstracts of title, as in other cases, but will require him to furnish a duly certified copy of the statute of limitation of mining-claims for the State or territory, together with his sworn statement giving a clear and succinct narration of the facts as to the origin of his title, and likewise as to the continuation of his possession of the mining ground covered by his application; the area thereof, the nature and extent of the mining that has been done thereon; whether there has been any opposition to his possession, or litigation with regard to his claim, and, if so, when the same ceased; whether such cessation was caused by compromise or by judicial decree, and any additional facts within the claimant's knowledge having a direct bearing upon his possession and *bona fides* which he may desire to submit in support of his claim.

"68. There should likewise be filed a certificate, under seal of the court having jurisdiction of mining cases within the judicial district embracing the claim, that no suit or action of any character whatever involving the right of possession to any portion of the claim applied for is pending, and that there has been no litigation before said court affecting the title to said claim or any part thereof for a period equal to the time fixed by the statute of limitations for mining claims in the State or territory as aforesaid, other than that which has been finally decided in favour of the claimant.

"69. The claimant should support his narrative of facts relative to his possession, occupancy, and improvements by corroborative testimony of any disinterested person or persons of credibility who may be cognizant of the facts in the case and are capable of testifying understandingly in the premises.

"70. It will be to the advantage of claimants to make their proofs as full and complete as practicable.

" MILL SITES.

"71. Section 2,337 provides that 'where non-mineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes, such non-adjacent surface-grounds may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location hereafter made of such non-adjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this chapter for the superficies of the lode. The owner of a quartz mill or reduction works, not owning a mine in connexion therewith, may also receive a patent for his mill site, as provided in this section.'

"72. To avail themselves of this provision of law, parties holding the possessory right to a vein or lode, and to a piece of non-mineral land not contiguous thereto, for mining or milling purposes, not exceeding the quantity allowed for such purpose by section 2,337, United States Revised Statutes, or prior laws, under which the land was appropriated, the proprietors of such vein or lode may file in the proper land office their application for a patent, under oath, in manner already set forth herein, which application, together with the plat and field notes, may include, embrace, and describe, in addition to the vein or lode, such non-contiguous mill site, and after due proceedings as to notice, &c., a patent will be issued conveying the same as one claim.

"73. In making the survey in a case of this kind, the lode claim should be described in the plat and field notes as 'Lot No. 37, A,' and the mill site as 'Lot No. 37, B,' or whatever may be its appropriate numerical designation; the course and distance from a corner of the mill site to a corner of the lode claim to be invariably given in such plat and field notes, and a copy of the plat and notice of application for patent must be conspicuously posted upon the mill site as well as upon the vein or lode for the statutory period of sixty days. In making the entry no separate receipt or certificate need be issued for the mill site, but the whole area of both lode and mill site will be embraced in one entry, the price being five dollars for each acre and fractional part of an acre embraced by such lode and mill site claim.

"74. In case the owner of a quartz mill or reduction works is not the owner or claimant of a vein or lode, the law permits him to make application therefor in the same manner prescribed herein for mining claims, and after due notice and proceedings, in the absence of a valid adverse filing, to enter and receive a patent for his mill site at said price per acre.

"75. In every case there must be satisfactory proof that the land claimed as a mill site is not mineral in character, which proof may, where the matter is unquestioned, consist of the sworn statement of the claimant, supported by that of one or more disinterested persons capable from acquaintance with the land to testify understandingly.

"76. The law expressly limits mill site locations, made from and after its passage, to five acres.

"77. The registers and receivers will preserve an unbroken consecutive series of numbers for all mineral entries.

" PROOF OF CITIZENSHIP OF MINING CLAIMANTS.

"78. The proof necessary to establish the citizenship of applicants for mining patents must be made in the following manner: In case of an incorporated company, a certified copy of their charter or certificate of incorporation must be filed. In case of an association of persons unincorporated, the affidavit of their duly authorised agent, made upon his own knowledge, or upon information and belief, setting forth the residence of each person forming such association, must be submitted. This affidavit must be accompanied by a power of attorney from the parties forming such association, authorising the person who makes the affidavit of citizenship to act for them in the matter of their application for patent.

"79. In case of an individual or an association of individuals who do not appear by their duly authorised agent, you will require the affidavit of each applicant, showing whether he is a native or naturalized citizen, when and where born, and his residence.

"80. In case an applicant has declared his intention to become a citizen, or has been naturalized, his affidavit must

show the date, place, and the court before which he declared his intention, or from which his certificate of citizenship issued, and present residence.

"81. The affidavit of the claimant as to his citizenship may be taken before the register or receiver, or any other officer authorised to administer oaths within the land district. If citizenship is established by the testimony of disinterested persons, such testimony may be taken at any place before any person authorised to administer oaths, and whose official character is duly verified.

" APPOINTMENT OF DEPUTY SURVEYORS OF MINING CLAIMS—CHARGES FOR SURVEYORS AND PUBLICATIONS—FEES OF REGISTERS AND RECEIVERS, &c.

"82. Section 2,334 provides for the appointment of surveyors of mineral claims, authorises the Commissioner of the General Land Office to establish the rates to be charged for surveys and for newspaper publications, prescribes the fees allowed to the local officers for receiving and acting upon applications for mining patents and for adverse claims thereto, &c.

"Under this authority of law the following rates have been established as the maximum charges for newspaper publications in mining cases:—

"a. Where a daily newspaper is designated the charge shall not exceed seven dollars for each ten lines of space occupied, and where a weekly newspaper is designated as the medium of publication, five dollars for the same space will be allowed. Such charge shall be accepted as full payment for publication in each issue of the newspaper for the entire period required by law.

"It is expected that these notices shall not be so abbreviated as to curtail the description essential to a perfect notice, and the said rates established upon the understanding that they are to be in the usual body-type used for advertisements.

"b. For the publication of citations in contests or hearings involving the character of lands, the charges shall not exceed eight dollars for five publications in weekly newspapers, or ten dollars for publications in daily newspapers for thirty days.

"83. The surveyors-general of the several districts will, in pursuance of said law, appoint in each land district as many competent deputies for the survey of mining claims as may seek such appointment; it being distinctly understood that all expenses of these notices and surveys are to be borne by the mining claimants and not by the United States; the system of making deposits for mineral surveys as required by previous instructions, being hereby revoked as regards field work; the claimant having the option of employing any deputy surveyor within such district to do his work in the field.

"84. With regard to the platting of the claim and other office work in the surveyor-general's office, that officer will make an estimate of the cost thereof, which amount the claimant will deposit with any assistant United States treasurer, or designated depository, in favour of the United States treasurer, to be passed to the credit of the fund created by individual depositors for surveys of the public land, and file, with the surveyor-general, duplicate certificate of such deposit in the usual manner.

"85. The surveyors-general will endeavour to appoint mineral deputy surveyors, so that one or more may be located in each mining district for the greater convenience of miners.

"86. The usual oaths will be required of these deputies and their assistants as to the correctness of each survey executed by them.

"The duty of the deputy mineral surveyor ceases when he has executed the survey and returned the field notes and preliminary plat thereof with his report to the surveyors-general. He will not be allowed to prepare for the mining claimant the papers in support of an application for patent, or otherwise perform the duties of an attorney before the land office in connexion with a mining claim.

"The surveyors-general and local land officers are expected to report any infringement of this regulation to this Office.

"87. The law requires that each applicant shall file with the register and receiver a sworn statement of all charges and fees paid by him for publication of notice and for survey; together with all fees and money paid the register and receiver, which sworn statement is required to be transmitted to this Office, for the information of the Commissioner.

"88. Should it appear that excessive or exorbitant charges have been made by any surveyor or any publisher, prompt action will be taken with the view of correcting the abuse.

"89. The fees payable to the register and receiver for filing and acting upon applications for mineral land patents are five dollars to each officer, to be paid by the applicant for patent at the time of filing, and the like sum of five dollars is payable to each officer by an adverse claimant at the time of filing his adverse claim.

"90. All fees or charges under this law may be paid in the United States currency.

"91. The register and receiver will, at the close of each month, forward to this Office an abstract of mining applications filed, and a register of receipts, accompanied with an abstract of mineral lands sold, and an abstract of adverse claims filed.

"92. The fees and purchase money received by registers and receivers must be placed to the credit of the United States in the receiver's monthly and quarterly account, charging up in the disbursing account the sums to which the register and receiver may be respectively entitled as fees and commissions, with limitations in regard to the legal maximum.

" HEARINGS TO ESTABLISH THE CHARACTER OF LANDS.

"93. In every case where it becomes necessary under the law and existing instructions of this Office that a hearing be held and testimony taken for the purpose of ascertaining the mineral or agricultural character of land, the local officers are directed to cause the evidence to be taken before a duly qualified officer whose office is located nearest the land in dispute, the distance to be computed by ordinary routes of travel.

"Whenever the local office comes within this rule, the hearing will be held before the register and receiver.

"It is intended to cause these hearings to be held, as far as practicable, in such manner as to afford the least inconvenience to persons interested. Should it appear, therefore, by written stipulation of all the parties, that this purpose will best be subserved by the designation of any particular officer authorised to administer oaths within the land district in which the land in controversy is situated, the instructions herein may be departed from in accordance with such stipulation. Such deviation may also be allowed where the officer, who would otherwise be designated, is an interested party, or where, for other good reason, his selection would be improper.

"When the evidence is taken before an officer other than the register and receiver, the record should be sealed up, the title of the case indorsed on the envelope, and the whole returned by mail or express to the register and receiver.

"On the 27th April 1880, in accordance with the directions of the Secretary of the Interior, this Office revoked the withdrawals theretofore made, upon general information that vast tracts of public land were mineral in character, and instructed the local officers, in the absence of a specific allegation of the mineral character of land, to allow applications for agricultural entry thereof, upon due proof.

"Hereafter the only tracts of public land that will be withheld from entry as agricultural land on account of its mineral character, will be such as are returned by the surveyor-general as mineral; and even the presumption which is supported by such return may be overcome by testimony taken at a regular hearing.

"94. Hearings to determine the character of land, as practically distinguished, are of two kinds:

"1st. Where lands which are sought to be entered and patented as agricultural are alleged by affidavit to be mineral, or when sought as mineral their non-mineral character is alleged.

"The proceedings relative to this class are in the nature of a contest between two or more known parties, and the testimony may be taken on personal notice of at least ten days, duly served on all parties, or, if they cannot be found, then by publication, for thirty days in a newspaper of general circulation, to be designated by the register of the land office as published nearest to the land in controversy. If the publication is made in a weekly newspaper, the notice must be inserted in five consecutive weekly issues thereof.

"2nd. When lands are returned as mineral by the surveyor-general.

"When such lands are sought to be entered as agricultural, notice must be given by publication for thirty days, as aforesaid.

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

" 95. All notices must describe the land, giving the name and address of the claimant, the character of his claim, and the time, place, and purpose of the hearing.

" Proof of service of notice, when personal, must consist of either acknowledgment of service indorsed on the citation (which is always desirable), or the affidavit of the party serving the same, giving date, place and manner of service endorsed as aforesaid.

" Proof of publication must be the affidavit of the publisher of the newspaper, stating the period of publication, giving dates, stating whether in a daily or weekly issue, and a copy of the notice so published must be attached to, and form a part of, the affidavit.

" Proof of posting on the claim must be made by the affidavits of two or more persons who state when and where the notice was posted; that it remained so posted during the prescribed period, giving dates, and a copy of the notice so posted must be attached to, and made a part of, the affidavits.

" Proof of notice is indispensable to the regularity of proceedings, and must accompany the record in every case.

" The expense of notice must in every case be paid by the parties thereto.

" 96. At the hearing there must be filed the affidavit of the publisher of the paper that the said notice was published for the required time, stating when and for how long such publication was made; a printed copy thereof to be attached and made a part of the affidavit.

" 97. At the hearing the claimants and witnesses will be thoroughly examined with regard to the character of the land; whether the same has been thoroughly prospected; whether or not there exists within the tract or tracts claimed any lode or vein of quartz or other rock in place, bearing gold, silver, cinnabar, lead, tin, or copper, or other valuable deposit, which has ever been claimed, located, recorded, or worked; whether such work is entirely abandoned, or whether occasionally resumed; if such lode does exist, by whom claimed, under what designation, and in which subdivision of the land it lies; whether any placer mine or mines exist upon the land; if so what is the character thereof—whether of the shallow-surface description or of the deep cement, blue lead, or gravel deposits; to what extent mining is carried on when water can be obtained, and what the facilities are for obtaining water for mining purposes; upon what particular ten-acre subdivisions mining has been done, and at what time the land was abandoned for mining purposes, if abandoned at all.

" 98. The testimony should also show the agricultural capacities of the land, what kind of crops are raised thereon and the value thereof; the number of acres actually cultivated for crops of cereals or vegetables, and within which particular ten-acre subdivision such crops are raised; also which of these subdivisions embrace his improvements, giving in detail the extent and value of his improvements, such as house, barn, vineyard, orchard, fencing, &c.

" 99. It is thought that *bona fide* settlers upon lands really agricultural will be able to show, by a clear, logical, and succinct chain of evidence, that their claims are founded upon law and justice; while parties who have made little or no permanent agricultural improvements, and who only seek title for speculative purposes, on account of the mineral deposits known to themselves to be contained in the land, will be defeated in their intentions.

" 100. The testimony should be as full and complete as possible; and in addition to the leading points indicated above, everything of importance bearing upon the question of the character of the land should be elicited at the hearing.

" 101. Where the testimony is taken before an officer who does not use a seal, other than the register and receiver, the official character of such officer must be attested by a clerk of a court of record, and the testimony transmitted to the register and receiver, who will thereupon examine and forward the same to this Office, with their joint opinion as to the character of the land as shown by the testimony.

" 102. When the case comes before this Office, such an award of the land will be made as the law and the facts may justify; and in cases where a survey is necessary to set apart the mineral from the agricultural land in any forty-acre tract, the necessary instructions will be issued to enable the agricultural claimant, at his own expense, to have the work done, at his option, either by United States deputy, county, or other local surveyor; the survey in such case may be executed in such manner as will segregate the portion of land actually containing the mine, and used as surface-ground for the convenient working thereof, from the remainder of the tract, which remainder will be

patented to the agriculturist to whom the same may have been awarded, subject, however, to the condition that the land may be entered upon by the proprietor of any vein or lode for which a patent has been issued by the United States for the purpose of extracting and removing the ore from the same, where found to penetrate or intersect the land so patented as agricultural, as stipulated by the Mining Act.

" 103. Such survey when executed must be properly sworn to by the surveyor, either before a notary public, officer of a court of record, or before the register or receiver, the deponent's character and credibility to be properly certified to by the officer administering the oath.

" 104. Upon the filing of the plat and field notes of such survey, duly sworn to as aforesaid, you will transmit the same to the surveyor-general for his verification and approval, who, if he finds the work correctly performed, will properly mark out the same upon the original township-plat in his office, and furnish authenticated copies of such plat and description both to the proper local land office and to this Office, to be affixed to the duplicate and triplicate township-plats respectively.

" 105. In cases where a portion of a forty-acre tract is awarded to an agricultural claimant and he causes the segregation thereof from the mineral portion, as aforesaid, such agricultural portion will not be given a numerical designation as in the case of surveyed mineral claims, but will simply be described as the 'Fractional ——— quarter of the ——— quarter of section ———, in township ———, of range ———, meridian, containing ——— acres, the same being exclusive of the land adjudged to be mineral in said forty-acre tract.'

" 106. The surveyor must correctly compute the area of such agricultural portion, which computation will be verified by the surveyor-general.

" 107. After the authenticated plat and field notes of the survey have been received from the surveyor-general, this Office will issue the necessary order for the entry of the land, and in issuing the receiver's receipt and register's patent certificate you will invariably be governed by the description of the land given in the order from this Office.

" 108. The fees for taking testimony and reducing the same to writing in these cases will have to be defrayed by the parties in interest. Where such testimony is taken before any other officer than the register and receiver, the register and receiver will be entitled to no fees.

" 109. If, upon a review of the testimony at this Office, a ten-acre tract should be found to be properly mineral in character, that fact will be no bar to the execution of the settler's legal right to the remaining non-mineral portion of his claim, if contiguous.

" 110. No fear need be entertained that miners will be permitted to make entries of tracts ostensibly as mining claims, which are not mineral, simply for the purpose of obtaining possession and defrauding settlers out of their valuable agricultural improvements; it being almost an impossibility for such a fraud to be consummated under the laws and regulations applicable to obtaining patents for mining claims.

" 111. The fact that a certain tract of land is decided upon testimony to be mineral in character is by no means equivalent to an award of the land to a miner. A miner is compelled by law to give sixty days' publication of notice, and posting of diagrams and notices, as a preliminary step; and then, before he can enter the land, he must show that the land yields mineral; that he is entitled to the possessory right thereto in virtue of compliance with local customs or rules of miners, or by virtue of the statute of limitations; that he or his grantors have expended in actual labour and improvements an amount of not less than five hundred dollars thereon, and that the claim is one in regard to which there is no controversy or opposing claim. After all these proofs are met, he is entitled to have a survey made at his own cost where a survey is required, after which he can enter and pay for the land embraced by his claim.

" 112. Blank forms for proofs in mineral cases are not furnished by the General Land Office.

" Respectfully,
N. C. McFARLAND,
Commissioner.

" Department of Interior,
" October 31, 1881.
" Approved.
" S. J. KIRKWOOD,
" Secretary."

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

" Department of the Interior,
" General Land Office,

" Washington, D.C.,

September 13, 1878.

GENTLEMEN,
" By direction of the Hon. Secretary of the Interior, under date of 6th instant, you are hereby instructed as follows:—

" 1. The survey and plat of mineral claims, required by section 2,325, Revised Statutes of the United States, to be filed in the proper land office, with application for payment, must be made subsequent to the recording of the location of the mine; and when the original location is made by survey of a United States deputy surveyor, such location survey cannot be substituted for that required by the statute, as above indicated.

" 2. The surveyor-general should derive his information upon which to base his certificate as to the value of labour expended or improvements made from his deputy who makes the actual survey and examination upon the premises, and such deputy should specify with particularity and full detail the character and extent of such improvements.

" I desire also to call your attention to section 2,320, United States Revised Statutes, referring to vein or lode claims, which requires that 'the end lines of each claim shall be parallel to each other.'

" It appears that in some instances this explicit statutory requirement has been disregarded. Hereafter you will approve no survey of such claims unless the end lines thereof are parallel to each other.

" Promptly instruct your deputy surveyors accordingly.

" Very respectfully,

" U. J. BAXTER,

" Acting Commissioner.

" To United States Surveyors-General."

" Department of the Interior,

" General Land Office,

" Washington, D.C., April 27, 1880.

GENTLEMEN,
" Your attention is directed to the following copy of letter from the Hon. Secretary of the Interior:

" Department of the Interior,
Washington, April 22, 1880.

SIR,
" I HAVE received your letter of the 16th instant, calling my attention to the withdrawals heretofore made of mineral lands under the direction of my predecessor, Hon. C. Delano, and setting forth at length the difficulties which arise in the adjustment of homestead and pre-emption claims on account of said withdrawals, and recommending in view of such difficulties that the 'present policy and practice of throwing the burden of proof upon agricultural claimants be reversed; that the applicant for such entry be required to make the non-mineral affidavit required as aforesaid, and that this be deemed sufficient in absence of the alleged mineral character of his claim; that if a party does allege in proper form that the land is valuable for minerals, he should be required to affirmatively prove the fact, instead of in every case, with or without such allegation, requiring every settler to prove an expensive negative.'

" You further recommend 'that the withdrawals heretofore made as aforesaid be revoked, in order to remove the restriction upon *bona fide* agricultural settlements, and to place such lands in a condition where they can be occupied, purchased, and developed.'

" I have carefully considered the recommendations made by you for the reasons stated, and have to say that they meet my approval.

" You are therefore instructed to so modify the instructions of your office as to conform to said recommendations, and you are also instructed to revoke the orders of withdrawals mentioned by you, in order that the restrictions thereby made upon agricultural settlements of the lands may be removed.

" Very respectfully,

" C. SCHURZ,

" Secretary.

" The Commissioner of the General Land Office."

" The recommendations to the Hon. Secretary, upon which his said approval was based, are in brief and in substance, that immense tracts of land are now, and for several years last past have been, officially designated as mineral lands; that as a matter of fact, but an exceedingly small part of this entire area is valuable for minerals, but good agricultural land; that these withdrawn lands are subject to entry under the homestead, pre-emption, and other laws providing for the sale of agricultural lands only upon a hearing in every case wherein the burden of proof is upon the agricultural applicant to establish that the

tract claimed is non-mineral; that it is thus rendered exceedingly easy to cause such applicant great expense, delay, and vexation; that the expense, embarrassment, and delay actually incident to the course hitherto pursued operate to discourage and prevent settlements on such lands; that the timber on these lands is being largely taken on the claim that they are mineral lands; and that the vast tracts so designated, and which are capable of supporting many thousands of settlers, adding largely to the productions of the country and contributing to its better progress, are not only for the most part practically reserved from sale under any law, but being so secluded it becomes easier for a party to fraudulently enter as agricultural a tract which he may discover to be valuable for minerals than for a *bona fide* settler to secure patent for agricultural land. All of such withdrawals heretofore made of lands in your district are hereby revoked; and when any party applies to enter any tract under any of the laws relating to agricultural lands, he will be required to make the usual non-mineral affidavit, which, in the absence of any allegation that the land is mineral, will be deemed sufficient. Should affidavits be filed with you properly alleging any tract sought to be entered as aforesaid to be mineral, you will, after due notice, hold a hearing to determine the facts. In such cases the burden of proof will rest upon the party who alleges the land to be valuable for minerals, and he must affirmatively prove his allegations.

" It is expected that you will exercise all possible prudence and care in respect to this matter, and endeavour to carefully and conscientiously maintain and advance the purpose of the Department and this Office, to wit: to enable the public lands which are, in fact, agricultural to be occupied and purchased without oppressive conditions, and to prevent lands which are in fact valuable for minerals from being taken except under the special laws applicable thereto.

" Very respectfully,

" J. A. WILLIAMSON,

Commissioner.

" Registers and Receivers,

" United States District Land Offices."

" Department of the Interior,

" General Land Office,

" Washington, D.C.,

September 23, 1880.

GENTLEMEN,
" HEREAFTER in case of application being made in your office to enter or select as agricultural land under any Act of Congress other than the pre-emption or homestead Acts, lands returned as mineral by the surveyor-general, you will require the applicant, at date of final proof, location, or selection, to publish for thirty days a notice describing the land applied for, and giving time and place when such proof will be submitted or selection tendered. You will also post in your office a copy of the notice for the same period. Proof of publication will consist of the affidavit of the publisher of the newspaper in which the notice was published, and you will furnish your own certificate as to posting in your office.

" The revocation of the withdrawals of lands as mineral by circular of April 27, 1880, was made not only because said withdrawals had, in many instances, worked great hardships to settlers, but because it is required by law that homestead and pre-emption claimants shall publish notices of their intention to make final proof on their entries, and this was thought to afford sufficient protection to all parties; but in case of entries under other laws there is no such notice required. This procedure will apply to cases of application to enter under the town site, desert land, and timber culture laws, applications to select lands under grants to States, railroad, and wagon road companies; and the location of the various classes of scrip upon lands which have been returned by the surveyor-general as mineral in character.

" Where, after such publication of notice has been regularly made, no affidavits alleging the mineral character of the land have been filed with you, you will allow the entry, selection, or location upon the filing of a proper non-mineral affidavit. If such mineral affidavits shall have been filed, you will proceed with a hearing, as directed by the circular of April 27, 1880.

Acknowledge receipt hereof.

" Very respectfully,

" J. A. WILLIAMSON,

Commissioner.

" Registers and Receivers,

" United States District Land Offices."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
May 9, 1882.

"GENTLEMEN,
"YOUR attention is directed to the provisions of the following Act of Congress, approved April 26, 1882:
"AN Act to amend section twenty-three hundred and twenty-six of the Revised Statutes in regard to mineral lands, and for other purposes.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the adverse claim required by section twenty-three hundred and twenty-six of the Revised Statutes, may be verified by the oath of any duly authorized agent or attorney-in-fact of the adverse claimant cognizant of the facts stated; and the adverse claimant, if residing or at the time being beyond the limits of the district wherein the claim is situated, may make oath to the adverse claim before the clerk of any court of record of the United States or the State or territory where the adverse claimant may then be, or before any notary public of such State or territory.

"Sec. 2. That applicants for mineral patents, if residing beyond the limits of the district wherein the claim is situated, may make any oath or affidavit required for proof of citizenship before the clerk of any court of record, or before any notary public of any State or territory.

"1. It will be observed that the Act is not retroactive, and hence cannot affect proceedings had prior to its approval; where citizenship, however, has not been proved, it may be established as provided by section two of this Act.

"2. Where an agent or attorney-in-fact verifies the adverse claim, he must distinctly swear that he is such agent or attorney, and accompany his affidavit by proof thereof.

"3. The agent or attorney-in-fact must make the affidavit in verification of the adverse claim within the land district where the claim is situated.

"Very respectfully,
"N. C. MCFARLAND,
"Commissioner.

"To Registers and Receivers,
"United States District Land Offices.

"Department of Interior,
"May 26, 1882.

"Approved:
"H. M. TELLER,
"Secretary."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
September 22, 1882.

"GENTLEMEN,
"THE following regulations are promulgated as amendatory of circular of October 31, 1881, entitled 'United States mining laws and regulations thereunder,' and have special reference to applications for patents to placer claims. They are to be considered in connexion with paragraphs 53 to 60 of regulations contained in said circular.

"1. The first care in recognising an application for patent upon a placer claim, must be exercised in determining the exact classification of the lands. To this end the clearest evidence of which the case is capable should be presented. If the claim be all placer ground, that fact must be stated in the application, and corroborated by accompanying proofs. If of mixed placers and lodes it should be set out, with a description of all known lodes situated within the boundaries of the claim. A specific declaration, such as is required by section 2,333, Revised Statutes, must be furnished as to each lode intended to be claimed. All other known lodes are, by the silence of the applicant, excluded by law from all claim by him, of whatsoever nature, possessory or otherwise.

"2. Section 2,395, Revised Statutes (sub-division 7), requires the surveyor to 'note in his field books the true situation of all mines, salt licks, salt springs, and mill seats which come to his knowledge'; also 'all water courses over which the lines he runs may pass.' It further requires him to 'note the quality of the lands.' These descriptive notes are required by sub-division 8 to be incorporated in the plat by the surveyor-general.

"3. If these duties have been performed, the surveys will furnish a reasonable guide to the district officers and to claimants in prosecuting their applications. But ex-

perience has shown that great neglect has resulted from inattention to the law in this respect, and the regular plats are of very little value in the matter. It will, therefore, be required in the future that deputy surveyors shall, at the expense of the parties, make full examination of all placer claims, and duly note the facts as specified in the law, stating the quality and compensation of the soil, the kind and amount of timber and other vegetation, the locus and size of streams, and such other matters as may appear upon the surface of the claim. This examination should include the character and extent of all surface and underground workings, whether placer or lode, for mining purposes.

"4. In addition to these data, which the law requires to be shown in all cases, the deputy should report with reference to the proximity of centers of trade or residence; also of well-known systems of lode deposit or of individual lodes. He should also report as to the use or adaptability of the claim for placer mining; whether water has been brought upon it in sufficient quantity to mine the same, or whether it can be procured for that purpose; and, finally, what works or expenditures have been made by the claimant or his grantors for the development of the claim, and their situation and location with respect to the same as applied for.

"5. This examination should be reported by the deputy under oath to the surveyor-general, and duly corroborated; and a copy of the same should be furnished, with the application for patent to the claim, constituting a part thereof, and included in the oath of the applicant.

"6. In case of a proposed claim for lands not yet surveyed, the foregoing regulations will govern the application for survey.

"7. In controversies hereafter to be determined respecting the mineral value of lands, their value for all purposes, whether agricultural or municipal, or as seats for towns, will be considered without reference to the decisions heretofore made in particular cases. No decision finally executed, however, will be reconsidered under this modification.

"8. No application by an association of persons for patent to a placer claim will be allowed to embrace more than one hundred and sixty acres, nor will any application be entertained that embraces more than one location.

"9. Applications awaiting entry, whether published or not, must be made to conform to these regulations, both with respect to amount of ground and examination as to the character of the land. Entries already made will be suspended for examination by the commissioner, and such additional proofs as may be deemed necessary in each case will be demanded.

"Very respectfully,
"N. C. MCFARLAND,
"Commissioner.

"To Registers and Receivers,
"and Surveyors-General.

"Department of the Interior,
"September 23, 1882.

"Approved:
"H. M. TELLER,
"Secretary."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
December 9, 1882.

"GENTLEMEN,
"By direction, contained in letter dated the 7th inst., from the honourable Secretary of the Interior, paragraph No. 8 of the preceding circular of September 22, 1882, relating to placer mining claims, has been amended so as to read as follows:—

"8. No application by an association of persons for patent to a placer claim will be allowed to embrace more than one hundred and sixty acres; and not less than five hundred dollars' worth of work must be shown to have been expended upon or for the benefit of each separate location embraced in such application. If an individual becomes the purchaser and possessor of several separate claims of twenty acres each or less, he may be permitted to include in his application for patent any number of such claims contiguous to each other, not exceeding in the aggregate one hundred and sixty acres; but upon or for the benefit of each original claim or location so embraced, he or his grantors must have expended the sum of five hundred dollars in improvements.

"You are instructed to observe this modification of my said circular of September 22, 1882.

"Very respectfully,

"N. C. MCFARLAND,
"Commissioner.
"To Registers and Receivers,
"and Surveyors-General."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
November 16, 1882.

"GENTLEMEN,
"THE regulations of this Office requires that the plats and field-notes of surveys of mining claims shall disclose all conflicts between such surveys and prior surveys, giving the areas of conflicts.

"The rule has not been properly observed in all cases. Your attention is invited to the following particulars, which should be observed in the survey of every mining claim:

"1. The exterior boundaries of the claim should be represented on the plat of survey and in the field notes.

"2. The intersection of the lines of the survey with the lines of conflicting prior surveys should be noted in the field notes and represented upon the plat.

"3. Conflicts with unsurveyed claims, where the applicant for survey does not claim the area in conflict, should be shown by actual survey.

"4. The total area of the claim embraced by the exterior boundaries should be stated, and also the area in conflict with each intersecting survey, substantially as follows:

	Acres.
Total area of claim	- 10.50
Area in conflict with survey No. 302	- 1.56
Area in conflict with survey No. 948	- 2.33
Area in conflict with Mountain Maid lode mining claim, unsurveyed	- 1.48

"In a number of instances that have come to the attention of this Office the total area in conflict has been given but not the area in conflict with each intersecting claim. The portion of the plat not in conflict has been coloured and the remainder left uncoloured. The language of the field notes has been such as to convey the idea that the conflicting areas were excluded from the claim, whereas such was not the intention. It does not follow that because mining surveys are required to exhibit all conflicts with prior surveys the areas of conflict are to be excluded. The field notes and plat are made a part of the application for patent, and care should be taken that the description does not inadvertently exclude portions intended to be retained. It is better that the application for patent should state the portions to be excluded in express terms. A survey executed as in the example given will enable the applicant for patent to exclude such conflicts as may seem desirable. For instance, the conflict with survey No. 302 and with the Mountain Maid lode claim might be excluded and that with survey No. 948 included.

"Your attention is also invited to another matter. The practice of colouring portions of surveys, leaving other portions uncoloured, is open to the same objections that have been stated concerning the field notes. In the future no colouring will be used.

"Very respectfully,
"N. C. MCFARLAND,
"Commissioner.

"To United States Surveyors-General."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
June 8, 1883.

"GENTLEMEN,
"THE following additional regulations are promulgated as amendatory of circular of October 31, 1881, entitled 'United States Mining Laws and Regulations thereunder,' which, except as herein modified, will remain in full force:

"1. No application will be received, or entry allowed, which embraces more than one lode location.

"2. A party who is not an applicant for patent under section 2,325, Revised Statutes, or the assignee of such applicant, is not entitled to make entry under said section, and in no case will the name of such party be inserted in the certificate of entry. This regulation has no reference to proceedings under section 2,326.

"3. Any party applying to make entry as trustee must disclose fully the nature of the trust and the name of the

cestui que trust; and such trustee, as well as the beneficiaries, must furnish satisfactory proof of citizenship; and the names of beneficiaries, as well as that of the trustee, must be inserted in the final certificate of entry.

"4. Where an adverse claim has been filed and suit thereon commenced within the statutory period, and final judgment determining the right of possession rendered in favour of the applicant, it will not be sufficient for him to file with the register a certificate of the clerk of the court, setting forth the facts as to such judgment, but he must, before he is allowed to make entry, file a certified copy of the judgment, together with the other evidence required by section 2,326, Revised Statutes.

"5. Where such suit has been dismissed, a certificate of the clerk of the court to that effect, or a certified copy of the order of dismissal, will be sufficient.

"6. In no case will a relinquishment of the ground in controversy, or other proof, filed with the register or receiver, be accepted in lieu of the evidence required in paragraphs 4 and 5.

"7. Where an adverse claim has been filed, but no suit commenced against the applicant for patent within the statutory period, a certificate to that effect by the clerk of the State court having jurisdiction in the case, and also by the clerk of the circuit court of the United States for the district in which the claim is situated, will be required.

"8. Possessory title to a lode claim held and worked for a period equal to the time prescribed by the statute of limitations for mining claims of the State or territory where the same may be situated, may, in the absence of any adverse claim, be established in the same manner as now allowed in placer claims, and indicated generally in paragraphs 67, 68, and 69 of the circular hereby amended.

"9. No entry will be allowed until the register has satisfied himself, by a careful examination, that proper proofs have been filed upon all the points indicated in official regulations in force, and that they show a sufficient *bona fide* compliance with the laws and such regulations.

"A strict observance of this regulation will be required.
L. HARRISON,
Acting Commissioner.

"July 6, 1883.

"Approved:
"H. M. TELLER,
"Secretary.
"To Registers and Receivers
"and Surveyors-General."

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
January 14, 1884.

"GENTLEMEN,
"YOUR attention is called to the following extract from the decision of the Hon. Secretary of the Interior in case of Charles K. Miner, claimant of the Spencer Lode v. J. G. Marriott *et al.*, claimants of the Tabor Lode, dated January 4, 1884:

"Section 2,395 of the Revised Statutes requires, among other things, newspaper publication for the period of sixty days as notice of application for mineral patent. It also provides that 'if no adverse claim shall have been filed with the register and receiver of the proper land office at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent, upon the payment to the proper officer of five dollars per acre, and that no adverse claim exists.'

"Section 2,326 prescribes the method of procedure where an adverse claim is filed during the period of publication.

"For the purpose of deciding the question raised by the appeal, it is only necessary to apply the provisions of law above cited to the facts relative to publication as disclosed by the record.

"These are found to be as follows: The first publication for the Tabor lode was, as already stated, on the 1st of June 1882. The adverse claim of miner was filed on the 3rd of August 1882.

"Excluding, in accordance with a long-established rule of the Department, the first day we find the 3rd of August to be the 63rd day of publication.

"An apparently plain and simple proposition is thus presented for consideration.

"The law requires that an adverse, to be effective, must be filed within the sixty days of publication. Miner's adverse claim was not filed until the sixty-third day. Was it filed within the period prescribed by the law, and has the adverse claimant a legal status as such?

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

"This would admit of no discussion except for the following facts: This Department has held for a number of years (certainly since 1874) that where publication is made in a weekly newspaper, ten insertions are essential in order to show compliance with the law requiring sixty days' publication. In such cases the tenth issue falls on the sixty-third day after the first. In view of this ruling of the Department, your office in October 1879, promulgated a decision or order containing the following: 'The last or tenth insertion being essential, it follows that adverse claims may be filed until the expiration of the day upon which the last issue of such weekly publication is made.'

"This rule has since been followed by your office, and you therefore recognise as legal and valid the adverse claim of miner filed on the day of tenth issue of paper containing publication, i.e., on the sixty-third day. In my opinion, the practice of your office referred to is not necessary as a logical result of the rule requiring ten insertions in a weekly paper, nor is it consistent with the law which prescribes the time within which an adverse claim may be filed.

"Section 2,325 of the Revised Statutes specifically fixes sixty days as the period of publication, and says 'if no adverse claim shall have been filed * * * at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent,' &c. The regulation requiring ten publications (in a weekly paper), thus in fact making the period sixty-three days instead of sixty, does not alter the law as to sixty days for the filing of an adverse.

"The regulation has its reason in the fact that in no other way can the law requiring sixty days' publication be complied with. Nine issues of a weekly paper would not cover the required period. It is true that the tenth insertion carries the publication three days beyond the legally required sixty days, yet, for the purpose of meeting the requirement of law, ten insertions are in fact necessary, since the continuity for sixty days can be preserved only by the tenth publication, which falls on the sixty-third day after the first. It is also true that the applicant cannot proceed to complete his entry until after the tenth publication, but this is because it is essential as proof of sixty days' publication. These reasons do not apply to an adverse claimant, and his acts are not controlled thereby. He has the plain letter of the law for his guide. His course is clear and his duty plain. He has sixty days on any one of which he may file his adverse claim.

"If he fails to file within the sixty days of publication prescribed by the law he is barred.

"So far as he is concerned the question is one of very simple computation.

"It would be equally plain as to the applicant except for the reasons herein given, and which do not control in considering the rights either legal or equitable of an adverse claimant.

* * * * *

"So far as the case under consideration is concerned, however, your decision that the adverse claim was properly received, and therefore dismissing the appeal, is affirmed. The rule of this decision should not operate to interfere with or take away any rights acquired under the law as it has heretofore been construed by your office. Though that construction is, in my opinion, clearly erroneous, such fact does not render illegal any acts which have been performed in accordance with and pursuant to that construction or interpretation. Until a rule is changed it has all the force of law, and acts done under it while it is in force must be regarded as legal. This view will govern you in the consideration of any similar cases which may arise.

"After the receipt of this circular at your office, you will be required to observe strictly the above ruling of the Department.

"Very respectfully,

"N. C. MCFARLAND,
Registers and Receivers. "Commissioner."

"[Circular.]

"N.] "Department of the Interior,
"General Land Office,
"Washington, D.C.,
December 4, 1884.

"GENTLEMEN,
"1. The rights granted to locators under section 2,322, Revised Statutes, are restricted to such locations or veins, lodes or ledges as may be situated on the public domain. In application for lode claims where the survey conflicts with a prior valid lode claim or entry, and the ground in conflict is excluded, the applicant not only has

no right to the excluded ground, but he has no right to that portion of any vein or lode, the top or apex of which lies within such excluded ground, unless his location was prior to May 10, 1872. His right to the lode claimed terminates where the lode, in its onward course or strike, intersects the exterior boundary of such excluded ground and passes within it.

"2. The end line of his survey should not, therefore, be established beyond such intersection, unless it should be necessary so to do for the purpose of including ground held and claimed under a location which was made upon public land and valid at the time it was made. To include such ground (which may possibly embrace other lodes) the end line of the survey may be established within the conflicting survey, but the line must be so run as not to extend any further into the conflicting survey than may be necessary to make such end line parallel to the other end line and at the same time embrace the ground so held and claimed. The useless practice in such cases of extending both the side lines of a survey into the conflicting survey and establishing an end line wholly within it, beyond a point necessary under the rule just stated, will be discontinued.

"3. These instructions will be observed by surveyors-general in all cases where surveys have not been approved by them prior to receipt hereof.

"4. If, however, a survey under the old practice has been approved by the surveyor-general prior to the receipt by him of these instructions, application for patent thereon, if otherwise regular, will not be rejected.

"5. In applications filed prior to receipt hereof at the local land office and applications allowed under the preceding paragraph entry will be allowed as heretofore when the necessary proofs under former regulations are complete.

"6. In case of applications and entries allowed under paragraphs 4 and 5, amendment of the survey will be directed by this Office, if found necessary.

"7. After the receipt of this circular at the local land office all applications for mineral patents, applications to purchase, register's final certificates of entry and receiver's receipts, must not only describe the ground claimed, but must state specifically what conflict or conflicts with other surveys, lots, or claims are excluded, giving the number of each conflicting survey or lot. The published and posted notices must contain the same information.

"8. As this circular does not affect any rights which an applicant has under the law, its enforcement in pending cases cannot operate injuriously, and it will therefore be carried into effect at once in the adjudication of cases by this Office. In the form of patents to be issued the same rule will go into operation as soon as the necessary blanks and records can be prepared.

"9. A strict observance of these regulations will be required.

"Very respectfully,

"N. C. MCFARLAND,
"Commissioner.

"Approved:
"H. M. TELLER,
"Secretary.

"To U.S. Surveyors-General,
"and Registers and Receivers."

"A.] Department of the Interior,
"General Land Office,
"Washington, D.C.,
April 21, 1885.

"GENTLEMEN,
"REFERRING to circular of this Office of July 31, 1884, relative to the designation of newspapers for the publication of final proof notices, you are instructed that you have no discretion under the law to designate any other than the newspaper 'nearest the land' for such purpose, when such paper is a 'newspaper of general circulation,' as defined in said circular. But you will in all cases designate the newspaper of general circulation that is published nearest the land, geographically measured. When two or more such newspapers are published in the same town, nearest the land, you may select the one which, in your honest and impartial judgment, as public officers will best subserve the purpose of the law and the general interests of the public. But in no case will you permit your selection to be governed by prejudice, favoritism, or personal interest.

"The circular of July 31, 1884, is modified in accordance herewith.

"For the protection of entrymen, you should see to it that newspaper charges do not exceed the rates established

by State or territorial laws for the publication of legal notices, and report to this Office should any infraction of this order occur.

"Very respectfully,
"W. M. A. J. SPARKS,
"Commissioner.

"Approved:
"L. Q. C. LAMAR,
"Secretary.

"Registers and Receivers,
"U.S. Land Offices.

"MINING REGULATIONS FOR THE DISTRICT OF ALASKA.

"Department of the Interior,
"Washington,
"July 28, 1885.

"1. In pursuance of the eighth section of the Act of Congress, approved May 17, 1884, entitled, 'An Act to provide a civil government for Alaska' (23 Stat., 24), it is hereby prescribed that the rules and regulations of the General Land Office and Department of the Interior, governing the administration of the mining laws of the United States, be adopted for and extended to the district of Alaska, so far as the same may be applicable.

"2. Notices required by mining laws and regulations to be published in a newspaper nearest the claim may, until newspapers are established in Alaska, be published in some suitable newspaper or newspapers printed in Washington territory, to be designated by the *ex officio* register of the land district of Alaska.

"3. No public lands other than specific mineral claims are subject to survey or disposal in said district.

"4. The *ex officio* register, receiver, and surveyor-general, while acting as such, and their clerks and deputy-surveyors, will be deemed subject to the laws and regulations governing the official conduct and responsibilities of similar officers and persons under general Statutes of the United States.

"5. The Commissioner of the General Land Office will from time to time direct the *ex officio* land officers in the proper discharge of their official duties, and will exercise the same general supervision over the execution of the laws as are or may be exercised by him in other mineral districts.

"L. Q. C. LAMAR,
"Secretary.

"Approved:
"GROVER CLEVELAND."

"[Circular.]

"A.] Department of the Interior,
"General Land Office,
"Washington, D.C.,
December 18, 1885.

"GENTLEMEN,
"THE habitual failure of local officers to promptly notify this Office when appeals are not taken from decisions or action of this Office, or where parties do not comply with requirements made, or where they take no action under notices directed to be given, involves great embarrassment and delay, and causes unnecessary correspondence, to obtain the information which you are expected and required to furnish without special calls therefor.

"In order to obviate these difficulties it is directed:—
"First.—That in each local land office at least two current dockets must be kept:

"1. A docket of contested cases, in which every case of individual contest shall be entered when initiated, and thereafter a memorandum of every order made or action taken in such case, either by the local office or by this Office, or by the Secretary of the Interior, shall also be entered as soon as any action is had or notice thereof received.

"2. A docket, in which shall be entered every entry of any character which is held for cancellation, or in which further evidence is called for, or other requirements made involving the right of appeal or other action by the party, and reports thereon by the local officers. In each case memoranda shall at once be entered on the docket of all holdings, calls, or other action by this Office, stating the nature thereof, the time allowed for appeal, reply, or other proceeding, the date and initial of Commissioner's letter, and the date of notice and evidence of service of notice, together with any other memoranda deemed necessary.

"Second.—The date when the period allowed for appeal, reply, or other action by the party will expire, and a report to the General Land Office by the local officers become due, must, in every instance, be distinctly noted on the dockets at the time notice is given to the party.

"Third.—Upon every Saturday the dockets must be carefully examined, and reports to this Office made in all cases where time for report has arrived.

"A strict observance of the foregoing is imperatively required.

"You will also, forthwith, make a thorough examination of your records, and immediately transmit reports in all cases in which reports are now due, entering on your dockets, as above required, the cases in which reports are becoming due.

"W. M. A. J. SPARKS,
"Commissioner.

"Approved:
"L. Q. C. LAMAR,
"Secretary.

"To Registers and Receivers,
"U.S. Land Offices."

"[Circular.]

"RULES AND REGULATIONS.

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
"August 5, 1886.

"By virtue of the power vested in the Secretary of the Interior by the first section of the Act of June 3, 1878, entitled 'An Act authorising the citizens of Colorado, Nevada, and the Territories to fell and remove timber on the public domain for mining and domestic purposes,' the following rules and regulations are hereby prescribed:

"1. The Act applies only to the States of Colorado and Nevada, and to the Territories of New Mexico, Arizona, Utah, Wyoming, Dakota, Idaho, and Montana, and other mineral districts of the United States not specially provided for.

"2. The land from which timber is felled or removed under the provisions of the Act, must be known to be of a strictly mineral character, and that it is 'not subject to entry under existing laws of the United States, except for mineral entry.'

"3. No person not a citizen or *bonâ fide* resident of a State, territory, or other mineral district provided for in said Act, is permitted to fell or remove timber from mineral lands therein. And no person, firm, or corporation felling or removing timber under this Act shall sell or dispose of the same, or the lumber manufactured therefrom, to any other than citizens and *bonâ fide* residents of the State or Territory where such timber is cut, nor for any other purpose than for the legitimate use of said purchaser for the purposes mentioned in said Act.

"4. Every owner or manager of a saw-mill, or other person felling or removing timber under the provisions of this Act, shall keep a record of all timber so cut or removed, stating time when cut, names of parties cutting the same or in charge of the work, and describing the land from whence cut by legal subdivisions if surveyed, and as near as practicable if not surveyed, with a statement of the evidence upon which it is claimed that the land is mineral in character, and stating also the kind and quantity of lumber manufactured therefrom, together with the names of parties to whom any such timber or lumber is sold, dates of sale, and the purpose for which sold, and shall not sell or dispose of such timber, or lumber made from such timber, without taking from the purchaser a written agreement that the same shall not be used except for building, agricultural, mining, or other domestic purposes within the State or territory; and every such purchaser shall further be required to file with said owner or manager a certificate, under oath, that he purchases such timber or lumber exclusively for his own use and for the purposes aforesaid.

"5. The books, files, and records of all mill-men or other persons so cutting, removing, and selling such timber or lumber, required to be kept as above mentioned, shall at all times be subject to the inspection of the officers and agents of this Department.

"6. Timber felled or removed shall be strictly limited to building, agricultural, mining, and other domestic purposes within the State or territory where it grew.

"All cutting of such timber for use outside of the State or territory where the same is cut, and all removals thereof

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

Appendix
C. XXVI.
UNITED
STATES.
Replies to
questions from
Mr. Wright.

outside of the State or territory where it is cut, are forbidden.

"7. No person will be permitted to fell or remove any growing trees, of any kind whatsoever, less than eight inches in diameter.

"8. Persons felling or removing timber from public mineral lands of the United States must utilise all of each tree cut that can be profitably used, and must cut and remove the tops and brush, or dispose of the same in such manner as to prevent the spread of forest fires. The Act under which these rules and regulations were prescribed provides as follows:—

"Sec. 3. Any person or persons who shall violate the provisions of this Act, or any rules and regulations in pursuance thereof made by the Secretary of the Interior, shall be deemed guilty of a misdemeanour, and upon conviction shall be fined in any sum not exceeding five hundred dollars, and to which may be added imprisonment for any term not exceeding six months.

"9. These rules and regulations shall take effect September 1, 1886, and all existing rules and regulations heretofore prescribed under said Act, inconsistent herewith, are hereby revoked.

"WM. A. J. SPARKS,
"Commissioner.

"Approved August 5, 1886:

"L. Q. C. LAMAR,
"Secretary."

"[Circular.—Registered Letters.]

"A.] Department of the Interior,
"General Land Office,
"Washington, D.C.,
October 28, 1886.

"GENTLEMEN,
"In addition to the registration of notices of hearings and decisions, as provided in circular of October 15, 1884, it is hereby directed that all notices required to be given by you of your decisions, or of decisions of this Office, involving the right of appeal, or the exercise of other rights within a certain time or compliance with some official requirement will hereafter be served by you personally or by registered letter.

"When personal service is had, you will transmit to this office the acknowledgment of such service or evidence thereof. When service is made by registered letter, the return letter receipt, or returned letter, as the case may be, must, in every instance, be sent up with the papers in the case.

"The costs of registration will be paid out of the advances from the proper appropriations, and estimates therefor will be embraced in the usual requisitions.

"Very respectfully,
"MM. A. J. SPARKS,
"Commissioner.

"Approved:

"L. Q. C. LAMAR,
"Secretary.

"Registers and Receivers,
"and Surveyors-General."

"[Circular.]

"Department of the Interior,
"General Land Office,
"Washington, D.C.,
"March 24, 1887.

"GENTLEMEN,
"1. For reasons stated in decision dated October 31, 1885, in the case of the Good Return Placer Mine

(4 L.D., 221), the Hon. Secretary of the Interior holds that the 'circular instructions of 9th December 1882, and 'the first requirement of the circular of 8th June 1883, 'are erroneous, and the same are accordingly overruled.'

"2. Said decision also holds—

"That the annual expenditure to the amount of \$100, required by section 2,324, Revised Statutes, must be made upon placer claims as well as lode claims.

"3. That compliance 'with the terms of this chapter,' as a condition for the making of application for patent according to section 2,325, requires the preliminary showing of work or expenditure upon each location, either by showing the full amount sufficient to the maintenance of possession under section 2,324 for the pending year; or, if there has been failure, it should be shown that work has been resumed so as to prevent relocation by adverse parties after abandonment.

"The pending year' means the calendar year in which application is made. And you will observe that the paragraph has no reference to a showing of work at date of the final entry.

"4. That as section 2,325 only directs proof of expenditure to the amount of five hundred dollars by certificate of the surveyor-general on the claim embraced in the application for patent, it must be error to hold that it further requires that amount on each individual original location, in lieu of the amount already provided for by section 2,324.

"5. Registers will, therefore, before receiving any applications or permitting entry upon applications already made, require a satisfactory preliminary showing of work or expenditure, under paragraph 3 hereof, upon or for the benefit of each location embraced in the claim, which may, where the matter is unquestioned, consist of the affidavit of the applicant, clearly and specifically setting out all the facts constituting the compliance with the law by himself or grantors. Where application is made by an incorporated company, or where an applicant satisfactorily shows by affidavit that he is not personally acquainted with the facts, the applicant's affidavit may be made by the duly authorised agent who has such knowledge, but whether made by principal or agent, it must be specifically and fully corroborated by the affidavits of at least two disinterested and credible witnesses familiar with the facts. This showing must include the year in which the application for patent is filed. The evidence specified in paragraph 32 of Circular N. of October 31, 1884 will still be required. Where the abstract of title is dated prior to the date of filing the application for patent, a continuation of the abstract to and including such date must be filed before the applicant is allowed to make entry.

"Where an application for patent embraces several locations or claims held in common, constituting one entire claim, whether lode or placer, an expenditure of five hundred dollars, under section 2,325, R.S., upon such entire claim embraced in the application, will be sufficient, and need not be shown upon each of the locations included therein.

"You will observe carefully the modification of the practice and regulations as above indicated.

"WM. A. J. SPARKS,
"Commissioner."

"Approved March 24, 1887:

"H. L. MULBROW,
"Acting Secretary.

"To Registers and Receivers,
"and Surveyors-General."

APPENDIX D.

NOTES ON THE MINING LAWS OF FOREIGN COUNTRIES,

As revised by MR. OSWALD WALMESLEY (by permission).

(See Questions 20,234 et seq.)

CONTENTS.

CHAP.	Page
1. Introduction	275
2. Notes as to Mining Law of France	276
3. Form of Act of Concession (France)	282
4. Notes as to Mining Law of Germany	285
5. " " Austria-Hungary	290
6. " " Italy	292
7. " " Belgium	301
8. " " Portugal	302
9. " " Spain	304
10. Form of Act of Concession (Spain)	306
11. Notes as to Mining Law of United States	307
12. " " Luxemburg	315
13. Form of Act of Concession (Luxemburg)	317
14. Notes on Mining and the Law as to Ownership of Minerals in India and the Colonies	319

CHAPTER I.

Introduction.

The following digest of information relating to foreign and colonial mines referred to in the evidence given before this Royal Commission on the 5th March 1891, has, by the courtesy of the Commissioners, been allowed to be revised shortly before the date of this present Report, and, on such revision, to be altered and amended, having regard to the remarks made by two of the witnesses, viz., Mr. John Bramston, C.B., and Mr. R. W. Raymond, and to corrections or suggestions which had been made from various quarters, and to numerous alterations or amendments of mining laws which have been made, especially in some of the colonies, since the digest was originally compiled.

By way of preface to the digest or notes it may be convenient to explain that, from the investigations which I have made, it appears that in nearly every country, except England and those countries which have followed her system of legislation, there exists a special and extensive mass of legislation on the subject of mining, differing as between the various countries, and often as between different portions of the same country, in details and sometimes in principle. On careful examination, however, it is found that the differences in principle are more apparent than real, and that all the important legislations connect themselves more or less with certain principal types, which are themselves distinguished from one another by sufficiently distinct characteristics. These legislations have grown up by degrees in the different countries, being based in most cases upon custom supplemented by the written law; but they have to a great extent been put into shape and expanded during the present century—a fact which is probably attributable in great measure to the immense development of mining which has followed upon the general adoption of steam-power and the establishment of railways. The principal types before referred to are, it seems to be generally admitted, capable of being reduced to three.

A.—The first of these is spoken of by French authors as the system of "accession," under which (as in England, except as regards royal mines) the minerals accede to or go with the ownership of the surface.

B.—The second is called by the French authors the "domanial" system, under which the mines belong to the

State, with the right of working them itself, or of disposing of them to the highest bidder as it thinks proper. This system prevails in parts of Italy and in Luxemburg.

C.—The third system is called by the French authors the "regalien" system, and is that system under which the State does not work the mines itself, or dispose of them to the highest bidder, but confers the privilege of working and the property in the mines upon certain persons, who must deal with the mines under established regulations and pay a tax to the State. This is, in fact, the system of "concession," which prevails in France and most of the other countries of the European continent. There are, however, various subdivisions of the last-mentioned system, depending upon the mode in which the concessions are granted.

1. AS REGARDS THE PERSON TO WHOM THEY ARE GRANTED—e.g., the discoverer (as in Germany), the first applicant (as in Spain), at the discretion of the Government (as in France), or the owner of the surface having a right of preference (as in Belgium and parts of Italy).

2. AS REGARDS THE PERIOD FOR WHICH THE CONCESSIONS ARE GRANTED—e.g., in perpetuity (as in France), or for terms of years (as in Turkey), or

3. AS REGARDS THE SUBSTANCES TO WHICH THE CONCESSIONS EXTEND—e.g.,

(a.) To all the substances reserved from the ownership of the soil within the area to which the concession extends (as in Spain and Austria), or

(b.) To the substance specified in the act of concession alone (as in France and Germany).

And there are many other differences which may, perhaps, be considered rather as constituting differences of detail than of principle.

The differences which are admittedly only differences of detail, are also very numerous and important.

It is proposed in the following notes to set out under separate headings the principal distinctive features of the different legislations, so far as they are likely to be of use or interest in considering the points which come within the scope of the present inquiry, precluding the notes with reference to the existing legislation of each country, wherever the materials for such a purpose are available, with a short sketch of the HISTORY OF THE LAW AS TO THE OWNERSHIP OF MINES in such country.

It is then proposed to give (in tabulated form where possible) particulars of THE MODE IN WHICH MINERAL SUBSTANCES ARE CLASSIFIED in each country, showing in whom the ownership of each class is vested, and to whom taxes or royalties (if any) are payable in respect of each class. From these tables it will be amply apparent that the substances which lie beneath the soil are not on the Continent, as in England, all usually subject to the same ownership, or incidents of ownership, but are divided with respect to ownership in a great variety of ways, both as regards the heads of division and as regards the mode in which the various substances are allotted under such heads. It is proposed in these tables to show to whom rents or royalties or other taxes or impositions in the nature of rent are payable; and it will be seen from this portion of the notes that in many cases, even under the system of concession, payments are made to the owners of the surface, in addition to all sums payable for compensation in respect of occupation or damage.

The subject of SEARCHES FOR MINES is next proposed to be dealt with, and in this respect again it will be seen that there is great difference between the different systems; in some cases (as in Germany) the right of search being open to every one who will indemnify the surface-owner against damage; in other cases (as in France and Belgium) no one except the owner of the surface being allowed to make the searches, without the consent of such owner or the authority of the mining administration; and in other cases (as in Austria-Hungary) not even the owner of the surface being allowed to search for the mines which are reserved from the ownership of the soil, without the permission of the mining authority. There are many further differences as to the conditions on which searches may be made.

It is then proposed to describe in respect of each country in which the system of concession obtains THE MODE IN WHICH AND THE PERSONS BY WHOM CONCESSIONS MAY BE OBTAINED, THE CONDITIONS ON WHICH THEY MAY BE OBTAINED, AND THE MODE IN WHICH THEY MAY BE WORKED UNDER, DEALT WITH, UNITED, DIVIDED, SURRENDERED, OR FORFEITED. Instances will be given illustrating the mode in which concessions are dealt with by sale or lease. Most of these instances are taken from published particulars of English limited companies which have acquired concessions of mines abroad (it being found difficult to obtain many particulars as to private arrangements), but many of them have been supplied by parties who have been actually interested in the dealings specified.

THE MODE IN WHICH AND THE CONDITIONS UNDER WHICH THE RIGHT TO WAYLEAVES, BOTH INSIDE AND OUTSIDE THE AREAS OF THE CONCESSIONS CAN BE ACQUIRED, will then be noticed. Particulars will then be given with respect to each country of the provisions of the law with respect to INSPECTION AND REGULATION OF MINES, and of the arrangements which are usually made, whether compulsorily or otherwise, for the RELIEF OF WORKMEN in case of accidents, &c.

Some slight description of the CONSTITUTION OF THE MINING AUTHORITY OR ADMINISTRATION in countries where such an administration exists will also be given, and GENERAL OBSERVATIONS will be offered, where they appear to be called for, with reference to the systems existing in the different countries.

THE AVERAGE HOURS OF WORKING BY AND THE RATES OF WAGES PAID TO THE DIFFERENT CLASSES OF WORKMEN EMPLOYED ABOUT MINES will also be stated, where materials for the purpose are available.

It may be observed that with the view of restricting these notes within reasonable limits, those countries only have been dealt with which from the value of their mining wealth, and the consequent opportunity afforded to them of competition with England, seems to deserve special notice. As regards India and the Colonies, many of which possess separate mining codes and administrations, it has only been considered necessary to make a sort of index for reference, which was prepared some time since, but which has been corrected so far as possible up to the date of the other notes.

Much of the information given in the following notes has been collected from the French and Belgian text-writers, whose names and works (referred to by abbreviations as below) are as follows, viz.:-

DUPONT.—Cours de Législation des Mines, par M. Etienne Dupont, Inspecteur Général des Mines et Professeur à l'Ecole des Mines, Paris.

F.-G.—Code des Mines et Mineurs, par L. J. D. Féraud-Giraud, conseiller à la Cour de Cassation, Paris.

Ag.—Législation des Mines Française et Etrangère, par Louis Aguillon, Ingénieur en Chef des Mines, Professeur de Législation à l'Ecole Nationale Supérieure des Mines, Paris.

Vuill.—Nouvelle Carte des Bassins Houillers du Nord et du Pas-de-Calais, par E. Vuillemin.

W. & H.—Code de l'Industrie et des Mines, par Camille Williquet, avocat, etc., et Herman Hubert, ingénieur des mines, Belgium.

The "Blue-book" which is frequently referred to in these notes is the book containing the "Reports of H.M. Representatives abroad on Mining Rents and Royalties and the Laws relating thereto." (1887, Commercial No. 7.)

CHAPTER II.

FRANCE.

NOTES AS TO MINING LAW.

Previously to 1791 the law as to the ownership of mines in France appears to have varied in character at different periods. M. Etienne Dupont, Inspector-General of Mines and Professor of the School of Mines at Paris, is of opinion that originally the French law was based upon the Roman law, under which permission to work mines was granted to explorers on payment of one-tenth part of the produce to the Imperial Treasury, and one-tenth part to the owner of the soil; that in the feudal times the rights of the Crown were split up, and, so far as concerns the mines, passed to the feudal lords; but that the kings gradually repossessed themselves of their regal rights in respect of mines, so much so that in the 15th century a chief superintendent of mines was appointed (by Louis XI.), having power to work mines or give others permission to work them, saving the indemnity payable to, and the right of preference given to, the owners of the soil. Other variations of the law succeeded, and under a decision of the Privy Council of 13th May 1698, Louis XIV., notwithstanding his previous edicts, conferred on the owners of the soil the free right of working coal mines—a right which was withdrawn under Louis XV. in 1744, when coal mines were placed, like other mines, under the system of concessions or permissions. The concessions were not, however, previously to 1791, well defined nor well respected by the power which had created them, and the need of a general law of mines made itself felt. In 1781 four inspectors of mines and quarries were appointed, and in 1783 the School of Mines was established in Paris.

The law of 28th July 1791 (passed by the National Assembly of 1789) declared that mines, both metallic and non-metallic, also bituminous substances, coals and pyrites, were subject to the disposition of the nation, in this sense only—that such substances could not be worked but by the consent of the nation, and under inspection. By this law the right of preference in obtaining concessions was given to the owners of the soil, who were also authorised to work mines in their own grounds to the depth of 100 feet without concessions. It also limited the term and areas for which concessions were to be granted to 50 years and 120 square kilometres respectively.

By the Civil Code of France (Art. 552) the owner of the soil was declared to be the owner of everything above and below, but subject to the laws and regulations relating to mines.

On the 21st April 1810 the law was passed, under the Emperor Napoleon I., after careful preparation and full discussion by the Council of State which (with some modifications) still regulates the ownership and management of mines in France.

The preferential rights to concessions given to the owners of the soil by the law of 1791 no longer exist; but the law of 1810 (Art. 6) recognises a claim by the owner of the soil upon the produce of the mines to be regulated by the Act of Concession, and (by Art. 7) the concession confers a perpetual right which is capable of disposition and transmission like all other property, except that it must not be sold in lots or partitioned without a previous authorisation of the Government to be given in the same form as the concession.

By Art. 8 the mines and plant, &c. are declared to be immovable (corresponding with English real) property, whilst the extracted minerals, &c. are declared to be movable (corresponding with English personal) property.

History of law as to ownership of mines.

It must not, however, be supposed that all the substances which in England are held to be included within the meaning of the word "minerals" are in France the subject of concession, and so practically reserved from the estate of the surface owner.

The law of 21st April 1810 was supplemented by the three following decrees, viz.:-

Decree of 18th November 1810, organising and regulating the duties of the corps of mining engineers.

Decree of the 6th May 1811, regulating the process of collection of taxes on mines (Ag. § 488, &c.). This was afterwards modified by two decrees of the 30th May 1860 and the 11th February 1874, having reference to the system of compounding for such taxes.

Decree of the 3rd January 1813, regulating the police of mines and the steps to be taken for the prevention of, or in cases of, accidents.

A law of the 27th April 1838 provided for a general system of contribution amongst concessionnaires in the event of the flooding of their mining district, and established the right of the administration to withdraw concessions under certain circumstances and subject to certain restrictions.

A law of the 17th June 1840 has reference to salt mines, which had not previously been brought within the provisions of the law of 1810.

A decree of the 23rd October 1852 forbade the union of different concessions of the same description without the consent of the administration.

A law of the 9th of May 1866 abrogated the provisions of the law of 1810 (Arts. 73 to 78), which had rendered it obligatory to obtain the previous permission of the administration to the establishment of furnaces, forges, or manufactories of iron, and also the corresponding provisions of the same law (Arts. 59 to 67, 70, 79, and 80), which had made it obligatory upon the owners of minières and the concessionnaires of iron

mines to keep the owners of furnaces (maitres des forges) in their neighbourhood supplied with iron ore, and which had authorised the latter to work the minières in their neighbourhood if not sufficiently worked by the proprietors. Manufactories of iron were in fact before 1866 specially protected industries; the law of that year made them free and brought them within the sphere of the ordinary economic law of supply and demand (Dupont, 440).

The law of 1810 was again modified by the law of 27th July 1880, which substituted a new text for certain Arts. (11, 23, 26, 42, 43, 44, 50, 70, 81, and 82), leaving intact the numerical division and the principal features of the old law. The modifications made by the law of 1880 in effect bear upon the following points, viz.: reduction of the right of protection for dwelling-houses against the opening of new works; diminution of the length of inquiries relative to the institution of concessions; declaration of the mode in which the royalty payable to the owners of the surface is to be ascertained (Ag. § 282); regulation of procedure for occupation of land within the areas of concessions; the power of opening works for safety or communication outside the areas of concessions; extension of the power of official supervision over mines; regulation of the relations between parties simultaneously working mines and minières on the same bed of iron ore; and amplification of the provisions relative to the power of the administration in reference to carrières.

Further legislation on the subject of mines which is now in contemplation is referred to more fully hereafter.

The following table is intended to illustrate the classification of mineral substances according to the existing French law, with the rules as to ownership, &c. of the different classes:—

IN FRANCE.
CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, viz., the following mineral substances when lying in veins, seams, or lumps, i.e.:- Gold. Silver. Platinum. Mercury. Lead. Iron in veins or seams. Copper. Tin. Zinc. Calamine. Bismuth. Cobalt. Arsenic. Manganese. Antimony. Molybdena. Plumbago, or other metallic matters. Sulphur. Coal (of earth or stone). Fossilised wood. Bituminous substances. Alum or sulphates from metallic bases* (Art. 2.)	In concessionaire, or his assigns. Can only be worked by virtue of an Act of Concession from the State, which vests the property in the concessionaire for ever, but with power to dispose of and transmit the same like all other property, except that it cannot be sold in lots or divided without the consent of the Government given in the same form as the concession.	Partly to the owners of the surface. The royalties payable to the owners of the surface are sometimes proportional to the yield, sometimes fixed, and sometimes partly fixed and partly proportional. They are generally known as "Redevances trefoneières," being regulated by the Acts of Concession. Partly to the Government. The taxes payable to the Government are partly fixed and partly proportional to the yield, and in addition 10 per cent. on the amount of the taxes is to be paid towards a fund in favour of unproductive mines, so as to permit a reduction of the tax in the case of proprietors of mines who have experienced losses or accidents.	The royalties payable to the owners of the surface are regulated under Arts. 6 and 42 of the law of 1810, modified as to Art. 42 by the law of 27th July 1880. The Taxes payable to the Government are regulated by Arts. 33 to 36 of the law of 1810.
II. Minières, viz.: Alluvial iron ore† (such as can be worked by open workings or by subterranean works of short extent and not permanent), pyrites suitable to convert into sulphate of iron, aluminous earth and turf.	In surface-owner (Dupont, 432); but when worked by subterranean workings permission must be obtained from, and when worked by open workings a declaration must be made to, the prefect of the Department.	If let, to the surface-owner. No royalties are payable to the Government, but <i>patente</i> is paid (see below).	Law of 21st April 1810, Arts. 57 to 70 (partly abrogated and modified by the laws of 9th May 1866 and of 27th July 1880).
III. Carrières, or quarries of slate, stone, marble, limestone, sand, clay, &c., worked either by open or underground workings.	In surface-owner. Before working a declaration must be made to the mayor and be transmitted to the prefect in order to secure inspection.	As in the case of minières (see above), the Government may, in case of necessity, take materials for road or public works, making compensation for same.	Law of 21st April 1810 (Art. 81), as modified by law of 27th July 1880.

* By a law of 17th June 1840, salt mines and salt springs are added in some respects to the category of mines, but the tax is much higher, viz., 10 frs. per 100 kilos, or about 7s. 6d. per cwt., with a minimum payment for 500 tons each year (Ag. II., 109).
† Ironstone or ore lying in seams, beds, or lumps would also be comprised within the term minières, so long as it could be worked by open workings (Dupont, 431). This arises from the construction of Arts. 69 and 70 of the law of 1810.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Both minières and carrières are subject to the usual licence fees ("patente") payable in respect of all trades and professions. These fees differ in amount according to different classes of trades and professions, and in the case of the working of minières consist of a proportional annual tax of one twentieth on the value of residences only, and of fixed taxes of 5 francs for each undertaking, and 4 francs for each workman. In the case of turf workings the tax in respect of each working is only 2½ francs. In the case of carrières the proportional tax on residences is also one twentieth of the value, and the fixed tax is 5 francs for each undertaking, and 2½ francs for each workman (Dupont, 454 and 487).

Mines, on the contrary, are not subject to licence fees (Art. 32). This exception is confirmed by Art. 17 of the law of 15th July 1880, but only applies when the minerals are sold raw without any smelting, &c.

1. *Proportional to the yield.*—These appear to vary according to the custom of district.

In the coal mines in the basin of the Loire they amount to one-fourth of the gross produce in the case of open workings, and vary from one-sixth to one-twentieth on the gross produce in the case of workings by pits, according to the depth of the pits for seams of two metres thick, and are reduced by one-third to three-fourths for seams varying from less than two metres to less than one-half a metre in thickness. They amount in practice from about 5*d.* to 7*d.* per ton, but there are cases in which from fr. 1.75 to fr. 1.85 (equivalent to from 1*s.* 5*d.* to 1*s.* 6*d.*) a ton have been paid on a production of 350,000 tons (F. G., vol. I., p. 428).

In the basin of the Aveyron the royalties are reserved on a different scale, said to be much less in practice than the rates above mentioned.

In iron mines the royalty varies from 1*d.* per metric quintal (i.e., about 1*s.* 8*d.* the ton) to about 3*d.** the ton, and in other cases from about 11*d.* to about 7*d.* the cubic metre (Dupont, 140-2).

2. *Fixed.*—These, which appear to be the most usual form of royalties, seem to vary in amount to a great degree, e.g., from 300 francs per hectare (2.471 acres) or about 5*l.* an acre (in the case of the Salt Mines de L'Est) down to 1*d.* per hectare (Iron Mines de Rancie); but it is said that royalties of from 3*d.* to 1*d.* per hectare are by far the most frequent rates (Dupont, 142).

3. *Partly fixed and partly proportional*, which vary from about 1*d.* per acre and 2 per cent. on the produce to about 3*d.* per acre and 1*d.* per ton of the mineral extracted (Dupont, 113).

These royalties payable to the owners of the soil are altogether independent of the indemnity payable to them in respect of occupation of and damage to the surface, which are provided for by Arts. 43 and 44 of the law (as modified in 1880).

The principle on which the royalties payable to the owners of the soil are fixed by the Government in the different districts is not very clear; but it is understood that regard is taken of custom, local usage, prescriptive rights, and precedents of all kinds, the fact or the absence of previous mining operations, special circumstances as to the position of the mines, &c. (F.—G., vol. I., 428).

The owner of the soil has also the right of being heard by the Council of State before the amount of the royalty is fixed (Arts. 6 and 42 as modified in 1880); but when once the amount is fixed by the Act of Concession it overrides any agreement previously made between the owner of the soil and the concessionnaire (Dupont, 147); but the same rule does not apply to agreements as to royalties come to subsequently to the Act of Concession, but even such agreements may be nullified by the ordinary tribunals (Dupont, 151).

In addition to the royalties provided to be paid to the owner of the soil, he is entitled to be indemnified in respect of land occupied for the purpose of, or damaged by, the searching for (Art. 10) and working of mines (Arts. 43 and 44 as modified in 1880).

The concessionnaire may be authorised by a decision of the prefect of the Department in which the mine is situate to occupy within the boundaries of his concession the ground necessary to the working of his mine, the smelting of minerals, or the washing of coals, and also for the construction of roads and of railways when the latter do not alter the surface of the ground; but the

owners of the surface must have been called upon to state their objections. In such case, or in case of occupation by the permission of the Government for searches, the indemnity due to the owner of the surface is fixed at double the net produce of the damaged ground if the occupation is only temporary, and if within one year the land may be cultivated as before the occupation. If the occupation lasts more than one year, and if after the occupation the ground occupied cannot be cultivated as before, the owner of the surface has the option to oblige the mine owner to purchase it at double the value it had before the occupation (Art. 43 of law of 1810, modified by law of 27th July 1880).

As regards canals and railways which can not be constructed within the boundaries of the concession without altering the surface of the ground, and also as regards the canals, railways, necessary roads and works of vital importance to the mine outside the area of the concession, a decree made in the Council of State may declare them to be works of public utility, and the law of expropriation of 3rd May 1841 may be brought into operation (Art. 44 of the law of 1810, modified by law of 27th July 1880).

Questions arising on the subject of the indemnity have to be dealt with by the civil tribunals, but may be referred by agreement to arbitration (Art. 43 as modified in 1880).

In addition to the indemnity for land occupied, the owner of the surface can also obtain compensation for depreciation of adjoining land (Dupont, 170), but there is nothing to prevent concessionnaires and surface owners from coming to mutual agreements with respect to surface damage in substitution for the statutory indemnity (Dupont, 171); and the owner of the soil has a right to be heard before land can be occupied by virtue of an order of the prefect for the searching for, or working of, mines (Dupont, 172).

The owner of the soil is also entitled to compensation for any damage to the surface through working the mines other than by occupation (e.g., by subsidence), but in this case the measure of damage is the actual loss suffered, instead of double the value of the land (Dupont, 174, and Art. 1382 of the Code Civil are applicable).

He has also the right to have security from the concessionnaire against damage to inhabited places (Art. 15, and Dupont, 196).

The fixed tax is payable annually according to the extent of the concession, and is at the rate of 10 francs for the square kilometre (Art. 34).

This fixed tax is payable in respect of each concession of mines under the same surface, so that it may be payable several times over in respect of the same surface where there are concessions of different beds of mines one above the other (Dupont, 216).

It also continues payable, whether the mines are worked or not, until the granting of a decree of renunciation of the concession.

The proportional tax is fixed each year by the budget of the State, but is not to exceed 5 per cent. on the net produce (Art. 35). The centimes additionals raise the rate to 5.5 per cent.

Reductions or remissions may, however, be and are frequently made in the rate of payment (Dupont, 243, 247), and considerable allowances are made in estimating the expenses to arrive at the net produce (Dupont, 260).

Dupont gives the total result to the Government for 1878 (omitting fractions) as follows, viz. :—

	Frs.	£
Fixed tax	104,349	
Proportional do.	1,966,088	
10 cents additional for relief, &c.	207,043	
Total	2,277,481	= about 91,090

and calculates that the payments in respect of coal in 1878 amounted to little over 1*d.* in the ton (267).

The result for 1890 (based upon the production for 1889) is as follows, viz. :—

	Frs.	£	s.	d.
Coal and other fuel	2,156,754	85,371	10	0
Iron mines	82,553	2,267	10	0
Other substances	295,133	11,682	0	0
Total	2,534,440	100,321	0	0

The above figures do not take into account the royalties payable to owners of the surface.

searches for mines.

Concessions.

The concessionnaires of mines are also subject to ordinary general taxation, including the impost of 3 per cent. per annum on profits of companies established under the law of 29th June 1872 (Dupont, 272).

No one but the proprietor of the soil can search for mines except with the consent of the proprietors, or by the authorisation of the Government, which is not to permit of searches, &c. within walled-in grounds, or in courts and gardens, or of pits, &c. being opened within 50 metres of habitations or walled-in grounds, without the consent of the proprietors. The proprietor himself can make searches in any part of his property without authority, but must not work without a concession (Arts. 10 to 12). In case of searches by the authority of the Government the proprietor of the soil has a right to an indemnity, payable beforehand (Art. 10).

Any person, whether a naturalised Frenchman or not, acting by himself or in partnership, may demand and obtain a concession (Art. 13), if he proves that he has sufficient means to undertake and carry on the work, and to satisfy the taxes and indemnities imposed upon him by the Act of Concession (Art. 14); and in case of his working under habitations or under other mines in course of working or in their vicinity, he may be called upon to give security for compensation in case of damage (Art. 15).

The Government is free to choose between the various parties seeking for a concession of the same mine; but if the discoverer of the mine does not obtain the concession, he is entitled to an indemnity from the concessionnaire, to be regulated by the Act of Concession (Art. 16).

The demand for a concession is made by petition to the prefect of the Department in which the mine is situate, accompanied by a plan of the surface (Art. 30), and particulars of any negotiations with the surface-owner on the subject of his rent (Dupont, 89). It must then be advertised and published for at least two months in a prescribed manner (Art. 23, as modified in 1880). Opposition or concurrent applications may be lodged with the prefect (Art. 26, as modified in 1880).

This is composed of two distinct parts, viz., the decree and the list of conditions ("cahier des charges"). A form of an Act of Concession is given below, from which it will be seen that the first part of the Act of Concession, the decree, sets out the names and descriptions of the concessionnaires and the nature and situation of the minerals conceded, and fixes, so far as may be, the royalties or indemnities payable to the surface-owner and the discoverer (if any), and refers to certain general provisions of the law with reference to the taxes payable to the Government, the right of inspection and regulation, the consequences of undue delay in working, the power of abandonment, &c. In the second part, the list of conditions, are set out certain special conditions as to the mode of working the mine and otherwise to which the particular concession is to be made subject. These conditions include the fixing of signs showing the boundaries of the concessions, the preparation and return to the prefect of plans and sections showing the manner proposed for working the mines, and the annual furnishing to the prefect of plans and particulars of the workings in the previous year, and other conditions which may be said to be of a more general nature with reference to the powers of the prefect to order and determine the thickness of barriers to be left, and to determine what works may be necessary in communication with other mines for ventilation and drainage, and specifying the rights of proprietors of other minerals within the same area to which the concession is made subject.

The demand, having been registered at the prefecture, is examined and reported on by the Government engineer of mines (Dupont, 72), who must satisfy himself that it conforms with the regulations. The papers are then transmitted to the Inspector General of Mines, who examines them closely and reports to the Council General of Mines (Dupont, 101).

The Council General considers the project of concession, and transmits it with the opinion of the Council to the Minister of Public Works, by whom it is examined, and modified if necessary. It is then transmitted to the Council of State, and first submitted to the consideration of the Committee of Public Works; then it is considered by the Council in General Assembly, and afterwards a concession may be granted by a decree of the President of the State (Dupont, 102). Until the granting of the decree all opposition is admissible before the Minister of the Interior or the Secretary General of the Council of State (Art. 28).

One concessionnaire can obtain several concessions, but on condition that he proceeds actively with the working of each.

As before observed, concessions are transferable like all other property, but cannot be sold in lots or divided without the consent of the Government (Art. 7).

The following are some examples of sales :—

The concession of Hasnon, in the Nord, granted in 1840, together with certain shares in the adjoining concession of Vicoigne, were purchased in 1843 by the Company of Anzin for 600,000 frs. = 24,000*l.* (Vuill. 55.)

The concession of Douvrin, in the Pas-de-Calais, granted in 1859, was purchased in 1873 by the Company of Lens for 500,000 frs. = 20,000*l.* (Vuill. 110).

The concessions of Pierrefitte, Heas, and Garvanie, Palouma and Arau, in the Hautes Pyrénées, France, of mines producing silver, lead, and zinc ores (blende) within an area of 17,000 acres, held from the French Government at a fixed rent of about 40*l.* per annum, were sold in 1887 to the New Pierrefitte Mining Company, Limited. The purchase money was 23,214*l.*, payable as to 2,000*l.* in cash, and as to 21,214*l.* in fully paid-up shares.

A case is given of a lead mine at which from 180 to 200 hands are employed, in which a French contractor has taken over the working of the concession on terms equivalent to the payment of a rent of 1,000*l.* for one year, at the end of which time the mines are to revert to the concessionnaire unless a fresh arrangement is come to.

The Rodez Collieries, Limited, was brought out in London in the month of February 1891, having been formed to acquire seven concessions of coal mines in the Aveyron district under 3,900 acres, the purchase money to be paid to the vendor being 150,000*l.* It is understood, however, that this Company has collapsed, the concessions having since been sold by auction under a lien by the vendor for unpaid purchase money. It appears from the prospectus issued by the company that coal in France is protected by an import duty of 1 franc per ton. The import duty is in fact 12 cents. per 100 kilos or 1.20 frs. per ton.

The French Mines, Limited, was also brought out in London in the month of February 1890, having been formed to acquire several concessions of gold, silver, and lead. The purchase money to be paid to the vendors in this case also was to be 150,000*l.*

Different concessions of the same description cannot be united except by the authority of the Government (decree of 23rd October 1852; Dupont, 285), but examples of such unions with the consent of the Government are not uncommon (Dupont, 289), though occasionally the Government refuse to unite several concessions into one concession so as to relieve from the necessity of working under each concession (Dupont, 291).

As a matter of fact, in the north of France at least, concessions are commonly united and are generally worked by companies, the shares in which are dealt with and quoted on the stock exchanges. The sale of concessions is thus constantly going on in detail. The following figures show the selling prices at various dates of the shares in the six principal coal companies operating in the north of France :—

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Sales of Concessions.

Surface land occupied or damaged.

* This is so according to Dupont, who puts the lowest tonnage royalty at 8 centimes, but gives no examples. In another author examples are given in which the lowest royalties for iron are 70 and 80 centimes the ton (A.G., vol. I., p. 256).

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

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TABLE A.

AVERAGE PRICE OF SHARES AT VARIOUS PERIODS OF THE SIX PRINCIPAL COLLIERY COMPANIES IN—

	The Nord.			Pas-de-Calais.		
	Anzin.	Aniche.	Escarpelle.	Dourges.	Courrières.	Lens.
A.D.						
1806	22,000 frs.					
1830	90,000 "	1,500 frs.				
1840	150,000 "	8,000 "		(1855)	(1853)	(1853)
1850	200,000 "	16,000 "	500 frs.	1,000 frs.	1,000 frs.	500 frs.
1860	150,000 "	78,000 "	1,000 "	2,500 "	3,500 "	2,000 "
1870	300,000 "	98,400 "	1,150 "	3,800 "	10,500 "	9,000 "
1880	535,700 "	180,912 "	5,077 "	8,228 "	27,598 "	25,002 "
1890	441,500 "	188,832 "	3,622 "	11,137 "	43,739 "	26,990 "
September 14, 1891	505,000 "	198,000 "	2,230 "	9,400 "	11,200 "	26,150 "

It will be seen from the above table that the value of the shares in the Company of Aniche was 132 times greater in 1891 than it was in 1830, and that the value of the shares in the Company of Lens was over 50 times greater in 1891 than it was in 1853, and that the shares in the other companies have all increased more or less considerably in value since the earliest dates at which records of the values are available from the quotations on the Bourse at Lille or other reliable sources. This table has been certified by Mr. Vuillemin to be correct.

Through the union of concessions, the fields or areas of mines held in the same hands sometimes become very large: thus the principal company in the district of the Nord—that of Anzin—owns eight concessions, comprising together an area of 28,053 hectares = nearly 70,000 acres, or over 109 square miles.

In case the working of a concession be reduced or stopped in such a way as to endanger public safety or the requirements of consumers, the prefects, after having heard the owners of the mines, shall make a report to the Minister of Public Works in order that a decision should be taken (Art. 49, law of 1810). In such cases the decree of concession reserves to the Government the right to withdraw the concession; but this power has rarely been made use of (Dupont, 315).

In 1838 many mines were left unworked, and the flooding of mines became a public danger; a special law (April 27, 1838) was passed, empowering the Government to force the mine-owners to form syndicates to execute the necessary works to protect their mines and to contribute to the cost thereof *pro rata* of their interest. In case of non-payment of the contribution to such cost, the Government may withdraw the concession, and sell the mine by auction. Notwithstanding the minute provisions of this law, in 1877, out of 1,216 mines, only 499 were worked, and out of 612 coal mines, 277 were abandoned. In order to put an end to this state of things, the Minister of Public Works gave notice to the mine-owners who had stopped work that, if it were not resumed within two months, their concessions would be withdrawn; but these threats were not enforced. From the year 1838 to 1877 only six declarations of forfeiture occurred, and there only appears to have been one since the latter date. In 1883, out of a total number of 1,328 concessions, only 506 were worked (Ag. § 565 note 2). At the end of 1889, there were in France 1,372 concessions in existence, of which 465 only were worked (Statistique de l'Industrie Minière, 1891, p. 2).

Special provisions are made in the law of 1810 as regards concessions previously granted, and also as regards the workers of mines who had not complied with the law of 1791. Many of the most important coal mines in France are still held under such concessions (Dupont, 396). The concessions granted previously to the publication of the law of 1810 were merely confirmed *ipso facto*, the concessionnaires being rendered liable to pay the rents to the Government provided for by the law of 1810 (Arts. 51 and 52). The workers of mines who had not complied with the law of 1791 were bound to obtain a concession from the Government in accordance with the law of 1810 (Arts. 53 to 56).

The mode in which these can be acquired within the boundaries of the concession has already been stated. Under Art. 44 of the law of 1810, modified by the law of 27th July 1880, concessionnaires can obtain the right to execute work of this description outside the limits

of their concession, on the Council of State declaring such works to be of public utility.

This is fully provided for by Arts. 47 to 50 (inclusive) of the law of 1810, amended by the law of 27th July 1880 and numerous other laws, decrees, and ordinances, in accordance with which the Government mining engineers exercise, under the orders of the Minister of Public Works and the prefects, extensive powers of inspection with the view of preventing danger and providing for the preservation of buildings and the safety of individuals. The prefects have also power, at the request of the engineers, to require mine-owners at their own cost to execute works necessary to protect buildings and the surface, and to secure the safety of the public, the mines, the workmen, and of ways of communication, mineral waters, and the water supply for towns, villages, or public establishments at the cost of the concessionnaires (Arts. 49 and 50 and decree of 26th March 1845).

By a decree of the 3rd January 1813 (Art. 15) (which applies to "minières" as well as mines, but not to "carrières") mine-owners are required to keep on their premises, in proportion to the number of workmen and the extent of the workings, such remedies and aid appliances as may be required by the Minister of Public Works, and to conform to the regulations approved by him in that behalf. Under this article directions have been issued as to the first aid to be given to persons wounded or injured, and list of the remedies to be kept on the spot is prescribed. Under Art. 16 of the last-mentioned decree, the Minister of Public Works, on the proposition of the prefect and the report of the Director-General of Mines, is to indicate the mines which, from their importance and the number of workmen which they employ, should keep and maintain at their expense a surgeon specially attached to the service of their undertaking. One surgeon may be attached to several undertakings at the same time by agreement, the expense to be divided amongst the different undertakings in proportion to the extent of their interests.

The same decree (Art. 11) provides that in case of accident in mines, notice must at once be given to the authorities who (Art. 14) shall have power to take all necessary measures either to put an end to the danger or to prevent the consequences, and (Art. 17) the owners and managers of neighbouring mines are required to furnish all the assistance they can, any expenses (Art. 20) of assistance to wounded men or repair of works being borne by the owners of the mine where the accident occurred. The mining engineers or other authorities must report upon the accidents, and in cases of negligence the mine owners and managers may be punished by imprisonment and fine, besides being made liable in damages.

There is nothing approaching to compulsory insurance of workmen in France; but by the law of 11th July 1868 any workmen may make provision for the cases of death or accident, the insurance fund being administered by Government officials, and by the law of 18th June 1850 (modified by the law of 20th July 1886) workmen may make similar provision for the case of old age.

In addition to the public insurance institutions there are numerous private associations or mutual aid societies, the objects of which are usually to make provision for sickness and burial, but occasionally to also to provide pensions in case of old age or incapacity for work. The mutual aid societies are divided

Inspection and regulation of mines.

Relief societies, &c.

Mining authority.

into three classes, known as: first, free or private societies, which, beyond requiring official authority under the law relating to associations, are under no restriction as to their rules and organisation; secondly, approved societies, which are regulated by State decrees and subject to the approval of their rules by the prefect, and have in return certain legal advantages over the free societies; thirdly, societies recognised as being of public utility.

There are also insurance societies formed in connexion with particular undertakings, differing from the free or authorised mutual societies in this, that the associates have between them the common bond of being workmen in the same undertaking, and are generally bound to belong to the society as long as they are in the employment of such undertaking. In other respects the free and authorised societies and the societies in connexion with particular undertakings resemble one another, the objects in both cases being generally to ensure assistance, temporary or for life, and medical aid to sick or wounded workmen, relief to widows and children, and sometimes pensions in old age. In both cases the advantages are assured by the contributions of all those who participate to a common fund, whilst the contributions given by the head of the undertaking resemble the contributions given by honorary members of the mutual aid societies.

There is no legal obligation to form relief funds in connexion with mining undertakings; but, as a matter of fact, nearly all mines have their special relief funds, with special regulations for management of the same. Some of these funds (and this is usually the case) are supported by subscriptions from the workmen, supplemented by contributions from the mine owners; some of them by the workmen alone, and some of them by the mine owners alone. The contributions by the workmen usually average from two to three per cent. of the amount of their wages.

Many proposals have been brought forward of late years for general legislation on the subject of relief funds, but none of them have as yet been carried into effect.

Some of the mining companies make special terms with hospitals for the benefit of their workmen; others have established hospitals; others have established co-operative shops; others erect houses and establish schools for the benefit of their workmen, whilst certain companies make free distributions of coal amongst their workmen.

At the head of the mining administration is the Minister of Public Works, whilst in each department the prefect is the head of the service, under the authority of the Minister of Public Works. Under the immediate orders of the Minister of Public Works is the Council-General of Mines. This is composed of the Inspectors-General of the first and second class, presided over by the Minister of Public Works, or, in his absence, by a vice-president appointed for a year by the Minister out of the Inspectors-General.

The duties of the Council-General of Mines are to give their opinion as to the applications for concessions, and as to the conditions to which concessionnaires should be subjected, and as to contentious questions submitted to the Minister of Public Works. Below the Inspectors-General of the first and second class come the engineers-in-chief, also divided into two classes, and under these are the ordinary engineers of the first, second, and third classes. To these are added certain inferior officers called "gardes mines," who are divided into four classes.

The engineers-in-chief have to render accounts to the prefects of mining works and to receive and execute their orders relative to inspection; to report to the Director-General, the prefects, and the "procureurs" of the Republic all breaches of the laws and regulations as to mines and to inspect the mines in their departments in turn, under the orders of the Director-General. They have the right to inspect the plans of all ancient concessions of mines which should be deposited at the prefectures, and to take copies to keep at their offices; also minutes of all the plans and maps relative to new concessions which have been applied for or obtained. They propose to the prefects the advertisements and lists of charges for concessions of mines, and they give their opinions on the reports of the ordinary engineers, whose duties they must fulfil in cases of necessity (Arts. 47 to 50 as modified in 1880).

The ordinary engineers must visit at least once a year all the mines being worked in their sub-department, and in case of a breach of the laws, or of danger or accident, being notified at a working, they must

attend at the place and prepare a report for the engineer-in-chief with the view of effecting a remedy. They must notify to the mine owners defects which they may remark in the workings, and propose such improvements as they may consider desirable. They have to verify the plans attached to applications for concessions, and give their opinions upon such applications and also on all official matters relative to mines, minières, and carrières. They have to prepare accounts of mine-rents, and take part in the committees of assessment of such rents, and (in cases contemplated by Art. 50 of the law of 1810) when a working endangers public safety they propose to the prefect measures of prevention, and cause them to be carried out in the event of the concessionnaires refusing by virtue of decision of the prefect, and in cases of imminent danger they may call upon the local authorities to take immediate preventive measures. They may act as experts in mining matters, and they have other similar duties and powers.

The "gardes mines" have to assist the engineers in all that concerns the inspection of mines, minières, and carrières; the collection and copying of surface and underground plans, and the inspection of steam engines and the plant of railways (which also forms an independent part of the duty of the engineers of mines).

There is a head office of mines in Paris, and the rest of the country is divided into various districts and sub-districts for the purposes of the mining administration.

The principal objection which is taken to the French system of mining law seems to be that there is too much State control, especially in the matter of granting concessions, it being left to the pleasure of the State whether the mine should be granted or not, and to whom it should be granted; whilst in other countries the discoverer (as in Germany) or the first applicant (as in Spain) is entitled to a grant of the concession; and a well-known French author (Ag. X.) contrasts this position of the mining industry in France, with regret, to that of England, which, he says, has had the happy fortune never to know, as regards the working of mines, any system but that of complete industrial and economic liberty, except so far as State interference has been directed towards avoiding accidents in mines.

It is not surprising to find that the respective claims of the concessionnaires of iron mines, on the one hand, and of the owners of the surface on the other hand, with respect to the boundaries of the mines and of the minières respectively, have given rise to numerous law suits (Dupont, 434); and, although Art. 70 of the law of 1810 (revised in 1880) aims at preventing such difficulties (by providing that, when the Minister of Public Works, at the instance of a concessionaire, forbids the owner of a minière from continuing his workings so as to prevent the working of the mine by the concessionaire, an ample indemnity is to be paid by the concessionaire of the mine to the owner of the minière), there is evidently still room for much dispute on the subject (F.-G. 911 and Ag. § 684).

Difficulties also seem to arise between the respective concessionnaires of different substances under the same area (F.-G. 89), and between the concessionnaires of adjoining mines, in spite of the provisions made by the Act of Concession K. to O., some of which are considered by competent authorities to be of doubtful validity (Ag. § 415).

The following figures (showing the comparatively greater cost of transport from the French than from the English coal-fields, were compiled by M. Vuillemin in the year 1886:—

The freight from Cardiff and Newcastle by Havre and Dieppe to Rouen is from 6 to 7 frs., so that English coal can arrive at Rouen:—

	Fr.	cts.
Cost price	9	65
Freight	6	00
Import duty	1	30
	16	95

Whilst French coal from the Nord would cost at Rouen

	Fr.	cts.
Cost price	11	00
Carriage by rail (204 kilom.)	7	40
	18	40

* It is understood, however, that the cost of railway transport to Rouen from the Nord has been somewhat reduced since 1886.

General remarks.

Competition between English and French coal.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Wages and working hours.

This is for Rouen, but for Havre and the left bank of the Seine the advantage in favour of English coal would be much greater.

M. Vuillemin concludes from this and other examples which he has procured that it is impossible for French coal to compete, except under very unfavourable conditions, with English coal along the ocean sea-board of the Continent, and in the Mediterranean.

It may here be mentioned that the imports of English coal into France itself have steadily increased, as will be seen from the following figures furnished by M. Vuillemin and taken by him from official sources.

A.D.	Coal imported from England.
1850	602,410 tons.
1860	1,365,300 "
1870	1,827,310 "
1880	3,291,653 "
1890	4,260,010 "
1891	4,306,240 "

During the past year (1891) whilst the imports of coal into France from England and Belgium have both increased, the imports of coal into the same country from Germany have actually decreased by nearly 10 per cent., a fact which M. Vuillemin attributes to the difficulty which Germany finds in supplying the wants even of her own industries.

The following table has been prepared from the figures given by M. Vuillemin in the pamphlet referred to by Mons. Raoul Duval before this Commission (19,409):—

TABLE showing average Wages and Hours of Labour of Coal Hewers employed in the different Districts in France.

Name of District.	Number of Hewers employed.	Average Wages per Day paid in the First Months of 1890.	Hours of Labour from Bank to Bank.
1. Valenciennes	24,083	frcs. cts. s. d. 5 30 = 4 2½	9'40
2. Loire	3,279	5 66 = 4 6	10'45
3. Gard	3,483	5 11 = 4 0½	11'70
4. Bourgogne and Nivernais	3,273	4 55 = 3 7½	9'24
5. Tarn and Aveyron	2,220	4 36 = 3 5½	9'17
6. Bourbonnais	1,837	4 28 = 3 4½	10'0
7. Etc.	—	—	—
France	42,756	5 04 = 4 0	9'45

But it must be borne in mind that the French miners have advantages given to them in the way of free coals, cheap houses, gratuitous medical assistance, &c., which Mr. Vuillemin reckons to be worth about 4d. per day in addition to the wages paid direct.

It is also stated on competent authority that the average wages of coal hewers in France were increased after the first three months of 1890 (to which period the figures in the above table relate) before the end of 1891 to 5'77 frcs. = 4s. 7d., and this, with the addition of the 4d. for accessory advantages before referred to, makes up the sum of 4s. 11d., which is believed to represent the full average wage per day of coal hewers in France in the year 1891.

As before stated, further legislation is now contemplated, and the Report of a Commission of Deputies presented to the Chamber by M. Jacques Pion in February 1889 contains the text of a proposed new law, by which the Commission propose that the existing mining law should be codified, a variety of alterations being at the same time introduced, such alterations having been principally suggested by four projets de loi submitted to the consideration of the Commission. The following are the principal alterations which are proposed by the Commission, viz.:—

The suppression of the class of minières, and the practical fusion of the substances now belonging to that class into the category of mines which are the subject of concessions. The reason for the existence of minières as a separate class is stated by the Commissioners to have disappeared on the passing of the law of 1866, which put an end to the servitude which such minières were previously under with respect to the State-authorized iron manufactories. Provision is proposed to be made for the protection of the proprietors of subsisting minières by entitling them to concessions on application within two years, and for cases in which a minière lies above a mine, when, if the concession is

made to the owner of the mine, he must before taking it over pay an indemnity to the owner of the minière.

The recognition of the right to the concession of the discoverer who proves the existence of a bed of mineral substance. This is practically an adoption of the German system of institution of ownership, and is intended to meet the objections which are raised against the present system of granting concessions at the goodwill of the Government.

It is proposed to give the right of search to the first comer who complies with the regulations and gives security against damage to the surface. It is proposed, however, to accord to the owners of the surface for six months a right of preference to the permissions to search for minerals on their own land.

It is proposed to limit the extent of concessions to a maximum of 2,000 hectares for mines of combustible substances, and of 800 hectares for mines of other descriptions, and no two points of the area are to be further from each other than 5 kilometres in the case of combustible substances, or than 3 kilometres in the other cases.

It is proposed to abrogate the present fixed rate of indemnity for land occupied, and in each case to leave it to a jury to fix the amount of compensation to be paid.

It is proposed to raise the fixed rent payable to the Government from 10 cents to 50 cents per hectare, and (confirming the present practice) to define the proportional rent as 5 per cent. of the net profit calculated on the results of the previous year's raisings.

It is also proposed to confine the power of forfeiture to the single case where a mine continues unworked for two years and the proprietor fails for six months, after notice from the prefect, to continue working, in which case he may be cited before a civil tribunal, which may order the sale of the mine, and, on failure to sell, the mine may become forfeited. The concessionnaire is no longer to have power to renounce his concession.

The redevances trefondières payable under all concessions are to be confirmed, but the concessionnaires are to have the right to buy them up (in cases where they are fixed, at 20 years' purchase, and, in other cases, at a sum to be fixed by the tribunal having regard to the value of the minerals). It would appear that the proposed law does not contemplate the reservation of any rents to the owners of the surface in future concessions; but the right of preference to a permission of research accorded to the owner of the surface during the space of six months (available afterwards for two years and renewable by the prefect) appears to be intended to have the practical effect, if it is exercised, of securing to him the right to a concession of the minerals under his land.

The Commissioners remark that the main object of legislation should be to assimilate mining property with ordinary property, to secure entire freedom of contract and the independence of the mine owner; and they say that when such legislation is attained the law as to mining will be confined to some regulations for the security of workmen and of the dwellers on the surface, and some rules as to the institution of the property and the right of inclosure. They also remark that England and the United States are almost in complete possession of a law as wise in its simplicity as that which they indicate as the perfection of mining law; that everywhere the regalian right is being assailed; that everywhere the power of the State in such matters is being restrained; and that everywhere greater belief is being placed in private enterprise and in industrial liberty, and that it is a remarkable fact that the more this faith increases the more mineral wealth is developed.

No change of the law has, however, been made since the report of the Commission.

CHAPTER III.

FRANCE.

FORM OF ACT OF CONCESSION.

1st PART.—DECREE OF CONCESSION.

(Adopted in 1882.)

NOTICE.—(General clauses, letters A, B, C, &c.; special clauses, same letters with a number placed on the right, as B¹, B².)

Reference to:

1st. Law of 21 April 1810, modified by the law of 27 July 1880;
or for the concession of mines of iron.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

- Law of 21 April 1810, modified by the law of 9 May 1866 and 27 July 1880.
2nd. Decree of 18 November 1810.
3rd. Decree of 6 May 1811, modified by decree of 11 February 1874.
4th. Decree of 3 January 1813.
5th. Law of 27 April 1838, and Ordinance of 23 May 1841.
6th. Ordinance of 18th April 1842.
7th. Ordinance of 26 March 1843, modified by decree of 25 September 1882.
8th. Decree of 23 October 1852.

Note.—In addition, when for concessions of mines of salt, of springs, or of wells of saline waters.

Law of 17 June 1840, and Ordinance of 7 March 1841, and also Ordinance of 26 June 1841.

Note.—But in such case the decrees of 6 May 1811 and 11 February 1874 must be excluded.

Articles.

Art. A.—Concession is made to of the mines of included within the limits hereafter stated, Commune of Arrondissement of Department of

Art. B.—This concession, which shall take the name of Concession of is limited in accordance with the plan annexed to this decree as follows;

the said limits include a surface of square kilometres hectares.

Art. B¹.—(Special to concessions of mines of iron, not including iron ore in seams, in beds, or meadow ore, which are workable as minières or some of them.) (a.) (In certain cases two articles, B¹ and B², may be included together in the decree.)

This concession does not apply to iron ore in seams, or in beds, or of meadow ore. (b.) (in accordance with the cases the three sorts of ore may be kept in, or some of them may be excluded), which may be worked as minières and remain at the disposal of the owners of the said minières in accordance with the terms and conditions of Arts. 57, 58, 68, 69, 70, of the law of 21 April 1810, modified by the laws of 9 May 1866 and 27 July 1880.

Art. B².—(Special for concessions of mines of iron, including iron in seams, in beds, or meadow ore, workable as minières, or including at least some of them.) (Notice (a) of Art. B¹.)

Are now joined to the concession, without prejudice to the rights given to the owners of minières by the paragraph 3 of the law of 21 April 1810, modified by the laws of 9 May 1866 and 27 July 1880, the iron ore in seams, or in beds, or meadow ore (note (b) of Art. B¹), which may be worked as minières.

The limits between the iron ore included in the concession and the ore of the minières joined to the concession which will cause an indemnity to be paid to the owners of the said minières are fixed as follow:

Art. C.—Nothing is now decided as to the deposits of any other mineral

the concession of these deposits of mineral may be henceforth granted if needful in the usual forms either to the concessionnaire of the mines of or to any other person.

Art. D.—The rights given to the owners of the land by Arts. 6 and 42 of the law of 21 April 1810, modified by the law of 27 July 1880, on the produce of the mines of which concession is granted are fixed at

Art. D¹.—(a.) (Special in case there is a rent to pay to the inventor.)

The concessionnaire shall pay to in accordance to Art. 16 of the law of 21 April 1810, and as an indemnity for the discovery of the sum of

Note (a) of D¹.—As agreed with the Council of State this Article, since the adoption of the form, has been worded as follows:

The indemnity given in accordance with Art. 16 of the law of 21 April 1810 to for the discovery of the deposits (state names of deposits) is fixed at the sum of

Art. E.—The concessionnaire shall comply with the provisions of the conditions of grant annexed to this decree, and which is considered as being an essential part thereof.

Art. F.—If the concessionnaire wish to renounce the whole or part of the concession he shall apply, by means of petition to the prefect, six months at least before the time at which he intends to cease the working of his mines, and he shall join to the said petition:—

1. The plan and a description of the works.
2. A certificate delivered by the registrar of mortgages showing that there are no inscriptions of mortgages on the concession, or, if it be not the case, a list of such as may have been taken, together with the deed of removal of such inscriptions, at least for the portion of the deposit which he intends to renounce.

When such documents have been furnished the petition shall be published and advertised for two months in the places and in accordance with the forms fixed by Arts. 23 and 24 of the law of 21 April 1810, modified by the law of 27 July 1880, for the applications for concessions of mines.

The oppositions, if there should be any, shall be received and notified in the forms fixed by Art. 26 of the same law.

The renunciation shall only be effectual when it shall have been accepted, if such be the case, by a decree considered in the Council of State.

Art. G.—This decree shall be published and posted up at the expense of the concessionnaire in the commune in which the concession is situate.

Art. H.—The Minister of Public Works and the Minister of Finance are intrusted, each as far as it concerns him, with the execution of this decree, which shall be printed by extract in the "Bulletin des Lois."

2ND PART.—STATEMENT OF CONDITIONS OF CONCESSIONS OF MINES (Cahier des Charges).

(General clauses, letters A, B, C, &c.; special clauses, A¹, B², &c.)

Art. A.—Within the delay of from the date of the notification of the decree of concession, boundaries shall be placed at all points used as limits to the concession where it shall be deemed necessary. This work shall be done at the expense of the concessionnaire at the request of the prefect, and in the presence of the engineer of mines, who shall make a written report thereof. Official copies of this written report shall be deposited with the official documents at the seat of the prefecture of the department of and at that of the commune of

Art. B.—Within six months' time from the date of the notification of the decree of concession the concessionnaire shall forward to the prefect the plans and sketches of the mines and of the work already done. These plans to be made on a scale of 0^m.001 per metre compassed to be exact north and divided in squares per 10 millimetres. He shall join to it a statement showing in detail the mode of working which he intends to follow.

This mode of working shall also be shown on the plans and sketches.

The levels of the principal points, such as the mouths of the pits and galleries, the points of connexion of the galleries with the pits, and of the galleries between themselves with reference to a fixed horizontal level, shall be marked in metres and centimetres on the plans.

The concessionnaire shall join to it on transparent paper a plan of the surface covering the plan of the works and showing the position of the houses and inhabited places, buildings, ways, mineral waters, spring supplying towns, villages, boroughs and public establishments, canals, watercourses, &c., &c.

Art. B¹.—(For salt mines.) Within six months from the date of the notification of the decree of concession, the concessionnaire shall submit to the prefect the statement, the plans, and sketches provided for in Art. 3 of the Ordinance of 7 March 1841.

The plans shall be made to the scale of 1 millimetre per metre compassed to the exact north, and divided in squares per 10 millimetres.

The statement of levels of the principal points, such as the mouths of the pits, galleries, bore-holes, points of connexion of the galleries with the pits, and of the

galleries with reference to an horizontal plan fixed and settled, shall be marked in metres and centimetres on these plans.

The concessionnaire shall join to them on transparent paper a plan of the surface, &c. (as above).

There shall be as many copies of these plans as there are of communes included in the undertaking.

The above-mentioned schemes, as also the plans in support in accordance with Art. 3 of the Ordinance of 7 March 1841, shall be, before any decision is arrived at, made known to the public in the forms and terms prescribed by the said article.

The bills shall be put up at the request of the prefect and at the expense of the concessionnaire.

Art. B².—(Special in case in which a proportional rent has been stipulated in favour of the owner of the surface.) The plans and the statement furnished in accordance with the preceding article shall include the drawing and the statement of the surface lands that the field of working is to comprise.

An extract of the declaration made by the engineer of mines shall, at the request of the prefect and at the expense of the concessionnaire, be posted up for one month at the door of the mayoralty houses in all the communes where the concession lies.

Art. C.—The prefect shall refer these documents to be considered by the engineers of mines if it be found that the works contemplated may cause some of the wrongs or dangers anticipated as well in Title V. of the law of 21 April 1810, modified by the law of 27 July 1880, as in the sections II. and III. of the decree of the 3rd January 1813. The prefect shall notify to the concessionnaire his opposition to the execution of the whole or parts of the said works. If the prefect has made no opposition within two months from the day of lodging the documents with the prefecture, the execution of the works by the concessionnaire shall be proceeded with.

Art. C.—(For salt mines.) The execution of the scheme of works shall be authorised if deemed advisable by the prefect in the cases in which no claim has been made during the inquiry above referred to. If it be otherwise the Minister of Public Works shall decide. If it be found that the works may cause some of the wrongs or dangers anticipated, as well in the Title V. of the law of 21 April 1810, modified by the law of 27 July 1880 as in sections II. and III. of the decree of 3 January 1813, the authorisation shall be given only after making the necessary alterations in the schemes.

Art. C¹.—(Special in case there is a proportional rent to pay to the owner of the ground.)

As soon as the concessionnaire shall begin to extract under a new property, he shall be bound to advise the owner of the ground thereof. This owner will be entitled at his own expense to have on the mine an agent to verify the quantity of daily produce of the works.

Art. C².—(Special to salt mines.) No bore-hole for the working of salt by dissolution shall be allowed to be made within the boundaries of the concession at any horizontal distance of less than metres of all railroads built or to be built, and of less than metres from all canals established or to be established, without prejudice to the future application in case of need of the Art. 50 of the law of 21 April 1810, modified by the law of 27 July 1880.

Art. D.—When the concessionnaire wishes to open a new field of works or establish new pits or galleries from the surface, or to alter the mode of working previously followed, he shall address to the prefect a general plan of the concession, a plan of the works, an explanatory statement, and a corresponding plan of the surface, the whole of it made out in accordance with what is prescribed in the above Art. B.

This scheme shall be followed up as is prescribed in Art. C.

Art. E.—In case the works planned by the concessionnaire shall extend under or in the immediate vicinity of buildings, houses, or inhabited places, other works, roads, mineral springs, springs supplying towns, villages, boroughs, or public establishments, under canals or water streams, or at a horizontal distance less than metres from their sites, the scheme of works will have to be previously submitted to the prefect.

This shall be followed up in the manner prescribed by Art. C. when the interested parties have been heard, and without prejudice to the future application in case

of need of the Art. 50 of the law of 21 April 1810, modified by the law of the 27 July 1880.

Art. F.—In the vicinity of railroads it is forbidden to the concessionnaire to work (for salt mines add "by galleries") at any depth under a space of ground limited on the surface by two lines drawn parallel to the limits of the railroad and its dependencies, and to metres of distance from those limits, if he has not obtained the authorisation therefor by the prefect, given on the report of the engineers of the mines, the railway company, and control service having been heard.

Art. G.—Each year, in the course of January, the concessionnaire shall forward to the prefect the plans and sketches of the works made in the course of the preceding year. The plans shall be made out at the scale of one millimetre per metre, in order that they may be annexed to the general plans referred to in the preceding articles, and including all the details mentioned in the said articles, and shall be verified by the engineer of mines.

The concessionnaire shall annex to them on transparent paper a copy of the plan of the surface prescribed for by the Arts. B. and D., including, with the alterations which may have taken place, the information mentioned in Art. B.

Art. H.—When the concessionnaire shall wish to abandon a portion of the underground works, he shall be bound to make a declaration thereof to the prefecture, and to join to this declaration a plan of the works, as well as a plan corresponding with the surface.

It shall afterwards be proceeded thereon as is prescribed in Arts. 8, 9, and 10 of the decree of 3 January 1813.

Art. H¹.—(Special in the case in which a proportional rent is stipulated in favour of the surface owners.)

The declaration of the concessionnaire shall contain the description of the properties which correspond to the field of works it is proposed to abandon. An extract of this declaration, made by the engineer of mines, shall be posted up as is prescribed above in Art. B¹.

Art. I.—The openings to the surface of pits and galleries which shall become useless shall be filled up or closed by the concessionnaire in the way which shall be prescribed by the prefect on the proposal of the engineer of mines and at the request of the mayors of the communes of the district in which the openings are situated.

In case of default proceedings will be taken in accordance with what is said in Art. 10 of the decree of 3 January 1813.

Art. P.—(Special to coal mines, lignite, and anthracite.) The debris and materials spontaneously inflammable shall be carried to the surface as the works are proceeded with, unless a special authorisation be delivered by the prefect on the report of the engineer of mines.

Art. P¹.—(Special to mines of fuel.) The concessionnaire must comply with the measures which may be prescribed by the administration to prevent the dangers caused by the presence of inflammable gas and of its explosion in the mines, and bear the burdens which may for the purpose be imposed upon him.

Art. P².—(Special to salt mines.) In cases in which the working of salt takes place by dissolution* the concessionnaire shall be bound to execute all the works which shall be prescribed by the prefect on the report of the engineer of mines for the purpose of ascertaining the position and the size of the excavations underground produced by the action of the waters.

Art. J.—The concessionnaire shall constantly keep in order and up to date on each mine:

- 1st. The plans and sections of the underground works made out at the scale of one millimetre per metre.
- 2nd. A book stating the daily advance of the works, and the circumstances of the working of which it will be useful to keep a record, such as the nature of the deposits, their thickness, their quality, the nature of the roof and side walls, the measure of the waters running in the mine, &c., &c.
- 3rd. A book of daily control of the workmen employed in the works outside and inside.
- 4th. A book of extraction and of sale.

The concessionnaire shall exhibit these plans and books to the engineers of the mines each time that they shall require same.

* The mode of working by dissolution is that the mine is flooded, and the water is pumped out when the salt has dissolved in it.

The concessionnaire shall transmit to the prefect in the form and at the time which shall be named to him the list of the workmen, that of the produce extracted during the preceding year, and a detailed declaration of the net produce of the works liable to tax. (The prescription relating to the declaration of the net produce liable to tax does not apply to salt mines.)

Art. J¹.—(Special to cases in which a proportional rent is stipulated in favour of the landowners.) The plans and books mentioned in the preceding article shall contain an indication of the ground properties under which the working takes place.

Art. K.—(Special to cases in which the deposit lately conceded extends under grounds already conceded for the working of a mine of another kind.)

The concessionnaire shall be bound to allow all the openings which may be made for the working of the mines of by the concessionnaires of these mines, or even a passage through his own works, if it be found necessary, in return for an indemnity which shall be fixed by mutual consent or by experts.

In case of dispute as to the necessity or utility of these works, the prefect shall decide on the report of the engineer of mines, the parties having been heard.

Art. L.—(Special to the case in which the deposit lately conceded should extend under grounds already conceded for the working of a mine of another kind.)

If the working of the deposits of the subject-matter of this concession shows that they approach the subject-matter of the concession of the concessionnaire shall only be allowed to work such part of the deposits the extraction of which shall be found to be without prejudice to the mines of the concession of situated in the vicinity.

In case of dispute on this subject it shall be decided by the prefect as is stated in the preceding article, and the concessionnaire shall be obliged to comply with the measures prescribed by the administration in the interest of the proper working of the two substances.

Art. M.—If the deposits to be worked in the concession of extend out of this concession, the prefect can order according to the report of the engineers of mines, the concessionnaire having been heard, that a barrier should be reserved untouched in every deposit near the limit of the concession to prevent the workings from being put into communication with those that would take place in a neighbouring concession, and be prejudicial to one or the other of the mines. The thickness of these barriers shall be determined by the order of the prefect, who will regulate the reserve. The barriers shall only be cut through or worked in case the prefect, after having heard the concessionnaire interested, and on the report of the engineers of mines, shall have authorised the work and directed the way in which it is to be executed. In case the usefulness of these barriers should have ceased, a decree of the prefect will permit the concessionnaire to work the part which belongs to him.

Art. N.—In case it should be considered necessary to execute works with the view of putting into communication the mines of two concessions for ventilation and for drainage, or to open means of ventilation, drainage, and assistance to the neighbouring mines, the concessionnaire shall be obliged to permit the execution of such works, and to participate in them in a proportion of his interest.

These works will be ordered by the prefect on the report of the engineers of mines, the concessionnaires having been heard.

In an urgent case the works may be commenced on the simple requisition of the engineer of mines of the department, according to the Art. 14 of the decree of 3rd January 1813.

Art. O.—If some deposits of other foreign minerals than those included in the area of the concession of are legally worked by the owners of the soil, or become the subject of a special concession granted to third parties, the concessionnaire of the mines of shall be bound to permit the works which the administration may judge to be useful to the working of such minerals, and even, if it is necessary, give free passage through his own works in return for an indemnity, the amount of which would be determined by mutual agreement or by experts.

Art. P.—(Special to mining concessions in Algeria.) The administration guarantees to the establishments of the concessionnaires, of which the sites and plans have been fixed between them and the military services, the protection which it grants to all the establishments of settlers.

If the sites and plans fixed necessitate special defensive works, these works will be executed at the expense of the concessionnaire. The concessionnaire must provide the barracks for a garrison to be determined on the demand of the concessionnaire if the military authority judges this garrison to be indispensable.

In the case provided for by the preceding paragraph, the general commanding the division of or his delegates will be judges of the expediency of the measures to take from a military point of view.

CHAPTER IV.

GERMANY.

NOTES AS TO MINING LAW.

The old German mining law seems to have depended on a variety of laws, regulations, and customs which together made up what is known as the "Common German Mining Right" (Gemeines Deutsches Bergrecht).

This common German mining right seems to have combined the principle of possession by the first occupant with the right of the Crown to grant concessions, and to impose a tax on the produce of the mines. As regards the proprietors of the soil the regulations were very diverse. Some gave nothing to the owners of the soil; others gave them a certain proportion of the produce; others gave them the right to certain shares in the adventure (Erbkuxe). The greater part of the regulations gave a certain proportion to schools and churches as well as to relief funds (Freikuxe).

The existing state of mining legislation results from various codes or laws which have been drawn up at different dates in the present century, of which the principal is the Prussian Mining Law of 24th June 1865, which is said to be rather a consolidation of old laws than a new law properly speaking, and which has been adopted more or less completely by twelve out of the twenty-six States constituting the Empire of Germany, and which twelve States are said to comprise eight-ninths of the surface and nine-tenths of the mineral production of the whole Empire. These States are Alsace-Lorraine, Anhalt, Bavaria, Brunswick, Hesse-Darmstadt, Prussia, Reuss, (younger branch), Saxe-Altenburg, Saxe-Coburg-Gotha (but for Gotha only), Saxe-Meiningen, Waldeck-Pyrmont, and Wurttemberg.

Three States, the Kingdom of Saxony, the Grand Duchy of Saxe-Weimar, and the Principality of Schwarzburg-Sondershausen, follow another type of legislation which is adopted from the legislation of the first mentioned of these States.

The eleven other States, which are of little importance from a mineral point of view, have adopted legislation founded more or less on the two principal types and the common German mining right.

The Prussian mining law of 24 June 1865 is divided into 250 paragraphs or articles. This law is founded on the principle of the liberty of working mines by the first occupant, and treats such mines as are within the scope of the Act as being free from control on the part of the owner of the soil; it gives the free right of search to every one and everywhere (subject to certain restrictions for the protection of buildings, and inclosed ground), and gives the exclusive right of working either to the first finder or to the first petitioner, and continues the right, subject to regulation and inspection, unless some motive of public interest justifies interference. The right of mining is made an immovable property, altogether distinct from the right to the surface, as in the French legislation.

The following table shows the general division and rights of property in and to rents of minerals in Prussia and in the German States following the Prussian mining law.

History of the law as to ownership of mines.

As to Prussia and the 11 other States adopting a similar law.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

GERMANY.

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Gold, silver, mercury, iron (with the exception of iron found in marshes), lead, copper, tin, zinc, cobalt, nickel, arsenic, manganese, antimony, sulphur, aluminous and vitriolic minerals, coal, lignite and graphite, salt and salt springs.	Usually in the first finder or claimant (instituted by the Government) or his assigns.	To the Government, ordinarily 2 per cent. on the gross profit of the mine. Certain payments have also to be made to the miners' benefit funds (Knappschaftskasse). In some instances royalties are payable to private individuals under old laws kept in force by the modern Mining Acts.	This is the general effect of the Prussian mining law of 24th June 1865, which has been followed in most of the important mining States in Germany. In some of such States, however, the rents are reserved on different principles, e.g. in Bavaria, where a small fixed rent of about 3d. per hectare is reserved, and the tax on revenue from mines is valued and collected in the same manner as the tax on income from other sources, and in the Duchy of Saxe-Coburg-Gotha, where the rent varies as regards manganese, whilst all other mines pay 4 per cent. on the gross products.
II. All other metals and minerals.	In surface owner	If let, to the owner of the surface.	

In certain regions of the province of Pomerania, only salt mines and salt springs are excepted from the free disposition of the owners of the surface (Art. 210 of law of 1865) and, of the other mines, only workings of lignite are subjected to Government inspection.

Iron mines in the Province of Silesia, the county of Glatz, Lower New Pomerania and in the Island of Rugen, as well as in the district of Hohenzollern, also belong to the proprietors of the surface (Art. 211).

In the Duchy of Saxe-Altenburg the working of coal (including turf, lignite, and graphite) belongs exclusively to the proprietor of the soil.

In Waldeck slate is added to I., and brine springs included in the Principality of Pyrmont.

In Bavaria graphite and gold washings are excluded from I., but iron found in marshes is not excepted.

In Brunswick vitriolic minerals are excluded from I.

In Alsace-Lorraine bituminous substances are added to I., and iron-ore which can be worked by open workings without rendering subterranean workings impossible is excluded.

In Saxe-Meiningen and Reuss (younger branch), slates and colouring earths are added to I.

No provision is made by the Prussian law of 1865 for payment of royalties to the owners of the surface in respect of the mines which are the subject of concessions. It is to be remarked, however, that the law did not repeal laws previously in force respecting royalties and imposts on mines, which laws were on the contrary explicitly maintained in force by the second paragraph of section II. of the law of 1865. This would seem to keep in force the "redevances trefoncières," which were payable in respect of the provinces on the left bank of the Rhine under the French law of 1810, and the provisions for the benefit of certain owners of the surface, and of schools and churches under the old regulations previously referred to, in respect of the provinces on the right bank of the Rhine.

In some parts of the Empire, the old owners of the Crown rights (such as mediatised princes) or private companies, receive either one-half of the 2 per cent. tax or higher taxes founded on private titles, e.g.:

In Westphalia.—(a) The Duke of Aremberg (at Recklinghausen) receives 1 per cent. of the gross coal production from 11 collieries, amounting in 1890 to a sum of at least 200,000 marks.

(b) Two collieries near Mulheim-on-Prater, pay 5 per cent. of their gross produce to a company which acquired the rights of the ancient Land-graf of Broich, five other collieries have redeemed the royalty, paying altogether a sum of 1,789,500 marks.

In Silesia.—The Lady Thiele Winkler receives 4 per cent. of the gross produce of coal at Myslowitz, Kakowitz in Upper Silesia, amounting to a considerable sum.

The worker of mines has the right to occupy, under the sanction of the administration, land necessary for his working except residences, private buildings, and courts adjoining at an annual rent, except where the land is purchased. The worker cannot force the surface owner to sell, but on the contrary the latter can require the former to buy the land if it is occupied or certain to be occupied for more than three years (Art. 13), and, in the case of sale, the surface owner has a right of pre-emption in case the land is no longer required for the

working of the mine. The rent or the purchase money is calculated according to the actual damage caused, and where there is only a temporary occupation without purchase, the worker of the mine may be required to give security against permanent damage. Disputes are settled by deputies appointed by the Administration of Mines and the Government of the province, and recourse may also be had to the legal tribunals (Arts. 142 to 145).

The worker of the mines is also (Art. 148) altogether responsible for all damage caused to the surface by his workings whether by his fault or not, but he is not responsible for damage to buildings which are erected in the face of his working (Art. 150).

These are regulated by the ancient law, and are in Prussia all reduced to an impost of 2 per cent. on the value of the gross product of the mines. This value is fixed officially with power for the workers of the mines to show the actual value by producing the results of their sale of the produce of their mines. The impost consists, on the right bank of the Rhine, of two parts, viz., of the rent of 1 per cent. substituted for the old royalty payable to the Crown, and of 1 per cent. in respect of the right of inspection established by a law passed in 1851. The latter portion of the impost is payable in all cases, whilst mines which are subject to the payment of a tenth part in favour of a private proprietor of the Crown rights are exempted from the payment of the first 1 per cent.

In the year 1890, the total amount of mining tax, (2 per cent. of the produce) paid to the German Government was 7,742,459 marks = 387,123l. The sum paid to private proprietors of Crown right is in the same year is estimated at 500,000 marks = 25,000l.

On the left bank of the Rhine the Legislature has substituted (by Art. 6 of the law of 20th October 1862) the principle of a 2 per cent. rent on the gross produce for the proportional rent on the net produce payable to the Government under the French mining law of 1810.

The bases on which the impost rests are somewhat intricate, but in practice the matter is regulated by Ministerial instructions of the 23rd November 1864 (a copy of which is set out in Sir E. B. Malet's report from Berlin of 13th November 1886) for the left bank of the Rhine, and of 29th January 1866 for the right bank (see Blue-book). It is said that a revision of the legislation on the impost on mines is generally considered to be a pressing necessity.

As gross produce or output is considered all produce of the mine actually sold or used for the consumption of the mine itself or by the owners (see M.L. of 23rd November 1864, § 2).

Besides the special mining tax, the mines have to pay considerable sums for local rates and State taxes. The total charges in the case of coal mines are stated to exceed 10 per cent. of the selling value of the minerals. The following table showing the sums actually paid by a particular colliery in Westphalia, for the years 1889

and 1890, illustrates what these charges in practice amount to:—

TABLE showing charges in a GERMAN COLLIERY.

	1889.	1890.
1. Mining land and building tax -	33,074.71 marks	58,801.30 marks.
2. Local rates -	12,693.08 "	20,755.30 "
3. Compulsory payments to relief and accident societies -	121,972.82 "	139,032.93 "
4. Contributions to Chamber of Commerce -	63.00 "	63.00 "
Contributions to common mining fund -	1,438.40 "	1,411.20 "
Contributions to association -	312.00 "	520.00 "
Or per ton of the sold production .	0.49 = 6d.	0.64 = 7½d.

In future the profits of mining undertakings will also be subject to the payment of a heavy income tax.

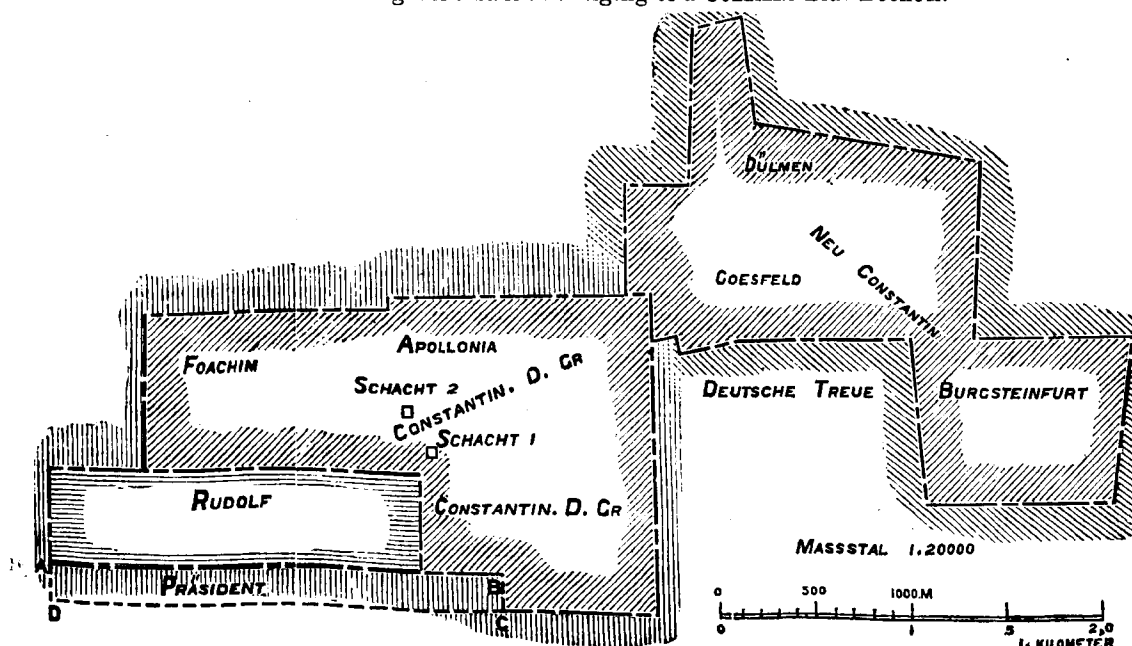
Searches for mines can be made by anyone and anywhere except under private buildings and their appurtenances and in their immediate vicinity for a distance of 62m. 8. The explorer, however, is required previously to indemnify the proprietor against damage which he may cause to the ground, and to give security against subsequent damage.

In case the proprietor of the soil refuses to allow searches to be made, recourse may be had to the administration of mines, who will authorise the searches, unless motives of public as opposed to private interests, stand in the way; but sometimes it is difficult to distinguish private from public interests; for instance, in a case where the search might threaten to make a spring necessary for agriculture disappear, or might injure a forest of which the preservation might be of public interest.

The right to work a certain substance within a particular area is given by way of preference to the discoverer, that is to say, to the first person who has communicated the fact of his discovery of a layer during the week of the discovery; in default of which it is given to the first person who has petitioned for it in conformity with the prescribed rules. The administration has not to consider whether the mine is workable or not, though it has the right to ascertain whether there is really a vein of mineral or not (mere traces of a substance would be insufficient to establish the right to a concession); but if the existence of a layer (Gisement), that is a bed or a vein or a mass of mineral is established, the discoverer who has made a legal demand within a week from the date of his discovery, or in default the first regular petitioner in order of date has a right to obtain the property in the mine.

An exception to the rule, however, is in the case of a substance which is discovered lying in such connexion with a substance already conceded that the administration consider that the two substances should be worked together, in which case the concessionaire has a right of preference over the discoverer to a concession of the

PLAN showing CONCESSIONS belonging to a COLLIERY near BOCHUM.



newly-discovered substance (Art. 55). In case of disputes as to the right to a concession it is for the judicial tribunals to decide between the rival claimants.

The claimant has to fix the form and extent of the field to which his claim gives him the right, on the double condition, as a rule, that it does not exceed 219 hectares, and that any two boundaries should not be at a greater distance from each other than 4,185 metres. Occasionally, however, these limits are varied even in Prussia, and many of the States, following the Prussian law in other respects, have adopted different limits.

The institution or concession carries with it the right to work and dispose of the minerals mentioned in the concession within a certain specified district. The property is entirely distinct from that of the surface. It is considered an immovable (that is, real) property (Art. 50), and may be alienated (Art. 52), and the worker may carry on his works subject only to the prescribed regulations, and may within the area of his concession carry on all necessary works, conforming as regards his relations with the owners of the soil to the provisions of the law. It is a common practice for concessionnaires to sell or let their concessions to companies who undertake the working of the mines.

Thus in the year 1890, the Hibernia Company bought a concession of coal near Bochum (on which no outlay whatever had been made beyond the original expense of boring to prove the existence of coal) for 2,000,000 marks = 100,000l.

The case of an entire concession being given in lease seems to be rather unusual in Germany, though instances are to be found, such as the lease of the colliery Carolus Magnus, near Borbeck to the Company Phoenix; another of the colliery Hert to Mr. Krupp of Essen and a third, the lease of the concession Rudolf to the Colliery Company Constantin the Great near Bochum mentioned below.

On the other hand leases and exchanges of adjoining parts of concessions between neighbouring collieries are of frequent occurrence.

The mode in which concessions are dealt with in Germany may be well illustrated by the case of one of the best collieries in Westphalia, Constantin the Great, of which a plan (showing the colliery field) is given below. The colliery is owned by a Gewerkschaft Society (divided into 1,000 kuxe, or shares) the field being composed of three original concessions which have already been extensively worked, and which have been united with three other original concessions which have not been worked as yet, and to which have been added a concession which has been taken on a kind of lease (an extract from which marked A, is given below), and part of another concession which has also been taken on another kind of lease (an extract from which marked B, is also given below). It will be seen that another concession which does not at present belong to the company and which is marked as "Deutsche Treue" on the plan, intervenes rather inconveniently with the field; and it is stated that the company are contemplating the purchase of this intervening concession, but have not been able to buy it hitherto in consequence of the high price which is being asked for it.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Dealing with concessions.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
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Walmesley.

A. ESSENTIAL EXTRACT from a LEASE TREATY still in force concluded between the Colliery Company of United Constantin the Great and the Mining Company of the Coal Concession Rudolf (not worked yet) at Bochum concluded on the 13th May 1870 (see annexed plan).

1. Rudolf cedes its Concession to Constantin the Great on lease. Constantin is obliged to prepare and explore the said coal field in every level of its own mine.
2. Constantin charges itself with the extraction and the sale of the coal, and provides all the preparation and materials necessary for the purpose. The representative of Rudolf is always entitled to inspect the account books and see over the mine above and underground.
3. Constantin has to manage the working and to represent the mine against the Mining Office.
4. Constantin must extract at least 50 tons of coal a day in average of every half-year, unless force major hinders the extraction. Hindrance must immediately be communicated to the representative of Rudolf and must be removed as soon as possible. If through fault of Constantin the due output is not produced, one-half of the average profit is to be paid for the difference.
5. Constantin accounts for the revenue out of the Rudolf mine every half-year; profit and contribution are divided between the two companies in equal parts. The selling price is calculated on the average of the entire output of Shaft 1 of Constantin; the special cost in the same way, the general costs (of administration engines &c.) are divided in proportion to the coal produced out of the two mines.
6. The western part can be extracted by shaft of Constantin on the same conditions.
7. The safety barriers between the respective fields drop with consent of the Mining Office.
8. Surface damages above the field of Rudolf are carried one-half to each company.
9. This treaty shall be abolished, if through water or other forces the working of the Rudolf Concession shall become impossible or disadvantageous.
10. In that case new safety barriers must be established half at the cost of contractors.
11. In the same case the installations, &c., made for the working of Rudolf remain its property pro rata of the mutual coal produce during the treaty, but Constantin can acquire the portion of Rudolf at a price valued by experts.
12. The treaty is to be inscribed into the Mining Hypothecary Book at Dortmund.

B. TREATY of the 1st December 1879 between the "GEWERKSCHAFT CONSTANTIN the GREAT" and the Limited Company, proprietor of the Colliery President near Bochum, in Westphalia, concerning the lease of a small part of the latter Concession.

1. The Bochum Mining Company gives the part of its field indicated A. B. C. D. on the annexed plan in lease to the Gewerkschaft Constantin the Great in order that the latter shall be entitled to work and sell all the coal contained in the said part above the second level of Constantin.
2. The old safety barriers are annihilated and new ones adopted with the approbation of the Mining Office.
3. The coals taken by Constantin out of the leased field are to be paid for on the following sliding scale, for which the average selling price at the pit-mouth at the Shaft 1 of Constantin serves as the base.

From a selling price lower than :—

50 m. to 60 m.	per 10 tons is to be paid 5 m.
60 " to 70 "	" " " " " 6 "
70 " to 80 "	" " " " " 7-50 "
80 " to 90 "	" " " " " 9-50 "
90 " to 100 "	" " " " " 12 "
100 " to 110 "	" " " " " 15 "
110 " to 120 "	" " " " " 18 "
120 " to 130 "	" " " " " 22 "
130 " to 140 "	" " " " " 26 "
140 " to 150 "	" " " " " 31 "
150 " to 160 "	" " " " " 36 "

These coals must be distinctly referred to in the working registers. The Manager of the Bochum

Company is authorised to inspect the registers and account books.

4. The payment is made on the 25th of the following month.
5. The underground workings to begin instantly and to continue without interruption conformably to the mining rules.
6. Unavoidable interruptions of the extraction are to be communicated to the other side and must be removed as soon as possible.
7. Constantin the Great takes all the risk and responsibility of surface damages.

Several mines may be united, each retaining their independent entity, or (with the consent of the administration, which cannot be refused, but is given subject to regulations as to the rights of creditors) may be consolidated into one mine. There is absolutely no guard against companies enlarging their holdings through purchase of other undertakings; in fact this is proceeding very rapidly in all the German coal fields without check; and it is stated that concessions of all the coal fields which are capable of being worked at the present time were all taken up years ago, and were never worked by the original concessionaires, but are generally in the second or third hands. No one starts mining with less than three or four concessions, which are generally worked by companies, either private or public. The original concessions were granted to persons who had proved the existence of coal by borings which cost from 15,000 to 30,000 marks = 750l. to 1,500l. The borings were often made by companies, and these have again been incorporated into mining companies, the shares of which can of course be sold, though as a rule many of the original shareholders still remain the same. Many of the original concessions have been united into one company, and in some cases concessions have been bought or taken on lease by companies, though this is the exception rather than the rule. There are two forms of mining societies. The usual form is called a *Gewerkschaft*, divided into a hundred or a thousand shares, called *kenne*. This form of company appears to correspond exactly with the cost-book form of company in England, and is said to work very satisfactorily. The other form of mining society is called *Actiengesellschaft*, which seems to correspond exactly with an English limited company. The shares in both these kinds of societies are publicly quoted for sale in the Stock Exchange quotations, and are frequently sold, so that the ownership of concessions is constantly changing, not as regards the whole, but as regards fractions of the whole.

Concessions may be forfeited if imperious motives of public interest require it (Art. 65); but though there would appear to be a considerable number of mines unworked, and the application of the clause has been frequently demanded, it is stated that the Prussian administration has refused for the last 20 years to make use of it. But if such a forfeiture is proposed to be made the creditors have the right for three months to sell the mine.

The concessionaire may also carry on certain works of ventilation and drainage, and even for the more profitable working of his mine under land outside the area of his mine which is not the subject of any other concession, and even in lands which are the subject of other concessions, as long as he does not endanger the workings of the other concessionaires. He has also the right to employ for the purposes of his works substances which are not the subject of his concession, but which are detached in working his mine. If he does not employ them in his mine he must deliver them to the proprietor of the soil (Art. 57).

A concessionaire can also obtain the possession of ground even outside the limits of his concession for the conveyance of minerals, but must not interfere with dwelling-houses, manufactories, farm buildings, or yards. The expropriation must be made through the Mining Office (Oberamt) and the provincial administration, who fully inquire into the necessity for, and the conditions of the expropriation, and fix the rent or the price to be paid, the landlord being entitled to require the land to be bought out if the occupation is going to last more than three years or is likely to be permanently injured, the price paid being usually much beyond the ordinary value of the land; but both parties have power to appeal to the Minister of Commerce and Agriculture.

The mines in the Saarbruchen coal mining district generally belong to the Government, and are worked

Union and consolidation of mines.

Accident and relief societies.

Forfeiture of concessions.

Way-leaves.

Inspection and regulation of mines.

Mining administration.

Government mines.

as part of the Crown property. The explanation of this fact is that Saarbruchen was formerly in the Duchy of Nassau Saarbruchen—an independent principality—in which the mines were reserved to the Crown. After the Duchy became part of the German empire, the Government continued to work the mines; but on the passing of the Act of 1865, the Government took out concessions, just as a private individual would have done with just the same incidents, except, of course, that the Government does not pay the mining tax to its self. Some concessions in the district, which the Government probably did not think it worth while to take up, have been taken up by private individuals in the district.

Insurance of workmen employed in mines against sickness and accidents is compulsory; as to the former, under a law of 15 June 1883, and as to the latter under a law of 6 July 1884, the two classes of insurance being kept separate.

The law of 1884 provides generally for the formation of trades unions (or *Knappschaftsvereine*) in the different business districts throughout the empire, for the purpose of carrying out the provisions of the law as to insurance and for the conduct and regulation of their procedure.

For the purpose of carrying the insurance law of 1884 into effect, a general union for the whole of Germany was started in 1885. The name of this union is "The Miners' Trades Union," and the head office is in Berlin, and the range of this union is divided into eight sections, comprising different mining districts of Germany. Other districts such as the district of Bochum, have their own "trades union" for carrying the law into effect, with special statutes or regulations for the conduct of their business. According to these it would appear that the contributions of the mine owners vary from 75 per cent. of, to an equal amount with, that of the workmen. The actual amounts paid also vary, but the average amount paid by the mine owners appears from the following table to be equivalent to 100 of 1s., or 1½d. per ton of minerals raised in Prussia:—

Year.	Tons raised in Prussia.	Contribution to Fund in Shillings.	By per Ton of Minerals in Decimals of Shillings.
1883 -	69,222,259	6,892,446	0.099
1884 -	70,643,371	7,127,320	0.109
1885 -	71,713,132	7,527,479	0.104
1886 -	71,002,106	8,173,265	0.115
1887 -	73,782,426	9,258,235	0.125
1888 -	79,482,925	9,465,616	0.119
Total -	435,846,079	48,434,361	0.111

By a law of June 22nd, 1889, provision is also made for compulsory insurance of workmen for maintenance in case of old age and infirmity which adds considerably to the cost of insurance.

Special provisions are made by Art. 196 of the law of 1865 for inspection and regulation of mines, having in view:—1. The safety of the works; 2. The protection of life and health of the workmen; 3. The protection of the surface; 4. Protection against workings which might be detrimental to the public interests.

The task of carrying into effect the provisions of the mining law is entrusted, in the first instance, to an official in each mining district, who is called the *Revier-beamte*; and, in the next place, to a Council called the *Oberbergamt*, of which there are five in Prussia, having under each of them a certain number of districts. The *Oberbergamte* again are under the authority of the Minister of Public Works. There is a power of appeal from the *Revierbeamte* to the *Oberbergamt*, and from the latter to the Minister of Public Works, and in this country the mining authority alone (and not, as in other countries, in conjunction with the civil authority) has entire jurisdiction in matters relating to mining, except as regards surface damage.

AS TO THE KINGDOM OF SAXONY AND THE GERMAN STATES FOLLOWING THE SAXON MINING LAW.

The modern Saxon mining law is for the most part contained in a law dated the 16th of June 1868. It is only intended here to refer to the chief points in which this law differs from the Prussian mining law.

The essential difference is in the classification of minerals, as the Saxon mining law leaves to the owner of the surface the right of working coal and lignite (1868, Art. 4). This right can only be exercised after a notice given to or permission given by the Administration, which cannot, however, be refused unless the working area is insufficient. On the permission being given, the mine becomes a separate property from the surface, and can be disposed of separately and is subject to inspection, &c., as if it had been the subject of a concession. The laws of Saxe-Weimar and Schwarzburg-Sondershausen, which follow on the Saxon law, are fixed respectively by laws of the 22nd June 1857 and the 15th February 1860.

No rents are payable to the owners of the surface in respect of the mines which are reserved from their ownership or right of working.

The taxes payable to the State in the kingdom of Saxony appear to be fixed by a special law of 10th October 1864, and to be in the form of a fixed royalty amounting to 120 pf., equal about 1s. 3d. per annum per unit of 4,000 square metres for mines of gold and silver, and 80 pf., equal about 10d. per annum per unit of 4,000 square metres for other mines, with the usual tax upon industrial revenue, payable in respect of the income of mines.

In Saxe-Weimar and Schwarzburg-Sondershausen, on the contrary, the mines have to pay a tax on the gross produce, as in Prussia, but which is at the rate of 5 per cent., instead of 2 per cent. They also pay small fixed rents amounting to from 15c. to 25c. per hectare.

These, which in Prussia are free to all, can in Saxony only take place by the previous authority of the mining administration. Such authority is, however, usually granted to the first applicant, is available for a year (which may be prolonged for six months), and extends to a particular area not exceeding 40 hectares in extent. The search warrant can during its duration be exchanged into a definite right of working. The relations between the explorer and the surface-owner are similar to those established under the Prussian law.

These are granted, not necessarily, as in Prussia, to the first finder, but to the first claimant, and if several claimants present themselves simultaneously, that is on the same day, the concession is granted to them in common. It is necessary to prove the existence of a layer, but the proofs required are not as strict or complete as in Prussia. The areas which can be taken are of any form or extent which the claimant desires in ground previously unoccupied; but, for the purpose of taxation and labour conditions, the concessions are considered to be divided into certain "units of claim" fixed at four hectares for superficial mines, and 4,000 square metres for other mines. Each mine of the last-mentioned extent should employ at least two workmen working eight hours per day, excepting Sundays, and larger mines should employ a greater number of men in certain specified proportions.

OTHER GERMAN STATES.

As for the other eleven States of the German Empire, their mineral legislation is not of sufficient importance, and their mineral property is not of sufficient value, to make it worth while to study their mining laws in detail. It is stated that five of them do not possess any mines, that in another (Baden) the mining industry is without interest; that the mines are regulated by laws inspired by the Prussian Code in two States, and partly by that Code and partly by the Saxon Code in two other States, and that finally one State (Oldenburg) has preserved the French law of 1810.

AS TO THE WHOLE OF GERMANY.

The following table has been prepared from the Report of the Royal Commission appointed in 1890 by the German emperor to inquire into the condition of coal-miners which has been presented to this Commission. The first column of the table gives the wages per shift paid in the first quarter of 1889, to which has been added a sum of 35 per cent., which is said to be a fair addition, to bring the wages up to the average of 1891. The general averages given at the foot of the table have been arrived at by reference to the number of workmen officially stated to have been employed in the different coal districts of Germany in the year 1890.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
revised by Mr.
Walmesley.

Royalties.

Searches.

Concessions.

Wages and working hours of miners in Germany.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

TABLE showing average WAGES and HOURS of LABOUR of COAL-HEWERS employed in the different districts in Germany.

Name of district.	Average wages per shift paid in first quarter of 1889.	Add 35 per cent. to sum stated in column No. 1.	Making estimated wages per shift paid in 1891.	Usual hours of labour from bank to bank.
1. Ruhr district, Dortmund, &c.	s. d. 3 0	s. d. 1 0	s. d. 4 0	8½
2. Saarbrücken - - -	3 5	1 2	4 7	9 to 10
3. Aix-la-Chapelle - - -	3 0	1 0	4 0	9 to 9½
4. Lower Silesia - - -	2 4	0 10	3 2	8 to 10
5. Upper Silesia - - -	2 5	1 10½	3 3½	12
Averages - - -	2 10	1 0	3 10	9½

In this case it is proposed to add the sum of 5d. per day for accessory advantages paid indirectly to the miner (which do not appear to have been taken into account in the figures given in the report of the German Commission), making the sum of 4s. 3d., which is believed to represent the full average wage per day of coal-hewers in Germany in the year 1891.

It is understood that the provisions of the Prussian Mining law concerning the relations between employees and workmen have recently been revised.

CHAPTER V.

AUSTRIA-HUNGARY.

NOTES AS TO MINING LAW.

The old Austrian mining law seems to have depended, like the old German mining law, upon a number of regulations applicable to different districts, supplemented by the common German mining right.

The old mining law of Austria and Hungary was, however, codified and united by the Law of 23 May 1854, which explicitly repealed the ancient law both written and customary, maintaining, however, rights of mining acquired under the ancient law. Some alterations have since been made in the law, and others are projected.

The general mining law—"das allgemeine Berggesetz," i.e., the one common mining law of the Austrian Empire—is in force in Hungary.

The "Judex-Curial" Conference, however, recognised certain points of difference in the law as applied to Hungary. The most important of these points regards the working of coal mines, which cannot in Hungary be worked without the permission of the owners of the land.

The remaining differences are concerned chiefly with the forms of procedure in the mining offices, with the entries in the mining registers (Bergbücher), and with the jurisdictions of the Courts.

Although the Austrian mining law was passed nine years earlier than the Prussian mining law of 1865, the two laws have considerable resemblance to each other, being both to some extent evolved from the ancient German mining right. There are, however, extensive differences in detail between the two laws.

The Law of 1854 consists of 286 paragraphs or articles. It gives the working of such mines as are reserved from the ownership of the surface proprietor, not to the first occupant, as in Prussia, but to the first claimant who proves the existence of a workable field. If several claimants present their petitions on the same day, the mine is granted to them in common, unless they can agree to divide it (Art. 53). The right of search is not, as in Prussia, free, but can only be made by permission of the mining authority. A peculiarity of the Austrian law is that the worker of the mines has the right to work all the substances reserved from the ownership of the soil within the limits to which his concession extends (Art. 123), and not, as in France and Prussia, some particular substance specified in the Act of Concession only. The right of mining, as in France and Prussia, is an immovable property wholly distinct from the ownership of the surface. Another peculiarity is the division of the reserved mines into two classes, called deep workings (Grubenmasse) and surface workings (Tagmasse), respectively, as to which classes different regulations apply.

Practically the same substances are reserved from the ownership of the surface in Austria as in Prussia, but the definition in Austria is indicative rather than specific, as in Prussia, and cannot therefore be conveniently stated in tabular form. The substances reserved are such as are capable of being used as metals, sulphur, alum, vitriol, or salt (the latter being a State monopoly), vitriolic springs, graphite, and bitumen, and all kinds of coal and lignite (Art. 5); all other substances belong to the proprietor of the surface, and, by exception from the general law, in Galicia, Cracovia, and Bukovina the right of searching for and working minerals, oils, and ozokerit, and all bituminous substances except coal, belongs to the owners of the surface, and, as before observed, in Hungary coal cannot be worked without the permission of the owners of the surface.

No rents are payable to the owners of the surface in respect of the reserved mines themselves.

The worker of the mines has the right to occupy such portions of the surface as are necessary for him under the supervision, and in case of dispute by means of the intervention of the Administration, on paying a simple indemnity if the use is only to be temporary; but he must proceed by a regular system of expropriation, and buy the land, if the occupation is likely to be lengthy. He has a right to buy land and water rights for all purposes of his works either within or outside the limits of his field. In case of disputes the mining authority determines, in union with the "political" authority, on the necessity for the occupation and the situation and extent of the lands to be occupied. The indemnity is fixed by experts, and the occupation may take place on payment of the sum fixed. Buildings, enclosed courts, gardens, and enclosed grounds are excepted from the lands which may be taken, and the restriction extends to an area of 38 metres round the buildings.

The worker of the mines has to repair all damage occasioned to the surface by his workings, but is not liable in respect of buildings and erections established within the limits of his mine without the consent of the authority.

The taxes payable to the Government by the Act of 1854 were partly fixed and partly proportional upon the gross produce of the mine, the fixed taxes being at the rate of only four florins (say 8s.) for each Freischürf Grubenmasse or Tagmasse and for each "mine-measure," and even this amount may be reduced for very poor or broken-up mines, the mining authorities having the power to reduce the payment on each Freischürf from four florins to two florins.

The tax on the gross profits has been repealed by a Law of 28 August 1862, which has substituted for it a tax upon revenue fixed in principle at 5 per cent. on the net revenue, to which has since been added three-fifths by virtue of the Law of 26 June 1868, or 8 per cent. in all.

All businesses in Austria pay an income tax to the Government of 5 per cent. on the net profits.

There is also a payment to be made towards the "Land"; i.e., the general fund of the province in which the business is being carried on.

There is a further payment to be made towards the local funds.

These two last payments vary according to the necessities of the provinces and parishes. Under unfavourable circumstances a business (mines are considered as such) may have to pay—

- (1) 5 per cent. to the central government.
- (2) 5 per cent. to the "Land" or province.
- (3) 5 per cent. to the parish.

In all 15 per cent. of the net profits.

N.B.—(2) and (3) are levied by the Provincial Parliament.

Searches for mines cannot be made even by the owner of the soil without the permission of the mining authority, within certain limits in the mining district, given in principle for one year only, but renewable indefinitely from year to year (Art. 16). The permission, however, does not of itself give an exclusive right to the person making the search; but a right to free diggings (Freischürf) can be acquired by following certain rules, by which means private circles of 400 metres in radius round the points indicated can be acquired. Such permissions (Schürfbewilligung) are given to all who apply for them. Free shares (Freischürfe) are registered according to priority of declaration at the District Mining Office (Revierbergamt).

In order to keep legal possession of a Freischürf it is necessary to show that 27 days' work (eight or ten hours) have been done upon it in the year (Art. 174).

Ownership of mines.

Surface occupied or damaged.

Concessions.

Taxes payable to the Government.

Searches for mines.

As the object of the mining authorities is to encourage mining, they have the power of allowing the work done on one Freischürf to be considered as sufficient for several.

Where there are no rival competitors Freischürfe can practically be held on the payment of the four florins a year.

The payments become due at the end of each quarter. As long as the dues are paid a polite excuse for not having done the required work, with a promise that work shall be done, satisfies the authorities, who are very lenient on this point.

The explorer cannot commence his work until after he has acquired from the surface proprietor, after the decision of the mining authority in case of opposition, the land necessary for the purpose, and given security for ultimately making good damage (Art. 27).

The right of searching in a free digging may be alienated on making a simple declaration to the mining authority. The searcher may not dispose of the produce of his digging without the consent of the mining authority; but he can, if he discovers a workable field, obtain one or more measures of mines or concessions.

The right to these is created by proving that the free share or free shares contain workable minerals; and here the "free digger" has the advantage over the searcher for mines in Prussia, as the "free-digging" gives him the opportunity of proving the workability of the field without opposition, and so gives him "the concession" if there is anything worth having. No mine can, in the first instance, consist of less than a simple measure (the "mine-measure" being a rectangle of 45,116 square metres in case of deep mines, and of more than double that area in the case of surface mines); but, if there is sufficient unoccupied land, any person may take in the first instance four ordinary measures (or 18 hectares), or, in the case of coal, four double measures (or 36 hectares), always in connexion with the point of discovery in the centre. These can be united with other fields, so as to form a maximum of 36 hectares in the case of mines other than coal, and 72 hectares in the case of coal; but there is nothing to prevent one person or one society, conditionally on undertaking the necessary obligations of working, from acquiring as many distinct fields of working as they please. The deep workings (Grubenmasse) give the right to all substances reserved from the ownership of the soil within the area taken. This principle is peculiar to the Austrian and the Spanish mining rights alone.

The surface workings (Tagmasse) are about double the size of the deep workings, and only give a right to the superficial mines (such as are reserved from the ownership of the soil alone). They cannot, however, exist with deep workings, and can only be granted in places where deep workings have not already been granted.

The mine-worker is required to maintain continuous working, though authority may be given for delay. There is no fixed rule as to the degree of activity which is requisite; it has to be settled in each case according to the circumstances by the Administration (Arts. 170, 174, and 243). The rules as to working before referred to, however, have to be observed; in default of which fines of from five to fifty florins, or, in case of repeated negligence, of double those amounts, may be inflicted. In case of persistent negligence the mine may be forfeited (Art. 240). Mines may also be surrendered, in which case they may be sold by the creditors (Arts. 263-5).

Sale of Concessions.—Concessions can be and are freely sold. The following are some examples:—The mining rights at Silberleithen and Biberwier, in the Upper Inn Valley, were sold about the year 1879 to a German Syndicate for 30,000 florins (2,500l.). The ore raised is chiefly zinc, with some lead ore.

The concession for the gold mine at Hainzeburg, in the Zillerthal (Tirol), was sold in 1880 or 1881 to an American Syndicate. This mine is now abandoned.

N.B.—There is a specimen from this mine marked Zillerthal (Tirol) in the Geological Museum at South Kensington.

A Hamburg firm bought the concession for working petroleum and asphalt at Seefeld in 1888, and paid 30,000 florins for it.

Many concessions in Styria for working all kinds of mines have changed hands by purchase. The same remark applies to the provinces of Carinthia, Carniola, &c., &c.

The concessions over an area of about 50,000 English acres at Erczepaták (Carpathian mountains) were purchased by the Transylvanian Gold Mining Company, Limited, about 1888, for 60,000l., of which 20,000l. was to be paid in cash, and 40,000l. in fully paid up shares, the purchase money including mining rights, goodwill, and plant.

The concessions over an area of above 10,000 English acres at Eibenthal, in Hungary, were purchased by the Danube Collieries and Minerals Company, Limited, in 1889, for 100,000l., of which 40,000l. was payable in cash and the balance, at the option of the Directors, either in cash or shares. It is stated that they are subject to a Government tax of about 100l. per annum.

The concession of silver lead mines at Rabenstein, Sarntal, Tirol, on which very little money had been expended, was purchased in 1876 for about 2,000l.

It appears that before assignments, notice must be given to the mining authority, and that on assignments a tax has to be paid to the state amounting to 3½ per cent. of the value, in the case of sales and to 8 per cent. in the case of assignments by way of gift or in consequence of death (see report of Dr. M. Weiss, presented to this Commission).

The worker may execute, with the permission of the mining authority, any works outside his boundary, either for ventilation or for the more convenient extraction of his minerals (Arts. 85 and 86), and works common to several miners may be established by the permission of the mining authority (Arts. 87-89). Necessary works may also be established through adjoining mines, and use may even be made of the workings and roads belonging to adjoining mines on providing a sufficient indemnity. It is stipulated (Art. 195) that this indemnity should be in part a proportionate part of the cost of maintenance, and for the rest an interest which must not exceed 10 per cent. of the cost really saved by the mine making use of the works. In all cases the mine availing itself of the privilege is responsible for all damage caused to the other mine (Art. 196). All the indemnities in case of disagreement have to be fixed by the mining authority, with the right of appeal to the judicial tribunals.

Full provision is made for inspection and regulation of mines, and the mining authority has power to appoint a person to take charge of the working of a mine when the incompetency of the manager places the security or preservation of the workings in danger (Art. 224). The mining authority can stop the workings or even pronounce a forfeiture of the mines if the regulations are not complied with. The mining authority has also to see that the working is proceeded with without interruption and with sufficient activity.

Each mine has a code of regulations, "Dienst-Ordnung," which has to be approved of by the mining authorities (Revier-Bergamt, or district mining office) and by the political authorities. The Dienst-Ordnung has the force of law. Each workman has, upon being engaged, his attention called to the Ordnung, and has to submit to the fines and penalties, and to the power of dismissal for bad conduct which the Ordnung sanctions. Cases of infringement of the Dienst-Ordnung are tried before the district law court. An appeal can be made by either party to the mining office.

The law makes provisions respecting contracts of service, and the terms on which masters and workmen can respectively give notice. On quitting a mine each workman has to receive a certificate, stating his class, the length of his service, and the relief society to which he belongs, and he cannot be received into another mine without such certificate (Art. 208).

Each mine must have its own society or be affiliated to a fund common to various workings, and established with the approval of the mining authority.

The statutes and the contributions paid by men and owners, respectively, at present vary in different mines. The following appears to be the usual arrangement, viz.: The miners have to pay 4 per cent. of their wages towards the relief fund until a considerable fund is accumulated, when their contribution is reduced to 2 per cent. The masters have to contribute a sum equivalent to one-third of the miners' contribution for six years. The fund is administered by the mine owner and a committee of the men, under the supervision of the Government.

It is, however, understood to be the intention of the Government that for the future all mines are to be placed under one and the same set of regulations.*

* It may be observed that relief societies for all kinds of workmen and women, even domestic servants, are being introduced and are obligatory.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Way-leaves.

Inspection and regulation of mines.

Relations between employer and workmen.

Relief societies.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
revised by Mr.
Walmesley.
Mining
authority.

The payments are to be everywhere the same, and they will be:—

From the men (1)—4 per cent. of their wages.
From the owners (2)—A sum equal to that paid by the men.

This change will be put in force as soon as possible. One of the departments of the Minister of Public Works is a mining department, with a staff of officials for the management of such department, and a permanent committee for mining matters. The empire is divided into different mining districts. At the head of a collection of such districts is a mining official (Berghauptmann) assisted by a number of counsellors (Bergräthe) and mining engineers. There are four such mining officials for the whole of the part of the empire on the west side of the Leitha, having under them a varying number of district officers.

The four are:—

- 1 in Prague for Bohemia.
- 1 in Vienna for provinces of Upper and Lower Austria, Salzburg, Moravia, Silesia, and the Bukovina.
- 1 in Klagenfurt for Styria, Tirol and Voralberg, Carinthia, Carniola, Görz and Trieste, Istria and Dalmatia.
- 1 in Cracow (Krakau) for Galicia.

In each separate district there is a mining office (Revierbergamt), which is presided over by a commissioner (Revierbeamte), who is subordinate to the Berghauptmann of his collection of districts. The Revierbeamte keeps a register of the searching permits and freischürfe. In principle he is the ordinary authority before whom all matters come in the first instance. His duty is to see that the mining law is properly administered in his district, and that the mining revenue is collected by the revenue officers, &c. Grants of searching permits and freischürfe are made by the district office, but the concessions are made through the Berghauptmann's office. Mining disputes which are of such a nature as not to come into the category of ordinary common law cases ("Civilstreitigkeiten") are tried by the district mining offices (Revierbergamt), the "Berghauptmannschaften," and in the last instance by the department of the Ministry of Agriculture in Vienna, under which the Berghauptmannschaften stand. This last is the Court of Appeal and the Court of last instance in purely mining cases. Civil cases arising out of mining disputes are tried by the Landcourt of the province in which the mine lies, as the court of first instance. The court of second instance is the upper Landcourt of the province, and the court of last instance is the "Oberste Gerichtshof" ("Highest Court") in Vienna.

If questions arise between adjoining concessionaires they are dealt with by the mining authority of the district, but if between a worker of mines and a surface-owner they are referred to a commission consisting of the mining commissioner of the district, the mayor or other municipal officer, and local experts presided over by a "political" officer. Appeals may be carried up from one mining authority to that immediately above, but not further, so that only decisions made in the first instance by the Berghauptmann can be appealed against to the Minister of Agriculture.

The mining authority may impose fines (varying from 1 to 200 florins) on the workers of mines for contravention of the mining law.

The Government may work mines (and do so extensively in Bohemia), but before doing so have to go through exactly the same formalities as private individuals, taking out freischürfe, &c., and if a private individual gets precedence the Government cannot turn him out.

British and Austrian mines cannot be properly compared, owing to the great difference of the circumstances under which they are found. Most British mines are found in places not much above sea-level. In Austria the metalliferous mines are usually found in mountainous districts, where they crop out, and where the land is of very little value for other than mining purposes.

The principal coal fields of Austria are in Bohemia, Silesia, and Moravia, which are all rich agricultural countries. Of the Alpine provinces Styria and Carinthia have the most important fields.

The Southern Railway of Austria, a branch of which runs from Trieste to Vienna, and which passes through Styria, uses chiefly Moravian and Silesian coal, although it is compelled by law to use a certain amount of Styrian coal from Trifail.

For most of the smelting at the celebrated ironworks in Styria charcoal is used, as the coal to be obtained is not good.

In the Tirol there is only one small coal mine, at Häring, in the lower valley of the Inn. This mine is worked by the Government.

In the Alpine Provinces, and especially in Tirol, the mines are mostly at high altitudes,* where the land is of very little value.

As a general rule the same remark would appear to apply to metal mines all over the world, viz., that they are situated in districts where the value of the land for agricultural purposes is not high.

In mountainous countries the mines are generally at high altitudes, or, if they are situated lower down, they are in barren rocky places.

The following particulars were furnished in the year 1890 by the owner of the Rabenstein mine.

The average wage paid per day of eight or ten hours in Tirol for a good miner is from 1.30 krs. to 2 fls.—2s. 2d. to 3s. 4d.

The men at Rabenstein are satisfied if they earn an average wage of 1.50, or 2s. 6d. a day. They can live well with such a wage.

The ten-hour shift, divided by one hour for a meal, is preferred to an eight-hour shift without a break.

The men come on at 7 a.m. and work till 12, when they dine; at 1 p.m. they come on again and work till 6.

The rate of wages varies slightly according to the valley, the density of the population, and the means of communication.

If a mine is very high up in the mountains, the wages of the men who work all the year round must be higher than those of men in better placed mines. Wages of men who only come in summer would not be higher than in more favoured places, as there is a very plentiful supply of labour in the country in the summer months from North Italy.

The wages of miners in Carinthia and Carniola and in Styria are lower than in Tirol, as the necessities of life in the first-named three provinces are cheaper than in Tirol.

Miners' wages in the above-named provinces are about 20% less than in Tirol.

The above remarks apply only to metal mines.

It is understood that wages paid in coal mines in Austria would be about the same as those given as the miners' wages in Tirol.

The miners of Trifail in Styria struck in the autumn of 1889 for an increase of wage and shorter hours.

The wage was to be 2 fls. (3s. 4d.) a day, and the hours reduced from 10, and even 12, to 8. A compromise was effected between the men and owners which led to a resumption of work. It is believed that the wages were increased to 2 fls. (3s. 4d.), but the hours remained the same as before.

As the coal mines are situated in thickly populated districts which are rich agriculturally, labour and the necessities of life are both cheaper than in the districts where the metal mines are situated, and the men who work in the latter, although the conditions under which they work are more favourable than those of the coal miners, are paid about the same wages as are paid to the colliers.

CHAPTER VI.

ITALY.

NOTES AS TO MINING LAW.

The unity of Italy as a kingdom has not as yet led to a general consolidation of the different laws with reference to mines which prevailed in the independent States of which the present kingdom is made up. These laws still subsist, and are of a varied character. Many forms of ownership exist with regard to mines in different parts of the country.

The "application of the laws" is clearly laid down by the Italian Government in the "Rivista del Servizio Minerario nel 1883," viz.:

"In Upper Italy, in the ex-Pontifical States, and in the old kingdom of Sardinia (Continent of Italy and Island of Sardinia), mines are given by the Government in concession, with preference to the discoverer.

* The Government mine of Schnee Berg is on a mountain 8,400 feet above the sea.

Wages and working hours.

Regulation and inspection of mines.

"In Sicily and the Neapolitan Provinces the sulphur mines are reserved for the owner of the soil; all other mines can be conceded by the Government to him who makes the demand, should the owner of the soil not work them.

"In Tuscany mines (except those of Elba and Piombino, which belong to the Public Domain) are at the free disposal of the owners of the soil."

Thus the principle of "accession" and the "regalien" system both appear in the legislation, and it may be pointed out in addition that, as regards the iron mines in the Island of Elba and Piombino, and also until recently (and perhaps still to some extent) as to the mines in the ex-Pontifical States, the principle of "domaniality" has been recognised, the mines being considered to belong to the Crown, with power to deal with them at discretion.

These seem to be the general principles on which mines are dealt with in the kingdom, though it is understood that there are many old laws still on the statute-book relating to mines which are now in disuse.

Since the kingdom became united, various projects have from time to time been brought forward for establishing a uniform law based on one or other of the particular systems before referred to, but so far these projects have all fallen through, though there is now a prospect (which will be fully referred to later on) of uniformity being established in the law relating to mines to some extent, the existing laws as to the proprietorship of minerals not being disturbed.

There are, however, a few points on which remarks may be made which may be fairly applicable to the whole country, for instance, as regards the regulation and inspection of mines.

A Royal Decree of the 23rd December 1865 subjected all workings of mines, quarries, turf, and mineral manufactories in the provinces, to which the law of Piedmont of 1859 was not applicable, to police regulations, relative to the security of the surface and of the persons engaged about the works. By this law all workings are placed under official inspection, which is exercised by the Engineers of Mines, under the authority of the Minister of Agriculture, Industry, and Commerce, and of the Prefects and sub-Prefects, who have power to prescribe (after hearing the mine owner) all measures proper to put an end to any cause of danger. The administration has also the right, in case of neglect, to execute the prescribed works at the cost of the mine owner (Art. 5).

In case of accidents the mine owner ought at once to inform the syndic of the district and the Engineer of Mines. In cases of urgency the syndic can take all necessary steps, with a right of requisition upon neighbouring mine owners, at the expense of the mine owner concerned (Art. 14).

All working of mines is prohibited within an area of 20 metres around court gardens and walled-in places, and within an area of 100 metres round buildings, canals, and private springs of water, failing the consent of the parties interested, or the works being admitted and declared to be without danger by the judicial authority. On the other hand, the judicial authority may, at the instance of private owners, prevent or regulate the working of mines outside the areas before referred to, if such workings endanger courts, gardens, buildings, canals, or springs (Art. 6).

Similar provisions are made for the protection of public property, such as roads, railroads, and canals (Art. 7).

Mine owners are required to keep plans of their underground workings, and to remit copies of such plans every year to the Government engineers.

Mine owners are also required to keep about their works necessary appliances for aid in proportion to the number of workmen and the nature and situation of the works (Art. 12).

In the month of February 1890 a Bill was presented by the Government to the Chamber of Deputies for the compulsory insurance of workpeople, including miners, against accident, even in establishments worked by the State, the Provinces, or the Communes.

The Bill fixes the proportion of the premium to be paid by employers and employed. The risks can be under-written either by the "Cassa Nazionale" or by private companies duly authorised. The Bill has already passed through Committee with slight modifications, but has not yet passed the Senate.

In order to provide for the proper inspection of the mines and other technical duties, the Minister of Agriculture, Industry, and Commerce commands the services

of the engineers of the Royal Corps of Mines. The territory of the State is divided into 10 mining districts, in each of which one or more engineers are stationed, under the control of a central inspector resident in Rome.

The Royal Corps of Mining Engineers is now composed as follows, viz.: 2 inspectors, 9 chief engineers, 21 engineers of the 1st, 2nd, and 3rd class respectively, 6 geological engineers, 1 student engineer, 24 assistant engineers of the 1st, 2nd, and 3rd class respectively, 3 draughtsmen (this work, as a rule, is done by assistant engineers), and 7 writers. Total, 73 persons.

There are three schools of mines, Agordo, Caltanissetta, and Carrara, and a school for Capi Minatori (a cross between mining captains and corporals) at Iglesias. "Rivista del Servizio Minerario nel 1888," pages 89 to 91.

In considering the subject of mining in Italy the following facts should be constantly borne in mind, viz.:

1. That landed properties are cut up into very small parcels through the operation of the law of inheritance.
2. That mines are usually situated in high and poor land.
3. That the general taxation of the country is extremely heavy.

No Government statistics, published of late years, have given the number of Royal Concessions in force; however, they must be at least 500 (this is exclusive of mines worked in Sicily and Tuscany without Royal concessions), out of this number in the year 1888 about 200 are represented by the Government as having been worked.

In some districts the number of mines unworked is much greater in proportion than in others; the particulars (taken from reports of the Government mining engineers) given below will illustrate the extent to which the power of revocation is made use of.

During the year 1888 eight concessions were granted and two revoked. The following table gives the number of concessions and permits of research granted and revoked in 1888.

District.	Concessions.		Permits of Research.	
	Granted.	Revoked.	Granted.	Revoked.
Bologna	1	—	5	—
Turin	—	—	7	30
Iglesias	4	2	27	13
Vincenza	—	—	29	26
Rome	—	—	32	—
Genoa	—	—	1	—
Milan	3	—	6	23
Total	8	2	107	101

The rights of research in force are as follows:

In 1887 the total number	467
In 1888 the total number granted	107
In 1888 the total number revoked	574
Total number remaining in force at end of 1888	473

Aperitur—rights of research—granted for Sicily, 4. It is said that great laxity prevails with respect to the enforcement of the regulations as to working of mines under concession, and that at least three fifths of the mining concessions in force are not worked in conformity with the conditions of the concessions, and that many are not worked at all. It is also stated that not one fourth of the permissions of research are worked in conformity with the stipulations and conditions of the mining law; that these facts are of public notoriety, and are admitted by the corps of Royal Mining Engineers.

The following particulars as to wages and hours of working were obtained in 1890.

Miners and other underground workpeople work 48 hours per week; surface hands from 10 to 12 hours a day, according to the season of the year. In mines there is both day and night work, the miners' wages being the same for eight hours' work, whether they labour by day or night.

The following table shows the rate of wages paid at a mine in the north of Italy from 1869 to 1889, with

Wages and hours of working.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

cost of wages per ton of gold ore extracted during the same period:—

Date.	Blacksmiths per day.	Carpenters per day.	Miners on day work.	Miners on contract.	Labourers' day work.	Wages per ton on excavation of ore.
1869 - - -	lire. 2'50	lire. 2'25	lire. 1'70	lire. 2'36	lire. 1'50	lire. 11'13
1874 - - -	3'00	2'50	2'00	2'36	1'60	9'33
1879 - - -	3'50	2'75	2'00	2'45	1'60	7'55
1884 - - -	3'50	3'00	2'50	2'80	2'00	12'92
1889 - - -	3'50	3'00	2'50	2'80	2'30	12'36

Miners (on day-work and contract), therefore, appear to have received an average of lire 2'34=1s. 10½d., and labourers an average of lire 1'8=1s. 5½d. per day during the period referred to.

From the preceding remarks it will be apparent that in order to understand the existing state of mining law in Italy, it is necessary to follow separately the history of the law as to mines in each of the States which go to make up the entire kingdom. The different States must again to some extent be subdivided according to

Different mining laws.

their former history. It is proposed to give a short sketch here of the history of each State or portion of a State in which a separate law prevails as to mines, following the order in which the different laws are stated in the Blue Book before referred to.

PIEDMONT.

In the 16th century the Duke of Savoy, Charles II., laid down a general law upon the subject of mines. In the second half of the 18th century various alterations of the law took place. During the French occupation the French laws of 1791 and 1810 were successively applied, but they were abolished on the return of the Kings of Sardinia to the possession of the country. In 1822 King Charles Felix issued Letters Patent, to regulate the matter, based principally on the French law of 1791, and recognising a right of preference to the concessions in the owner of the surface. In 1840 Charles Albert established a complete mining code abolishing all previous laws on the subject, which code transforms the basis of the existing law. This code transferred the right of preference to the concession from the owner of the soil to the discoverer. In other respects the law greatly resembled that of France. The effect of the existing law of 1859 (in 171 Articles) is briefly but correctly stated in the Blue Book before referred to (p. 20). By this law minerals are divided into two classes only, the property in which is owned as shown in the following table:—

PIEDMONT.

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines.	Ownership.	To whom Royalty or Mining Tax is payable.	Remarks.
I. Mines, comprising veins, layers, or beds of gold, silver, platinum, iron, copper, lead, zinc, tin, antimony, arsenic, bismuth, cobalt, nickel, mercury, manganese, and other metals; sulphur, sulphates of iron, copper, and zinc, manganese, aluminium, alum, bitumen, asphalt, graphite, anthracite, coal, and lignite.	In the concessionaire from the State, the concession being given by preference to the discoverer, who may either be the owner of the soil or a stranger, who has made a search in accordance with the regulations, and established the existence of a workable mine.	To the Government. 1st a fixed tax of 50 centimes per hectare, and 2nd, proportional royalty tax of 5 per cent. of the net profits ascertainable by the prefect. N.B.—The latter rent has been of late years replaced by the general income tax (Tassa di ricchezza mobile)* amounting to 13-20 per cent. on the net profits of the undertaking.	Law of 1859, Arts. 59 to 63.
II. Quarries, comprising turf and quarries of metalliferous sands and earths, stone for building and sculpture, chalk, slate, marble, sand, quartz, barytine, fluorine, and in general all rocks from which neither metallic nor combustible substances can be extracted, and not comprised in the 1st class.	In the owner of the surface, who is simply subject to police regulations for protecting the public safety. The workings must not be undertaken until after a declaration made to the sub-prefect, accompanied (if the workings are to be underground) by a plan.	If let, to the owners of the surface.	

* N.B.—The Ricchezza Mobile (Italian income tax) is paid on the net working profit of a mine, not on the produce, as stated in the Blue Book, p. 20. It is charged on all businesses alike, not specially on mining profits. By Article 14, mines of salt and saltpetre are excluded from the application of the law (being a Government monopoly).

Royalties.

No provision is made by the law for payment of rents to the owners of the surface, except in respect of land occupied.

Surface land occupied or damaged.

For land temporarily occupied within or without the area of the concession, the owners of the surface are entitled to an annual indemnity of double the value of the net income which they could be shown to have produced; but, should the occupation last for more than a year, or cannot be restored, the surface owner can require it to be bought, without any corresponding power on the part of the concessionaire to require him to sell. In this case the value is taken at the ordinary rate, and not doubled as under the French law. The concessionaire can be required to give security beforehand in case of works under buildings or inclosed places, or in their vicinity (Art. 81); but the concessionaire may be excused from doing so if he proves that he has executed the necessary works to prevent any future danger (Art. 82).

In case of works outside the area of the concession the ordinary law of expropriation on the plea of public utility must be followed (Art. 83).

The principles of indemnity and recompense between neighbouring and underlying and overlying mines laid down by the French law of 1810 in respect of water (Art. 45) are adopted by the law of Piedmont (Art. 75), and extended to all cases of damage by one mine to another.

These cannot be undertaken even by the owner of the surface, except by permission of the administration granted by the prefect of the province after a public inquiry (Arts. 20 and 23). The prefect, subject to an appeal to the Minister, can either grant or refuse the permission (Art. 22), and his choice is not restricted in the case of concurrent applications, though it is usual to give priority to the applicant who has made the first regular application. A permit may be obtained even in cases where the proprietor of the

Searches for mines.

Sales and Leases of Permits of Research and of Concessions.

land has refused his consent (Art. 20); but if the applicant has obtained the consent of such proprietor, he must unite it to his application (Art. 21), and it is said that, if he has not obtained the consent, he must at least prove that he has asked for it (Ag. § 1316). The permission of search fixes the boundaries within which it may be made, and the mineral for which it is granted; the duration is limited to two years, but it may be prolonged for a year (Art. 24), and prorogued at the pleasure of the Government even for years; and it may be revoked if the works are interrupted for three months, except in case of *force majeure* (Art. 24). It may be disposed of on declaration being made to the sub-prefect (Art. 28); but it does not give permission to dispose of the products of the search without a special authorisation of the Government (Art. 34). The permission does not give the right, without the formal permission of the proprietors interested, to make explorations in places enclosed by walls, or in courts or gardens, or to bore or open pits or galleries within a radius of 100 metres from dwellings, or the walled enclosures belonging to them, or within a radius of 40 metres from other walled enclosures (Art. 31). A special permission is required to follow the works to within a distance of less than 20 metres from roads, or less than 100 metres from canals, aqueducts, and watercourses (Art. 32). If the search results in proving, to the satisfaction of the Government, the existence of a workable mine, the discovery (Art. 35) shall be declared, after which the mine will be concessionable.

Concessions.

When the search is over, if successful, the administration proceeds, on the application of the party interested, to the "declaration of discovery" which is made by the decision of the Minister of Public Works on the report of the engineers of mines (Art. 35). This declaration confers on the person in whose favour it is made a right of preference to a grant of the concession. Whilst waiting for the concession the holder of the right of research may be authorised to continue his works (Art. 36).

The finder and his assigns have the right of preference to obtain the concession of the mine declared discovered if within six months from the declaration of the discovery they put in a regular application and prove the necessary technical and financial ability of themselves or their partners to conduct the working, and comply with the conditions of the concession (Art. 40). In default of such application and proof within the six months, the finder shall be, by the decision of the Minister of Public Works, declared to have lost his right of preference, and the concession can then be granted to another applicant, in which case the discoverer has a right to an indemnity to be paid by the grantee of the concession, the amount of which may be settled amicably between them, or otherwise is fixed by the act of concession.

No concession can exceed 400 hectares, about 988 English acres in extent, but the same concessionaire can obtain several concessions even in the same neighbourhood. A concession only extends to the substance or substances of which the position has been declared discovered, and which are expressly mentioned in the act of concession. The mine when conceded forms a separate immovable property which is distinct from the surface and perpetual, and capable of transfer like all other property, except that it must not be sold in lots or divided without an authority given by Royal decree. But as regards transfer, Art. 15 of the law provides that transfer *inter vivos* can only take place under the conditions indicated in the act of concession. These conditions usually are as follows, viz.:—

To strictly observe the conditions of the mining law.

To pay a discoverer what he is entitled to.

To work the mine in a businesslike manner.

To pay the State tax of 50 cents per hectare.

These appear to be of not unfrequent occurrence, but the terms of the arrangements, being purely a matter of private agreement, vary considerably. The following examples may be quoted:—

The workers of lignite in Sardinia, in Umbria, &c., who have taken concessions from the original concessionaires, pay the concessionaires an average royalty of 1 lire per ton exported from the mine.

In Lombardy and in Sardinia the workers of zinc mines who have taken concessions from the original concessionaires pay an average royalty of 6 lire per ton of calcined calamine. Those who undertake the mining of lead, and lead and silver, or mixed undertakings, in Sardinia are liable to varying amounts of

royalties of from less than 8 to more than 12 lire per ton, though it appears that the lead and silver mines of Italy are of poor quality.

It must be borne in mind that out of about 207 metalliferous properties really worked not 60 are worked to a profit. It is consequently not surprising to find that concessions are not freely sold or leased, and that a large proportion of the concessions which are worked, are worked by the concessionaires themselves.

Under Arts. 96 to 100 of the law the concessionaire or owner who desires to surrender the property of a mine must make a formal petition to the prefects of the province (Art. 96); it must not contain any condition whatsoever (Art. 97).

After the petition has been presented no further excavations may be made in the mine. Ladders, bridges, &c., necessary for the working and maintenance of the mine must be left, but have to be paid for afterwards by a new concessionaire (Art. 98).

After the registration of the declaration of surrender and after the visit of the Government mining engineer (Art. 100) to ascertain the state of the mine, &c., and after the necessary instructions given by the prefect for the safety of the mine, the declaration of surrender is published on three successive Sundays at the sub-prefecture and commune where the property is situate.

Ordinary creditors of the party surrendering can put up the mine for sale, having obtained a decree of the local tribunal of commerce to that effect. Should there be a mortgage or mortgages on the mine, either the Government or the creditors, privileged or otherwise, can demand the sale. The order or decree would be made by the local civil tribunal, as in the case of ordinary creditors. The usual formalities prescribed by the civil codes are exactly the same as in the case of any other real estate mortgaged in favour of a creditor (Arts. 660, 662, and following of the Codes of Civil Procedure). Should no offer be made on attempted sale by public auction, the tribunal pronounces judgment, declaring the mine free and returned to the State. To complete all formalities up to time of sale about four months are necessary.

When no creditors come forward at the time of the publication of the surrender, and no mortgages are found to be registered against the property, the surrender is accepted by royal decree. This decree is published, and, after the expiration of 40 days, the Government can dispose of the mine and grant a new concession of it. It will therefore be seen that about six months are required to liberate a mine from date of surrender when mortgages or creditors are in question; when there are no creditors or mortgages two months suffice.

This is only provided for in one case—that is, where the concessionaire of a mine which has been unworked for two years does not resume working after notice has been given to him by a ministerial decree (Art. 111). The right of forfeiture is, however, only a power which may be exercised by the administration, and is not obligatory. It is pronounced by the minister, on the recommendation of the Council of Mines. Appeal, however, can be made against the ministerial decree to the Council of State, and, if pronounced, gives rise to exactly the same results as a surrender, except that a sale has to be attempted, whether there are mortgage creditors or not. As a matter of fact, the power does not appear to be often exercised. A case is given of the concession of a gold mine in the province of Novara, which has not been worked for more than 20 years, but the concessionaire has never been denounced by the Government engineers.

As before observed, permission to execute works necessary for ventilation and drainage outside the areas of concessions may be obtained by concessionaires by means of the law of expropriation for purposes of public utility. Owners of mines have a right of way for their minerals to the nearest communal or provincial road or waterway, subject to their making good any damage they may cause. It is said, however, that communal roads, as a rule, pass close to most important mines; and that, when they do not, trunk roads are frequently made by mine owners to join the communal roads.

These are provided for by Arts. 84 and 85 of the law, under which, whenever the safety of persons or of the working of a mine is in danger, the engineer of mines, who must be informed, proposes the necessary measures to the prefect; and the latter, after giving the concessionaire an opportunity of being heard, prescribes the steps which he considers necessary to be taken, and

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Surrender of Concessions.

Forfeiture of Concessions.

Way-leaves.

Inspection and regulation of mines.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
revised by Mr.
Walmsley.

which, except in cases of urgency, are not obligatory until the approval of the minister has been obtained; but may finally be executed by the administration at the cost of the concessionnaire.

Arts. 89 and 95 enact similar provisions to those of the French law as to procedure in case of accident to persons, and as to the supply of remedies and the employment of surgeons, with separate penalties in case of non-observance of the different obligations of the law.

Lucca.

The law of Lucca of the 3rd May 1847 resembles the law of Piedmont of 1859, the most striking difference being that it recognises in the owner of the soil a right of preference to the permission of research and (subject to provisions for the benefit of the discoverer) to a grant of the concession (Ag. § 1341). The law of Lucca does not specify the substances which are the subject of concession, but includes in such category all metallic and demi-metallic substances.

The concessionnaire should pay to the State a royalty fixed by the administration, based on the value of the minerals extracted, which may, by agreement, be altered into a fixed annual payment (Art. 61).

For land taken within the limits of the concession, double yearly value must be paid, if the land is only occupied for a short time; after one year the landowner can compel the concessionnaire to buy at the real value; if the land is mortgaged, only one-fourth of the indemnity becomes payable to the owner, and three-fourths to his creditors.

These can only take place by permission of the owners of the surface, or of the Government, given on condition of an indemnity being paid to such owners for damage that may be done, to be fixed by agreement or by experts, and for which the owners can require security to be given. Permissions only last for a year, but may be prolonged if there is a likelihood of discovery, and may be revoked if the work is delayed for a month. Any discovery must be notified to the Government, when, if it is ascertained that a workable mine really exists, a concession may be granted; and, pending such grant, special permission may be given.

These can only be granted after the mine has been discovered and the practicability of working it has been admitted by the Government. The application must be published for forty days, during which time any one may protest against the concession being granted.

A right of preference to a grant of the concession is given during a period of three months from the date of the discovery to the person who has made the discovery under the previous conditions, on his proving that he is possessed of sufficient means to work it. In the event of his not obtaining the concession, he is to be awarded an indemnity (to be fixed by the Government) by the act of concession, and in addition is to be reimbursed the cost of the works executed by him (Art. 35). After the discovery, the law recognises a right in the owner of the soil, who proves his ability to work the mine, to the concession, and it is only in the event of neither of those parties demanding a concession that the Government can choose at discretion between other parties who may have applied for it simultaneously, and can prove their ability to work the mine.

In any case the Government fixes the limits of the concession at discretion, but usually adopts the limits asked for in the application. The concessions are perpetual, and may be disposed of subject to any condition which may be inserted in the act of concession (Art. 31). The concession may be forfeited not only (as in Piedmont) in case of failure to work for two years, but also in case the mine is in such a disorderly state that the administration considers that it would be impossible that it should be repaired (Art. 63).

With a few trifling exceptions the rest of the law is similar to that of Piedmont. The law does not, however, contain any provisions relative to the relations between neighbouring or overlying or underlying mines.

The subject is not of much practical importance, as there are only worked under this law two concessions, one of silver lead and one of lignite. (Government Mining Report for 1887.)

MODENA AND REGGIO (EMILIA).

The law of the 9th August 1808 emanated from Napoleon I., and naturally forms a sort of cross between the French laws of 1791 and 1810. It will only be necessary to draw attention here to the points in which

it differs from the law of 1810. The law is only of theoretic interest, as it is understood that no concessions are worked under it.

Mineral substances are divided into two classes only, that of "mines," which cannot be worked except by virtue of a concession, and that of "quarries," which are left to the free disposition of the owner of the soil, under reserve of the right of extraction by reason of public requirements.

No royalties are payable by law to the owner of the soil in respect of the minerals comprised in the first class.

Explorers and concessionnaires have the right to occupy the lands which are necessary for their working on the lands which are necessary for the value of the presumed probable damage, or of the land occupied, with the addition of a sixth part of the same value (Art. 31). The concessionnaires are also responsible for all the damage which the working of the mine may occasion.

Any one may make these for a period of six months which period may be prolonged by the administration (Art. 9). If the owner of the soil opposes the carrying on of the searches he may be restrained by the Government, and the explorer has the same rights and obligations towards him as a concessionnaire would have.

These can only be granted for 50 years at the most (Art. 11), and can extend over an area of six (Italian) square miles (Art. 12). They are only available for the substance named in the act of concession (Art. 36).

The Government, after due publication, has power to decide at discretion if there is ground for a concession. If there is, the concession may be granted within boundaries fixed at the discretion of the Government according to the following rules: If the mine is notoriously known as discovered, and is unworked, the owner of the soil has the right of preference if he proves that he has the necessary means, and he asserts his rights within three months from the date of the first application. In default, the mine is granted to the first petitioner who has made his application in form. If the mine has not been previously known, the first finder or applicant has the preference if he proves the necessary means, the finder being considered the first person who has pointed out the mine, at least so that the contrary cannot be proved by any third person. If the finder is excluded by reason of not proving himself possessed of the necessary means, he has a right to an indemnity from the concessionnaire, to be fixed by agreement, or in default by the administration. Whenever a new concession becomes necessary by the discovery of a new substance within the field of a mine, the first concessionnaire has the right of preference (Art. 36). At the expiration of a concession the concessionnaire has the right of preference to a renewal of it if he has performed his obligations (Art. 38).

Special conditions may be inserted in the act of concession (Arts. 26 and 28).

Concessions may be disposed of at pleasure, but the transferees should make a declaration within three months to the administration proving their means to work, and the transfer is not effective until it has received the approval of the administration (Arts. 43 to 45).

This may be incurred (1) through not having commenced working within four months from the date of the concession (Art. 48). (2) Through the work being stopped for more than six months without good reason. (3) Through the different conditions of the act of concession not being complied with. (4) If the working of the mine is not continued as actively as the administration thinks proper. (5) Through default in making the declaration within three months of a transfer by gift or sale. The forfeiture is in all these cases pronounced by the Minister of the Interior on the report of the prefect after hearing the concessionnaire (Art. 51).

The concessionnaire may give up his concession on giving three months' previous notice to the administration.

Both in the case of forfeited and surrendered mines, or when the concession has lapsed, the concessionnaire is forbidden to work the mine; he has only the right to sell the mineral already extracted, the unfixed machinery at surface, and tools, but cannot take away ladders, pit-work, wood-work of galleries, or anything else necessary to keep open the access to, and to continue the internal working of, the mine (Art. 53). Whenever a new concession is granted, the new concessionnaire shall pay to the former one, or his heirs, the value of the effects left on the mine, which are recognised as useful for the keeping up of the same, at a just estimate to be determined by agreement

Classification
of mines.

Royalties on
taxes.

Surface land
occupied or
damaged.

Searches.

Concessions.

Dealings with
Concessions.

Forfeiture of
Concessions.

Surrender of
Concessions.

Regulation of
mines.

or by experts named by the parties, or by the tribunal (Art. 54).

At the end of each year mine owners must give particulars of the work executed, with plans for working in the succeeding year, indicating the number of workmen occupied and the gross and net produce of the undertaking (Art. 39).

NEAPOLITAN STATES.
CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Royalties or Mining Taxes payable.	Remarks.
I. Metallic and semi-metallic mines, coal, bitumen, alum, and sulphates with metallic base.	Apparently in the surface owners, who may work themselves or grant the right of working to third parties, and without any concession from the Government; but the Government may grant the right of working mines to third parties if, after a warning and sufficient delay, the owners of the surface do not work them.	To the surface owners when concessions are granted, the amount being fixed by agreement, or in default by the courts.	Arts. 2 and 15.
II. Mines of sulphur and plaster and quarries of stone, marble, granite, sand, slate, &c., and all other substances not comprised in the first class.	In the owners of the surface, to whose free disposition they are left without any restriction.	If let to the owners of the surface. As regards mines of sulphur in the Island of Sicily a tax (called <i>Aperietur</i>) is payable on the mine being first opened. The amount so payable in respect of each mine opened is 127 fr. 50 c. (or about 54.).	(Art. 17.) This tax was originally levied under a royal decree of the 8th October 1808, which was continued in force by a Ministerial Circular of the 21st February 1868.
Salt mines form a separate class.	On the mainland in the Crown and on the Island of Sicily in the surface owners.	To the Crown or the surface owner, as the case may be.	(Art. 16.)

N.B.—A peculiarity of this law appears to be that the worker of a mine which has been opened on one property may follow it into an adjoining property without the owner of the latter being able to prevent him; but in this case the latter has a right to be compensated, such compensation to be mutually agreed on or fixed by the arbitration of a judge (Art. 15). This right, apparently, is only applicable to mines which are worked under private grants; as, in the case of concessions, the boundaries of each concession have to be stated. The right seems to be analogous to that which is recognised by the law of the United States of America.

Royalties.

These are payable in the manner shown in the above table, and are subject to all the usual taxes. It is stated that the workers of sulphur mines, when not themselves the owners of the surface, usually pay to the latter by force of agreements between the parties, not regulated by special laws, and under the title of rent or royalty, a fraction of the entire gross yield of the sulphur; this fraction is sometimes paid in kind, that is to say, in the condition of pure sulphur. It is also stated that in the Island of Sicily the royalty varies generally from 20 to 25 per cent. of the produce, but sometimes is less, and at other times the higher limit is exceeded, and examples are given of such royalties reaching even up to 40 per cent. Nor are there wanting in Sicily cases of royalties on an ascending scale—that is, progressive with the duration of the leases; as also of royalties fixed according to the varying price of the sulphur. We are also told of nine years' contracts, for which the lessee has to pay the rent or duty of 11 per cent. for the first three years, of 13 per cent. in the following three, and of 15 per cent. in the last three. In other contracts we find the fixed rent or duty of 10 per cent. for the years in which the average price of the sulphur stands at between 8.50 and 9.50 lire per cwt., that of 11 per cent. for averages of 9.50 to 10.50 lire, and that of 12 per cent. for prices above 10.50 lire.

There are, besides, stated to be contracts which fix a minimum duty, on less than which the lessee can never count, whatever may be the produce of the mine. Other contracts instead take as their base a fixed figure of production and reckon the duty upon this. For example, one contract fixed the rent or royalty at 8,000 cwt. of sulphur, while the produce was less than 32,000 cwt.; when this output was exceeded, there remained simply a royalty of 25 per cent. By virtue of another contract the owner receives the duty of 40 per cent. on a specified output of 222,000 cwt., he gets therefore 88,800 cwt. of sulphur, whatever the actual yield of sulphur may be.

Besides the burden of the duty, certain contracts involve also the obligation of sinking a sum of capital money which has exceeded in certain cases even 100,000 lire.

NEAPOLITAN STATES.

The general law is contained in an Act of the 17th October 1826. By this law the mineral substances are divided into two classes, subject to the incidents respectively shown in the following table, viz.:—

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
revised by Mr.
Walmsley.

Surface occupied
or damaged.

Concessions.

Forfeiture of
concessions.

Regulation of
mines.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.
General remarks.

treatment of sulphur. Establishments for these purposes can only be started after a declaration to the administration, and are prohibited, except by special permission, within a certain distance from inhabited places and cultivated lands.

The mining industry of the Neapolitan States and Sicily does not appear to be very important or flourishing. The mines worked in the former States in the year 1888 were as follows:—

MINES WORKED IN THE NEAPOLITAN STATES (EXCLUSIVE OF SICILY) IN 1888.

Province.	Mines.	Minerals.	Produce.
Chieti - - -	3	Asphalt, bitumen, and stone.	£ 10,760
Catanzaro - - -	7	Sulphur - - -	47,526
Avellino - - -	2	Sulphur - - -	30,690
Caserta - - -	1	Petroleum (well) - - -	240
" - - -	1	Asphalt - - -	840
Cosenza - - -	1	Rocksalt - - -	8,240
Total - - -	15		98,246

The Government Engineer's Report for 1888 as to excavations for minerals in the province of Messina, in the Island of Sicily, is as follows, viz.:—

"Several of the small but numerous excavations of the province of Messina have continued to be worked, but in a very irregular manner, the work being limited even to a few days during the year.

Name of Company.	Property.	Where situate.	When registered.	How held and purchase money.
Giona Sulphur Co., Limited.	Sulphur mines	Racalmuto, Sicily	1886	The new Company paid 1,500 <i>l.</i> for the property, subject to three mortgages, amounting together to 18,500 <i>l.</i>
Sicilian United Copper Mines, Limited.	Copper mines	Novara, Sicily	1888	Under purchase for 85,000 <i>l.</i> in fully paid shares.

The produce of the sulphur mines of Sicily is subjected to a special export duty of 10 frs. per ton.

LOMBARDO VENETIA.

These States were formerly governed by the Austrian Mining Law of the 23rd May 1854, the provisions of which are fully set out under the head of "Austria-Hungary." In 1859 Lombardy was annexed to the kingdom of Sardinia, and the mines of the country were shortly afterwards placed under the Piedmontese law of the same year. Venetia still continues under the Austrian Mining Law of 1854.

The mining industry is inconsiderable, as will be seen from the Government return for the Venetian Provinces in 1888:

Province.	Mines.	Minerals.	To	Value.	Work-people.
Belluno - - -	1	Copper - - -	12,060	lire. 120,160	202
Vicenza - - -	5	Lignite and bituminous schist.	17,559	187,337	226
Totals - - -	6		29,619	307,497	428

The quality of both the copper (that is, the per-centage of metal in the ore) and of the lignite is said to be poor.

A fixed annual tax of lire 9.88=7*s.* 10*d.*, is payable for each "misura" (=12,544 square perches), in respect of which a permission of research or a concession is granted.

"This year better and more detailed statistics have been obtained, which enable one to ascertain that this industry, although developed under most difficult conditions, and in the hands of persons almost devoid of means, and ignorant of all technical knowledge, is not without a certain importance. The principal minerals that form the scope of the mining industry are: antimony, grey copper, and copper pyrites, silver-lead, ore and blende. The mining works consist, except in very rare cases, of very superficial excavations. Frequently advantage is taken of the denudation of some metalliferous veins, produced by landslips, of frequent occurrence in these soils, composed of argillous mica schist, and these veins contain the small metalliferous deposits. These small veins, you will observe, are not described as regular well-defined lodes or veins, but are spoken of as containing deposits."* ("Rivista del Servizio Minerario nel 1888," p. 51.)

In spite, however, of apparently unsuccessful results of mining in the Neapolitan States and Sicily, it appears that mines are sometimes disposed of in those countries for considerable sums, as will be seen from the following published particulars of English companies, viz.:

* It will be seen that the above extract from the Government Engineer's Report does not extend to mines of sulphur, which is the chief mineral product of the Island of Sicily, and as to which the following particulars are taken from the Government reports for 1888:—

DISTRICT CALTANISSETTA (Whole of Island of Sicily).—The quantity of sulphur produced during 1888 was 322,042 tons, of a value of lire 21,512,405 (851,532*l.*); during 1887, 300,802 tons, of the value of lire 20,905,739 (827,518*l.*). The increased production during 1888 was therefore 21,240 tons, of a value of lire 606,666 (24,011*l.*). This production was obtained by 25,024 workpeople. The average free-on-board price at shipping port was 53*s.* 7*d.* per ton during 1888 whereas it was 55*s.* 7*d.* in 1887.

PARMA.

The mining industry subject to the provisions of this law is unimportant.

Properly speaking, there are no metalliferous mines.

The following are the concessions and permits of Research in force:

("Rivista del Servizio Minerario 1887.")

Province.	Mines.	Minerals.	Value.	Work-people.
Parma - - -	3	Concessions. Petroleum wells, producing 149 tons crude oil.	lire. 46,000	68
	1	Mineral spring - - -	33,740	3
Placenza - - -	2	Searches. Petroleum wells, producing 10 tons crude oil.	6,000	15
	1	Copper, no ore yet discovered.	—	9

The law is laid down by an Act of 21st June 1852, supplemented by a ministerial decree of the 8th July 1852. This law possesses several special features, which will appear from the following notes. In the first place it divides mineral substances in the manner appearing in the following table, viz.:

PARMA.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, all metallic and coal, lignite, different bituminous matters, sulphur crystals, marble, monumental stone, and in general all mineral substances which are not in common and constant use, and mineral* springs.	In the State, to concede them to third parties.	To the State, viz., 5 per cent. of the net produce which may be converted by the administration into a fixed annual sum. If the mine is not worked the tax must still be paid, and is calculated according to the last previous results.	It is believed that the tax is merged in the <i>Ricchezza Mobile</i> .
II. Quarries. Marl, limestone, brick-earth, and sand.	In the owner of the surface, still the State may grant a concession of these substances to any one who has discovered an entirely new and special mode of applying them (Art. 22 of law).	If let, to the owner of the surface; if conceded, apparently to the State as above.	In case of doubt as to the legal classification of any substance, it is to be determined by a decision of the administration (Art. 14 of the decree).

* This is said to be the only law which classes mineral springs amongst mines.

D'ESTE.

The system of Este, without limitations, formerly applied to certain districts of the province of Massa Carrara, and gave the Sovereign absolute rights of domain over the working of mines and the establishment of manufactories, which he might deal with at pleasure; but by a ministerial order of the 24th July 1860, the Piedmontese Law of 1859 is extended to the districts in which the system of Este, without limitations, formerly prevailed. The system of Este, with limitation, applied to different portions of the province of Massa Carrara, has special reference to searches for and working of marble on the communal lands. The law recognises priority of occupation and discovery, secures royalty to the commune, and provides for forfeiture in case of failure to work.

General remarks.

It is stated that there are no metalliferous mines, and only one lignite mine worked in the province. This lignite mine is unimportant, producing only 5,012 tons, of a value of lire 42,103, and employing 70 work-people. The total tax payable to the Crown at 50 cts. per hectare of ground (in 1888) amounted to 227 lire, about 9*l.* 1*s.* 7*d.* There are many valuable quarries worked under the system of Este, with special limitations (viz., in the district of Carrara under the law of February 1751, and in the Massa district by the regulations of July 1846), but such substances do not seem to come under the scope of this inquiry.

PONTIFICAL STATES.

The principle of absolute ownership by the Crown of all mineral substances capable of being worked seems to have been recognised from an early period, the Sovereign Pontiffs being in the habit of granting permissions to work such mines, without any special formality, to whom they pleased, and for whatever periods and upon whatever conditions they thought proper. The existing legislation applicable to the States seems to differ in different portions of such States, according to the date of their annexation.

In the States known as "The Marches," which were annexed in 1860, the Piedmontese Law of 1859 has been made applicable.

In the provinces of Forlì, Rome, and Perugia the system of searches for and concessions of mines has been regulated to some extent by Royal decrees of 23rd March 1865, and 17th June 1872, which have extended to those provinces similar principles to those of the Piedmontese Law of 1859.

It would seem, however, that the provinces of Bologna, Ferrara, and Ravenna still remain subject to the general principles of ownership by the Crown which formerly prevailed, apparently because no occasion has arisen to apply them (Ag., § 1346).

It is understood that the decree (Regolamento) of the 23rd December 1865 as to regulation of mines now applies to all the provinces.

It will be seen from the following table that there is only one metalliferous mine worked in the ex-Papal States, aluminium, the others being mines of asphalt

General remarks.

and lignite, the latter belonging to the Torni Company, the production being used in the establishments of that Company:

Province.	Mines.	Minerals.	Tons.	Value.	Work-people.
Chieti	3	Asphalt, &c.	6,977	lire. 283,305	574
Rome	3	"	173	11,326	27
"	1	Aluminium	6,050	39,250	93
Perugia	5	Lignite	94,713	912,444	1,027
Totals	12			1,238,325	1,721

TUSCANY.

In this part of the country, under a Grand Ducal "motu proprio" of 1788, except in the Island of Elba and Piombino (where the minerals are reserved to the Crown as part of the public domain), the ownership of the soil carries with it that of the mines (*see* Report of Consul General Colnaghi, 1882).

The mines are occasionally dealt with by sale or lease, as in England. At the present time in Tuscany the workers of many of the most important mines are also owners of the mines, having bought the mines, or in some other way acquired the perpetual right to work. Where, however, the worker is not himself the owner, the latter, in proportion with the right granted, receives payments which vary considerably according to time, place, person, and other circumstances, there being no special rule regulating such matters. Some agreements accordingly provide for a joint interest in profits, others reserve to the owners of the surface a certain per-centage of the gross produce, or a royalty in money for every ton of mineral extracted, or a fixed dead rent; then there are agreements of a mixed character, and there are also sliding scales; thus, for example, it is stated that some workers of mercury mines contribute to the owners of the surface from 14 to 20 per cent. of the profits; others, a fixed dead rent of from 2,000 to 6,000 lire, and sometimes, besides the dead rent, 5 per cent. of the gross produce. Certain owners of cinnabar-producing lands receive the annual rent of from 50 to 70 lire per hectare.

There are copper mines which contribute 8 per cent. of the mineral extracted, others pay 5 lire per ton. The royalty paid by some workers of antimony varies from 10 to 14 lire per ton, that paid by manganese mines from 5 to 8 lire.

Lignite bears a royalty of one lira per ton, or of a fixed annual sum, which sometimes amounts to 20,000 lire; some mines pay 5 per cent. of the gross produce.

These mines belong to the public domain. They have been re-let quite recently to a Mr. Tonnetta, but the conditions of the contract have not yet been made known. The policy of the Government with respect to their iron mines has been to put such a heavy royalty on ore exported (*viz.*, lire 4.25=3s. 5d. per ton for unwashed mineral, and lire 5.25=4s. 2d. per ton for washed mineral exported) as practically to prohibit its shipment. The object of this prohibitive policy has been to induce capitalists to erect furnaces in the kingdom, but it has been thwarted, owing to the high prices ruling abroad for hematite.

The royalty for ore used in Italy is only 50 cents per ton, 4d., and, notwithstanding this, the home demand for the ore in 1888 was only 9,104 tons (*see* table below).

It is understood that the last contractors of the mines were able to get out without much loss, but declined to contract again, even on far more favourable terms.

It appears that the bulk of the iron ore of Elba is shipped to America, as, indeed, is proved by the following table.

TABLE of Production and Exportation of Iron Ores extracted from the Royal Mines of Elba.			
	Tons.		Tons.
Production in 1888	154,830	Shipped to America	115,557
Remaining in stock from 1887	40,995	" England	61,240
		" France	9,924
		Used in Italy	9,104
	195,825		195,825

As before stated, there is now a prospect of the laws relating to minerals in the country being consolidated to some extent under the following circumstances, *viz.*:

Recently a Commission of Deputies has been sitting to consider a draft Bill presented in November 1889 by the Minister of Agriculture, Industry, and Commerce "on expropriations, partnerships, police of workings in mines, quarries, and turf, and on searches for minerals."

This Commission, in March 1890, issued a long and interesting report, of which it may be worth while to give here a short analysis.

The report commences by referring to the draft Bill, and states that there exist actually 16 different schemes of law (*progetti*), of which it gives a list (the dates extending from 1862 to 1889), none of which had been approved by the two Houses of Parliament.

The report then treats of the different subjects as to which it is proposed to legislate, dividing them under the following sections and headings:

SECTION I.—EXPROPRIATIONS AND PARTNERSHIPS.

The provisions referred to under the first part of this heading seem to be adapted to some extent from Art. 83 of the Piedmontese law of 1859, which enables concessionnaires to execute outside the areas of their concessions the necessary works for ventilation and drainage of their mines by having recourse to the system of expropriation on the ground of public utility.

The second part of the same heading deals with the system of compulsory partnerships, which it is proposed to establish in order to deal with the difficulty of mining on any extended scale in consequence of properties in Italy being split up into small proprietorships. The notion appears to be that where there are different workings in what should naturally constitute one mine, and which would be more easily and regularly worked if it belonged to one owner, the various owners should to some extent become partners, in order to carry out works for the common good, with the risk of expropriation (on the usual terms) of any one who wishes to withdraw himself from the partnership. The principle of such compulsory partnerships already exists in the Piedmontese law of 1859, which (Arts. 73, 74, 76, and 77) gives to the administration power to require different neighbouring concessionnaires to form a syndicate in order to carry out a common plan of working, and to undertake and carry out works for the common good of all when a necessity arises either from motives of public safety or to secure the preservation of the mines concerned. The principle indeed seems to have been originally adopted in the French law of the 27th April 1838, and to have been extended by the Piedmontese law to all cases which might arise in working mines, and not limited (as by the French law) to the case of apprehended flooding only. The report fully acknowledges the difficulties which the constitution of compulsory partnerships presents, and considers the subject minutely with the view of ascertaining in what cases it would be reasonable to constitute such partnerships. The outcome of the consideration is a recommendation that the power of enforcing contribution towards works for the common benefit should be limited to such works as merely require an original capital outlay and a subsequent small expenditure to prevent decay, such as drainage galleries and ventilation shafts, but should not extend to works which would require a considerable annual expenditure, especially with the application of mechanical apparatus, such as pumping works or mechanical ventilation. Beyond this it is not proposed to go, though it is pointed out that the true method of making the industry fruitful and profitable would be to unite together the different portions so as to make them into one single mine; but it is remarked that such union should be the result of voluntary and friendly agreements between those interested, and certainly not of compulsion. The Commissioners also report that they consider that the importance and nature of the provision demands that the partnership shall be constituted not by ministerial decree but by Royal decree, after an administrative inquiry, and hearing both the parties interested and the Council of Mines. They also refer to the provisions which already exist in the Civil Code and in the laws as to public works for constituting partnerships in reference to irrigation works, roads, and replanting; and, after remarking that this is the first time that compulsory partnership has been proposed for works of private interest, as showing the gravity of the proposal, they go on to consider what provisions should be made against private rights being too severely injured. They point

Proposed general legislation.

out the difficulty which small proprietors might be in if they required to raise capital on so uncertain a property as that of a mine, and, on the other hand, the risk that the majority would be in if they had to expropriate the portions of the mine belonging to a minority on the strength of mere valuations of such an uncertain property. The Commissioners propose to meet the difficulty by giving members of the minority power to pay their contribution by way of annuities extending over 20 years and secured on their shares of the mine. If they prefer, they are to be entitled to the mine. Where the propriation for the sake of public utility. Where the ownership of the mines arises from a concession distinct from the ownership of the soil, the whole concession must be expropriated; but where by law the ownership of the mine is combined with that of the soil, the expropriation must extend both to the surface and the subsoil, but only to that portion of land containing the mineral which can share in the profits of the partnership.

SECTION II.—POLICE OF WORKINGS.

The provisions recommended under this section are, for the most part, textual reproductions of the regulations promulgated on the 23rd December 1865, giving to such regulations the force of law, and extending them to the whole country, and establishing effective penalties to secure the observance of the law. The Commissioners remark that the general principle to be followed in regulating the police of mines is that the mining corps and the administration ought always to have for their object the prevention of danger, but should never impose on the worker a given system of working, the art of mining having no fixed rules, and the manager being entitled to be the free judge of the system of excavation which he should follow; and that the mining corps, exercising a diligent watch, ought to do its best to prevent the workers omitting, through ignorance or avarice, necessary precautions, but should not enjoin what system is to be adopted.

SECTION III.—GENERAL PROVISIONS.

The Ministry, by their Bill, proposed to consolidate the laws of the country as to the ownership of mines by adopting the system of concession throughout the country, giving to the owner of the soil the right of preference to the concession. The majority of the Commission, however, decided against this proposal, and the Commissioners subsequently decided unanimously to strike out all provisions of the Bill affecting the existing rights of ownership. The report contains a full statement of the reasons which has led the Commissioners to this conclusion, and in doing so enters into an elaborate exposition of the various principles on which the different forms of ownership of mines are believed to have been based, and classifies the different laws of the country as being founded on—1. The Industrial right, which grants the ownership of the mine to the discoverer. 2. The Territorial right, which recognises the owner of the soil as also owner of the sub soil. And 3. The Mixed right (*viz.*, that proposed by the Ministry), which recognises in the owner of the soil the right to work the minerals under his own land without the need of a concession, but which, if he does not work them, gives to the Government the right of granting by decree a concession of such minerals to the discoverer, leaving, however, to the owner of the soil a certain time for undertaking the working of the minerals himself, which (as the report observes) is equivalent to a real right of preference. A stranger taking the concession is further bound to make compensation to the owner of the soil.

The Commissioners, after giving a full analytical exposition of each of the three systems, indicate their preference for the first of those systems, as being more fruitful for the mining industry where property (as in Italy) is much divided. They point out, however, that in England and in North America, where (to use their own words) "private properties are very extensive, where capital exists in abundance and can be obtained at a low rate of interest, and where there exists a strong spirit of co-operation in joint-stock enterprises, the territorial system was never an obstacle to mining industry."

The Commissioners go on to say that no one can deny the difficulties of consolidation. They recognise that in the controversy about consolidation there comes in the factor of "custom," and that in the different districts of Italy each one prefers the law by

which it has been governed up till now; and they come to the conclusion that consolidation cannot be an easy work, and that it is not strictly necessary, though it would be useful to the industry if a way of rendering one legislation acceptable to all could be discovered.

The text of a Bill has since been agreed upon between the Commission and the Ministry embodying to a great extent the recommendations of the Commissioners in their report with respect to the law of expropriation and partnership, and as to police of mines, but declaring (Art. 28) that the mineral laws existing in the various parts of the kingdom are to remain in force so far as they are not contrary to the proposed law, and omitting all the provisions contained in the original Bill of the Ministry relative to the institution of ownership of property in minerals. Certain mining regulations (Art. 29) and the establishment of a General Council of Mines (Art. 30) are also provided for. The Council of Mines is to consist of eight members, that is, of two inspectors of mines, three members of the Judicial Bench, and three experts in mineral and metallurgical sciences, and is to be constituted according to, and exercise all over the country, the functions conferred upon the Council of Mines by the Piedmontese Act of 1859.

No actual legislation has, however, as yet resulted from the Report of the Italian Commission.

CHAPTER VII.

BELGIUM.

NOTES AS TO MINING LAW.

Formerly, in Belgium, mining was subject in the two following districts to different rights:—

In Hainault the rights of mining were granted by certain Lords High Justiciaries, who, each in his own district, granted such rights to third parties, reserving certain fixed and proportional rents. The owner of the soil had no recognised rights over the mines.

In Liège, on the contrary, the mines belonged in principle to the owner of the soil. They could not, as a rule, be worked without his consent, though adventurers appear to have had rights under certain circumstances of following seams and otherwise.

The French Laws of 1871 and 1810 relating to mines were, however, subsequently adopted in Belgium, and up to 1830 the French laws and regulations in the matter of mines continued to be applied exclusively to Belgium.

Since the Revolution of 1830, two laws, *viz.*, of the 2nd May 1837 and the 8th July 1865, have modified some points of the Law of 1810, preserving, however, the essential character of that law. The modifications are as follows, *viz.*—

The Law of 1837 (Art. 11) recognises a formal right of preference to the concession in the owner of the surface who has a sufficient extent to ensure regular and profitable working, and is possessed of sufficient means to undertake and conduct the work, though the Government may, by the recommendation of the Council of Mines, depart from this rule in favour of a discoverer or of a concessionnaire seeking an extension. As a matter of fact, the Government almost always gives the concession to the owner of the surface, if he applies for it.

The owner of the surface can assign his right of preference to a third party (Dupont, 202), and there are cases in which the proprietor of the surface receives a higher royalty from a concessionnaire than the maximum fixed by Government, having agreed to give such a royalty in order to prevent the surface owner from applying for a concession, and such a contract has been held to be legal.

This is the same as in France, *viz.*, mines, minières, and carrières, the first-named only being reserved from the ownership of the proprietor of the surface.

In cases where the proprietor of the soil does not himself obtain the concession he is to be entitled to a fixed royalty of not less than 25 centimes the hectare, and also to a proportional royalty of from 1 to 3 per cent. on the produce of the mine (Art. 9). The exact rate of the proportional royalty is fixed by the Act of Concession, and the amount of the net proceeds is fixed each year by the Committee of Valuation. The royalty is distributed amongst the proprietors in proportion to the extent of their lands within the area of the concession, but where a concession has been extended, the surface owner of the land comprised within the extension is not entitled to any payment beyond the fixed royalty unless mineral has actually been worked from under his land (*see* H. & W., p. 46, § 126).

History of ownership of mines.

Rights of preference accorded to surface proprietors.

Classification of mineral substances.

Royalties payable to the owners of the surface.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.
Surface land occupied or damaged.

Taxes payable to the Government.

Valuation committees.

On mines actually long to owners surface.

Day-leaves.

Inhabited buildings.

Inspection and regulation of mines.

Relief funds.

Forfeiture of concessions.

As a matter of fact the fixed royalty varies from 25 centimes to 3 francs the hectare (Dupont, 145).

In fixing the royalty it is not permitted to take into account the damage which the works may cause to the surface, which has to be separately provided for, as under the French Law (Dupont, 145). If the land is occupied for less than a year, or at the end of that time can be restored to its former state, the proprietor of the surface is entitled to double the yearly value of the produce (Art. 43); but if the land is occupied for more than a year, or permanently damaged, the proprietor may require it to be bought at double the value it possessed before the working commenced (Art. 44). This right of occupation can only be exercised by a concessionaire within the area of his concession (W. & H., p. 48, § 127).

These taxes are the same as in France, viz., a fixed tax of 10 francs per square kilometre, and a proportional tax not exceeding 5 per cent. per annum on the net proceeds (as a matter of fact the proportional tax has remained for a long time at the rate of 3½ per cent.). The net proceeds are arrived at by deducting from the gross sales of a mine all working expenses, but excluding any interest on capital outlay; all products of the mine consumed in working it are for the purposes of this valuation assumed to have been sold at cost price, or at a higher price, if the Valuation Committee so decide. The value of any new work or new plant can be deducted for the year in which the outlay is incurred; but if the expenses in any one year exceed the amount of gross sales there is no power to recoup the balance in any future year or years. No allowance is made for depreciation, but all outlay incurred in any year for keeping up mines or plant is deducted from the gross value of the output for the same year.

The fixed acreage tax is payable under any circumstances; but the Valuation Committee can reduce or exempt the mine-holders from the proportional tax in case of unavoidable accidents or of any difficulties occurring in working the mine (but as a matter of fact this power is not acted upon) whilst so long as the mine is unworked no proportional royalty can be payable, as there is no produce.

The Valuation Committee for the proportional tax of mines is composed of seven members, viz. :—

The Governor of the Province,
Two members of the Provincial Government designated by the Governor,
The proprietors of mines,
The District Engineer of Mines,
The Director of Taxes. (W. & H. 33.)

It has resulted from the reservation made in Art. 1 of the Law of 1837 that no concessions have since been made of iron mines, and that in consequence the mines of the proprietors of the soil have become extended into regular mines (Ag. 187).

Under the Law of 1837 (Art. 12) the Government, on the recommendation of the Council of Mines and after an inquiry, may declare as of public utility the ways of communication necessary in the interests of a mine, in the same way as is provided in France by the Law of 27th July 1880; only in Belgium the indemnity to the proprietor is fixed at double the selling value, including depreciation, cost of reinvestment, and interest for delay (W. & H., § 146), and the Government cannot grant the use of the ways to other industrial establishments besides the mines (Dupont, 371-2). This power of expropriation is quite separate from the right of occupation before referred to, which is only exercisable within the areas of the concession for the establishment of ways strictly necessary for the purpose of the mine (W. & H., p. 51, § 196).

Under Art. 11 of the Law of 1810 (modified by the law of 8th July 1865) works which involve the occupation of the surface cannot be opened within 100 metres of habitations without the consent of the proprietors of the same, if the land on which the works are situate also belongs to them.

A very complete law for the inspection and regulation of mines was passed on the 28th April 1884, superseding previous laws.

Legal provisions are also made for the establishment of relief societies, of which there seems to be a large number established on a similar system to those of France (Ann. Stat., pp. 164-5).

Although Art. 49 of the Law of 1810 applies to Belgium, there is no further provision similar to that enacted by the Law of 1838 in France, and the article has no practical effect; and, though there appears to

be some difference of opinion on the subject, the balance of opinion seem to be that no forfeiture can in fact be decreed unless it is specially provided for by the Act of Concession (Dupont, 319).

There is a complete staff of mining officials appointed by the Crown, at the head of which is a Director General, having under him divisional directors and several grades of engineers. It is the duty of these officials, under the authority of the Minister of the Interior, to see to the laws, regulations, and decrees relating to mines being carried into effect.

The powers given to the Council of State by the Law of 1810 are in Belgium exercisable by a Council for Mines, composed of a president and four councillors, nominated by the King, their decisions being subject to the approbation of the King (Law of 2nd May 1837). No concession of mines can be granted against their advice.

Questions which arise as to indemnities between owners of surface and owners of mines respecting occupation of land have to be determined by the civil tribunals (W. & H., 131).

The following statistics are taken from the Government Report of the Belgian Minister of the Interior for the year 1891 :—

The number of subsisting concessions of coal in the year 1890 amounted to 240 (extending over an area of 137,661 hectares), of which 134 only were being worked. The total production of these was 20,365,960 tons, of a total value of 268,503,000 frs. (or rather less than eleven million pounds), costing in production 209,743,000 frs. (or over eight and a half million pounds), and leaving a net profit of 58,760,000 frs. (or about 2,350,400£), divided among 122 concessions, the other 12 having been worked at a loss (Annuaire Statistique, 1891, p. 285).

It may be observed that although the production of finished iron and steel has increased in Belgium of late years, on the other hand, the production of raw material from the metallic mines in Belgium has been greatly reduced, the bulk of raw material being now imported from Spain, the North of Africa, and elsewhere, and that the number of workmen employed in the metallic mines of Belgium has decreased from 11,141 in the year 1860 to 1,427 in the year 1890 (Ann. Stat., 1891, p. 284).

The total number of workers underground (in collieries) in 1890 was 89,038, of whom 3,170 were women, 9,608 boys, and 945 girls under 16 years of age; above-ground, 27,741, of whom 4,368 were women, 2,499 boys, and 2,763 girls under 16 years of age (Ann. Stat., 1891, p. 285). The hours of work varied from 7 to 14 by day or night, and the daily wages of workers—

Under 14 years of age from 50 frs. to 2.25 frs.=5d. to 1s. 9½d.

Over 14 and under 16 from 91 frs. to 3.0 frs.=9d. to 2s. 6d.

Over 16 years of age from 1.55 frs. to 4.50 frs.=1s. 3d. to 3s. 7d. (Ann. Stat., 1891, p. 281.)

Mr. Vuillemin, who in 1890 published a careful comparison of wages paid to miners in France, Germany, and Belgium, calculates that miners' wages paid in the latter country are on the average 25 per cent. less than those paid in France, and from his calculations and others,* it seems justifiable to assume that the average daily wages paid to hewers in Belgium in 1891 did not exceed 3s. 8½d., whilst the hours of working were said to vary from 7 to 14.

CHAPTER VIII.

PORTUGAL.

NOTES AS TO MINING LAW.

The existing mining law of this country is principally laid down by a law decreed in 1852, but completed in 1853. This law recognises the principle of the separation of certain mines from the ownership of the soil, and the right of concession of such mines by the Government. The classification of mineral substances is somewhat vague, being purely enunciative, and depending not only upon the nature of the substances but also upon the conditions under which they are worked.

The following table is intended to demonstrate the general features of the law so far as it relates to the subject under investigation, viz. :—

* See "Statistique des Mines," &c., par M. Em. Hartze (Bruxelles: Imprimerie veuve Momon, 1891, p. 40).

Mining administration.

General remarks.

Wages and working hours.

Taxes and royalties.

Surface land occupied or damaged.

Law as to ownership of mines.

IN PORTUGAL.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I.—Beds of metallic salt or combustible substances which require excavations and the use of fixed machinery.	In the concessionaire from the Government or his assigns, the first finder of a mine who registers the discovery in due form being entitled to the concession.	Partly to the Government, viz. : 1st. Fixed, of 80 reis for 10,000 brasses carrees (a mere nominal sum); 2nd. Proportional, an annual sum not exceeding 5 per cent. on the net production. And partly to the surface owner, viz., one half the amount of the proportional tax, payable to the Government.	Arts. 19 and 40 of the Law of 1852, and a Decree of 15th April 1862.
II.—Auriferous sands and alluvial deposits, where no fixed works require to be set up.	In the owner of the soil, but if he does not work them the Government may, in the public interest, authorise the working of them, even without his consent.		Art. 15 of the Law of 1852.
III.—Substances, which may be described as <i>carrières</i> , including building materials, pyrites, chalk, and turf.	In the owner of the soil, but in some cases, where required for public purposes, the Government may authorise a third party to work them, on the worker giving security for the reparation of all damage, or if the owner of the soil prefers it after paying the value of the land and 20 per cent. additional.		Arts. 16 and 20 of the Law of 1852.

The taxes and royalties which are payable to the Government and the surface-owner, in respect of the mines which are the subject of concession, are mentioned in the preceding table. The Administration has power to lessen the Government charges at discretion, and even to convert them into fixed charges (Article 40). If the Government has given a complete exemption from the proportional rent payable to the State, it must fix a royalty to be paid to the owner of the soil, unless the parties can agree on the subject.

The concessionaires may occupy or expropriate, under the supervision of the Administration, all land necessary for working the mines; in default of amicable agreement, the law relative to expropriation for public utility is applicable; and concessionaires may, even without having recourse to the law of expropriation, occupy, temporarily, land which may be necessary, being bound in such case to give security to make good all damage which may be occasioned. They are also held liable to make good damage caused to the surface by subsidence.

The law recognises two kinds of searches which it treats differently—the first are simple surface investigations; the second, explorations by means of pits and galleries. If the diggings do not exceed 10 varas (11 metres) they come under the first heading. These searches can be undertaken by the owner of the soil or with his consent; or, in default, they can be authorised by the Administration for a term of two years, renewable indefinitely. The explorer must give security against all damage to the surface. Explorations under the second head cannot be undertaken, even by the proprietor of the soil, without the consent of the Government. An exclusive right to make searches may be granted by the Government to a company throughout an area of five square leagues for a term of two years (renewable); searches cannot take place amongst buildings without the written consent of the proprietors under the penalty of double the value of damage done. The right of search does not imply any right to dispose of the produce of the explorations.

The law recognises a right to a concession in favour of the finder, that is, of the first person who registers in the municipality of a place the discovery of a layer, the existence of which must be admitted by the mining authority. The finder has six months in which to constitute a company or to prove that he has sufficient means to work the mine, in which case a concession should be granted to him. When the finder does not obtain the concession, he has a right to an indemnity fixed by the Administration and payable by the concessionaire. The Administration may select at discretion between persons who apply concurrently, and

also decides at discretion as to the boundaries and extent of the concession. This decision as to the boundaries is not come to immediately on the commencement of the concession; at first only a provisional grant is made, with an approximate indication of the boundaries. The concessionaire has six months to prepare the plan on which the boundaries are finally determined. The concessionaire has only a right to the particular substance which forms the subject of his concession. All other substances under the same lands may form the subject of separate searches and concessions. It is said that, under the Portuguese system, the inconveniences adherent to such a system are diminished to a certain extent by the fact that searches cannot be made without the authority of the Government, who, in granting permission for subsequent searches can safeguard the interests of the first concessionaire.

The concessions are granted for an unlimited period, but remain subject to the strict supervision of the Government, and at the risk of withdrawal by the State on any infraction of the terms on which they are granted. The concession must not be divided, or even parted with, except by the authority of the Government. It must be actively worked to the satisfaction of the Government, and the works may only be directed by an engineer approved of by the Government.

Although these cannot, apparently, take place without the permission of the Government, they are undoubtedly made, as will be seen from the following instances :—

The concessions of mines of antimony and gold at Oporto, over an area of about 260 acres, held from the Portuguese Government in perpetuity, at the usual taxes, with certain leases of surface and pinewoods at rents of 40£. per annum, were sold in 1887 to the Lixa Mining Company, Limited, for the sum of 55,000£., of which 28,500£. was payable in cash, and 26,500£. in fully paid-up shares.

The concessions of copper mines over an area of about 850 acres were sold in 1888 to the Portuguese Consolidated Copper Mines, Limited, for 50,000£., payable in cash or shares at the option of the company. These, where required, can apparently be obtained under the law of expropriation before referred to.

This is provided for, as a penalty for breach of the obligations imposed on the concessionaire, and especially in the following cases: if he fails to furnish the plan of his concession within six months after the delivery of the provisional grant; if the works are not commenced within two months after the final grant of the concession; if the mine is not kept in a constant state of active work; if the concessionaire does not

Appendix D
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Sales of concessions.

Wayleaves.

Forfeiture of concessions.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
issued by Mr.
Walmesley.
Protection and
regulation of
mines.
Mining
Authority.

take the necessary measures during a specified time in case of danger resulting from bad management of the works; and when, in consequence of improper working, the ultimate working out of the mine is rendered difficult or impossible.

The law provides for inspection of workings and searches to assure the safety of the workmen and the protection of the soil, and this right of inspection extends to mines of the third class or *carrières*.

The control of and management of mines is entrusted to a Committee of Public Works and Mines, which is subordinate to the State Department of Public Works, Commerce and Industry (Blue Book, p. 20).

CHAPTER IX.

SPAIN.

NOTES AS TO MINING LAW.

From the earliest period at which there is any authentic record of the law as to the ownership of mines in Spain (A.D. 1256) they are spoken of as being reserved to the Crown, who might, however, concede them to third parties; but in early periods the concessions appear only to have been made for the life of the king who granted them.

What is considered in reality the first Spanish law on mines was issued by Don John I. at Briviesca in 1387. By this law all mines were declared to belong to the Crown, but every native of Spain was authorised to search for and work mines on his property, or on the property of others with their permission, but paying two-third parts of the net profits to the Crown. These rights could not, however, be exercised in cases where special concessions had been granted, such as appear to have been frequently granted and revoked by the Crown, and which were all finally abolished by a law completed in the year 1584, under Philip II.

The Law of 1584 continued in force until 1825, and therefore deserves some attention. By this law any person (either a Spanish subject or a foreigner) might work any mines which he discovered, subject to compliance with certain regulations as to registering the circumstances of their discovery and as to subsequent regular working.

The extent of such mines (which were granted as and subdivided into "*pertenencias*") was limited, but the discoverer was entitled to take several *pertenencias*.

The worker of the mines was obliged to observe certain conditions, including a condition that he should employ four workmen for each *pertenencia*, under risk of the "denunciation," a system corresponding with what is known in Australia as "jumping," under which he might lose his rights, which passed to the denunciator if he proved that the mine had not been occupied, i.e., worked by a minimum of four men per *pertenencia* for four months. Gold mines had to pay half the gross produce, and silver mines from one-half to one-tenth, according to the yield per Spanish cwt. of silver lead, to the Crown. A special administration was constituted to deliver concessions of and exercise inspection over and try questions relating to mines.

Under the Law of 1825 the mining legislation extended to beds of precious stones, and all metallic, and combustible, and saline substances, except beds and springs of ordinary salt (which were reserved to the Crown, and held as a monopoly). The mines were considered as *res nullius*, which any one without distinction of nationality could search for (on making compensation for damage to the soil), and acquire the right to work.

Other mineral substances, such as sand, clay, and chalk, were considered as the property of the owner of the surface.

The size of the *pertenencia* was increased, and in principle one person could only acquire two *pertenencias* in contiguity, but to this rule there were exceptions. The property of the concessionaire was perpetual, and could be transferred and disposed of like other property, subject to regulations as to inspection, including the obligation to work regularly under risk of "denunciation." Such surface land as was required by the owner of the mines could be acquired on paying an indemnity to the original owner of the surface.

In 1849 a new classification of mineral substances was made which introduced a class corresponding to the *minières* of the French system, and other alterations were made in the details of the mining law. Other alterations of the law were made in 1859.

The whole law of mining was amended and consolidated in 1868, and the law then decreed (subject to some alterations made in 1871 and 1884) constitutes the existing mining law of Spain.

This law recognises the ownership of certain mineral substances as belonging to the State, which, however, can only dispose of them in accordance with the provisions of the law. Mineral substances are divided by the law into three classes, according to the following table, which follows the sections of the law, viz. :—

SPAIN.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Substances (which may be described as <i>carrières</i>) comprising in general all materials of construction, such as slate, sand, stone, lime, marble, and clay, and other substances of an earthy nature.	In the surface-owner -	If let, to the surface-owner -	Art. 2 of Law of 1868.
II. Substances (which may be described as <i>minières</i>) such as metalliferous alluvial soil, alluvial iron ore, ochres, metalliferous deposits from old workings, turf, pyrites, aluminous and fuller's earths, saltpetre, phosphates of lime, baryta, fluorspar, steatites, &c.	In the surface-owner, but if he does not work them, and the working is declared to be of public utility, they may be acquired by third parties as if they were mines. The surface-owner may, however, instead of working the mines himself, let them to someone else.	If let, to the surface-owner - If the owner works them himself he is free of any Government charge, but if they become the subject of concession (under the circumstances mentioned in the preceding column), they become subject to the Government taxes, as in the case of mines.	Art. 3 of Law of 1868. A Royal Order of the 26th February 1884 adds asbestos to this clause, and it is understood that the classification is to be considered as indicative rather than limitative.
III. Mines, viz., all metalliferous substances obtained by mining and anthracite coal, lignite, petroleum, and mineral oils, graphite, certain saline substances, sulphur, copperas, and precious stones.	In concessionaire or his assigns.	To the Government - Fixed taxes of 10 pesetas (or francs) per hectare for precious stones and metalliferous substances, and of 4 pesetas per hectare of other mines; and proportional taxes of one per cent. of the gross produce—that is, of the total value of the mineral extracted, without any deduction for the cost of extraction.	The rents are fixed under a Law of the 25th July 1883, and see Decree of 9th April 1889.

Royalties.

Surface land occupied or damaged.

Searches for mines.

Concessions.

No royalties are payable to the owners of the surface in respect of the mines which are the subject of concession. The taxes, which are payable to the Government, are mentioned in the preceding table.

The owner of the mines usually agrees with the owner of the surface as to the land which may be required for the purpose of the mine, but in the event of their not agreeing, the owner of the mine may apply to the Governor of the Province for permission to acquire the land by expropriation under the law referring to public utility. In the application of this law the respective advantages to the public of the working of the mines on the one hand, and the cultivation of the soil on the other, is taken into consideration,* and, if the expropriation takes place, the surface-owner must be properly indemnified, the purchase money being ascertained by an official valuation of the actual value of the land required, to which a further amount of 20 per cent. is added.

Any one may make searches for mines in public lands by making excavations of not exceeding ten metres in length, but on private lands it appears that such searches cannot be made except by permission of the surface-owner.

These are granted to the first applicant (who may be a private individual or a company), provided that he takes not less than four "*pertenencias*" (the modern "*pertenencia*" being a square of 100 metres by 100 metres) adjoining each other, so that a concession contains at least 40,000 square metres, except when it is an enclosure between two or more mines, and less than four *pertenencias*; it is then called a "*demasia*," and may be given to one of the concessionaires of the adjoining mines, but if none of them apply for it within three years of the last concession, it may be given to anyone who applies for it.

Any number of *pertenencias* may be included in one concession, so long as they adjoin each other. The applicant is not required to prove the existence of mineral on the land, or that he has sunk any shaft, or commenced any searching operations. The application for the concession must be made to the Governor of the Province, stating specifically the circumstances of the proposed concession. The application is published in the Official Gazette, and will be granted if not opposed for sixty days, on the land being proved to be free (from existing concessions). The land is marked

* The working of mines is generally acknowledged as being of public utility, and it is not therefore necessary for the concessionaire to show the benefits which will arise to the public.

out, and a plan and report are prepared by the Government Mining Engineer of the Province. Certain fees (not of any great amount) have to be paid, and the concession is granted by the Governor of the Province and registered. The ordinary form of concession is given at the end of this statement.

When the concession is granted it is perpetual (the system of "denunciation" being done away with in Spain), and can only lapse on failure to pay the taxes payable to the Government for a period of twelve months, or, under a recent law, if the mine-owner refuses to contribute to the general mines drainage scheme of the district.

It is also capable of transfer, like all other immovable property, and may be divided at pleasure but not into areas of less than one *pertenencia* each and can be worked or not at the pleasure of the concessionaire or his assigns. There is ample authority for stating that the concessions are frequently dealt with by way of sale or lease. The following observations have recently been made by a Spanish lawyer of great experience on the subject:—

"The concessionaires of mines in Spain are generally disposed to sell the same, and in the majority of cases ask for excessive prices, although they soon reduce and limit their demands when they are convinced of the sincerity of the purchaser, and more particularly if the purchase money is to be paid on the execution of the contract. They are not in the habit of being favourable to granting leases, although they accept such when the private individual or the company has and offers guarantees for the due carrying out of the same. Generally, these contracts are made for the term of twenty or thirty years, and upon the payment of a per-centage of the products obtained, and increasing or reducing the same according to a scale that is usually fixed, taking as a basis (e.g., in the case of lead mines) the price of pig lead in the London market. Some such contracts have been made in this district. 'La Real Compania Asturiana' of Belgium, and 'T. Sopwith & Co., Limited,' of London, have made contracts for leases. It is almost always usual to mention a fixed price to provide for the event of the lessee during his contract desiring to acquire the property of the mine or mines let on lease, and the lessor undertakes to sell the same at the price agreed upon, which is more or less according to the term of lease which may have expired."

The following are some examples of dealings with concessions in Spain:—

SPAIN.

DEALINGS WITH CONCESSIONS.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase Money.	How payable.
Andalusian Silver Mining Company, Limited.	Silver lead, 1,412 acres.	Linares, Spain.	1887	Under concession from Spanish Government in perpetuity; rental 226l. a year.	70,000l.	In fully paid up shares.
Monte del Oro Mining Company, Limited.	Gold, silver, and other minerals within an area of about 80 acres.	Province of Cordova, Spain.	1886	Under concession from Spanish Government in perpetuity subject to usual small annual payment and tax of one per cent. on minerals produced.	25,000l.	In fully paid up shares, or in cash (it was paid in cash).
*Orconera Iron Ore Company, Limited.	-	-	1873	-	-	-
Parcocha Iron Ore and Railway Company, Limited.	Iron ore, &c.	Bilbao, Spain.	1890	-	540,000l. - 340,000l. - 170,000l. -	In debentures. In preferential shares. In ordinary shares.
Pradera Silver Mines, Limited.	Silver mines over an area of about 369 acres.	Spain.	1888	Under concession from Spanish Government.	35,000l.	In fully paid up shares.
Rio Tinto Company, Limited.	Copper ore over a property of 16,000 acres.	Province of Huelva.	1873	-	3,331,005l. (cost of mines account).	-
Salamanca Tin Company, Limited.	Tin mines over an area of 1,030 acres.	Spain.	1887	Under concession from Spanish Government.	85,000l. and 75,000l. and a royalty of 12 per cent. on the dressed ore.	Cash. In fully paid up shares. Subject to redemption before October 1891, on payment of 20,000l.
San Cebrian Railway and Collieries Company, Limited.	About 2,200 acres of coal mines, and a narrow-gauge railway 11 miles in length.	Province of Palencia.	1885	-	165,000l.	In fully paid shares.
Spanish Copper Company, Limited.	Sulphur and copper mines.	Provinces of Huelva, Spain.	1883	Under two leases granted by the concessionaire in perpetuity at the annual rental of 200l. each (400l. per annum).	75,000l.	In fully paid up shares.

* No details as to the acquisition of properties by this Company are published, but it appears to have paid high dividends, amounting to 40 per cent. in 1884.

Appendix D.
Notes on the
Mining Laws
of India, the
Colonies, and
Foreign
Countries,
revised by Mr.
Walmesley.

DEALINGS WITH CONCESSIONS—cont.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase Money.	How payable.
Spanish Corporation, Limited.	48 mining properties and two railway concessions.	Sierra Demanda, Spain.	1890	Under concession from Government subject to usual taxes.	212,000 <i>l.</i>	2,000 <i>l.</i> in founders' shares, balance in cash or shares.
*Somorostro Iron Ore Company, Limited.	Iron ore	-	1890	-	-	-
Tharsis Sulphur and Copper Company, Limited.	Sulphur and copper	-	1896	-	Said to pay over 4 <i>l.</i> per ton royalty.	-

* The same remarks as have been made respecting the Orconera Iron Ore Company, Limited, apply to this Company, the dividends amounting to, for 1886-7, 40 per cent.; for 1887-8, 45 per cent.; for 1888-9, 65 per cent.; and for 1889-90, 85 per cent.

Proprietors of mines (that is, the owners of the surface, as to mines of the first and second classes, and owners of concessions, as to mines of the third class), having the power to cede the working of such mines to others, can and do lease them for terms of years. It is usual to let them for five or ten years, renewable at the option of the lessees, subject to a royalty, a minimum or dead rent, and to the regulations regarding the working of mines, and to conditions, including a condition determining the minimum number of workmen to be constantly employed in the mine, under penalty of rescission and forfeiture in favour of the proprietor of all manufactured things, implements, &c., or the payment in cash of a stipulated sum. In this manner the proprietors obtain a guarantee that their mines will be worked.

The royalties reserved are often very high. The circumstances and conditions of mining leases vary so considerably that it is impossible to enumerate the various forms which may be agreed upon, for there is no restriction put upon what is after all a matter of private arrangement between one party who has proprietary rights, which he can sell, lease, or transfer to another, who is willing to acquire them. The following instances of high royalties may, however, be mentioned:—

A rich silver lead mine in the province of Murcia was leased a few years ago by the original concessionaires to a new company, the latter undertaking to pay a royalty of no less than 65 per cent. of the gross produce, no deduction whatever being made for the cost of working and dressing the ores. This excessive rate was subsequently reduced, but still continues at 45 per cent.

In Sierra Almagrera still higher rates have been paid, and in some cases 80 per cent. has in effect been paid by lessees.

There are also certain mines which have been reserved to the Spanish Government from the ordinary system of concession, and these are sold or let upon lease by the Government at high prices paid down, or upon heavy royalties. It is understood that the Rio Tinto Copper Mine was sold by the Government for over 3,000,000*l.* sterling.

The mine of Arrayanes in the district of Linares is leased from the Government at a fixed royalty of 3*l.* 10*s.* per ton, which, on the average price of lead over the last five years, is equal to 50 per cent. on the value of the ore.

It appears that surface wayleaves may also be purchased where necessary for the conveyance of minerals, under the law of "expropriation."

Adjoining mines have rights of ventilation and drainage through each other, being reciprocally bound to make good damage caused to one another (Art. 24); but, except for these works of safety, it appears that underground wayleaves cannot as a rule be obtained except by agreement, though in some cases the construction of general galleries for transport may, it appears, be effected under the law of "expropriation" (Art. 18 of Law of 29th December 1868).

There seems to be no limit as to the number of concessions, which may be obtained either by grant or purchase or otherwise by the same person, but the Government tax in respect of each "pertenencia" must be paid. As a matter of fact very large areas are sometimes taken, and it is said that great abuses have arisen from the exercise of the right of taking up unlimited areas.

This can only take place in the event of the non-payment of the Government tax for 12 months or refusal to contribute to a mines drainage scheme, in which case the concession is put up for sale; and, if no bidder can be found, will lapse, but no forfeiture can

take place through failure to work so long as the small fixed rent or tax is paid, although the non-working involves the loss by the Government of the proportional tax of one per cent.

There is no law in force as to compulsory insurance of workmen, but in the event of accidents recourse must be had to the ordinary tribunals, there being a law in force corresponding, to some extent, with the Employers' Liability Act in this country. It is, however, customary to establish accident and relief insurance funds in connection with different mining undertakings towards which the workmen and masters contribute.

The 22nd Art. of the Law of 1868 contemplated the framing of regulations for securing the safety of men and property, but the rules have not yet been framed, and the mining authorities appear to have no power to interfere with the working of mines in any way beyond settling the boundaries of the concessions. As a matter of fact, however, the Government engineers do inspect mines with the view of ensuring the safety of workmen and the prevention of unnecessary damage to the surface.

There is a Government Board of Mines at Madrid, and in each province there are Government engineers, whose business it is to settle the boundaries of the concessions and to keep plans showing such boundaries, and to act generally as official experts in reference to mining matters.

It is stated that the average cost of wages 20 years ago was about 15 or 20 per cent. below what it was in 1889, the cost of extraction in the iron mines in the north of Spain being (in the latter year) from six to seven reals, 1*s.* 3*d.* to 1*s.* 5½*d.*, per ton for campanil, and nine to ten reals per ton for brown ores according to the nature of the ground.

The hours of work (in the last-mentioned year) were from sunrise to sunset, winter and summer; in summer two hours are allowed at midday instead of one, and half an hour is allowed at 5 p.m. in summer.

Spanish Colonies.

It is understood that the modern Spanish mining system is being extended by degrees to her existing colonies. Thus, in 1883, the principles of the Spanish Law of 1868 were extended to Cuba.

CHAPTER X.

SPAIN.

FORM OF CONCESSION OF MINES.

Don _____, Civil Governor of the Province of Jaen.
Whereas I have thought fit to grant to _____, residing at _____, a concession for a mine situate at _____, within the sub-district of _____, in this province.

I have determined, under the date of _____, to issue in his favour the present proprietary title, in conformity with the provisions of the Mining Law of the 4th March 1868, in respect of claims extending over _____ square metres in the form appearing from the annexed plan, drawn up by the engineer, _____, in conformity with the provisions now in force, dated at _____ the _____ day of _____, the concessionaire being under the

Accident or relief societies.

Inspection and regulation of mines.

Mining administration.

Wages and working hours.

obligation of fulfilling the following general conditions:—

First.—To work the mine in conformity with the rules of the art, he and his workmen being subject to the police law prescribed by the regulations.

Second.—To be answerable for all damage and injury which the working may cause to any third party.

Third.—To make good to his neighbours any damage he may cause them by the accumulation of water, in consequence of his works, should he not, on being required to do so, have made such damage good in the space of time appointed for the purpose.

Fourth.—To contribute in proportion to the benefit that he may receive to the cost of draining neighbouring mines, and of general drainage and transport galleries, when they are opened by virtue of competent authority, in respect of a group of claims or of the whole mining district wherein the mine may be situate.

Fifth.—To strengthen the mining works within the term fixed for this purpose, when, owing to the misdirection of the labours, they may threaten destruction; unless in this be prevented by *force majeure*.

Sixth.—Not to suspend the working of the mine with a view to its abandonment, without previously acquainting the civil Governor with his intention, and not to leave the mine in a weak state of repair.

Seventh.—Not to perform any works without previous sanction, within less than 40 metres distance from buildings, roads, and any other public right of way.

Eighth.—To pay for the mine and the products of the same the tax legally imposed, and

Ninth.—To fulfil, in a word, all the provisions contained in the law and regulations affecting concessions of the nature of the present.

Therefore by virtue of this title I grant in the name of the Government of His Majesty, the property of the aforesaid mine in perpetuity while the preceding conditions are fulfilled, so that he may work the said mine, utilise its products, and freely dispose of same, acting with regard to them as he may desire, subject to the laws, enjoying at the same time all the rights and benefits which, by the mining law and regulation, belong to concessionnaires; and in order that what is contained in the aforesaid conditions may be faithfully fulfilled and observed, alike by the said concessionaire, and by all authorities, tribunals, corporations, and private persons whom it may concern, I issue the present proprietary title bearing the seal of this provincial Government.

Given at _____ the Governor
Seal of the Provincial Government.
Department of Commerce, Industry, and Public Works.
Government of the Province.
Department of Commerce, Industry, and Public Works.

CHAPTER XI.

AMERICA (UNITED STATES OF).

NOTES AS TO MINING LAW.

In considering the subject of the mining laws of this country, there should be constantly kept in mind the distinction which exists between the Federal public lands and lands owned by the States or by private individuals. The separate States own their lands by the same title as private individuals, namely, by grants from the Crown, in the case of the 13 original States and from the Federal Government, in the case of the more modern States. Having regard to the important distinction before referred to between public and private lands, it is proposed in these notes to deal with the laws affecting the two different classes of land, so far as may be separately.

It is also necessary, in order to comprehend the state of the law as to mines in this country, to have regard to the general law of the country as to the alienation of public lands to individuals or companies, it being distinctly to be understood that, as a general rule, if public lands are granted to individuals or companies, no matter for what purpose, agricultural or otherwise, or at what price, and whether they are known to contain minerals or not, all mines beneath the surface, as well as the surface itself, pass to the grantee.*

Originally the Government of the United States sold off extensive tracts of land by ordinary grant in fee simple, but by an Act of Congress of the 10th of May 1808, a system of sale in detail was established, the main features of which continue to the present day. Under this law no sale of public lands may be made until after survey by Government officials, when land may be bought in sections, through the medium of the Land Office, at the minimum price (for agricultural land) 1.25 dollars per acre. The purchaser receives a title deed called a "Patent" (signed by the President or some one appointed to represent him, and sealed with the seal of the United States), which confers upon him the fee simple or absolute ownership of the surface and the sub-soil. Certain rights of preference were, however, formerly accorded to squatters, settlers, or those who establish "homesteads"—that is, to the first occupants of the land, who had improved it either by cultivating it or by building houses upon it. Such persons might occupy the land and, after survey and payment of the price of 1.25 dollars per acre, might become entitled to the absolute ownership. This privilege, however, only extended to agricultural lands as distinguished from mineral lands or other land reserved for purposes of public utility.

Until recently there was no special Federal legislation as regards mines; the old (common law) patents gave a title both to the surface and to the minerals beneath the land which they comprised without any restriction, as they still do in the States of Wisconsin, Michigan, and Minnesota, which were excepted from the provisions of the recent Federal mineral legislation. (See Revised Statutes, s. 2345.) Mineral lands forming part of the public lands (which appear to be chiefly situate in the Western States and territories) are now subject to the special provisions of an Act passed in 1872, which will be more particularly referred to hereafter. The Government or Administration of each State or territory only intervenes as a rule by regulations made exclusively for the protection of the workmen employed in the mines.

"A patent of land from the United States passes to the patentee all the interest of the United States, whatever it may be, in everything connected with the soil, or forming any portion of its bed or fixed to its surface; in short, everything embraced within the term 'land.'" The above is the language of the Supreme Court of California (see 17 Cal. 199, in certain celebrated cases in which agricultural grants made by the Mexican Government before the acquisition of California by the United States were subsequently confirmed by the latter, and patents issued accordingly. The original grant by Mexico confessedly did not convey the precious metals in the soil: but it was held that the patent of the United States did so nevertheless, and this doctrine has been repeatedly reaffirmed by the Courts of the United States. It is true that the United States has at times withheld mineral lands from sale; has at other times fixed special conditions for their sale; has excepted them from railroad grants, &c. But when (without fraud) a piece of land, not officially known and described as mineral land, has been sold to a private party or granted to a State or a Railroad Company, and a patent has been issued for it, the patent gives the complete common-law right—and more too—for it waives what the common law reserves, the right of the sovereign to the precious metals. There is but one exception—namely, that of the right of the locators of lodes having their tops or apexes in lands adjoining, to "possess and enjoy" the said lodes in their downward course through the (otherwise) private land.

* An exception to the common law rule here stated is furnished by the case of private lands bought from the Government since the passing of the Mining Law of 1872, in the States and territories to which that Act applies. Such lands are owned subject to the right of the locators of lodes having their tops or apexes in lands adjoining, to "possess and enjoy" the said lodes in their downward course through the (otherwise) private land.

Appendix D.

Notes on the Mining Law of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley. I.—As to public lands.

Ownership of mines.

United States patents.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.
Gold and silver.

In the State of Pennsylvania it is understood that gold and silver mines are reserved to the Penn family, whilst the State of New York has a special law on the subject of such mines, though it is understood that in neither of the last-mentioned States is the subject of practical importance, as no such mines have been discovered in either of them. The law of New York is set out in the Blue Book before referred to pp. 43-45. The Federal Government as such never appears to have set up any claim of right to sovereignty in or over the precious metals. "The motive underlying the earliest congressional legislation touching the public mineral lands was to secure a revenue therefrom. To this end the system of leasing the lead and copper mines was adopted in 1807, with its attendant agencies, accountings, &c. After a trial of nearly 40 years, the system was pronounced a failure, and in 1846 the mines were offered for sale, with a preference right in those who had leases or were in the occupation of the mines. When the gold mines of California were discovered, and the varied mineral wealth of the Pacific coast was brought to the attention of Congress, several revenue bills were introduced at different times and were earnestly debated; but the notorious failure of the lease system in the Mississippi valley, and the difficulties in the way of securing a revenue otherwise, gave success to the friends of free mining in 1866.*"

The Federal mining law.

The proprietorship of the minerals is not necessarily inseparable from that of the surface; as a matter of fact, under the Federal Mining Act of 1886 the United States hold numerous mines, without selling the surface above them. All that it granted in such cases as to the surface was an easement—that is, the preferential right to use it for mining purposes. The same surface was to this extent, sold over and over again to different parties, and sometimes owned besides by citizens not miners, who built houses upon it. Only, the miner (in the order of priority of claim) could take it if they needed it, paying for the damage done to other occupants. The Act of 1872 abrogated this state of affairs; and now the United States issue no patents for mines alone. Its mining patents always convey a full title to land, and the ownership also of all the minerals therein (with the exception, heretofore noted, of the extra-lateral lode-rights of adjoining owners).

It may here be remarked that the actual law of the United States of America as to mining seems to have been founded to a great extent upon customs which had grown up in California previous to the passing of the first Federal mining law. These customs do not, however, appear to have been derived to any great extent from the law of Mexico, to which country California originally belonged. The only principle common to the Mexican law and the customs of the early miners in California seems to have been that of the tenure of a mining-claim by continued occupancy and working. The principle of a demarcation of surface-area, limiting the underground rights, and the principle of a royalty payable to the Government, the two leading characteristics of the Mexican system, found no lodgment whatever in California. On the other hand, the principle of longitudinal measurement (so many feet of a lode in linear extent, or so many feet along the course of a stream, whatever the width of the lode or "gulch" might be) and the principle of the right to follow a lode "on its dip," between the end limits of the claim, wherever it might go, which were the two leading and controlling features of the California system, had never existed in Mexico. In fact, it would be surprising that the California system was so utterly unlike that of Mexico, but for the historical explanation that,

* Extract from the Mining Laws, Rules, and Regulations, published by the Tenth Census Office of the United States, in 1885.

although California had belonged to Mexico, there was no mining in California until after the annexation; that the alluvial mining which then began was quite unlike the deep mining of the Mexicans; and that the miners themselves were adventurers from all parts of the world, among whom the old Californians formed a small part only; as a rule, indeed, they were engaged in other occupations.

Even as regards the one point in which the Mexican and Californian systems agree, the importation of that principle into the Californian system was probably not due to Mexican influence. The principle of possessory tenure, dependent upon continued work, is probably German in origin, and passed from Germany to other countries. Together with all the other peculiarities of the Californian system, it was adopted under the pressure of the peculiar circumstances of the case, a great rush of population to the gold fields, more people than room for them, no courts, no surveyors, and an overwhelming necessity for simple rights of property, based on priority and possession, and determinable by mere tape-line measurement, without surveying. These causes adequately explain the whole result.

For 18 years after the annexation of California the mining law of that country depended entirely upon the miners' customs, regulating not only dealings with the mines, but also with water required in connexion with the mines.

The law of 1866 differed from that of 1872, in that it provided for the sale of a lode, with an easement as to surface, whereas the Act of 1872 provided for the sale of the land. Again, the law of 1866 did not make the rights of the locator dependent upon his possession of the "apex" of the lode he discovered, and on which he located his claim. The law of 1872, hence called "The Law of the Apex," makes the whole ownership of a lode dependent upon the possession of the apex. (See section 2322, Revised Statutes.)

The law of 1872 is set out in the Revised Statutes of America (reprinted with Amendments in 1878), by which it is declared, under Title xxxii. s. 2318, that in all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly provided by law; and (s. 2319) that all valuable mineral deposits in lands belonging to the United States are thereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase by citizens of the United States, and those who declare their intention to become such,* under regulations prescribed by law and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

It has resulted from the recognition of the principle of combined ownership of the surface and the mines that a division is made of public lands with reference to mines, not by dealing with the different mineral substances apart from the surface, but by dividing lands known to contain minerals from purely agricultural lands; the mineral lands being again divided amongst themselves according to the classification shown in the following Table. It must, however, be borne in mind that the division has reference to the original grants made by the Federal Government as "Lord paramount" of part of the public domain, corresponding with grants from the Crown in England, and does not in anywise affect private or appropriated lands.

* Under an Act passed in 1880 claimants for patents of mineral lands who are not residents of the land districts in which such lands are situated may make the applications and the necessary affidavits through their authorised agents. It is, no doubt, under this provision that many persons who are not, and do not intend to become, citizens of the United States obtain patents.

UNITED STATES OF AMERICA.

CLASSIFICATION OF PUBLIC MINERAL LANDS.

Mineral Lands.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Vein or lode lands, i.e., lands containing veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits (s. 2320).	In first occupant who is a citizen of the United States, or declares his intention to become such, and makes a claim to be afterwards completed by Patent granted by Government on proof of expenditure of 500 dollars in labour or improvements, and on payment of 5 dollars per acre and fees.	If let, to the locator of the claim or his assigns. The Government of each State has the right to impose taxes on the produce of the mines, but this is not generally done; such a tax, however, appears to be imposed in the State of Nevada (Law of 28 February 1871), and in the State of South Carolina (as regards mining or dredging of phosphate rock in the navigable rivers alone (see Blue Book, p. 46).	The extent of such claim is left to local regulations provided that it shall not exceed 1,500 feet in length or 300 feet in width on each side of the vein at the surface, and provided also that local regulations shall not fix the maximum width of a lode-location at less than 25 feet on each side of the middle of the vein at the surface, except where adverse rights existing prior to May 10, 1872, render such limitation necessary (s. 2320).
II. Placer lands, i.e., lands containing all forms of metallic deposit except veins of quartz or other rock in place.	In ditto, the price paid for acquisition, however, being only 2½ dollars per acre.	Do. do.	Ditto, the extent of placer claims is limited to 20 acres for individuals and 160 acres for associations, but placer claims do not give the right of following veins into adjoining lands, the rights of the locator being strictly confined to the area of his claim.
III. Coal lands	In ditto, the price being not less than 10 dollars per acre when lands distant more than 15 miles from any completed railway, and not less than 20 dollars per acre when within that distance (s. 2347).	Do. do.	The extent of claims on coal lands is limited to 160 acres for individuals or 320 acres for associations, but an association of not less than four persons can obtain 640 acres on proving that they have expended 5,000 dollars in labour or improvements (s. 2348).

Section 2352 provides that nothing in the preceding five sections shall authorise the sale of lands valuable for mines of gold, silver, or copper. But these five sections comprise the law as to the acquisition of coal lands, and the only purpose of section 2352 is to forbid the acquisition of a large tract as coal land, if it is at the same valuable for mines of these metals. In that case it must be acquired in smaller parcels, under the provisions of the statute covering gold, silver, and copper mines. (Sections 2319, 2320.)

The category of agricultural lands is made by the surveyors of the Government. Whether a limestone or chalk quarry shall be acquired by an agricultural or by a mining patent, depends how the land has been classed. If the regular Government land survey has not yet been made, the land could be located under sections 2325 and 2329. The popular term for such a location of a lime quarry is "lime-placer."

There is a special law (statute of 1877, ch. 18) as to saline lands under which they may be sold (except in States which have not had a grant of salines by Act of Congress) at a price not less than 1.25 dollars per acre.

As soon as a claim is made in accordance with the regulations of the district, the claimant has a right to search not only for the mineral substance, the existence of which is supposed to have been acknowledged to justify the regularity of the location, but also for all other minerals which may exist within the boundaries of the claim; and the locator of a vein in rock may, even before obtaining his patent, follow the vein in a downward course with all its dips, angles, and variations outside the vertical limits of his claim.

This extra lateral right is limited by vertical planes drawn through the end-lines of his location, which end-lines must be parallel. The locator cannot go beyond these planes. And if the location is defective in essential particulars (e.g., has not parallel end-lines), the extra-lateral right is forfeited.

By section 2324 it is provided that patents may be obtained on application showing compliance with conditions under oath; applications to be posted and

Patents.

Searches for mines.

filed in Land Office and to be published. Claimants to prove that they have expended 500 dollars worth of labour on improvements.

By section 2,326 it is provided that adverse claims are to be decided by the Court, and, these being disposed of and 5 dollars per acre of claim and fees being paid, patents are to be issued.

It must be understood that by the mere fact of the location, or occupation, made in conformity with the laws and customs, a person acquires with respect to mineral lands (by a system analogous to that which is followed with respect to agricultural lands, the right to which is acquired by occupation) a private right of possession within a certain area, called a "claim," the limits of which are fixed by the laws and customs. The locator of a claim may deal with it and transfer it at pleasure, without the obligation of obtaining a patent; but under the express condition of conforming strictly to the rules of law or custom as to the minimum amount of annual work; in default, the claim becomes forfeited without any authoritative declaration, and any other person may locate it. The minimum amount of work required to be done is fixed by the laws of the State or the customs of the district in which the lands are situate, subject to the provisions of s. 2,324 of the Federal Law, by which the minimum amount of labour expended or improvement made on each claim in the course of every year should not be of less value than 100 dollars.

A distinction between the system of acquiring mineral land and agricultural land is that in the case of the former the survey is made by the United States deputy mineral land surveyor at the expense of the applicant, covers only the claim applied for, and need not be connected or "tied" to the general system of land surveys; whereas agricultural land is only conveyed by the Government after the section and township lines have been run, and then only according to these boundaries—nothing less than 40 acres in a piece—the square mile (640 acres) being divided, by lines N. and S. and E. and W., into sections of 160 acres each, and these into quarter sections of 40 acres.

Appendix D.
Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley. Union and division of claims. Forfeiture of claims. Rights in respect of tunnels.

Wayleaves on public lands.

Inspection and regulation of mines on public lands.

Federal land authority.

General remarks as to the law relating to mining on public lands.

It follows from what has been said that claims may be united or divided at the will of their owners, subject to the necessary conditions prior to the acquisition of a patent being duly performed in respect of each claim.

It will also be seen that, until the acquisition of patents, claims may become forfeited through non-observance of conditions without any previous official declaration, in which case the land becomes open to occupation and location as in the first instance.

By section 2,323 owners of tunnels run for the development of a lode or the discovery of mines have the right and possession of all veins or lodes within 3,000 feet from the face of such tunnel on the line thereof not previously known to exist to the same extent as if discovered from the surface (though patents cannot be obtained by tunnel-owners until they have located claims on the surface covering the lodes discovered), but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

Under section 2,337, the owner of mineral lands can, at the time of obtaining his patent for such lands, have included in his patent non-mineral land used or occupied by him for mining or milling purposes, but the extent of such non-mineral land included in the patent is not to exceed five acres, and payment must be made at the same rate as for the mineral land.

Under section 2,338, in the absence of necessary legislation by Congress, the local Legislature of any State or territory may, as a condition of sale, provide rules for working mines involving easements, drainage, and other necessary means to their complete development; and it is provided that such conditions shall be fully expressed in the patent. The conditions referred to are the ordinary police regulations providing for safety, and in some cases determining the manner in which the cost of mine-drainage shall be assessed upon the mines benefited, &c.

The miners of each mining district may make regulations not in conflict with the laws of the United States or of the State or territory in which the district is situate governing the location, as to the manner of recording, amount of work necessary to hold possession of a mining location, subject to certain requirements (*inter alia*) that on each future location not less than 100 dollars worth of labour shall be performed or improvements made in each year. (Section 2,324.)

All the business connected with the public land is managed by a special administration of the Federal Government called "The General Land Office," at Washington, directed by a Commissioner under the authority of the Minister of the Interior. The work of the Land Office is divided into two branches, that of surveys and that of sale. For the surveys there is in each state a Surveyor-General, who has under him a staff of deputy-surveyors. For the other branch of the work the country is divided into districts having each a registrar, who is the administrative agent, and a receiver who deals with the funds. The Statute (s. 2,334) provides that the Surveyor-General is to appoint surveyors in each land district containing mineral lands, and provides for the cost of surveys and of publication of notices, to be paid by the applicants, and empowers the Commissioner of the General Land Office to establish the maximum charges for such surveys and publications.

Adverse claims are (under s. 2,326) to be determined by proceedings in a court of competent jurisdiction.

The decisions of the Commissioner of the General Land Office are subject to appeal to the Secretary of the Interior, and from the latter to the courts, the final tribunal being the United States Supreme Court.

The Federal Law authorises the same person to occupy an indefinite number of claims even adjoining one another, unless there is something in the law of the particular State or in the custom of the district in which the claims are situate to the contrary; and even these, it appears, cannot prevent the acquisition of any number of claims by individuals through purchase. Each claim, however, must be the subject of a separate application and patent; and it is said that the principal difficulty arising from the Federal Mining Law is that it divides the mineral lands into ownerships so small as to make it a very expensive matter to get together an area large enough for really extensive and permanent mining improvements.

It is understood that numerous law suits formerly arose about the boundaries of claims, but that they now seldom arise on that account, as the boundaries of

claims are officially determine and permanently marked.

The principal source of law suits under the existing law is said to be the uncertainty attaching to the apex-right or extra-lateral right of the apex-owner. When a miner has worked through his own ground, and is found extracting ore from beneath the surface owned by another, he is of course liable for trespass unless he can clearly show that he has followed all the way a vein upon which he has a valid extra-lateral right. Proof of this is sometimes difficult. Expert evidence is required to establish the existence and continuity of the alleged lode. The regularity and validity of the lode-location may be attacked, &c.

The Federal Law has, however, distinctly provided for two cases which might otherwise be the subject of frequent dispute.

In the first of these cases, namely, where veins intersect, it is provided (s. 2,336) that priority of title shall govern, that is, the owner of the claim whose title is the earliest in date has a right to all the mineral at the point of intersection, but the other is to have a right of way through the space of intersection for the convenient working of his mine. In the other case, namely, where two or more veins unite, it is also provided (s. 2,336) that priority of title shall govern—that is, the owner of the claim whose title is the earliest in date takes the whole vein below the point of union, including the space of intersection.

Although the statute law seems to leave a great deal to be decided by custom (see ss. 2,319 and 2,320), it is stated that litigation over mining "customs" has now about ceased. The customs themselves have been superseded by local legislation in the States, as well as by the provisions of the Federal Statutes.

It may be observed that when once agreements are entered into in America there can be no interference with them by any State legislation, it being a fundamental law laid down in the Constitution of the United States that no State shall "make any *ex post facto* law or laws impairing the obligation of contracts." It is also to be noted that the Federal Law as to public mineral lands herein-before referred to does not in any manner affect rights previously acquired. Indeed the law specifically provides (s. 2,340) that nothing which it contains shall be construed to impair in any way rights or interests in mining property acquired under existing laws; and, as regards water rights, it expressly declares (ss. 2,339 and 2,340) that wherever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes have vested and accrued, the same are to be recognised and the owners protected; and the right of way for the construction of ditches and canals for the purposes specified is to be acknowledged and confirmed; although, if the person constructing any ditch or canal injures or damages the possession of any settler on the public domain, he is to be liable to the party injured for such injury or damage; and all patents granted, or pre-emption or homesteads allowed, are to be subject to any such vested and accrued water-rights, or rights to ditches and reservoirs used in connexion therewith, as aforesaid; finally, the law declares (s. 2,352) that nothing which it contains is to destroy or impair any rights which might have attached previously to the passing of the law.

The moment a valid mining claim is located on the Federal public land, that moment the land ceases to be public, and is, as the Courts have declared, "withdrawn from the public domain."

It may be laid down as a general proposition that the owners of mines, whether patentees, or grantees from patentees, or proprietors of the fee by any other chain of title, or States, can do what they like with their property; even titles to patents may be alienated to any person whatever (s. 2,326); consequently any private individual or company having acquired mineral lands can sell them, or lease them, or otherwise dispose of them at pleasure. Private lands (comprising in this term the bulk of the lands in the Eastern States) are consequently free from the scope of the Federal legislation, and are left to be dealt with on the basis of absolute freedom of contract.

The holder of a patent is exactly in the position of the owner of real estate in fee simple by an ordinary deed, except that the patent is a clearer title, more easily searched, and free from many collateral uncertainties.

Mines are accordingly dealt with in the United States in the same manner as in England, except that

II. As to private lands.

Dealings with mines.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries revised by, Mr. Walmesley.

the rents or royalties reserved are frequently much higher. This is sufficiently shown by the evidence given by Sir Lowthian Bell before the Royal Commission on the Depression of Trade and Industry in 1885. In the statement put in by him and set out in the Appendix to the Second Report of that Commission (App. A., Part I.), he makes the following observations (p. 339):—

"I met with many similar instances in the United States. The mines on Lake Superior are rich in them. Skilled geologists, with energetic minds, pushed on into this then unknown region—indeed, so little known at the present day that I found the native Indians still living in its vast tracts of unclaimed land. One enterprising speculator purchased from the State a property of 40 acres for a few thousand dollars. By him it was agreed to be let to a second, who agreed to pay a royalty of 2s. per ton on the ore to the original purchaser; and the new owner, after an expenditure of 3,000*l.* to 4,000*l.*, passed the property on to a third, who paid for the privilege of working the ore, in addition to the royalty of 2s. per ton, the sum of 75,000*l.*, leaving thus a profit to the second holder of 71,000*l.* or thereabouts."

The following remarks are also taken from Sir Lowthian Bell's "Notes of a Visit to the Coal and Iron Mines and Iron Works in the United States" (2nd Edition, published in 1875):—

As to anthracite mines in Pennsylvania, p. 13—
"A coal speculator who was fortunate and sagacious enough in the early career of this important branch of mining industry to purchase coal lands, pays an interest little, often nothing, in the way of royalty. A lessee of coal afterwards paid about 1s. per ton, but this in recent years has risen to 2s., or even as high as 2s. 3*d.*

As to bituminous coal, p. 14—
"The royalty paid varies from 1*l.* to 1s. 4*d.*"
Kanawha Valley (Ohio and Chesapeake Railway), p. 15—

"The royalty given me was low, viz., about 6*d.* per ton; but anyone wishing to invest money in coal lands on the banks of the Kanawha may do much better than this, for they can be purchased at something under 1*l.* an acre, although, when immediately adjoining the railway, as much as 5*l.* an acre is obtained."

Magnetic iron-ore (in the State of New Jersey, Hibernia Mine), p. 23—

"The royalty paid is nearly 3s. per ton, and probably in any new lease it would be even higher."
(In the State of Pennsylvania, Cornwall Mine), p. 24—

"The mine, or quarry rather, is private property, hence there is no royalty to be paid. It was stated to me that as much as two millions sterling had been offered for this mine . . . but it was declined."

Limonite or brown hematite (in the State of Pennsylvania), p. 28—

"The landowners, usually small farmers, receive a royalty varying from 1s. 10*d.* to 2s. 10*d.* per ton."

The mines in private lands appear to be dealt with in much the same manner as in England, the royalties

varying according to:—1st. Proximity to market. 2nd. Quality of mineral (*e.g.*, anthracite may be worth 2s. or 2s. 6*d.* per ton royalty,* whilst bituminous coal has at present little or no royalty value). 3. Cost of working. It is usual to reserve royalty by way of a proportionate part of the selling price, a minimum being fixed and the royalty ascending by scale in proportion to the increase in selling price. There are various ways of ascertaining the basis: in some cases the selling price at the works is taken; in other cases, and more frequently, the price at New York Harbour, which is unquestionable, is taken.† On iron-ore the royalty varies from 15 cents to 75 cents, or even 1.00 dollars per ton. The latter prices are more rare, and the average is probably less than 50 cents.

It is also usual to provide for regular payment and working, either by a fixed certain rent, with power to recoup, as is usual in England, or by requiring a certain amount of tons to be paid for every year.

A form of lease, stated to be the ordinary form, is given in the Blue Book before referred to, p. 45.

The writer, when visiting some oil wells and natural gas wells in the neighbourhood of Pittsburgh, with the members of the British Iron and Steel Institute, in the autumn of 1890, was informed by an American gentleman interested in one of the properties on which the wells were sunk that the royalty paid to the owner of the land in respect of the oil wells was usually 5 per cent. of the produce when the rent was fixed before the oil was found; but that in his case the rent was not fixed until after the oil was found, and was then fixed at the rate of 10 per cent. of the produce; but that in the case of the natural gas wells the rent was usually a fixed annual royalty of 400 dollars or 500 dollars.

As regards payment of taxes, this is also a matter of agreement, and it is sometimes arranged that the tenant should pay all, sometimes that the landlord and tenant should contribute in equal shares, and sometimes that the landlord should pay all.

It is stated that all the British companies operating mines in the Pacific States and territories have purchased patented lands.

The following list of British mining companies which have been formed for the purpose of working mines in the United States of America, containing particulars (taken from a publication‡ in England) in many cases of the sums paid for the purchase of mines, will convey some idea of the mode in which such mines are dealt with:—

* The royalty upon anthracite is calculated upon the coal sent to market (after large waste in mining, crushing, screening, and sizing), and varies usually with the class or size of coal. A probably fair average on the whole tonnage is one shilling.

† This statement of the basis of calculation applies almost exclusively to anthracite. The cases in which the selling price is taken into account as determining directly a variable royalty on any other mineral product are extremely rare. It is, however, common in gold and silver mines for lessees to pay as royalty a certain per-centage of gross or of net returns, which, of course, would depend indirectly upon the selling price of the product.

‡ "Burdett's Official Intelligence for 1892."

BRITISH MINING COMPANIES OPERATING IN THE UNITED STATES OF AMERICA.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
Amador Gold Mine, Limited.	Gold mine, 90 acres -	Jackson, California -	1889	Under U.S. patents, except 6 acres which are held by location.	£ 200,000	In shares.
American Belle Mines, Limited.	Eight claims in the Red Mountain district.	Ouray County Colorado.	1890	Five claims under U.S. patents.	350,000	133,000 <i>l.</i> in fully paid shares; the balance in cash.
Arizona Copper Company, Limited.	Copper mining and cattle ranching.	Arizona - -	1884 (bought from a former Company).			
Breckenridge Company, Limited.	Oil and coal over 6,000 acres, with mineral rights over further land.	Kentucky - -	1885 (bought from a former Company).		535,000	5,000 <i>l.</i> in cash, balance in fully paid shares.
Calaveras Consolidated Gold Mining Company, Limited.	Six gold mining claims nearly 1½ mile in length.	Calaveras County, California.	1888		6,000	5,000 <i>l.</i> in cash, balance in deferred shares.
Colorado Coal and Iron Company.		Colorado - -	1890 (consolidated).			
Colorado Silver Mining Company, Limited.	Silver mine - -	Georgetown, Colorado	1887 (reconstituted)			

Appendix D.

British Mining Companies operating in the United States of America—continued.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
Comstock Mining Company, Limited.	Silver mines -	Park City, Utah -	1888	Under U.S. patents, rights acquired for 99 years from 1st March 1888.	£ 200,000	50,000 <i>l.</i> in cash, balance in fully paid shares.
Cortez Mines Limited.	Silver mines -	Eureka County, Nevada.	1888	29 claims under U.S. patents.	290,000	In fully paid shares.
Dickens Custer Mines, Limited.	Mines -	Norton Hill, Custer County, Idaho.	1889 (reconstructed)			
Elmore Gold Company, Limited.	Gold mine -	Alturas County, Idaho	1889 (reconstructed)			
Esmeralda, Limited.	Gold mine -	Esmeralda County, Nevada.	Ditto			
"Flagstaff," Limited.	Silver lead mines -	Utah Territory -	Ditto			
Flat Top Coal Land Association.	Over 200,000 acres of coal and timber lands of the Flat Top coal field.	Virginia and	1887	The Association does not mine or operate its lands, but leases on royalty.		
"Garfield," Limited.	Gold and silver mines	Nevada -	1889 (reconstructed)			
Gold King, Limited.	16 placer claims of 160 acres each on the banks of the River San Miguel.	Montrose County, Colorado.	1888	—	270,000	20,000 <i>l.</i> in cash, 250,000 <i>l.</i> in fully paid shares.
Golden Gate Alluvial Syndicate, Limited.	The Bed of the Feather River, formerly known as "Lewis" Claim, and now as "The Golden Gate" Claim.	Oroville, California -	1888	—	28,500	In fully paid shares.
Hanby Mountains Gold Mines, Limited.	Freehold gold-bearing gravel and quartz over an estate of about 3,500 acres.	North George -	1886	—	250,000	15,000 <i>l.</i> in cash, 235,000 <i>l.</i> in cash or shares at option of Directors.
Idaho Mining Company, Limited.	Mining claims -	Idaho -	1889 (reconstructed)			
Ilex Gold Mining Company, Limited.	Mines and other properties at Rich Gulch.	Calaveras County, California.	1887	—	45,000	21,000 <i>l.</i> in cash, 16,000 <i>l.</i> in fully paid preferred shares, 8,000 <i>l.</i> deferred shares.
Jay Hawk and Lone Pine Consolidated Mining Company, Limited.	Mining claims -	Montana -	1891 (reconstructed)			
Kaiser Gold Mines, Limited.	12 gold mines -	Arizona -	1888	Under lease for 99 years from 1st September 1888, at yearly rent of 10 <i>l.</i> for each of 12 claims.	180,000	15,000 <i>l.</i> in cash, 60,666 <i>l.</i> in shares, 98,334 <i>l.</i> in cash or shares at option of Directors. It is understood that by an arrangement made with vendor the sale has been cancelled.
Kohinoor and Donaldson Consolidated Mining Company, Limited.	Mines -	Colorado -	1889			
"Maid of Erin" Silver Mines, Limited.	Silver mines -	Leadville Lake County, Colorado.	1891	Two claims and a third held under lease for five (since extended to ten) years.	575,000	In fully paid shares.
Mammoth Gold Mines, Limited.	Mining properties -	Tucson, Arizona -	1889	—	464,000	390,000 <i>l.</i> in fully paid shares, 72,000 <i>l.</i> in debentures and balance in cash.
Missouri Lead Mining and Smelting Company, Limited.	Gold and silver mine under properties embracing an area of 1,190 acres.	St. Clair, Franklin County, Missouri.	1879	—	65,000	7,010 <i>l.</i> in cash, 12,990 <i>l.</i> in A. shares, 45,000 <i>l.</i> in B. shares.
Montana Company, Limited.	The Drumlunnon Silver and Gold Mine.	Marysville, Montana	1883	Under U.S. patents	500,000	300,000 <i>l.</i> in cash and balance in fully paid shares. The Company's capital was in 1884 increased by 60,000 <i>l.</i> to purchase the Old Standard property.
Mount Carbon Company, Limited.	Coal and timber on Mount Carbon estate comprising about 10,000 acres of land.	Fayette County, West Virginia.	1884	Under lease for 999 years, at rent of 6 cents per ton on all coal and coke sold, and 3 cents per ton on all slack or small coal sold as such; other rents for timber, &c.	5,000	Fully paid up shares.
Mount Jefferson Gold Mining Company, Limited.	Gold Mine -	Tuolumne County, California.	1888	—	98,000	3,000 <i>l.</i> in cash and 95,000 <i>l.</i> in fully paid shares.
Mud sill Mining Company, Limited.	Silver mining property, consisting of eight claims.	Fairplay Park County, Colorado.	1888	—	59,200	34,200 <i>l.</i> in cash, balance in fully paid shares.

British Mining Companies operating in the United States of America—continued.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Name of Company.	Property.	Where situate.	When registered.	How held.	Purchase money.	How payable.
New California, Limited.	California Mine of Colorado and other mines.	Gilpin County, Colorado.	1886 (reconstructed)		£	
New Gold Hill Company, Limited.	Gold Hill Estate of about 1,000 acres.	North Carolina -	1888 (reconstructed)			
New Guston Company, Limited.	Silver mines known as the Guston lode mining claim.	Red Mountain District, Ouray County, Colorado.	1887 (reconstructed)			Since reconstruction the Company has acquired for 15,000 <i>l.</i> two adjacent claims known as the "Little Annie" and "Smuggler" secured by U.S. patents, and has recently purchased the Elmore Patentee Mining claims for \$40,000.
New Hoover Hill Gold Mining Company, Limited.	Freehold mineral properties comprising 283 acres of land.	Randolph County, North Carolina.	1884 (replaced older Company).			
New Russell Gold Mining Company, Limited.	Gold mine -	Montgomery County, North Carolina.	1887 (reconstructed)			
New Viola Company, Limited.	The Viola and adjoining properties.	Idaho -	1889 (reconstructed)			
Old Lout Mining Company, Limited.	Silver-lead properties, upwards of 50 acres in extent, situate in the Poughkeepsie Gulch.	San Juan County Colorado.	1888	Under U.S. patents as to four claims, the remaining two claims being held under the assessment law.	Originally purchased by the Mines Company for 60,000 <i>l.</i> and sold to the Old Lout Company for 80,000 <i>l.</i>	39,000 <i>l.</i> in cash, balance in fully paid shares. 45,000 <i>l.</i> in cash, balance in fully paid shares.
Original Pittsburg (Grass Valley) Gold Mines, Limited.	Gold mining over about 40 acres of freehold.	Grass Valley District Nevada.	1888 (reconstructed in 1890 as the New Pittsburg, &c. Company).	Under U.S. patents	90,000	In fully-paid up shares.
Ouray Gold Mining Company, Limited.	Gold, silver, and lead mines.	Ouray, Colorado -	1887	Ditto	95,000	5,000 <i>l.</i> in cash, balance in fully paid shares.
Pittsburg Consolidated Gold Mines, Limited.	Gold mining -	Nevada -	1887 (reconstructed in 1890).	—	65,000	38,334 <i>l.</i> in cash, balance in fully paid shares.
Richmond Consolidated Mining Company, Limited.	Gold, silver, and lead mines.	Eureka, Nevada -	1871	Under U.S. patents		
St. George Gold Mining Company, Limited.	1,840 acres of freehold mining land (including the Dean Mines).	White County, Georgia.	1886	—	50,000	2,000 <i>l.</i> in cash, 3,000 <i>l.</i> in fully paid preference shares, 45,000 <i>l.</i> in fully paid ordinary shares.
Sam Christian Gold Hydraulic, Limited.	Gold Mining property, comprising about 1,350 acres (of which 1,000 are freehold).	Montgomery County, North Carolina.	1887	—	150,000	In fully paid share
Shenango Railway and Mercer Coal Company, Limited.	Railway property and 465 acres of freehold and mining rights under 45,000 acres of mineral lands.	—	1880			
Sierra Buttes Gold Mining Company, Limited.	The Sierra Buttes Gold Mines; also the Plumas Eureka Mine, and the Uncle Sam Mine.	California -	1870	—		The Uncle Sam Mine was purchased in 1889 for 30,000 <i>l.</i>
Silverton Mines, Limited.	Silver mines -	Colorado -	1887 (reconstructed)			
Slide and Spur Gold Mining Limited.	Gold mining -	Boulder County, Colorado.	1887	Under U.S. patents	375,000	In fully paid shares.
Tarryall Creek Gold Company, Limited.	The Tarryall Gold Placer Estate, covering an area of 550 acres of placer mineral land.	Park County, Colorado.	1837 (reconstructed)	Ditto	86,660	10,000 <i>l.</i> in cash, 10,000 <i>l.</i> in two yearly instalments from profits, 66,660 <i>l.</i> in fully paid shares.
Twin Lakes Hydraulic Gold Mining Syndicate, Limited.	Placer gold mining properties.	Leadville, Colorado -	1883	—	38,600	22,000 <i>l.</i> in cash, and 16,600 <i>l.</i> in deferred shares.
Valley Gold Company, Limited.	Gold properties consisting of about 360 acres of auriferous alluvium.	San Bernardino County, California.	1886 (reconstructed 1890).	—	70,900	35,000 <i>l.</i> in cash, 20,000 <i>l.</i> in fully paid deferred shares, 15,000 <i>l.</i> in fully paid ordinary shares.
West Mountain Mining Company, Limited.	—	Bingham, Utah -	1888 (reconstructed)			
Ingall's Gold Mining Company, Limited.	Formed to acquire the bond and lease of "Ingall's" Mine.	Gilpin County, Colorado.	1889	Held on lease at a royalty of 10 per cent, and 15 per cent on net proceeds of tilling and smelting ores respectively, with option of purchasing freehold for 4,100 <i>l.</i> at any time within two years from 1st May 1889.	10,000	Payable in deferred shares.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmsley.

Separation of minerals from surface.

Wayleaves on private lands.

That a private owner can, at will, alienate his property in minerals while continuing to hold the fee of the soil is as unquestionable in the United States of America as it is in England. A State can, of course, do the same, but as a rule does not. The almost or quite universal practice is to sell the land outright with everything in it.

Wayleaves on private lands are usually a matter of agreement, but in Pennsylvania there is one exception to this rule, viz., that, under the Mines Regulation Act, in case it is absolutely necessary for the purpose of ventilation or drainage only, one owner may ventilate or drain through another owner's property, making compensation, to be ascertained, in case of difference, by a jury. In the State of Massachusetts also there is a special law (see Public Statutes of Massachusetts, ch. 189, ss. 19 to 28) under which owners of mines or mineral deposits and of low lands, swamps, &c. which on account of adjacent lands belonging to other persons, or occupied as highways, cannot be approached, worked, drained, or used in the ordinary manner without crossing such lands or highways, may be authorised to establish roads, drains, ditches, tunnels, and railways to such places in the manner thereby provided. The parties desiring to make such improvements must apply to a certain body known as the County Commissioners, giving security for the costs of the application, and the Commissioners, after inquiring into the circumstances, and hearing all parties, may, if they consider it necessary, proceed to lay out and establish the improvements in such a way as shall do as little injury as is practicable, and shall ascertain the damage which, in their opinion, the proprietor of the adjacent lands will sustain, and shall apportion the damage equitably among all parties to be benefited, having regard to the benefit each will receive. Where repairs afterwards become necessary, a majority of the persons benefited may cause such repairs to be made and may compel contributions on the basis of the award from each person benefited; any person aggrieved may appeal to a jury. If the improvements are situate in a town the application is to be dealt with by the Town Authorities, with power of appeal to the County Commissioners.

It is understood that Railroad Acts for the establishment of public railways can also be obtained in most of the States without much trouble or expense.

The State of Pennsylvania possesses special laws for inspection and regulation of coal mines, there being separate regulations with respect to the anthracite and the bituminous mines respectively. These laws naturally have regard to the health and safety of the persons engaged in the mines. With this view they lay down certain rules as to keeping plans, double communication between the mine and the surface, ventilation, safety lamps, &c. A staff of inspectors is provided to see to the observance of the law and prosecute offenders. The Courts have power under certain circumstances to stop the workings. Persons who have sustained injury through a contravention of the law are entitled to recover damages from the offender, and penalties are prescribed for breaches of the law, either by masters or workmen. In fact, the provisions are very similar to those of the English Coal Mines Regulation Acts, but do not provide for "special rules."

Similar laws for the regulation of coal mines exist in the State of Illinois; also in other States where coal is mined, such as Ohio, Alabama, Virginia, &c.

Working men's relief or insurance societies are voluntary. There is no State legislation on the subject.

In many cases the employer and employed voluntarily unite to provide for the disability of the workman, as in the case of the Lehigh Coal and Navigation Company, where the beneficial fund is created and maintained by the following contributions made monthly, viz., the Company pay to it one cent. for every ton of coals produced at the mines; inside workmen employed on the property pay to it one per cent. and the outside workmen one half per cent. of their earnings, but no one has to pay more than one dollar a month. Provision is thus made for the contributors and their families in case of accidents occurring in the service of the Company.

In some parts of the country (as the result of private purchases), the mineral lands have got into a few hands; for instance, in the State of Pennsylvania about 70 per cent. of the anthracite coal fields appear to be owned by ten large corporations. (See "Mineral

Resources of the United States," published in 1883, p. 25.) It is said that the Philadelphia and Reading Coal and Iron Company bought for 30,000,000 dollars or thereabouts 80,000 acres of anthracite coal land, and issued bonds for the amount which were guaranteed by the Philadelphia and Reading Railroad Company. In West Virginia, again, it is said that coal lands are generally held in large grants and often under conflicting titles, and we are told that many of the tracts to which a clear title could be found are so involved by mortgages, that they can only be taken as a whole by large capitalists, and cannot be divided to suit the requirements of individual operators. The river bottoms and lower slopes are said to be often held under different titles by small farmers who control the approach to the coal lands in their rear. (See "Mineral Resources of United States" published in 1885.)

Wages vary widely in the different States. Probably 1 dollar 25 cents to 2 dollars per day is about the wages for miners east of the Missouri; in the far West, 2 dollars 50 cents to 3 or 4 dollars. The most common rate in the West is understood to be 3 dollars per day. The "shift" is in many cases, but not always (only in deep mines, it is understood), eight hours long; otherwise, 10 hours.

The following extracts from the New Tariff Law of 1890 may be found useful in considering this subject. The Law provides as follows:—"That on and after the 6th day of October 1890, unless otherwise specially provided for in this Act, there shall be levied, collected, and paid upon all articles imported from foreign countries, and mentioned in the schedules herein contained, the rates of duties which are by the schedules and paragraphs respectively prescribed," viz. (*inter alia*)—

SCHEDULE C.—METALS.

Iron Ore, including manganiferous iron ore, also the dross or residuum on burnt pyrites, 75 cents per ton = 3s. 1d. per ton.

Iron in pigs, &c., three-tenths of one cent per lb. = 1l. 7s. 8d. per ton.

Bar iron rolled or hammered, comprising flats not less than one inch wide, nor less than three-eighths of one inch thick, eight-tenths of one cent per lb. = 3l. 13s. 10d. per ton.

Railway bars made of iron or steel, and railway bars made in part of steel, T rails and punched iron or steel flat rails, six-tenths of one cent per lb. = 2l. 15s. 5d. per ton.

Bar iron, various rates according to classes.

Boiler plates ditto, up to 45 per cent. *ad val.*

Steel plates, 25 per cent. *ad val.*

Copper imported in the form of ores, $\frac{1}{2}$ cent. on each lb. = 2l. 6s. 2d. per ton of fine copper contained therein.

Rolled plates, 35 per cent. *ad val.*

Lead ore and lead dross, $1\frac{1}{2}$ cents per lb. = 6l. 18s. 6d. per ton.

Pigs and bars, per lb. 2 cents = 9l. 4s. 8d. per ton.

Antimony, as regulus or metal, 10 per cent. *ad val.*

Metallic mineral substances, in a crude state, and metals unwrought not specifically provided for, 20 per cent. *ad val.*

Manufactured articles or wares not specially enumerated or provided for composed wholly or in part of iron, steel, lead, copper, nickel, pewter, zinc, gold, silver, platinum or any other metal, and whether partly or wholly manufactured, 45 per cent. *ad val.*

SCHEDULE N.—SUNDRIES.

Coal slack or culm, such as will pass through a half-inch screen, 30 cents per ton of 28 bushels, 80 lbs. to the bushel = 1s. 3d. per ton.

Coal, bituminous and shale, 75 cents per ton of 28 bushels, 80 lbs. to the bushel = 3s. 1d. per ton.

Coke, 20 per cent. *ad val.*

III. Generally. Wages and working hours.

Import duties.

CHAPTER XII.

LUXEMBURG.

NOTES AS TO MINING LAW.

The French Legislation of 1810 was introduced into the Grand Duchy of Luxembourg at the date of its annexation to France under the First Empire. So far as concerns mines, open workings, quarries and peat bogs, this legislation still continues in force. Special laws have, however, been enacted in recent years respecting the valuable oolitic iron-ore deposits which have been discovered, and which are the only minerals of any importance worked in the country. The first of these laws (viz., that of the 15th March 1870) applies only to the iron-ore deposits in the valley of the Alzette, in the canton of Esch. Before the passing of this law numerous open workings had, on the one hand, been opened by surface owners under the name of *minières*, and the State had, on the other hand, granted important concessions of mines in the same iron-ore deposits to the Prince Henri (Railway and Mining) Company. In order to meet the difficulties which might otherwise have arisen as to the boundaries between the mines and the *minières*, the law of 1870 provided that the iron-ore deposits of the canton of Esch were to be considered as coming under the head of mines forming the subject of concession, when the bed lay at certain depths, differing as regards the right and left banks of the River

History of the law as to ownership of mines.

Alzette; the practical effect, it is said, being to limit the workings of the proprietor of the surface to a depth of 34 metres on the right bank and of 35 metres on the left bank of the river (Ag. § 1358). The law also provided (Art. 2) that no further concessions should be granted until the passing of a further law on the subject.

The second law is dated the 12th June 1874, and is only applicable to iron-ore and manufactures of iron, and does away with the obligations imposed by the law of 1810, securing a right to supply by the manufactories from the mines or *minières* of iron (as was done for France in 1866). The Act, in effect, brings all alluvial iron-ore within the category of *minières*, and places all stratified ironstone outside the canton of Esch in the category of mines (Ag. § 1360). It stipulates explicitly (Art. 1) that every concession must be made by a law, thus implying that it may be granted for such a period and upon such conditions as the Legislature may choose to make. This is said to be a recognition of the principle of "domaniality," by which the State makes a contract with the concessionaire for the enjoyment of a portion of the State domain, and not merely confers upon him the title to a property which it delivers to him. It follows from this that the State keeps the right to reserve whatever rent the mine is capable of paying, and this the State is authorised to do (Arts. 3 and 5) either in the shape of a rent per ton (*une redevance par tonnage*) or an annual rent, which may be considered as a composition for a tonnage rent.

The ownership of minerals in Luxembourg may, therefore, be classified as follows, viz. :—

LUXEMBURG.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals.	Ownership.	To whom Taxes or Royalties payable.	Remarks.
I. Mines, viz., the same substances as are contained in the category of mines under the French law, except that in the canton of Esch all iron ore at depths varying according to whether the land is situate on the right or left bank of the River Alzette, and that outside the canton of Esch, all stratified ironstone is also to be considered as coming under this head.	In the concessionaire (or his assigns), who can only obtain a concession by virtue of a law. The concessions are usually granted to the owners of blast furnaces erected in the country, or for works of public utility. The concessions appear to be usually granted for an unlimited period, but the payment of the rent is only extended over a limited period, e.g., 50 years.	Partly to the Government, who may charge a tonnage rent (<i>toceage</i>) or a fixed rent by way of composition of the tonnage rent, proportionate to the rental value of the mine; and Partly to the owners of the surface, the amount being fixed at 5 per cent. of the sum paid to the Government, but not to exceed 10 centimes per ton of the mineral worked.	It appears from an Act dated the 7th July 1874, that the owners of certain blast furnaces have agreed to pay to the State for 50 years in respect of the mines conceded to them a rent of 130,000 fcs., being at the rate of about 750 fcs. per hectare, calculated to be equivalent to 4 fcs. 60 c. to 5 fcs. per waggon (of 10 tons), or about 5d. per ton. It is understood that the taxes on concessionaires, besides the royalty which they have to pay to the State as the price of their concessions amount to from 0.025 fcs. to 0.05 fcs. ($\frac{1}{4}$ d. to $\frac{1}{2}$ d.) per ton, besides communal (parish) and other duties variable with the circumstances of the case, except in the case of concessionaires holding their concessions for works of public utility, who pay in all 10 cents = 1d. per ton of ore extracted.*
II. <i>Minières</i> , viz., all iron deposits which are not legally the subject of concessions.	In the surface owner or his assigns; but they must not be worked except by permission, which cannot be refused except on grounds of public safety or health; and the permission fixes the conditions which are to be observed by the workers with the same objects in view; and it may be suspended, or even revoked, in case of non-observance of such conditions, or of danger to public safety or health, or even to a neighbouring working.	If let to the surface owner, no royalties are payable to the Government; but a law of the 4th December 1863, burdens all open workings of minerals with a tax of 2 per cent. on the approximate value of the ore extracted, after deducting the expenses of working; and see the provisions of the law of 25th December 1889, given below.	This tax affects both mines, <i>minières</i> , and <i>carrières</i> , which are worked by open workings, and in the case of mines is in addition to the rents payable to the Government and surface owners.
III. <i>Carrières</i> comprising the same substances as under the French law of 1810.	In ditto (as in the case of France).	Ditto (as in the case of France).	

* It is understood that an interesting question has lately been raised before the Council of State, viz., whether the worker is liable to pay, in addition to the 10 centimes per ton, the tax (*impôt mobilier*) on the working capital. The Council of State has not yet decided the question.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Surface land occupied or damaged. Searches for mines.

Concessions.

Taxation.

Way-leave, drainage, and ventilation.

Relief societies, &c.

Mining authority.

General remarks.

Land occupied for the purpose of working mines must be paid for at double the value, at the choice of the owner of the surface, either of the amount of the damage, or of the value of the ground occupied (Arts. 7 to 11).

These, it is understood, are regulated in accordance with the French law of 1810.

These, as before mentioned, can only be granted by virtue of a law, and are usually granted (1) to the owners of blast furnaces erected in the country, who will smelt the ore on the spot, or (2) as a subsidy for works of public utility. A form of concession (understood to be the latest granted by the Government) is given below.

Concessionnaires are at liberty to sell or sub-let their concessions so long as they keep within the terms of their respective conventions. The Prince Henri (Railway and Mining) Company forms an exception as regards sale.

The leases made between concessionnaires and sub-concessionnaires may be for a lump sum, a yearly rental or royalty (toccage).

The original concessionnaires have in some cases made toccage contracts, as in the case of the Prince Henri Company and the original workers, under which a royalty is payable for, in some cases, 40 years.

According to the terms of a recent law (of the 25th December 1889) respecting the duty on mining operations, there is levied by the State, on the working of iron mines and open workings, in the measures both conceded and non-conceded a tax of $\frac{1}{2}$ per cent. on the selling price of the ore.

This duty is payable both on the quantity of ore sold to third parties, and on that used by the proprietors or concessionnaires of the land for supplying their works either in the country or abroad.

The duty is levied on the average sale price of the ore in the various basins during the year for which the duty is imposed.

The mine duty is subject to communal (parish) charges, both for the making of parish roads and for the additional per-centages proper (centimes additionnels).

The above law of 25th December 1889 does not annul or detract from the provisions of Art. 4 of the Convention law of March 1869, in favour of the concessionnaires of the Prince Henri Railway as regards the dues and charges imposed upon them with respect to their mining operations, nor the conventions-interpretations which followed, nor similar conventions made with other concessionnaires.

The workers of mines have the right to occupy all the surface land other than the site of buildings and adjoining enclosures which are necessary for the working of their mines, including necessary roads and ways (not confined to the areas of the concessions), on paying an indemnity for land occupied as stated previously (Arts. 7 to 11). They may also be authorised by the administration to establish ways of safety in adjoining mines or even minières, on paying compensation for damage (Arts. 14 to 16).

The French decree of the 3rd January 1813 (Art. 13), enabling the authorities in case of accidents in mines to take the necessary measures to put an end to the danger and to prevent evil consequences, is established as part of the law of Luxembourg.

There is no compulsory system of insurance, but it is understood that the iron-smelting companies usually effect collective insurances with foreign assurance companies by way of meeting accidents which may befall their men.

This is similar to the mining administration of France, the Director-General of the Interior being at the head of the Administration. The powers of the Administration are considerable.

The Director-General may (law of 1874, Art. 13) (subject to appeal to the Council-General) interdict all works undertaken contrary to the laws or regulations, or may (Art. 6) (subject to a similar appeal) suspend any part of the working in case it is conducted contrary to the conditions of the act of concession or of the regulations, and in such cases forfeiture may even be proceeded for before the tribunals.

The very special feature of the Luxembourg mining legislation is the recognition of the system of "domaniality." This system has, it appears, been adopted advisedly, as the French system of gratuitous concessions of mines has been entirely condemned in the country. It might consequently be supposed that the worker of mines in this country was at a disadvantage with those of the adjoining countries who obtain their concessions gratuitously; still it is understood that the iron workings of Luxembourg have been able to show profits even in bad times.

The subjoined report, which has been recently received from an English engineer residing in Luxembourg, will throw some light upon the objects and practical working out of the special law as to mining in that country.

The miners generally work 10 hours daily, or 60 hours per week.

Wages are as follows, viz.:-

Miners earn from 3.50 to 5 fcs. per day.

Underground labourers from 3 to 4 fcs. per day.

Smiths and carpenters from 3.50 to 4.50 fcs. per day.

Surface labourers' (men) from 2.50 fcs. per day.

There is no law against the employment of women in mines, but public opinion is against the practice and it does not exist.

Boys are prevented by law from working in mines under the age of sixteen.

CHAPTER XIII.

TRANSLATION OF THE TEXT OF THE LATEST MINE CONCESSION GRANTED BY THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBURG.

BETWEEN the Government of the Grand Duchy of Luxembourg, represented by M., Director General of the Interior,

AND the Société Anonyme des Hauts Fourneaux et Forges de, represented by M.

administrateur délégué (managing director), domiciled at, has been concluded the following convention:-

Article 1.—Is granted in concession by the Government of the Grand Duchy of Luxembourg to the Société des Hauts Fourneaux et Forges de aforesaid, the mines of oolitic hydrate of iron in the measures capable of being conceded by the State, and underlying the place called in the section and commune of

This concession, as defined by the plan annexed to these presents is bounded on the south by the line D E F G H, along the zone de protection, ten mètres wide, adjacent to Lorraine.

On the north and east it adjoins the boundary A B C D, separating the concessible district from the property workable open-cast, forming part of the belonging to the commune of; finally on the west it is bounded by the line I A, more particularly defined by the road between and adjoining the districts known as and

Thus, embraced by the polygonal figure A B C D E F G H, this concession contains including all the concessible portion of the which contains altogether but from which are deducted the esponses de protection, to be preserved along the Lorraine frontier, measuring

Article 2.—The limits of the concession are definitely fixed by the plan signed by the parties and annexed to the present convention, of which it forms an integral portion.

The Concessionnaire Company accepts the deposit of the plan as definitely fixing the limits of the concession and its conveyance, without any necessity for the intervention of the surface owners.

In execution of this plan, the representatives of the Concessionnaire Company shall shortly proceed to mark out the district on the ground, the limits being checked by the Government engineers.

If it be ascertained, even after the final marking out, and at any period whatsoever of the working, that among the lands conceded there be measures not concessible in accordance with the law of 15th March 1870, the Concessionnaire Company will be entitled either to additional lands or to a reduction of price proportionate to the value thus deficient.

Article 3.—The Government of the Grand Duchy only guarantees to the Concessionnaire Company the proprietorship of the mines; that is to say, it guarantees no yield of the mines; nor does it guarantee the quality, per-centage of metallic iron, or nature of ore, the concession being granted only on the reputation of the lands conceded being ore-bearing.

In the event of any let or hindrance to the working by third parties, the Concessionnaire Company will have the right to take such measures as may be advised for putting a stop to the hindrance, and for obtaining compensation for any damage that may ensue from such let or hindrance.

Article 4.—Remain reserved by the State the lodes of any mineral other than iron, which may be found in the concessions granted by these presents.

Article 5.—The Concessionnaire Company may work the measures with perfect liberty, selecting the most suitable seams; the company will be held bound to work the mines in accordance with recognised methods, and, en bon père de famille (like a good family man), it (the company) will take all necessary measures so as not to compromise the

Wages and working hours.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

complete working out of the measures, either during the operation of the present convention or at its close; it will conform to the laws, enactments, and regulations as to the working of mines in the Grand Duchy of Luxembourg; it will provide the necessary timbering for the workings, keep up pillars of sufficient thickness, and line the workings with masonry wherever required by the nature of the measures.

Article 6.—In return for the advantages granted by the present convention, the Concessionnaire Company undertakes to pay every year to the Government of the Grand Duchy of Luxembourg, for fifty consecutive years, a rent of 32,925 francs (=1,303*l.*)

The first payment of this rent is to be made on the 31st day of December 1887, and the last on the 31st day of December 1937, at the office of the Receiver, Esch-sur-l'Alzette.

The State undertakes to pay the royalty due to the surface-owner.

As the price of the concession is payable in fifty years, the Concessionnaire Company is entitled to work each year the fiftieth part, or 50 ares = $1\frac{1}{2}$ acre. Consequently, if in one year more than this area be worked, the excess shall be paid to the State on the basis of 37,500 francs. (=1,484*l.*) per hectare (about 2½ acres), unless the total area worked since the granting of the concession be less than that which the Concessionnaire Company had the right to work.

The excess thus paid during one or more years shall be allowed for during the following years, during which the Concessionnaire Company shall work beyond the average.

Reports drawn up each year in June and December by the Ingénieur des Mines (Government Mining Engineer), and checked by the Concessionnaire Company, will constitute a record of the areas actually worked.

Article 7.—The Government undertakes not to grant gratuitous concessions, but to allow the Concessionnaire Company to profit by any legislative measure which may improve the condition of iron-masters.

Article 8.—The Concessionnaire Company may compound its annual payments by paying their present worth at 5 per cent., or by partial repayments, the whole without prejudice to the advantage secured by Article 7.

Article 9.—The Concessionnaire Company may cede or farm the whole or part of its concession on condition that the sub-concessionnaire or tenant provide all necessary guarantees of solvency.

The sub-concessionnaire or tenant is legally reputed solvent if he provide a bail ensuring the execution of all the engagements to the State provided by the present convention.

The Concessionnaire Company has the right to dispose of its concession as it pleases, if the yearly payments have been compounded in accordance with Article 8.

All the provisions of the present convention are applicable to the tenants, sub-concessionnaires, or assigns of the Concessionnaire Company.

Article 10.—In the event of the Concessionnaire Company using or ceding the conceded ore for traffic, the present convention may be annulled with damages in favour of the State.

Article 11.—The Government is empowered to require from the Concessionnaire Company sufficient security, either by bail or by mortgage, for the payment of three years' rent as above reserved.

Article 12.—The Government is empowered to stop the working temporarily if the Concessionnaire Company be two months in arrear with the rent.

The Concessionnaire Company becomes in arrear by the mere fact of the date expiring on which the rent is due, and without the necessity of any legal formality. Interest at the rate of 5 per cent. becomes legally due on all sums not regularly paid to date.

If there be any danger in delay, the Government may stop the working at any time, even before the expiration of the period for which the rent is due. A delay of more than two months may be granted for payment of the rent if there be no danger in delay, or if the Concessionnaire Company have worked less than the average provided for by Article 6. The granting of delay carries with it *de plein droit* suspension of all hostile measures provided for by the present article.

Article 13.—If the year's rent be more than six months in arrear, the Government may apply to the Courts to cancel the agreement, and also for damages in proportion to the loss incurred by the State through non-execution of the contract.

In that case, as well as in all others in which the Government has the right of cancelling the convention by virtue of the general provisions of the law as to the regulation of mines and open workings, all proceedings for cancelling will be stayed, if, before final judgment, the Concessionnaire Company satisfy the claims of the Government.

On the other hand, if the cancelling be pronounced, the Government has recourse against the Concessionnaire Company or its legal representative.

Delay of more than six months may be granted for payment of the rent in the cases provided for by the last paragraph of the preceding article; and the granting of such delay carries with it *de plein droit* the suspension of all proceedings for cancelling the agreement.

The provisions of Article 2 of the law of 21st May 1879, which approves the compromise convention of 18th March 1879, as to the mining concessions dealt with by the law of 7th July 1874, are applicable to the present convention.

Article 14.—In all cases in which the present convention is cancelled, by virtue of the above stipulations, or owing to any other cause, and also at the expiration of the term, the Concessionnaire Company, or its legal representatives, are entitled to remove from the concession the working plant which they have added, and which may be withdrawn without endangering the mine, subject, however, to paying to the Government all the royalties due, and subject also to the option of taking over at a valuation by the Government, or other concessionnaires, of all objects which they may consider useful for working.

Article 15.—The Concessionnaire Company is responsible before the law for all damage which its working may cause the surface-owners or other persons.

Article 16.—The Government undertakes to apply, and cause to be applied, in the sense most favourable for mine workers the provision of Article 25, paragraph 5, of the Specification of 27th February 1869, annexed to the law of 19th March 1869, in such a manner that the railways conceded, or to be conceded, oppose no obstacle to any private lines that may be laid to facilitate the economical working of mining property.

The Government undertakes, moreover, not to renounce by new conventions the right of decreeing expropriation on account of public utility in cases wherein the right of expropriation may be considered as applicable to the iron industry in accordance with existing laws.

Article 17.—The Concessionnaire Company must elect a single administrative domicile, which it will make known by a declaration addressed to the member of the Government charged with the direction of mines.

Article 18.—Any disputes to which the interpretation of the present convention may give rise are to be settled, in the first instance, by three arbitrators, to be appointed, through the initiative of one or other of the parties, by the President of the High Court of Justice.

Article 19.—The present convention is not to come into force until after it shall have received the sanction of the Sovereign. It will be registered at the fixed rate of 5 francs (=4*s.*), and a copy delivered gratuitously, excepting the fee of the conservator.

Made double at Luxembourg, the 20th November 1886.
(Signed) (Signed)

REPORT ON LUXEMBURG, by Mr. J. WALTER PEARSE.

The Grand Duchy of Luxembourg is an independent state, the neutrality of which was guaranteed by the Treaty of London in 1867, its area having been reduced to 258,744 hectares, or 639,393 acres, in 1839, after its separation from Belgium. It is situated between 49° 35' and 50° 16' north latitude, and between 5° 45' and 6° 30' longitude east of Greenwich, being bounded by the Rhine Province of Prussia on the east, that of Lorraine on the south, and the Belgian Province of Luxembourg on the west, while the French Department of Meurthe et Moselle adjoins it for about six miles direct length at the south-west corner.

Copper is found at Stolzemburg on the eastern frontier, argentiferous lead at Oberwampach, and antimony at Goesdorf, the last two being to the north-west of the country. These deposits, however, together with the alluvial iron ore which originally started the iron trade of Luxembourg, are relatively unimportant in comparison with rich strata of limonite minette, or ferruginous oolite, which now constitute the national fortune, and which place Grand-Ducal Luxembourg in the front rank of iron-producing countries. These deposits extend along half the southern frontier, and form part of the measures encountered in the south-east corner of Belgium, the Longwy district of France, and that of the Moselle in Lorraine. The ore which occurs in Luxembourg is, however, richer in metallic iron than that in the neighbouring countries, and is, moreover, so highly impregnated and so intimately mixed with lime that it may, with judicious mixture of ore from the various seams worked, be smelted without any additional flux, while the seams are so near the surface as to be easily worked, and so regular that the quantity of ore in a given area may be calculated with approximate accuracy. As a set-off to these advantages, the coal measures are absolutely wanting in the Grand Duchy; and all attempts to work the bituminous shales, met with in the

south-east, have hitherto been commercially unsuccessful. The balance of advantages, however, is so great as to make the little country a favoured spot for ironmasters, its production of pig iron now attaining one-fifth that of the Zollverein, of which it forms part. The ore, and therefore the pig iron, also contains just sufficient phosphorus to permit the latter being converted into steel by the Thomas-Gilchrist process, so that all the seven ironworks make "basic" pig, which now exceeds one-fourth the whole production of the country, while this quality is made exclusively at the latest-erected works and converted into steel on the spot.

In presence of this considerable mineral wealth, the Government determined to strike out an entirely new course, differing in one or other respect from the practice of neighbouring countries. The surface owner has the right to raise ore by open workings; but until 1874 he was debarred from sinking shafts or driving levels. The law of that year, however, gave him the right, when working opencast becomes too difficult, to sink and drive down to a certain depth, about 20 metres or 11 fathoms, actually though not geologically differing in the east and west basins, which are divided by the River Alzette. All below this limit is reserved to the State, to grant in concessions to ironmasters who will smelt the ore on the spot, and to companies who will provide railways for developing the resources of the country. In this way the ore will be more quickly wrought out; but the other products and industries of the country, which are considerable, will also the sooner be turned to account, while the 56 mines are being actively worked, which is far from being the case in the neighbouring countries. The concessions to ironmasters, notwithstanding the somewhat heavy charges attached to them, have given great impetus to the iron manufacture, there being at the present time twenty-two furnaces in operation, besides the finished steel works already alluded to, employing with mines and furnaces 2,000 men. At the present time, two additional furnaces are being built; the foundations are laid for two more; and the erection of another, higher than any now existing in the country, is under serious consideration. Indeed, the opinion has been expressed that in a few years Luxemburg will be the centre of the basic pig and steel production on the continent of Europe. Thanks to this policy of the Government, the little country is endowed with a railway system larger in proportion to the population than that of any other country in the world.

It is a fundamental principle in the law of Luxemburg that all real and personal property, whether remunerative or not, shall contribute to the State; and the communal or parish authorities are empowered to levy rates on the same basis as the taxes imposed by the State. Now mines differ from all other species of property in this respect, that in proportion as they are developed and become remunerative they also become exhausted, their value, the basis on which a tax is levied, diminishing in inverse ratio. In order, therefore, to prevent the tax from slipping out of the hands of the Government, and at the same time to recoup the local authorities for the additional expense, in roads, &c. incurred through the development of the mines, it was found necessary to subject them to a different régime from that which regulates other descriptions of property. As a technical abstract of the mining law of Luxemburg has already been prepared, it is unnecessary to recapitulate its provisions; but it will not be uninteresting to state here the arguments of the Government in favour of a new tax on mines, and the reclamations of the ironmasters against it, on the subject being debated in the Chamber.

Up to this period, 1883, although the ironmasters paid the Government an annual royalty, which may be regarded as the price or rent of their concession, they were subject to no State taxes or local rates for their concessible subterranean mines, and only a Government tax for the non-concessible open-workings. As the communal authorities were not empowered by the existing legislation to levy rates on the mines in order to cover the expense incurred on their account, they brought pressure to bear on the Government, which was obliged to propose the application of the 1863 law to concessible mines, thus assimilating them to other landed property. This law, while introducing no new principle into mine legislation, puts mines and open-workings on the same footing, and permits them to be saddled with local rates. It was calculated that the tax might amount to 15 centimes=1½d. per 10-ton waggon, and if the local rates should reach the same amount, that would only make 30 c.=3d., while the Prince Henry Railway Company pays 1 fr. per waggon, or nearly 1d. per ton, and yet finds sub-concessionnaires to work its mines at a profit. Moreover, the slightest accident occurring in a mine would constitute a far heavier charge.

The ironmasters contended that, if the Bill should become law, they would have to pay to the State, as the price of their concessions, 30,000 fr. per hectare (about

6000l. per acre), and, in addition, the yearly tax at 2 centimes on the 80,000 tons of ore raised therefrom, making together 39,100 fr. per hectare, or 6240l. per acre, and this irrespective of the local rates which may reach the same amount as the Government tax, while Prussian ironmasters receive their concessions gratis and pay no taxes, those in the Longwy district of France paying only about 2 c., or one-fifth of a penny, per ton, and those in Lorraine only half that amount. In this manner Luxemburg mines would be taxed, not only on the profits, but also on the value of the raw material, without deducting the expenses of working, so that taxes would be levied even when the mines were worked at a loss.

The Bill, however, was passed; and the new law coming into operation with the beginning of 1884, continued in force until 1890, when it was superseded by a tax of 1 per cent. on the selling price of the ore, a measure which was made permanent.

Another burning question in the Grand Duchy is the granting, by Government, of mining concessions as compensation for the construction of railways in agricultural districts, which railways may not prove remunerative until the traffic is developed. The ironmasters contend that, if the ore is thus granted for such purposes (and such concessionaires are at liberty to sell the ore out of the country), it will soon be exhausted, leaving none to supply the furnaces. The representatives of the country districts reply that, as their taxes helped to pay the subvention of 8,000,000 fr.=320,0000l. granted for the construction of the Wilhelm-Luxemburg Railway, which was the means of developing the iron industry, it is but fair that this ore should contribute towards improving their means of communication and therefore developing the districts. However, as each concession must form the subject of a separate law, keenly debated in the Chamber, where the ironmasters are largely represented, it is not likely that the ore-bearing ground will be conceded without sufficient reason. It may here be mentioned that the Prince Henry Railway, one section of which was constructed expressly to develop the iron district, received a subvention of 475 hectares=1,174 acres, valued at 37,500 fr.=1,50000l. per hectare when calculated at the same price that the ironmasters pay in royalty-rent for their concessions. For a long time the other sections of the line were worked at a loss; but, one after the other, all have now become remunerative. In the same way a concession of 127 hectares=315 acres was granted as subvention for the construction and working of two small-gauge lines by the Luxemburg Secondary Railway Co.; and subsequently, on a portion of the concession proving unworkable, other lands were substituted, as the Government contracted to give good ore-bearing ground. This is not the case, however, with the ironmasters, who select their concessions in conjunction with the Government mining engineers, taking such concessions definitely for better or worse. Still the renunciation of a concession proved unworkable has been accepted from an iron smelting company by means of a special law, thus relieving the company from payment of further royalty-rent, though the sums already paid and works executed remain acquired to the State. Two other feeder lines now in operation have likewise been subventioned by ore concessions; and several demands for ore concessions in return for the making and working of proposed railways have been submitted to the Government.

The annual royalty-rent paid by ironmasters for their concessions is 750 fr. per hectare, or roughly 120l. per acre, and the hectare contains on an average 80,000 tons of ore with a mean content of 40 per cent. of iron. This amounts to about 12 fr. 50 c.=10s. per 10 tons in the central and most valuable portion of the iron district while for the red seam, which is most highly appreciated, the expenses of extraction, sorting, loading, timber and smithing, including depreciation, sinking fund and general charges, may be put at nearly 25 fr.=170l., so that the total cost of 10 tons of the best ore put on rails amounts to 30s. Surface property does not frequently change hands; but a few sales have been effected of late years at prices varying from 15,000 fr. to 45,000 fr. per hectare, or 2400l. to 7200l. per acre. So regular are the strata that the ore they contain may be calculated with near approximation; and it may be considered probable that, if 15,000 fr. be paid for a hectare, it will contain 15,000 waggon-loads of 10 tons, so that the 10-ton waggon-load will have cost the purchaser 1 fr. in the ground; but this "Tocage," as it is called, varies from 1 fr. to 3 fr. according to the price paid for the land. Taking an average of 2 fr. and adding 12 fr. 50 c., a rather high estimate for the cost of extraction and incidental charges, the total of 15 fr. or 12s. is obtained for the 10-ton waggon of surface ore on rails. This is a high maximum cost price; but it generally happens that, when a high price has been paid for the land, the expenses of extraction are low, and vice versa.

CHAPTER XIV.

NOTES ON MINING AND THE LAW AS TO OWNERSHIP OF MINERALS IN INDIA AND THE COLONIES.

The following is a short statement as to the minerals which are found in India and the different colonies, and as to the laws which govern the ownership and regulate the working of such minerals. This statement, without attempting to cover the whole ground, will, at any rate, afford some indication of the variety of legislation which exists with reference to the subject matter, and may serve as an index to such legislation. Every possible effort has been made to bring the revision of these notes up to date, but it must be observed, that the progress of legislation in some of the Colonies on such a subject as that which is here dealt with is so rapid, that considerable difficulty has been experienced in keeping pace with the constant change of laws and regulations bearing upon the subject.

As many of the laws and regulations respecting mining in the Colonies have reference particularly to mining for gold and silver, it may be here observed that grants by the Crown (or Government) of land in

the Colonies (as in England) will not pass gold or silver mines therein unless an intention to transfer them is expressed or necessarily implied (*Woolley v. Attorney-General of Victoria*, 2 App. Cas. 163, and *Attorney-General of British Columbia v. Attorney-General of Canada*, 14 App. Cas. 295). The notes in the 3rd column, as to the ownership of the mines, must, therefore, usually be taken as applicable only to mines other than gold and silver.

It must also be understood that the notes as to the ownership of mines given in this statement have reference to lands which have been alienated by the Crown (except where otherwise stated), and not to the waste, unoccupied, and uncultivated tracts of land, or to the specially reserved mining districts, which in many of the Colonies still remain unalienated in the Crown, and which are usually designated by the name of "Crown-lands."

IN EUROPE.

Name.	Minerals.	Ownership.	Remarks.
1. Channel Islands	—	—	—
2. Gibraltar	—	—	—
3. Isle of Man	Lead Copper. Zinc.	In Crown under customary estates (not under Bishop's Lands).	Acquired by purchase from the Duke of Athol (5 Geo. III. c. 26. A.D. 1765).
4. Malta	—	—	—

IN ASIA.

Name.	Minerals.	Ownership.	Remarks.
1. Ceylon	Plumbago Iron. A little coal. Precious stones.	In surface owner (except where there has been a specific reservation to the Crown).	No one is permitted to gem on Crown lands without a license. There do not seem to be any acts or regulations relating to mines of coal or metals.

By "The Gemming Ordinance, 1890" (1890 No. 5), no person is to open, work, or use any mine of gold, silver, gems, or precious stones without a license from the Government, which is to be subject to a stamp duty of five rupees, and may be granted to any person establishing a *prima facie* right to enter on, open, work, and use a mine on any land (the word land being defined to mean every description of land not being the property of the Crown). Licensees may not, however, employ any person in or about a mine without a written permit under the hand of the Government agent, for which a fee of 75 cents is to be paid, and which shall be in force only for the current quarter in which it is issued (s. 8). Import duties are charged in Ceylon on various metals, e.g. :—

	Rs. cts.
Iron, pig, per ton	2. 50
" bar, flat, &c.	4. 0
" angle, &c.	5. 0
" corrugated	7. 0
" galvanised	15. 0
Copper sheathing, per cwt.	3. 0
Lead, sheet, pipe, and pig, per ton	10. 0
Spelter, tin and zinc	10. 0
Tin plates, per cwt.	0. 75

Ore-crushing or machinery, railway rails, and machinery of various descriptions are, however, admitted free. An export duty is charged on plumbago per cwt. of 0.25.—*Return of Colonial Tariffs presented to Parliament June 1891.*

Name.	Minerals.	Ownership.	Remarks.
2. Cyprus	Silver Copper.	In Crown	Under Cyprus Ordinance No. 5 of 1882 (amending Ottoman Law* dated 4 Mouharrem, 1286), being regulations as to mines and metallic substances, and the granting of concessions and licenses to search for, win, work, and get the same.

* Under the Ottoman law there are mines e.g., gold, silver, lead, iron, coal, &c.; minières, i.e., mineral matters got by surface work; and carrières, marbles, &c. (not within law).

Mines cannot be worked but by virtue of an Imperial Iradé. This gives a concession for 99 years, during which period the mines may pass by inheritance or sale (but by sale only under official authorisation).
Persons may search for mines on their own lands, and also on those of others, with their authorisation but not without, except by special official authorisation.
Miniers may be worked in perpetuity by the owner of the soil by virtue of a firman, which he is bound to obtain for the purpose; but if he does not work them the working may be conceded to another person, who will pay double value for the land, and a fair price for buildings and other accessions.
Both mines and minières are subject to inspection by the Government engineer.
On obtaining a concession the concessionaire pays from 50l. to 200l. (Turk) according to the value of the mines. He afterwards pays two species of redevance—1st, of 5 paras per dennum of land comprised in the concession (payable to the owner); 2nd, the redevance proper, which varies from 1 to 5 per cent., according to the richness of the mine, and is fixed in the firman of concession.—(Legislation Ottomane droit Administratif, 1873, by Aristarchi Bey).
The Cyprus Ordinance No. 5, of 1882, above mentioned, enacted (*inter alia*)—
1st. That concessions should be under the hand of the High Commissioner and the seal of Cyprus instead of an Imperial Iradé.
2nd. That the High Commissioner in Council might suspend the provisions of the regulations of the Ottoman law providing for payment of a fixed surface rent so far as the same relate to land not being vacant land, or the property of any individual or individuals.
3rd. That the rents and royalties payable to Government should be paid into the Island treasury.

Name.	Minerals.	Ownership.	Remarks.
3. Hong Kong -	-	-	-
4. India:—			
Bengal -	Coal* and other minerals in large quantities.	The right to mines, &c., in unalienated lands has been reserved to the Government from recent dates in various provinces. In the case of lands previously alienated by the Government in those provinces and in the case of the other provinces (without special reservations), the mines belong to the surface owner.	See the Anglo-Indian Codes—Whitley Stokes (1888), vol. i. p. 727.
Assam -	Limestone, some coal and iron		
N.W. Provinces and Oudh	Some iron, but no minerals of importance.		
Ajmer -	Lead, copper, iron -		
Punjab -	Rock-salt, some coal of poor quality.		
Central Provinces -	Coal and Iron -		
British Burma -	Tin, petroleum, some iron -		
Madras -	Gold, iron, &c. -		
Mysore -	Gold -		
Bombay -	Some iron, but no mines of importance.		

* There were 105 collieries in Bengal in the year 1887, of which 62 were worked during that year, with a total output of 1,319,090 tons, as compared with 1,166,802 tons in 1886.
In the Bengal coal-field collieries are worked entirely by companies and other private owners.—("Moral and Material Progress and Condition of India, 1887-1888.")

The total yield of Indian coal has, during the past few years, increased as follows, viz.:—

In 1886 -	1,389,000 tons
" 1888 -	1,708,000 "
" 1889 -	2,045,000 "
" 1890 -	2,168,000 "

During the same period the importations of coal by sea have decreased from 849,000 tons in 1886 to 605,000 tons in 1889, but rose in 1890 to 784,000 tons; of this, the bulk came from England, while 12,014 tons came from Japan, and 10,017 tons from Australia.—("Moral and Material Progress and Condition of India, 1890-1.")

N.B.—In Bengal.—The road cess is to be levied on mines, amongst other property.—(Bengal, Act IX. of 1880, s. 6.)
In the Central Provinces.—The right to mines, minerals, coals, quarries, fisheries, and sap from palmyra and cocoa-nut trees are to be reserved to Government from future grants, provision being made for compensation for damage to surface owners.—(Central Provinces Code, Act No. 18 of 1881, s. 151.)

Unless it is otherwise expressly provided in the records of a settlement, or by the terms of a grant made by the Government, the right to all mines, minerals, coals, and quarries, and to all fisheries in navigable rivers, shall be deemed to belong to Government, and the Government shall have all powers necessary for the proper enjoyment of such rights.

Provided that whenever in the exercise by the Government of the rights herein referred to over any land the rights of any persons are infringed by the occupation or disturbance of the surface of such land, the Government shall pay to such persons compensation for such infringement, and the amount of such compensation shall be determined as nearly as may be in accordance with the provisions of the Land Acquisition Act, 1873.—(The Central Provinces Land Revenue Act, 1881, s. 151; see the Central Provinces Code, 1891, p. 165.)

In Bombay.—Mines and minerals in all unalienated lands to be reserved to Government (subsisting rights of occupants not to be affected).—(Bombay Code, Act No. 5 of 1879, s. 69.)

In the Punjab.—Mines of metal or coal and gold-washings shall in every case be deemed to be the property of Government. But if Government works, or causes to be worked, any such mines, compensation for damage to the surface of the soil shall be made to the owner of such surface.—(Punjab Code, Act No. 33 of 1871, s. 29.)

In Ajmer and Merwara.—Except in the case of lands in respect of which istimrari sanads (perpetual grants) have been granted by the Chief Commissioner with the previous sanction of the Governor-General in Council, the Government shall be presumed, until the contrary is proved, to be the sole owner of all mines, opened and unopened, of metal, coal, and other valuable minerals, with full liberty to search for and work the same. Compensation to be made for damage caused to the surface owner; the amount to be determined by the revenue officer.—(Ajmer Land and Revenue, Reg. II. of 1887, sec. 3 (A).)

In British Burma.—A landowner shall have a permanent heritable and transferable right of use and occupancy in his land, subject only—

(a) To payment of revenue taxes, cesses, and rates, &c.
(b) To the reservation in favour of Government of all mines and mineral products, and of all buried treasure, with full liberty to work and search for the same, paying to the landholder any compensation for surface damage as estimated by the revenue officer.—(British Burma Code, Act No. 2 of 1872, s. 8.)

Rules have been made as to working the tin deposits in the Mergui district (where a great development of such deposits is taking place) which came into force on the 1st of August 1890, under which prospecting licenses available for 12 months and leases for terms not exceeding 31 years may be granted by the Deputy Commissioner; and no tin deposits are to be worked or prepared or made marketable except under such a lease or license. Annual rents of Rs. 1. per acre, and a royalty of Rs. 3. per picul (133 lbs.) on all tin smelted, are to be paid by the lessees, who are also to be subject to the labour and other conditions set out in the form of lease attached to the rules.

IN ASIA.

Name.	Minerals.	Ownership.	Remarks.
Upper Burma -	Precious stones -	In Crown, unless otherwise provided by grants.	The Upper Burma Land and Revenue Reg., No. 111 of 1889.

The Upper Burma Land and Revenue Regulation (No. 111 of 1889) provides (s. 31) 1. Save as otherwise provided by the terms of any grant made or continued by or on behalf of the British Government, the right to all precious stones, mines, minerals, coal and earth-oil shall be deemed to belong to the Government, and the Government shall have all powers necessary for the proper enjoyment of its right thereto. 2. Whenever in the exercise of any such right of the Government, the rights of any person are infringed by the occupation or disturbance of any land, the Government shall pay, or cause to be paid, to that person compensation for the infringement. 3. The compensation shall be determined as nearly as may be in accordance with the provisions of the Upper Burma Land Acquisition Regulation of 1886.

Under the last-mentioned Regulation the amount of compensation, in case of dispute, is to be determined by the Deputy Commissioner of this district, after hearing the parties interested.—(Burma Code of 1889, p. 406)

"A seven years' lease of the Government monopoly of rubies has been granted. The terms of the lease and the regulations concerning the mines safeguard the rights of the ruby mines' residents to work their claims on the old system, and to have new claims as long as they pay the prescribed royalty on all rubies and sapphires they raise."—"Progress and Condition of India, 1887-8.")

Concessions have been granted to two companies for working coal over six square miles of the Chindwin field in Upper Burma, on condition that the industry makes satisfactory progress during the next eighteen months. The royalty on this coal is to be four annas per ton.—("Moral and Material Progress and Condition of India, 1889-90.")

Name.	Minerals.	Ownership.	Remarks.
5. Labuan -	Coal -	In Crown, except as to lands granted to the Labuan Coal Company, and other lands granted prior to 1849.	By an arrangement with Her Majesty's Government, which came into force 1st January 1890, the administration of the Colony of Labuan was transferred from the Colonial Office to the British North Borneo Company.

All land in this country is now leased by the Government for 999 years, subject to the reservation of coal and other minerals to the Crown, its grantees, lessees, or licensees.—(Labuan Ordinance No. 2 of 1863.) This Ordinance has been repealed (as regards Labuan) by the Labuan Ordinance No. VIII. of 1891, but similar provisions as regards mines are re-enacted by the last mentioned Ordinance.

The Labuan Coal Company have certain rights to purchase lands in fee-simple which are reserved by the last-mentioned Ordinance. Prior to an Act passed in 1849, the grants of land were made without reservation of minerals or royalties to Government; but in the case of lands held under grants made between 1849 and 1863, the coals and minerals are to be held subject to a royalty to be fixed by the Governor.

Name.	Minerals.	Ownership.	Remarks.
6. Straits Settlements:—			
Singapore -	There does not appear to be any mineral production in the Straits Settlements proper, except in Malacca.	Apparently in surface owner, subject to the payment of a royalty in the Crown in the case of lands granted by the Crown since 1886.	All grants of Crown Lands made under the Straits Settlements Ordinance No. 2 of 1886 are (in the absence of an express provision to the contrary) to be subject to the payment to the Crown of a royalty of 10 per cent. of the gross produce of all mines and minerals, other than laterite found, in or upon such land.
Penang -			
Malacca -	Gold and tin -	Apparently in the surface owner, in the case of lands granted by the Crown before 1886, and in the Crown in the case of lands granted since that date.	By the Ordinance No. IX. of 1886 (applicable only to Malacca), it is declared that all mines and mineral products, and all buried treasures, with power to work and get the same making compensation for damage, are reserved to the Crown.

The Straits Settlements Colony is formed of a number of settlements, of which the principal are Singapore, Penang, and Malacca. In order to understand the tenure of land in these settlements the following remarks (taken from the Straits Settlements Blue Book, 1890) may be found useful.

SINGAPORE.

Land in the hands of private owners in Singapore is held direct from the Crown, either by lease or grant. The terms of the leases vary. A great portion of the land on which the town stands is held on building leases for 60 and 99 years. The terms of leases in the country are for the most part 99 and 999 years. The quit-rent reserved in leases for land in the country issued before October 15th, 1883 is 30 cents per acre; on land leased since that date it varies according to the advantages of the land or to situation, soil, &c., but is in no case less than 40 cents an acre. In all leases issued since the 15th October 1883 a condition under which the quit-rent is re-adjustable every 30 years is inserted. Since the passing of the "Crown Lands Ordinance, 1886," the only instrument of title is a statutory grant in perpetuity, subject to a minimum quit-rent of 50 cents per acre re-adjustable every 30 years. The extent of land alienated in fee simple before 1871, which pays no revenue to the Crown, is considerable.

PENANG.

Land in Penang and Province Wellesley is held of the Crown as in Singapore, by grant or lease. The conditions of tenure vary according to the date when the Government at the time the documents were issued respectively. The conditions of tenure are set out in the Penang and Province Wellesley Land Ordinance, 1856, and in the Penang and Province Wellesley Land Ordinance, 1856, and in the Penang and Province Wellesley Land Ordinance, 1856, and in the Penang and Province Wellesley Land Ordinance, 1856.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

20 different kinds of title are in the hands of the public). The rates of rent reserved in old leases vary in different districts. Unoccupied Crown land is obtainable on statutory grants in perpetuity, premium and quit-rent being fixed according to the advantage of locality, soil, &c.

IN ASIA.

MALACCA.

The tenure of land in the town of Malacca has remained unchanged since the days of Dutch rule. Possession is evidenced in many cases by documents of title in Dutch. Occupied land in the country is in some cases held either under grant or lease from the Crown, but for the most part under customary tenure as defined by the Malacca Lands Ordinance. Land is now obtainable without premium if held under customary tenure, and with premium and a moderate quit-rent if under statutory grants.—*The Straits Settlements Blue Book*, 1890.

Closely connected with the Straits Settlement Colony proper are the following protected Native Settlements of the Malay Peninsula, the laws in which, administered by Native sultans or chiefs assisted by British residents, are of importance owing to the extensive development of mining enterprise in these settlements, and having regard to the numerous and special regulations which have been recently adopted in these settlements in connexion with such development.

Name.	Minerals.	Ownership.	Remarks.
Perak - Pahang - Jelebu - Negri Sembilan - Selangor - Sungei Ujong -	- - - - - -	Some gold and coal, &c., and much tin. In Government, where grant of land made since date of recent regulations referred to below, but in case of older grants and of native customary holdings, proprietary rights in minerals frequently belong to surface owners.	See the various regulations referred to below.

PERAK.

By the General Land Regulations Amendment, 1891 (Perak) the right to all mines and mineral products, coal, petroleum, road materials, and quarries under or within any land granted or leased is reserved to Government, with full liberty for the Government and its assigns to search for and work the minerals, &c. on payment of compensation on account of disturbance or surface damage. Such compensation to be determined in accordance with the law for the acquisition of land for public purposes. Road materials, &c. may be taken by Government on paying compensation for damage to crops, buildings, &c. This Order was to come into force on October 1st, 1891. See Order No. 6 of 1891, published in Government Gazette (Perak) of September 30th, 1891.

Mining for tin in Perak has greatly developed within the last 10 years, chiefly through encouraging Chinese immigration.

Prospecting licenses are given for \$25 for six months over areas not exceeding 320 acres.

Permits to mine are given (annual fee \$2), to dig for tin over areas of five acres.

Mining leases for 21 years, not exceeding 25 acres in one block, or more in special cases. Lessee bound to open and work and employ a certain number of miners without intermission, and to pay export duties; also to pay fees, including an annual quit-rent of \$1 per acre. The export duty is equivalent to 10 or 11 per cent. on the value of the metal. (See "Report on Tin Mining in Perak and in Burma," W. T. Hall; and "Preliminary Sketch of Tin Mining in Perak and in Burma," T. W. H. Hughes, Superintendent, Government Survey, India, January 1889, and by the latter, August 1889).

Amended and much more detailed mining regulations for Perak are under consideration, a draft of which was published in the Perak Government Gazette of September 25th, 1891.

PAHANG.

Under the Pahang General Land and Mining Regulations, dated 31st December 1889, lands available for agricultural purposes are held from the Crown on grant or lease, subject to the reservation of all minerals, together with the right of digging and taking the same, to the State. All districts in which metals or minerals were then being worked, or might thereafter be discovered, are to be treated as mining reserves, and subject to the provisions of the State Mining Regulations.

Similar conditions appear to apply to land in the occupation of natives under Malay tenure, of which leases in perpetuity may be obtained on compliance with certain conditions as to registration and survey.

All districts in which metals or minerals were being worked at the date of the issue of the regulations, or in which metalliferous deposits might thereafter be discovered, are to be subject to the provisions of the State Mining Regulations in addition to the general land regulations.

The Pahang State Mining Regulations, dated 31st December 1889, provide for the granting by the Government of:—

1. Mining licenses, which entitle holders to search for gold or other metals or minerals within certain specified areas for the space of one year (renewable) on payment of certain prescribed fees.
2. Mining leases of areas not exceeding 250 acres for terms not exceeding 25 years (renewable), the royalties reserved by Government being 50 per cent. on gold, 80 per cent. on tin, and 10 per cent. on any other metal or mineral. The royalties are apparently calculated on the value of mineral exported. The leases entitle the holder to mine within certain specified areas subject to prescribed conditions.
3. The Regulations also provide that in the case of persons or companies holding concessions for prospecting or mining granted by the Sultan of Pahang before the date of those Regulations, certain particulars were to be furnished to the Government, who would then replace the concessions by leases.

All leases are subject to labour conditions, providing for continuous and effective working, and to provisions for forfeiture in case of discontinuance of work, without exemption by the Mining Department.

All documents of title must be registered, and transfers are permitted on registration and payment of small fees.

No document of title granted to a miner confers any proprietary right to the land included within his prospecting or mining area, but merely permission to search for metals and minerals, and to utilise roads, waterways, timber and other materials, and the surface of the land for buildings or other purposes connected with prospecting or mining, in accordance with the provisions of the Regulations (s. 62).

The Government reserves right to take land for public purposes on payment of compensation (s. 63).

Any occupied land may be mined upon with the consent in writing of the District Collector, provided that compensation is made beforehand to the occupant for all loss, damage, or injury that may be sustained by him in consequence thereof, the amount of compensation being determined by the District Collector (s. 66).

JELEBU.

By the Jelebu Land Regulations (dated), lands available for agricultural purposes may be taken on lease for various terms of years according to the purposes for which they are taken, subject to the reservation to Government of all minerals, together with the right to enter upon and resume such portions of land as may be necessary for working mines, upon payment of just compensation to the lessee for any surface damage actually sustained by him, but the lessee will have priority of right to work minerals on the terms in force at the time being.

No such reservation, however, appears to be made from land in the occupation of natives under Malay tenure, of which leases in perpetuity may be obtained on compliance with certain conditions as to registration and survey.

Tracts known to contain metalliferous deposits, for which no lease or other sufficient title shall have been given, are to be considered as Government reserves, and mining licenses and leases may be obtained of lots included in such reserves on payment of certain specified fees, and subject to certain specified conditions. Such leases are to convey no property in the land, but merely to remove the metal on payment of the duty in force for the time being.

IN ASIA.

NEGRI SEMBELAN.

By the Negri Sembelan Land Regulations, dated 2nd October 1887, land available for agricultural purposes may be held on grant in perpetuity subject to the reservation of all minerals by the State, together with the right of digging and taking the same.

A similar reservation (subject to the right of the landholder to compensation for damage) applies to land in the occupation of natives under Malay tenure, who are to be deemed to have a permanent heritable and transferable right of occupancy in such land, subject to certain specified conditions.

Tracts known to contain metalliferous deposits, for which no sufficient title should have been issued at the date of the Regulations, are to be considered as Government reserves, and mining licenses and grants may be obtained of lots included in such reserves on payment of certain specified fees, and subject to certain specified conditions. Such grants are to convey no property in the land, but merely permission to remove the metal on payment of the duty in force for the time being for tin, or, in the case of any other metal, of one-tenth of the produce.

SELANGOR.

By the Land Regulations of Selangor, contained in Regulation III. of 1891 (passed by the State Council of June 13th, and to be cited as "The Land Code, 1891"), all grants of land made after the commencement of the Regulations are (in the absence of any express provision to the contrary) to be subject to a reservation to the State of a royalty of 10 per cent. of the gross produce of all mines and minerals found in or upon such land, such royalty to be ascertained and paid in the manner prescribed by rules made under the regulation.

Customary landholders are to be deemed to have a permanent transmissible and transferable right of use and occupancy in their land, subject to certain reservations, including the reservation in favour of the Government of all mines and mineral products and of all buried treasure, with full liberty to work and search for the same, paying to the customary landholder only compensation for surface damage as assessed by the District Officer.

The Resident may grant licenses to search for and remove minerals or metals from waste lands (defined as meaning all lands in Selangor not being customary land, which may not have been reserved for or dedicated to any public purpose, or which have not been granted or leased or agreed to be granted or leased to any person), or from any lands in respect of which the right to minerals and metals is reserved to the State, or may lease the same in blocks not exceeding 200 acres for the purpose of mining for any minerals or metals upon certain specified terms and conditions. Provision is also made for the appointment of inspectors of mines who may hear and determine in a summary way disputes between the holders of mining licenses, either amongst themselves or between themselves and third parties relative to their mining rights.

SUNGEI UJONG.

By the Sungei Ujong Land Regulations (dated), land available for agricultural purposes may be held on a lease in perpetuity, or for 999 years, subject to the reservation to Government of all minerals, with the right to enter on and resume such portions of land as may be necessary for examining or working mines, upon payment of just compensation to the lessee for any damage sustained by him, but the lessee, his administrators, executors, or assigns, are to have the priority of right to work minerals on the terms in force at the time being.

No such reservation, however, appears to be made from land in the occupation of natives, of which leases in perpetuity may be obtained on compliance with certain conditions as to regulation and survey.

The rules as to mining reserves seem to be similar to those enacted under the Jelebu Land Regulations before referred to.

Name.	Minerals.	Ownership.	Remarks.
North Borneo and Sarawak.	Gold, coal, &c.	All coals, minerals, precious stones, and mineral oils are reserved to the British North Borneo Company, from the leases (which are made for the term of 999 years).	Land Regulation of the British North Borneo Company (approved by the Court of Directors, 7th February 1883).

Mining licenses will be granted on favourable terms to the lessees of demised lands (s. 10).

The Labuan Ordinance of 1863 was extended to North Borneo, but as regards that country has been repealed by the British North Borneo Regulation (No. 2 of 1885) except as regards rights accrued under it, and by such last-mentioned regulation new provisions are made for the leasing of lands subject to the reservation of minerals, &c., with the right of entering on payment of reasonable compensation for surface damage and for damage to buildings; and the Government may grant mining licenses on favourable terms to the lessees of demised lands.

IN AFRICA.

Name.	Minerals.	Ownership.	Remarks.
1. Cape Colony	Gold. Silver. Precious stones. Copper. Iron. Coal, &c.	In the surface owner, unless specially reserved to the Crown; and, even where the mines have been reserved to the Crown, the surface owner is entitled to receive one-half of the license moneys, rents, or royalties collected by the Government. (Act, No. 19 of 1883, sec. 33.)	The laws relative to the prospecting and mining of minerals within the Colony on Crown lands, or on quitrent lands where the mines have been reserved to the Crown, are the C. of G.H. Acts, No. 19 of 1883, No. 22 of 1885, No. 18 of 1886, No. 44 of 1887, and No. 10 of 1888.

N.B.—Where the mines are not reserved to the Crown, the owner of any private property (not subject to a reservation of minerals) on which diggings or mines are proclaimed is to pay 10 per cent. of any rents or royalties received by him to Government for the maintenance of order and good government and protection of life and limb within his mining district.—(Cape of Good Hope Act, No. 19 of 1883, sec. 77.)

Where the mines have been reserved to the Crown, the owner of the surface has special privileges with respect to the mines, e.g., he may prospect without license, refuse consent to licensed persons to prospect on his land unless it is situated in a properly constituted "mining district," in which case, also, he has special privileges, including the right to claim certain portions of the mine free from Crown royalty.—(Cape of Good Hope Act, No. 44 of 1887, sec. 5.)

Name.	Minerals.	Ownership.	Remarks.
2. Basutoland	-	-	Apparently native chiefs have power to make regulations, and at present permission to search for minerals and precious stones is refused. (Report of Resident Commissioner for 1889, Colonial Office Reports, 1890, No. 70.)

ROYAL COMMISSION ON MINING ROYALTIES:

IN AFRICA.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Name.	Minerals.	Ownership.	Remarks.
3. British Bechuana-land.	Precious stones - Gold. Silver. Platinum.	As in Cape Colony -	Provisions for prospecting licenses and leases of minerals, under proclamation of Sir Hercules Robinson, 25th April 1889 (63 B.B. 1889).

N.B.—The prospecting licenses do not give any right to prospect on private property without the consent of the owner of such property, and the person prospecting has in any case to give security to make good surface damage. The Proclamation only applies to gold, silver, and platinum. As regards precious stones, Division I. of Act No. 19 of the Cape of Good Hope (of 1883) is in force throughout British Bechuanaland.—(See Proclamation, 63 B.B. 1889, above referred to.)

Name.	Minerals.	Ownership.	Remarks.
4. Gold Coast	Gold	—	"Native chiefs may make laws regulating mines" and mining for gold and other minerals."—(Gold Coast Colonies Ordinance, No. 5 of 1885.)
5. Mauritius	Traces of iron. Lead. Copper.	—	—
6. Natal	Coal. Iron. Copper.	In the case of lands granted before 1887, in surface owner; in the case of lands granted since that date, in Crown.	By the (Natal) Act 17 of 1887, called the Natal Mines Act, 1886, the right of mining for and disposing of all gold, precious stones, and precious metals, and all other minerals in the Colony, is thereby vested in the Crown, subject to the provisions of that Act, but the Act is not to affect rights previously acquired.

The Natal Act 17 of 1887 has been repealed by the Natal Mines Law, 1888 (No. 34 of 1888), but the provisions above referred to are re-enacted. Mineral leases may be granted by the Governor to any licensed person of any unalienated Crown lands for mining purposes (s. 22), and the Commissioner of Mines or other person appointed for the purpose may, on giving the prescribed notice, enter on private lands for the purpose of prospecting or boring for coal, making compensation to the owner or occupier of any such lands for any damages thereby occasioned, the amount of such compensation to be decided by the resident magistrate of the county or division (s. 30). The owner of any land on which coal is discovered may dig for, mine for, and dispose of such coal; or may grant leases to any person or persons for the purpose of mining for or disposal of such coal (s. 31). The owner has also the right to mine for gold or other precious metals or minerals on his land or to give permission for others to do so (s. 38), but if he neglects to do so the Commissioner of Mines may issue prospecting licenses for other persons to do so (s. 40). The owner of any land which has been proclaimed a public gold field has precedence in choice of claims, and one-half of the license fees paid by other parties is to be paid over to him (s. 56). Discoverers of gold have also special privileges (s. 54). A royalty is payable to the Government in respect to all gold, silver, and precious stones found on any land not being a proclaimed gold field on gold of 1s. 6d. an ounce, silver 1s. per ounce, diamonds 2½ per cent. ad. val. (s. 64). On the proclaimed gold fields diggers must take out licenses of 10s. a month for each claim (s. 13). A prospector's license costs 10s. for every six months, and no one may search for gold or precious stones or metals or other minerals on Crown lands without such a license (s. 3).

Name.	Minerals.	Ownership.	Remarks.
7. St. Helena and Ascension.	—	—	—
8. Sierra Leone	There are no mines	—	Sierra Leone Blue Book, 1890.
9. Zululand	Gold	As in Natal, above referred to.	Proclamation of Governor, 1889, No. 2.

IN AMERICA (NORTH).

Name.	Minerals.	Ownership.	Remarks.
1. Bermudas	—	—	—
2. Dominion of Canada	—	—	—

The land of Canada consists of granted and ungranted land. The ungranted land in the older provinces is the property of the provinces, and is disposed of by officials appointed for the purpose in accordance with the provisions of statutes passed by the several provincial legislatures. The (ungranted) land in Manitoba and the North-West Territories belong to the whole people of Canada, and is administered by the Federal Government ("Canada," 1889).

The law as to dealings with unappropriated Crown lands is regulated by "The Dominion Lands Act" (Revised Statutes of Canada, 1886, c. 54). Under this Act agricultural lands are open to homestead entry and pre-emption in accordance with the regulations of the Act; but by—

Section 47. Lands containing coal and other minerals are not to be subject to the provisions of the Act respecting sale or homestead entry; but are to be disposed of in the manner and upon terms and conditions to be fixed by the Governor in Council.

Section 48. No grant from the Crown of land in freehold or for any less estate, shall be deemed to have conveyed, or to convey, the gold or silver mines therein, unless the same are expressly conveyed in such grant.

Section 49. Discoverers of minerals who had applied for grants of the land containing such minerals before the date of an Act passed in the year 1886 to have certain rights.

Under the Dominion Land Regs. (No. 8) the price per acre of coal lands is: for land containing lignite or bituminous coal, \$10, and for anthracite coal, \$20; and (No. 10) any person may explore vacant Dominion lands for mineral deposits, and on discovering such may obtain a mining location, on certain specified terms, entitling him to enter on the land and work it for one year, and at any time within five years from the date of recording his claim, and on proof of expenditure of \$500 and payment of \$5 per acre and \$50 survey fee may obtain a patent for the claim. Statistical Year Book of Canada for 1891 (published 1892).

The import duties charged in Canada (as regulated by the Customs Tariff, 1889), are considerable, e.g.:—

Iron in pigs per ton, \$4=16s. 5d.
" bars, &c., \$18=2l. 13s. 8d.
Copper, in pig bars, &c., 10 per cent. ad val.
" sheets, 15 per cent. ad val.
" manufactures of, 80 per cent. ad val.

From Return of Colonial Tariffs, presented to the English Parliament, June 1891.

IN AMERICA (NORTH).

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Name.	Minerals.	Ownership.	Remarks.
Ontario	Gold. Silver. Lead. Copper. Iron, &c.	In surface owner, as to lands granted before 1891 (unless specially reserved to the Crown), and in Crown as to land granted for agricultural purposes since 1891, unless the surface owner has acquired a mining location.	"Crown royalties and reservations abolished, and "no future reservations of gold, silver, iron, "copper, or other minerals to be made out of "Crown lands granted as 'Mining lands.' "Mining claims may be granted by Crown " (out of Crown lands) at \$2 per acre."—The General Mining Act (Revised Statutes of Ontario, 1887), amended by an Act of 1890, c. 9. The Mining Operations Act, 1890 (Stat. of Ont., 1890, c. 10), provides for the regulation and inspection of mines where more than six persons are employed underground. The whole law as to mining in Ontario has now been consolidated by the Mines Act, 1892, State of Ontario, 55 Vict. (1892) c. 9, under which all royalties, taxes, or duties imposed in respect of minerals in land granted before 1891 are abandoned, and such minerals are to be always free from such royalties, &c., but minerals in lands granted after 1891 are to be subject to small royalties, but not during the first seven years of the patent or lease.
Quebec	Gold. Copper. Iron. Plumbago. Traces of lead.	As to grants made up to 1880, in the owner of surface (unless purchased with reservation of mines, in which case owner may purchase mines at \$2 per acre if for gold or silver, and \$1 per acre if for base mines). As to grants made since 1880, for agricultural purposes, in the Crown, but, if made as a mining location, in the owner of surface.	The Quebec General Mining Act of 1880 (Statutes of Quebec), 43 & 44. Vict. c. 12, and Revised Statutes of 1888, 1424.

Recently Mr. Lockwood, who owned 80,000 acres of auriferous lands in the province of Quebec, sold 8,000 acres of them to Messrs. McArthur Bros. & Co. for \$8,000. Shortly afterwards Messrs. McArthur Bros. & Co. sold a portion only of these 8,000 acres for \$50,000.—("Canada," 1889.)

Name.	Minerals.	Ownership.	Remarks.
Manitoba	Coal. Iron-ore and traces of gold, silver, and copper.	In surface owner	No reservation of gold, silver, iron, copper, or other mines or minerals shall be inserted in any patent from the Crown granting any portion of the Dominion lands (Statutes of Canada, 35th Vict. (1872) c. 23). This Act applies exclusively to the lands included in Manitoba and the North-West Territories. Any person may explore for mines or minerals on any unclaimed or unoccupied Dominion lands and may purchase mining locations of 320 acres (80 x 40 chs.), 160 acres (40 chs. sq.), or 80 acres (40 x 20 chs.) at the same price as farming lands, viz., \$1 per acre (same Act, ss. 38 and 40), but the Secretary of State may exempt certain lands from sale (s. 41). And in case of certain lands proving rich in minerals the Secretary of State may withdraw such lands from sale, and in lieu thereof institute a system of lease; the rent payable to the Crown under any such lease to be a royalty not to exceed 2½ per cent. on the net profits of working (same Act, s. 38). The Act also contains special provisions as to coal lands, under which claims may be made before survey entitling the claimants to occupy any number of acres not exceeding 640 on payment of \$1 per acre, and entitling them to patents if the mines are continuously worked up to the survey; but the Secretary of State, with the view of preventing undue monopoly in coal lands may exempt such lands from sale and settlement under the Act (same Act, ss. 43 to 45).
New Brunswick	Coal. Iron. Plumbago. Some gold. Copper. Lead. Albite, Antimony, &c.	In owner of surface (except where specially reserved to the Crown, but subject to payment of royalties to Crown except in respect of surface veins).	Apparently before 1891 the exclusive right of digging for and raising coal and other minerals was considered to be vested in the owner of the surface, but (except in cases where the owner has a right to mine without payment of royalty) he had to obtain a license from the Crown before digging, to be granted subject to the payment of such royalties as the Governor in Council might think fit (surface mines not exceeding 2 ft. thick not subject to royalties).—(Consolidated Statutes of New Brunswick, 1877, ch. 18, ss. 4 to 7); but by the "General Mining Act," Statutes of New Brunswick (1891), c. 16

IN AMERICA (NORTH).

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

Name.	Minerals.	Ownership.	Remarks.
North-West Territories.	Coal	In surface owner	It is declared that in all grants in which mines and minerals have been excepted and reserved to the Crown, such mining rights are property separate from the soil covering such mines and minerals, and provisions are made for the reservation of royalties to the Crown, for the use of the Province similar in amount to those fixed by statute for Nova Scotia (see below).
Nova Scotia	Coal Gold. Iron, &c.	With certain exceptions, referred to below, the mines are vested in the Crown, and as to mines other than gold and silver, for the benefit of the Province.	The same remarks apply as in the case of Manitoba. Surface owner or tenant entitled to compensation for land and easements.

The royalties are fixed by statute as follows:—

On gold and silver 2 per cent. on gross output (and an annual charge of \$2 per area—100 ft. by 150 ft.—if mines not worked)
On coal 10 cents per ton of 2,240 lbs. of coal sold or removed from the mine or used in the manufacture of coke or other form of manufactured fuel.
On copper 4 cents upon every unit, that is, upon every 1 per cent. of copper contained in each and every ton of 2,352 lbs. of copper ore sold or smelted.
On lead 2 cents on ditto (the ton being of 2,240 lbs.).
On iron 5 cents on ditto ditto.
On tin and precious stones 5 per cent. on their values. (N.S. Stat. 1885, c. 4.)
The only productive seam of coal worked at present is a surface one, 22 inches thick, said to produce an excellent steam coal, and is believed to extend over an area of at least 600 square miles.—("Canada," 1889.)
In 1890 the sales of Nova Scotia coal amounted to 2,222,081 tons.
The whole law as to mines in Nova Scotia has been amended and consolidated by the "Mines and Minerals Act, 1892" (N.S. Stat., 1892, c. 1).

The history of Nova Scotia coal-mining is stated to be as follows, viz.:—In the early part of the present century all the minerals of the province were granted to the Duke of York, who transferred them to the London jewellers, Messrs. Rundle and Bridge, who sold them to the General Mining Association of London in 1827. The Company worked the mines extensively until 1857, when arrangements were made with the Government whereby the General Mining Association surrendered their claims except to certain large tracts in the various coal districts, and the public were allowed to open mines under leases from the Government.

The grants of land to the early settlers in the province of Nova Scotia contained no regular reservation of minerals. In some instances gold, silver, and

precious stones only were reserved; in other cases gold, silver, copper, lead, &c., were retained for a source of revenue to the Crown. After the agreement with the General Mining Association the Government passed an Act by which they retained in previous grants the gold, silver, coal, iron, copper, lead, tin, and precious stones, whenever reserved, and for the purpose of revenue made the above reservations in all future grants. This Act releases to the surface owner all gypsum, limestone, fireclay, barytes, manganese, antimony, &c., and any of the above reservations whenever they are not specified (as reserved) in the grant. A complete list is published of all the grants, and information as to every grant can be obtained at the Crown Lands Office.—("Canada," 1889.)

Name.	Minerals.	Ownership.	Remarks.
Prince Edward's Island.	—	—	There is no mining in Prince Edward's Island.—The Statistical Year Book of Canada for 1891 (published 1892), p. 305.
British Columbia, including Vancouver's Island, &c.	Gold. Silver. Coal. Iron. Copper, &c., &c.	As to gold and other precious metals in "Placer" lands in free miners under certificates granted by the Gold Commissioner or Mining Recorder. As to do. and all other minerals (except coal) on Crown lands, and where right has been reserved to Crown and its licensees, in free miners as aforesaid. As to coal (and apparently as to all other minerals except gold and other precious metals where right to mine has not been reserved to the Crown and its licensees), in surface owner (subject, as to coal, to a reservation of 5 cents (= 2½d.) per ton of merchantable coal raised or gotten. No royalty on dross or fine slack).	See "Placer" Mining Act, 1891 (State of British Columbia, 91, c. 26.), s. 10. See "The Mineral Act, 1891" (State of British Columbia, 91, c. 25.), s. 10. "The Land Act," 1884 (as amended in 1890 and 1891) (State of British Columbia, 91, c. 66. s. 97).

Crown lands in this Colony, under the "Land Act, 1884" (as amended in 1890 and 1891), are classed as surveyed of unsurveyed lands, and may be acquired by "record" and pre-emption or by purchase.

The price of Crown lands pre-empted is \$1 per acre. The Crown grant reserves to the Crown the right for the Crown, and for any person or persons acting under the authority of the Crown, to enter on the land and get thereout any minerals, precious or base, other than coal thereon or thereunder, and to use the said land and the easements and privileges thereto belonging for the purpose of such raising and getting and every purpose connected therewith, paying in respect of such raising, getting, and use, reasonable compensation.

The Land Act, 1884 (amended as above), reserves to the Crown a royalty of 5 cents (= 2½d. per ton) on every ton of merchantable coal raised or gotten from any land acquired under the provisions of that Act, not including dross or fine slack,

IN AMERICA (NORTH).

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

and directs that in any Crown grant to be issued in pursuance of the Act there shall be contained a reservation of the said royalty.

The Land Act also provides that in all grants therefore issued by which the coal is reserved to the Crown, the coal so reserved is to become the property of the grantees and their assigns, subject to the aforesaid royalty.

Under the "Mineral Act, 1891," a "free miner" must be over 18 years of age. His certificate must be for one or more years at the rate of \$5 a year, and is not transferable. He may enter, locate, prospect, and mine upon any waste lands of the Crown for all minerals other than coal, and, on making compensation, upon all lands the right whereon to so enter, prospect, and mine, all minerals other than coal shall have been or shall be reserved to the Crown and its licensees (except land occupied by any building or falling within the curtilage of any dwelling-house, and any orchard or any land actually under cultivation or lawfully occupied for mining purposes other than placer mining, and also Indian reservations). The amount of compensation in cases of dispute is to be determined by the Court having jurisdiction in mining disputes with or without a jury.

Free miners' claims must be recorded and re-recorded from year to year at a cost of \$2 50 each year, and the free miner must in each year do or cause to be done work to the value of \$100 on each claim.

A free miner is not entitled to hold more than one claim on the same vein or lode except by purchase.

A free miner is not only entitled to work the mineral within his own claim (such claims being usually 1,500 long by 600 feet wide in a rectangular form), but is also entitled to some extent to follow veins or lodes in a downward course into adjoining lands without entering upon the surface of such adjoining lands. The holder of a mineral claim can purchase the same on payment of \$25 per acre in lieu of expenditure on the claim. Free miners may obtain licenses to run drains or tunnels for drainage or other purposes connected with the development or working of their claims through any occupied or unoccupied lands, whether mineral or otherwise, on giving full security for any damage that may be done thereby.

The "Placer Mining Act, 1891," regulates the rights and liabilities of "free miners" with respect to placer claims, which are very similar to those referred to above with respect to lode claims.

Under placer claims the free miners have the right to enter, locate, prospect, and mine for gold and other precious metals upon any lands in the province, whether vested in the Crown or otherwise, except upon Government reservations for town sites, land occupied by any building, or land within the curtilage of any dwelling-house, and any orchard or land lawfully occupied for placer mining purposes and Indian reservations.

Under the "Coal Mines Act, 1883," a 12 months' prospecting license for 480 acres of unoccupied and unreserved coal land may be granted by the Government on payment of \$25. The license may be extended for another year, if the licensee has actually explored for coal, on payment of \$50. The license is not transferable without notice being given to the Chief Commissioners of Land and Works.

Prospectors of mines may acquire such a portion of any Crown lands or lands held under pre-emption, or Crown grants, by any person or persons as may be necessary for affording communication with the sea shore or any river or public highway, together with a block of land not exceeding five acres at the terminus of such line of communication, such land only to be used for transporting, storing, and shipping coal and for other purposes essential to the business of the mine. The conveyance of land so taken is not to include the minerals thereunder, except by the consent of the grantor. Prior to the acquisition of such land compensation is to be given to the person from whom it is taken, the amount of compensation in case of dispute to be settled by the arbitration of two arbitrators appointed by the parties and an umpire appointed by the arbitrators. (The "Coal Mines Act" (Statutes of British Columbia, 1883, c. 3).)

Under the "Mineral Act, 1884" (chap. 82, "Consolidated Statutes, 1888"), with amendments made in 1889 and 1890 (and which Act is to a great extent repealed by the "Mineral Act, 1891," before mentioned), the Lieutenant-Governor in Council may appoint Gold Commissioners for the whole province, or for any particular district therein. Within each district there is to be a "Mining Court," in which the Gold Commissioner is to act as judge. Such court is to have original jurisdiction, and a court of law and equity to hear and determine all mining disputes arising within its district, with power for the judge in certain cases to summon a jury of from three to five miners to assess damages.

Under "An Act to aid the Development of Quartz Mines" (Statutes of British Columbia, 1888, s. 85), the Lieutenant-Governor in Council has power to expend public moneys in the erection and maintenance of crushing, chlorinating, and smelting works, and may grant sums of money by way of bonus to assist quartz mines already partly developed, and may grant a bonus to a company which shall erect a quartz mill or smelting works, or both combined.

Under an Act passed in 1890 (c. 31) special provisions are made with respect to claims located within that portion of the province within which the Canadian Pacific Railway runs.

Name.	Minerals.	Ownership.	Remarks.
3. Newfoundland	Copper. Lead. Silver. Gold. Coal.	In Crown	Any person may search for minerals on any lands in the Colony, and if he finds them, may obtain a lease from the Crown, but if he does not <i>bonâ fide</i> lay out certain sums in developing the mines in each of the first five years of the lease mines to revert to the Crown. Owner to be compensated for damage to surface and for easements.—(47 Vict. c. 2. and 48 Vict. c. 3, 1884 and 1885.)

The import duties charged in Newfoundland seem more favourable to this country on the whole than those charged in the Dominion of Canada, e.g.,

Iron in pig is free.

" bars, sheets, plates, &c., 10 per cent. ad val.

Coal, per ton 30 cents = 1s. 3d.

Goods, wares, and merchandise not otherwise specified (apparently including lead, and copper, raw or manufactured, with some slight exemptions), 25 per cent. ad val.—From Return of Colonial Tariffs, presented to Parliament June 1891.

IN AMERICA (CENTRAL).

Name.	Minerals.	Ownership.	Remarks.
1. Bahamas	—	—	—
2. Honduras	Trace of gold. Silver and coal.	In Crown	All mines and minerals (including coal) are reserved to the Crown, with the right to enter and take, subject to compensation for damage to land or buildings, to be determined, in case of dispute, by arbitration.—(Consolidated Laws of British Honduras, part 34, c. 103, s. 42.)
3. Jamaica	Gold. Copper. Cobalt. Lead. Manganese.	In surface owners	Limited owners have power to lease mines for fifty years.—(Laws of Jamaica, 18 Vict. c. 32.)

IN AMERICA (CENTRAL).

Name.	Minerals.	Ownership.	Remarks.
4. Leeward Islands -	Gold - Silver -	-	-
5. St. Lucia -	Iron - Copper -	-	-
6. Trinidad -	Tin - Platinum -	-	-
7. Windward Islands	Coal (poor quality).	-	-
8. Barbados -	-	-	-

In one of the Leeward Island (Dominica) an import duty of 5s. per ton is charged on coals and patent fuel; and in another (Montserrat) an import duty of 2s. per ton is charged on coals, exclusive of package, whilst in Barbados an import duty of 2s. 6d. a ton is charged on coal and the mixed preparations thereof and coke.—Return of Colonial Tariffs, presented to Parliament June 1891.

IN AMERICA (SOUTH).

Name.	Minerals.	Ownership.	Remarks.
1. British Guiana -	Gold and silver occasionally.	In Crown -	Governor may give concessions or licenses to persons to work gold, silver, or any valuable mineral other than precious stones on private lands, subject to regulations to be made securing compensation for damage to surface, and determining the amounts to be paid for royalties, &c. to the Colonial Government.—(Ordinance of British Guiana, No. 4 of 1887.)

Under the Gold Mining Regulations, the annual rent appears to be \$1 for each acre of land, above 50 acres, included in the concession, merging in a royalty of 90 cents for each oz. of gold, and 4 cents for each oz. of silver.—(See Gold Mining Regulations under Ord. 4. 87. ss. 59 and 78. Pounds Mining Law of British Guiana Suppt. 1888.)

Name.	Minerals.	Ownership.	Remarks.
2. Falkland Islands -	Coal; but apparently none worked at present. See Falkland Islands Blue Book, 1891.	In surface owner -	The waste lands of the Crown are to be sold in fee simple and by public auction only, though licenses may be obtained for temporary occupation for pastoral purposes, provision being made for reservations in leases.—(Falkland Islands Ordinance, No. 4 of 1871.)
3. Pitcairn -	-	-	-

IN AUSTRALASIA.

In Australia, New Zealand, and Tasmania, there appears to be a system by which the Government grant pastoral or agricultural leases of tracts of land which have not been permanently purchased, with power to resume possession for a variety of purposes (including mining); also by which, when mines have been discovered in districts which have not been permanently purchased, such districts are proclaimed as "mining districts," and let or leased as such by the Governments. The notes below do not generally refer to such districts, but to the lands which have been sold and permanently alienated by the Governments.

Name.	Minerals.	Ownership.	Remarks.
1. Australia: New South Wales	Gold - Silver - Copper - Tin - Coal - Iron - Antimony - &c., &c.	As to minerals other than gold and silver, in the case of lands granted before 1884, in surface owner, and in the case of lands granted since that date in Crown.	All grants of Crown Lands made since 1884 are to contain a reservation of all minerals in such lands, but, wherever land has been alienated, subject to a reservation of the minerals to the Crown, the Governor may permit the owner of the land to remove such minerals upon payment of such royalty, and upon such conditions as may be prescribed.—(New South Wales Act, 48 Vict., No. 18, s. 7.)

Previous to 1884 (since 1861) minerals were reserved from sales of agricultural land, but could be acquired by paying 2l. per acre, and expending 2l. per acre in mining.

Under the "Mining Act, 1874" (37 Vict., No. 13, s. 56), the Governor may grant leases of Crown lands for the purpose of mining for any metal or mineral other than gold (which is dealt with in other ways), the areas of leases not to exceed 640 acres for coal mining, and 80 acres for other mineral lots; terms not to exceed 20 years; rent to be 5s. per acre per annum, and subject to other conditions mentioned or referred to in the Act.

By the "Crown Lands Act, 1884" (41 Vict., No. 18, s. 91), the Governor is enjoined to impose a royalty of not less than 6d. per ton on coal raised from Crown lands leased; such royalty to be in addition to or substitution for any rent payable under the Mining Act.

IN AUSTRALASIA.

By the "Mining Act of 1889" (53 Vict., No. 20, s. 2), power is given for the Government to resume possession of land sold after the commencement of that Act, or leased conditionally under the Act of 1884, which may be found to contain minerals, compensation being given to the proprietor of the land for his interest therein and improvements thereon as appraised by the Land Board, subject to appeal, in accordance with the "Crown Lands Act, 1884," or any Act amending the same.

Import duties are charged in New South Wales in respect of some manufactured articles, e.g. :—

Iron, galvanised, in bars, sheets or corrugated, per ton	s. d.
" iron and steel wire, per ton	- 40 0
" galvanised manufactures (except anchors), per ton	- 20 0
Return of Colonial Tariffs, presented to Parliament, June 1891.	- 65 0

Name.	Minerals.	Ownership.	Remarks.
Queensland	Gold - Copper - Iron - Tin - Coal -	As to minerals other than gold, apparently in surface owner.	All Crown grants are to contain a reservation of gold.—(Crown Lands Act, 1884 (Queensland), 48 Vict., No. 28.)

There are two principal Acts relating to minerals on Crown lands, viz., the "Mineral Land Act of 1882 (Queensland Stat. 46 Vict., No. 8)," and the "Mineral Land (Coal Mining) Act of 1886 (Queensland Stat. 50 Vict., No. 20)." Under the latter Act Crown land may be leased for coal mining at 6d. per acre and 3d. per ton royalty for the first ten years of the lease, and 6d. per ton afterwards (s. 6), and special privileges may be given to discoverers of new coalfields (s. 7). There is also an Act for the regulation and inspection of mines and collieries (Queensland Stat. 45. Vict., No. 6), which extends to all mines in which more than six people are ordinarily employed underground.

Under the "Mineral Homestead Leases Act of 1891," Queensland Stat. (1891), No. 55, leases of Crown lands in proclaimed mineral districts may be granted, subject to the right of holders of mining licenses to take up such land for mining purposes, on making compensation for damage done to improvements.

Import duties are charged upon certain minerals or manufactures of minerals, e.g. :—

Galvanized or corrugated iron, and iron wire, lead (pig, piping, and sheet) per cwt.	s. d.
Iron castings for building purposes, &c. per cwt.	- 2 0
Coal, per ton	- 3 0
Mineral oils, per gallon	- 2 0
	- 0 6

and all goods not elsewhere specified (apparently including lead and copper) 15 per cent. ad. val., but iron ore, plain, sheet (not galvanized), pig, bar, rod for $\frac{1}{4}$ to $\frac{1}{2}$ inch, channel, angle and tee, rolled joints up to 10 by 5 inches, scrap and hoop and steel, rails, unwrought, sheet, bar, angle and tee are free.—Return of Colonial Tariff, presented to Parliament, June 1891.

Name.	Minerals.	Ownership.	Remarks.
South Australia	Copper -	As to gold, in Crown; surface owner to be compensated. As to other minerals, apparently in surface owner.	Crown Lands Consolidation Act (South Australia), 1886.

Under the "Mining on Private Property Act, 1888" (Stat. of South Australia, 51 & 52 Vict., No. 448), the Government on behalf of the Crown may resume the ownership of any private land for the purpose of mining for gold on payment being made by way of purchase money and compensation for land resumed, and for the damage thereby occasioned as if such land had been acquired under the Land Consolidation Act. The land may also be provisionally resumed and licenses to mine may be granted to such person who, but for the resumption of such private land, would have been entitled to the first right to mine thereon. Private land may also be proclaimed to be an alluvial gold field, in which case the owner of the land can require the land to be absolutely resumed.

The owner of private lands may be compelled to grant a lease for the purpose of mining for gold; and, failing agreement, the royalty is to be at the rate of 2½ per cent. on the gross money value of the metal raised during the lease, and a rent for the surface land to be assumed by the local court. Term to be 28 years, and the lease to comprise a convenient way to the land and provision for preventing damage.

Import duties are charged in South Australia in respect of certain manufactured articles, e.g. :—

Galvanized iron, corrugated, unmanufactured, per ton	s. d.
Iron or steel columns, girders, rolled or rivetted, pipes, tubes, &c., per ton	- 30 0
Lead, pipe and sheet, shot, per cwt.	- 40 0
Iron brackets, doors, &c., and galvanized iron manufactures, 25 per cent. ad. val.	- 2 6
Return of Colonial Tariffs, presented to Parliament, June 1891.	

Name.	Minerals.	Ownership.	Remarks.
Victoria	Gold - A little tin - Copper - Antimony - Lead, &c. - Some coal -	As to gold and silver, in Crown; but owner of land before 1885 entitled to lease if he applied for it within six months after the passing of the Act. As to other minerals, apparently in surface owner.	Mining on Private Property Act, 1884 (Victoria), 48 Vict., 796. This Act appears to apply only to gold and silver. In respect of minerals (other than gold) leased by the Crown on Crown lands a royalty of two per cent. on the value at the pit's mouth is charged; but it is stated that the Minister of Mines has decided to abolish this royalty (see Iron and Coal Trade Review, August 8th, 1890). Under the "Mines Act, 1891," s. 63, the Governor in Council may now fix the royalty and conditions at the time of the granting of the license.

IN AUSTRALASIA.

Appendix D.

Notes on the Mining Laws of India, the Colonies, and Foreign Countries, revised by Mr. Walmesley.

By the "Mining on Private Property Act, 1884" (Vict. Stat. 48 Vict., No. 796) power was given to a Governor to grant mining leases of private lands for the purpose of mining thereon for gold with all necessary powers and privileges for that purpose, the owner of land or buildings being entitled to compensation for injury and depreciation from mining operations, the amount of such compensation, if not fixed by agreement, to be determined before a warden or in a Court of Mines. The last-mentioned Act is repealed, but practically re-enacted by the "Mines Act, 1890" (Vict. Stat. 54 Vict., No. 1,120) which is in consolidation of all the Mining Acts of the Colony relating to Crown lands as well as private lands. Leases of easements for bringing water for mining purposes over private lands may be obtained at a rent of 6d. per acre per annum, in which case the compensation for the land comprised in such lease and for the injuriously affecting of any other land is to be ascertained if not agreed upon as before. (Section 334.)

Under the "Mines Act, 1891," 55 Vict., Stat. (1891) No. 1215, the holder of a residence area comprised in any gold mines lease or mineral lease, may purchase the surface of the land compulsorily, together with the earth below the same to such depth not exceeding 100 feet, as the Governor in Council shall determine.

The owner of private land is entitled to compensation for damage by mining for gold and silver, such compensation, not agreed, being determined by a warden or in a Court of Mines (established under the Mining Act of 1865). Leases of easements over private lands may be obtained, in which case the compensation is to be ascertained, if not agreed upon, as before.

Import duties are charged in Victoria on certain minerals and manufactures of minerals, e.g. :—

Charcoal and coal (ground), 20 per cent. ad. val.

Lead, sheet and piping, per cwt., 2s. 6d.

Metals, manufactures of, and machinery N.E.S. (except portable engines), 35 per cent. ad. val.

Some manufactures of metals and machinery are, however, free.—Return of Colonial Tariffs, presented to Parliament, June 1891.

Name.	Minerals.	Ownership.	Remarks.
1. Western Australia	Gold Silver. Lead. Copper. Ironstone. Coal, &c.	As to gold, silver, and other precious metals to Crown. As to other minerals, apparently in surface owner.	Land Regulations (Western Australia) proclaimed 2nd March 1887, No. 16.

Under "The Mineral Lands Act of 1892" (Stat. of Western Australia, 55 Vict. No. 3), holders (who must not be Asiatics or Africans) of mining licenses costing 10s. per annum, may search for mines on Crown lands subject to certain regulations, and may obtain leases of Crown lands within proclaimed mining districts for various areas not exceeding in the case of coal 640 acres, for terms not to exceed 21 years, and at rentals at the rate of 5s. per acre or part of an acre, except in the case of coal, which is to be at the rate of 6d. per

acre or part of an acre, and a royalty of 3d. per ton on the coal raised during the first 10 years of the term and 6d. per ton afterwards.

Persons found working for minerals or removing minerals or mineral ores from the claim, lease, or land of any other person who is personally or by his agents occupying the same, whether held under mining license, or lease, or in fee, may be fined any sum not exceeding 50l. for each offence, and be held guilty of larceny (ss. 29, 30).

An import duty of 2l. per ton is charged in Western Australia on galvanized iron, corrugated sheet, and other rates on other manufactures of iron and lead.—Return of Colonial Tariffs, presented to Parliament, June 1891.

Name.	Minerals.	Ownership.	Remarks.
2. Fiji	—	—	—
2. New Guinea	Traces of gold, iron, plumbago, coal.	As in Queensland	By the British Guinea Ordinance No. 4, of 1888, the Queensland Statutes generally are adopted as the laws of this Colony, and by the British Guinea Ordinance No. 7, of 1888, the provisions of the Queensland Gold Mining Acts in particular are adopted. Under the British Guinea Ordinance No. 7, of 1890, s. 6, all Crown grants or leases are to contain a reservation of gold and silver, with right of access to dig for and remove same.
4. New Zealand	Gold Silver. Copper. Iron. Zinc. Tin. Lead. Antimony. Nickel. Coal.	In surface owners where land has been granted by Crown in fee, but lands granted since 1873 (in which year an Act was passed providing that all lands alienated by the Crown after that date should be subject to redemption for mining purposes) may be resumed by the Government for mining purposes (not including coal mining) on payment to the owners of full compensation for the value (otherwise than auriferous or argentiferous) of the lands and improvements resumed, and lands may also be resumed for coal mining purposes on the conditions mentioned below.	The Mining Act, 1891 (New Zealand), 54 & 55 Vict., No. 33. A Bill to amend "The Mining Act of 1891" has been before the Parliament of New Zealand during the Session of 1892, which is understood to have passed, but no copy of the Act has yet reached this country.

The laws of New Zealand relating to mines (other than coal mines) are consolidated and amended by the above-mentioned Act. By the provisions of this Act land in proclaimed mining districts is only to be sold by the Government subject to special conditions. The Coal

Mines Act, 1891 (New Zealand), 54 & 55 Vict., No. 46, provides for the leasing of coal mines (under Crown lands) by the Warden or Commissioner of Crown lands, and for the regulation and inspection of coal mines. The leases are to be for terms not exceeding 66 years,

IN AUSTRALASIA.

Appendix D.

and to comprise areas not exceeding 2,000 acres, and to impose dead-rents of not less than 1s., nor more than 5s. per acre and royalties at the rate of not less than 3d., nor more than 1s. per ton (the dead-rents to merge in the royalties). By this Act it is also provided (amongst other things) that all lands which previously to the commencement of the Act had been alienated or agreed to be alienated from the Crown, whether by way of absolute sale or lease, or for any lesser interest, should, with the consent of the owners or occupiers thereof respectively; and that all lands which after the commencement of the Act might be so alienated or agreed to be alienated from the Crown, but not expressly for coal-mining purposes, should, without the

consent of the owners or occupiers thereof respectively, be liable to be resumed by Her Majesty for coal-mining purposes on paying full compensation to the owner and occupier thereof for the value of the lands and improvements so resumed (s. 59), and that where, for the purpose of working any mine, it is required to carry any work on or over or under any private land, or to take any such land, the Government, on the application and at the cost of the person working the mine, may take and vest in him such land as for a public work under the Public Works Act, 1882. The last-mentioned Act provides for compensation to be made to the owner of the land taken.

Import duties are charged in New Zealand on various kinds of manufactures and minerals, e.g. :—

Iron fencing wire, the cwt.	s. d.
Barbed "	1 6
Galvanized, corrugated sheets, screws, and nails, the cwt.	2 0
Lead, in sheets, the cwt.	2 0
" piping	1 6
	3 6

Return of Colonial Tariffs, presented to Parliament, June 1891.

Name.	Minerals.	Ownership.	Remarks.
5. Tasmania	Gold Silver. Coal. Iron. Tin.* Lead, &c.	As to land granted before 1890, mines other than gold and silver, apparently in surface owner; but grants of Crown land since that date within certain areas contain a reservation to the Crown of the right to mine at a depth of not less than 50 feet from the surface; and even lands granted before 1890 were liable to be resumed for mining purposes by the Crown on paying full value for the value, other than auriferous, of the lands and improvements so resumed (see Waste Lands Act, 1870, 34 Vict. (Tas. Stat.), No. 108, 54).	Any person mining on land belonging to a private individual without his consent subject to penalties.—(The Minerals Lands Act, 1884 (Tasmania), 47 Vict., No. 10.) Government subsidies have been given to some extent to prospecting associations, &c., to encourage deep sinkings.—Act of 1876. Under the "Crown Lands Act, 1890" (Tasmania Stat. [1890] No. 8), s. 80, every grant deed of any Crown lands within a town or within the limits of any proclaimed goldfield, or of any lands withdrawn from sale or selection, is to contain a reservation to the Crown of the right to mine for minerals under such land at a depth of not less than 50 feet from the surface; but this section is not to apply to land purchased before the passing of the Act.

* Nearly all alluvial tin.

Under the "Crown Land Act, 1890," all lands selected or alienated under the provisions of that or any former Act relating to the sale of Crown lands may (but only within five years from the date of such alienation) be resumed for mining purposes by Her Majesty, on paying full compensation to the selector, grantee, or purchaser thereof for the value, other than that of gold or other minerals contained in such land; such value in case of disagreement to be ascertained by arbitration under the Lands Clauses Act (Stats. of Tasmania, 54 Vict., No. 8, s. 104).

Lands leased for grazing purposes may also be resumed by the Crown for mining purposes, on full compensation being made to the occupier for improvements (Stats. of Tasmania, 54 Vict., No. 8, s. 105).

"The Regulation of Mines Act, 1891" (Stat. of Tasmania, 55 Vict., No. 31), consolidates and amends the law relating to the regulation and inspection of mines.

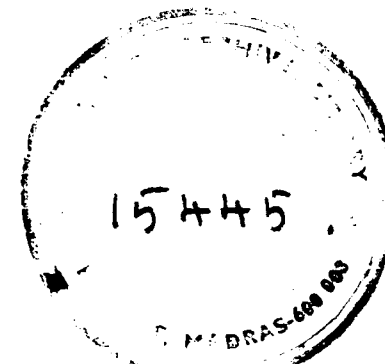
Import duties are charged in Tasmania on various minerals and manufactures of minerals, e.g. :—

Coals, per ton	s. d.
Coke, "	1 0
Iron, rough castings, per cwt. gross	1 0
" retorts, 12½ per cent.	1 6
" castings, per cwt.	1 6
Lead, milled, sheet, or piping, per cwt.	2 0

Return of Colonial Tariffs, presented to Parliament, June 1891.

22nd November 1892.

OSWALD WALMESLEY.



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