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REPORT
ON
STATE. Aid to Industries

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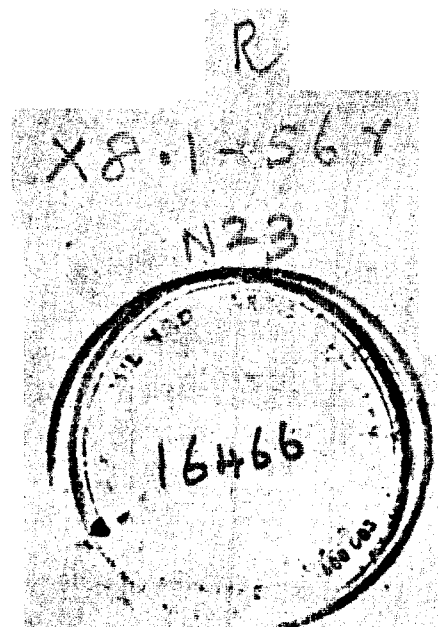
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PREFACE

Under the scheme of Reforms which came into force in India at the end of 1920, the portfolios relative to industries in Provincial Governments were transferred to Ministers responsible to the Legislative Councils of their respective Provinces. At a conference in May 1921, which was attended by these Ministers and their Directors of Industries, it was urged that, while the active participation of Government in the industrial development of the country had now definitely come to be recognized as one of their legitimate functions, those responsible for the development of industries in India feel the need of accurate and up-to-date information regarding the experience gained in other countries where the theory and practice of State aid to industries has reached a more advanced stage of development; that the theory of State aid has developed considerably during the last 5 or 6 years, and in many countries has assumed definite shape in the direction of intervention and control in a variety of ways; and that accurate information on the subject is not available in India.

A proposal was considered to depute to various countries one or more officers with experience in the field of commercial intelligence to investigate the subject on the spot, and to make a complete historical survey of State aid to industries in the countries visited, together with a bibliography of published monographs and official reports dealing with industries and industrial development. This proposal, after a full discussion, was negatived on the grounds that the suggested special deputations would involve considerable expenditure and delay and that the Government of India had under consideration a scheme for the employment of trade commissioners in foreign countries, who will eventually discharge, among other duties, that of collecting such information as that in view.

It was eventually decided to place an officer on special duty in London to collect information on the subject of State aid to industries from such sources as year books, administrative reports, reports from embassies and consuls and other documents available to, or obtainable by, His Majesty's Government.

My instructions in undertaking this work were to investigate, so far as may be possible, the methods by which, and the conditions under which, assistance is afforded to industries by the State in the United Kingdom, the Dominions, France, the United States of America, Japan and Germany, to report the result of my investigations, and to compile a bibliography of the more important books to which reference may be had at first hand for information on the subject. The enquiry was to include all

methods of State aid given for the development of industries, but in particular the following headings were suggested for the enquiry:—

- (a) To what extent aid is afforded by the State to industries in the shape of money grants, subsidies, guaranteed dividends, loans with or without interest, and the raising of share capital;
- (b) Whether any particular classes of industry are maintained under Government control or supervision, and in the former case, the method and extent of such control;
- (c) Whether any, and, if so, what, limitations or restrictions are imposed on State aid to new industries; and
- (d) What experiments in granting assistance have failed and been abandoned, with the reasons so far as they can be ascertained for such failure.

After the enquiry had been going on for three months, advantage was taken of a short visit to London by the Secretary to the Government of India in the Department of Industries to ascertain from him what limits should be placed on the points to be dealt with in detail. It was ascertained that in addition to a brief general indication (without historical references or indications of economic conditions), of the principal methods adopted by the State now or in the past, to assist industries in the countries mentioned, details were desired only regarding direct financial aid to manufacturers (bounties, loans, guarantees or investment of State funds); and regarding State factories (other than munitions factories and factories maintained solely for the supply of commodities to Government Departments or for the purposes of research, experiment, education and training). Detailed information was not desired about assistance given by municipal or local authorities; assistance to primary industries including the disposal of products; customs tariffs; the encouragement of trade and commerce, e.g., by bounties on exports, or subsidies on navigation; assistance for the provision of means of transport or communication or storage; assistance for the supply of power; industrial banks; research, technical and industrial education and training; or measures arising out of the War.

The enquiry was limited by time (five months in all) and by the condition that it was to be confined to London. Many persons whom I consulted expressed the opinion that I should require three years or more to complete the enquiry. It is generally difficult to obtain definite information in London regarding State aid in other countries. Detailed annual reports are not usually available. It is particularly difficult to determine without local enquiry whether State aid has in any particular case really succeeded (*i.e.*, whether the industry could not have been developed quite as well—or even

better—without the State aid given¹), and, if the industry has not been established in spite of the State aid given or offered, what are the real reasons for failure, *i.e.*, whether it is due to the inadequacy or unsuitability of the aid offered or given, or to particular conditions attached to it, or to other causes, such as general trade depression or the lack of enterprise, raw materials or labour; views expressed by contemporary writers are liable to be biassed by a desire either to attack or defend the particular policy adopted, or by preconceived notions as to the desirability or undesirability of State interference in industries. The Government of India, however, desired to ascertain what information could be obtained in a short time in London regarding certain forms of State aid, and to be provided with a guide to sources of information which may be studied by those interested in the subject. No claim can be made that the information in this report is complete. While I have quoted facts and figures which may indicate the extent to which an industry has developed while the State aid was available and in some cases quoted the views of others as to the effect of the State aid, I have generally refrained from expressing any views of my own, and have of course made no suggestion as to the suitability or otherwise of the particular forms of State aid to India at the present time.

I should like to take this opportunity of acknowledging very gratefully the assistance I have received from many quarters, besides the Indian Trade Commissioner and his staff, especially from the representatives of the Dominions and of the United States of America, from the authorities of the Board of Trade, the Department of Overseas Trade, the Foreign Office, the Colonial Office, the Ministry of Agriculture, the Development Commission, the British Museum, the London School of Economics and the Imperial Institute, and from Dr. J. H. Clapham.

A. Y. G. C.

28th February 1922

¹ Dr. Royal Meeker in the preface to his "History of Shipping Subsidies" writes "The greatest value of the historical part of this work is to show that the broad generalisations so frequently made as to the effects of bounties are without foundation, because it is impossible to isolate the economic effects of bounties from those of other economic causes."

CHAPTER I

Principal methods of State aid

GENERAL

It is difficult to give a short summary of the principal methods of State aid adopted from time to time in a particular country without running the risk of conveying false impressions, especially when no reference is to be made to the political or economic conditions under which State aid was given. Different problems in connection with industries have arisen in different countries and at different times in the same country. Some caution appears to be necessary in drawing from experience elsewhere conclusions regarding the advisability of adopting particular forms of State aid. A form of State aid, which may be found advantageous at one period and in one set of circumstances, may not be justifiable or desirable at another period, under different conditions or in another country.

There is hardly a branch of governmental activity which does not in some way affect industries, directly or indirectly, beneficially or otherwise. In particular, laws relating to such matters as land tenure, currency, banks, companies, co-operative societies, patents, trade marks, and labour, may materially affect industries. It appears, however, to be generally recognized that the development of industries leads to greater national wealth and to increased prosperity of the people, though the State may find it necessary to interfere to prevent such evils as sweating and unhealthy conditions of employment. Governments, in the first place, take measures which are calculated to smooth the way for the development of industries by the enterprise, energy, skill and inventiveness of the people; for this purpose measures are taken to secure the safety of person and of property (intellectual as well as material), courts which are above reproach, general education and health for all, and freedom for every individual to select his own vocation. As industries depend on foreign as well as domestic trade and commerce, both for raw materials, fuel and machinery and for markets, means are adopted to protect the persons and property of nationals abroad, to see that safe and cheap means of transport and communication are provided, both within the State and beyond its borders, to remove such restrictions on trade as internal customs duties, to guarantee that the coinage, weights and measures shall be definite and clearly understood, and to ensure, by inspection and analysis if necessary, that other terms used in trade, *e.g.*, those relative to particular commodities, shall have definite meanings. Governments generally assist industries by undertaking or giving grants in aid towards research and experiment, the collection and publication of information, technical education and industrial training,

museums and exhibitions of raw materials, models of machinery and manufactured articles, and libraries. In some cases the State has provided irrigation works or the supply of electrical power. Other measures which are sometimes adopted are protective customs tariffs, the encouragement of suitable immigrants or settlers on land, the grant of loans or of bounties in various forms (*e.g.*, in cash, in drawbacks of excise or customs duties, in land on favourable terms, or in remission of taxation) and the establishment of State factories.

GREAT BRITAIN

In England from the time of the Norman Conquest (1066) to the middle of the 19th century, the State, as represented in the Crown or the Government, constantly took an active interest in the development of industries.

The immigration of foreign merchants and artisans was encouraged, and the industrial development of England in mediæval times was largely due to them.¹ At various times the exportation of raw materials, such as wool, and the importation of finished articles, were prohibited but such measures were generally defeated by smuggling.² The law regulated terms of apprenticeship and the operation of guilds and in some cases the methods of manufacture, and provided for the inspection of finished articles in the interest of the consumer, thereby assuring maintenance of quality. In the 14th century a Navigation Act provided that imports and exports must be carried in British ships an impracticable undertaking, as there were not enough British ships.³ The first English consul in the Mediterranean was appointed in 1485.⁴

Serfdom passed away in the 16th century.⁵ The modern era of industrialism may be regarded as dating from the time of Elizabeth (1588—1603) when capitalism arose.⁶ Bounties were used for the encouragement of certain industries, including ship-building.⁷ It was recognized that industry depended on foreign trade to some extent; harbours were improved, and, later, lighthouses were erected:⁸ the trade of the colonies was controlled so that they should provide raw materials and markets for home industries;⁹ special

¹ W. Cunningham, *The Growth of English Industry and Commerce, Early and Middle Ages*, pp. 183, 304, 641;

W. Cunningham, *The Growth of English Industry and Commerce in Modern Times*, pp. 59, 60, 516, 623;

Sir Frank Warner, *The Silk Industry*, pp. 24, 33, 40, 44, 47, 50;

E. Lipson, *The English Woollen and Worsted Industries*, pp. 10, 12, 26.

² *The Growth of English Industry and Commerce, Early and Middle Ages* p. 177, n., pp. 192, 308, 429, 430, 492, 515.

³ *op. cit.*, p. 394.

⁴ *op. cit.*, p. 417.

⁵ *op. cit.*, p. 534.

⁶ *The Growth of English Industry and Commerce in Modern Times*, pp. 1, 8 to 12.

⁷ *op. cit.*, pp. 64, 324, 484, 485, 486, 516, 522, 591.

⁸ *op. cit.*, pp. 66, 468.

⁹ E. L. Bogart, *The Economic History of the United States*, pp. 100—102;

The Growth of English Industry and Commerce in Modern Times, p. 474, n. 5, pp. 425, 435.

privileges were allowed in respect of trade with certain countries¹⁰ and monopolies were granted for the establishment of new industries and enterprises at home;¹¹ trade was considered in treaties with foreign powers.¹² Marine insurance was common in the 15th century,¹³ and banking in the interests of trade was established by the 17th century, though its beginnings are obscure; a bankruptcy act was passed in 1571.¹⁴

In the eighteenth century the Government took up the improvement of the high roads, which in earlier times had been left to "private benevolence."¹⁵ Rewards and patents were granted for inventions, and the exportation of machines, plans and models and the emigration of operatives were prohibited;¹⁶ but the great industrial development of the last two centuries was due more to the inventiveness, resource and enterprise of the people than to State direction or assistance.

In the first half of the nineteenth century the protective tariff and navigation laws were repealed, and the policy of free trade and *laissez faire* was adopted, but the State has had to interfere on behalf of the workers, and it exercises some control over railways and canals and has granted subsidies to shipping to encourage trade on particular routes.¹⁷

Recently the Government has endeavoured to assist industries by grants-in-aid of technical and industrial education and research and the supply of information regarding foreign countries through consular and other officers, and, in the peculiar conditions prevailing at the end of the war, by "exports credit" schemes, by anti-dumping duties, and, in certain cases, by the investment of public funds.

CANADA

Two of the principal difficulties which the Governments of the various British Dominions have had to meet in developing industries have been vastness of area and sparseness of population.

In Canada the Dominion Government's expenditure on roads appears to have been comparatively small until recent years. In 1919 the expenditure was authorized of \$20,000,000 in five years to assist the Provinces in the construction and improvement of highways.¹⁸ The Dominion Government has, however, given considerable assistance to railways by grants of land, subsidies, and loans, and the guarantee of bonds or interest. In recent years assistance

¹⁰ *The Growth of English History and Commerce in Modern Times*, pp. 214 to 284.

¹¹ *op. cit.*, pp. 58, 60, 61, 289, 294.

¹² *op. cit.*, pp. 196, 197.

¹³ *op. cit.*, p. 489.

¹⁴ *op. cit.*, p. 144.

¹⁵ *The Growth of English Industry and Commerce in Modern Times*, pp. 535, 536.

¹⁶ *The Economic History of the United States*, p. 151.

¹⁷ K. Coman, *The Industrial History of the United States*, p. 264.

¹⁸ *Canada Highways Act; Statutes*, cap. 54 of 1919.

has largely taken the form of guarantees of bonds. The Provincial Governments and municipalities have also given substantial aid to railways. The Dominion Government owns, operates and constructs railways itself,¹⁹ but the Government railways are generally worked at a loss.²⁰ It is claimed that the railway mileage of Canada is larger in proportion to the population than that of any other country in the world.²¹

The Government has constructed and maintained navigable canals, especially in connection with navigable lakes and rivers,²² and has also constructed graving docks,²³ subsidized the construction of dry docks²⁴ and advanced money for the construction of harbours.²⁵

The Dominion and Provincial Governments have endeavoured to improve agricultural practice, and have established experimental farms and colleges of agriculture.²⁶ Under Provincial Acts financial assistance may be given to farmers by different methods by the various Provincial Governments and municipal councils, *e.g.*, by loans to farmers direct for various purposes, by guaranteeing a portion of a loan made by a loan company and the interest on it, by purchasing and re-selling partly on credit real estate and live-stock, by supplying seed-grain on credit, by guaranteeing half the securities of a co-operative credit society and by making agreements with chartered banks and other persons to guarantee loans of seed-grain or of money to buy seed-grain.²⁷ Settlers are encouraged by conditional free grants of Government land or the sale to them of such land on favourable terms and by loans.²⁸

The grain trade of Canada is highly organized. Elevators were introduced in 1880, and all grain, shipped in car-load lots or cargoes from elevators, is subject to Government inspection and grading; the Government has built and operates five terminal elevators.²⁹

The mineral resources of Canada have been scarcely touched as yet, although the Government has done valuable exploration work and issued reports; but "the real value of mineral deposits can usually only be determined by costly development work, which must be left to the enterprise of capitalists," and Canada has suffered in this respect from lack of capital.³⁰

¹⁹ *Canada Year Book*, 1920, pp. 457 to 459, 469, 470.

²⁰ *op. cit.*, p. 471.

²¹ *Canada Year Book*, 1918, p. 66. For the early history of the railways in Canada see *Statistical Year Book of Canada*, 1894, pp. 198 to 231.

²² *Statistical Year Book of Canada*, 1894, pp. 715 to 734.

²³ *Canada Year Book*, 1920, pp. 659, 670.

²⁴ *Statutes of Canada*, cap. 17 of 1910, etc., *Canada Year Book*, 1920, pp. 669, 670.

²⁵ *Canada Year Book*, 1920, p. 671.

²⁶ *op. cit.*, pp. 279 to 287.

²⁷ *Canada Year Book*, 1918, pp. 530 to 540.

²⁸ *op. cit.*, pp. 584 to 591; *Canada Year Book*, 1920, pp. 655 to 661.

²⁹ *Canada Year Book*, 1914, pp. 454 to 457; 1918, pp. 68, 394; 1920, pp. 446 to 448.

³⁰ *Canada Year Book*, 1916-17, p. 40.

The Government has aided fisheries by the grant of bounties since 1882; these bounties are given to the owners of fishing vessels and fishing boats, and to vessel and boat fishermen. The Government also bears one-third of the ordinary express charges for conveying fresh fish from the coast to inland markets, assists the building of small cold storage establishments for bait, and breeds fish on an extensive scale.³¹

Ship-building in Canada was stimulated during the war by orders from the Imperial Munitions Board and from the Dominion Department of Marine.³²

Subsidies are paid to various shipping companies for "trade services, including the conveyance of mails."³³ The coasting trade of Canada is restricted to British ships.³⁴

Bounties have been offered by the Dominion Government on iron, steel, lead, zinc and crude petroleum, and on Manila fibre used in the manufacture of binder twine or cordage.

Free trade between the Provinces was established under the first tariff adopted after the Confederation in 1867 and has been maintained since. The Dominion tariff duties were moderate until 1879, when a protective tariff was adopted. The tariff has been amended from time to time, and Great Britain and the British Dominions and the Colonies now generally enjoy a substantial preference.³⁵

In 1913 the Canadian Royal Commission on industrial training and technical education made a full report after examining the systems in force in certain other countries besides Canada; they reported as regards Canada that "the general testimony was to the effect that provision for the systematic industrial training and technical education of hand workers and foremen exists in comparatively few places, and in them not to an extent adequate to the needs of the industrial population."³⁶ They noted that "testimony was received as to the usefulness of libraries and librarians in the technical education of workers."³⁷ In 1919 the Dominion Parliament appropriated \$10,000,000 to be allotted as grants "to Provincial Governments during ten years in aid of technical education."³⁸

In 1915 an Advisory Council for scientific and industrial research, was appointed; it has established studentships and fellowships for research and provided a fund from which grants in aid of research are made.³⁹

³¹ *Canada Year Book*, 1920, pp. 293 to 296.

³² *Canada Year Book*, 1920, pp. 7, 8, 501.

³³ *op. cit.*, pp. 517, 518.

³⁴ *Canada Shipping Act*, cap. 113 of Revised Statutes, 1906, sec. 955.

³⁵ *Canada Year Book*, 1913, pp. 24, 26.

³⁶ *Canada Sessional Paper*, No. 191d—A 1913, p. 1643.

³⁷ *op. cit.*, p. 1647.

³⁸ *Statutes of Canada*, cap. 73 of 1919; *Canada Year Book*, 1920, pp. 49, 50, 129.

³⁹ *Canada Year Book*, 1916-17, pp. 619 to 623; 1918, pp. 581 to 584.

The municipal councils of the smaller towns frequently assist manufacturers to establish factories, etc. Local bodies appoint industrial commissioners, who endeavour to increase the importance of their towns from a business point of view. The assistance given generally takes the form of a remission of rates, e.g., one city which has extensive water powers offers exemption from taxes for a period of ten years to manufacturers who locate factories within its boundaries.

AUSTRALIA

In order to encourage immigration of suitable settlers, the land laws of the various States of Australia permitted the conditional grant of land, rent free or on favourable terms for a number of years, and the States' Governments made loans to settlers and farmers.⁴⁰

The States have constructed harbours, railways, roads and bridges, and made grants to the local authorities for roads and bridges.⁴¹ Inter-state traffic by railway is, however, hampered by the fact that the railways in adjoining States are of different gauges. The railways are generally State-owned. New South Wales paid subsidies to shipping.

Victoria adopted a protective tariff in 1866.

The amount spent in Australia on technical education is described as "comparatively insignificant."

Since the creation of the Commonwealth of Australia in 1901, the Federal Government has endeavoured to encourage industries by the abolition of inter-colonial tariffs;⁴² by the grant of bounties on certain agricultural products⁴³ (which seem to have generally had little effect on production), combed wool or tops,⁴⁴ sugarcane and sugar-beet,⁴⁵ and on certain manufactures mentioned later; by subsidies to shipping;⁴⁶ by undertaking ship-building and by establishing the Commonwealth Shipping Line;⁴⁷ by the grant of a loan of not more than £550,000 to a company for the erection of silos and elevators;⁴⁸ by the establishment of the Institute of Science and Industry;⁴⁹ by a protective tariff;⁵⁰ and, during and since the war, by measures for the formation of pools to arrange for the marketing of the whole produce of Australia in respect of wheat,⁵¹ sugar,⁵² wool,⁵³ and fruit.

⁴⁰ *Official Year Books of the Commonwealth of Australia*, No. 4, p. 235; No. 13, p. 261.

⁴¹ *Year Book*, No. 13, pp. 974, 652 and 640.

⁴² *Customs Tariff Act*, 1902; *Year Book*, No. 13, p. 573.

⁴³ *Year Book*, No. 13, p. 395.

⁴⁴ *op. cit.*, p. 334.

⁴⁵ *Year Books*, No. 6, p. 304; No. 13, p. 383.

⁴⁶ *Year Book*, No. 13, p. 726.

⁴⁷ *op. cit.*, p. 637.

⁴⁸ *The Western Australian Farmers' Agreement Act*, No. 13, of 1920.

⁴⁹ *The Institute of Science and Industry Act*, 1920.

⁵⁰ *Year Book*, No. 13, p. 616.

⁵¹ *Year Book*, No. 13, p. 362.

⁵² *op. cit.*, p. 388.

⁵³ *op. cit.*, p. 337; *Times*, Nov. 29, 1921.

NEW ZEALAND

In New Zealand practically all the railways are owned by the State.⁵⁴ The State owns and works coal mines⁵⁵ and offers assistance to prospectors for minerals in the form of subsidies, loans, expert and technical advice, use of plant, etc. In 1919, £9,943 was paid as subsidies to fifteen prospecting parties, and further subsidies amounting to £1,440 were approved; but no important results were obtained.⁵⁶ The State also makes loans to mining companies for development and subsidizes the construction of roads to mining fields.⁵⁷

A special department administers the kauri-gum industry.⁵⁸ The State establishes and manages hydro-electric supply installations.⁵⁹ It also makes loans to dairy companies for the acquisition of land and the erection of buildings and machinery.⁶⁰

The customs tariff became protective in intention in 1895. Preference in favour of British products was given as long ago as 1841, and Imperial preference was introduced in 1903.⁶¹

SOUTH AFRICA

In South Africa the principal industries are agriculture and mining. The Governments have constructed roads, railways and harbours.⁶² The land laws provide for settlement on the land and for the grant of advances to lessees for development. Borchholes are sunk and windmills erected for lessees in certain cases.⁶³ The Union Land Bank, formed by the amalgamation of the State Land Banks and financed by the Union Government, makes advances to farmers for various purposes.⁶⁴

The Governments also assist agriculture by research and experiment,⁶⁵ by the provision of agricultural education and instruction,⁶⁶ by the publication of useful information,⁶⁷ by grants in aid of creameries,⁶⁸ by the importation of stallions and cattle,⁶⁹ and by arrangements in the Ocean-Mail contract for the free conveyance of pedigree stock to South Africa.⁷⁰ A proposal that the Government should build elevators has been approved.⁷¹

⁵⁴ *New Zealand Official Year Book*, 1919, p. 464.

⁵⁵ *op. cit.*, p. 532.

⁵⁶ *op. cit.*, pp. 593, 595, 597.

⁵⁷ *op. cit.*, p. 523.

⁵⁸ *op. cit.*, p. 535.

⁵⁹ *op. cit.*, p. 620.

⁶⁰ *op. cit.*, p. 550.

⁶¹ *op. cit.*, pp. 427 to 432.

⁶² *Official Year Book of the Union of South Africa*, No. 3, pp. 851, 745, 725.

⁶³ *op. cit.*, pp. 454 to 463.

⁶⁴ *op. cit.*, p. 463.

⁶⁵ *Official Year Book of the Union of South Africa*, No. 3, pp. 423, 515, 323, 636, 538.

⁶⁶ *op. cit.*, pp. 503, 536.

⁶⁷ *op. cit.*, p. 496.

⁶⁸ *op. cit.*, p. 503.

⁶⁹ *op. cit.*, pp. 499, 501.

⁷⁰ *op. cit.*, p. 513.

⁷¹ *op. cit.*, p. 520.

Attempts have been made to assist mining by advances and grants, but these have generally failed. Other methods of State assistance to mining have been the construction and repair of roads, the importation of experts from overseas, technical education and the making of assays and analyses at low fees.⁷²

By providing an experimental trawler, the Government of Cape Colony succeeded in establishing the trawling industry.⁷³

Assistance to manufacturing industries has taken the form of an economic survey of natural resources, research, the publication of information, advice,⁷⁴ and technical education.⁷⁵ Before the formation of the Union in 1910 conventions were made at various times between the Colonies and Republics in South Africa to provide for mutual free trade and for a common external tariff. Since 1910 the customs have been controlled by the Union Government, the tariff is moderately high but appears to be devised for revenue purposes; a preference, which is generally 3 per cent. *ad valorem*, is granted on goods which are the growth, produce or manufacture of the United Kingdom and reciprocating British Possessions.⁷⁷

The war had a great effect on manufacturing industries, the value of their output in 1917-18 being three and a half times its value in 1911.⁷⁸

FRANCE

France had made considerable progress industrially before the Revolution of 1789. The system of State control of industries established after the Hundred Years' War (1337-1453) served, to some extent, as an example to England.⁷⁹ In the sixteenth century the State constructed roads, prohibited the import of certain manufactured articles and freed raw materials from import duties, and commercial companies were formed.⁸⁰ In the seventeenth century State factories for the manufacture of soap, glass, lace, carpets and cloth were established, but they had the effect of checking private enterprise.⁸¹ Colonies had been founded and capitalism had long existed in France before the Revolution.⁸²

The Revolution, however, freed industries "from surviving medieval restrictions and the excesses of official control,"⁸³ serfdom and feudal payments were abolished and the peasants were

freed.⁸² Napoleon I built or restored roads and bridges, improved the navigation of rivers⁸³ and established prohibitions and high tariffs, but, owing to smuggling, prohibition was replaced later by the imposition of duties.⁸⁴ A commercial code was passed.⁸⁵

As an example of State industrial training at this time may be mentioned the establishment of a model weaving shed for the introduction of the fly shuttle.⁸⁶

Dr. Clapham has said: "If legislative and administrative action could industrialize a country, France would have moved more quickly. The Revolution had removed all obstacles to free enterprise. Both the Revolutionary and Napoleonic Governments held that the State must do its utmost to help industry without fettering it. Weights and measures had been rationalized and unified. Museums of arts and crafts and industrial exhibitions had been projected during the Reign of Terror, though the first exhibition was delayed until 1798. Schools of civil engineering and of mining were encouraged long before England had anything of the kind. Under the pressure of war needs and the British blockade the scientific aspects of industry had been explored All the Governments worked hard to acclimatize the new English mechanical knowledge⁸⁷ There were reasons much more permanent and deep seated than revolution and war to explain why no amount of intelligent official action could make France follow England's steps at England's pace. 'We are,' wrote Chaptel in 1828 after more than a decade of peace, 'far from having that profusion of machines which one sees in England. . . . It is because labour is cheaper with us and because the cheapness of fuel in England enables them to employ machines everywhere with advantage.'⁸⁸

The Bank of France was founded in 1808.⁸⁹ Later the State built railways and assisted by guarantees their construction by companies.⁹⁰ Subsidies were given for shipbuilding and to shipping lines;⁹¹ commercial treaties were made with foreign countries;⁹² and chambers of commerce, which are quasi official bodies, were established.⁹³

GERMANY

Between 1740 and 1786, during the reign of Frederick the Great, there was "a vast economic revival and expansion in all parts of the young Kingdom" of Prussia. Frederick endeavoured to pre-

⁷² *op. cit.*, pp. 267, 605 to 608.

⁷³ *op. cit.*, p. 548.

⁷⁴ *op. cit.*, p. 653.

⁷⁵ *op. cit.*, pp. 277, 286.

⁷⁶ *op. cit.*, p. 656.

⁷⁷ *op. cit.*, pp. 661 to 676.

⁷⁸ *op. cit.*, p. 625.

⁷⁹ *The Growth of English Industry and Commerce in Modern Times*, p. 207.

⁸⁰ *Encyclopædia Britannica* XIth edition, Vol. X, p. 833.

⁸¹ *op. cit.*, p. 842. *The Growth of English Industry and Commerce in Modern Times*, p. 98, n. 3.

⁸² J. H. Chaplain, *The Economic Development of France and Germany, 1815-1914*, p. 2.

⁸³ *op. cit.*

⁸² *op. cit.*, pp. 1, 14.

⁸³ *op. cit.*, pp. 104, 105.

⁸⁴ *op. cit.*, p. 75.

⁸⁵ *op. cit.*, p. 130.

⁸⁶ *op. cit.*, p. 55.

⁸⁷ *op. cit.*, p. 54.

⁸⁸ *op. cit.*, p. 56.

⁸⁹ *op. cit.*, p. 125.

⁹⁰ *op. cit.*, pp. 145 to 148.

⁹¹ *op. cit.*, pp. 110, 244; P. Ashley, *Modern Tariff History*, pp. 317, 334, 342 to 346; *French Year Book*, 1919, p. 842.

⁹² *Economic Development of France and Germany*, p. 178.

⁹³ *The French Year Book*, 1919, p. 813.

event, by prohibition or high duties, the import of foreign commodities, but gave bounties on the export of Prussian manufactures. The export of raw materials was prohibited; excise taxes were reduced; new industries were subsidized; foreigners with manufacturing skill and knowledge were welcomed; grants and loans were made "for the purchase of raw material, for the establishment of technical education, and for the introduction of foreign teachers;" the guild system was relaxed; roads and canals were made. Some of the principal Prussian manufacturing and mining industries date back to the eighteenth century or earlier.⁹⁴

The principal methods by which the State appears to have aided the development of industries in Germany during the nineteenth century are the emancipation of peasants and workers, the formation of a customs union⁹⁵ the consolidation of the independent States into one Empire, the adoption of a uniform system of weights, measures, and coinage, general and technical education, the encouragement of scientific research, communications, colonies, the manipulation of freight rates on State railways, protective tariffs, commercial treaties, banking and commercial legislation, the effective use of diplomatic and consular agents for the encouragement of trade, and a constant general interest in the development of industries.

Local authorities also aid industries to some extent by facilities in obtaining sites, by loans, and by assisting technical institutions.

The rapid development of the chemical and electrical industries in Germany is ascribed partly to "a broad and true foundation of scientific knowledge."⁹⁶ Professor Marshall mentions as one of the causes of the great advance in Germany's output of steel,⁹⁷ the "superiority of German educational methods over British as a preparation for the work of modern business."

Mr. Dawson remarks: "Both industry and trade receive encouragement and practical help from the Governments of the various States, and within its more limited power from the Imperial Government. The idea that a German ambassador is a sort of superior commercial agent is, of course, absurd, yet the fiction had its origin in a fact, which is that German diplomatic representatives abroad are very properly alive to the close connection of national trade and national prosperity, and are not slow to do industry a service when the opportunity occurs. Protective legislation apart, the fact that the railways are, with insignificant exceptions, State undertakings enables the Governments to render a great service, both to industry and agriculture, by regulating transport charges according to special circumstances, geographical and otherwise, while the export trade is systematically assisted by means of low

⁹⁴ W. H. Dawson, *Protection in Germany*, pp. 3 to 6.

⁹⁵ This provided internal free trade between the States joining it, and a common external customs tariff.

⁹⁶ *Economic Development of France and Germany*, p. 303.

⁹⁷ *Industry and Trade*, pp. 556, 557.

preferential tariffs specially designed to enable the home manufacturers to enter foreign markets on favourable conditions⁹⁸. The State also shows its concern for the promotion of trade by the construction of inland water-ways, a branch of navigation which in Germany is now seldom touched by private enterprise How the Central and State Governments help industry on the occasion both of national and international exhibitions has been brought home to English commercial men on many occasions. Some of the States maintain, and still more subsidize, stationary and travelling exhibitions of industrial products within their own borders. The Grand Duchy of Hesse is one of the least of the States, with a population of under a million and a quarter and with but a single large town, yet it maintained and has maintained since 1836—when its inhabitants were only half their present number—a Central Agency for industry which serves as a national information bureau on industrial and commercial questions. As time grew its functions broadened, and for many years it has also controlled the industrial and technical instruction of the State, maintaining a large library and industrial museum and a chemical laboratory, and conducting examinations for masters and journeymen in various industries. In 1906 the Central Agency had 136 technical schools under its care, being more than one to every thousand inhabitants. Wurtemberg, in proportion to its population and wealth, does even more for industry and commerce on much the same lines, though every State has national institutions which by different means achieve the same ends. . . . Nor is the Emperor's direct encouragement wanting. . . . Industry, commerce and shipping all owe much to the encouragement which the Emperor has given them."⁹⁹

UNITED STATES OF AMERICA

Before the United States of America became independent the colonies were necessarily affected by legislation in England, *e.g.*, the navigation laws of the 17th century (which required the use of English or colonial ships in colonial trade) encouraged shipbuilding,¹⁰⁰ but other restrictions on trade and manufactures hampered the development of the Colonies.¹⁰¹ In the seventeenth century the Colonial Governments endeavoured to encourage manufacture by the offer of bounties and the imposition of import and export duties—sometimes for protective purposes—in addition to those levied in England; but these efforts met with little success, partly owing to the sparseness of the population.¹⁰²

By the constitution of 1789 the control of foreign commerce, and therefore of import and export duties, was vested in the Federal

⁹⁸ The State railways were, however, so managed as to be profitable investments.

⁹⁹ *Evolution of Modern Germany*, pp. 87 to 89.

¹⁰⁰ E. L. Bogart, *The Economic History of the United States*, p. 95.

¹⁰¹ *op. cit.*, p. 100.

¹⁰² *op. cit.*, pp. 59 to 63.

Congress,¹⁰³ and the tariff, though at first moderate, was, from the earliest days, intended to be protective. The duties became high after 1824.¹⁰⁴

Before 1807, the States frequently aided private road companies;¹⁰⁵ after that date the Federal Government undertook the construction of a national road, and the States constructed canals and roads and later railways.¹⁰⁶ Owing, however, to the failure of the State Governments in these enterprises,¹⁰⁷ they withdrew in most cases after 1837 from such undertakings as railways and canals,¹⁰⁸ though they assisted the establishment of railways by contributions of capital and credit and by grants of land.¹⁰⁹ In 1870 the States, and in 1887 the Federal Government, took power to regulate such matters as maxima rates, pooling, and discrimination.¹¹⁰ The Federal Government now carries on investigations and experiments regarding road-making, maintenance and materials, furnishes expert advice on the subject¹¹¹ and makes grants to State Governments for rural post roads.¹¹²

The territorial expansion of the United States in North America continued until 1853, and much attention was paid by the Governments to the opening up and development of new lands.¹¹³ A national banking system was finally established after the failure of the system of private note-issuing banks chartered by the various States.¹¹⁴

The patent law encouraged the inventiveness of the American.¹¹⁵

Shipping subsidies were given in 1891 and later years. During the recent war the Federal Government built and acquired ships through the Shipping Board which has continued its activities since the war.¹¹⁶

The industry of agriculture has been materially assisted by the Federal and States' Governments, by education, research, experiment, and the introduction of seeds and plants, by peripatetic lec-

¹⁰³ *op. cit.*, p. 117.

¹⁰⁴ F. W. Taussig, *The Tariff History of the United States*, pp. 15, 24.

¹⁰⁵ *Economic History of the United States*, p. 207.

¹⁰⁶ *op. cit.*, pp. 209, 211, 214.

¹⁰⁷ The failure has been ascribed to incompetency and corruption—see J. W. Million, *State Aid to Railways in Missouri*, Economic Studies of the University of Chicago.

¹⁰⁸ *Economic History of the United States*, p. 215.

¹⁰⁹ *op. cit.*, pp. 233, 453.

¹¹⁰ *op. cit.*, pp. 355, 371.

¹¹¹ *Statutes of the United States of America*, 65th Congress Sess. II, ch. 178 (vol. XL, p. 1001).

¹¹² *Statutes of the United States of America*, 64th Congress, Sess. I, chap. 241, and 65th Congress, Sess. III, chap. 69, Sec. 5.

¹¹³ *Economic History of the United States*, pp. 169, 287, 293.

¹¹⁴ K. Coman, *The Industrial History of the United States*, pp. 155, 193, 235, 241.

¹¹⁵ *Economic History of the United States*, pp. 177, 437; *Industrial History of the United States*, p. 207.

¹¹⁶ *Eighth Annual Report of the Secretary of Commerce*, 1920; p. 171, *Quarterly Journal of Economics*, Aug. 1920, Vol. XXXIV, No. 4, pp. 557 to 606.

turers and by the publication of information and the giving of advice.¹¹⁷

The mining industry is aided by scientific and technological investigations concerning mining, the treatment of ores, etc., and by mining experiment stations.¹¹⁸

Other industries are assisted by technical education, towards which the Federal Government¹¹⁹ and States' Governments contribute, by research and the collection and publication of much valuable information on a great variety of subjects.¹²⁰

The causes of the industrial expansion of the United States are discussed in the Cambridge Modern History. "That the tariff was an influential factor in this development is beyond question. In some cases entirely new industries were established under its shelter; for example, the manufacture of silk and the tin-plate industry, the most recent illustration of a new industry created outright by conscious effort. The initial costs necessary to the production of iron and steel on a large scale would have delayed the wonderful developments in these lines, had it not been for the protected prices of the early period. On the other side, however, must be placed the increased costs to other manufacturers and the diminished purchasing power of the farmer. It may be asserted with confidence that the power of the tariff, whether for good or evil, has been vastly overrated. . . . On the other hand the main causes of industrial growth lie deeper than the regulations of commercial policy. . . . The primary causes of industrial growth in the United States are to be found in the character of the people and the natural advantages of the country. It is not necessary to enlarge on those general qualities of nervous energy, alert intelligence, directness in method, independent initiative, and daring enterprise, combined with an eager absorption in the pursuit of material success, which, partly inherited but largely acquired during a century's command of unlimited resources, have marked the people of the United States perhaps above all others. A special characteristic, however, of the American, which has had an important influence on the industrial advance of the country, is his ingenuity in invention combined with a peculiar aptitude in the use of machinery. . . . His practical sense finds full scope in the production of large quantities of uniform commodities by quick machine methods. A further characteristic of the aptness of the race in these respects is the promptness with which the inventions of others have been adopted and brought to greater perfection. The history of many typical American industries is the history of inventions first made by Europeans, which remained without economic result till perfected and made financially success-

¹¹⁷ *Economic History of the United States*, p. 344. A Franc, *Use your Government*, Part I.

¹¹⁸ *Statutes of the U. S. A.*, 65th Congress, Sess. I, ch. 27; Sess. II, ch. 113, Vol. XL, pp. 145, 146, 670, 671.

¹¹⁹ *Statutes of the U. S. A.*, 64th Congress, Sess. II, ch. 114, and 65th Congress, Sess. I, ch. 79.

¹²⁰ *Annual Report of the Secretary of Commerce; Use your Government*, Part III.

ful in the United States. . . No small share of the credit for this constant succession of inventions belongs to the system of patent right. . . . Endowed with such qualities for industrial success, the people were rapidly increasing through natural causes, while receiving enormous additions to their labour through immigration.

"The second great factor in the industrial growth of the country has been its unparalleled command of natural resources. . . . A glance at the map shows the wonderful geographical advantages which this country enjoys. . . . Within the area thus situated is to be found a greater variety of climate, soil and mineral resources than in any equal area of the world. . . . Within this area there existed no artificial barriers to the growth of commerce. . . .

"With such a combination of advantages as has now been briefly described, the progress of industry was inevitably rapid. . . . While the population was, roughly speaking, doubled between 1860 and 1890, the capital invested in manufactures increased six-fold from \$1,000,000,000 to over \$6,000,000,000, the value of the products above five-fold, the number of persons employed three-fold and their wages nearly five-fold. . . .

"The last few years" (1890-1902) "have witnessed in the United States an expansion of industry and a growth of material prosperity which have not been equalled in any period of equal length in its history. . . . The industrial expansion which has been described above has been accompanied by, and is in some degree the result of, a widespread re-organization of business control, which has brought to the fore the entirely new problem of capitalistic concentration."¹²¹

JAPAN

The modern development of industries in Japan dates from the restoration of the Emperor in 1868. At first the Government, in a steady pursuit of the policy of industrial development on Western lines, itself undertook various industrial enterprises. From 1880 industrial ventures on a commercial scale were more generally left to private enterprise with encouragement by the State. Until the year 1889 Japan was precluded by treaties from raising more than a 5 per cent. *ad valorem* customs duty. The tariff and commercial treaties of 1899 marked the beginning of a new stage in the development of Japanese industries. The industries developed remarkably during the great war and immediately after its close, but in 1919 a period of depression ensued.

The principal methods adopted by the State for the encouragement of industries, in addition to those already mentioned, were the grant of complete freedom to all to follow any calling and to possess or deal in land; the spread of education, which was made compulsory, though not free, in 1872; the purchase and working of

mines;¹²² the opening of model factories; the establishment of national laboratories for research, and of institutions to give technical education and training; the employment of foreign experts and the dispatch of Japanese to foreign countries for the purpose of study;¹²³ the construction of railways and harbours; exhibitions; the organization of the banking system and the passing of legislation relating to patents, companies, trade-marks, guilds, etc. Up-to-date machinery was obtained from Europe for the State factories, and such machinery was also placed at the disposal of private individuals on advantageous terms. Financial assistance was given in the form of subsidies (including subsidies for ship-building and to shipping companies), advances, remission of taxation for a term of years and the grant of land free or at a nominal rent, and the Government took shares in industrial undertakings. It established exchanges and chambers of commerce; consuls were appointed to foreign countries, and the Government subsidized the establishment of undertakings in other parts of the world for the benefit of home industries.

¹²² *Financial and Economic Annual on Japan*, No. II, 1902; p. 45.

¹²³ In his *Japan the New World Power* (2nd edition, pp. 316, 317), Mr. R. P. Porter states that the Government sent in all about 300 students abroad for the purpose of acquiring practical knowledge in relation to manufacturing, mining and agriculture and in 1911 about 110 young Japanese were so engaged.

CHAPTER II

Bounties on the manufacture of sugar

The "Sugar Bounties," which attracted so much attention in the nineteenth-century, were not direct bounties, but arose out of the methods of calculating excise duties on sugar. In 1881 it was stated in a Board of Trade Memorandum on the subject that "no one knows what the amount of any foreign bounty is; in many cases there is no agreement whether there is a bounty or not; even where bounties are admitted to exist, they differ, not only in each different country, but in different seasons and circumstances in the same country; on different quantities of the raw material; and almost, it may be said, on every parcel of sugar."¹

GERMANY

In Germany in 1880 the excise duty was 10 marks on 1 cwt. of raw sugar, but the duty was paid on the weight of the beetroot used, it being assumed that 1 cwt. of raw sugar was produced from 12½ cwt. of beets.² If a manufacturer succeeded in making 1 cwt. of raw sugar from 10 cwt. of beet, he would pay 10 marks excise duty on 1¼ cwt. of raw sugar, or 8 marks on 1 cwt. and so, on this account alone, would reduce the cost (including duty) of manufacture of 1 cwt. of raw sugar by 2 marks, and would improve to that extent his advantages over a manufacturer who did not extract more than 1 cwt. of raw sugar from 12½ cwt. of beet. The arrangements for the levy of excise duty, therefore, acted as a bounty on the improvement of the beet as a sugar producer and on improved methods of manufacture of raw sugar.³ In 1848 the total output of sugar in Germany was 12,500 tons of sugar made from 250,000 tons of beet;⁴ in 1906—10 the annual output was 2,116,000 tons of raw sugar made from 13,423,000 tons of beet.⁵ Not only had the output increased 170 times, but the weight of beet required to yield 1 cwt. of sugar was reduced from 20 cwt. in 1848 to 6 cwt. in 1910.

FRANCE

In France the sugar factories were worked under excise supervision, and the duty was levied on the raw sugar itself. In this case, therefore, there was no such bounty as in Germany on the improvement of the beet or on the manufacture of raw sugar; but

¹ Memorandum on the Correspondence in relation to Sugar Bounties (H. C. No. 422; 1881), p. 3.

² Report from the Select Committee on Sugar Industries, 1880 (H. C. No. 332; 1880), p. xii.

³ Evolution of Modern Germany, p. 59.

⁴ Economic Development of France and Germany; p. 217.

as the duty paid on the raw sugar was refunded in the case of sugar refined for export, and the amount to be refunded was calculated on an assumed yield of refined sugar from a specified weight of raw sugar according to its class, a bounty on export might arise if the yield of refined sugar were greater than that assumed for the purposes of the refund of duty.⁵

Complaints were made that the home and colonial sugar industries of the United Kingdom were prejudicially affected by the competition of bounty-fed sugar from foreign countries.⁶ After prolonged negotiations, Great Britain, France, Germany, Austria and certain other countries, by the Brussels International Sugar Convention of 1902, engaged to suppress direct or indirect bounties on the production or exportation of sugar, and agreed that sugar should be manufactured and refined in bond.⁷ The bounties then ceased.

WEST INDIES

In August, 1902, the British Parliament voted £250,000 to assist estates in the West Indies to carry on the cultivation of sugarcane until the Brussels International Sugar Convention abolishing sugar bounties should come into force. Most of this grant was used in the various colonies for the purposes of making loans, grants, or refunds or remissions of taxes to estate owners or cane cultivators; but £1,000 was offered for the improvement of sugar factories in Nevis, subject to certain conditions regarding the crushing of peasants' canes, and in Jamaica a portion of the grant was to be employed in connection with the work of a fermentation chemist with a view to the improvement of processes in the manufacture of rum.

CANADA

In 1875 the Quebec Legislature authorized the Government to offer \$5,000 a year for five years for the purpose of securing the establishment of a beet sugar factory. In 1876 the offer was increased to \$7,000 a year for 10 years. Companies were formed to manufacture sugar, and in 1882 the Quebec Legislature agreed to grant one of them \$7,000 a year for ten years and to pay the farmers \$2,000 at the rate of 75 cents per ton of beets delivered at the factory. The subsidy to the Company was paid but the Company closed in 1893. Another Company obtained a subvention of \$3,500 in 1882, but this had no practical result.⁸

In 1891, the Canadian Government was authorized to pay a bounty of one dollar per 100 lb. of raw beetroot sugar produced in Canada wholly from beets grown therein; an additional bounty of

⁵ Report from the Select Committee on Sugar Industries, 1880 (H. C. No. 332; 1880), p. viii.

⁶ Memorandum on the Correspondence in relation to Sugar Bounties, 1881 (H. C. No. 422; 1881), p. 1.

⁷ International Convention relative to Bounties on Sugar (Treaty Series No. 7, 1903; C.A. 1535), p. 12, Articles I and II.

⁸ Statistical Year Book of Canada, 1902, p. 669.

$3\frac{1}{2}$ cents per 100 lb. was payable for each degree over 70° shown by the polariscopic test. The bounties paid amounted to \$23,767 in 1891-92, and to \$29,449 in 1894-95. In 1895 the rates of bounties were reduced to 75 cents and 1 cent, respectively, subject to a maximum total bounty of one dollar per 100 lb.⁹ and the system was extended to the 1st July 1897.¹⁰

Altogether the province of Quebec paid \$122,419, and the Dominion Government paid \$93,283 in these subsidies and bounties, but the enterprizes failed.

No further assistance was offered to this industry by the Dominion or Provincial Governments till 1901, when the Ontario Government set aside for the purpose \$75,000 a year for 3 years, payable at the rate of $\frac{1}{2}$ cent per lb. for the first and second years and $\frac{1}{4}$ cent per lb. for the third year. At the same time the Federal Parliament admitted free of customs duty structural iron and machinery used in the manufacture of beet sugar. Several companies were formed, and four began work in 1902, their output in that year being 15,500,000 lb. of sugar made from 82,000 tons of beet.¹¹

In 1915 there were in Canada nine sugar refineries, with a capital of nearly \$31,000,000 and an annual output valued at \$37,750,000.¹² The quantity of refined sugar manufactured in Canada in 1915 from Canadian grown sugar beets was 39,500,000 lb; but the industry had been stimulated by the War, the output having been only 26,150,000 lb. in 1913.¹³ The imports of raw sugar rose from 160,000 tons in 1902 to 310,000 tons in 1913, and to 540,000 tons in 1920.¹⁴ The quantity of sugar beets grown in Canada rose from 71,000 bushels in 1916 to 412,400 bushels in 1920.¹⁵

NATAL

A bonus was offered in Natal on the manufacture, between the 30th June 1890 and the 30th June 1895, of syrup or sugar of a proper marketable quality from sorghum or beet grown in the Colony. The rate of bonus was £5 a ton subject to a minimum production of 20 tons and a maximum bonus of £500.¹⁶ This does not appear to have led to any result.¹⁷

UNITED STATES OF AMERICA

Under the McKinley Tariff Act of 1890 a duty was levied on imported refined sugar, but not on imported raw sugar; and to

⁹ *Reports on Bounties other than those on shipping granted in the Colonies, 1896* (c-7960), pp. 57 to 59.

¹⁰ *Canada Year Book, 1894*, p. 387, note.

¹¹ *Statistical Year Book of Canada, 1902*; pp. 669, 670.

¹² *Canada Year Book, 1916-17*; p. 286.

¹³ *Canada Year Book, 1915*; p. 185.

¹⁴ *Canada Year Book, 1920*; p. 412.

¹⁵ *op. cit.*, p. 193.

¹⁶ *Reports on Bounties other than those on Shipping granted in the Colonies, 1896* (c-7960), p. 18.

¹⁷ *op. cit.*, p. 27.

encourage domestic sugar a bounty was to be paid on all domestic sugar from 1891 to 1905, at the rate of 2 cents a lb. on sugar testing by the polariscope not under 90° and $1\frac{1}{2}$ cents a lb. on sugar testing under 90° but not under 80° . The bounty was repealed in 1894; but the total amount paid amounted to \$29,783,603, of which \$12,100,208 was paid in the year ended the 30th June 1894. In 1895 the bounties were revived at the same rates.¹⁸ The bounty was held by the Court of Appeals of the district of Columbia to be unconstitutional.¹⁹ In 1903 no bounties were paid by the Federal Government, but the New York and Washington State Governments paid bounties at the rates of $\frac{1}{2}$ cent and 1 cent, respectively, per lb. on sugar manufactured from beets grown in their respective States.²⁰

FORMOSA

In 1902 the Japanese Government endeavoured to encourage the sugar industry in the recently conquered island of Formosa. Sugar mills were in some cases given subsidies of 6 per cent. on the paid up capital for five years, and in other cases were given 20 per cent. of the total value of the plant and factory. These methods generally failed, owing to the refusal of the farmers to sell cane to the new factories. In the case of one large factory (the original capital of which was 1,000,000 yen,²¹ and towards which the Government contributed 187,722 yen), the Government intervened to effect the sale of land to the Company for growing cane and the police assisted in getting the farmers to sell cane to the Company. Three other companies, established between 1903 and 1905, received subsidies amounting to 219,529 yen 62,300 yen and 59,544 yen, respectively.

In 1905 new regulations were issued by which no modern mill could be erected without the permission of the Director of the Sugar Bureau. Every new mill was assigned a district and all cane grown in the district had to be sold to the mill, which had to pay a reasonable price for it; the farmers, however, could not be compelled to grow cane; the erection of mills of the old style within the district without special permission was prohibited. In some cases an extensive area of Government land was leased, free of rent, to a mill for cane growing on certain conditions to ensure its cultivation for the purpose; if these were complied with, the land was ultimately given free to the mill. Although these regulations first led to a contraction of the area cultivated with cane owing to the farmer's distrust, the good prices paid by the mills soon led to a large increase in many districts and the regulations were successful. New mills were put up without any subsidy or further

¹⁸ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 7* (1895) (c-7897), pp. 70, 71.

¹⁹ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 2* (1896), (c-7974).

²⁰ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 2* (1904) (cd-1946), p. 89.

²¹ At the pre-war rate of exchange one yen = 2s. 0½d.

assistance from the Government, but the farmers were given the chance by means of subsidies to adopt modern mills. The Government also profited owing to the increase in the consumption tax on sugar, the extraction of sugar by the modern eleven-roller mills being much higher than by the old mills.²²

²² Report for the year 1908 on the Sugar Industry of South Formosa; Diplomatic and Consular Reports, Misc. Series, No. 675 (cd. 4447-3).

CHAPTER III

Bounties on shipbuilding

GREAT BRITAIN

Bounties on navigation may act as bounties on shipbuilding,¹ but under the writer's instructions detailed information regarding the former is not to be included in this report. It may, however, be mentioned that a Select Committee of the House of Commons on Steamship Subsidies reported in 1902 that "subsidies are the minor factor and commercial skill and industry the major factors of the recent development of the shipping and trade of certain foreign countries, and notably of Germany," and that "a general system of subsidies other than for services rendered is costly and inexpedient."²

The development of shipping was one of the three main points of the mercantile system adopted in England in mediæval times.³ An early example of a bounty on shipbuilding was the exemption of John Taverner's carack in 1449 from the law of the staple⁴ under which duties were payable on goods exported. In later times bounties on shipbuilding were paid, especially on big ships.⁵ In the reigns of Elizabeth and James I a bounty of five shillings a ton was paid on every ship above 100 tons burden. In 1626 the limit was raised to 200 tons. In 1662 a bounty of one-tenth of the customs dues on the vessel's cargo was given for the first two years to every vessel of 2½ or 3 decks carrying thirty guns; in 1694 the period was extended to three years. Dr. Royal Meeker points out that "these bounties were in the nature of the modern admiralty subventions," and that "there is no reason to suppose that these early bounties had any noticeable effect on ship construction."⁶

Bounties were also offered on naval stores, and measures were taken to preserve timber and other materials required for ships; but with regard to the action taken early in the eighteenth century, Dr. Cunningham remarks that the bounty (£4 a ton) "seems to have been successful in calling forth the manufacture of a considerable quantity of tar," but the bounty on hemp (£6 a ton) failed entirely, and the attempt to reserve forests roused much local opposition. He adds that "on the whole it may be said that

¹ Reports on Bounties on the construction and running of ships; Commercial No. 8 (1895) (c.7898), pp. 45, 46 and French Year Book, 1919, p. 843.

² Report from the Select Committee on Shipping Subsidies, No. 385, 1902, p. xxv.

³ Growth of English Industry and Commerce, Early and Middle Ages, pp. 470, 481.

⁴ op. cit., p. 413.

⁵ Growth of English Industry and Commerce in Modern Times, pp. 64, 434.

⁶ Dr. Royal Meeker, History of Shipping Subsidies, Publications of the American Economic Association, Third Series, Vol. VI, No. 3; August, 1905; p. 2.

Parliament had singularly little success in controlling this source of supply for public advantage in the way which Sir Josiah Child and other writers desired."⁷

CANADA

To increase the building of fishing vessels and boats the Dominion Government has since 1882 paid bounties to the owners of fishing vessels and fishing boats. The rates have varied in different years and in 1916-17 were \$1 per registered ton to owners of vessels and \$1 per boat to owners of boats per annum. In 1916-17 bounties were paid on 849 vessels with an aggregate tonnage of 21,120 and on 22,682 boats. These figures were less than in 1915-16, but the capital invested in fisheries rose in the year by nearly \$3,000,000 to \$28,729,000.⁸ In 1918-19 the rates were the same, but the bounty on a vessel was limited to \$80. In 1919 bounties were paid on 748 vessels and 12,313 boats.⁹ In 1920 the capital invested in the primary operations of the fishing industry was \$29,893,000 and that invested in canning and curing establishments was \$23,200,000.¹⁰

FRANCE

Bounties on shipbuilding have been paid in France since 1881. The principal laws relating to bounties on shipbuilding and navigation were passed in 1881, 1893, 1902 and 1906.

Under the law of 1881 the following bounties were given on shipbuilding:—for iron and steel vessels, 60 frs. per ton, gross measurement; for wooden vessels of 200 tons or more, 20 frs. per ton; for wooden vessels of less than 200 tons, 10 frs. per ton; for composite vessels (framed with timber having beams or ribs of iron or steel), 40 frs. per ton; for engines and auxiliary parts, 12 frs. per 100 kilograms; for renewal of boilers, 8 frs. per 100 kilograms, if of French make.¹¹

Until this law was passed shipbuilding materials were admitted into France free of duty;¹² these bounties purported under the law to compensate shipbuilders for charges levied under the customs tariff. No period was fixed during which these bounties should remain in force, nor was any limit fixed to the amount which might be paid in bounties, either each year or altogether.

Under the same law certain navigation bounties were sanctioned for ten years, this period being later extended to 12 years. The

⁷ *Growth of English Industry and Commerce in Modern Times*, pp. 64, 65, 485, 486.

⁸ *Canada Year Book*, 1918; p. 253.

⁹ *Canada Year Book*, 1920; pp. 293, 294.

¹⁰ *Times Trade Supplement*, December, 31, 1921; p. 304.

¹¹ *Further Correspondence relative to the French Mercantile Marine Bill*, Commercial No. 8 (1881) (c-2763), p. 23.

¹² *Government Aid to Merchant Shipping*; by Grosvenor M. Jones; U. S. A. Department of Commerce, Bureau of Foreign and Domestic Commerce, Special Agents, Series No. 119; 1916; p. 137.

navigation bounties for foreign-built vessels were half those for vessels of French construction, while the bounty for steamers built according to plans approved by the Marine Department was 15 per cent. more than the ordinary rates. These bounties purported to be compensation for charges imposed on the mercantile navy for recruitment and service of the military navy.¹³

The effects of these shipbuilding and navigation bounties were considered, according to one report, "satisfactory without having been important;"¹⁴ according to another report "the law was unsatisfactory in particular to the owners of wooden sailing vessels, and was regarded generally as a failure."¹⁵

The amount paid in shipbuilding bounties during the 12 years was £1,266,320, besides £3,641,600 paid in navigation bounties.¹⁶ The amount paid annually varied from year to year. In 1886 bounties were paid on 613 wooden ships (of which only three were over 200 tons) and on 22 steamers. The total bounties in that year amounted to 3,000,000 frs., of which 2,500,000 frs. were paid on four steamers.¹⁷ In the first three years a considerable stimulus was given to the building of steamships, but after that period the bounties had little effect on steamship building as steamships built in France cost so much more than those built abroad.¹⁸ The amount of construction bounties paid was £179,000 in 1884, £45,000 in 1885,¹⁹ £122,000 in 1889, and £81,000 in 1892.²⁰

By the law of 1893 the shipbuilding bounties were raised to the following rates:—65 frs. per ton on iron and steel ships, 40 frs. per ton on wooden or composite ships of 150 tons or more, 30 frs. per ton on wooden or composite ships of less than 150 tons, and 15 frs. per 100 kilograms on engines, boilers and machinery and on materials used in the repair of hulls, boilers, engines, etc.²¹

The results of the law of 1893 (by which the navigation bounties were also altered) "were not at all satisfactory and caused great apprehensions for the future of the mercantile marine." This was in part due to the alterations in the navigation bounties, by which the half bounties granted to foreign built vessels were abolished, and the rates became more favourable to sailing vessels than to steam vessels. This "had the effect of producing a fleet of huge sailing vessels, which sailed round and round the world more or less in ballast, and the creation of shipowning companies which existed alone on the high bounties given to sailing vessels."²² The

¹³ Commercial No. 8 (1881), p. 23.

¹⁴ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, 1906; Diplomatic and consular Reports, Mics. Series, No. 651 (cd.-2683-15), p. 3.

¹⁵ *Government Aid to Merchant Shipping*, p. 142.

¹⁶ *Report on the French Mercantile Marine Law, 1906 and its predecessors*, p. 4.

¹⁷ *Reports concerning bounties and subsidies in aid of the construction and running of ships*; Commercial No. 14 (1889) (c-5677), p. 20.

¹⁸ *Modern Tariff History*, p. 343.

¹⁹ Commercial No. 14 (1889), pp. 20, 21.

²⁰ *Reports respecting bounties on shipbuilding, etc.*; Commercial No. 4 (1901); (cd-596) p. 18.

²¹ *Government Aid to Merchant Shipping*, p. 142.

law remained in force till 1902, and the benefit of the increase in the foreign trade in France which occurred during these years was obtained by foreign shipping. No improvement was to be noticed in the number and tonnage of French shipping vessels; though there was a slight increase in sailing vessels.²² Between 1893 and 1901, £1,870,000 were paid in shipbuilding bounties and £4,171,000 in navigation bounties.²³ The amount paid annually in construction bounties rose from £86,000 in 1886²⁴ to £381,000 in 1901.²⁵ The Select Committee of the House of Commons on Steamship Subsidies reported in 1902 that "all these subsidies are quite out of proportion to the services rendered, and, speaking generally, it is certain that French trade has not advanced with the increased munificence of the subsidies, while French shipowners, and especially French sailing-shipowners, have unduly benefited at the expense of their country."²⁶

By the law of 1902 the rates of navigation bounties were altered, but the shipbuilding bounties were continued unaltered. The total amount to be spent in shipbuilding bounties was, however, limited to £2,000,000 which was expected to be sufficient for 400,000 tons, and construction bounties were not to be paid on more than 50,000 tons a year.

M. Millerand reported that "the limitations introduced into the Law of 1902, and their incongruity produced unexpected and disastrous results which have threatened the existence of the French building yards. Part of the workmen were discharged, the others threatened with idleness, and the mercantile marine in danger..... The consequence of the discrepancy between the amount given by law and the amount actually required was a regular rush to get first place in the building yards..... The effect of the law was, therefore, once and for all exhausted."²⁷

The navigation bounties, as intended, acted as a bounty on shipbuilding in the form of an increase in the price of French built ships, but in consequence of this increase in price, the shipowner's expenses in interest and insurance were raised, and part of his bounty went to bankers and insurance companies. An attempt was therefore made in 1906 to obviate this objection by enhancing the rates of bounty on shipbuilding, so as to enable the French shipbuilder to compete with the British shipbuilder without being dependent upon obtaining a share of the navigation bounties.²⁸ The rates of the construction bounties were raised to the follow-

²² *Report on the French Mercantile Marine Law of 1906, and its predecessors*, p. 5.

²³ *op. cit.*, p. 6.

²⁴ Commercial No. 4 (1901), p. 18.

²⁵ *Report on Bounties and Subsidies, in respect of Shipbuilding, Shipping and Navigation in Foreign Countries*, 1913 (cd. 6899); p. 14.

²⁶ *Report from the Select Committee on Steamship Subsidies*, 1902 (H. C. 385); p. vi.

²⁷ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, p. 6.

²⁸ *op. cit.*, pp. 7, 8.

ing:—for steamships with iron or steel hulls, 145 frs. a ton with an annual decrease for 10 years of 4.5 frs. per ton; for sailing vessels with iron or steel hulls, 95 frs. per ton with an annual decrease for 10 years of 3 frs. per ton; for wooden vessels of 150 tons or more, 40 frs. per ton; for wooden vessels of less than 150 tons, 30 frs. per ton; for new boilers and engines, 27.5 frs. per 100 kilograms, with an annual decrease for 10 years of 0.75 frs. per 100 kilograms; for new parts for the repairs of boilers and engines 20 frs. per 100 kilograms. Seven-tenths of these bounties were payable on registration of the vessel. If the vessel remained under the French flag, another two-tenths were payable one year after registration and the remaining one-tenth at the end of the second year.²⁹

The navigation bounties took the form of equipment bounties, and were slightly lower than these provided in the law of 1902, while the conditions of the bounties were altered so as to avoid the objections to the navigation bounties under the earlier laws.³⁰ The payment of construction bounties on vessels which would also receive equipment bounty was limited to 50,000 gross steam tons and 15,000 gross sailing tons till the expiration of the law in 1902. The law was to remain in force for twelve years.³¹

The construction bounties amounted to £611,000 in 1902, £239,000 in 1903, £514,000 in 1908 and £362,000 in 1910; the total amount paid in construction, navigation and equipment bounties from 1890 to 1910 exceeded £1,000,000 a year, except in 1894.³²

The tonnage of the French mercantile marine was 932,735 in 1889, but fell to 887,078 in 1895;³³ it rose to 1,462,639 in 1911³⁴ and to 2,285,728 in 1916 before the submarine warfare began.³⁵ Between 1901 and 1911 the number and tonnage of sailing vessels rose from 14,393 and 564,447 to 15,949 and 624,521, and of steam vessels from 1,299 and 546,541 to 1,780 and 838,118,³⁶ but the percentage of French to total tonnage employed on French foreign trade fell from 41.2 in 1889 to 31.5 in 1899³⁷ and to 25 in 1907, and was 26.2 in 1911,³⁸ so that shipbuilding in France before the war did not keep pace with the expansion of her foreign trade.

Dr. Royal Meeker has summarized his views of the effects of the French subsidies on shipbuilding and navigation as follows:—"the laws, in so far as they increased profits, tended to increase the

²⁹ *Government Aid to Merchant Shipping*, pp. 149, 150.

³⁰ *op. cit.*, pp. 151 to 154.

³¹ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, pp. 8 to 10.

³² Commercial No. 4 (1901), p. 18, and *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign countries*, 1913, p. 14.

³³ Commercial No. 4 (1901), p. 22.

³⁴ *Statistical Abstract for Foreign Countries*, 1913 (cd. 6699), p. 30.

³⁵ *French Year Book*, 1919, p. 841.

³⁶ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign countries*, 1913, p. 15.

³⁷ Commercial No. 4 (1901), p. 23.

³⁸ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping, and Navigation in Foreign countries*, 1913, p. 16.

merchant marine; but in so far as they deadened private enterprise, they tended to decrease it. The statistics show that before 1881 the total tonnage decreased rapidly. It does not necessarily follow from this alone that the commercial fleet declined in efficiency. The statistics of commerce, however, do show that the merchant marine was declining in activity. The law of 1881 seems to have increased the tonnage and activity of the marine for a time. In recent years the tonnage has increased but the activity and efficiency have decreased. On the whole the bounties appear to have operated more strongly towards increasing than towards decreasing the marine. But this does not mean that the bounties have built up the shipping interests. On the contrary, the evidence goes to show that they have sapped the vitality and soul from French maritime enterprise and left it a giant 'infant industry' whose weakness increases with its growth."³⁹

GERMANY

No direct bounty was paid in the German Empire on shipbuilding, but under the Customs Law of 1885 **Mercantile marine** manufactured or partly manufactured materials destined for the construction, repair or equipment of sea-going vessels, including ordinary ships' gear, were exempt from the payment of import duty. In 1889 articles imported for the construction or equipment of ships in a finished or unfinished condition, and materials imported for making such articles in Germany, were exempt from customs duty.

Preferential railway rates were allowed on certain raw materials and partly manufactured articles used for the construction of shipping in Germany.⁴⁰

It is impracticable to ascertain the money value of these concessions or to estimate how far the extension of shipbuilding in Germany may be ascribed to them. The tonnage of German merchant ships rose from 1,321,000 in 1889 to 1,640,000 in 1898,⁴¹ and to 4,706,000 in 1916.⁴² Between 1901 and 1911 the number of sailing vessels rose from 2,496 to 2,723, but the tonnage fell from 586,974 to 510,059, while the number and tonnage of steam vessels rose from 1,463 and 1,506,059 to 2,009 and 2,513,666. The percentage of German tonnage to the total tonnage engaged in German foreign trade rose in the same period from 48.8 to 50.4³

It has been stated that "the rapid development of the German merchant marine is due chiefly to favourable economic conditions.

³⁹ *History of Shipping Subsidies*, 1905, pp. 83, 84.
⁴⁰ Commercial No. 4 (1901) (cd-596), pp. 28 to 30; Commercial No. 2 (1898), pp. 90, 91, 92; *Prussian Railways*; Diplomatic and Consular Reports, Misc. Series, No. 574 (cd-787-10), p. 16. *Government Aid to Merchant Shipping*, pp. 78, 79; *Report on Bounties and Subsidies in respect of Shipbuilding, etc.*, 1913, p. 17.

⁴¹ Commercial No. 4 (1901), p. 33.

⁴² *French Year Book*, 1919, p. 841.

⁴³ *Statistical Abstract for Foreign Countries*, 1913 (cd-6698), pp. 30, 36.

The imports and exports of Germany are not only large but also well-balanced in tonnage. Moreover, the foreign trade is concentrated largely at Hamburg and Bremen, which assures a maximum of cargo for ships calling at these ports. Much of the success of German shipping is attributable also to the efficient co-ordination of the industrial and commercial activities of the country.⁴⁴

Dr. Royal Meeker has stated that "it is scarcely necessary to mention the great industrial revolution in Germany since 1880 to prove that the growth of German shipping is entirely independent of official tinkering. As to the indirect bounties, their influence can hardly account for any considerable part of the rapid development of German shipping and commerce.....the intent of the Government was undoubtedly to aid shipping and encourage trade. If this motherly hovering has produced good results, it has been because of its inefficiency."⁴⁵

From a report made in 1905 it appears that the German Government made subventions for the building of new sailing fishing vessels and for providing them with outfits of nets and gear, as well as loans to fishermen and fishing companies. These subventions and loans were made upon the representation of and through the German Sea-Fishery Association. The Government expended about £20,000 a year on these objects and on research and kindred subjects, and also contributed £2,500 to £3,000 a year towards the expenses of the Association. The owner of a new smack to be employed in herring fishing received a building subvention of about £200 to £250, and a further sum for the purchase of nets and gear. Steamers received no such subvention, but if engaged in herring fishing were supplied by Government with a reserve fund for making good the losses of nets. This reserve fund could not be drawn on without the sanction of Government; it consisted of 5,000 marks for steamers and 2,000 marks for sailing vessels. It was expected that the Government would contribute £5,000 to make good exceptionally heavy losses of nets and gear in 1904. The Government also assisted the Association in other ways. It contributed liberally to the funds of a fishing museum for the purchase of models, etc., while a special service cruiser collected all possible information about the movements of shoals, size of catches made, loss of nets, etc. and telegraphed details from the nearest port to the Association.⁴⁶

UNITED STATES OF AMERICA

Shipbuilding materials were not admitted free of duty into the United States till 1872, but the Act then passed exempted from duty certain materials which were required only for the building of

⁴⁴ *Government Aid to Merchant Shipping*, pp. 23, 24.

⁴⁵ *History of Shipping Subsidies*, 1905, p. 95.

⁴⁶ *German Sea-Fishing Industry and Trade*; Diplomatic and Consular Reports No. 636 (cd-2683).

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wooden ships; its effect was further diminished by the provision that vessels built wholly or in part of foreign materials imported free of duty should not engage in coasting trade for more than two months in the year.

The list of shipbuilding materials admitted free of duty was extended in 1875 and again in 1890.

In 1894 the import, free of duty, was permitted of any shipbuilding materials required for the construction, outfit and equipment of vessels in the United States for foreign account and ownership or for employment in foreign trade, including trade between the Atlantic and Pacific ports of the United States. A similar provision has been included in all subsequent tariff acts.⁴⁷

The period during which vessels constructed of foreign materials could engage in coasting trade was extended to six months a year in 1909, and to the entire year in 1912.

Between 1891 and 1911 the tonnage of the United States mercantile marine engaged in overseas trade fell from 1,006,000 to 873,000, though the number of vessels rose from 1,587 to 1,703. On the other hand the tonnage of United States vessels engaged in domestic trade and trade on the great lakes rose in the same period from 3,591,000 to 6,641,000, while the number of vessels fell from 15,262 to 13,933. During the same period the percentage of imports carried in United States vessels fell from 15.9 to 10.2, and of exports carried in United States vessels from 9.3 to 7.5.⁴⁸

JAPAN

Under the Shipbuilding Encouragement Law passed in 1896, bounties were offered for the construction, by Japanese subjects, of steamships of 700 gross tons and over at the rate of 12 yen a ton on vessels under 1,000 tons, and 20 yen a ton on vessels over 1,000 tons; further bounty of 5 yen per horse power was payable on engines built in Japan.⁴⁹ The power was that developed on an official trial, for which there was no condition as to loading.⁵⁰ The shipyard had to satisfy the requirements of the Minister of Communications, and foreign materials could not be used without his special permission.⁵¹

This law was to remain in force for 15 years, but on January 1st, 1910, the law, subject to certain amendments, was extended for 10 years. Owing, however, to the great development of industry caused by the war, the law was suspended in July 1917, as the

⁴⁷ *Government Aid to Merchant Shipping*, pp. 37, 38; and *Reports on Bounties on the Construction and running of Ships*, etc.; Commercial No. 8 (1895), (C-7008), p. 45.

⁴⁸ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign Countries*, 1913 (cd-6899), pp. 44, 45.

⁴⁹ Commercial No. 4 (1901) (cd-596), pp. 51, 52.

⁵⁰ Professor F. P. Purvis, *Ship Construction in Japan*, Transactions of the Asiatic Society of Japan; December 1919; Vol. XLVII, p. 4.

⁵¹ *Government Aid to Merchant Shipping*, p. 215.

industry no longer required this form of State aid.⁵² Under the new law, bounties were payable only on steel vessels of 1,000 tons or more gross tonnage, which were constructed under supervision in accordance with the Government shipbuilding regulations. For purposes of rates of bounties vessels were divided into two classes (A & B) and each class into 4 grades, class A including only ships with sleeping accommodation for fifty or more first and second class passengers, or for one or more first or second class passengers per 100 tons of gross tonnage. The rates varied from 11 to 22 yen per ton of gross tonnage. The bounty on engines built in Japan remained at 5 yen per horse power. Foreign manufactured articles could only be used in certain specified parts of the vessel and machinery.

The amount paid in bounties varied from year to year. It was £42,000 in 1902, £21,000 in 1904, £69,000 in 1907, £154,000 in 1908 and £113,000 in 1911.⁵³

There had been little building of steel ships in Japan before 1896. In 1907, 76 steamers were built with a gross tonnage of 28,838; in 1912, 168 vessels with a gross tonnage of 48,155; in 1918, 443 vessels with a gross tonnage of 540,531, and in 1919, 273 vessels with a gross tonnage of 634,336. The capacity of Japan for building ships of over 2,000 tons each is now 101 berths with a total tonnage of 650,000.⁵⁴

Between 1901 and 1911 the numbers and tonnage of sailing vessels in the Japanese mercantile marine rose from 4,026 and 334,904 to 7,978 and 447,307, and of steam vessels from 1,395 and 583,067 to 2,789 and 1,386,047.⁵⁵ In the same period the percentage of Japanese tonnage to the total tonnage of vessels employed in Japanese foreign trade rose from 34.9 to 46.8.⁵⁶

The Special Economic and Financial Investigation Commission recommended in February 1921 the repeal of the Shipbuilding Encouragement Law; the exemption from import duty of steel and wood to be used for shipbuilding, ships' fittings, engines and parts thereof which cannot be made in Japan or which are patented; financial accommodation to shipbuilders at a low rate of interest, and subsidies for the construction of ships of a special character, such as vessels of high speed or tankers. Action appears to have been taken in accordance with these recommendations, at least as far as relates to the exemption of steel from import duty.

As regards the effect of Government aid given to shipbuilding and shipping in the past, Dr. F. P. Purvis, Professor of Naval Architecture, Tokyo, has stated that "the activities of the country in shipping and shipbuilding have been enormously emphasized by

⁵² *Times Trade Supplement*, Japanese Section, April 16, 1921, p. xviii.

⁵³ *Report on Bounties and Subsidies in respect of shipbuilding*, etc., 1913, pp. 22, 23.

⁵⁴ *Times Trade Supplement*, p. xviii.

⁵⁵ *Statistical Abstract for Foreign Countries*, 1913 (cd-6698), p. 32.

⁵⁶ *op. cit.*, pp. 40, 41.

the present war. Yet for the past 20 years Japan has been gradually preparing the position which the exigencies of the present make such a valuable asset to her; in the preparation the Government policy—started in 1896—of granting subsidies for shipping and shipbuilding has been a weighty, probably a preponderating, stimulus.⁵⁷ Dr. Royal Meeker, writing in 1905, said that the shipbuilding and navigation subsidy laws “have had immediate and far-reaching effects.” After referring, however, to the growth of the Japanese marine and the share of Japanese shipping in Japan’s foreign trade, he said “All this indicates a marvellously rapid development, but it will not do to ascribe all this, as some do, to the working of the subsidies.....A closer scrutiny of the history, however, compels an impartial mind to recognize that the testimony of the facts is not at all in favour of the subsidies. Shipping grew as rapidly before the law of 1896 as after, in spite of the monopolistic power of the *Nippon Yusen Kaisha*.....Shipping would have developed anyhow—in fact was developing with great rapidity.....The Government merely gave form to the maritime undertakings of the capitalists. It will always be a question if the Government gave the best direction—whether the development would not have been sounder, though less rapid, had the capitalists been left to decide for themselves what lines to establish.”⁵⁸ Mr. Grosvenor Jones writes “Japan rivals France in the extent of Government aid to shipping, and the subsidy legislation of Japan has been modelled to a large degree upon that of France. The results in Japan, however, have been much more successful than those obtained in France. Whether this is due wholly, or largely, to Government aid is doubtful, since basic economic conditions in Japan have been, and still are, more favourable for the development of a merchant marine than those obtaining in France. It is undoubtedly true, on the other hand, that Government aid in Japan has been a stimulus to a more efficient utilization of the economic conditions. The development of the Japanese merchant marine coincides, not only with grants of Government aid, but also with the awakening of the industrial and commercial activities of the Japanese nation, which followed the conclusion of its successful war with China.”⁵⁹

Since 1898 the Government has made an annual grant for the encouragement of deep-sea fisheries; the grant was at first 150,000 yen but was afterwards raised to 200,000 yen. Among the objects on which the grant might be spent was the payment of bounties on steamers or motor-boats, specially built or fitted with engines according to Government plans, the rates being 40 yen per ton on iron, steel or composite vessels, and 30 yen per ton on wooden vessels, besides 10 yen per horse power of a steam-engine

⁵⁷ Professor F. P. Purvis, *Ship Construction in Japan*; Transactions of the Asiatic Society of Japan; December 1919; Vol. XLVII, p. 13.

⁵⁸ *History of Shipping Subsidies*, 1905; pp. 143 to 145.

⁵⁹ *Government Aid to Merchant Shipping*, 1916; p. 211.

and 20 yen per horse power of an oil-engine.⁶⁰ These and other bounties in aid of the fisheries are said to have led to a great increase in the annual value of the fish caught. The number of deep-sea vessels increased between 1897 and 1907, from 9 to 137 and the value of the annual catch from 77,000 yen to 800,000 yen;⁶¹ but Sir Frederic Nicholson, writing in 1907, said that the results of the bounty system “do not seem remarkable”⁶² and that the greatest stimuli to the development of the fisheries have been “those of investigation, experiment and education.”⁶³

⁶⁰ Sir Frederic Nicholson, *Note on Fisheries in Japan*, p. 41.

⁶¹ *Japanese Year Book*, 1919-20, p. 577.

⁶² *Note on Fisheries in Japan*, p. 42.

⁶³ *op. cit.*, p. 40.

CHAPTER IV

Preferential railway rates.

GERMANY

Preferential railway rates have been allowed in Germany on the State railways to encourage German industries and to enable German products to compete with foreign, but the practice of giving preferential rates existed in Germany before the State purchased the railways on a large scale. The Prussian State, which in 1919 owned 37,400 kilometres¹ out of a total of 58,216 kilometres in the German Empire,² did not own much railway line till the annexation in 1866 of Hanover and Hesse-Cassel,³ and did not adopt on a large scale the policy of purchasing private lines till 1879.⁴ The Imperial Railway Office for the co-ordination of the construction, equipment and working of the various railway systems was established in 1873.⁵

Dr. Clapham states that from 1880 "special rates for imports, to divert through European traffic from neighbouring countries, and for exports, to help German foreign trade, re-introduced and extended over a very wide field that principle of two or more prices for the same service according to what the traffic will bear, which reformers had treated at one time as a typical bad product of private ownership. Latterly a very large proportion of the traffic was carried under the 'exceptional tariff.'"⁶ In 1897 the British Consul at Dusseldorf reported that reduced railway rates for coal over long distances in Holland, Belgium and France had been given for well nigh 40 years—at first for full train loads—and that the system developed later on a larger scale into preferential rates as a result of negotiations between certain Westphalian coal companies, the Dutch Rhenish Railway Company and the Cologne and Minden Railway Company. The arrangement then made was that the collieries undertook to send a fixed number of trains every week laden with coal and coke to certain stations in Holland. The system was extended later because the railway companies found it profitable to them.⁷

The second point to which attention may be drawn is that the interests of the State railways, regarded as commercial enterprises,

¹ *Economic Development of France and Germany, 1815–1914*, p. 347.

² *Statistical Abstract for Foreign Countries, 1913* (ed. 6698), p. 339.

³ *Economic Development of France and Germany, 1815–1914*, p. 155.

⁴ *op. cit.*, p. 347.

⁵ *op. cit.*, p. 346.

⁶ *op. cit.*, p. 348.

⁷ *Reports on Bounties on the construction and running of Ships and particulars with regard to the granting of preferential railway rates*; Commercial No. 2 (1898) (C-8720), pp. 30, 31.

were not sacrificed before the War by the grant of preferential rates.⁸ These rates were generally granted to or from ports or the frontier,⁹ and did not, as a rule, apply to smaller consignments than a ten-ton truck-load.¹⁰

In 1884 it was laid down that the general principles governing the grant of preferential rates were that (1) they should assist agriculture and industry by granting cheap rates for raw material or subsidiary material; (2) they should assist German manufacturers in competition with foreign importers at home, and should assist German export trade abroad; (3) they should assist German in competition with foreign ports; (4) they should advance the interests of German railways and waterways in competition with those of foreign nations. Further, as regards foreign goods, it was laid down that (1) no injury should ensue from the preferential tariff to any domestic industry; or (2) if such injury should ensue, there should be counter-balancing advantages.¹¹

The ordinary tariff fell into two main divisions according as goods were sent in truck loads or in quantities less than a truck load. The tariff on truck loads was divided into four classes—the general tariff and three special tariffs, I, II and III, the last being the lowest. Generally speaking, raw materials were included in special tariff III, semi-manufactured products in special tariff II, and finished products in special tariff I.¹² The preferential rates applicable in certain cases to particular goods under particular circumstances and on particular lines were more favourable than the rates ordinarily charged under these tariffs.¹³

The rates charged were calculated at so much per ton (1,000 kilograms) per kilometre, *plus* a booking fee (if the distance the goods were to be carried exceeded 100 kilometres) which did not vary with the distance.¹⁴ In the preferential tariff the former were generally reduced, and sometimes, but not always, the latter.¹⁵

The following are examples of preferential rates, intended to assist industries in the home markets.¹⁶

The rate for large quantities of coal from Silesia to East and West Prussia was reduced from 2.2 *plus* 6 pf., or 2.2 *plus* 12 pf. (special tariff III), to 1.42 *plus* 6 pf. per ton-kilometre in order to assist producers of domestic coal.

To assist agriculture, the rate for manure on Prussian lines was reduced from 2.6 *plus* 12 pf. to 2.2 *plus* 7 pf. In view of the agricultural distress a distress tariff was introduced in 1896 for

⁸ *op. cit.*, pp. 31–35; *The Evolution of Modern Germany*, p. 209.

⁹ Commercial No. 2 (1898) (C-8720), pp. 26, 27.

¹⁰ *op. cit.*, p. 33.

¹¹ *op. cit.*, pp. 21, 22.

¹² *op. cit.*, pp. 22, 23.

¹³ *op. cit.*, p. 24.

¹⁴ *op. cit.*, pp. 22, 23.

¹⁵ *op. cit.*, pp. 26, 27.

¹⁶ *op. cit.*, pp. 26, 27, 54 to 78.

manure, and later for the materials of artificial manures: this tariff gave a reduction of 20 per cent.

The rate for iron ore from abroad to foundries in Germany was reduced from 2.2 plus 6 pf. to 1.8 plus 8 pf. to help iron works in Germany; a reduction of rates was given for foreign ore imported at certain ports and transported to the coal districts in returning coal trucks.¹⁷ To help certain iron mines, the rate for iron ore from them to works in Hannan was reduced from 2.2 plus 6 pf. to 1.5 plus 6 pf.; and to help certain other mines, the rate for iron ore from Schmiedeberg to Silesian foundries was reduced from 2.2 plus 6 pf. to 1.52 plus 6 pf. No booking fee was charged for cast iron from foundries to Berlin.

The rate for raw petroleum from the wells to the refineries was reduced from 6 pf. to 3 pf. to help manufacturers.

To favour the stone quarries in the Eifel the rate for worked up stone was reduced from 3.5 plus 8 to 12 pf. to 2.7 or 2.5 plus 8 to 12 pf.¹⁸

In 1897 a special fuel tariff was introduced in order to stimulate production by reducing the price of power.¹⁹

Traffic developed on the introduction of preferential rates e.g., the transport of soft coal from Thuringia and Brandenburg to German harbours, on which a special rate was granted in 1890, rose from 38,230 tons in 1891-92 to 64,919 tons in 1894-95; and the quantity of raw materials (manure, earth, beets) transported in Prussia rose in 5 years from 5,902,000 tons to 9,427,000 tons.²⁰

FRANCE

The Railways Commission in France has recommended recently that special rebates of charges for carriage by railway should be given for long distance traffic, for exported goods, and for certain articles upon the cheapness of which the prosperity of local industries depends. For example, it is proposed that there should be a special rate for coal and ore required by the metal industry of St. Etienne and Grenoble.²¹

¹⁷ *op. cit.*, pp. 33, 46.

¹⁸ *op. cit.*, p. 60.

¹⁹ *Prussian Railways*; Diplomatic and Consular Reports, Misc. Series No. 574 (cd. 787-10), 1902, p. 16.

²⁰ Commercial No. 2. (1898), (C-8720), p. 28; for another view see *Government Regulation of Railway Rates* by H. R. Meyer, Assistant Professor of Political Economy, Chicago.

²¹ *Times Trade Supplement* Dec. 24, 1921; p. 287.

CHAPTER V

Miscellaneous bounties on manufactures

GREAT BRITAIN AND IRELAND

An early example of a bounty is recorded by Sir Frank Warner in *The Silk Industry*. A sum of £8,000 was granted in 1763 by the Irish Parliament to the Dublin Society for the encouragement of industries. The Society granted a premium of 10 per cent. to manufacturers of Irish made silk, sold in a public silk warehouse. "For a time, with the additional assistance of prizes and exhibitions, the pampered manufacture prospered, and it is stated that in good years of the system nearly 3,000 looms were employed. These figures are, however, rather uncertain." Sir Frank Warner concludes that the policy of interference was not a success. "After 22 years of State encouragement, during which time £28,000 had been given in bounties and prizes, the silk warehouse was closed, as the plan 'had not answered the ends of a general increase and extension of the manufacture'."¹

In 1732 the British Parliament awarded £14,000 to Sir Thomas Lombe for perfecting the art of silk throwing, on condition that an exact model of the mechanism should be exhibited in the Tower of London.²

Mr. Lipson in *The English Woollen and Worsted Industries* mentions the payment by the British Parliament of £5,000 to Samuel Crompton for the invention of the mule,³ and £10,000 to Edmund Cartwright for the invention of the power loom.⁴

For the encouragement of the linen industry in Ireland the English Government in 1711 established a Board of Trustees of the Linen and Hempen Manufactures of Ireland and gave it an annual grant of £20,000. The Board continued to operate till 1827, when it was dissolved, as "the industry no longer required the extraneous assistance of the grant." The Board distributed premiums on spindles erected and bounties on goods produced; a firm in Cork received a grant of 30s. a spindle in 1809 and bounties at 2d. a yard on duck and sailcloth sold. The Government was most anxious to encourage the manufacture of sailcloth in the interests of the Navy. The bounty

¹ *The Silk Industry*, pp. 373, 374.

² *The Silk Industry*, pp. 206, 491.

³ *The English Woollen and Worsted Industries*, p. 161.

⁴ *op. cit.*, p. 168.

system stimulated flax-spinning by machinery but the industry spread rapidly after the withdrawal of the bounties.⁵

The reasons which led the British Government recently to encourage the dye industry will be found in Chapter VI, the earliest assistance having been given in connection with the formation of British Dyes, Ltd., in 1915.

In 1918 a scheme was published under which the Government offered financial assistance to the dye industry in order "to ensure that the requirements of the textile and other trades of the United Kingdom and of other parts of the British Empire, which are largely dependent upon an efficient supply of dyes, are met within a reasonable period to an extent sufficient to make them independent of German dyestuffs, by placing at their disposal a reasonably sufficient variety of colours of British manufacture, and of satisfactory quality." Financial assistance was not to be "available for the extension of the manufacture of dyes already in sufficient supply for Empire markets, nor for any general development not important as contributing directly to the main purpose."

The financial assistance offered was of two kinds:—(A) loans; (B) grants-in-aid of (i) buildings and plant, and (ii) research.

Loans were to be made at a commercial rate of interest when unduly heavy outlay on plant and equipment was necessary. Grants-in-aid of the cost of buildings and plant were "to compensate for the increase in cost over the normal and to meet special depreciation and obsolescence due thereto or for other special circumstances due to war conditions." These grants were not to exceed 40 per cent. of the cost of the buildings and plant on account of which they were made. For purposes of grants-in-aid, research was defined as "specialized technical research conducted in connection with the actual manufacture of dyes and advanced intermediates, and, as accessory thereto, for the purpose of discovering new dyestuffs or intermediates and the discrimination of those of value for the purposes of the industry or new processes for the production of known dyestuffs and the improvement of their quality." The grants were not to exceed 40 per cent. of the cost of extensions of laboratory buildings and equipment, and 40 per cent. of the annual cost of maintenance of the laboratories for a limited period. No loan might exceed 50 per cent. of the net value of the material assets of the firm. No manufacturer receiving a loan or grant might pay a dividend or distribute profits amounting to more than 8 per cent., until the conditions of the loan or grant were fulfilled. Loans were to be repayable within 20 years, and to be secured by a mortgage on the whole assets of the business. Interest was to be one per cent. over bank rate with a minimum of 5 per cent. After amounts are set aside for payment of interest on debentures and loans, depreciation, etc. (as approved by the Board of Trade), 10 per cent. of the remaining profits earned and 50 per cent. of

⁵ W. J. Ashley, *British Industries*, pp. 122 to 125.

any profits still remaining after the payment of 8 per cent. on the share capital must be paid to Government in repayment of the loan until it is repaid; and if the whole loan is not repaid within 20 years, the balance then becomes due and payable. "The payment of management and directors' fees or salaries in excess of £1,000 a year and the issue of bonus shares, require the approval of the Board of Trade. The Board of Trade may control prices."

The sum allotted for this scheme was £2,000,000, but the expenditure sanctioned amounts to only about £350,000 as grants and £90,000 as loans. The offer of assistance is now withdrawn. The companies to which this assistance has been given, though suffering now from the general depression of trade, are said to be likely to make good, and the scheme is regarded as successful, though it has been more limited in extent than was anticipated.

Mention may be made of the Development Commission established in 1909⁷ as a permanent authority to advise the Treasury regarding grants and loans to be made from the Development Fund in connection with agriculture, rural industries, co-operation, forestry, reclamation and drainage of land, rural transport (exclusive of roads for which the Road Board is responsible) labourers, inland navigation and fisheries. The sum of £2,900,000 was appropriated originally for the Development Fund; and a further sum of £1,000,000 was voted by Parliament in August 1920, but in view of the general financial situation, was not actually paid into the Fund. The Commission is, precluded from recommending assistance to profit-making concerns, a restriction which the Commission has found to impede its work seriously. In the financial year 1919-20 the Commission recommended grants amounting to £668,000 and loans amounting to £157,000.⁸ In 1920-21 the corresponding figures were £494,000 and £142,000.⁹

CANADA

The laws relating to bounties in Canada contain provisions as to the rates of the bounties, the general conditions on which they are payable, the period during which they shall remain in force, the total amount to be spent on them, and the amount which may be expended each year. To enable compliance with the last provision, only a percentage (e.g. 60 per cent.) of the bonus is paid when earned, the remainder being held over till the close of the fiscal year, and being liable to reduction, if necessary.

Bounties on pig iron, puddled iron bars and steel were offered for several years in Canada. In 1902 a falling sliding scale for four years was introduced.

⁷ Memorandum on Scheme for the allocation and administration of funds for the development of the dye industry, 1918; (cd. 9194).

⁸ Development and Road Improvement Funds Act, 1909; 9 Ed. 7 Chap. 47.

⁹ Tenth Report of the Development Commissioners, 1920 (H. C. 230).

¹⁰ Eleventh Report of the Development Commissioners, 1921 (H. C. 220).

duced, but in 1907 the rates were again raised and a new falling scale introduced by which the bounties, with one exception, ceased at the end of 1910.

A bounty on pig iron manufactured in Canada from Canadian ore was first offered in 1883. The rate, which was then \$1.50 per ton (2,000 lb.), was reduced in \$1 in 1886, raised to \$2 in 1892 and to \$3 in 1897. In 1902 a bounty of \$2 a ton on pig iron manufactured in Canada from foreign ore was introduced. The bounties were continued from 1902 at rates varying between \$2.70 and 40 cents till 1910, and were then continued for two more years only so far as electric smelting was concerned, but no bounties appear to have been paid on electrically smelted pig iron.

The quantity of pig iron on which bounty was paid rose from 52,000 tons in 1896 to 581,800 in 1906, and to 740,200 tons in 1910. The total amount paid in these bounties from 1896 to 1911 was \$7,097,041 on a total output of 5,431,547 tons.

A bounty on puddled iron bars was offered in 1894 at the rate of \$2 a ton. In 1897 the rate was raised to \$3 a ton and between 1902 and 1910 varied between this rate and 60 cents a ton. The annual output on which bounty was paid was highest in 1902, when it was 6,984 tons, but in 1907 puddled iron bars ceased to be made in Canada. The total amount paid in bounties from 1896 to 1907 was \$113,674 on 42,812 tons.

A bounty was offered on steel made in Canada from 1894 to 1910. The rate was at first \$2 a ton, but was raised to \$3 a ton in 1897; after 1902 the rate varied from \$2.70 to 60 cents a ton. The quantity of steel on which bounty was paid was 29,749 tons in 1896 and 8,683 tons in 1897; it rose slowly to 36,375 tons in 1902, and then jumped to 260,668 tons in 1903; in 1910 it was 740,390 tons. The total amount paid from 1896 to 1911 was \$6,706,990 on 4,448,780 tons.

A bounty of \$3 a ton was paid between 1903 and 1906 on rolled angles, beams and other rolled shapes, and on rolled plates; from 1903 to 1911 a bounty was paid on wire rods at \$6 a ton. The output on which bounties were paid was 4,211 tons in 1904, 40,213 tons in 1905, and rose to 89,802 tons in 1910. The total amount paid was \$2,868,122 on an output of 499,312 tons.¹⁰

The Australian Royal Commission on the Bonuses for Manufactures Bill, 1904, concluded that "the Canadian experience is not encouraging."¹¹

Between 1895 and 1900 a bounty was offered on silver lead smelted in Canada at the rate of 50 cents per ton. No bounties were paid till 1899. The

¹⁰ Canada Year Book 1915, pp. 459, 460.

¹¹ Report from the Royal Commission on Bonuses for Manufactures Bill, (Australian Commonwealth Parliamentary Paper) p. 49.

quantities on which bounties were paid were 450,000,000 lb. in 1899, 178,000,000 lb. in 1900 and 246,000,000 lb. in 1901. In 1903 a bounty of 75 cents per 100 lb. was authorized on lead contained in lead-bearing ores mined and smelted in Canada, provided that the price of pig lead in London did not exceed £12: 10: 0: this figure was raised to £14: 10: 0 in 1908.¹² The bounties ceased in 1916, when the price in London exceeded this amount.¹³ The quantities of lead on which bounty was paid varied very much from year to year. It rose to 56,000,000 lb. in 1905 but fell to 15,000,000 lb. in 1908; rose to 45,000,000 lb. in 1910, but fell to 24,000,000 lb. in 1913, to 7,000,000 lb. in 1914 and to 3,000,000 lb. in 1915.¹⁴ The total amount paid in bounties on lead from 1899 to 1919 amounted to \$1,979,216.

In 1916 an Act was passed providing for the payment of bounty on zinc and spelter produced in Canada, but as no bounty was to be paid on zinc or spelter produced during the war or after the 31st July 1917, the Act must have remained inoperative.¹⁵

In 1918 a bounty was authorized on zinc or spelter (containing not more than 2 per cent. of impurities) produced in Canada from zinc ores mined in Canada when the standard price of zinc or spelter in London (England) or St. Louis (U.S.A.) was less than 9 cents a lb. The bounty was to be the difference between such standard price and nine cents a lb. The bounty was to remain in force till the 31st July 1920, and the total amount payable was not to exceed \$400,000.¹⁶ The amount paid up in 1919-20 was \$249,246 on 15,186,694 lb.¹⁷

In 1903 the Dominion Parliament authorized the payment of a bounty on Manila fibre used in the manufacture of binder twine. The rate was to be equal to the export duty on the fibre in the Philippine Islands, but was not to exceed three-eighths of a cent per lb. In 1907 the bounty was extended to Manila fibre used in the manufacture of cordage. These bounties expired in October 1913. The annual quantity of fibre on which bounty was paid rose from 7,470,000 lb. in 1904 to 18,040,000 lb. in 1910, but fell to 14,830,000 lb. in 1912. The total amount paid in these bounties was \$367,962.¹⁸

AUSTRALIA

The Commonwealth of Australia has at different times offered bounties on various Australian products and manufactures. It is usually enacted that to be entitled to bounty goods must be of good

¹² Canada Year Book, 1915, p. 459.

¹³ Canada Year Book, 1915-16, p. 424; 1918, p. 402.

¹⁴ Canada Year Book, 1915, p. 461.

¹⁵ Statutes of Canada, chap. 27 of 1916.

¹⁶ Statutes of Canada, chap. 51 of 1918.

¹⁷ Canada Year Book, 1920, p. 454.

¹⁸ Canada Year Book, 1915, pp. 460, 461.

and marketable quality and the rates of wages and conditions of employment must be up to standard, or, in the absence of a standard, be reasonable and fair. The law prescribes in each case the rate of bounty, the period during which the bounty is to remain in force and the amount to be appropriated for the purpose each year; but any sum unspent in one year may be added to the amount available for the payment of the bounty in the following year.

In 1908 bounties were authorized to establish the iron industry in Australia on a remunerative basis, both in the smelting of pig iron and in the production of bar iron and steel from Australian ore. £150,000 a year was allotted for the payment of a bounty of 12 s. a ton on pig iron, puddled bar iron or steel made from Australian ore, and £30,000 a year for the payment of a bounty of 10 per cent. *ad valorem* on galvanized sheet or plate iron or steel, wire netting, wire, and iron or steel tubes or pipes, not more than 6 in. in diameter, made from Australian ore.¹⁹ These bounties continued in force till the 30th June 1914. The total amount paid was £173,681, viz. £130,972 on pig iron, £4,611 on puddled bar iron, £14,339 on steel, £674 on galvanized sheet iron and £23,085 on wire netting.²⁰ The offer of bounty appears to have failed in its object in respect of the manufacture of puddled bar iron galvanized sheet or plate iron or steel, and iron or steel tubes.

From the 1st July 1914 to the 31st December 1916 the sum of £30,000 per annum was made available for the payment of a bounty at the rate of 8 s. a ton on pig iron made from Australian ore. In 1915 this bounty was declared not payable on pig iron manufactured for other than foundry purposes.²¹ The total amount paid was £55,727.²²

Pig iron was first produced in Australia in 1907. Between 1908 and 1915 the annual output of pig iron made from Australian ore rose from 30,393 tons, worth £98,777, to 76,318 tons, worth £267,000.²³

In 1918, £200,000 was provided for the payment of bounties on black steel sheets and galvanized sheets manufactured in Australia, between the 1st October 1918 and the 30th September 1923, from Australian ore or from steel manufactured in Australia, or from sheet bar steel the importation of which had been duly authorized.²⁴ The rate of bounty depends on the average freight for black steel sheets, not exceeding 1/16th inch in thickness, and galvanized sheets from ports in the United Kingdom at which these sheets are usually shipped to Australia, as determined by the British Board of Trade for the quarter immediately preceding that in which the bounty is

¹⁹ *The Manufacturers Encouragement Act, 1908*, extended by Act 28 of 1912.

²⁰ *Official Year Book of the Commonwealth of Australia*, No. 9 p. 420.

²¹ *The Iron Bounty Act, 1914-15*.

²² *Year Book*, No. 13, p. 461.

²³ *Year Books* No. 5, p. 505; No. 6, p. 497; No. 13, p. 462.

²⁴ *The Iron and Steel Bounty Act, 1918*.

payable. When the freight is £2: 10: 0 per ton or under, the rate of bounty on black steel sheets is £1: 10: 0 per ton, and on galvanized sheets £2 per ton. When the freight exceeds £2: 10: 0 per ton, the amount by which it exceeds £2: 10: 0 per ton is deducted from the rate of bounty. The bounty payable on galvanized sheets includes the bounty, if any, paid on black steel sheets from which the galvanized sheets are made. If the net profits on a business in respect of which bounty is claimed exceed 15 per cent. of the capital so much of the bounty may be withheld as will reduce the net profits to 15 per cent.²⁵ The amount paid up to the end of 1921 was £1,756. Only one firm appears to have been interested in this bounty. The general dislocation of business after the war made it difficult to organize a new industry and especially to obtain the necessary machinery from abroad; the firm could not therefore make a start till October 1921. In January 1922 a notice appeared in the press that owing to the high cost of local sheet bars and coal and the high wages paid and in the face of the very low prices at which galvanized iron and black sheets could be imported into Australia the firm could not compete with the imported articles and the works would probably be closed down in February 1922.

In 1912, £5,000 a year for five years from the 1st January 1913 was appropriated for the payment of bounty on wood pulp manufactured from raw material produced in Australia. The rate of bounty was 15 per cent. on the market value.²⁶ No bounty appears to have been paid under this authority.

Up to 1919 the only attempt made to produce wood pulp on a commercial scale in Australia was that of the Queensland Pine Company, Limited. Their mill had to close down in 1914 owing to want of water, and to the high cost of production, but it has since reopened. The Inter-State Commission of Australia pointed out that the conditions under which the mill works are very disadvantageous compared to those of mills abroad; in America, Canada, Norway and Sweden, mills are in close proximity to the forests, are conveniently situated by the water-side and are able to ship direct without heavy cost of inland carriage to the sea. These conditions are not satisfied by the mill in Australia. The Commission was unable to conclude that the Queensland Company offered any certainty that the manufacture of wood pulp under the conditions specified could attain any material success, but it was of opinion that the bounty did not offer adequate encouragement for the establishment of the wood pulp industry, and recommended that the rate of bounty should be increased to 30 per cent. on the market value of the pulp.²⁷

²⁵ *Year Books*, No. 11, p. 452; No. 13, p. 461.

²⁶ *The Wood-pulp and Rock Phosphate Bounties Act, 1912*.

²⁷ *Paper-pulp, possibilities of its manufacture in Australia*; Bulletin No. 11 issued by the Advisory Council of Science and Industry, Commonwealth of Australia; 1919, pp. 18, 19.

In 1912 a sum of £5,000 per annum for five years from the 1st January 1913 was appropriated for the payment of bounty on rock phosphate in cases where at least 10,000 tons of rock phosphate had been produced in one deposit and manufactured into marketable phosphatic manure in Australia. The rate of bounty was 10 per cent. on market value. The sum of £5,000 a year was also set aside at the same time for the payment of rewards of £1,000 each to the discoverer of any deposit or vein of rock phosphate suitable for making phosphatic manure, but the deposit or vein must have been worked and 10,000 tons of rock phosphate produced therefrom and used in the manufacture of marketable phosphatic manure. Further, it was not to be situated within 25 miles of any other deposit or vein in respect of which a reward was payable or a prior claim to a reward existed.²⁸ This Act was extended for a further five years, but no bounty appears to have been paid under it. In 1918, 8,074 tons of rock phosphate, valued at £10,773, were produced in South Australia, and 3,000 tons were raised in Victoria.²⁹

In 1907 a bounty at the rate of $\frac{1}{2}$ d. per lb. was offered on fish preserved in Australia as prescribed. The amount appropriated for the purpose was £10,000 a year for ten years.³⁰ In 1908-9 the amount paid was £1,727 and in 1909-10 it was £311, but in no other year has it exceeded £200. Only one establishment claimed bounty for fish preserving in 1917-18, as compared with five in 1916-17.³¹ The bounty seems, therefore, to have had little effect in the development of the industry of preserving fish. The comparative failure of this industry is ascribed to the high cost of production and increasing competition from other countries where wages are lower.

The sum of £15,000 was allotted for bounties on dried dates at the rate of a penny a lb., but no bounty was claimed. The conditions in Australia are said to be totally unsuited for the production of dried dates. Dates can be grown only in the far north and the greatly increased coastal freights (which are due, it is alleged, to the Navigation Act), coupled with the very cheap production of dates elsewhere, render it impossible to establish the industry.

A bounty was offered at the rate of 10 per cent., on value on dried fruit (except currants and raisins) canned and exported. The amount allotted for this purpose was £60,000 but only £2,518 was distributed. The reasons ascribed for the failure of this bounty are that it is very difficult to dry enough fruits for the Australian market and that the very greatly inflated price of land in the chief irrigation settlements makes it exceedingly difficult for increased quantities of fruit to be grown.

²⁸ *The Wood-pulp and Rock Phosphate Bounties Act, 1912-17.*

²⁹ *Year Book, No. 13, p. 433.*

³⁰ *The Bounties Act, 1907.*

³¹ *Year Book, No. 13, p. 439.*

Similar remarks apply in the case of the bounty on evaporated apples. The bounty was at the rate of 10 per cent. on value on evaporated apples sold to the Imperial Government between the 1st April 1918 and the 31st August 1918. The amount paid was £4,054 as against an allotment of £12,000.

In 1910, £50,000 were appropriated for the payment of bounties on kerosene and refined paraffin wax manufactured in Australia from shale between the 1st July 1910 and the 1st July 1913. The rates of bounty were 2d. a gallon on kerosene and 2/6d. a cwt. on wax.³² The amounts paid were £6,341 on kerosene and £2,240 on paraffin wax.³³

In 1917, £270,000 were appropriated for the payment of bounties on the production in Australia of crude shale oil of prescribed quality from mined kerosene shale during four years beginning on the 1st September 1917. In 1921 the Act was extended for another year. The rates at which the bounty was payable were as follows:—

- 2½d. per gallon up to 3,500,000 gallons.
- 2d. per gallon over 3,500,000 and not exceeding 5,000,000 gallons;
- 1½d. per gallon over 5,000,000 gallons and not exceeding 8,000,000 gallons;
- 1¼d. per gallon on every additional gallon.³⁴

The production of shale varied from year to year. It was 75,000 tons in 1911, 86,000 in 1912, 17,000 in 1913, 50,000 in 1914 and 32,000 in 1918.³⁵ No kerosene appears to have been made before 1910. At the end of that year the Commonwealth Oil Corporation retorts at Wolgan were ready for operation, while the British Australian Oil Company was erecting works for the production of oil at Hamilton.³⁶ In 1913 work ceased in two mines and the British Australian Oil Company closed its works, but it was more active in 1914. In the following year new retorts were installed at Wolgan and proved satisfactory.

Speaking on the Oil Agreement Bill in the House of Representatives in May 1920, Mr. Hughes, the Prime Minister, said "The quantity of shale oil produced, as compared with the volume of oil consumed in the world, is so small as to be for all practical purposes negligible. In this country, despite the offer of a bonus of 2½d. per gallon in September 1917 to Australian companies producing crude oil from shale, because the bonus provisionally offered was not considered sufficient, the production of oil from shale in Australia is only

³² *The Shale Oils Bounties Act, 1910.*

³³ *Year Books, No. 5, p. 521; No. 6, p. 513; No. 7, p. 442.*

³⁴ *The Shale Oil Bounty Acts, 1917, 1921.*

³⁵ *Year Books, No. 5, p. 520; No. 7, p. 441; No. 9, p. 437; No. 11, p. 469; No. 13, p. 479.*

³⁶ *Year Book, No. 5, p. 520.*

about 2,800,000 gallons per annum, whilst we consume of oil and its derivatives 52,000,000 gallons per annum."³⁷

VICTORIA

By Act 53 Victoria No. 1046 and certain other Acts the sum of £253,000 was appropriated for payment of bonuses by the Government of Victoria on certain agricultural products, etc. Of this sum £37,000 was offered to factories in the State for fruit canning, fruit drying, dairying, raisin and currant making, vegetable oil making, and preparing for the manufacturer flax, hemp, silk and other products.

The bonus payable for preserving fruit, other than grapes, was £100 for the first 20 tons' weight of fruit found to be in a marketable state and in good condition at a reasonable time after its preservation; and £3 on every additional ton weight of preserved fruit subject to a maximum payment of £300 in respect of any factory.

For preserving raisins, currants, figs, and prunes, the bonus payable was £5 a ton, subject to a minimum of half a ton and a maximum payment of £100 to any individual.

The bonus payable for the manufacture of vegetable oil was 1s. per gallon of oil proper marketable quality, subject to a maximum of £500 in each case.

The bonus for the manufacture of flax or hemp fibre was £5 a ton, subject to a maximum of £500.

A bonus of £40 was payable on one ton of insect destroying powder of good and proper marketable quality, and an additional £20 a ton on further quantities, subject to a maximum bonus of £100.

A bonus of £20 was payable on 2,000 lb. weight of manufactured tobacco of good quality and marketable value, and a further sum of £5 per 200 lb., subject to a maximum bonus of £500 in each case.

No bonuses appear to have been paid in any of these cases, except £633; 13 s. to two tobacco factories and £645 to raisin and currant factories, this sum being paid almost entirely on raisins. The colony became practically independent of foreign importation of raisins by 1895.

A sum of £4,000 was also allowed for the payment of a bonus for the introduction of new agricultural machinery and appliances, and of prizes for new inventions in general agricultural appliances.

³⁷ Commonwealth of Australia, Parliamentary Debates, First Session, 1920; 1883.

in Victoria between 1890-95. Of this sum £1,595 had been expended up to the 30th June 1895.³⁸

CAPE OF GOOD HOPE

In 1895 it was reported that the Government of the Cape of Good Hope allowed a rebate of 5s. 3d. out of the customs duty of 6s. 3d. per 100 lb. weight on sugar used in the manufacture of jams and preserves, in order to enable the manufacturers, of these articles to compete in the South African markets with the imported article produced from duty free sugar; and a rebate of 15 per cent. was granted by the railway department off second class rates on sugar used in these manufactures and carried inland from ports.³⁹

NATAL

In 1889 a law was passed in Natal for the encouragement of manufacturing industries by rewards. Rewards were to be limited to half the market value of the first production. Particulars of rewards offered had to be laid before the Legislative Council and were to be regarded as confirmed if not altered or rejected within four weeks. Under this law rewards were offered on the manufacture of several articles in Natal from colonial produce or material. These included leather manufactured from South African hides, boots and shoes, saddlery and harness, woollen manufactures, cloths, hosiery and hosiery, iron and steel, cement, ropes, certain papers, creosoted railway sleepers, superphosphatic manures, condensed milk, certain vegetable oils, stearine candles, and glass. In each case two rewards were offered, the second being roughly half the value of the first. The total amount of the first rewards offered to twenty classes of manufactures was £22,800; the amounts offered as first rewards varied from £150 for £500 worth of condensed milk to £7,000 for £20,000 worth of iron or steel. The time allowed for the production from the notification of intention to compete for the reward was generally one year, but was two years in the case of iron or steel.⁴⁰

FRANCE

In 1895 it was reported that bounties on silk spinning were paid in France at the following rates:—for every pan used in spinning two threads, 100 fr. a year; for every pan used in spinning more than two threads, 400 fr. a year; for every three pans used in preparing the cocoons for the spinning pans, 200 fr. a year. The bounties paid in 1893 and 1894 amounted to 2½ and 3½ million francs, respectively.⁴¹

³⁸ Reports on Bounties other than those on Shipping and Navigation, 1896, (c.7960), pp. 14 to 30, 50, 61.

³⁹ Reports on Bounties other than those on Shipping and Navigation, 1896, (c.7960), p. 5.

⁴⁰ op. cit., pp. 8 to 12.

⁴¹ Reports on Bounties other than those on Shipping and Navigation, Commercial No. 7 (1895) (c.7897), p. 36.

In 1898 a bounty on silk spinning was authorized for 10 years. The rates at which it was payable were 400 fr. and 340 fr. a year for every pan used in spinning more than three threads from French and foreign cocoons, respectively, and at the same rate for accessory pans at the rate of one accessory pan for three spinning pans, and 200 fr. and 170 fr. for every pan used in spinning double cocoons of French and foreign origin, respectively.

If the annual expenditure in the first six years exceeded 4,000,000 fr. (£160,000) the rates were to be reduced for the remaining four years. The bounties paid were £178,900 in 1898 and £163,600 in 1900.⁴²

In 1899 provision was made for the payment of bounty on the manufacture of shale oil in France for six years at the rate of not more than 3 fr. a hectolitre (1½d. per gallon) in the first two years, 2 fr. a hectolitre (1d. per gallon) in the next two years, and 1 fr. a hectolitre (¾d. per gallon) in the remaining two years, the annual expenditure being limited in these periods to £12,000, £8,000 and £4,000, respectively. The full amounts of £120,000 a year were paid in the first two years.⁴³

GERMANY

In 1895 it was reported that the excise duty on salt produced in Germany and the customs duty on salt imported by sea was 12 marks per 100 kilograms, and the import duty on other salt was 12.80 marks. Salt used for manufacturing purposes, for manures and for cattle food was admitted free when rendered unfit for human consumption or used under Government control. A drawback of the whole duty paid was granted on salt used for salting meat, butter, fish, etc., or for pickling herrings. The amounts paid in these drawbacks were about £3,000 a year.⁴⁴

UNITED STATES OF AMERICA

In the seventeenth century attempts were made by the Colonial Governments of America to encourage manufacturing enterprises (including cloth, silk, paper, iron and firearms) by bounties, but they failed owing to "the scarcity of labour, the lack of capital and the hard conditions of pioneer life."⁴⁵

In 1640 a bounty of 25 per cent. was offered in Massachusetts on the production of linen, woollen and cotton cloth; it was to continue for three years but

Cloth

⁴² *Reports on Bounties other than those on Shipping and Navigation*, Commercial No. 2 (1904) (cd. 1946), pp. 23, 24.

⁴³ Commercial No. 2 (1904) (cd. 1946), pp. 24, 25.

⁴⁴ *Reports on Bounties other than those on Shipping and Navigation*, Commercial No. 7 (1895), pp. 37 to 40.

⁴⁵ Dr. E. L. Bogart, *The Economic History of the United States*, 1920, pp. 59, 60.

was withdrawn in 1641 "because too burthensome to the country."⁴⁶

In 1722 the Rhode Island Assembly granted a linen manufacturer for five years the exclusive enjoyment of a bounty of 20 shillings for each bolt of duck manufactured by him from hemp grown in the province and equal to good Holland duck; the term was afterwards extended to ten years. In 1725 he was granted £500 for three years from the general treasury. In 1728 the General Court lent him £3,000 to be repaid without interest at the end of ten years on condition that he made 150 bolts of good merchantable duck each year. In 1731 the grant was confirmed, and he was relieved of the necessity to produce a definite quantity of duck annually and the bounty was continued. "Legislative patronage, whether judiciously bestowed or really beneficial to the industry, appears not to have been wanting to the linen branch in New England."⁴⁷

During the eighteenth century several important inventions affecting the textile manufactures were made in Great Britain, especially between 1768 and 1789. In 1774 and 1782 the exportation of textile machinery, tools, etc., or models or plans of them were prohibited and statutes were enforced against enticing artificers to emigrate.⁴⁸

In 1786 two brothers from Scotland were employed in Massachusetts to prepare carding, roping and spinning machines; in 1787 they were granted by the legislature six tickets in a State land lottery, as well as £200 to enable them to complete the machines; the machines were deposited with a Mr. Orr, who was to exhibit them and explain their principles, uses and advantages to enquirers and was permitted to use them himself. It appears, however, that he did not use them to establish a manufacturing business.⁴⁹

In the same year the State deposited with Mr. Orr £20 to encourage Thomas Somers, who had brought with much difficulty from England descriptions and models of carding and spinning machinery; the models were exhibited to manufacturers.⁵⁰

In 1780 a cotton spinning and weaving association was formed at Worcester, Massachusetts, and made corduroy, etc.⁵¹ But the factory set up at Beverly, New England, in 1787 is perhaps the first in which cotton was manufactured by machinery.⁵² It was driven by horse-power. In 1789 the proprietors were granted by the Legis-

⁴⁶ J. L. Bishop, *A History of American Manufactures from 1608 to 1860*, Vol. I, p. 299.

⁴⁷ *op cit.*, Vol. I, pp. 334, 335.

⁴⁸ *op cit.*, Vol. I, pp. 396, 397.

⁴⁹ *op cit.*, Vol. I, pp. 398, 399; S. Batchelder, *Cotton Manufactures in the United States*, pp. 22, 23.

⁵⁰ *A History of American Manufactures*, Vol. I, p. 399; *Cotton Manufacture in the United States*, pp. 23, 24.

⁵¹ *A History of American Manufactures*, Vol. I, p. 396.

⁵² *op cit.*, Vol. I, p. 401; *Cotton Manufactures in the United States*, p. 33.

lature £500 worth of land on condition that within seven years they should manufacture 50,000 yards of cotton and linen piece-goods of a quality usually imported. The factory was visited by George Washington in that year. In 1790 the managers applied to the Legislature for "some real and ready assistance" in lieu of the grant of land, as they had been put to much expense and the grant had not answered its purpose. A committee to whom the petition was referred recommended the grant of £1,000 (to be raised in a lottery) on condition that the petitioners gave bonds that the money would be actually used to promote effectually the manufacturing of cotton piece-goods in the Commonwealth.⁵³

In 1788 a notice appeared in the newspapers of the grant by the Pennsylvania Legislature of £100 to John Hague for introducing a machine for cording cotton and of the establishment of a society with legislative encouragement for the manufacture of cotton. This, as well as a notice of a reward offered by a Society for a machine to make cotton-rollers, attracted the attention of Samuel Slater who has been called the "father of cotton manufacture in the United States,"⁵⁴ but was then, at the age of 20, apprenticed to Jedediah Strutt, the partner of Sir Richard Arkwright. He decided to proceed to America, and after having been general overseer both of the machinery and manufacturing departments in Sir Richard Arkwright's works and Mr. Strutt's mill, proceeded there in 1789 and introduced the Arkwright machinery there.⁵⁵

In 1768 a paper mill was established in Connecticut under a promise of a bounty. In 1770 a bounty was paid at the rate of two pence a quire on writing paper and a penny a quire on printing paper; the bounties paid amounting to £81: 16: 8. The bounty was soon afterwards withdrawn.⁵⁶

In 1775 the Provincial Congress of South Carolina offered premiums of £200, £150, £100 and £50 on the erection of the first four saltpetre works in the province which should produce 50 lb. of good merchantable saltpetre each and similar sums for works for refining saltpetre on producing 100 lb. of sulphur.

Premiums of £1,000, £800, and £700 were offered on the first three bloomeries erected in the Colony, to produce one ton of good bar-iron each, and £500 was offered for each of the first three works producing 500 lb. of good bar steel. A premium of £700 was offered for the first

⁵³ *Cotton Manufacture in the United States*, pp. 26 to 33.

⁵⁴ B. H. Hammond, *The Cotton Industry, an Essay in American Economic History*; Publications of the American Economic Association, New Series No. I, Dec. 1897; Chap. VIII, p. 231; E. L. Bogart, *Economic History of the United States*, p. 154; *A History of American Manufactures*, Vol. I, p. 407.

⁵⁵ *Cotton Manufacture in the United States*, pp. 41 to 49; *A History of American Manufactures*, Vol. I, pp. 402, 403.

⁵⁶ *A History of American Manufactures*, Vol. I, p. 200.

1,000 lb. of nail-rods made at a proper rolling and slitting mill in the Colony.

Iron works on a fairly large scale were established in the Colony in 1787 and 1788.

Premiums of £500, £200 and £100 were offered on the first three lead factories at which 1,000 lb. of lead were made.⁵⁷

Lead

The following extract relating to the domestic manufacture of woollen cloth early in the nineteenth century is from Dr. C. W. Wright's *Wool Growing and the Tariff*.⁵⁸

Woollen cloth

"A very substantial impetus to household manufacture came from the innumerable premiums and awards offered by the various societies then formed for the promotion of industry. Thousands of yards of woollen cloth were each year displayed in competition at the annual fairs. Some of the states adopted the same policy. New York in 1808 passed a law offering an annual premium of \$80 in each county of the State for the best specimen of woollen cloth made in any household, and other premiums were open to competition from the State at large. The law was slightly changed in 1810 and 'proving eminently beneficial' was renewed in 1812 for three years longer. During the period from 1808 to 1815 a total of \$21,000 was so distributed. The rivalry thus engendered was no slight aid in increasing the quantity of the household product, as well as in improving its quality."

Until 1890 the United States Congress authorized no direct money bounty in aid of manufacturing industries, except in one doubtful instance.⁵⁹ In 1890 bounties were payable on sugar under the McKinley Tariff Act; these bounties have been dealt with in Chapter II.

Congress

JAPAN

In 1913 the Japanese Government remitted the income tax for the encouragement of certain industries, viz., ingots of gold, silver, zinc, aluminium, bar, rod and angle iron, iron rails, machinery, soda, sulphate of ammonia, glycerine, sheet-glass and condensed milk.

The Japanese Government has occasionally voted money for the purpose of maintaining prices by means of purchasing and holding stocks for the benefit of the producers.

⁵⁷ *A History of American Manufactures*, Vol. I, pp. 619, 620; Other examples of the grant of bounties will be found in this work, e.g., Vol. I, pp. 381 to 383.

⁵⁸ C. W. Wright, *Wool Growing and the Tariff, a Study in the Economic History of the United States*; Harvard Economic Studies, Vol. V, 1910, pp. 21, 22.

⁵⁹ In 1789 Congress authorised the payment of bounties for seven years on fishing vessels in lieu of the drawback on salt intended for the fisheries; by these bounties "navigation and shipbuilding were greatly promoted"; *A History of American Manufactures*, Vol. II, p. 43.

Under the Pig-iron Encouragement Act, the import of machines and machinery and other stores necessary for the purpose is exempt from customs duty, when at one place an iron foundry capable of producing at least 35,000 metric tons per annum of pig-iron or steel, or an additional iron foundry with the same capacity, is established; this concession is to remain in force for ten years from September 1917.⁶⁰

The Special Economic and Financial Investigation Commission recommended in February 1921, that an import duty of 10 per cent. should be levied on pig-iron, and of 15 per cent. on other iron or steel; except material for ship-building which should be free of import duty; that Japanese manufacturers of iron and steel should receive subsidies to the extent of the difference between excise duties and the conventional tariffs; that subsidies should be given for the use of Japanese steel for shipbuilding equal to the total import duty leviable on such steel; that iron manufacturers should be exempt from business and income taxes for a period of ten years, provided that their equipment satisfies the Iron Industry Encouragement law; that the transportation of iron ores and manufactures by sea or land should be subsidized; that Japanese iron manufacturers should be given special financial accommodation.

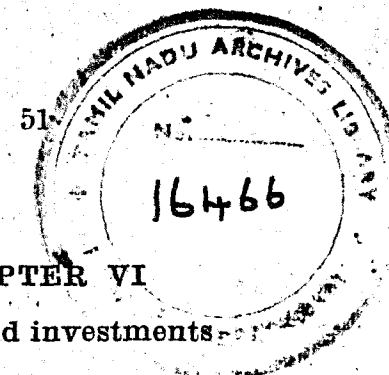
The law has apparently been amended so as to provide for the levy of the proposed import duties and the payment of the corresponding subsidies. Further, the recently enacted Iron Industry Encouragement Act provides that any person engaged in the iron industry with equipment to produce at a single place 5,250 metric tons or more yearly of pig-iron or steel is exempt from taxes on his industry and from income taxes on the profits yielded in the year in which the industry is started and for the following ten years. In the low phosphorous pig-iron industry an annual outturn of 2,500 metric tons instead of 5,250 tons is sufficient to earn these concessions. It appears probable, however, that there will be indefinite delay in bringing this Act into force.

HUNGARY

In Hungary the State assisted with some success the development of industries by exemption from taxation, the grant of subsidies and loans, and the transport of building materials, machinery, etc., by railways at cost price.⁶¹

⁶⁰ *The Nineteenth Financial and Economic Annual of Japan*, 1919: p. 24.

⁶¹ *State encouragement to Industry in Hungary*: Diplomatic and Consular Reports, Misc. Series, No. 663, (ed. 3284-7).



CHAPTER VI

Loans and investments

UNITED KINGDOM

Three principal reasons led the British Government to encourage the dye industry. Before the war the United Kingdom consumed annually about 20,000 tons of dyes, of which 90 per cent. came from Germany. Dyes are necessary for the textile, paint, leather, paper, and other industries; the want of dyes was therefore felt acutely very soon after the outbreak of the war. In the second place, the chemical warfare started by the enemy showed the necessity of a self-supporting organic chemical industry as a preparation for defence. Thirdly, it was necessary to provide scope for scientific research work and a training ground for young chemists.

In 1915 it was decided to form a new company for the manufacture of dyes with financial assistance from the Government. The British Dyes Ltd. was formed in 1915.¹ The Government undertook to subscribe £1 for every £1 of capital subscribed outside up to £1,000,000 and £1 for every £4 of capital subscribed outside over £1,000,000. The original capital was £2,000,000. At first it was laid down that only shareholders could draw supplies from the Company, but this condition had to be dropped as the public would not take up shares on this condition. It was altered to a condition giving shareholders a preference. The Government could nominate two directors, the total number being 6 to 12. The Government directors had absolute power to veto proposals or resolutions of the Board, "which, having regard to the main object with which the Company has been formed, shall in their or his opinion tend to encroach unduly on the trade or business of any manufacturer of products other than dyes or colours, or to give any undue preference as regards supply, prices or otherwise to any customer or consumer of the Company's products."

In 1919 the British Dyes Ltd. amalgamated with Messrs. Levins-tein Ltd. and formed the British Dyestuffs Corporation Ltd., with a capital of £6,000,000 divided into 6,000,000 shares of £1 each. The capital was shortly raised to £10,000,000. The Government holding in this Company in now £1,700,001 composed of 850,000 preferred ordinary shares, fully paid and 850,001 preference shares fully paid.² The Government appoints two directors who have the same powers as in the case of British Dyes Ltd. and can also veto the formation or making of any contract or agreement between the

¹ *Board of Trade Journal*, Feb. 5th 1920, pp. 177 to 180.

² *Government Investments in Registered Companies*, No. 250; 1921.

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Company and any foreign competitor of the Company. Ten per cent. of the residuary profits must be placed to the credit of a sinking fund for repayment of the Government loans; dividends may not exceed 8 per cent. per annum; and if the amount available is more than sufficient for such a dividend, the amount credited to the sinking fund has to be increased from the excess up to 15 per cent. of the residuary profits. The Corporation is further aided by the absolute prohibition for 10 years of the import of dyestuffs except under license.³ A large amount of research has been necessary, and the Government made a grant of £100,000 towards research under the scheme dealt with in Chapter V under the heading of Dye Industry.

The Corporation paid dividends of 8 per cent. in 1920, but, owing to the general depression of trade, paid no dividend in 1921. The value of the shares is now considerably below their par value; the trade in dyestuffs is, however, expected to recover with other trades, and the Corporation is expected to be successful commercially. The capacity of this and other British dye manufacturers is now not less than 25,000 or 30,000 tons per annum.⁴

The contract made by the British Government with the Cunard Steamship Company in 1903 provided for a loan of £2,600,000 to be repaid in twenty years, the rate of interest being 2½ per cent. The object of the loan was to enable the Company to build two large steamers of a speed of at least 25 knots for the North trans-Atlantic trade; they would be available as fast auxiliary cruisers and were constructed to meet Admiralty requirements. The fleet of the Company and its other property were pledged to the Government as security for the loan. The vessels built in accordance with the contract were the *Lusitania* and the *Mauretania*.⁵ The Government is shown as holding debenture stock to the extent of the loan and one ordinary share of £20 in the Company, but by November, 1921, £1,560,000 had been repaid, and the equivalent stock had been cancelled.⁶

The Government assisted the Munster Flax Development Co., Ltd., by taking debentures in it to the amount of £33,000.⁶ This Company set up a factory for retting flax by a patent process. The Company got into difficulties owing to the cost of buildings and machinery having exceeded the estimates considerably, and owing to a bad flax season, but the scheme is unsuccessful owing to the high cost of bringing the straw to the factory. The Company is being closed down.

For some years before the war, experiments in beet cultivation had been made by private growers and on the farms of agricultural colleges, and these had proved the possibility of growing sugar-beet

³ *Dyestuffs (Import Regulation) Act, 1920.*

⁴ *Board of Trade Journal*, Feb. 5th 1920, p. 179; *Times*, Jan. 7, 1922, p. 7.

⁵ *Government Aid to Merchant Shipping*, pp. 22, 51, 54, 55. *Copy of agreement with the Cunard Steamship Company, 1903* (Cd. 1703).

⁶ *Government Investments in Registered Companies, 1921* (H. C. 250), p. 2.

in England. The establishment of a beet-sugar factory was considered necessary to develop the cultivation of beet-sugar, but public funds could not be used for the purpose in consequence of treaty obligations, as financial assistance would be regarded as a bounty within the meaning of the Brussels Sugar Convention. The British Sugar Beet Growers' Society, Limited, was registered in 1915 under the Industrial and Provident Societies Acts, with rules prohibiting the division of profits among the shareholders. In 1917 and 1918 advances of about £170,000 were made to it by Government from the Development Fund for the purchase of an estate at Kelham of 5,000 acres and for working capital. Nearly 2,800 acres of the estate were sold to Government in 1919. The possibility of growing sugar beet in England having been demonstrated, the Reconstruction Committee recommended the establishment of the beet sugar industry with State assistance through a company in which the Government should take an interest. In 1920 a company, known as Home Grown Sugar Ltd., was floated; to take over the Kelham estate and to erect a beet sugar factory on it. The capital originally raised was £500,000. The Government undertook to subscribe for a number of ordinary shares of £1 each (not exceeding 250,000) equivalent to the number allotted to public subscribers. Further, the Government guaranteed interest at 5 per cent. for ten years on the shares allotted to public subscribers, and takes no interest on its own shares till the public subscribers have received 5 per cent. on their shares. Provision was made by which the Government shares can be transferred to the public. "The object of the guarantee of the Government is to subsidize the industry during the earlier years as a profitable commercial proposition by ensuring a certain 5 per cent. dividend to the public shareholders, and when so established, to encourage the Company to divest itself of Government control consequent upon the investment of State funds in the enterprise."

The factory has been built and recently opened. It can deal with 600 tons of beets in a day of 24 hours, or with 60,000 tons in a normal working season of 100 days—the produce of about 6,000 acres. The expected annual production is 8,000 tons of sugar, 3,000 tons of dried beet pulp, 1,800 tons of molasses, and a large quantity of lime waste.

Owing to the high prices of building, machinery, &c., it has been found necessary to raise a further sum of £200,000. The Company borrowed £75,000 on a first mortgage on the property and the Government lent £125,000 on a second mortgage at 7 per cent., the loan being repayable in 1930.⁷

The result of the present campaign, which closes in February 1922, will be a considerable loss, owing to high capital costs and the fall in the price of sugar.

⁷ *Government Investments in Registered Companies, 1921* (H. C. 250), p. 3; *Home Grown Sugar*, Vol. II, No. 7, Aug.-Sept.-Oct., 1921, Special Number; *Tenth Report of the Development Commissioners for the year ended the 31st March, 1920*, (H. C. 230), pp. 138 and 139.

BARBADOS

The West India Royal Commission, 1897, recommended the grant of a loan from the Imperial exchequer of £120,000 to Barbados for the establishment of central sugar factories.⁸ The Colonial Government was, under the Commission's proposal, to advance money as a loan to a combination of owners of estates;⁹ the representatives of the estates were to undertake for a number of years to send the canes grown by them to the central factories; they were to be paid a low price per ton for the canes as received, calculated in such a manner as barely to cover the cost of production, or nearly so; the next charge on the profits was to be the interest and a sinking fund of 1 per cent. per annum; any balance of profits remaining was to be divided between the owners of the estates in proportion to the quantity of canes supplied by each, but with provision that, of the profits in excess of a certain amount, one half should be added to the sinking fund; when the loan had been repaid with interest, the central factories were to become the property of the owners of the estates.¹⁰

ANTIGUA

The movement in Barbados to form a company to build one or more central factories proved unsuccessful. Action was, however, taken in Antigua. The sum of £3,500 was advanced as a loan without interest (to be eventually remitted if certain quantities of canes were purchased from peasants on a certain sliding scale favourable to them), for the renovation of a private factory, on condition that suitable up-to-date machinery, to the value of £7,500, was installed, and that a stipulated amount of peasants' canes was taken annually, payment being made for them on a sliding scale with a minimum price of 7s. 6d. per ton. This factory, apparently, had excellent results.

Towards the construction of another central factory the Government advanced from the Imperial exchequer the sum of £15,000 to a company as a loan without interest on certain conditions. In view of the special interest which attaches in India at present to attempts to establish modern sugar factories, it appears desirable to describe this experiment, which has been completed, in some detail. The main conditions on which the loan was made were as follows:—

(1) The original capital of the company was to be £1,250, divided into 12,500 "A" shares of 1s. each, and 12,500 "B" shares of 1s. each: the "B" shares were not to carry any dividend so long

as any debentures were outstanding. Debentures were to be issued as follows:—

	£
250 £100 "A" debentures (5 per cent.)	25,000
15 £1,000 "B" debentures	15,000
	40,000

(2) The Government was to be allotted in return for its contribution of £15,000.

	£
12,500 "B" shares for	625
15 "B" debentures for	14,375
	15,000

The "B" shares allotted to the Government were to be held in trust for *pro rata* distribution amongst the original contributing proprietors as soon as all debentures were extinguished. The "B" debentures held by the Government were to carry no interest and were to rank *pari passu* with the "A" debentures in the event of the winding up of the Company, and to be amortized annually as the stipulated quantity of peasants' canes was crushed.

(3) The Company was to erect a factory capable of making not less than 30 tons of 96° grey crystal sugar per working day, of 23 hours.

(4) The Company was to take peasants' canes up to 4,500 tons annually, if tendered at the factory, and of the usual fair average quality of canes. Peasants' canes were to be paid for at the rate of the average market price of 4½ pounds of 96° grey crystal sugar, f.o.b. Antigua, for each 100 pounds of canes delivered and accepted by the Company, but the price to be paid was in no case to be less than 7s. 6d. per ton of canes. The Company was to pay a penalty of 4s. for each ton of peasants' canes tendered at the factory, and not paid for at 7s. 6d. a ton.

(5) The Government was to have the power to appoint a Board to determine the order and amount of peasants' canes to be ground daily throughout the reaping season, and to settle all questions arising as to the meaning of any clause relating to peasants' canes, subject to appeal to the Governor.

(6) The Company was to cease to be bound to take peasants' canes on the above conditions after 75,000 tons of peasants' canes had been taken and paid for pursuant to the agreement, or upon the expiration of 15 years, commencing with the crop of 1905.

The factory was completed in time to take off the crop of 1905. A series of agreements was made between the proprietors of certain

⁸ Report of the West India Royal Commission, 1897, (c-8655), para. 548, j, p. 70.

⁹ *op. cit.*, para. 245, p. 32.

¹⁰ *op. cit.*, para. 255, p. 33.

estates and the factory Company. The Company found the additional capital of £25,000 and undertook to erect the factory in accordance with the Government's conditions, to provide reasonable railway facilities for the transport of canes, to pay the proprietors for canes the equivalent price of $4\frac{1}{2}$ tons of 96° crystals, f.o.b. Antigua, for each 100 tons of canes, and to divide the profits as follows:—should the price paid to the contracting proprietors for canes prove less than 10s. a ton, then the profits were to be applied first to bringing up the payment to 10s.; any further profits were to be divided equally between the shareholders of the Company and the proprietors supplying canes. Of the £15,000 advanced by the Government, £1,000 was to be amortized each year. As soon as the £25,000 subscribed by the Company had been paid off, the ownership of the factory should be divided equally between the shareholders in the Company and the contracting proprietors.

The contracting proprietors bound themselves to maintain a certain acreage in cultivation with sugarcane and to supply the canes so grown to the factory for a period of fifteen years. Eight estates originally entered into co-operation with the Factory Company and agreed to supply canes from 1,620 acres each season.

The original equipment included 2 Babcock and Wilcox water tube boilers, 2 three-roller mills, 2 vacuum pans, a central condensing installation, 5 Weston 36-inch centrifugals, 6 second sugar crystallizers and 6 miles of railway on 2' 6" gauge with rolling stock.¹¹

The factory was originally intended to manufacture 3,000 tons of sugar in a season. A demand, however, arose on the part of owners who had not joined originally to be allowed to have their crops dealt with by the factory. Additions have been made repeatedly to the capital and machinery.¹²

The original contracts were completed in 1919, and Sir Francis Watts published a full account of the work of the factory and the final position in Vol. 18 of the West Indies Bulletin (p. 134 *et seq.*) from which the following remarks are taken to indicate the success which has attended State aid in this instance and the principal measures taken to that end while the Company was subject to Government intervention.

The cost of the factory rose between 1905 and 1919 from £45,360 to £103,230. The first material increase took place in 1908 and was due to the addition of a Krajewski crusher to the original six-roller mill and to additions to the railway. Further additions were made in 1911 to the milling plant whereby the mills were converted into a 14-roller train, and there were also substantial additions to the general plant and to the railway, which was finally 21 miles long on a gauge of 30 inches.

Further contracts for the supply of canes were made by the Company with a second group of planters, who received payment for

¹¹ West Indian Bulletin, Vol. 6, p. 62.

¹² West Indian Bulletin, Vol. 15, p. 48.

their canes on the basis of 5 lb. of sugar for every 100 lb. of cane, together with their proportionate share of the half-profits arising from the year's working of the factory.

To meet the additional outlay new debentures were raised bearing interest at 5 per cent. and a sinking fund was created at a rate calculated to redeem these new debentures simultaneously with the original "A" debentures. All the debentures were paid off during 1919. The Government loan had been redeemed by the same date and became virtually a free grant. The factory now stands possessed of modern plant, buildings and railways which may be taken to be worth now some £200,000. Shares representing half this amount have passed into the hands of the original contracting proprietors in proportion to the weight of cane supplied by each during the period 1905 to 1919. The novel contracts have been carried out without any serious difficulties arising.

The total quantity of canes crushed was 15,681 tons in 1905; 24,676 tons in 1906; 40,782 tons in 1907, and rose to 112,235 tons in 1916. In 1919 the weight of canes crushed was 90,186 tons. The total quantities of sugar made in the same years were 1,634 tons, 2,349 tons, 4,231 tons, 12,371 tons, and 9,739 tons, respectively.

In 1905 the mill extracted 81.7 per cent. of the sugar contained in the canes. In 1908 this figure rose to 85.8, but since the mill has been increased to a 14-roller mill, the percentage of sugar extracted averaged 91 per cent., the highest percentage reached being 93.8 in 1918.

In 1905 the quantity of commercial sugar recovered was 82.6 per cent. of the weight of the sugar in the juice; in 1919 it was 95.1 per cent.

Considering the combined work of the mills and of the manufacture of sugar, it is seen that the weight of commercial (96°) sugar recovered has risen from 67.5 per cent. of the weight of the sugar in the cane in 1905 to 87.9 per cent. in 1919.

When the factory was installed in 1905, crushing by means of three-roller mills was general in the British West Indies. The installation of a six-roller mill was an innovation; the addition of the Krajewski crusher was a distinct advance; and the conversion of the milling train into a 14-roller one in 1911 instituted the first of such mills in these islands. In the general matter of sugar manufacture, the Antigua factory has done pioneer work in disseminating information which has been of general service.

In 1905 the production of muscovado sugar was general in the British West Indies, and the refineries expressed dissatisfaction with this class of sugar. The developments undertaken at Antigua paved the way for the manufacture of vacuum pan sugar in modern factories on these islands, so that to-day there are very few small works left where ordinary muscovado sugar is being made. There is a growing tendency to produce on the spot, where the sugar is grown, sugar fit for consumption, and to eliminate to a large extent the work of the refiner.

JAMAICA

The sugar industry of Jamaica has been recently materially damaged by drought and heavy floods, and jeopardized by the withdrawal of financial assistance from owners of factories, the Government of Jamaica has taken steps to afford temporary aid for the preservation of the sugar industry. By the Sugar Industry Aid Loans Law, 1921, passed in July 1921, the Governor was authorized to raise not more than £400,000 from local bank at a rate of interest not exceeding 7 per cent. per annum, the loan to be repayable within 15 months from the date of payment, or in such extended period as may be arranged between the Government and the lender. The money so raised was to be placed at the disposal of the "Sugar Industry Aid Board." This Board was to consist of seven members, of whom four, including the Chairman, should be appointed by the Governor, and three by the Legislative Council. The Board may use the money for the purpose of making loans, for the preservation of the sugar industry, to owners of sugar plantations or estates, or receivers appointed by any Court to take charge of such sugar plantations or estates, etc. The loans are to bear interest at a rate not exceeding one per cent. more than the rate payable by the Government on its loan.

The principal conditions on which loans may be made are the following:—

- (a) the debt shall be the first lien or charge against the plantation (including its crops, live and dead stocks, sugar factories, machinery and implements), notwithstanding that there may be prior encumbrances; prior encumbrancers may, however, object to the grant of a loan;
- (b) the loan may be applied only to the usual and necessary expenses of the upkeep of the plantation, *e.g.*, cultivation, reaping and manufacture of produce, purchase of canes from cane farmers, manure, etc. It may also be applied, with special sanction, to the payment of one year's interest on existing encumbrances and to special repairs, alterations, and additions to machinery and buildings and additions to live and dead stock;
- (c) the Board may insure buildings, machinery, stocks, crops, etc., against loss or damage by fire, and the cost of insurance is added to the loan with interest not exceeding 7 per cent. per annum;
- (d) the borrower must keep accounts of the money borrowed, and produce them with vouchers once a quarter before the Board;
- (e) the proceeds of sugarcane sugar, molasses and rum must be devoted, in the first instance, entirely to the repayment of the loan; and any sum due on account of the loan, after payment of the proceeds of the sale of the crops, must be repaid with interest due thereon on demand.

BRITISH COLUMBIA

Under the Department of Industries Act, 1919, the Government of British Columbia may aid by loan, guarantee or guarantee of securities any enterprise calculated to encourage the economic and commercial manufacture of the natural resources or products of the Province. Advances are made from a special fund called the "Industrial Development Fund." A grant of aid can be made only on the recommendation of an advisory council appointed under the Act; the terms and conditions on which aid is to be given are not prescribed in the Act, but the Advisory Council must ascertain that the aid is justified on certain grounds specified in the Act. The aggregate amount of loans and principal sums guaranteed was limited by the Act to \$2,000,000 in the first year; the sum required was to be raised by the Government by the issue and sale of British Columbia Stock. In addition to assisting the industrial development of the province, the Act was intended to provide returned soldiers with the means of starting in business.

The rate of interest on loans was fixed at 6 per cent. *plus* any additional charge that might be incurred by the Government in borrowing the money or making the loan. To ensure that the money advanced is used in the development of industry and for the purposes for which the grant was made, the amount of a loan is first placed at the credit of the applicant in the Development Fund and payments are made to him from the Fund on voucher.

In 1919 the number of applicants was 225 and the total amount applied for was \$2,767,000. Of these, 155 applications were refused and 19 granted in 1919, the total of the approved loans being \$442,200. The principal loans were \$200,000 to a cordage company, \$100,000 to a roofing, paper and refining company, \$50,000 to a 'cut-to-fit' building company, and \$30,000 to a cast-iron pipe company. Other industries assisted included the manufacture of toys, ink, furniture, auto bodies and ladies' waists and works for salting and curing fish. The total amount to be invested in new industrial developments, including the loans, was \$913,000, and it was expected that the development would provide permanent employment for about 380 persons.

In 1920, sixty applications were granted and 306 refused. The total amount of the approved loans was \$631,000. They varied from \$50,000 to a machinery manufacturing company to \$300 to an antique furniture industry, and \$200 for the manufacture of broom-protectors. Other assisted industries included saw-mills, saws, pumps and engines manufacture, concrete blocks, electrical appliances, woolen mills, boat-building, boots and shoes, rubber soles and heels, wood-working, toys, boxes, neck-wear, gramophones, bricks, sandpaper, canneries, fish companies, pickles, etc. The total amount to be spent on new industrial development including the loans is \$1,662,000, and these industries are expected to provide employment for about 1,050 persons.¹³

¹³ Reports of the Department of Industries of the Province of British Columbia for 1919 and 1920.

It is likely that in future the Department of Industries will devote its energies to research and the supply of information to those wishing to start industries rather than to the grant of financial assistance.

AUSTRALIA

In Australia, as in Great Britain, the greater part of dyes and colours used in manufactures were obtained from Germany. It became necessary, after the outbreak of war, for the Commonwealth Government to make the position of the Commonwealth Government Woollen Mills secure in respect of the supply of dyes; the Government therefore became a shareholder to the extent of £4,000 in British Dyes Ltd. when that company was formed in 1915. When the company was incorporated in the British Dyestuffs Corporation Ltd. in 1919, the Commonwealth Government was allotted 2,269 deferred ordinary shares, 2,360 preferred ordinary shares, and 2,360 preference shares; the Government still holds these shares.

In 1920 the Commonwealth Government of Australia entered into an agreement with the Anglo-Persian Oil Company, Ltd., by which the Oil Company was to form a refinery company for the following objects:—

- (a) the creation and development in Australia of the industry of refining mineral oil;
- (b) the erection, equipment and operation of a modern refinery or refineries in Australia for refining mineral oil;
- (c) the sale and disposal of the products of refining mineral oil.

The reasons given by Mr. Hughes, the Prime Minister, for introducing the Bill were the following. Oil is essential for the defence of Australia; oil is the key to industrial success; Australia must get oil as cheaply as possible, for every increase in the price of fuel is a tax upon industry and affects wages, which in turn affect the standard of living; prices have risen very considerably in the past few years; there were no oil wells in Australia or its territories, though there was reason to believe that oil would be found there; when found it would be useless unless it could be refined in Australia; Canada, with far less need of erecting refineries than Australia, had 14, but Australia had none; Australia was dependent upon three Companies—two American and one Dutch—for its oil supplies; the Anglo-Persian Oil Company was a British Company, in which the British Government had a controlling interest; it was desired to have the same control over the proposed refining company in Australia that the British Government had over the Anglo-Persian Oil Company.

The Refinery Company was to have a capital of £500,000 of which the Commonwealth Government was to hold £250,001. Of the total number of directors, three-sevenths were to be nominated

by the Government and four-sevenths by the Oil Company. Without the consent of the Government

- (a) the Refinery Company's business or any part thereof cannot be sold or disposed of;
- (b) the refined products cannot be sold to aliens or exported from the Commonwealth;
- (c) the refined products cannot be sold on long contracts or in circumstances which might endanger the ability of the Refinery Company to meet the requirements for consumption within Australia.

The Refinery Company is to erect, equip, and operate in Australia a modern refinery. Meantime, the Oil Company is to use its best endeavours to secure adequate supplies of oil products to Australia at reasonable prices.

The Government is to supply to the Refinery Company indigenous oil for refining up to 200,000 tons per annum, as it becomes available to the Government; if it is not available in such quantities, the Oil Company is to make up the deficiency by supplying crude mineral oil. The price payable by the Refinery Company for the oil so supplied is to be fixed by agreement between the Government and the Oil Company from time to time. The price payable by the Refinery Company to the Oil Company for crude mineral oil, f.o.b. at the port of shipment, is not to exceed the price f.o.b. paid by the British Government to the Oil Company for crude mineral oil. The Oil Company is to deliver the crude mineral oil at the port of discharge in Australia, but the Government has the option of making freight arrangements at a lower rate if it can do so. The price payable by the Refinery Company for crude mineral oil is to continue in force for a period of two years at a time.

The Refinery Company is bound to sell its oil products at such prices as are fair and reasonable, and on that condition the Government undertakes to use its powers to prevent dumping and unfair competition by importers of refined oil from other countries; to refund to the Refinery Company any customs duty paid by the Refinery Company upon the importation into Australia of crude mineral oil purchased from the Oil Company and refined in Australia by the Refinery Company; and to cause to be introduced into Parliament a bill providing for the imposition of customs duties on crude mineral oil whenever in its opinion such action is necessary or advisable to prevent unfair competition with the products of crude oil refined in Australia by the Refinery Company.

Neither the Commonwealth nor the Oil Company may sell or pledge its interest or holding in the Refinery Company without the consent of the other party.

The Government has the option, on giving two years' previous notice, of purchasing the Oil Company's interest or holding in the Refinery Company at the expiration of 15 years from the completion of the first refinery.

If steps are taken to liquidate or wind up or reconstruct the Oil Company, the Commonwealth has the option of purchasing the Oil Company's interest or holding in the Refinery Company within one calendar month from the date of notice. Provision is made for the valuation of the Oil Company's interest or holding by valuers representing both parties, and by an umpire if necessary.¹⁴

QUEENSLAND

Under the Meat and Dairy Produce Encouragement Act, 1893, passed by the Queensland Parliament, a Meat Fund and a Dairy Fund were constituted by the levy of special taxes on sheep and cattle at the rate of 15s. per 100 head of cattle and 1s. 6d. per 100 head of sheep. Money could be advanced by the Government from these funds (or from the consolidated revenue, subject to repayment from these funds) to the proprietors of works or factories for the manufacture or cold storage of meat or dairy produce, respectively.¹⁵ The funds were to be distributed by a Board. The works had to be mortgaged to Government as security and no advance could exceed half the cost of the works and machinery. Interest was charged on the advances at 5 per cent. after 5 years from the date of advance, and the loans were repayable in half-yearly payments during the ten years following the first five years after the advance was made. When an advance was made for construction, 30 per cent. of the value of works stated in the Government engineer's certificate to have been duly executed could be paid at once, the balance being payable on the issue of the certificate on the final and satisfactory completion of the works.¹⁶

SOUTH AUSTRALIA

Under the Loans to Producers Act, 1917, the Government of the State of South Australia may make loans to land holders and co-operative societies engaged in rural production. According to the present regulations under the Act, loans are repayable with interest in half-yearly instalments in twenty years, if made for purposes included in Class A, and in seven years if made for purposes included in Class B. Under Class A, interest only is payable for the first two years of the currency of the loan. Under Class B, however, repayment of both principal and interest begins on the expiry of six months from the grant of the loan.

The purposes included in Class A are (1) the erection or purchase of cool stores, (2) the erection or purchase of factories for jam making, or for canning, drying or otherwise preserving fruit or vegetables, (3) the erection or purchase of fruit-packing sheds, (4) the erection or purchase of butter, cheese or bacon factories, (5) the

¹⁴ *Oil Agreement Act, 1920* (No. 13 of 1920).

¹⁵ *Reports on Bounties other than those on Shipping and Navigation, (c-7960), pp. 16 to 20, 22 to 60.*

¹⁶ *op. cit.*, pp. 45 to 50.

erection of silos, (6) the erection or purchase of wineries or distilleries.

The purposes included in Class B. are (1) the purchase of fruit-grading machinery, (2) the installation of irrigation plants.

In August 1919 a Board was appointed to deal with and report upon applications for assistance under this Act. By the 30th June 1921 the following loans had been granted on the recommendation of the Board: (1) £990 to a co-operative society, for building a cheese factory and purchasing machinery, etc.; this factory has been completed and commenced operations some time ago; (2) £720 to a co-operative society for the erection of a fruit-packing shed; this has been completed; (3) £11,521 to a co-operative society for the erection of a cool store and the purchase of the necessary machinery and working plant; the store was completed in time to deal with the past season's apple crop; (4) £2,000 to a co-operative distillery for the purchase of a distillery; this was purchased to deal with the grapes of the settlers in the neighbouring district; (5) £750 to a co-operative society for the erection of a cheese factory and the purchase of the necessary working plant; this factory is under construction.¹⁷

VICTORIA

In 1896 the Government of Victoria assisted the promotion of a company to establish the beet-root industry by subscribing £2 for every £1 of private capital subscribed; the amount advanced by the Government was £62,000. A modern factory was erected, but, after various vicissitudes, the company was compelled to cease operations after two seasons, and the building and plant passed into the possession of Government under the terms of the mortgage and then remained idle for 12 years. In 1910 the Government attempted to revive the industry by establishing numerous experimental beet plots, by lectures and by organizing a system of field labour. The factory was re-started. To put the industry on a sound footing the Government purchased large areas of land and allotted them in the form of small holdings to settlers on condition that each must grow a certain area of beet. This condition was removed in 1914. The sugar produced rose from 482 tons in 1910-11 to 1,181 tons in 1914-15 and 1,948 tons in 1916-17. It fell to 1,263 tons in 1918-19, but rose to 1,551 tons in 1919-20.¹⁸

Under the Primary Products Advances Acts, 1919 (No. 3038) and 1920 (No. 3068), advances may be made by the Government to companies for the purposes of undertakings for dealing with certain primary products. These undertakings include factories for the manufacture of canned fruit, dried fruit or jam and flax-mills. The advance must be secured by a first mortgage on the undertaking and

¹⁷ *Report of the Minister of Agriculture for the year ended June 30th 1921, Adelaide, S. Australia* (A-No. 43); p. 7.

¹⁸ *Victorian Year Book, 1919-20*, pp. 563, 564.

on the property and assets of the company; the terms as to repayment and rate of interest, as well as the amount of the loan, are determined in each case by the State Treasurer.

GERMANY

The writer has found no evidence that in Germany the Imperial Government made loans to manufacturers or invested money in factories.

In 1904 the Prussian Government endeavoured to obtain a controlling majority of the shares of the Hibernia coal mine, but failed, owing to the opposition of the banks.¹⁹

In the case of potash, the Government, partly by legislation and partly by means of its extensive holdings of potash deposits, compelled the cartel to keep the home price below the export price.²⁰

The Governments of Prussia, Baden and Bavaria, obtained controlling interests in the shipping on the Rhine and inland waters when it was threatened with syndicalization.²¹

UNITED STATES OF AMERICA

In 1789 the Legislature of Pennsylvania, in order to assist the cotton manufactures of the State, subscribed for one hundred shares of £10 each in the manufacturing fund of the Pennsylvania Society for the encouragement of manufactures and the useful arts, as the sums subscribed by the public were insufficient.²²

In the same year the Legislature lent £200 to John Hewson to enable him to enlarge and carry on the business of calico printing and bleaching within the State.²³

JAPAN

About 1881 the Government of Japan obtained from England ten sets of cotton spinning plant, each of 2,000 spindles; these were sold to private parties but were to be paid for in ten annual instalments. In 1883 the Government advanced to the promoters the cost of hemp spinning plant for a mill in Shigaken; the mill was established three years later. The Hokkaido Hemp Company, started at Sapporo in 1887, received State aid in various forms for six years.²⁴

¹⁹ Professor A. Marshall, *Industry and Trade*, p. 574, n.

²⁰ *op. cit.*, p. 574.

²¹ *op. cit.*, p. 575.

²² J. L. Bishop, *A History of American Manufactures*, Vol. I, p. 409; Vol. II, p. 19.

²³ *op. cit.*, Vol. I, p. 407; Vol. II, p. 19.

²⁴ *Japan in the beginning of the 20th century*; by the Department of Agriculture, Tokyo, 1904; p. 415.

In 1898 the Government placed 5,000,000 yen at the disposal of the Hypothec Bank for the purpose of making loans to industrial undertakings.²⁵ The Bank was instructed to proceed carefully in order not to cause undue inflation, and, to prevent industries helped from relying too much on Government aid, each case was to be investigated carefully before a loan was granted.²⁶

Assistance to industry is also extended by special Government banks which grant lower rates than the regular banks for floating bonds, financing exports, etc.²⁷

In 1902 the Industrial Bank was founded; it makes advances largely on the security of sites and buildings of factories. The Government has come to its assistance on more than one occasion, e.g., in 1913 the Government advanced to it 13,500,000 yen at a cheap rate through the Bank of Japan and the Yokohama Specie Bank. The capital of the Bank is 20,504,000 yen, of which 7,550,000 yen is held by foreign capitalists.²⁸

²⁵ H. H. Van Kol, *De Ontwikkeling der Groot Industrie in Japan*, Vol. I, p. 62.

²⁶ W. A. Graham Clark, *Cotton Goods in Japan*; U. S. A. Department of Commerce, Bureau of Foreign and Domestic Commerce, Special Agents Series—No. 86; 1914; p. 46.

²⁷ *Cotton Goods in Japan*, p. 215.

²⁸ *Japan Year Book*, 1919-20, p. 399.

CHAPTER VII

Guarantees, etc.

UNITED KINGDOM

In connection with certain arrangements made during the war, the Government of the United Kingdom has entered into a contract with the Government of the Commonwealth of Australia to purchase the whole exportable surplus of zinc concentrates and slimes in Australia, up to 300,000 tons per annum, at certain prices which are fixed till the 30th June 1925, and then determined by a formula. This contract expires at the end of 1930.¹

JAMAICA

In 1902 the Secretary of State for the Colonies assented to the introduction of a bill in the Legislative Council of Jamaica, to authorize a Government guarantee of interest for a limited period on sums expended in the erection of central sugar factories, the consent of the Secretary of State being required in each case.

The scope of the Central Factories' law which was passed under this authority was considerably wider than had been anticipated, as it authorized a guarantee of capital as well as interest—the latter at a rate not exceeding 5 per cent. if interest alone were guaranteed, and not exceeding 3½ per cent. if both capital and interest were guaranteed. The law was not disallowed, but as it was feared that a guarantee of capital and interest in such undertakings might be considered by the Brussels Permanent Sugar Commission to be open to construction as a bounty, the law remained inoperative.

CANADA

In order to encourage shipbuilding, the Dominion Government was authorized in 1920 to endorse promissory notes drawn in favour of a shipbuilder in Canada by the purchaser of a vessel of 1,000 tons or more to be built in Canada. The value of the notes endorsed may not exceed half the cost of the vessel. Ten per cent. of the price must have been paid, and the payment of another 15 per cent. in certain prescribed instalments must have been secured to the satisfaction of the Government and satisfactory arrangements must have been made for the payment of a further 25 per cent. The Government must be given a first mortgage on the vessel for the full amount of the notes endorsed, and the

¹ The War Cabinet's Report for the year 1918, (Cmd. 325, 1919), p. 224.

vessel must be insured in favour of the Government. The total amount for which notes may be endorsed is \$20,000,000.²

QUEENSLAND

By the Sugar Works' Guarantee Act of 1893, passed by the Queensland Parliament, the Government was authorized to guarantee the capital of and interest on debentures issued for defraying the cost of sugar works and of their erection, the debentures being repayable in 15 years and the interest being at 5 per cent. The Government had to be satisfied that sufficient suitable land had been, or would be, planted with sugarcane and maintained to keep the sugar works employed. The sugar works, and, if necessary, additional freehold land, had to be mortgaged as a first mortgage to the Government as security, the value of the security being double the possible liability of the Government under its guarantee; the capital of the debentures had to be paid to the Government in 14 equal annual payments, beginning from the second year, interest being allowed at 3½ per cent.; these repayments were a first charge on the profits of the works, and, in default of payment, the Government could take over the works and manage them or sell them; the Government could insure the works if necessary, and recover the cost of insurance. The amount of the guarantee was limited by regulation to double the capital of the Company, of which at least one-tenth had to have been actually paid up.³

² An Act respecting the shipbuilding 1920; Canada Year Book, 1920, p. 219.
³ Reports on Bounties other than those on (c-7960), p. 18.

Statutes of Canada, cap. 70 of granted in the Colonies, 1895

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CHAPTER VIII

Government factories

UNITED KINGDOM

Some account of two factories recently established by the Government in England on a commercial scale may be of interest, though they are intended to establish the industries by experimental, demonstrational and educational methods.

Vegetable drying and fruit preserving

Soon after the Great War broke out in 1914 it was decided by Government to undertake experiments to test untried or partially tried methods of preservation of fruit and vegetables with a view to encouraging the formation of rural industries in vegetable drying and fruit preserving. This work was undertaken partly in connection with the war to meet expected unemployment, especially of women, and to preserve home products, but it had in view also the permanent establishment of the industries, and especially the preservation of fruit in years of glut. Two factories—one for drying vegetables and the other for preserving fruit—were started with the assistance of grants from the Development Fund. The capital advanced (£26,000) has been covered by the profits earned. As the war proceeded the problem of unemployment disappeared, but the factories continued to supply the army. At the end of the war, the factory for drying vegetables was given up, but in 1919 it was decided to establish a model factory on a commercial scale for preserving fruit. A factory at Chipping Campden, which had been used for other purposes was acquired and adapted. Experimental work was carried out, and three educational courses were opened, (1) a short course for persons desiring to make jam in their own houses; (2) a month's course for domestic economy teachers; and (3) a course for the training of factory managers. The first two classes have been well attended, but the class for managers was found to involve heavy expenditure and competition with jam manufacturers on account of the scale on which work should be done. Representative exhibits of the products of the factory were sent to shows throughout the country. Much useful work has been done in respect of experiment and education, especially in connection with improved methods of making and storing pulp, jellying of jam, sugar contents, &c and the preservation of fruit in times of glut. Many enquiries were answered through the factory, but there has not been an expansion of the industry, because the high price of sugar led to the failure of small jam manufacturers.¹

¹ Tenth Report of the Development Commissioners for the year ended the 31st March, 1920 (H. C. 230), pp. 141, 142.

The Government has established a lactose (milk-sugar) factory, which is partly experimental and partly commercial. Owing to the concentration of dairy industries, including cheese-making, in depôts, considerable quantities of whey are produced; its disposal presents difficulties, as it pollutes streams, wells and the filter beds of sewers, and its distribution to farmers for use is too expensive. At the same time it is a valuable food material; about 2½ per cent. B. P. lactose can be extracted from it besides about 4 per cent. of other valuable products. Lactose has hitherto been imported from foreign countries. In 1918 the Government decided to establish the factory because a certain amount of research is necessary, there is no experience of such a factory in England, and the establishment of a factory involves considerable capital outlay compared with the probable returns till experience is gained. A grant of £15,000 was made from the Development Fund in 1919-20.² Further grants amounting to £9,900 have been made from the same Fund.³

The factory, which has been recently completed, has been constructed near a cheese factory and is designed to deal with 3,000 gallons of whey a day. The erection and equipment cost about £23,000. In the whey season whey is dried for storage, and is refined in the winter. Owing to the high cost of transporting whey, attempts are being made to find a means of concentrating it, so that it can be taken more easily to a central refinery. It is too early yet to expect the factory to have any effect on the establishment of the industry, but many enquiries have been received and the prospects are considered good.

WEST INDIES

In connection with the establishment of the cotton growing industry in the West Indies, the Barbados Legislature in 1903 voted £250 for the provision of suitable machinery for ginning, bailing, etc., and placed a building at the disposal of the Imperial Department of Agriculture for its accommodation. The factory was transferred to the Barbados Cotton Factory, Ltd., in 1905.⁴ In 1902 the area planted with cotton was 16 acres; in 1907-08 the area had risen to 7,194 acres, but the area was less in subsequent years owing to the attacks of insect pests and fungoid diseases and to a drop in prices.

In 1903-4 the sum of £1,850 was spent by the Imperial Commissioner of Agriculture on the erection of a ginning factory in St. Vincent; the factory contained 8 gins and was capable of dealing with the production of 2,000 acres.

In Nevis a small cotton ginning factory was privately established, the machinery being lent by the Government.

² Tenth Report of the Development Commissioners for the year ended the 31st March, 1920, (H. C. 230), pp. 140, 141.

³ Eleventh Report of the Development Commissioners, 1921 (H. C. 220), p. 49.

⁴ Handbook of Barbados, 1913, p. 204.

In Antigua the Government provided funds for the erection of ginning machinery.

BRITISH GUIANA

In 1916 the British Guiana Government established at a cost of \$3,100 a factory for concentrating lime-juice and distilling oil from it. In the fifteen months ended 30th June 1920 about 19,300 gallons of lime-juice were dealt with, and the net profit, after allowing for depreciation (but apparently not for interest), amounted to \$2,170. As the work was insufficient for the boiler and engine, a No. 7 Engleberg Huller was installed to hull locally grown rice; in January 1920 a No. 1 Engleberg huller was added. In 1919 a small grain-mill for making cornmeal was connected to a shaft of the lime factory. These additions led to more economical working and increased the net profits of the undertaking in fifteen months in 1919-20 to \$5,200.⁵

MAURITIUS

The Government of Mauritius established a tobacco factory in 1919; it was moved to permanent premises in July 1920. During 1920 about 4,500 kilos. of green leaves and 5,000 kilos. of dried leaves were handled at the factory; of these quantities, 2,650 kilos. of green leaves and 1,870 kilos. of dried leaves were grown by the Government, the remainder being purchased from private growers. The manufactured cigarette tobacco is now in regular demand. To encourage development about 25 acres of Crown land have been leased free of tax for tobacco cultivation on condition that the tobacco is sold to the factory. The results so far obtained are regarded as satisfactory.⁶

SOUTH AUSTRALIA

The State Government of South Australia owns a freezing plant capable of dealing with 8,000 sheep a day; it also deals with the bye-products, such as the manufacture of tallow. The Government also started a butter factory as a check on private butter factories. It has also a canning factory (at which beef and mutton are canned) and an ice factory, and undertakes cold storage. These enterprises are managed by the Government Produce Department. The output varies from year to year. The total expenditure on land, buildings, plant and machinery from 1894 up to 30th June 1921 was £277,500; interest charged on the capital up to the same date was £116,500, and the net profit from 1894 to the 31st June 1921, after providing for interest, working expenses, maintenance and depreciation, was £31,400, the profits being high during the years 1914-15, and 1917-20. According to the balance sheet, the liabilities on the 30th June

⁵ Report of the Government Factory at Onderneeming, 1920; Georgetown, Demarara (C. S. O. No. 5841/20).

⁶ Annual Report of the Department of Agriculture for the year 1920, Mauritius, pp. 6, 16.

1921 included £148,300 on account of a loan from the Government and £19,700 on cash account with the Treasury. The loss on the year's working (1920-21), after allowing for maintenance, interest and depreciation, was £31,200. This loss is ascribed to the absence of any export of lamb or mutton during the year on account of the general depression that followed the boom prices of the war period.⁷

QUEENSLAND

The Queensland Government has undertaken a variety of enterprises, including cattle-stations, butchers' shops, sawmills, shipping, mines, petrolcum bores, hotels, licensed houses, refreshment-rooms, central sugar works and insurance.⁸ We are concerned here only with manufacturing enterprises.

During the season 1919-20 six State mills were under the control of the Bureau of Central Sugar Mills. Two Sugar factories of these had been built by the State; the other four had passed into the possession of the State Treasurer because the owners had obtained advances from the State and had failed to make annual repayments of interest and redemption. Of the six mills only four worked during the season.

The financial position of the Babinda Mill (which had been built by the State) on the June 30th, 1920 was satisfactory. The liabilities shown on the balance sheet included a Government loan of £346,400 and a liability to the Treasury Trust Fund of £21,400 and capital of £24,700, but during the year interest amounting to £14,300 was paid and £12,500 was credited to the Redemption Reserve Fund. Labour troubles in the mill and fields seriously interfered with the working of the mill and caused loss.

The South Johnstone Mill—the other mill built by the State—had on the 30th June 1920 an excess of liabilities over assets amounting to £70,100. The liabilities included a Government loan of £547,500, a sum of £30,700 due to the Treasury Trust Fund and £15,800 interest on loan. The quantity of cane crushed was 86,554 tons as against 39,448 tons in the previous year, and the Auditor General regarded the prospects as greatly improved.

The other two State mills worked had deficits on the year's working, but one showed a small manufacturing profit. The Auditor General remarked that one mill loses time through insufficient cane supply because farmers postpone cutting until a higher density in the cane prevails and recommended the adoption of the "relative percentage scheme" of payment which was in force at Babinda and certain other mills.

The other two mills were not worked as the crops were poor. The mills had resulted in annual losses to the State, and the Auditor

⁷ Report of the Minister of Agriculture for the year ended June 30th, 1921; Adelaide, South Australia (A.No. 43); p. 71.

⁸ Socialism at Work, 1918, published by the Queensland Government.

General recommended the removal of one to an area where a sufficient and regular supply of cane can be obtained.⁹

The State saw mills were first established in 1916. The accumulated losses to the 30th June 1918 amounted to £9,000, but in the two following years profits amounting to £13,300 were realized after the payment to the Treasury of interest on advances.

The State cannery began operations in January 1920; the balance sheet (30th June 1920), shows liabilities of £50,500 on account of a Government loan and £13,200 to the Government Trust Account. The cannery began operations before it was fully equipped in order to enable the soldiers in the Beerburum Settlement to find a ready market for their fruit.¹⁰

NEW SOUTH WALES

The Government of New South Wales controls various industrial undertakings, the revenue and expenditure of which are not included in the Consolidated Revenue Fund but are principally included in the Special Deposits Fund. They include a bakery, quarries, brick works, a clothing factory, a drug depôt, pipe works, a motor garage, a power station, saw mills, a timber yard, etc. and trawlers.

The first State undertakings were established in 1911. The brick works, pipe works, metal quarries, motor garage and saw mills compete in general trade; the timber yard and trawlers are almost wholly engaged in supply to the public; the bakery, drug depôt and clothing factory are restricted to supplying "purely sectional needs."

The capital invested in them on the 30th June 1919 was £711,341 and the net loss on them during the year ended on that date was £53,607; the principal losses were £68,238 on the timber yard, etc., and £10,672 on the trawlers.¹¹

In 1919-20 there were losses on two undertakings out of thirteen, viz., £68,476 on the trawling industry and £1,709 on the power station, making accumulated losses on these two industries of £106,450 and £9,872, respectively; the loss on the power station is, however, now apportioned among the undertakings supplied with power. The loss on the trawlers is ascribed to "inefficient management" and "faulty development policy." On the timber yard, which was "peculiarly unfortunate in its management and administration" till September 1919, a profit of £7,119 was made, the accumulated loss on it being reduced to £127,517. The net profits on ten other undertakings during the year varied from £104 to

⁹ Report of the Auditor General on the Accounts of the Central Sugar Mills under Government Control and Self-controlled mills indebted to the Treasury for the year ended 30th June 1920, (C. A. 64-1920).

¹⁰ Report of the Auditor General upon the accounts of the State enterprises for the year ended 30th June 1920 (C. A. 73-1920).

¹¹ Official Year Book of New South Wales, 1919, pp. 135, 352, 375.

£12,411; the total net profits on profitable undertakings were £52,356. The accumulated net profits on 10 undertakings were £199,055 and the accumulated net losses on 3 undertakings were £243,839.¹²

During the year 1920-21 the operations of a State canning factory resulted in a loss of over £205,000, or £21,000 more than its fixed capital.¹³

FRANCE

In the second half of the 17th century Colbert established in France State factories of soap, glass, lace, carpets and cloth, but these factories required much protection and after Colbert's day lost vigour, and only those that ministered to luxury escaped decay.¹⁴ Two, however, are still managed by the State now, viz., the "Manufacture de tapisseries des Gobelins," and the "Manufacture de tapisseries de Beauvais." In the latter furniture tapestry is made. To both are attached museums and technical schools. The "Manufacture nationale de porcelaines de Sèvres" dates from the time of Louis XV; a museum, a laboratory for research and a practical school are attached to it now.¹⁵

The French State monopolies include the manufactures of tobacco, matches and blasting gum and 'foreign commerce' powders. Tobacco is grown in 25 departments by private firms under State supervision. In 1913 the receipts from the sale of tobacco in various forms amounted to fr. 542,000,000 and the cost of manufacture was fr. 115,000,000. In the same year the profits on the sale of matches were over fr. 33,000,000 and the net result of the sale of powders manufactured by the State and of a tax on dynamite and nitro-glycerine manufactured under State supervision amounted to fr. 28,000,000.¹⁶

JAPAN

In the early days of the industrial development of Japan the Government started several factories. In 1872 the Government established a model silk-filature at Tomioka to introduce labour saving contrivances and to train operatives;¹⁷ 1874 the Government established shipyards at Tategami; in 1875 a cement factory at Fukagawa; in 1876 a glass factory at Shinagawa; in 1877 a silk filature at Shimmachi to utilize silk waste and waste cocoons, wool-weaving works at Senju, model cotton weaving works at Aichi and Hiroshima, sugar refineries in Hokkaido, paper factories and printing works at Tokyo, and type-

¹² Auditor General's Report for 1919-20.

¹³ Auditor General's Report for 1920-21, quoted in the Times, Jan. 7, 1922.

¹⁴ Enc. Brit., XI Edn., Vol. 10, pp. 842, 843.

¹⁵ French Year Book, 1919, p. 801.

¹⁶ French Year Book, 1919, pp. 799, 800.

¹⁷ Japan in the beginning of the 20th century, by the Department of Agriculture and Commerce, Japan; pp. 145, 146.

foundries, engineering works, smelting works and soap works in Kamaishi. In 1881 the Government built four cotton spinning mills in various parts of the country, and in 1886 a hemp spinning mill for training spinners. The Government also started the industries of making porcelain in Western style and of making paint. In addition the Government arranged training for female operatives in all new forms of industry.¹⁸

The financial results of these factories were not always satisfactory. Japanese artisans and engineers were lacking in experience, and high wages had to be paid to foreign assistants. Other reasons assigned for financial failure are mismanagement, neglect to give foreign experts a free hand and the employment of a large number of useless and lazy officials, with the result that the expenses were unduly swollen. The educational aspect of these institutions was often lost sight of, e.g., a considerable amount of money was wasted in Hokkaido, a thinly populated island which is far removed from the consumer and lacks means of communication, and could not be converted into a large industrial centre owing to the shortage of labour and the absence of suitable markets for the output.¹⁹

After 1880 the Government in many cases transferred its factories to private companies, as similar private factories were established, and has generally confined its direct management to ordnance and similar factories and the State monopolies of tobacco, camphor and salt.

In 1899 the Government established the Imperial Iron and Steel Works at Yawata-machi with the object of making steel from European pig-iron. The plant, on which about £10,000,000 have been spent, has a capacity of about 300,000 to 350,000 tons of pig-iron per annum, and includes a large and well equipped by-product recovery plant. There are five large modern blast furnaces, each having a capacity of 250 tons of pig-iron. A sixth blast furnace with a capacity of 300 tons is under construction; the capacity of the factory will then be raised to 400,000 tons of pig-iron per annum. The steel plant includes twelve 25-ton open hearth furnaces, six 50-ton furnaces and two 60-ton furnaces. The output of steel materials is at present 563,000 tons per annum, but this is to be raised to 650,000 tons. The total horse power of the factory is 118,128 and it employs over 14,000 hands. The factory is said to have been handicapped by want of experience and want of skill on the part of the workmen.²⁰

Since 1903 the Government has established several saw mills in connection with the State forests but it has been decided to sell some of them.²¹

¹⁸ H. H. Van Kol, *De Ontwikkeling der Groot Industrie in Japan*, Vol. I, pp. 65, 66; *Japan in the beginning of the 20th century*, pp. 415, 416.

¹⁹ *De Ontwikkeling, etc.*, Vol. I, pp. 65, 66.

²⁰ *Times Trade Supplement, Japanese Section*, April 16th, 1921, p. 16; and *Japan Year Book*, 1919-20, pp. 562, 594.

²¹ *Japan Year Book*, 1919-20, pp. 535, 594.

The Insatsukyoku paper mill at first made paper for official purposes, but about 1883 began to make ordinary printing paper and sell it to the public. The guild of paper manufacturers protested, without result, that they could not compete with the Insatsukyoku as the payment of its running expenses by the Government gave it an unfair advantage.²²

The Government monopolies are salt, tobacco and camphor. Tobacco and salt were made State monopolies in 1898 and 1905 with the object of raising revenue; camphor was made a State monopoly in 1898 in order to protect the industry in Formosa.²³ The Monopoly Bureau had sixty-three factories in 1917.²⁴

Salt has been a State monopoly since the 1st January 1906.²⁵ Manufacturers of salt are licensed by the Government and have to sell their salt at a fixed price to the Monopoly Bureau.²⁶ The net profit in 1917-18 from this monopoly was 7,469,000 yen.²⁷

A duty had been levied on tobacco since 1876. After the war with China the law was amended in order to ensure better results, but they were not satisfactory. The Government sent missions to study the administration of the tobacco excise in Europe and America, and in 1898 passed a law, based on the information obtained, which constituted the present tobacco monopoly. Since 1904 the monopoly has covered the manufacture of cigarettes and cigars as well as cut tobacco.²⁸ Permits are issued for the cultivation of tobacco and the leaves are purchased by the Government, which began the manufacture of cigarettes in 1904. In 1908 the Government began the manufacture of cigars from imported tobacco. The finished product is sold by Government to wholesale merchants.²⁹

The results of this monopoly have been very satisfactory; in 1917-18 the net profits amounted to 72,968,000 yen.³⁰

²² *Japanese paper mills*, 1907. Diplomatic and Consular Reports, Misc. Series, No. 669 (ed. 3284-4); pp. 7, 8.

²³ *Japan Year Book*, 1919-20, p. 630.

²⁴ *The Nineteenth Financial and Economic Annual of Japan*, 1919, p. 63.

²⁵ Le Comte de Saint-Maurice, *La Civilisation Economique de Japon*, 1908, 22.

²⁶ *Times Trade Supplement*, p. 20.

²⁷ *The Nineteenth Financial and Economic Annual of Japan*, 1919, p. 24. See also pp. 14, 15.

²⁸ *The Financial and Economic Annual of Japan*, 1904, p. 21; 1908, p. 30; *Japan Year Book*, 1919-20, p. 630.

²⁹ *La Civilisation Economique de Japon*, 1908, pp. 19 to 22.

³⁰ *The Nineteenth Financial and Economic Annual of Japan*, p. 24; see also 14, 15.

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APPENDIX

Bibliography

NOTE.—Part I of the bibliography relates to the industrial development of the countries named, but is not confined to those special forms of State assistance regarding which details have been given in the report. Part II relates to these special forms of State assistance. The bibliographies are very brief as regards unofficial publications but contain longer lists of official publications. Some of the books included in this bibliography contain bibliographies; a statement of lists of publications likely to be useful to persons desiring to consult fuller bibliographies has been added.

PART I

GENERAL

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Report of a Departmental Committee on the post-war position of the Sulphuric acid and Fertiliser Trades. 1918. (Cd. 8994).

Report of the Committee appointed to consider the question of Electric Power Supply. 1918. (Cd. 9062).

Report of the Departmental Committee appointed to consider the position of the Textile Trades after the war. 1918. (Cd. 9070).

(Includes paragraphs on elementary education and scientific and technical education, scientific and technical research, transport, etc., and a section on "The State and Industry.")

Report of the Departmental Committee appointed to consider the position of the Iron and Steel Trades after the war. 1918. (Cd. 9071).

(Includes sections on protection, means of transport, technical education, commercial intelligence, etc.)

¹ Includes a bibliography.

² Contains a brief bibliography.

Report of the Departmental Committee appointed to consider the position of the Electrical Trades after the war. 1918. (Cd. 9072).

Report of the Departmental Committee appointed to consider the position of the Shipping and Shipbuilding Industries after the war. 1918. (Cd. 9092).

Report of the Departmental Committee appointed to consider the position of the Coal Trade after the war. 1918. (Cd. 9093).

Report of the Engineering Trades (New Industries) Committee. 1918. (Cd. 9226).

(Includes paragraphs on research, exhibitions, education, etc.)

Report of Committee to examine the question of Government machinery for dealing with Trade and Commerce. 1919. (Cmd. 319).

Report of the Departmental Committee appointed to investigate the Non-Ferrous Mining Industry. 1920. (Cmd. 652).

(Includes sections on Transport, Taxation and State aid to mining.)

The War Cabinet's Report for the year 1917; (Cd. 9005; 1918).

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Final Report of the Committee on Commercial and Industrial Policy after the war. 1918. (Cd. 9035).

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(Deals with direct mail and passenger services between the United Kingdom and the West Indies; inter-colonial services; steamship communication between the West Indies and Canada; subsidies to steamship companies; and the development of certain West Indian ports.)

³ Contain full bibliographies.

⁴ Contains a short bibliography in the preface.

⁵ Contains bibliographies.

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No. 672. Silk industry of Japan. 1909. (Cd. 4447.)

(Contains some account of encouragement by Government.)

No. 674. Matting industry in Japan. 1909. (Cd. 4447-2.)

(Contains information about Government inspection and experiment departments.)

No. 675. Sugar industry in South Formosa. (Cd. 4447-3.)

(Contains Government regulations and discussion of success of encouragement offered.)

¹² Contains a full bibliography.

¹³ Contains full bibliographies.

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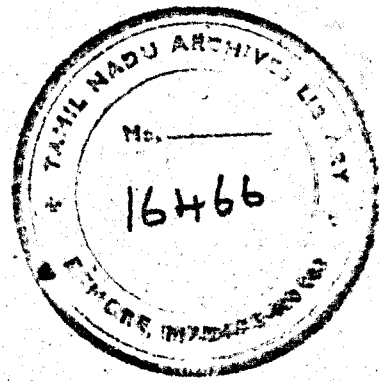
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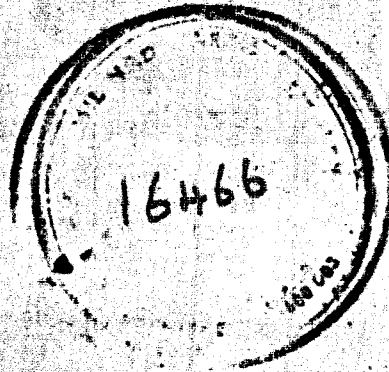
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செப்பவருவர்பெயர் பையர் பகவதர்

செப்பவருவதற்காக எடுத்த
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சுப்பார்க்கம் ஆராய்ச்சி
முயற்சி உதவியாளர்
கையொப்பம் கையொப்பம்

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PREFACE

Under the scheme of Reforms which came into force in India at the end of 1920, the portfolios relative to industries in Provincial Governments were transferred to Ministers responsible to the Legislative Councils of their respective Provinces. At a conference in May 1921, which was attended by these Ministers and their Directors of Industries, it was urged that, while the active participation of Government in the industrial development of the country had now definitely come to be recognized as one of their legitimate functions, those responsible for the development of industries in India feel the need of accurate and up-to-date information regarding the experience gained in other countries where the theory and practice of State aid to industries has reached a more advanced stage of development; that the theory of State aid has developed considerably during the last 5 or 6 years, and in many countries has assumed definite shape in the direction of intervention and control in a variety of ways; and that accurate information on the subject is not available in India.

A proposal was considered to depute to various countries one or more officers with experience in the field of commercial intelligence to investigate the subject on the spot, and to make a complete historical survey of State aid to industries in the countries visited, together with a bibliography of published monographs and official reports dealing with industries and industrial development. This proposal, after a full discussion, was negatived on the grounds that the suggested special deputations would involve considerable expenditure and delay and that the Government of India had under consideration a scheme for the employment of trade commissioners in foreign countries, who will eventually discharge, among other duties, that of collecting such information as that in view.

It was eventually decided to place an officer on special duty in London to collect information on the subject of State aid to industries from such sources as year books, administrative reports, reports from embassies and consuls and other documents available to, or obtainable by, His Majesty's Government.

My instructions in undertaking this work were to investigate, so far as may be possible, the methods by which, and the conditions under which, assistance is afforded to industries by the State in the United Kingdom, the Dominions, France, the United States of America, Japan and Germany, to report the result of my investigations, and to compile a bibliography of the more important books to which reference may be had at first hand for information on the subject. The enquiry was to include all

methods of State aid given for the development of industries, but in particular the following headings were suggested for the enquiry:—

- (a) To what extent aid is afforded by the State to industries in the shape of money grants, subsidies, guaranteed dividends, loans with or without interest, and the raising of share capital;
- (b) Whether any particular classes of industry are maintained under Government control or supervision, and in the former case, the method and extent of such control;
- (c) Whether any, and, if so, what, limitations or restrictions are imposed on State aid to new industries; and
- (d) What experiments in granting assistance have failed and been abandoned, with the reasons so far as they can be ascertained for such failure.

After the enquiry had been going on for three months, advantage was taken of a short visit to London by the Secretary to the Government of India in the Department of Industries to ascertain from him what limits should be placed on the points to be dealt with in detail. It was ascertained that in addition to a brief general indication (without historical references or indications of economic conditions), of the principal methods adopted by the State now or in the past, to assist industries in the countries mentioned, details were desired only regarding direct financial aid to manufacturers (bounties, loans, guarantees or investment of State funds); and regarding State factories (other than munitions factories and factories maintained solely for the supply of commodities to Government Departments or for the purposes of research, experiment, education and training). Detailed information was not desired about assistance given by municipal or local authorities; assistance to primary industries including the disposal of products; customs tariffs; the encouragement of trade and commerce, e.g., by bounties on exports, or subsidies on navigation; assistance for the provision of means of transport or communication or storage; assistance for the supply of power; industrial banks; research, technical and industrial education and training; or measures arising out of the War.

The enquiry was limited by time (five months in all) and by the condition that it was to be confined to London. Many persons whom I consulted expressed the opinion that I should require three years or more to complete the enquiry. It is generally difficult to obtain definite information in London regarding State aid in other countries. Detailed annual reports are not usually available. It is particularly difficult to determine without local enquiry whether State aid has in any particular case really succeeded (*i.e.*, whether the industry could not have been developed quite as well—or even

better—without the State aid given¹), and, if the industry has not been established in spite of the State aid given or offered, what are the real reasons for failure, *i.e.*, whether it is due to the inadequacy or unsuitability of the aid offered or given, or to particular conditions attached to it, or to other causes, such as general trade depression or the lack of enterprise, raw materials or labour; views expressed by contemporary writers are liable to be biassed by a desire either to attack or defend the particular policy adopted, or by preconceived notions as to the desirability or undesirability of State interference in industries. The Government of India, however, desired to ascertain what information could be obtained in a short time in London regarding certain forms of State aid, and to be provided with a guide to sources of information which may be studied by those interested in the subject. No claim can be made that the information in this report is complete. While I have quoted facts and figures which may indicate the extent to which an industry has developed while the State aid was available and in some cases quoted the views of others as to the effect of the State aid, I have generally refrained from expressing any views of my own, and have of course made no suggestion as to the suitability or otherwise of the particular forms of State aid to India at the present time.

I should like to take this opportunity of acknowledging very gratefully the assistance I have received from many quarters, besides the Indian Trade Commissioner and his staff, especially from the representatives of the Dominions and of the United States of America, from the authorities of the Board of Trade, the Department of Overseas Trade, the Foreign Office, the Colonial Office, the Ministry of Agriculture, the Development Commission, the British Museum, the London School of Economics and the Imperial Institute, and from Dr. J. H. Clapham.

A. Y. G. C.

28th February 1922

¹ Dr. Royal Meeker in the preface to his "History of Shipping Subsidies" writes "The greatest value of the historical part of this work is to show that the broad generalisations so frequently made as to the effects of bounties are without foundation, because it is impossible to isolate the economic effects of bounties from those of other economic causes."

CHAPTER I

Principal methods of State aid

GENERAL

It is difficult to give a short summary of the principal methods of State aid adopted from time to time in a particular country without running the risk of conveying false impressions, especially when no reference is to be made to the political or economic conditions under which State aid was given. Different problems in connection with industries have arisen in different countries and at different times in the same country. Some caution appears to be necessary in drawing from experience elsewhere conclusions regarding the advisability of adopting particular forms of State aid. A form of State aid, which may be found advantageous at one period and in one set of circumstances, may not be justifiable or desirable at another period, under different conditions or in another country.

There is hardly a branch of governmental activity which does not in some way affect industries, directly or indirectly, beneficially or otherwise. In particular, laws relating to such matters as land tenure, currency, banks, companies, co-operative societies, patents, trade marks, and labour, may materially affect industries. It appears, however, to be generally recognized that the development of industries leads to greater national wealth and to increased prosperity of the people, though the State may find it necessary to interfere to prevent such evils as sweating and unhealthy conditions of employment. Governments, in the first place, take measures which are calculated to smooth the way for the development of industries by the enterprise, energy, skill and inventiveness of the people; for this purpose measures are taken to secure the safety of person and of property (intellectual as well as material), courts which are above reproach, general education and health for all, and freedom for every individual to select his own vocation. As industries depend on foreign as well as domestic trade and commerce, both for raw materials, fuel and machinery and for markets, means are adopted to protect the persons and property of nationals abroad, to see that safe and cheap means of transport and communication are provided, both within the State and beyond its borders, to remove such restrictions on trade as internal customs duties, to guarantee that the coinage, weights and measures shall be definite and clearly understood, and to ensure, by inspection and analysis if necessary, that other terms used in trade, *e.g.*, those relative to particular commodities, shall have definite meanings. Governments generally assist industries by undertaking or giving grants in aid towards research and experiment, the collection and publication of information, technical education and industrial training,

museums and exhibitions of raw materials, models of machinery and manufactured articles, and libraries. In some cases the State has provided irrigation works or the supply of electrical power. Other measures which are sometimes adopted are protective customs tariffs, the encouragement of suitable immigrants or settlers on land, the grant of loans or of bounties in various forms (*e.g.*, in cash, in drawbacks of excise or customs duties, in land on favourable terms, or in remission of taxation) and the establishment of State factories.

GREAT BRITAIN

In England from the time of the Norman Conquest (1066) to the middle of the 19th century, the State, as represented in the Crown or the Government, constantly took an active interest in the development of industries.

The immigration of foreign merchants and artisans was encouraged, and the industrial development of England in mediæval times was largely due to them.¹ At various times the exportation of raw materials, such as wool, and the importation of finished articles, were prohibited but such measures were generally defeated by smuggling.² The law regulated terms of apprenticeship and the operation of guilds and in some cases the methods of manufacture, and provided for the inspection of finished articles in the interest of the consumer, thereby assuring maintenance of quality. In the 14th century a Navigation Act provided that imports and exports must be carried in British ships an impracticable undertaking, as there were not enough British ships.³ The first English consul in the Mediterranean was appointed in 1485.⁴

Serfdom passed away in the 16th century.⁵ The modern era of industrialism may be regarded as dating from the time of Elizabeth (1588—1603) when capitalism arose.⁶ Bounties were used for the encouragement of certain industries, including ship-building.⁷ It was recognized that industry depended on foreign trade to some extent; harbours were improved, and, later, lighthouses were erected:⁸ the trade of the colonies was controlled so that they should provide raw materials and markets for home industries;⁹ special

¹ W. Cunningham, *The Growth of English Industry and Commerce, Early and Middle Ages*, pp. 183, 304, 641;

W. Cunningham, *The Growth of English Industry and Commerce in Modern Times*, pp. 59, 60, 516, 623;

Sir Frank Warner, *The Silk Industry*, pp. 24, 33, 40, 44, 47, 50;

E. Lipson, *The English Woollen and Worsted Industries*, pp. 10, 12, 26.

² *The Growth of English Industry and Commerce, Early and Middle Ages* p. 177, n., pp. 192, 308, 429, 430, 492, 515.

³ *op. cit.*, p. 394.

⁴ *op. cit.*, p. 417.

⁵ *op. cit.*, p. 534.

⁶ *The Growth of English Industry and Commerce in Modern Times*, pp. 1, 8 to 12.

⁷ *op. cit.*, pp. 64, 324, 484, 485, 486, 516, 523, 591.

⁸ *op. cit.*, pp. 66, 468.

⁹ E. L. Bogart, *The Economic History of the United States*, pp. 100—102;

The Growth of English Industry and Commerce in Modern Times, p. 474, n. 5, pp. 425, 435.

privileges were allowed in respect of trade with certain countries¹⁰ and monopolies were granted for the establishment of new industries and enterprises at home;¹¹ trade was considered in treaties with foreign powers.¹² Marine insurance was common in the 15th century,¹³ and banking in the interests of trade was established by the 17th century, though its beginnings are obscure; a bankruptcy act was passed in 1571.¹⁴

In the eighteenth century the Government took up the improvement of the high roads, which in earlier times had been left to "private benevolence."¹⁵ Rewards and patents were granted for inventions, and the exportation of machines, plans and models and the emigration of operatives were prohibited;¹⁶ but the great industrial development of the last two centuries was due more to the inventiveness, resource and enterprise of the people than to State direction or assistance.

In the first half of the nineteenth century the protective tariff and navigation laws were repealed, and the policy of free trade and *laissez faire* was adopted, but the State has had to interfere on behalf of the workers, and it exercises some control over railways and canals and has granted subsidies to shipping to encourage trade on particular routes.¹⁷

Recently the Government has endeavoured to assist industries by grants-in-aid of technical and industrial education and research and the supply of information regarding foreign countries through consular and other officers, and, in the peculiar conditions prevailing at the end of the war, by "exports credit" schemes, by anti-dumping duties, and, in certain cases, by the investment of public funds.

CANADA

Two of the principal difficulties which the Governments of the various British Dominions have had to meet in developing industries have been vastness of area and sparseness of population.

In Canada the Dominion Government's expenditure on roads appears to have been comparatively small until recent years. In 1919 the expenditure was authorized of \$20,000,000 in five years to assist the Provinces in the construction and improvement of highways.¹⁸ The Dominion Government has, however, given considerable assistance to railways by grants of land, subsidies, and loans, and the guarantee of bonds or interest. In recent years assistance

¹⁰ *The Growth of English History and Commerce in Modern Times*, pp. 214 to 284.

¹¹ *op. cit.*, pp. 58, 60, 61, 289, 294.

¹² *op. cit.*, pp. 196, 197.

¹³ *op. cit.*, p. 489.

¹⁴ *op. cit.*, p. 144.

¹⁵ *The Growth of English Industry and Commerce in Modern Times*, pp. 535, 536.

¹⁶ *The Economic History of the United States*, p. 151.

¹⁷ K. Coman, *The Industrial History of the United States*, p. 264.

¹⁸ *Canada Highways Act; Statutes*, cap. 54 of 1919.

has largely taken the form of guarantees of bonds. The Provincial Governments and municipalities have also given substantial aid to railways. The Dominion Government owns, operates and constructs railways itself,¹⁹ but the Government railways are generally worked at a loss.²⁰ It is claimed that the railway mileage of Canada is larger in proportion to the population than that of any other country in the world.²¹

The Government has constructed and maintained navigable canals, especially in connection with navigable lakes and rivers,²² and has also constructed graving docks,²³ subsidized the construction of dry docks²⁴ and advanced money for the construction of harbours.²⁵

The Dominion and Provincial Governments have endeavoured to improve agricultural practice, and have established experimental farms and colleges of agriculture.²⁶ Under Provincial Acts financial assistance may be given to farmers by different methods by the various Provincial Governments and municipal councils, *e.g.*, by loans to farmers direct for various purposes, by guaranteeing a portion of a loan made by a loan company and the interest on it, by purchasing and re-selling partly on credit real estate and live-stock, by supplying seed-grain on credit, by guaranteeing half the securities of a co-operative credit society and by making agreements with chartered banks and other persons to guarantee loans of seed-grain or of money to buy seed-grain.²⁷ Settlers are encouraged by conditional free grants of Government land or the sale to them of such land on favourable terms and by loans.²⁸

The grain trade of Canada is highly organized. Elevators were introduced in 1880, and all grain, shipped in car-load lots or cargoes from elevators, is subject to Government inspection and grading; the Government has built and operates five terminal elevators.²⁹

The mineral resources of Canada have been scarcely touched as yet, although the Government has done valuable exploration work and issued reports; but "the real value of mineral deposits can usually only be determined by costly development work, which must be left to the enterprise of capitalists," and Canada has suffered in this respect from lack of capital.³⁰

¹⁹ *Canada Year Book*, 1920, pp. 457 to 459, 469, 470.

²⁰ *op. cit.*, p. 471.

²¹ *Canada Year Book*, 1918, p. 66. For the early history of the railways in Canada see *Statistical Year Book of Canada*, 1894, pp. 198 to 231.

²² *Statistical Year Book of Canada*, 1894, pp. 715 to 734.

²³ *Canada Year Book*, 1920, pp. 659, 670.

²⁴ *Statutes of Canada*, cap. 17 of 1910, etc., *Canada Year Book*, 1920, pp. 669, 670.

²⁵ *Canada Year Book*, 1920, p. 671.

²⁶ *op. cit.*, pp. 279 to 287.

²⁷ *Canada Year Book*, 1918, pp. 530 to 540.

²⁸ *op. cit.*, pp. 584 to 591; *Canada Year Book*, 1920, pp. 655 to 661.

²⁹ *Canada Year Book*, 1914, pp. 454 to 457; 1918, pp. 68, 394; 1920, pp. 446 to 448.

³⁰ *Canada Year Book*, 1916-17, p. 40.

The Government has aided fisheries by the grant of bounties since 1882; these bounties are given to the owners of fishing vessels and fishing boats, and to vessel and boat fishermen. The Government also bears one-third of the ordinary express charges for conveying fresh fish from the coast to inland markets, assists the building of small cold storage establishments for bait, and breeds fish on an extensive scale.³¹

Ship-building in Canada was stimulated during the war by orders from the Imperial Munitions Board and from the Dominion Department of Marine.³²

Subsidies are paid to various shipping companies for "trade services, including the conveyance of mails."³³ The coasting trade of Canada is restricted to British ships.³⁴

Bounties have been offered by the Dominion Government on iron, steel, lead, zinc and crude petroleum, and on Manila fibre used in the manufacture of binder twine or cordage.

Free trade between the Provinces was established under the first tariff adopted after the Confederation in 1867 and has been maintained since. The Dominion tariff duties were moderate until 1879, when a protective tariff was adopted. The tariff has been amended from time to time, and Great Britain and the British Dominions and the Colonies now generally enjoy a substantial preference.³⁵

In 1913 the Canadian Royal Commission on industrial training and technical education made a full report after examining the systems in force in certain other countries besides Canada; they reported as regards Canada that "the general testimony was to the effect that provision for the systematic industrial training and technical education of hand workers and foremen exists in comparatively few places, and in them not to an extent adequate to the needs of the industrial population."³⁶ They noted that "testimony was received as to the usefulness of libraries and librarians in the technical education of workers."³⁷ In 1919 the Dominion Parliament appropriated \$10,000,000 to be allotted as grants "to Provincial Governments during ten years in aid of technical education."³⁸

In 1915 an Advisory Council for scientific and industrial research, was appointed; it has established studentships and fellowships for research and provided a fund from which grants in aid of research are made.³⁹

³¹ *Canada Year Book*, 1920, pp. 293 to 296.

³² *Canada Year Book*, 1920, pp. 7, 8, 501.

³³ *op. cit.*, pp. 517, 518.

³⁴ *Canada Shipping Act*, cap. 113 of Revised Statutes, 1906, sec. 955.

³⁵ *Canada Year Book*, 1913, pp. 24, 26.

³⁶ *Canada Sessional Paper*, No. 191d—A 1913, p. 1643.

³⁷ *op. cit.*, p. 1647.

³⁸ *Statutes of Canada*, cap. 73 of 1919; *Canada Year Book*, 1920, pp. 49, 50, 129.

³⁹ *Canada Year Book*, 1916-17, pp. 619 to 623; 1918, pp. 581 to 584.

The municipal councils of the smaller towns frequently assist manufacturers to establish factories, etc. Local bodies appoint industrial commissioners, who endeavour to increase the importance of their towns from a business point of view. The assistance given generally takes the form of a remission of rates, e.g., one city which has extensive water powers offers exemption from taxes for a period of ten years to manufacturers who locate factories within its boundaries.

AUSTRALIA

In order to encourage immigration of suitable settlers, the land laws of the various States of Australia permitted the conditional grant of land, rent free or on favourable terms for a number of years, and the States' Governments made loans to settlers and farmers.⁴⁰

The States have constructed harbours, railways, roads and bridges, and made grants to the local authorities for roads and bridges.⁴¹ Inter-state traffic by railway is, however, hampered by the fact that the railways in adjoining States are of different gauges. The railways are generally State-owned. New South Wales paid subsidies to shipping.

Victoria adopted a protective tariff in 1866.

The amount spent in Australia on technical education is described as "comparatively insignificant."

Since the creation of the Commonwealth of Australia in 1901, the Federal Government has endeavoured to encourage industries by the abolition of inter-colonial tariffs;⁴² by the grant of bounties on certain agricultural products⁴³ (which seem to have generally had little effect on production), combed wool or tops,⁴⁴ sugarcane and sugar-beet,⁴⁵ and on certain manufactures mentioned later; by subsidies to shipping;⁴⁶ by undertaking ship-building and by establishing the Commonwealth Shipping Line;⁴⁷ by the grant of a loan of not more than £550,000 to a company for the erection of silos and elevators;⁴⁸ by the establishment of the Institute of Science and Industry;⁴⁹ by a protective tariff;⁵⁰ and, during and since the war, by measures for the formation of pools to arrange for the marketing of the whole produce of Australia in respect of wheat,⁵¹ sugar,⁵² wool,⁵³ and fruit.

⁴⁰ *Official Year Books of the Commonwealth of Australia*, No. 4, p. 235; No. 13, p. 261.

⁴¹ *Year Book*, No. 13, pp. 974, 652 and 640.

⁴² *Customs Tariff Act*, 1902; *Year Book*, No. 13, p. 573.

⁴³ *Year Book*, No. 13, p. 395.

⁴⁴ *op. cit.*, p. 334.

⁴⁵ *Year Books*, No. 6, p. 304; No. 13, p. 383.

⁴⁶ *Year Book*, No. 13, p. 726.

⁴⁷ *op. cit.*, p. 637.

⁴⁸ *The Western Australian Farmers' Agreement Act*, No. 13, of 1920.

⁴⁹ *The Institute of Science and Industry Act*, 1920.

⁵⁰ *Year Book*, No. 13, p. 616.

⁵¹ *Year Book*, No. 13, p. 362.

⁵² *op. cit.*, p. 388.

⁵³ *op. cit.*, p. 337; *Times*, Nov. 29, 1921.

NEW ZEALAND

In New Zealand practically all the railways are owned by the State.⁵⁴ The State owns and works coal mines⁵⁵ and offers assistance to prospectors for minerals in the form of subsidies, loans, expert and technical advice, use of plant, etc. In 1919, £9,943 was paid as subsidies to fifteen prospecting parties, and further subsidies amounting to £1,440 were approved; but no important results were obtained.⁵⁶ The State also makes loans to mining companies for development and subsidizes the construction of roads to mining fields.⁵⁷

A special department administers the kauri-gum industry.⁵⁸ The State establishes and manages hydro-electric supply installations.⁵⁹ It also makes loans to dairy companies for the acquisition of land and the erection of buildings and machinery.⁶⁰

The customs tariff became protective in intention in 1895. Preference in favour of British products was given as long ago as 1841, and Imperial preference was introduced in 1903.⁶¹

SOUTH AFRICA

In South Africa the principal industries are agriculture and mining. The Governments have constructed roads, railways and harbours.⁶² The land laws provide for settlement on the land and for the grant of advances to lessees for development. Borchholes are sunk and windmills erected for lessees in certain cases.⁶³ The Union Land Bank, formed by the amalgamation of the State Land Banks and financed by the Union Government, makes advances to farmers for various purposes.⁶⁴

The Governments also assist agriculture by research and experiment,⁶⁵ by the provision of agricultural education and instruction,⁶⁶ by the publication of useful information,⁶⁷ by grants in aid of creameries,⁶⁸ by the importation of stallions and cattle,⁶⁹ and by arrangements in the Ocean Mail contract for the free conveyance of pedigree stock to South Africa.⁷⁰ A proposal that the Government should build elevators has been approved.⁷¹

⁵⁴ *New Zealand Official Year Book*, 1919, p. 464.

⁵⁵ *op. cit.*, p. 432.

⁵⁶ *op. cit.*, pp. 593, 595, 597.

⁵⁷ *op. cit.*, p. 523.

⁵⁸ *op. cit.*, p. 535.

⁵⁹ *op. cit.*, p. 620.

⁶⁰ *op. cit.*, p. 550.

⁶¹ *op. cit.*, pp. 427 to 432.

⁶² *Official Year Book of the Union of South Africa*, No. 3, pp. 851, 745, 725.

⁶³ *op. cit.*, pp. 454 to 463.

⁶⁴ *op. cit.*, p. 463.

⁶⁵ *Official Year Book of the Union of South Africa*, No. 3, pp. 423, 515, 323, 636, 538.

⁶⁶ *op. cit.*, pp. 503, 536.

⁶⁷ *op. cit.*, p. 496.

⁶⁸ *op. cit.*, p. 503.

⁶⁹ *op. cit.*, pp. 499, 501.

⁷⁰ *op. cit.*, p. 513.

⁷¹ *op. cit.*, p. 520.

Attempts have been made to assist mining by advances and grants, but these have generally failed. Other methods of State assistance to mining have been the construction and repair of roads, the importation of experts from overseas, technical education and the making of assays and analyses at low fees.⁷²

By providing an experimental trawler, the Government of Cape Colony succeeded in establishing the trawling industry.⁷³

Assistance to manufacturing industries has taken the form of an economic survey of natural resources, research, the publication of information, advice,⁷⁴ and technical education.⁷⁵ Before the formation of the Union in 1910 conventions were made at various times between the Colonies and Republics in South Africa to provide for mutual free trade and for a common external tariff. Since 1910 the customs have been controlled by the Union Government, the tariff is moderately high but appears to be devised for revenue purposes; a preference, which is generally 3 per cent. *ad valorem*, is granted on goods which are the growth, produce or manufacture of the United Kingdom and reciprocating British Possessions.⁷⁷

The war had a great effect on manufacturing industries, the value of their output in 1917-18 being three and a half times its value in 1911.⁷⁸

FRANCE

France had made considerable progress industrially before the Revolution of 1789. The system of State control of industries established after the Hundred Years' War (1337-1453) served, to some extent, as an example to England.⁷⁹ In the sixteenth century the State constructed roads, prohibited the import of certain manufactured articles and freed raw materials from import duties, and commercial companies were formed.⁸⁰ In the seventeenth century State factories for the manufacture of soap, glass, lace, carpets and cloth were established, but they had the effect of checking private enterprise.⁸¹ Colonies had been founded and capitalism had long existed in France before the Revolution.⁸²

The Revolution, however, freed industries "from surviving medieval restrictions and the excesses of official control,"⁸³ serfdom and feudal payments were abolished and the peasants were

freed.⁸² Napoleon I built or restored roads and bridges, improved the navigation of rivers⁸³ and established prohibitions and high tariffs, but, owing to smuggling, prohibition was replaced later by the imposition of duties.⁸⁴ A commercial code was passed.⁸⁵

As an example of State industrial training at this time may be mentioned the establishment of a model weaving shed for the introduction of the fly shuttle.⁸⁶

Dr. Clapham has said: "If legislative and administrative action could industrialize a country, France would have moved more quickly. The Revolution had removed all obstacles to free enterprise. Both the Revolutionary and Napoleonic Governments held that the State must do its utmost to help industry without fettering it. Weights and measures had been rationalized and unified. Museums of arts and crafts and industrial exhibitions had been projected during the Reign of Terror, though the first exhibition was delayed until 1798. Schools of civil engineering and of mining were encouraged long before England had anything of the kind. Under the pressure of war needs and the British blockade the scientific aspects of industry had been explored All the Governments worked hard to acclimatize the new English mechanical knowledge⁸⁷ There were reasons much more permanent and deep seated than revolution and war to explain why no amount of intelligent official action could make France follow England's steps at England's pace. 'We are,' wrote Chaptel in 1828 after more than a decade of peace, 'far from having that profusion of machines which one sees in England. . . . It is because labour is cheaper with us and because the cheapness of fuel in England enables them to employ machines everywhere with advantage.'⁸⁸

The Bank of France was founded in 1808.⁸⁹ Later the State built railways and assisted by guarantees their construction by companies.⁹⁰ Subsidies were given for shipbuilding and to shipping lines;⁹¹ commercial treaties were made with foreign countries;⁹² and chambers of commerce, which are quasi official bodies, were established.⁹³

GERMANY

Between 1740 and 1786, during the reign of Frederick the Great, there was "a vast economic revival and expansion in all parts of the young Kingdom" of Prussia. Frederick endeavoured to pre-

⁷² *op. cit.*, pp. 267, 605 to 608.

⁷³ *op. cit.*, p. 548.

⁷⁴ *op. cit.*, p. 653.

⁷⁵ *op. cit.*, pp. 277, 286.

⁷⁶ *op. cit.*, p. 656.

⁷⁷ *op. cit.*, pp. 661 to 676.

⁷⁸ *op. cit.*, p. 625.

⁷⁹ *The Growth of English Industry and Commerce in Modern Times*, p. 207.

⁸⁰ *Encyclopædia Britannica* XIth edition, Vol. X, p. 833.

⁸¹ *op. cit.*, p. 842. *The Growth of English Industry and Commerce in Modern Times*, p. 98, n. 3.

⁸² J. H. Chaplain, *The Economic Development of France and Germany, 1815-1914*, p. 2.

⁸³ *op. cit.*

⁸² *op. cit.*, pp. 1, 14.

⁸³ *op. cit.*, pp. 104, 105.

⁸⁴ *op. cit.*, p. 75.

⁸⁵ *op. cit.*, p. 130.

⁸⁶ *op. cit.*, p. 55.

⁸⁷ *op. cit.*, p. 54.

⁸⁸ *op. cit.*, p. 56.

⁸⁹ *op. cit.*, p. 125.

⁹⁰ *op. cit.*, pp. 145 to 148.

⁹¹ *op. cit.*, pp. 110, 244; P. Ashley, *Modern Tariff History*, pp. 317, 334, 342 to 346; *French Year Book*, 1919, p. 842.

⁹² *Economic Development of France and Germany*, p. 178.

⁹³ *The French Year Book*, 1919, p. 813.

event, by prohibition or high duties, the import of foreign commodities, but gave bounties on the export of Prussian manufactures. The export of raw materials was prohibited; excise taxes were reduced; new industries were subsidized; foreigners with manufacturing skill and knowledge were welcomed; grants and loans were made "for the purchase of raw material, for the establishment of technical education, and for the introduction of foreign teachers;" the guild system was relaxed; roads and canals were made. Some of the principal Prussian manufacturing and mining industries date back to the eighteenth century or earlier.⁹⁴

The principal methods by which the State appears to have aided the development of industries in Germany during the nineteenth century are the emancipation of peasants and workers, the formation of a customs union⁹⁵ the consolidation of the independent States into one Empire, the adoption of a uniform system of weights, measures, and coinage, general and technical education, the encouragement of scientific research, communications, colonies, the manipulation of freight rates on State railways, protective tariffs, commercial treaties, banking and commercial legislation, the effective use of diplomatic and consular agents for the encouragement of trade, and a constant general interest in the development of industries.

Local authorities also aid industries to some extent by facilities in obtaining sites, by loans, and by assisting technical institutions.

The rapid development of the chemical and electrical industries in Germany is ascribed partly to "a broad and true foundation of scientific knowledge."⁹⁶ Professor Marshall mentions as one of the causes of the great advance in Germany's output of steel,⁹⁷ the "superiority of German educational methods over British as a preparation for the work of modern business."

Mr. Dawson remarks: "Both industry and trade receive encouragement and practical help from the Governments of the various States, and within its more limited power from the Imperial Government. The idea that a German ambassador is a sort of superior commercial agent is, of course, absurd, yet the fiction had its origin in a fact, which is that German diplomatic representatives abroad are very properly alive to the close connection of national trade and national prosperity, and are not slow to do industry a service when the opportunity occurs. Protective legislation apart, the fact that the railways are, with insignificant exceptions, State undertakings enables the Governments to render a great service, both to industry and agriculture, by regulating transport charges according to special circumstances, geographical and otherwise, while the export trade is systematically assisted by means of low

⁹⁴ W. H. Dawson, *Protection in Germany*, pp. 3 to 6.

⁹⁵ This provided internal free trade between the States joining it, and a common external customs tariff.

⁹⁶ *Economic Development of France and Germany*, p. 303.

⁹⁷ *Industry and Trade*, pp. 556, 557.

preferential tariffs specially designed to enable the home manufacturers to enter foreign markets on favourable conditions⁹⁸. The State also shows its concern for the promotion of trade by the construction of inland water-ways, a branch of navigation which in Germany is now seldom touched by private enterprise How the Central and State Governments help industry on the occasion both of national and international exhibitions has been brought home to English commercial men on many occasions. Some of the States maintain, and still more subsidize, stationary and travelling exhibitions of industrial products within their own borders. The Grand Duchy of Hesse is one of the least of the States, with a population of under a million and a quarter and with but a single large town, yet it maintained and has maintained since 1836—when its inhabitants were only half their present number—a Central Agency for industry which serves as a national information bureau on industrial and commercial questions. As time grew its functions broadened, and for many years it has also controlled the industrial and technical instruction of the State, maintaining a large library and industrial museum and a chemical laboratory, and conducting examinations for masters and journeymen in various industries. In 1906 the Central Agency had 136 technical schools under its care, being more than one to every thousand inhabitants. Wurtemberg, in proportion to its population and wealth, does even more for industry and commerce on much the same lines, though every State has national institutions which by different means achieve the same ends. . . . Nor is the Emperor's direct encouragement wanting. . . . Industry, commerce and shipping all owe much to the encouragement which the Emperor has given them."⁹⁹

UNITED STATES OF AMERICA

Before the United States of America became independent the colonies were necessarily affected by legislation in England, *e.g.*, the navigation laws of the 17th century (which required the use of English or colonial ships in colonial trade) encouraged shipbuilding,¹⁰⁰ but other restrictions on trade and manufactures hampered the development of the Colonies.¹⁰¹ In the seventeenth century the Colonial Governments endeavoured to encourage manufacture by the offer of bounties and the imposition of import and export duties—sometimes for protective purposes—in addition to those levied in England; but these efforts met with little success, partly owing to the sparseness of the population.¹⁰²

By the constitution of 1789 the control of foreign commerce, and therefore of import and export duties, was vested in the Federal

⁹⁸ The State railways were, however, so managed as to be profitable investments.

⁹⁹ *Evolution of Modern Germany*, pp. 87 to 89.

¹⁰⁰ E. L. Bogart, *The Economic History of the United States*, p. 95.

¹⁰¹ *op. cit.*, p. 100.

¹⁰² *op. cit.*, pp. 59 to 63.

Congress,¹⁰³ and the tariff, though at first moderate, was, from the earliest days, intended to be protective. The duties became high after 1824.¹⁰⁴

Before 1807, the States frequently aided private road companies;¹⁰⁵ after that date the Federal Government undertook the construction of a national road, and the States constructed canals and roads and later railways.¹⁰⁶ Owing, however, to the failure of the State Governments in these enterprises,¹⁰⁷ they withdrew in most cases after 1837 from such undertakings as railways and canals,¹⁰⁸ though they assisted the establishment of railways by contributions of capital and credit and by grants of land.¹⁰⁹ In 1870 the States, and in 1887 the Federal Government, took power to regulate such matters as maxima rates, pooling, and discrimination.¹¹⁰ The Federal Government now carries on investigations and experiments regarding road-making, maintenance and materials, furnishes expert advice on the subject¹¹¹ and makes grants to State Governments for rural post roads.¹¹²

The territorial expansion of the United States in North America continued until 1853, and much attention was paid by the Governments to the opening up and development of new lands.¹¹³ A national banking system was finally established after the failure of the system of private note-issuing banks chartered by the various States.¹¹⁴

The patent law encouraged the inventiveness of the American.¹¹⁵

Shipping subsidies were given in 1891 and later years. During the recent war the Federal Government built and acquired ships through the Shipping Board which has continued its activities since the war.¹¹⁶

The industry of agriculture has been materially assisted by the Federal and States' Governments, by education, research, experiment, and the introduction of seeds and plants, by peripatetic lec-

¹⁰³ *op. cit.*, p. 117.

¹⁰⁴ F. W. Taussig, *The Tariff History of the United States*, pp. 15, 24.

¹⁰⁵ *Economic History of the United States*, p. 207.

¹⁰⁶ *op. cit.*, pp. 209, 211, 214.

¹⁰⁷ The failure has been ascribed to incompetency and corruption—see J. W. Million, *State Aid to Railways in Missouri*, Economic Studies of the University of Chicago.

¹⁰⁸ *Economic History of the United States*, p. 215.

¹⁰⁹ *op. cit.*, pp. 233, 453.

¹¹⁰ *op. cit.*, pp. 355, 371.

¹¹¹ *Statutes of the United States of America*, 65th Congress Sess. II, ch. 178 (vol. XL, p. 1001).

¹¹² *Statutes of the United States of America*, 64th Congress, Sess. I, chap. 241, and 65th Congress, Sess. III, chap. 69, Sec. 5.

¹¹³ *Economic History of the United States*, pp. 169, 287, 293.

¹¹⁴ K. Coman, *The Industrial History of the United States*, pp. 155, 193, 235, 241.

¹¹⁵ *Economic History of the United States*, pp. 177, 437; *Industrial History of the United States*, p. 207.

¹¹⁶ *Eighth Annual Report of the Secretary of Commerce*, 1920; p. 171, *Quarterly Journal of Economics*, Aug. 1920, Vol. XXXIV, No. 4, pp. 557 to 606.

turers and by the publication of information and the giving of advice.¹¹⁷

The mining industry is aided by scientific and technological investigations concerning mining, the treatment of ores, etc., and by mining experiment stations.¹¹⁸

Other industries are assisted by technical education, towards which the Federal Government¹¹⁹ and States' Governments contribute, by research and the collection and publication of much valuable information on a great variety of subjects.¹²⁰

The causes of the industrial expansion of the United States are discussed in the Cambridge Modern History. "That the tariff was an influential factor in this development is beyond question. In some cases entirely new industries were established under its shelter; for example, the manufacture of silk and the tin-plate industry, the most recent illustration of a new industry created outright by conscious effort. The initial costs necessary to the production of iron and steel on a large scale would have delayed the wonderful developments in these lines, had it not been for the protected prices of the early period. On the other side, however, must be placed the increased costs to other manufacturers and the diminished purchasing power of the farmer. It may be asserted with confidence that the power of the tariff, whether for good or evil, has been vastly overrated. . . . On the other hand the main causes of industrial growth lie deeper than the regulations of commercial policy. . . . The primary causes of industrial growth in the United States are to be found in the character of the people and the natural advantages of the country. It is not necessary to enlarge on those general qualities of nervous energy, alert intelligence, directness in method, independent initiative, and daring enterprise, combined with an eager absorption in the pursuit of material success, which, partly inherited but largely acquired during a century's command of unlimited resources, have marked the people of the United States perhaps above all others. A special characteristic, however, of the American, which has had an important influence on the industrial advance of the country, is his ingenuity in invention combined with a peculiar aptitude in the use of machinery. . . . His practical sense finds full scope in the production of large quantities of uniform commodities by quick machine methods. A further characteristic of the aptness of the race in these respects is the promptness with which the inventions of others have been adopted and brought to greater perfection. The history of many typical American industries is the history of inventions first made by Europeans, which remained without economic result till perfected and made financially success-

¹¹⁷ *Economic History of the United States*, p. 344. A Franc, *Use your Government*, Part I.

¹¹⁸ *Statutes of the U. S. A.*, 65th Congress, Sess. I, ch. 27; Sess. II, ch. 113, Vol. XL, pp. 145, 146, 670, 671.

¹¹⁹ *Statutes of the U. S. A.*, 64th Congress, Sess. II, ch. 114, and 65th Congress, Sess. I, ch. 79.

¹²⁰ *Annual Report of the Secretary of Commerce; Use your Government*, Part III.

ful in the United States. . . No small share of the credit for this constant succession of inventions belongs to the system of patent right. . . . Endowed with such qualities for industrial success, the people were rapidly increasing through natural causes, while receiving enormous additions to their labour through immigration.

"The second great factor in the industrial growth of the country has been its unparalleled command of natural resources. . . . A glance at the map shows the wonderful geographical advantages which this country enjoys. . . . Within the area thus situated is to be found a greater variety of climate, soil and mineral resources than in any equal area of the world. . . . Within this area there existed no artificial barriers to the growth of commerce. . . .

"With such a combination of advantages as has now been briefly described, the progress of industry was inevitably rapid. . . . While the population was, roughly speaking, doubled between 1860 and 1890, the capital invested in manufactures increased six-fold from \$1,000,000,000 to over \$6,000,000,000, the value of the products above five-fold, the number of persons employed three-fold and their wages nearly five-fold. . . .

"The last few years" (1890-1902) "have witnessed in the United States an expansion of industry and a growth of material prosperity which have not been equalled in any period of equal length in its history. . . . The industrial expansion which has been described above has been accompanied by, and is in some degree the result of, a widespread re-organization of business control, which has brought to the fore the entirely new problem of capitalistic concentration."¹²¹

JAPAN

The modern development of industries in Japan dates from the restoration of the Emperor in 1868. At first the Government, in a steady pursuit of the policy of industrial development on Western lines, itself undertook various industrial enterprises. From 1880 industrial ventures on a commercial scale were more generally left to private enterprise with encouragement by the State. Until the year 1889 Japan was precluded by treaties from raising more than a 5 per cent. *ad valorem* customs duty. The tariff and commercial treaties of 1899 marked the beginning of a new stage in the development of Japanese industries. The industries developed remarkably during the great war and immediately after its close, but in 1919 a period of depression ensued.

The principal methods adopted by the State for the encouragement of industries, in addition to those already mentioned, were the grant of complete freedom to all to follow any calling and to possess or deal in land; the spread of education, which was made compulsory, though not free, in 1872; the purchase and working of

mines;¹²² the opening of model factories; the establishment of national laboratories for research, and of institutions to give technical education and training; the employment of foreign experts and the dispatch of Japanese to foreign countries for the purpose of study;¹²³ the construction of railways and harbours; exhibitions; the organization of the banking system and the passing of legislation relating to patents, companies, trade-marks, guilds, etc. Up-to-date machinery was obtained from Europe for the State factories, and such machinery was also placed at the disposal of private individuals on advantageous terms. Financial assistance was given in the form of subsidies (including subsidies for ship-building and to shipping companies), advances, remission of taxation for a term of years and the grant of land free or at a nominal rent, and the Government took shares in industrial undertakings. It established exchanges and chambers of commerce; consuls were appointed to foreign countries, and the Government subsidized the establishment of undertakings in other parts of the world for the benefit of home industries.

¹²² *Financial and Economic Annual on Japan*, No. II, 1902; p. 45.

¹²³ In his *Japan the New World Power* (2nd edition, pp. 316, 317), Mr. R. P. Porter states that the Government sent in all about 300 students abroad for the purpose of acquiring practical knowledge in relation to manufacturing, mining and agriculture and in 1911 about 110 young Japanese were so engaged.

¹²¹ *Cambridge Modern History*, Vol. vii, *The United States*; 1903, pp. 700 to 718.

CHAPTER II

Bounties on the manufacture of sugar

The "Sugar Bounties," which attracted so much attention in the nineteenth-century, were not direct bounties, but arose out of the methods of calculating excise duties on sugar. In 1881 it was stated in a Board of Trade Memorandum on the subject that "no one knows what the amount of any foreign bounty is; in many cases there is no agreement whether there is a bounty or not; even where bounties are admitted to exist, they differ, not only in each different country, but in different seasons and circumstances in the same country; on different quantities of the raw material; and almost, it may be said, on every parcel of sugar."¹

GERMANY

In Germany in 1880 the excise duty was 10 marks on 1 cwt. of raw sugar, but the duty was paid on the weight of the beetroot used, it being assumed that 1 cwt. of raw sugar was produced from 12½ cwt. of beets.² If a manufacturer succeeded in making 1 cwt. of raw sugar from 10 cwt. of beet, he would pay 10 marks excise duty on 1½ cwt. of raw sugar, or 8 marks on 1 cwt. and so, on this account alone, would reduce the cost (including duty) of manufacture of 1 cwt. of raw sugar by 2 marks, and would improve to that extent his advantages over a manufacturer who did not extract more than 1 cwt. of raw sugar from 12½ cwt. of beet. The arrangements for the levy of excise duty, therefore, acted as a bounty on the improvement of the beet as a sugar producer and on improved methods of manufacture of raw sugar.³ In 1848 the total output of sugar in Germany was 12,500 tons of sugar made from 250,000 tons of beet;⁴ in 1906—10 the annual output was 2,116,000 tons of raw sugar made from 13,423,000 tons of beet.⁵ Not only had the output increased 170 times, but the weight of beet required to yield 1 cwt. of sugar was reduced from 20 cwt. in 1848 to 6 cwt. in 1910.

FRANCE

In France the sugar factories were worked under excise supervision, and the duty was levied on the raw sugar itself. In this case, therefore, there was no such bounty as in Germany on the improvement of the beet or on the manufacture of raw sugar; but

¹ *Memorandum on the Correspondence in relation to Sugar Bounties* (H. C. No. 422; 1881), p. 3.

² *Report from the Select Committee on Sugar Industries, 1880* (H. C. No. 332; 1880), p. xii.

³ *Evolution of Modern Germany*, p. 59.

⁴ *Economic Development of France and Germany*; p. 217.

as the duty paid on the raw sugar was refunded in the case of sugar refined for export, and the amount to be refunded was calculated on an assumed yield of refined sugar from a specified weight of raw sugar according to its class, a bounty on export might arise if the yield of refined sugar were greater than that assumed for the purposes of the refund of duty.⁵

Complaints were made that the home and colonial sugar industries of the United Kingdom were prejudicially affected by the competition of bounty-fed sugar from foreign countries.⁶ After prolonged negotiations, Great Britain, France, Germany, Austria and certain other countries, by the Brussels International Sugar Convention of 1902, engaged to suppress direct or indirect bounties on the production or exportation of sugar, and agreed that sugar should be manufactured and refined in bond.⁷ The bounties then ceased.

WEST INDIES

In August, 1902, the British Parliament voted £250,000 to assist estates in the West Indies to carry on the cultivation of sugarcane until the Brussels International Sugar Convention abolishing sugar bounties should come into force. Most of this grant was used in the various colonies for the purposes of making loans, grants, or refunds or remissions of taxes to estate owners or cane cultivators; but £1,000 was offered for the improvement of sugar factories in Nevis, subject to certain conditions regarding the crushing of peasants' canes, and in Jamaica a portion of the grant was to be employed in connection with the work of a fermentation chemist with a view to the improvement of processes in the manufacture of rum.

CANADA

In 1875 the Quebec Legislature authorized the Government to offer \$5,000 a year for five years for the purpose of securing the establishment of a beet sugar factory. In 1876 the offer was increased to \$7,000 a year for 10 years. Companies were formed to manufacture sugar, and in 1882 the Quebec Legislature agreed to grant one of them \$7,000 a year for ten years and to pay the farmers \$2,000 at the rate of 75 cents per ton of beets delivered at the factory. The subsidy to the Company was paid but the Company closed in 1893. Another Company obtained a subvention of \$3,500 in 1882, but this had no practical result.⁸

In 1891, the Canadian Government was authorized to pay a bounty of one dollar per 100 lb. of raw beetroot sugar produced in Canada wholly from beets grown therein; an additional bounty of

⁵ *Report from the Select Committee on Sugar Industries, 1880* (H. C. No. 332; 1880), p. viii.

⁶ *Memorandum on the Correspondence in relation to Sugar Bounties, 1881* (H. C. No. 422; 1881), p. 1.

⁷ *International Convention relative to Bounties on Sugar* (Treaty Series No. 7, 1903; Cd. 1535), p. 12, Articles I and II.

⁸ *Statistical Year Book of Canada, 1902*, p. 669.

3½ cents per 100 lb. was payable for each degree over 70° shown by the polariscopic test. The bounties paid amounted to \$23,767 in 1891-92, and to \$29,449 in 1894-95. In 1895 the rates of bounties were reduced to 75 cents and 1 cent, respectively, subject to a maximum total bounty of one dollar per 100 lb.⁹ and the system was extended to the 1st July 1897.¹⁰

Altogether the province of Quebec paid \$122,419, and the Dominion Government paid \$93,283 in these subsidies and bounties, but the enterprizes failed.

No further assistance was offered to this industry by the Dominion or Provincial Governments till 1901, when the Ontario Government set aside for the purpose \$75,000 a year for 3 years, payable at the rate of ½ cent per lb. for the first and second years and ¼ cent per lb. for the third year. At the same time the Federal Parliament admitted free of customs duty structural iron and machinery used in the manufacture of beet sugar. Several companies were formed, and four began work in 1902, their output in that year being 15,500,000 lb. of sugar made from 82,000 tons of beet.¹¹

In 1915 there were in Canada nine sugar refineries, with a capital of nearly \$31,000,000 and an annual output valued at \$37,750,000.¹² The quantity of refined sugar manufactured in Canada in 1915 from Canadian grown sugar beets was 39,500,000 lb; but the industry had been stimulated by the War, the output having been only 26,150,000 lb. in 1913.¹³ The imports of raw sugar rose from 160,000 tons in 1902 to 310,000 tons in 1913, and to 540,000 tons in 1920.¹⁴ The quantity of sugar beets grown in Canada rose from 71,000 bushels in 1916 to 412,400 bushels in 1920.¹⁵

NATAL

A bonus was offered in Natal on the manufacture, between the 30th June 1890 and the 30th June 1895, of syrup or sugar of a proper marketable quality from sorghum or beet grown in the Colony. The rate of bonus was £5 a ton subject to a minimum production of 20 tons and a maximum bonus of £500.¹⁶ This does not appear to have led to any result.¹⁷

UNITED STATES OF AMERICA

Under the McKinley Tariff Act of 1890 a duty was levied on imported refined sugar, but not on imported raw sugar; and to

⁹ *Reports on Bounties other than those on shipping granted in the Colonies, 1896* (c-7960), pp. 57 to 59.

¹⁰ *Canada Year Book, 1894*, p. 387, note.

¹¹ *Statistical Year Book of Canada, 1902*; pp. 669, 670.

¹² *Canada Year Book, 1916-17*; p. 286.

¹³ *Canada Year Book, 1915*; p. 185.

¹⁴ *Canada Year Book, 1920*; p. 412.

¹⁵ *op. cit.*, p. 193.

¹⁶ *Reports on Bounties other than those on Shipping granted in the Colonies, 1896* (c-7960), p. 18.

¹⁷ *op. cit.*, p. 27.

encourage domestic sugar a bounty was to be paid on all domestic sugar from 1891 to 1905, at the rate of 2 cents a lb. on sugar testing by the polariscope not under 90° and 1½ cents a lb. on sugar testing under 90° but not under 80°. The bounty was repealed in 1894; but the total amount paid amounted to \$29,783,603, of which \$12,100,208 was paid in the year ended the 30th June 1894. In 1895 the bounties were revived at the same rates.¹⁸ The bounty was held by the Court of Appeals of the district of Columbia to be unconstitutional.¹⁹ In 1903 no bounties were paid by the Federal Government, but the New York and Washington State Governments paid bounties at the rates of ½ cent and 1 cent, respectively, per lb. on sugar manufactured from beets grown in their respective States.²⁰

FORMOSA

In 1902 the Japanese Government endeavoured to encourage the sugar industry in the recently conquered island of Formosa. Sugar mills were in some cases given subsidies of 6 per cent. on the paid up capital for five years, and in other cases were given 20 per cent. of the total value of the plant and factory. These methods generally failed, owing to the refusal of the farmers to sell cane to the new factories. In the case of one large factory (the original capital of which was 1,000,000 yen,²¹ and towards which the Government contributed 187,722 yen), the Government intervened to effect the sale of land to the Company for growing cane and the police assisted in getting the farmers to sell cane to the Company. Three other companies, established between 1903 and 1905, received subsidies amounting to 219,529 yen 62,300 yen and 59,544 yen, respectively.

In 1905 new regulations were issued by which no modern mill could be erected without the permission of the Director of the Sugar Bureau. Every new mill was assigned a district and all cane grown in the district had to be sold to the mill, which had to pay a reasonable price for it; the farmers, however, could not be compelled to grow cane; the erection of mills of the old style within the district without special permission was prohibited. In some cases an extensive area of Government land was leased, free of rent, to a mill for cane growing on certain conditions to ensure its cultivation for the purpose; if these were complied with, the land was ultimately given free to the mill. Although these regulations first led to a contraction of the area cultivated with cane owing to the farmer's distrust, the good prices paid by the mills soon led to a large increase in many districts and the regulations were successful. New mills were put up without any subsidy or further

¹⁸ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 7* (1895) (c-7897), pp. 70, 71.

¹⁹ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 2* (1896), (c-7974).

²⁰ *Reports on Bounties other than those on Shipping and Navigation; Commercial No. 2* (1904) (cd-1946), p. 89.

²¹ At the pre-war rate of exchange one yen = 2s. 0½d.

assistance from the Government, but the farmers were given the chance by means of subsidies to adopt modern mills. The Government also profited owing to the increase in the consumption tax on sugar, the extraction of sugar by the modern eleven-roller mills being much higher than by the old mills.²²

²² *Report for the year 1908 on the Sugar Industry of South Formosa*; Diplomatic and Consular Reports, Misc. Series, No. 675 (cd. 4447-3).

CHAPTER III

Bounties on shipbuilding

GREAT BRITAIN

Bounties on navigation may act as bounties on shipbuilding,¹ but under the writer's instructions detailed information regarding the former is not to be included in this report. It may, however, be mentioned that a Select Committee of the House of Commons on Steamship Subsidies reported in 1902 that "subsidies are the minor factor and commercial skill and industry the major factors of the recent development of the shipping and trade of certain foreign countries, and notably of Germany," and that "a general system of subsidies other than for services rendered is costly and inexpedient."²

The development of shipping was one of the three main points of the mercantile system adopted in England in mediæval times.³ An early example of a bounty on shipbuilding was the exemption of John Taverner's carack in 1449 from the law of the staple⁴ under which duties were payable on goods exported. In later times bounties on shipbuilding were paid, especially on big ships.⁵ In the reigns of Elizabeth and James I a bounty of five shillings a ton was paid on every ship above 100 tons burden. In 1626 the limit was raised to 200 tons. In 1662 a bounty of one-tenth of the customs dues on the vessel's cargo was given for the first two years to every vessel of 2½ or 3 decks carrying thirty guns; in 1694 the period was extended to three years. Dr. Royal Meeker points out that "these bounties were in the nature of the modern admiralty subventions," and that "there is no reason to suppose that these early bounties had any noticeable effect on ship construction."⁶

Bounties were also offered on naval stores, and measures were taken to preserve timber and other materials required for ships; but with regard to the action taken early in the eighteenth century, Dr. Cunningham remarks that the bounty (£4 a ton) "seems to have been successful in calling forth the manufacture of a considerable quantity of tar," but the bounty on hemp (£6 a ton) failed entirely, and the attempt to reserve forests roused much local opposition. He adds that "on the whole it may be said that

¹ *Reports on Bounties on the construction and running of ships*; Commercial No. 8 (1895) (c.7898), pp. 45, 46 and *French Year Book*, 1919, p. 843.

² *Report from the Select Committee on Shipping Subsidies*, No. 385, 1902, p. xxv.

³ *Growth of English Industry and Commerce, Early and Middle Ages*, pp. 470, 481.

⁴ *op. cit.*, p. 413.

⁵ *Growth of English Industry and Commerce in Modern Times*, pp. 64, 434.

⁶ Dr. Royal Meeker, *History of Shipping Subsidies*, Publications of the American Economic Association, Third Series, Vol. VI, No. 3; August, 1905; p. 2.

Parliament had singularly little success in controlling this source of supply for public advantage in the way which Sir Josiah Child and other writers desired."⁷

CANADA

To increase the building of fishing vessels and boats the Dominion Government has since 1882 paid bounties to the owners of fishing vessels and fishing boats. The rates have varied in different years and in 1916-17 were \$1 per registered ton to owners of vessels and \$1 per boat to owners of boats per annum. In 1916-17 bounties were paid on 849 vessels with an aggregate tonnage of 21,120 and on 22,682 boats. These figures were less than in 1915-16, but the capital invested in fisheries rose in the year by nearly \$3,000,000 to \$28,729,000.⁸ In 1918-19 the rates were the same, but the bounty on a vessel was limited to \$80. In 1919 bounties were paid on 748 vessels and 12,313 boats.⁹ In 1920 the capital invested in the primary operations of the fishing industry was \$29,893,000 and that invested in canning and curing establishments was \$23,200,000.¹⁰

FRANCE

Bounties on shipbuilding have been paid in France since 1881. The principal laws relating to bounties on shipbuilding and navigation were passed in 1881, 1893, 1902 and 1906.

Under the law of 1881 the following bounties were given on shipbuilding:—for iron and steel vessels, 60 frs. per ton, gross measurement; for wooden vessels of 200 tons or more, 20 frs. per ton; for wooden vessels of less than 200 tons, 10 frs. per ton; for composite vessels (planked with timber having beams or ribs of iron or steel), 40 frs. per ton; for engines and auxiliary parts, 12 frs. per 100 kilograms; for renewal of boilers, 8 frs. per 100 kilograms, if of French make.¹¹

Until this law was passed shipbuilding materials were admitted into France free of duty;¹² these bounties purported under the law to compensate shipbuilders for charges levied under the customs tariff. No period was fixed during which these bounties should remain in force, nor was any limit fixed to the amount which might be paid in bounties, either each year or altogether.

Under the same law certain navigation bounties were sanctioned for ten years, this period being later extended to 12 years. The

⁷ *Growth of English Industry and Commerce in Modern Times*, pp. 64, 65, 485, 486.

⁸ *Canada Year Book*, 1918; p. 253.

⁹ *Canada Year Book*, 1920; pp. 293, 294.

¹⁰ *Times Trade Supplement*, December, 31, 1921; p. 304.

¹¹ *Further Correspondence relative to the French Mercantile Marine Bill*, Commercial No. 8 (1881) (c-2763), p. 23.

¹² *Government Aid to Merchant Shipping*; by Grosvenor M. Jones; U. S. A. Department of Commerce, Bureau of Foreign and Domestic Commerce, Special Agents, Series No. 119; 1916; p. 137.

navigation bounties for foreign-built vessels were half those for vessels of French construction, while the bounty for steamers built according to plans approved by the Marine Department was 15 per cent. more than the ordinary rates. These bounties purported to be compensation for charges imposed on the mercantile navy for recruitment and service of the military navy.¹³

The effects of these shipbuilding and navigation bounties were considered, according to one report, "satisfactory without having been important;"¹⁴ according to another report "the law was unsatisfactory in particular to the owners of wooden sailing vessels, and was regarded generally as a failure."¹⁵

The amount paid in shipbuilding bounties during the 12 years was £1,266,320, besides £3,641,600 paid in navigation bounties.¹⁶ The amount paid annually varied from year to year. In 1886 bounties were paid on 613 wooden ships (of which only three were over 200 tons) and on 22 steamers. The total bounties in that year amounted to 3,000,000 frs., of which 2,500,000 frs. were paid on four steamers.¹⁷ In the first three years a considerable stimulus was given to the building of steamships, but after that period the bounties had little effect on steamship building as steamships built in France cost so much more than those built abroad.¹⁸ The amount of construction bounties paid was £179,000 in 1884, £45,000 in 1885,¹⁹ £122,000 in 1889, and £81,000 in 1892.²⁰

By the law of 1893 the shipbuilding bounties were raised to the following rates:—65 frs. per ton on iron and steel ships, 40 frs. per ton on wooden or composite ships of 150 tons or more, 30 frs. per ton on wooden or composite ships of less than 150 tons, and 15 frs. per 100 kilograms on engines, boilers and machinery and on materials used in the repair of hulls, boilers, engines, etc.²¹

The results of the law of 1893 (by which the navigation bounties were also altered) "were not at all satisfactory and caused great apprehensions for the future of the mercantile marine." This was in part due to the alterations in the navigation bounties, by which the half bounties granted to foreign built vessels were abolished, and the rates became more favourable to sailing vessels than to steam vessels. This "had the effect of producing a fleet of huge sailing vessels, which sailed round and round the world more or less in ballast, and the creation of shipowning companies which existed alone on the high bounties given to sailing vessels."²² The

¹³ Commercial No. 8 (1881), p. 23.

¹⁴ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, 1906; Diplomatic and consular Reports, Mics. Series, No. 651 (cd.-2683-15), p. 3.

¹⁵ *Government Aid to Merchant Shipping*, p. 142.

¹⁶ *Report on the French Mercantile Marine Law, 1906 and its predecessors*, p. 4.

¹⁷ *Reports concerning bounties and subsidies in aid of the construction and running of ships*; Commercial No. 14 (1889) (c-5677), p. 20.

¹⁸ *Modern Tariff History*, p. 343.

¹⁹ Commercial No. 14 (1889), pp. 20, 21.

²⁰ *Reports respecting bounties on shipbuilding, etc.*; Commercial No. 4 (1901); (cd-596) p. 18.

²¹ *Government Aid to Merchant Shipping*, p. 142.

law remained in force till 1902, and the benefit of the increase in the foreign trade in France which occurred during these years was obtained by foreign shipping. No improvement was to be noticed in the number and tonnage of French shipping vessels; though there was a slight increase in sailing vessels.²² Between 1893 and 1901, £1,870,000 were paid in shipbuilding bounties and £4,171,000 in navigation bounties.²³ The amount paid annually in construction bounties rose from £86,000 in 1886²⁴ to £381,000 in 1901.²⁵ The Select Committee of the House of Commons on Steamship Subsidies reported in 1902 that "all these subsidies are quite out of proportion to the services rendered, and, speaking generally, it is certain that French trade has not advanced with the increased munificence of the subsidies, while French shipowners, and especially French sailing-shipowners, have unduly benefited at the expense of their country."²⁶

By the law of 1902 the rates of navigation bounties were altered, but the shipbuilding bounties were continued unaltered. The total amount to be spent in shipbuilding bounties was, however, limited to £2,000,000 which was expected to be sufficient for 400,000 tons, and construction bounties were not to be paid on more than 50,000 tons a year.

M. Millerand reported that "the limitations introduced into the Law of 1902, and their incongruity produced unexpected and disastrous results which have threatened the existence of the French building yards. Part of the workmen were discharged, the others threatened with idleness, and the mercantile marine in danger..... The consequence of the discrepancy between the amount given by law and the amount actually required was a regular rush to get first place in the building yards..... The effect of the law was, therefore, once and for all exhausted."²⁷

The navigation bounties, as intended, acted as a bounty on shipbuilding in the form of an increase in the price of French built ships, but in consequence of this increase in price, the shipowner's expenses in interest and insurance were raised, and part of his bounty went to bankers and insurance companies. An attempt was therefore made in 1906 to obviate this objection by enhancing the rates of bounty on shipbuilding, so as to enable the French shipbuilder to compete with the British shipbuilder without being dependent upon obtaining a share of the navigation bounties.²⁸ The rates of the construction bounties were raised to the follow-

²² *Report on the French Mercantile Marine Law of 1906, and its predecessors*, p. 5.

²³ *op. cit.*, p. 6.

²⁴ Commercial No. 4 (1901), p. 18.

²⁵ *Report on Bounties and Subsidies, in respect of Shipbuilding, Shipping and Navigation in Foreign Countries*, 1913 (cd. 6899); p. 14.

²⁶ *Report from the Select Committee on Steamship Subsidies*, 1902 (H. C. 385); p. vi.

²⁷ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, p. 6.

²⁸ *op. cit.*, pp. 7, 8.

ing:—for steamships with iron or steel hulls, 145 frs. a ton with an annual decrease for 10 years of 4.5 frs. per ton; for sailing vessels with iron or steel hulls, 95 frs. per ton with an annual decrease for 10 years of 3 frs. per ton; for wooden vessels of 150 tons or more, 40 frs. per ton; for wooden vessels of less than 150 tons, 30 frs. per ton; for new boilers and engines, 27.5 frs. per 100 kilograms, with an annual decrease for 10 years of 0.75 frs. per 100 kilograms; for new parts for the repairs of boilers and engines 20 frs. per 100 kilograms. Seven-tenths of these bounties were payable on registration of the vessel. If the vessel remained under the French flag, another two-tenths were payable one year after registration and the remaining one-tenth at the end of the second year.²⁹

The navigation bounties took the form of equipment bounties, and were slightly lower than those provided in the law of 1902, while the conditions of the bounties were altered so as to avoid the objections to the navigation bounties under the earlier laws.³⁰ The payment of construction bounties on vessels which would also receive equipment bounty was limited to 50,000 gross steam tons and 15,000 gross sailing tons till the expiration of the law in 1902. The law was to remain in force for twelve years.³¹

The construction bounties amounted to £611,000 in 1902, £239,000 in 1903, £514,000 in 1908 and £362,000 in 1910; the total amount paid in construction, navigation and equipment bounties from 1890 to 1910 exceeded £1,000,000 a year, except in 1894.³²

The tonnage of the French mercantile marine was 932,735 in 1889, but fell to 887,078 in 1895;³³ it rose to 1,462,639 in 1911³⁴ and to 2,285,728 in 1916 before the submarine warfare began.³⁵ Between 1901 and 1911 the number and tonnage of sailing vessels rose from 14,393 and 564,447 to 15,949 and 624,521, and of steam vessels from 1,299 and 546,541 to 1,780 and 838,118,³⁶ but the percentage of French to total tonnage employed on French foreign trade fell from 41.2 in 1889 to 31.5 in 1899³⁷ and to 25 in 1907, and was 26.2 in 1911,³⁸ so that shipbuilding in France before the war did not keep pace with the expansion of her foreign trade.

Dr. Royal Meeker has summarized his views of the effects of the French subsidies on shipbuilding and navigation as follows:—"the laws, in so far as they increased profits, tended to increase the

²⁹ *Government Aid to Merchant Shipping*, pp. 149, 150.

³⁰ *op. cit.*, pp. 151 to 154.

³¹ *Report on the French Mercantile Marine Law of 1906 and its predecessors*, pp. 8 to 10.

³² Commercial No. 4 (1901), p. 18, and *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign countries*, 1913, p. 14.

³³ Commercial No. 4 (1901), p. 22.

³⁴ *Statistical Abstract for Foreign Countries*, 1913 (cd. 6699), p. 30.

³⁵ *French Year Book*, 1919, p. 841.

³⁶ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign countries*, 1913, p. 15.

³⁷ Commercial No. 4 (1901), p. 23.

³⁸ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping, and Navigation in Foreign countries*, 1913, p. 16.

merchant marine; but in so far as they deadened private enterprise, they tended to decrease it. The statistics show that before 1881 the total tonnage decreased rapidly. It does not necessarily follow from this alone that the commercial fleet declined in efficiency. The statistics of commerce, however, do show that the merchant marine was declining in activity. The law of 1881 seems to have increased the tonnage and activity of the marine for a time. In recent years the tonnage has increased but the activity and efficiency have decreased. On the whole the bounties appear to have operated more strongly towards increasing than towards decreasing the marine. But this does not mean that the bounties have built up the shipping interests. On the contrary, the evidence goes to show that they have sapped the vitality and soul from French maritime enterprise and left it a giant 'infant industry' whose weakness increases with its growth."³⁹

GERMANY

No direct bounty was paid in the German Empire on shipbuilding, but under the Customs Law of 1885 **Mercantile marine** manufactured or partly manufactured materials destined for the construction, repair or equipment of sea-going vessels, including ordinary ships' gear, were exempt from the payment of import duty. In 1889 articles imported for the construction or equipment of ships in a finished or unfinished condition, and materials imported for making such articles in Germany, were exempt from customs duty.

Preferential railway rates were allowed on certain raw materials and partly manufactured articles used for the construction of shipping in Germany.⁴⁰

It is impracticable to ascertain the money value of these concessions or to estimate how far the extension of shipbuilding in Germany may be ascribed to them. The tonnage of German merchant ships rose from 1,321,000 in 1889 to 1,640,000 in 1898,⁴¹ and to 4,706,000 in 1916.⁴² Between 1901 and 1911 the number of sailing vessels rose from 2,496 to 2,723, but the tonnage fell from 586,974 to 510,059, while the number and tonnage of steam vessels rose from 1,463 and 1,506,059 to 2,009 and 2,513,666. The percentage of German tonnage to the total tonnage engaged in German foreign trade rose in the same period from 48.8 to 50.⁴³

It has been stated that "the rapid development of the German merchant marine is due chiefly to favourable economic conditions.

³⁹ *History of Shipping Subsidies*, 1905, pp. 83, 84.
⁴⁰ Commercial No. 4 (1901) (cd-596), pp. 28 to 30; Commercial No. 2 (1898), pp. 90, 91, 92; *Prussian Railways*; Diplomatic and Consular Reports, Misc. Series, No. 574 (cd-787-10), p. 16. *Government Aid to Merchant Shipping*, pp. 78, 79; *Report on Bounties and Subsidies in respect of Shipbuilding, etc.*, 1913, p. 17.

⁴¹ Commercial No. 4 (1901), p. 33.

⁴² *French Year Book*, 1919, p. 841.

⁴³ *Statistical Abstract for Foreign Countries*, 1913 (cd-6698), pp. 30, 36.

The imports and exports of Germany are not only large but also well-balanced in tonnage. Moreover, the foreign trade is concentrated largely at Hamburg and Bremen, which assures a maximum of cargo for ships calling at these ports. Much of the success of German shipping is attributable also to the efficient co-ordination of the industrial and commercial activities of the country.⁴⁴

Dr. Royal Meeker has stated that "it is scarcely necessary to mention the great industrial revolution in Germany since 1880 to prove that the growth of German shipping is entirely independent of official tinkering. As to the indirect bounties, their influence can hardly account for any considerable part of the rapid development of German shipping and commerce.....the intent of the Government was undoubtedly to aid shipping and encourage trade. If this motherly hovering has produced good results, it has been because of its inefficiency."⁴⁵

From a report made in 1905 it appears that the German Government made subventions for the building of new sailing fishing vessels and for providing them with outfits of nets and gear, as well as loans to fishermen and fishing companies. These subventions and loans were made upon the representation of and through the German Sea-Fishery Association. The Government expended about £20,000 a year on these objects and on research and kindred subjects, and also contributed £2,500 to £3,000 a year towards the expenses of the Association. The owner of a new smack to be employed in herring fishing received a building subvention of about £200 to £250, and a further sum for the purchase of nets and gear. Steamers received no such subvention, but if engaged in herring fishing were supplied by Government with a reserve fund for making good the losses of nets. This reserve fund could not be drawn on without the sanction of Government; it consisted of 5,000 marks for steamers and 2,000 marks for sailing vessels. It was expected that the Government would contribute £5,000 to make good exceptionally heavy losses of nets and gear in 1904. The Government also assisted the Association in other ways. It contributed liberally to the funds of a fishing museum for the purchase of models, etc., while a special service cruiser collected all possible information about the movements of shoals, size of catches made, loss of nets, etc. and telegraphed details from the nearest port to the Association.⁴⁶

UNITED STATES OF AMERICA

Shipbuilding materials were not admitted free of duty into the United States till 1872, but the Act then passed exempted from duty certain materials which were required only for the building of

⁴⁴ *Government Aid to Merchant Shipping*, pp. 23, 24.

⁴⁵ *History of Shipping Subsidies*, 1905, p. 95.

⁴⁶ *German Sea-Fishing Industry and Trade*; Diplomatic and Consular Reports No. 636 (cd-2683).

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wooden ships; its effect was further diminished by the provision that vessels built wholly or in part of foreign materials imported free of duty should not engage in coasting trade for more than two months in the year.

The list of shipbuilding materials admitted free of duty was extended in 1875 and again in 1890.

In 1894 the import, free of duty, was permitted of any shipbuilding materials required for the construction, outfit and equipment of vessels in the United States for foreign account and ownership or for employment in foreign trade, including trade between the Atlantic and Pacific ports of the United States. A similar provision has been included in all subsequent tariff acts.⁴⁷

The period during which vessels constructed of foreign materials could engage in coasting trade was extended to six months a year in 1909, and to the entire year in 1912.

Between 1891 and 1911 the tonnage of the United States mercantile marine engaged in overseas trade fell from 1,006,000 to 873,000, though the number of vessels rose from 1,587 to 1,703. On the other hand the tonnage of United States vessels engaged in domestic trade and trade on the great lakes rose in the same period from 3,591,000 to 6,641,000, while the number of vessels fell from 15,262 to 13,933. During the same period the percentage of imports carried in United States vessels fell from 15.9 to 10.2, and of exports carried in United States vessels from 9.3 to 7.5.⁴⁸

JAPAN

Under the Shipbuilding Encouragement Law passed in 1896, bounties were offered for the construction, by Japanese subjects, of steamships of 700 gross tons and over at the rate of 12 yen a ton on vessels under 1,000 tons, and 20 yen a ton on vessels over 1,000 tons; further bounty of 5 yen per horse power was payable on engines built in Japan.⁴⁹ The power was that developed on an official trial, for which there was no condition as to loading.⁵⁰ The shipyard had to satisfy the requirements of the Minister of Communications, and foreign materials could not be used without his special permission.⁵¹

This law was to remain in force for 15 years, but on January 1st, 1910, the law, subject to certain amendments, was extended for 10 years. Owing, however, to the great development of industry caused by the war, the law was suspended in July 1917, as the

⁴⁷ *Government Aid to Merchant Shipping*, pp. 37, 38; and *Reports on Bounties on the Construction and running of Ships*, etc.; Commercial No. 8 (1895), (C-7008), p. 45.

⁴⁸ *Report on Bounties and Subsidies in respect of Shipbuilding, Shipping and Navigation in Foreign Countries*, 1913 (cd-6899), pp. 44, 45.

⁴⁹ Commercial No. 4 (1901) (cd-596), pp. 51, 52.

⁵⁰ Professor F. P. Purvis, *Ship Construction in Japan*, Transactions of the Asiatic Society of Japan; December 1919; Vol. XLVII, p. 4.

⁵¹ *Government Aid to Merchant Shipping*, p. 215.

industry no longer required this form of State aid.⁵² Under the new law, bounties were payable only on steel vessels of 1,000 tons or more gross tonnage, which were constructed under supervision in accordance with the Government shipbuilding regulations. For purposes of rates of bounties vessels were divided into two classes (A & B) and each class into 4 grades, class A including only ships with sleeping accommodation for fifty or more first and second class passengers, or for one or more first or second class passengers per 100 tons of gross tonnage. The rates varied from 11 to 22 yen per ton of gross tonnage. The bounty on engines built in Japan remained at 5 yen per horse power. Foreign manufactured articles could only be used in certain specified parts of the vessel and machinery.

The amount paid in bounties varied from year to year. It was £42,000 in 1902, £21,000 in 1904, £69,000 in 1907, £154,000 in 1908 and £113,000 in 1911.⁵³

There had been little building of steel ships in Japan before 1896. In 1907, 76 steamers were built with a gross tonnage of 28,838; in 1912, 168 vessels with a gross tonnage of 48,155; in 1918, 443 vessels with a gross tonnage of 540,531, and in 1919, 273 vessels with a gross tonnage of 634,336. The capacity of Japan for building ships of over 2,000 tons each is now 101 berths with a total tonnage of 650,000.⁵⁴

Between 1901 and 1911 the numbers and tonnage of sailing vessels in the Japanese mercantile marine rose from 4,026 and 334,904 to 7,978 and 447,307, and of steam vessels from 1,395 and 583,067 to 2,789 and 1,386,047.⁵⁵ In the same period the percentage of Japanese tonnage to the total tonnage of vessels employed in Japanese foreign trade rose from 34.9 to 46.8.⁵⁶

The Special Economic and Financial Investigation Commission recommended in February 1921 the repeal of the Shipbuilding Encouragement Law; the exemption from import duty of steel and wood to be used for shipbuilding, ships' fittings, engines and parts thereof which cannot be made in Japan or which are patented; financial accommodation to shipbuilders at a low rate of interest, and subsidies for the construction of ships of a special character, such as vessels of high speed or tankers. Action appears to have been taken in accordance with these recommendations, at least as far as relates to the exemption of steel from import duty.

As regards the effect of Government aid given to shipbuilding and shipping in the past, Dr. F. P. Purvis, Professor of Naval Architecture, Tokyo, has stated that "the activities of the country in shipping and shipbuilding have been enormously emphasized by

⁵² *Times Trade Supplement*, Japanese Section, April 16, 1921, p. xviii.

⁵³ *Report on Bounties and Subsidies in respect of shipbuilding*, etc., 1913, pp. 22, 23.

⁵⁴ *Times Trade Supplement*, p. xviii.

⁵⁵ *Statistical Abstract for Foreign Countries*, 1913 (cd-6698), p. 32.

⁵⁶ *op. cit.*, pp. 40, 41.

the present war. Yet for the past 20 years Japan has been gradually preparing the position which the exigencies of the present make such a valuable asset to her; in the preparation the Government policy—started in 1896—of granting subsidies for shipping and shipbuilding has been a weighty, probably a preponderating, stimulus.⁵⁷ Dr. Royal Meeker, writing in 1905, said that the shipbuilding and navigation subsidy laws “have had immediate and far-reaching effects.” After referring, however, to the growth of the Japanese marine and the share of Japanese shipping in Japan’s foreign trade, he said “All this indicates a marvellously rapid development, but it will not do to ascribe all this, as some do, to the working of the subsidies.....A closer scrutiny of the history, however, compels an impartial mind to recognize that the testimony of the facts is not at all in favour of the subsidies. Shipping grew as rapidly before the law of 1896 as after, in spite of the monopolistic power of the *Nippon Yusen Kaisha*.....Shipping would have developed anyhow—in fact was developing with great rapidity.....The Government merely gave form to the maritime undertakings of the capitalists. It will always be a question if the Government gave the best direction—whether the development would not have been sounder, though less rapid, had the capitalists been left to decide for themselves what lines to establish.”⁵⁸ Mr. Grosvenor Jones writes “Japan rivals France in the extent of Government aid to shipping, and the subsidy legislation of Japan has been modelled to a large degree upon that of France. The results in Japan, however, have been much more successful than those obtained in France. Whether this is due wholly, or largely, to Government aid is doubtful, since basic economic conditions in Japan have been, and still are, more favourable for the development of a merchant marine than those obtaining in France. It is undoubtedly true, on the other hand, that Government aid in Japan has been a stimulus to a more efficient utilization of the economic conditions. The development of the Japanese merchant marine coincides, not only with grants of Government aid, but also with the awakening of the industrial and commercial activities of the Japanese nation, which followed the conclusion of its successful war with China.”⁵⁹

Since 1898 the Government has made an annual grant for the encouragement of deep-sea fisheries; the grant was at first 150,000 yen but was afterwards raised to 200,000 yen. Among the objects on which the grant might be spent was the payment of bounties on steamers or motor-boats, specially built or fitted with engines according to Government plans, the rates being 40 yen per ton on iron, steel or composite vessels, and 30 yen per ton on wooden vessels, besides 10 yen per horse power of a steam-engine

⁵⁷ Professor F. P. Purvis, *Ship Construction in Japan*; Transactions of the Asiatic Society of Japan; December 1919; Vol. XLVII, p. 13.

⁵⁸ *History of Shipping Subsidies*, 1905; pp. 143 to 145.

⁵⁹ *Government Aid to Merchant Shipping*, 1916; p. 211.

and 20 yen per horse power of an oil-engine.⁶⁰ These and other bounties in aid of the fisheries are said to have led to a great increase in the annual value of the fish caught. The number of deep-sea vessels increased between 1897 and 1907, from 9 to 137 and the value of the annual catch from 77,000 yen to 800,000 yen;⁶¹ but Sir Frederic Nicholson, writing in 1907, said that the results of the bounty system “do not seem remarkable”⁶² and that the greatest stimuli to the development of the fisheries have been “those of investigation, experiment and education.”⁶³

⁶⁰ Sir Frederic Nicholson, *Note on Fisheries in Japan*, p. 41.

⁶¹ *Japanese Year Book*, 1919-20, p. 577.

⁶² *Note on Fisheries in Japan*, p. 42.

⁶³ *op. cit.*, p. 40.

CHAPTER IV

Preferential railway rates.

GERMANY

Preferential railway rates have been allowed in Germany on the State railways to encourage German industries and to enable German products to compete with foreign, but the practice of giving preferential rates existed in Germany before the State purchased the railways on a large scale. The Prussian State, which in 1919 owned 37,400 kilometres¹ out of a total of 58,216 kilometres in the German Empire,² did not own much railway line till the annexation in 1866 of Hanover and Hesse-Cassel,³ and did not adopt on a large scale the policy of purchasing private lines till 1879.⁴ The Imperial Railway Office for the co-ordination of the construction, equipment and working of the various railway systems was established in 1873.⁵

Dr. Clapham states that from 1880 "special rates for imports, to divert through European traffic from neighbouring countries, and for exports, to help German foreign trade, re-introduced and extended over a very wide field that principle of two or more prices for the same service according to what the traffic will bear, which reformers had treated at one time as a typical bad product of private ownership. Latterly a very large proportion of the traffic was carried under the 'exceptional tariff.'"⁶ In 1897 the British Consul at Dusseldorf reported that reduced railway rates for coal over long distances in Holland, Belgium and France had been given for well nigh 40 years—at first for full train loads—and that the system developed later on a larger scale into preferential rates as a result of negotiations between certain Westphalian coal companies, the Dutch Rhenish Railway Company and the Cologne and Minden Railway Company. The arrangement then made was that the collieries undertook to send a fixed number of trains every week laden with coal and coke to certain stations in Holland. The system was extended later because the railway companies found it profitable to them.⁷

The second point to which attention may be drawn is that the interests of the State railways, regarded as commercial enterprises,

¹ *Economic Development of France and Germany, 1815–1914*, p. 347.

² *Statistical Abstract for Foreign Countries, 1913* (ed. 6698), p. 339.

³ *Economic Development of France and Germany, 1815–1914*, p. 155.

⁴ *op. cit.*, p. 347.

⁵ *op. cit.*, p. 346.

⁶ *op. cit.*, p. 348.

⁷ *Reports on Bounties on the construction and running of Ships and particulars with regard to the granting of preferential railway rates*; Commercial No. 2 (1898) (C-8720), pp. 30, 31.

were not sacrificed before the War by the grant of preferential rates.⁸ These rates were generally granted to or from ports or the frontier,⁹ and did not, as a rule, apply to smaller consignments than a ten-ton truck-load.¹⁰

In 1884 it was laid down that the general principles governing the grant of preferential rates were that (1) they should assist agriculture and industry by granting cheap rates for raw material or subsidiary material; (2) they should assist German manufacturers in competition with foreign importers at home, and should assist German export trade abroad; (3) they should assist German in competition with foreign ports; (4) they should advance the interests of German railways and waterways in competition with those of foreign nations. Further, as regards foreign goods, it was laid down that (1) no injury should ensue from the preferential tariff to any domestic industry; or (2) if such injury should ensue, there should be counter-balancing advantages.¹¹

The ordinary tariff fell into two main divisions according as goods were sent in truck loads or in quantities less than a truck load. The tariff on truck loads was divided into four classes—the general tariff and three special tariffs, I, II and III, the last being the lowest. Generally speaking, raw materials were included in special tariff III, semi-manufactured products in special tariff II, and finished products in special tariff I.¹² The preferential rates applicable in certain cases to particular goods under particular circumstances and on particular lines were more favourable than the rates ordinarily charged under these tariffs.¹³

The rates charged were calculated at so much per ton (1,000 kilograms) per kilometre, *plus* a booking fee (if the distance the goods were to be carried exceeded 100 kilometres) which did not vary with the distance.¹⁴ In the preferential tariff the former were generally reduced, and sometimes, but not always, the latter.¹⁵

The following are examples of preferential rates, intended to assist industries in the home markets.¹⁶

The rate for large quantities of coal from Silesia to East and West Prussia was reduced from 2.2 *plus* 6 pf., or 2.2 *plus* 12 pf. (special tariff III), to 1.42 *plus* 6 pf. per ton-kilometre in order to assist producers of domestic coal.

To assist agriculture, the rate for manure on Prussian lines was reduced from 2.6 *plus* 12 pf. to 2.2 *plus* 7 pf. In view of the agricultural distress a distress tariff was introduced in 1896 for

⁸ *op. cit.*, pp. 31–35; *The Evolution of Modern Germany*, p. 209.

⁹ Commercial No. 2 (1898) (C-8720), pp. 26, 27.

¹⁰ *op. cit.*, p. 33.

¹¹ *op. cit.*, pp. 21, 22.

¹² *op. cit.*, pp. 22, 23.

¹³ *op. cit.*, p. 24.

¹⁴ *op. cit.*, pp. 22, 23.

¹⁵ *op. cit.*, pp. 26, 27.

¹⁶ *op. cit.*, pp. 26, 27, 54 to 78.

manure, and later for the materials of artificial manures: this tariff gave a reduction of 20 per cent.

The rate for iron ore from abroad to foundries in Germany was reduced from 2.2 plus 6 pf. to 1.8 plus 8 pf. to help iron works in Germany; a reduction of rates was given for foreign ore imported at certain ports and transported to the coal districts in returning coal trucks.¹⁷ To help certain iron mines, the rate for iron ore from them to works in Hannan was reduced from 2.2 plus 6 pf. to 1.5 plus 6 pf.; and to help certain other mines, the rate for iron ore from Schmiedeberg to Silesian foundries was reduced from 2.2 plus 6 pf. to 1.52 plus 6 pf. No booking fee was charged for cast iron from foundries to Berlin.

The rate for raw petroleum from the wells to the refineries was reduced from 6 pf. to 3 pf. to help manufacturers.

To favour the stone quarries in the Eifel the rate for worked up stone was reduced from 3.5 plus 8 to 12 pf. to 2.7 or 2.5 plus 8 to 12 pf.¹⁸

In 1897 a special fuel tariff was introduced in order to stimulate production by reducing the price of power.¹⁹

Traffic developed on the introduction of preferential rates e.g., the transport of soft coal from Thuringia and Brandenburg to German harbours, on which a special rate was granted in 1890, rose from 38,230 tons in 1891-92 to 64,919 tons in 1894-95; and the quantity of raw materials (manure, earth, beets) transported in Prussia rose in 5 years from 5,902,000 tons to 9,427,000 tons.²⁰

FRANCE

The Railways Commission in France has recommended recently that special rebates of charges for carriage by railway should be given for long distance traffic, for exported goods, and for certain articles upon the cheapness of which the prosperity of local industries depends. For example, it is proposed that there should be a special rate for coal and ore required by the metal industry of St. Etienne and Grenoble.²¹

¹⁷ *op. cit.*, pp. 33, 46.

¹⁸ *op. cit.*, p. 60.

¹⁹ *Prussian Railways*; Diplomatic and Consular Reports, Misc. Series No. 574 (cd. 787-10), 1902, p. 16.

²⁰ Commercial No. 2. (1898), (C-8720), p. 28; for another view see *Government Regulation of Railway Rates* by H. R. Meyer, Assistant Professor of Political Economy, Chicago.

²¹ *Times Trade Supplement* Dec. 24, 1921; p. 287.

CHAPTER V

Miscellaneous bounties on manufactures

GREAT BRITAIN AND IRELAND

An early example of a bounty is recorded by Sir Frank Warner in *The Silk Industry*. A sum of £8,000 was granted in 1763 by the Irish Parliament to the Dublin Society for the encouragement of industries. The Society granted a premium of 10 per cent. to manufacturers of Irish made silk, sold in a public silk warehouse. "For a time, with the additional assistance of prizes and exhibitions, the pampered manufacture prospered, and it is stated that in good years of the system nearly 3,000 looms were employed. These figures are, however, rather uncertain." Sir Frank Warner concludes that the policy of interference was not a success. "After 22 years of State encouragement, during which time £28,000 had been given in bounties and prizes, the silk warehouse was closed, as the plan 'had not answered the ends of a general increase and extension of the manufacture'."¹

In 1732 the British Parliament awarded £14,000 to Sir Thomas Lombe for perfecting the art of silk throwing, on condition that an exact model of the mechanism should be exhibited in the Tower of London.²

Mr. Lipson in *The English Woollen and Worsted Industries* mentions the payment by the British Parliament of £5,000 to Samuel Crompton for the invention of the mule,³ and £10,000 to Edmund Cartwright for the invention of the power loom.⁴

For the encouragement of the linen industry in Ireland the English Government in 1711 established a Board of Trustees of the Linen and Hempen Manufactures of Ireland and gave it an annual grant of £20,000. The Board continued to operate till 1827, when it was dissolved, as "the industry no longer required the extraneous assistance of the grant." The Board distributed premiums on spindles erected and bounties on goods produced; a firm in Cork received a grant of 30s. a spindle in 1809 and bounties at 2d. a yard on duck and sailcloth sold. The Government was most anxious to encourage the manufacture of sailcloth in the interests of the Navy. The bounty

¹ *The Silk Industry*, pp. 373, 374.

² *The Silk Industry*, pp. 206, 491.

³ *The English Woollen and Worsted Industries*, p. 161.

⁴ *op. cit.*, p. 168.

system stimulated flax-spinning by machinery but the industry spread rapidly after the withdrawal of the bounties.⁵

The reasons which led the British Government recently to encourage the dye industry will be found in Chapter VI, the earliest assistance having been given in connection with the formation of British Dyes, Ltd., in 1915.

In 1918 a scheme was published under which the Government offered financial assistance to the dye industry in order "to ensure that the requirements of the textile and other trades of the United Kingdom and of other parts of the British Empire, which are largely dependent upon an efficient supply of dyes, are met within a reasonable period to an extent sufficient to make them independent of German dyestuffs, by placing at their disposal a reasonably sufficient variety of colours of British manufacture, and of satisfactory quality." Financial assistance was not to be "available for the extension of the manufacture of dyes already in sufficient supply for Empire markets, nor for any general development not important as contributing directly to the main purpose."

The financial assistance offered was of two kinds:—(A) loans; (B) grants-in-aid of (i) buildings and plant, and (ii) research.

Loans were to be made at a commercial rate of interest when unduly heavy outlay on plant and equipment was necessary. Grants-in-aid of the cost of buildings and plant were "to compensate for the increase in cost over the normal and to meet special depreciation and obsolescence due thereto or for other special circumstances due to war conditions." These grants were not to exceed 40 per cent. of the cost of the buildings and plant on account of which they were made. For purposes of grants-in-aid, research was defined as "specialized technical research conducted in connection with the actual manufacture of dyes and advanced intermediates, and, as accessory thereto, for the purpose of discovering new dyestuffs or intermediates and the discrimination of those of value for the purposes of the industry or new processes for the production of known dyestuffs and the improvement of their quality." The grants were not to exceed 40 per cent. of the cost of extensions of laboratory buildings and equipment, and 40 per cent. of the annual cost of maintenance of the laboratories for a limited period. No loan might exceed 50 per cent. of the net value of the material assets of the firm. No manufacturer receiving a loan or grant might pay a dividend or distribute profits amounting to more than 8 per cent., until the conditions of the loan or grant were fulfilled. Loans were to be repayable within 20 years, and to be secured by a mortgage on the whole assets of the business. Interest was to be one per cent. over bank rate with a minimum of 5 per cent. After amounts are set aside for payment of interest on debentures and loans, depreciation, etc. (as approved by the Board of Trade), 10 per cent. of the remaining profits earned and 50 per cent. of

⁵ W. J. Ashley, *British Industries*, pp. 122 to 125.

any profits still remaining after the payment of 8 per cent. on the share capital must be paid to Government in repayment of the loan until it is repaid; and if the whole loan is not repaid within 20 years, the balance then becomes due and payable. "The payment of management and directors' fees or salaries in excess of £1,000 a year and the issue of bonus shares, require the approval of the Board of Trade. The Board of Trade may control prices."

The sum allotted for this scheme was £2,000,000, but the expenditure sanctioned amounts to only about £350,000 as grants and £90,000 as loans. The offer of assistance is now withdrawn. The companies to which this assistance has been given, though suffering now from the general depression of trade, are said to be likely to make good, and the scheme is regarded as successful, though it has been more limited in extent than was anticipated.

Mention may be made of the Development Commission established in 1909⁷ as a permanent authority to advise the Treasury regarding grants and loans to be made from the Development Fund in connection with agriculture, rural industries, co-operation, forestry, reclamation and drainage of land, rural transport (exclusive of roads for which the Road Board is responsible) labourers, inland navigation and fisheries. The sum of £2,900,000 was appropriated originally for the Development Fund; and a further sum of £1,000,000 was voted by Parliament in August 1920, but in view of the general financial situation, was not actually paid into the Fund. The Commission is, precluded from recommending assistance to profit-making concerns, a restriction which the Commission has found to impede its work seriously. In the financial year 1919-20 the Commission recommended grants amounting to £668,000 and loans amounting to £157,000.⁸ In 1920-21 the corresponding figures were £494,000 and £142,000.⁹

CANADA

The laws relating to bounties in Canada contain provisions as to the rates of the bounties, the general conditions on which they are payable, the period during which they shall remain in force, the total amount to be spent on them, and the amount which may be expended each year. To enable compliance with the last provision, only a percentage (e.g. 60 per cent.) of the bonus is paid when earned, the remainder being held over till the close of the fiscal year, and being liable to reduction, if necessary.

Bounties on pig iron, puddled iron bars and steel were offered for several years in Canada. In 1902 a falling sliding scale for four years was introduced.

⁷ Memorandum on Scheme for the allocation and administration of funds for the development of the dye industry, 1918; (cd. 9194).

⁸ Development and Road Improvement Funds Act, 1909; 9 Ed. 7 Chap. 47.

⁹ Tenth Report of the Development Commissioners, 1920 (H. C. 230).

¹⁰ Eleventh Report of the Development Commissioners, 1921 (H. C. 220).

duced, but in 1907 the rates were again raised and a new falling scale introduced by which the bounties, with one exception, ceased at the end of 1910.

A bounty on pig iron manufactured in Canada from Canadian ore was first offered in 1883. The rate, which was then \$1.50 per ton (2,000 lb.), was reduced in \$1 in 1886, raised to \$2 in 1892 and to \$3 in 1897. In 1902 a bounty of \$2 a ton on pig iron manufactured in Canada from foreign ore was introduced. The bounties were continued from 1902 at rates varying between \$2.70 and 40 cents till 1910, and were then continued for two more years only so far as electric smelting was concerned, but no bounties appear to have been paid on electrically smelted pig iron.

The quantity of pig iron on which bounty was paid rose from 52,000 tons in 1896 to 581,800 in 1906, and to 740,200 tons in 1910. The total amount paid in these bounties from 1896 to 1911 was \$7,097,041 on a total output of 5,431,547 tons.

A bounty on puddled iron bars was offered in 1894 at the rate of \$2 a ton. In 1897 the rate was raised to \$3 a ton and between 1902 and 1910 varied between this rate and 60 cents a ton. The annual output on which bounty was paid was highest in 1902, when it was 6,984 tons, but in 1907 puddled iron bars ceased to be made in Canada. The total amount paid in bounties from 1896 to 1907 was \$113,674 on 42,812 tons.

A bounty was offered on steel made in Canada from 1894 to 1910. The rate was at first \$2 a ton, but was raised to \$3 a ton in 1897; after 1902 the rate varied from \$2.70 to 60 cents a ton. The quantity of steel on which bounty was paid was 29,749 tons in 1896 and 8,683 tons in 1897; it rose slowly to 36,375 tons in 1902, and then jumped to 260,668 tons in 1903; in 1910 it was 740,390 tons. The total amount paid from 1896 to 1911 was \$6,706,990 on 4,448,780 tons.

A bounty of \$3 a ton was paid between 1903 and 1906 on rolled angles, beams and other rolled shapes, and on rolled plates; from 1903 to 1911 a bounty was paid on wire rods at \$6 a ton. The output on which bounties were paid was 4,211 tons in 1904, 40,213 tons in 1905, and rose to 89,802 tons in 1910. The total amount paid was \$2,868,122 on an output of 499,312 tons.¹⁰

The Australian Royal Commission on the Bonuses for Manufactures Bill, 1904, concluded that "the Canadian experience is not encouraging."¹¹

Between 1895 and 1900 a bounty was offered on silver lead smelted in Canada at the rate of 50 cents per ton. No bounties were paid till 1899. The

¹⁰ Canada Year Book 1915, pp. 459, 460.

¹¹ Report from the Royal Commission on Bonuses for Manufactures Bill, (Australian Commonwealth Parliamentary Paper) p. 49.

quantities on which bounties were paid were 450,000,000 lb. in 1899, 178,000,000 lb. in 1900 and 246,000,000 lb. in 1901. In 1903 a bounty of 75 cents per 100 lb. was authorized on lead contained in lead-bearing ores mined and smelted in Canada, provided that the price of pig lead in London did not exceed £12: 10: 0: this figure was raised to £14: 10: 0 in 1908.¹² The bounties ceased in 1916, when the price in London exceeded this amount.¹³ The quantities of lead on which bounty was paid varied very much from year to year. It rose to 56,000,000 lb. in 1905 but fell to 15,000,000 lb. in 1908; rose to 45,000,000 lb. in 1910, but fell to 24,000,000 lb. in 1913, to 7,000,000 lb. in 1914 and to 3,000,000 lb. in 1915.¹⁴ The total amount paid in bounties on lead from 1899 to 1919 amounted to \$1,979,216.

In 1916 an Act was passed providing for the payment of bounty on zinc and spelter produced in Canada, but as no bounty was to be paid on zinc or spelter produced during the war or after the 31st July 1917, the Act must have remained inoperative.¹⁵

In 1918 a bounty was authorized on zinc or spelter (containing not more than 2 per cent. of impurities) produced in Canada from zinc ores mined in Canada when the standard price of zinc or spelter in London (England) or St. Louis (U.S.A.) was less than 9 cents a lb. The bounty was to be the difference between such standard price and nine cents a lb. The bounty was to remain in force till the 31st July 1920, and the total amount payable was not to exceed \$400,000.¹⁶ The amount paid up in 1919-20 was \$249,246 on 15,186,694 lb.¹⁷

In 1903 the Dominion Parliament authorized the payment of a bounty on Manila fibre used in the manufacture of binder twine. The rate was to be equal to the export duty on the fibre in the Philippine Islands, but was not to exceed three-eighths of a cent per lb. In 1907 the bounty was extended to Manila fibre used in the manufacture of cordage. These bounties expired in October 1913. The annual quantity of fibre on which bounty was paid rose from 7,470,000 lb. in 1904 to 18,040,000 lb. in 1910, but fell to 14,830,000 lb. in 1912. The total amount paid in these bounties was \$367,962.¹⁸

AUSTRALIA

The Commonwealth of Australia has at different times offered bounties on various Australian products and manufactures. It is usually enacted that to be entitled to bounty goods must be of good

¹² Canada Year Book, 1915, p. 459.

¹³ Canada Year Book, 1915-16, p. 424; 1918, p. 402.

¹⁴ Canada Year Book, 1915, p. 461.

¹⁵ Statutes of Canada, chap. 27 of 1916.

¹⁶ Statutes of Canada, chap. 51 of 1918.

¹⁷ Canada Year Book, 1920, p. 454.

¹⁸ Canada Year Book, 1915, pp. 460, 461.

and marketable quality and the rates of wages and conditions of employment must be up to standard, or, in the absence of a standard, be reasonable and fair. The law prescribes in each case the rate of bounty, the period during which the bounty is to remain in force and the amount to be appropriated for the purpose each year; but any sum unspent in one year may be added to the amount available for the payment of the bounty in the following year.

In 1908 bounties were authorized to establish the iron industry in Australia on a remunerative basis, both in the smelting of pig iron and in the production of bar iron and steel from Australian ore. £150,000 a year was allotted for the payment of a bounty of 12 s. a ton on pig iron, puddled bar iron or steel made from Australian ore, and £30,000 a year for the payment of a bounty of 10 per cent. *ad valorem* on galvanized sheet or plate iron or steel, wire netting, wire, and iron or steel tubes or pipes, not more than 6 in. in diameter, made from Australian ore.¹⁹ These bounties continued in force till the 30th June 1914. The total amount paid was £173,681, viz. £130,972 on pig iron, £4,611 on puddled bar iron, £14,339 on steel, £674 on galvanized sheet iron and £23,085 on wire netting.²⁰ The offer of bounty appears to have failed in its object in respect of the manufacture of puddled bar iron galvanized sheet or plate iron or steel, and iron or steel tubes.

From the 1st July 1914 to the 31st December 1916 the sum of £30,000 per annum was made available for the payment of a bounty at the rate of 8 s. a ton on pig iron made from Australian ore. In 1915 this bounty was declared not payable on pig iron manufactured for other than foundry purposes.²¹ The total amount paid was £55,727.²²

Pig iron was first produced in Australia in 1907. Between 1908 and 1915 the annual output of pig iron made from Australian ore rose from 30,393 tons, worth £98,777, to 76,318 tons, worth £267,000.²³

In 1918, £200,000 was provided for the payment of bounties on black steel sheets and galvanized sheets manufactured in Australia, between the 1st October 1918 and the 30th September 1923, from Australian ore or from steel manufactured in Australia, or from sheet bar steel the importation of which had been duly authorized.²⁴ The rate of bounty depends on the average freight for black steel sheets, not exceeding 1/16th inch in thickness, and galvanized sheets from ports in the United Kingdom at which these sheets are usually shipped to Australia, as determined by the British Board of Trade for the quarter immediately preceding that in which the bounty is

¹⁹ *The Manufacturers Encouragement Act, 1908*, extended by Act 28 of 1912.

²⁰ *Official Year Book of the Commonwealth of Australia*, No. 9 p. 420.

²¹ *The Iron Bounty Act, 1914-15*.

²² *Year Book*, No. 13, p. 461.

²³ *Year Books* No. 5, p. 505; No. 6, p. 497; No. 13, p. 462.

²⁴ *The Iron and Steel Bounty Act, 1918*.

payable. When the freight is £2: 10: 0 per ton or under, the rate of bounty on black steel sheets is £1: 10: 0 per ton, and on galvanized sheets £2 per ton. When the freight exceeds £2: 10: 0 per ton, the amount by which it exceeds £2: 10: 0 per ton is deducted from the rate of bounty. The bounty payable on galvanized sheets includes the bounty, if any, paid on black steel sheets from which the galvanized sheets are made. If the net profits on a business in respect of which bounty is claimed exceed 15 per cent. of the capital so much of the bounty may be withheld as will reduce the net profits to 15 per cent.²⁵ The amount paid up to the end of 1921 was £1,756. Only one firm appears to have been interested in this bounty. The general dislocation of business after the war made it difficult to organize a new industry and especially to obtain the necessary machinery from abroad; the firm could not therefore make a start till October 1921. In January 1922 a notice appeared in the press that owing to the high cost of local sheet bars and coal and the high wages paid and in the face of the very low prices at which galvanized iron and black sheets could be imported into Australia the firm could not compete with the imported articles and the works would probably be closed down in February 1922.

In 1912, £5,000 a year for five years from the 1st January 1913 was appropriated for the payment of bounty on wood pulp manufactured from raw material produced in Australia. The rate of bounty was 15 per cent. on the market value.²⁶ No bounty appears to have been paid under this authority.

Up to 1919 the only attempt made to produce wood pulp on a commercial scale in Australia was that of the Queensland Pine Company, Limited. Their mill had to close down in 1914 owing to want of water, and to the high cost of production, but it has since reopened. The Inter-State Commission of Australia pointed out that the conditions under which the mill works are very disadvantageous compared to those of mills abroad; in America, Canada, Norway and Sweden, mills are in close proximity to the forests, are conveniently situated by the water-side and are able to ship direct without heavy cost of inland carriage to the sea. These conditions are not satisfied by the mill in Australia. The Commission was unable to conclude that the Queensland Company offered any certainty that the manufacture of wood pulp under the conditions specified could attain any material success, but it was of opinion that the bounty did not offer adequate encouragement for the establishment of the wood pulp industry, and recommended that the rate of bounty should be increased to 30 per cent. on the market value of the pulp.²⁷

²⁵ *Year Books*, No. 11, p. 452; No. 13, p. 461.

²⁶ *The Wood-pulp and Rock Phosphate Bounties Act, 1912*.

²⁷ *Paper-pulp, possibilities of its manufacture in Australia*; Bulletin No. 11 issued by the Advisory Council of Science and Industry, Commonwealth of Australia; 1919, pp. 18, 19.

In 1912 a sum of £5,000 per annum for five years from the 1st January 1913 was appropriated for the payment of bounty on rock phosphate in cases where at least 10,000 tons of rock phosphate had been produced in one deposit and manufactured into marketable phosphatic manure in Australia. The rate of bounty was 10 per cent. on market value. The sum of £5,000 a year was also set aside at the same time for the payment of rewards of £1,000 each to the discoverer of any deposit or vein of rock phosphate suitable for making phosphatic manure, but the deposit or vein must have been worked and 10,000 tons of rock phosphate produced therefrom and used in the manufacture of marketable phosphatic manure. Further, it was not to be situated within 25 miles of any other deposit or vein in respect of which a reward was payable or a prior claim to a reward existed.²⁸ This Act was extended for a further five years, but no bounty appears to have been paid under it. In 1918, 8,074 tons of rock phosphate, valued at £10,773, were produced in South Australia, and 3,000 tons were raised in Victoria.²⁹

In 1907 a bounty at the rate of $\frac{1}{2}$ d. per lb. was offered on fish preserved in Australia as prescribed. The amount appropriated for the purpose was £10,000 a year for ten years.³⁰ In 1908-9 the amount paid was £1,727 and in 1909-10 it was £311, but in no other year has it exceeded £200. Only one establishment claimed bounty for fish preserving in 1917-18, as compared with five in 1916-17.³¹ The bounty seems, therefore, to have had little effect in the development of the industry of preserving fish. The comparative failure of this industry is ascribed to the high cost of production and increasing competition from other countries where wages are lower.

The sum of £15,000 was allotted for bounties on dried dates at the rate of a penny a lb., but no bounty was claimed. The conditions in Australia are said to be totally unsuited for the production of dried dates. Dates can be grown only in the far north and the greatly increased coastal freights (which are due, it is alleged, to the Navigation Act), coupled with the very cheap production of dates elsewhere, render it impossible to establish the industry.

A bounty was offered at the rate of 10 per cent., on value on dried fruit (except currants and raisins) canned and exported. The amount allotted for this purpose was £60,000 but only £2,518 was distributed. The reasons ascribed for the failure of this bounty are that it is very difficult to dry enough fruits for the Australian market and that the very greatly inflated price of land in the chief irrigation settlements makes it exceedingly difficult for increased quantities of fruit to be grown.

²⁸ *The Wood-pulp and Rock Phosphate Bounties Act, 1912-17.*

²⁹ *Year Book, No. 13, p. 433.*

³⁰ *The Bounties Act, 1907.*

³¹ *Year Book, No. 13, p. 439.*

Similar remarks apply in the case of the bounty on evaporated apples. The bounty was at the rate of 10 per cent. on value on evaporated apples sold to the Imperial Government between the 1st April 1918 and the 31st August 1918. The amount paid was £4,054 as against an allotment of £12,000.

In 1910, £50,000 were appropriated for the payment of bounties on kerosene and refined paraffin wax manufactured in Australia from shale between the 1st July 1910 and the 1st July 1913. The rates of bounty were 2d. a gallon on kerosene and 2/6d. a cwt. on wax.³² The amounts paid were £6,341 on kerosene and £2,240 on paraffin wax.³³

In 1917, £270,000 were appropriated for the payment of bounties on the production in Australia of crude shale oil of prescribed quality from mined kerosene shale during four years beginning on the 1st September 1917. In 1921 the Act was extended for another year. The rates at which the bounty was payable were as follows:—

- 2½d. per gallon up to 3,500,000 gallons.
- 2d. per gallon over 3,500,000 and not exceeding 5,000,000 gallons;
- 1½d. per gallon over 5,000,000 gallons and not exceeding 8,000,000 gallons;
- 1¼d. per gallon on every additional gallon.³⁴

The production of shale varied from year to year. It was 75,000 tons in 1911, 86,000 in 1912, 17,000 in 1913, 50,000 in 1914 and 32,000 in 1918.³⁵ No kerosene appears to have been made before 1910. At the end of that year the Commonwealth Oil Corporation retorts at Wolgan were ready for operation, while the British Australian Oil Company was erecting works for the production of oil at Hamilton.³⁶ In 1913 work ceased in two mines and the British Australian Oil Company closed its works, but it was more active in 1914. In the following year new retorts were installed at Wolgan and proved satisfactory.

Speaking on the Oil Agreement Bill in the House of Representatives in May 1920, Mr. Hughes, the Prime Minister, said "The quantity of shale oil produced, as compared with the volume of oil consumed in the world, is so small as to be for all practical purposes negligible. In this country, despite the offer of a bonus of 2½d. per gallon in September 1917 to Australian companies producing crude oil from shale, because the bonus provisionally offered was not considered sufficient, the production of oil from shale in Australia is only

³² *The Shale Oils Bounties Act, 1910.*

³³ *Year Books, No. 5, p. 521; No. 6, p. 513; No. 7, p. 442.*

³⁴ *The Shale Oil Bounty Acts, 1917, 1921.*

³⁵ *Year Books, No. 5, p. 520; No. 7, p. 441; No. 9, p. 437; No. 11, p. 469; No. 13, p. 479.*

³⁶ *Year Book, No. 5, p. 520.*

about 2,800,000 gallons per annum, whilst we consume of oil and its derivatives 52,000,000 gallons per annum."³⁷

VICTORIA

By Act 53 Victoria No. 1046 and certain other Acts the sum of £253,000 was appropriated for payment of bonuses by the Government of Victoria on certain agricultural products, etc. Of this sum £37,000 was offered to factories in the State for fruit canning, fruit drying, dairying, raisin and currant making, vegetable oil making, and preparing for the manufacturer flax, hemp, silk and other products.

The bonus payable for preserving fruit, other than grapes, was £100 for the first 20 tons' weight of fruit found to be in a marketable state and in good condition at a reasonable time after its preservation; and £3 on every additional ton weight of preserved fruit subject to a maximum payment of £300 in respect of any factory.

For preserving raisins, currants, figs, and prunes, the bonus payable was £5 a ton, subject to a minimum of half a ton and a maximum payment of £100 to any individual.

The bonus payable for the manufacture of vegetable oil was 1s. per gallon of oil proper marketable quality, subject to a maximum of £500 in each case.

The bonus for the manufacture of flax or hemp fibre was £5 a ton, subject to a maximum of £500.

A bonus of £40 was payable on one ton of insect destroying powder of good and proper marketable quality, and an additional £20 a ton on further quantities, subject to a maximum bonus of £100.

A bonus of £20 was payable on 2,000 lb. weight of manufactured tobacco of good quality and marketable value, and a further sum of £5 per 200 lb., subject to a maximum bonus of £500 in each case.

No bonuses appear to have been paid in any of these cases, except £633; 13 s. to two tobacco factories and £645 to raisin and currant factories, this sum being paid almost entirely on raisins. The colony became practically independent of foreign importation of raisins by 1895.

A sum of £4,000 was also allowed for the payment of a bonus for the introduction of new agricultural machinery and appliances, and of prizes for new inventions in general agricultural appliances.

³⁷ Commonwealth of Australia, Parliamentary Debates, First Session, 1920; 1883.

in Victoria between 1890-95. Of this sum £1,595 had been expended up to the 30th June 1895.³⁸

CAPE OF GOOD HOPE

In 1895 it was reported that the Government of the Cape of Good Hope allowed a rebate of 5s. 3d. out of the customs duty of 6s. 3d. per 100 lb. weight on sugar used in the manufacture of jams and preserves, in order to enable the manufacturers, of these articles to compete in the South African markets with the imported article produced from duty free sugar; and a rebate of 15 per cent. was granted by the railway department off second class rates on sugar used in these manufactures and carried inland from ports.³⁹

NATAL

In 1889 a law was passed in Natal for the encouragement of manufacturing industries by rewards. Rewards were to be limited to half the market value of the first production. Particulars of rewards offered had to be laid before the Legislative Council and were to be regarded as confirmed if not altered or rejected within four weeks. Under this law rewards were offered on the manufacture of several articles in Natal from colonial produce or material. These included leather manufactured from South African hides, boots and shoes, saddlery and harness, woollen manufactures, cloths, hosiery and hosiery, iron and steel, cement, ropes, certain papers, creosoted railway sleepers, superphosphatic manures, condensed milk, certain vegetable oils, stearine candles, and glass. In each case two rewards were offered, the second being roughly half the value of the first. The total amount of the first rewards offered to twenty classes of manufactures was £22,800; the amounts offered as first rewards varied from £150 for £500 worth of condensed milk to £7,000 for £20,000 worth of iron or steel. The time allowed for the production from the notification of intention to compete for the reward was generally one year, but was two years in the case of iron or steel.⁴⁰

FRANCE

In 1895 it was reported that bounties on silk spinning were paid in France at the following rates:—for every pan used in spinning two threads, 100 fr. a year; for every pan used in spinning more than two threads, 400 fr. a year; for every three pans used in preparing the cocoons for the spinning pans, 200 fr. a year. The bounties paid in 1893 and 1894 amounted to 2½ and 3½ million francs, respectively.⁴¹

³⁸ Reports on Bounties other than those on Shipping and Navigation, 1896, (c.7960), pp. 14 to 30, 50, 61.

³⁹ Reports on Bounties other than those on Shipping and Navigation, 1896, (c.7960), p. 5.

⁴⁰ op. cit., pp. 8 to 12.

⁴¹ Reports on Bounties other than those on Shipping and Navigation, Commercial No. 7 (1895) (c.7897), p. 36.

In 1898 a bounty on silk spinning was authorized for 10 years. The rates at which it was payable were 400 fr. and 340 fr. a year for every pan used in spinning more than three threads from French and foreign cocoons, respectively, and at the same rate for accessory pans at the rate of one accessory pan for three spinning pans, and 200 fr. and 170 fr. for every pan used in spinning double cocoons of French and foreign origin, respectively.

If the annual expenditure in the first six years exceeded 4,000,000 fr. (£160,000) the rates were to be reduced for the remaining four years. The bounties paid were £178,900 in 1898 and £163,600 in 1900.⁴²

In 1899 provision was made for the payment of bounty on the manufacture of shale oil in France for six years at the rate of not more than 3 fr. a hectolitre (1½d. per gallon) in the first two years, 2 fr. a hectolitre (1d. per gallon) in the next two years, and 1 fr. a hectolitre (¾d. per gallon) in the remaining two years, the annual expenditure being limited in these periods to £12,000, £8,000 and £4,000, respectively. The full amounts of £120,000 a year were paid in the first two years.⁴³

GERMANY

In 1895 it was reported that the excise duty on salt produced in Germany and the customs duty on salt imported by sea was 12 marks per 100 kilograms, and the import duty on other salt was 12.80 marks. Salt used for manufacturing purposes, for manures and for cattle food was admitted free when rendered unfit for human consumption or used under Government control. A drawback of the whole duty paid was granted on salt used for salting meat, butter, fish, etc., or for pickling herrings. The amounts paid in these drawbacks were about £3,000 a year.⁴⁴

UNITED STATES OF AMERICA

In the seventeenth century attempts were made by the Colonial Governments of America to encourage manufacturing enterprises (including cloth, silk, paper, iron and firearms) by bounties, but they failed owing to "the scarcity of labour, the lack of capital and the hard conditions of pioneer life."⁴⁵

In 1640 a bounty of 25 per cent. was offered in Massachusetts on the production of linen, woollen and cotton cloth; it was to continue for three years but

Cloth

⁴² *Reports on Bounties other than those on Shipping and Navigation*, Commercial No. 2 (1904) (cd. 1946), pp. 23, 24.

⁴³ Commercial No. 2 (1904) (cd. 1946), pp. 24, 25.

⁴⁴ *Reports on Bounties other than those on Shipping and Navigation*, Commercial No. 7 (1895), pp. 37 to 40.

⁴⁵ Dr. E. L. Bogart, *The Economic History of the United States*, 1920, pp. 59, 60.

was withdrawn in 1641 "because too burthensome to the country."⁴⁶

In 1722 the Rhode Island Assembly granted a linen manufacturer for five years the exclusive enjoyment of a bounty of 20 shillings for each bolt of duck manufactured by him from hemp grown in the province and equal to good Holland duck; the term was afterwards extended to ten years. In 1725 he was granted £500 for three years from the general treasury. In 1728 the General Court lent him £3,000 to be repaid without interest at the end of ten years on condition that he made 150 bolts of good merchantable duck each year. In 1731 the grant was confirmed, and he was relieved of the necessity to produce a definite quantity of duck annually and the bounty was continued. "Legislative patronage, whether judiciously bestowed or really beneficial to the industry, appears not to have been wanting to the linen branch in New England."⁴⁷

During the eighteenth century several important inventions affecting the textile manufactures were made in Great Britain, especially between 1768 and 1789. In 1774 and 1782 the exportation of textile machinery, tools, etc., or models or plans of them were prohibited and statutes were enforced against enticing artificers to emigrate.⁴⁸

In 1786 two brothers from Scotland were employed in Massachusetts to prepare carding, roping and spinning machines; in 1787 they were granted by the legislature six tickets in a State land lottery, as well as £200 to enable them to complete the machines; the machines were deposited with a Mr. Orr, who was to exhibit them and explain their principles, uses and advantages to enquirers and was permitted to use them himself. It appears, however, that he did not use them to establish a manufacturing business.⁴⁹

In the same year the State deposited with Mr. Orr £20 to encourage Thomas Somers, who had brought with much difficulty from England descriptions and models of carding and spinning machinery; the models were exhibited to manufacturers.⁵⁰

In 1780 a cotton spinning and weaving association was formed at Worcester, Massachusetts, and made corduroy, etc.⁵¹ But the factory set up at Beverly, New England, in 1787 is perhaps the first in which cotton was manufactured by machinery.⁵² It was driven by horse-power. In 1789 the proprietors were granted by the Legis-

⁴⁶ J. L. Bishop, *A History of American Manufactures from 1608 to 1860*, Vol. I, p. 299.

⁴⁷ *op cit.*, Vol. I, pp. 334, 335.

⁴⁸ *op cit.*, Vol. I, pp. 396, 397.

⁴⁹ *op cit.*, Vol. I, pp. 398, 399; S. Batchelder, *Cotton Manufactures in the United States*, pp. 22, 23.

⁵⁰ *A History of American Manufactures*, Vol. I, p. 399; *Cotton Manufacture in the United States*, pp. 23, 24.

⁵¹ *A History of American Manufactures*, Vol. I, p. 396.

⁵² *op cit.*, Vol. I, p. 401; *Cotton Manufactures in the United States*, p. 33.

lature £500 worth of land on condition that within seven years they should manufacture 50,000 yards of cotton and linen piece-goods of a quality usually imported. The factory was visited by George Washington in that year. In 1790 the managers applied to the Legislature for "some real and ready assistance" in lieu of the grant of land, as they had been put to much expense and the grant had not answered its purpose. A committee to whom the petition was referred recommended the grant of £1,000 (to be raised in a lottery) on condition that the petitioners gave bonds that the money would be actually used to promote effectually the manufacturing of cotton piece-goods in the Commonwealth.⁵³

In 1788 a notice appeared in the newspapers of the grant by the Pennsylvania Legislature of £100 to John Hague for introducing a machine for cording cotton and of the establishment of a society with legislative encouragement for the manufacture of cotton. This, as well as a notice of a reward offered by a Society for a machine to make cotton-rollers, attracted the attention of Samuel Slater who has been called the "father of cotton manufacture in the United States,"⁵⁴ but was then, at the age of 20, apprenticed to Jedediah Strutt, the partner of Sir Richard Arkwright. He decided to proceed to America, and after having been general overseer both of the machinery and manufacturing departments in Sir Richard Arkwright's works and Mr. Strutt's mill, proceeded there in 1789 and introduced the Arkwright machinery there.⁵⁵

In 1768 a paper mill was established in Connecticut under a promise of a bounty. In 1770 a bounty was paid at the rate of two pence a quire on writing paper and a penny a quire on printing paper; the bounties paid amounting to £81: 16: 8. The bounty was soon afterwards withdrawn.⁵⁶

In 1775 the Provincial Congress of South Carolina offered premiums of £200, £150, £100 and £50 on the erection of the first four saltpetre works in the province which should produce 50 lb. of good merchantable saltpetre each and similar sums for works for refining saltpetre on producing 100 lb. of sulphur.

Premiums of £1,000, £800, and £700 were offered on the first three bloomeries erected in the Colony, to produce one ton of good bar-iron each, and £500 was offered for each of the first three works producing 500 lb. of good bar steel. A premium of £700 was offered for the first

⁵³ *Cotton Manufacture in the United States*, pp. 26 to 33.

⁵⁴ B. H. Hammond, *The Cotton Industry, an Essay in American Economic History*; Publications of the American Economic Association, New Series No. I, Dec. 1897; Chap. VIII, p. 231; E. L. Bogart, *Economic History of the United States*, p. 154; *A History of American Manufactures*, Vol. I, p. 407.

⁵⁵ *Cotton Manufacture in the United States*, pp. 41 to 49; *A History of American Manufactures*, Vol. I, pp. 402, 403.

⁵⁶ *A History of American Manufactures*, Vol. I, p. 200.

1,000 lb. of nail-rods made at a proper rolling and slitting mill in the Colony.

Iron works on a fairly large scale were established in the Colony in 1787 and 1788.

Premiums of £500, £200 and £100 were offered on the first three lead factories at which 1,000 lb. of lead were made.⁵⁷

Lead

The following extract relating to the domestic manufacture of woollen cloth early in the nineteenth century is from Dr. C. W. Wright's *Wool Growing and the Tariff*.⁵⁸

Woollen cloth

"A very substantial impetus to household manufacture came from the innumerable premiums and awards offered by the various societies then formed for the promotion of industry. Thousands of yards of woollen cloth were each year displayed in competition at the annual fairs. Some of the states adopted the same policy. New York in 1808 passed a law offering an annual premium of \$80 in each county of the State for the best specimen of woollen cloth made in any household, and other premiums were open to competition from the State at large. The law was slightly changed in 1810 and 'proving eminently beneficial' was renewed in 1812 for three years longer. During the period from 1808 to 1815 a total of \$21,000 was so distributed. The rivalry thus engendered was no slight aid in increasing the quantity of the household product, as well as in improving its quality."

Until 1890 the United States Congress authorized no direct money bounty in aid of manufacturing industries, except in one doubtful instance.⁵⁹ In 1890 bounties were payable on sugar under the McKinley Tariff Act; these bounties have been dealt with in Chapter II.

Congress

JAPAN

In 1913 the Japanese Government remitted the income tax for the encouragement of certain industries, viz., ingots of gold, silver, zinc, aluminium, bar, rod and angle iron, iron rails, machinery, soda, sulphate of ammonia, glycerine, sheet-glass and condensed milk.

The Japanese Government has occasionally voted money for the purpose of maintaining prices by means of purchasing and holding stocks for the benefit of the producers.

⁵⁷ *A History of American Manufactures*, Vol. I, pp. 619, 620; Other examples of the grant of bounties will be found in this work, e.g., Vol. I, pp. 381 to 383.

⁵⁸ C. W. Wright, *Wool Growing and the Tariff, a Study in the Economic History of the United States*; Harvard Economic Studies, Vol. V, 1910, pp. 21, 22.

⁵⁹ In 1789 Congress authorised the payment of bounties for seven years on fishing vessels in lieu of the drawback on salt intended for the fisheries; by these bounties "navigation and shipbuilding were greatly promoted"; *A History of American Manufactures*, Vol. II, p. 43.

Under the Pig-iron Encouragement Act, the import of machines and machinery and other stores necessary for the purpose is exempt from customs duty, when at one place an iron foundry capable of producing at least 35,000 metric tons per annum of pig-iron or steel, or an additional iron foundry with the same capacity, is established; this concession is to remain in force for ten years from September 1917.⁶⁰

The Special Economic and Financial Investigation Commission recommended in February 1921, that an import duty of 10 per cent. should be levied on pig-iron, and of 15 per cent. on other iron or steel; except material for ship-building which should be free of import duty; that Japanese manufacturers of iron and steel should receive subsidies to the extent of the difference between excise duties and the conventional tariffs; that subsidies should be given for the use of Japanese steel for shipbuilding equal to the total import duty leviable on such steel; that iron manufacturers should be exempt from business and income taxes for a period of ten years, provided that their equipment satisfies the Iron Industry Encouragement law; that the transportation of iron ores and manufactures by sea or land should be subsidized; that Japanese iron manufacturers should be given special financial accommodation.

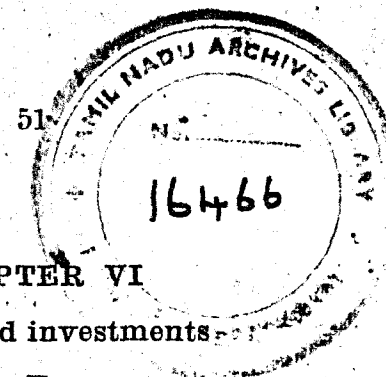
The law has apparently been amended so as to provide for the levy of the proposed import duties and the payment of the corresponding subsidies. Further, the recently enacted Iron Industry Encouragement Act provides that any person engaged in the iron industry with equipment to produce at a single place 5,250 metric tons or more yearly of pig-iron or steel is exempt from taxes on his industry and from income taxes on the profits yielded in the year in which the industry is started and for the following ten years. In the low phosphorous pig-iron industry an annual outturn of 2,500 metric tons instead of 5,250 tons is sufficient to earn these concessions. It appears probable, however, that there will be indefinite delay in bringing this Act into force.

HUNGARY

In Hungary the State assisted with some success the development of industries by exemption from taxation, the grant of subsidies and loans, and the transport of building materials, machinery, etc., by railways at cost price.⁶¹

⁶⁰ *The Nineteenth Financial and Economic Annual of Japan*, 1919: p. 24.

⁶¹ *State encouragement to Industry in Hungary*: Diplomatic and Consular Reports, Misc. Series, No. 663, (ed. 3284-7).



CHAPTER VI

Loans and investments

UNITED KINGDOM

Three principal reasons led the British Government to encourage the dye industry. Before the war the United Kingdom consumed annually about 20,000 tons of dyes, of which 90 per cent. came from Germany. Dyes are necessary for the textile, paint, leather, paper, and other industries; the want of dyes was therefore felt acutely very soon after the outbreak of the war. In the second place, the chemical warfare started by the enemy showed the necessity of a self-supporting organic chemical industry as a preparation for defence. Thirdly, it was necessary to provide scope for scientific research work and a training ground for young chemists.

In 1915 it was decided to form a new company for the manufacture of dyes with financial assistance from the Government. The British Dyes Ltd. was formed in 1915.¹ The Government undertook to subscribe £1 for every £1 of capital subscribed outside up to £1,000,000 and £1 for every £4 of capital subscribed outside over £1,000,000. The original capital was £2,000,000. At first it was laid down that only shareholders could draw supplies from the Company, but this condition had to be dropped as the public would not take up shares on this condition. It was altered to a condition giving shareholders a preference. The Government could nominate two directors, the total number being 6 to 12. The Government directors had absolute power to veto proposals or resolutions of the Board, "which, having regard to the main object with which the Company has been formed, shall in their or his opinion tend to encroach unduly on the trade or business of any manufacturer of products other than dyes or colours, or to give any undue preference as regards supply, prices or otherwise to any customer or consumer of the Company's products."

In 1919 the British Dyes Ltd. amalgamated with Messrs. Levins-tein Ltd. and formed the British Dyestuffs Corporation Ltd., with a capital of £6,000,000 divided into 6,000,000 shares of £1 each. The capital was shortly raised to £10,000,000. The Government holding in this Company in now £1,700,001 composed of 850,000 preferred ordinary shares, fully paid and 850,001 preference shares fully paid.² The Government appoints two directors who have the same powers as in the case of British Dyes Ltd. and can also veto the formation or making of any contract or agreement between the

¹ *Board of Trade Journal*, Feb. 5th 1920, pp. 177 to 180.

² *Government Investments in Registered Companies*, No. 250; 1921.

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Company and any foreign competitor of the Company. Ten per cent. of the residuary profits must be placed to the credit of a sinking fund for repayment of the Government loans; dividends may not exceed 8 per cent. per annum; and if the amount available is more than sufficient for such a dividend, the amount credited to the sinking fund has to be increased from the excess up to 15 per cent. of the residuary profits. The Corporation is further aided by the absolute prohibition for 10 years of the import of dyestuffs except under license.³ A large amount of research has been necessary, and the Government made a grant of £100,000 towards research under the scheme dealt with in Chapter V under the heading of Dye Industry.

The Corporation paid dividends of 8 per cent. in 1920, but, owing to the general depression of trade, paid no dividend in 1921. The value of the shares is now considerably below their par value; the trade in dyestuffs is, however, expected to recover with other trades, and the Corporation is expected to be successful commercially. The capacity of this and other British dye manufacturers is now not less than 25,000 or 30,000 tons per annum.⁴

The contract made by the British Government with the Cunard Steamship Company in 1903 provided for a loan of £2,600,000 to be repaid in twenty years, the rate of interest being 2½ per cent. The object of the loan was to enable the Company to build two large steamers of a speed of at least 25 knots for the North trans-Atlantic trade; they would be available as fast auxiliary cruisers and were constructed to meet Admiralty requirements. The fleet of the Company and its other property were pledged to the Government as security for the loan. The vessels built in accordance with the contract were the *Lusitania* and the *Mauretania*.⁵ The Government is shown as holding debenture stock to the extent of the loan and one ordinary share of £20 in the Company, but by November, 1921, £1,560,000 had been repaid, and the equivalent stock had been cancelled.⁶

The Government assisted the Munster Flax Development Co., Ltd., by taking debentures in it to the amount of £33,000.⁶ This Company set up a factory for retting flax by a patent process. The Company got into difficulties owing to the cost of buildings and machinery having exceeded the estimates considerably, and owing to a bad flax season, but the scheme is unsuccessful owing to the high cost of bringing the straw to the factory. The Company is being closed down.

For some years before the war, experiments in beet cultivation had been made by private growers and on the farms of agricultural colleges, and these had proved the possibility of growing sugar-beet

³ *Dyestuffs (Import Regulation) Act, 1920.*

⁴ *Board of Trade Journal*, Feb. 5th 1920, p. 179; *Times*, Jan. 7, 1922, p. 7.

⁵ *Government Aid to Merchant Shipping*, pp. 22, 51, 54, 55. *Copy of agreement with the Cunard Steamship Company, 1903* (Cd. 1703).

⁶ *Government Investments in Registered Companies, 1921* (H. C. 250), p. 2.

in England. The establishment of a beet-sugar factory was considered necessary to develop the cultivation of beet-sugar, but public funds could not be used for the purpose in consequence of treaty obligations, as financial assistance would be regarded as a bounty within the meaning of the Brussels Sugar Convention. The British Sugar Beet Growers' Society, Limited, was registered in 1915 under the Industrial and Provident Societies Acts, with rules prohibiting the division of profits among the shareholders. In 1917 and 1918 advances of about £170,000 were made to it by Government from the Development Fund for the purchase of an estate at Kelham of 5,000 acres and for working capital. Nearly 2,800 acres of the estate were sold to Government in 1919. The possibility of growing sugar beet in England having been demonstrated, the Reconstruction Committee recommended the establishment of the beet sugar industry with State assistance through a company in which the Government should take an interest. In 1920 a company, known as Home Grown Sugar Ltd., was floated; to take over the Kelham estate and to erect a beet sugar factory on it. The capital originally raised was £500,000. The Government undertook to subscribe for a number of ordinary shares of £1 each (not exceeding 250,000) equivalent to the number allotted to public subscribers. Further, the Government guaranteed interest at 5 per cent. for ten years on the shares allotted to public subscribers, and takes no interest on its own shares till the public subscribers have received 5 per cent. on their shares. Provision was made by which the Government shares can be transferred to the public. "The object of the guarantee of the Government is to subsidize the industry during the earlier years as a profitable commercial proposition by ensuring a certain 5 per cent. dividend to the public shareholders, and when so established, to encourage the Company to divest itself of Government control consequent upon the investment of State funds in the enterprise."

The factory has been built and recently opened. It can deal with 600 tons of beets in a day of 24 hours, or with 60,000 tons in a normal working season of 100 days—the produce of about 6,000 acres. The expected annual production is 8,000 tons of sugar, 3,000 tons of dried beet pulp, 1,800 tons of molasses, and a large quantity of lime waste.

Owing to the high prices of building, machinery, &c., it has been found necessary to raise a further sum of £200,000. The Company borrowed £75,000 on a first mortgage on the property and the Government lent £125,000 on a second mortgage at 7 per cent., the loan being repayable in 1930.⁷

The result of the present campaign, which closes in February 1922, will be a considerable loss, owing to high capital costs and the fall in the price of sugar.

⁷ *Government Investments in Registered Companies, 1921* (H. C. 250), p. 3; *Home Grown Sugar*, Vol. II, No. 7, Aug.-Sept.-Oct., 1921, Special Number; *Tenth Report of the Development Commissioners for the year ended the 31st March, 1920*, (H. C. 230), pp. 138 and 139.

BARBADOS

The West India Royal Commission, 1897, recommended the grant of a loan from the Imperial exchequer of £120,000 to Barbados for the establishment of central sugar factories.⁸ The Colonial Government was, under the Commission's proposal, to advance money as a loan to a combination of owners of estates;⁹ the representatives of the estates were to undertake for a number of years to send the canes grown by them to the central factories; they were to be paid a low price per ton for the canes as received, calculated in such a manner as barely to cover the cost of production, or nearly so; the next charge on the profits was to be the interest and a sinking fund of 1 per cent. per annum; any balance of profits remaining was to be divided between the owners of the estates in proportion to the quantity of canes supplied by each, but with provision that, of the profits in excess of a certain amount, one half should be added to the sinking fund; when the loan had been repaid with interest, the central factories were to become the property of the owners of the estates.¹⁰

ANTIGUA

The movement in Barbados to form a company to build one or more central factories proved unsuccessful. Action was, however, taken in Antigua. The sum of £3,500 was advanced as a loan without interest (to be eventually remitted if certain quantities of canes were purchased from peasants on a certain sliding scale favourable to them), for the renovation of a private factory, on condition that suitable up-to-date machinery, to the value of £7,500, was installed, and that a stipulated amount of peasants' canes was taken annually, payment being made for them on a sliding scale with a minimum price of 7s. 6d. per ton. This factory, apparently, had excellent results.

Towards the construction of another central factory the Government advanced from the Imperial exchequer the sum of £15,000 to a company as a loan without interest on certain conditions. In view of the special interest which attaches in India at present to attempts to establish modern sugar factories, it appears desirable to describe this experiment, which has been completed, in some detail. The main conditions on which the loan was made were as follows:—

(1) The original capital of the company was to be £1,250, divided into 12,500 "A" shares of 1s. each, and 12,500 "B" shares of 1s. each: the "B" shares were not to carry any dividend so long

as any debentures were outstanding. Debentures were to be issued as follows:—

	£
250 £100 "A" debentures (5 per cent.)	25,000
15 £1,000 "B" debentures	15,000
	40,000

(2) The Government was to be allotted in return for its contribution of £15,000.

	£
12,500 "B" shares for	625
15 "B" debentures for	14,375
	15,000

The "B" shares allotted to the Government were to be held in trust for *pro rata* distribution amongst the original contributing proprietors as soon as all debentures were extinguished. The "B" debentures held by the Government were to carry no interest and were to rank *pari passu* with the "A" debentures in the event of the winding up of the Company, and to be amortized annually as the stipulated quantity of peasants' canes was crushed.

(3) The Company was to erect a factory capable of making not less than 30 tons of 96° grey crystal sugar per working day, of 23 hours.

(4) The Company was to take peasants' canes up to 4,500 tons annually, if tendered at the factory, and of the usual fair average quality of canes. Peasants' canes were to be paid for at the rate of the average market price of 4½ pounds of 96° grey crystal sugar, f.o.b. Antigua, for each 100 pounds of canes delivered and accepted by the Company, but the price to be paid was in no case to be less than 7s. 6d. per ton of canes. The Company was to pay a penalty of 4s. for each ton of peasants' canes tendered at the factory, and not paid for at 7s. 6d. a ton.

(5) The Government was to have the power to appoint a Board to determine the order and amount of peasants' canes to be ground daily throughout the reaping season, and to settle all questions arising as to the meaning of any clause relating to peasants' canes, subject to appeal to the Governor.

(6) The Company was to cease to be bound to take peasants' canes on the above conditions after 75,000 tons of peasants' canes had been taken and paid for pursuant to the agreement, or upon the expiration of 15 years, commencing with the crop of 1905.

The factory was completed in time to take off the crop of 1905. A series of agreements was made between the proprietors of certain

⁸ Report of the West India Royal Commission, 1897, (c-8655), para. 548, j, p. 70.

⁹ *op. cit.*, para. 245, p. 32.

¹⁰ *op. cit.*, para. 255, p. 33.

estates and the factory Company. The Company found the additional capital of £25,000 and undertook to erect the factory in accordance with the Government's conditions, to provide reasonable railway facilities for the transport of canes, to pay the proprietors for canes the equivalent price of $4\frac{1}{2}$ tons of 96° crystals, f.o.b. Antigua, for each 100 tons of canes, and to divide the profits as follows:—should the price paid to the contracting proprietors for canes prove less than 10s. a ton, then the profits were to be applied first to bringing up the payment to 10s.; any further profits were to be divided equally between the shareholders of the Company and the proprietors supplying canes. Of the £15,000 advanced by the Government, £1,000 was to be amortized each year. As soon as the £25,000 subscribed by the Company had been paid off, the ownership of the factory should be divided equally between the shareholders in the Company and the contracting proprietors.

The contracting proprietors bound themselves to maintain a certain acreage in cultivation with sugarcane and to supply the canes so grown to the factory for a period of fifteen years. Eight estates originally entered into co-operation with the Factory Company and agreed to supply canes from 1,620 acres each season.

The original equipment included 2 Babcock and Wilcox water tube boilers, 2 three-roller mills, 2 vacuum pans, a central condensing installation, 5 Weston 36-inch centrifugals, 6 second sugar crystallizers and 6 miles of railway on 2' 6" gauge with rolling stock.¹¹

The factory was originally intended to manufacture 3,000 tons of sugar in a season. A demand, however, arose on the part of owners who had not joined originally to be allowed to have their crops dealt with by the factory. Additions have been made repeatedly to the capital and machinery.¹²

The original contracts were completed in 1919, and Sir Francis Watts published a full account of the work of the factory and the final position in Vol. 18 of the West Indies Bulletin (p. 134 *et seq.*) from which the following remarks are taken to indicate the success which has attended State aid in this instance and the principal measures taken to that end while the Company was subject to Government intervention.

The cost of the factory rose between 1905 and 1919 from £45,360 to £103,230. The first material increase took place in 1908 and was due to the addition of a Krajewski crusher to the original six-roller mill and to additions to the railway. Further additions were made in 1911 to the milling plant whereby the mills were converted into a 14-roller train, and there were also substantial additions to the general plant and to the railway, which was finally 21 miles long on a gauge of 30 inches.

Further contracts for the supply of canes were made by the Company with a second group of planters, who received payment for

¹¹ West Indian Bulletin, Vol. 6, p. 62.

¹² West Indian Bulletin, Vol. 15, p. 48.

their canes on the basis of 5 lb. of sugar for every 100 lb. of cane, together with their proportionate share of the half-profits arising from the year's working of the factory.

To meet the additional outlay new debentures were raised bearing interest at 5 per cent. and a sinking fund was created at a rate calculated to redeem these new debentures simultaneously with the original "A" debentures. All the debentures were paid off during 1919. The Government loan had been redeemed by the same date and became virtually a free grant. The factory now stands possessed of modern plant, buildings and railways which may be taken to be worth now some £200,000. Shares representing half this amount have passed into the hands of the original contracting proprietors in proportion to the weight of cane supplied by each during the period 1905 to 1919. The novel contracts have been carried out without any serious difficulties arising.

The total quantity of canes crushed was 15,681 tons in 1905; 24,676 tons in 1906; 40,782 tons in 1907, and rose to 112,235 tons in 1916. In 1919 the weight of canes crushed was 90,186 tons. The total quantities of sugar made in the same years were 1,634 tons, 2,349 tons, 4,231 tons, 12,371 tons, and 9,739 tons, respectively.

In 1905 the mill extracted 81.7 per cent. of the sugar contained in the canes. In 1908 this figure rose to 85.8, but since the mill has been increased to a 14-roller mill, the percentage of sugar extracted averaged 91 per cent., the highest percentage reached being 93.8 in 1918.

In 1905 the quantity of commercial sugar recovered was 82.6 per cent. of the weight of the sugar in the juice; in 1919 it was 95.1 per cent.

Considering the combined work of the mills and of the manufacture of sugar, it is seen that the weight of commercial (96°) sugar recovered has risen from 67.5 per cent. of the weight of the sugar in the cane in 1905 to 87.9 per cent. in 1919.

When the factory was installed in 1905, crushing by means of three-roller mills was general in the British West Indies. The installation of a six-roller mill was an innovation; the addition of the Krajewski crusher was a distinct advance; and the conversion of the milling train into a 14-roller one in 1911 instituted the first of such mills in these islands. In the general matter of sugar manufacture, the Antigua factory has done pioneer work in disseminating information which has been of general service.

In 1905 the production of muscovado sugar was general in the British West Indies, and the refineries expressed dissatisfaction with this class of sugar. The developments undertaken at Antigua paved the way for the manufacture of vacuum pan sugar in modern factories on these islands, so that to-day there are very few small works left where ordinary muscovado sugar is being made. There is a growing tendency to produce on the spot, where the sugar is grown, sugar fit for consumption, and to eliminate to a large extent the work of the refiner.

JAMAICA

The sugar industry of Jamaica has been recently materially damaged by drought and heavy floods, and jeopardized by the withdrawal of financial assistance from owners of factories, the Government of Jamaica has taken steps to afford temporary aid for the preservation of the sugar industry. By the Sugar Industry Aid Loans Law, 1921, passed in July 1921, the Governor was authorized to raise not more than £400,000 from local bank at a rate of interest not exceeding 7 per cent. per annum, the loan to be repayable within 15 months from the date of payment, or in such extended period as may be arranged between the Government and the lender. The money so raised was to be placed at the disposal of the "Sugar Industry Aid Board." This Board was to consist of seven members, of whom four, including the Chairman, should be appointed by the Governor, and three by the Legislative Council. The Board may use the money for the purpose of making loans, for the preservation of the sugar industry, to owners of sugar plantations or estates, or receivers appointed by any Court to take charge of such sugar plantations or estates, etc. The loans are to bear interest at a rate not exceeding one per cent. more than the rate payable by the Government on its loan.

The principal conditions on which loans may be made are the following:—

- (a) the debt shall be the first lien or charge against the plantation (including its crops, live and dead stocks, sugar factories, machinery and implements), notwithstanding that there may be prior encumbrances; prior encumbrancers may, however, object to the grant of a loan;
- (b) the loan may be applied only to the usual and necessary expenses of the upkeep of the plantation, *e.g.*, cultivation, reaping and manufacture of produce, purchase of canes from cane farmers, manure, etc. It may also be applied, with special sanction, to the payment of one year's interest on existing encumbrances and to special repairs, alterations, and additions to machinery and buildings and additions to live and dead stock;
- (c) the Board may insure buildings, machinery, stocks, crops, etc., against loss or damage by fire, and the cost of insurance is added to the loan with interest not exceeding 7 per cent. per annum;
- (d) the borrower must keep accounts of the money borrowed, and produce them with vouchers once a quarter before the Board;
- (e) the proceeds of sugarcane sugar, molasses and rum must be devoted, in the first instance, entirely to the repayment of the loan; and any sum due on account of the loan, after payment of the proceeds of the sale of the crops, must be repaid with interest due thereon on demand.

BRITISH COLUMBIA

Under the Department of Industries Act, 1919, the Government of British Columbia may aid by loan, guarantee or guarantee of securities any enterprise calculated to encourage the economic and commercial manufacture of the natural resources or products of the Province. Advances are made from a special fund called the "Industrial Development Fund." A grant of aid can be made only on the recommendation of an advisory council appointed under the Act; the terms and conditions on which aid is to be given are not prescribed in the Act, but the Advisory Council must ascertain that the aid is justified on certain grounds specified in the Act. The aggregate amount of loans and principal sums guaranteed was limited by the Act to \$2,000,000 in the first year; the sum required was to be raised by the Government by the issue and sale of British Columbia Stock. In addition to assisting the industrial development of the province, the Act was intended to provide returned soldiers with the means of starting in business.

The rate of interest on loans was fixed at 6 per cent. *plus* any additional charge that might be incurred by the Government in borrowing the money or making the loan. To ensure that the money advanced is used in the development of industry and for the purposes for which the grant was made, the amount of a loan is first placed at the credit of the applicant in the Development Fund and payments are made to him from the Fund on voucher.

In 1919 the number of applicants was 225 and the total amount applied for was \$2,767,000. Of these, 155 applications were refused and 19 granted in 1919, the total of the approved loans being \$442,200. The principal loans were \$200,000 to a cordage company, \$100,000 to a roofing, paper and refining company, \$50,000 to a 'cut-to-fit' building company, and \$30,000 to a cast-iron pipe company. Other industries assisted included the manufacture of toys, ink, furniture, auto bodies and ladies' waists and works for salting and curing fish. The total amount to be invested in new industrial developments, including the loans, was \$913,000, and it was expected that the development would provide permanent employment for about 380 persons.

In 1920, sixty applications were granted and 306 refused. The total amount of the approved loans was \$631,000. They varied from \$50,000 to a machinery manufacturing company to \$300 to an antique furniture industry, and \$200 for the manufacture of broom-protectors. Other assisted industries included saw-mills, saws, pumps and engines manufacture, concrete blocks, electrical appliances, woolen mills, boat-building, boots and shoes, rubber soles and heels, wood-working, toys, boxes, neck-wear, gramophones, bricks, sandpaper, canneries, fish companies, pickles, etc. The total amount to be spent on new industrial development including the loans is \$1,662,000, and these industries are expected to provide employment for about 1,050 persons.¹³

¹³ Reports of the Department of Industries of the Province of British Columbia for 1919 and 1920.

It is likely that in future the Department of Industries will devote its energies to research and the supply of information to those wishing to start industries rather than to the grant of financial assistance.

AUSTRALIA

In Australia, as in Great Britain, the greater part of dyes and colours used in manufactures were obtained from Germany. It became necessary, after the outbreak of war, for the Commonwealth Government to make the position of the Commonwealth Government Woollen Mills secure in respect of the supply of dyes; the Government therefore became a shareholder to the extent of £4,000 in British Dyes Ltd. when that company was formed in 1915. When the company was incorporated in the British Dyestuffs Corporation Ltd. in 1919, the Commonwealth Government was allotted 2,269 deferred ordinary shares, 2,360 preferred ordinary shares, and 2,360 preference shares; the Government still holds these shares.

In 1920 the Commonwealth Government of Australia entered into an agreement with the Anglo-Persian Oil Company, Ltd., by which the Oil Company was to form a refinery company for the following objects:—

- (a) the creation and development in Australia of the industry of refining mineral oil;
- (b) the erection, equipment and operation of a modern refinery or refineries in Australia for refining mineral oil;
- (c) the sale and disposal of the products of refining mineral oil.

The reasons given by Mr. Hughes, the Prime Minister, for introducing the Bill were the following. Oil is essential for the defence of Australia; oil is the key to industrial success; Australia must get oil as cheaply as possible, for every increase in the price of fuel is a tax upon industry and affects wages, which in turn affect the standard of living; prices have risen very considerably in the past few years; there were no oil wells in Australia or its territories, though there was reason to believe that oil would be found there; when found it would be useless unless it could be refined in Australia; Canada, with far less need of erecting refineries than Australia, had 14, but Australia had none; Australia was dependent upon three Companies—two American and one Dutch—for its oil supplies; the Anglo-Persian Oil Company was a British Company, in which the British Government had a controlling interest; it was desired to have the same control over the proposed refining company in Australia that the British Government had over the Anglo-Persian Oil Company.

The Refinery Company was to have a capital of £500,000 of which the Commonwealth Government was to hold £250,001. Of the total number of directors, three-sevenths were to be nominated

by the Government and four-sevenths by the Oil Company. Without the consent of the Government

- (a) the Refinery Company's business or any part thereof cannot be sold or disposed of;
- (b) the refined products cannot be sold to aliens or exported from the Commonwealth;
- (c) the refined products cannot be sold on long contracts or in circumstances which might endanger the ability of the Refinery Company to meet the requirements for consumption within Australia.

The Refinery Company is to erect, equip, and operate in Australia a modern refinery. Meantime, the Oil Company is to use its best endeavours to secure adequate supplies of oil products to Australia at reasonable prices.

The Government is to supply to the Refinery Company indigenous oil for refining up to 200,000 tons per annum, as it becomes available to the Government; if it is not available in such quantities, the Oil Company is to make up the deficiency by supplying crude mineral oil. The price payable by the Refinery Company for the oil so supplied is to be fixed by agreement between the Government and the Oil Company from time to time. The price payable by the Refinery Company to the Oil Company for crude mineral oil, f.o.b. at the port of shipment, is not to exceed the price f.o.b. paid by the British Government to the Oil Company for crude mineral oil. The Oil Company is to deliver the crude mineral oil at the port of discharge in Australia, but the Government has the option of making freight arrangements at a lower rate if it can do so. The price payable by the Refinery Company for crude mineral oil is to continue in force for a period of two years at a time.

The Refinery Company is bound to sell its oil products at such prices as are fair and reasonable, and on that condition the Government undertakes to use its powers to prevent dumping and unfair competition by importers of refined oil from other countries; to refund to the Refinery Company any customs duty paid by the Refinery Company upon the importation into Australia of crude mineral oil purchased from the Oil Company and refined in Australia by the Refinery Company; and to cause to be introduced into Parliament a bill providing for the imposition of customs duties on crude mineral oil whenever in its opinion such action is necessary or advisable to prevent unfair competition with the products of crude oil refined in Australia by the Refinery Company.

Neither the Commonwealth nor the Oil Company may sell or pledge its interest or holding in the Refinery Company without the consent of the other party.

The Government has the option, on giving two years' previous notice, of purchasing the Oil Company's interest or holding in the Refinery Company at the expiration of 15 years from the completion of the first refinery.

If steps are taken to liquidate or wind up or reconstruct the Oil Company, the Commonwealth has the option of purchasing the Oil Company's interest or holding in the Refinery Company within one calendar month from the date of notice. Provision is made for the valuation of the Oil Company's interest or holding by valuers representing both parties, and by an umpire if necessary.¹⁴

QUEENSLAND

Under the Meat and Dairy Produce Encouragement Act, 1893, passed by the Queensland Parliament, a Meat Fund and a Dairy Fund were constituted by the levy of special taxes on sheep and cattle at the rate of 15s. per 100 head of cattle and 1s. 6d. per 100 head of sheep. Money could be advanced by the Government from these funds (or from the consolidated revenue, subject to repayment from these funds) to the proprietors of works or factories for the manufacture or cold storage of meat or dairy produce, respectively.¹⁵ The funds were to be distributed by a Board. The works had to be mortgaged to Government as security and no advance could exceed half the cost of the works and machinery. Interest was charged on the advances at 5 per cent. after 5 years from the date of advance, and the loans were repayable in half-yearly payments during the ten years following the first five years after the advance was made. When an advance was made for construction, 30 per cent. of the value of works stated in the Government engineer's certificate to have been duly executed could be paid at once, the balance being payable on the issue of the certificate on the final and satisfactory completion of the works.¹⁶

SOUTH AUSTRALIA

Under the Loans to Producers Act, 1917, the Government of the State of South Australia may make loans to land holders and co-operative societies engaged in rural production. According to the present regulations under the Act, loans are repayable with interest in half-yearly instalments in twenty years, if made for purposes included in Class A, and in seven years if made for purposes included in Class B. Under Class A, interest only is payable for the first two years of the currency of the loan. Under Class B, however, repayment of both principal and interest begins on the expiry of six months from the grant of the loan.

The purposes included in Class A are (1) the erection or purchase of cool stores, (2) the erection or purchase of factories for jam making, or for canning, drying or otherwise preserving fruit or vegetables, (3) the erection or purchase of fruit-packing sheds, (4) the erection or purchase of butter, cheese or bacon factories, (5) the

¹⁴ *Oil Agreement Act, 1920* (No. 13 of 1920).

¹⁵ *Reports on Bounties other than those on Shipping and Navigation, (c-7960), pp. 16 to 20, 22 to 60.*

¹⁶ *op. cit.*, pp. 45 to 50.

erection of silos, (6) the erection or purchase of wineries or distilleries.

The purposes included in Class B. are (1) the purchase of fruit-grading machinery, (2) the installation of irrigation plants.

In August 1919 a Board was appointed to deal with and report upon applications for assistance under this Act. By the 30th June 1921 the following loans had been granted on the recommendation of the Board: (1) £990 to a co-operative society, for building a cheese factory and purchasing machinery, etc.; this factory has been completed and commenced operations some time ago; (2) £720 to a co-operative society for the erection of a fruit-packing shed; this has been completed; (3) £11,521 to a co-operative society for the erection of a cool store and the purchase of the necessary machinery and working plant; the store was completed in time to deal with the past season's apple crop; (4) £2,000 to a co-operative distillery for the purchase of a distillery; this was purchased to deal with the grapes of the settlers in the neighbouring district; (5) £750 to a co-operative society for the erection of a cheese factory and the purchase of the necessary working plant; this factory is under construction.¹⁷

VICTORIA

In 1896 the Government of Victoria assisted the promotion of a company to establish the beet-root industry by subscribing £2 for every £1 of private capital subscribed; the amount advanced by the Government was £62,000. A modern factory was erected, but, after various vicissitudes, the company was compelled to cease operations after two seasons, and the building and plant passed into the possession of Government under the terms of the mortgage and then remained idle for 12 years. In 1910 the Government attempted to revive the industry by establishing numerous experimental beet plots, by lectures and by organizing a system of field labour. The factory was re-started. To put the industry on a sound footing the Government purchased large areas of land and allotted them in the form of small holdings to settlers on condition that each must grow a certain area of beet. This condition was removed in 1914. The sugar produced rose from 482 tons in 1910-11 to 1,181 tons in 1914-15 and 1,948 tons in 1916-17. It fell to 1,263 tons in 1918-19, but rose to 1,551 tons in 1919-20.¹⁸

Under the Primary Products Advances Acts, 1919 (No. 3038) and 1920 (No. 3068), advances may be made by the Government to companies for the purposes of undertakings for dealing with certain primary products. These undertakings include factories for the manufacture of canned fruit, dried fruit or jam and flax-mills. The advance must be secured by a first mortgage on the undertaking and

¹⁷ *Report of the Minister of Agriculture for the year ended June 30th 1921, Adelaide, S. Australia* (A-No. 43); p. 7.

¹⁸ *Victorian Year Book, 1919-20*, pp. 563, 564.

on the property and assets of the company; the terms as to repayment and rate of interest, as well as the amount of the loan, are determined in each case by the State Treasurer.

GERMANY

The writer has found no evidence that in Germany the Imperial Government made loans to manufacturers or invested money in factories.

In 1904 the Prussian Government endeavoured to obtain a controlling majority of the shares of the Hibernia coal mine, but failed, owing to the opposition of the banks.¹⁹

In the case of potash, the Government, partly by legislation and partly by means of its extensive holdings of potash deposits, compelled the cartel to keep the home price below the export price.²⁰

The Governments of Prussia, Baden and Bavaria, obtained controlling interests in the shipping on the Rhine and inland waters when it was threatened with syndicalization.²¹

UNITED STATES OF AMERICA

In 1789 the Legislature of Pennsylvania, in order to assist the cotton manufactures of the State, subscribed for one hundred shares of £10 each in the manufacturing fund of the Pennsylvania Society for the encouragement of manufactures and the useful arts, as the sums subscribed by the public were insufficient.²²

In the same year the Legislature lent £200 to John Hewson to enable him to enlarge and carry on the business of calico printing and bleaching within the State.²³

JAPAN

About 1881 the Government of Japan obtained from England ten sets of cotton spinning plant, each of 2,000 spindles; these were sold to private parties but were to be paid for in ten annual instalments. In 1883 the Government advanced to the promoters the cost of hemp spinning plant for a mill in Shigaken; the mill was established three years later. The Hokkaido Hemp Company, started at Sapporo in 1887, received State aid in various forms for six years.²⁴

¹⁹ Professor A. Marshall, *Industry and Trade*, p. 574, n.

²⁰ *op. cit.*, p. 574.

²¹ *op. cit.*, p. 575.

²² J. L. Bishop, *A History of American Manufactures*, Vol. I, p. 409; Vol. II, p. 19.

²³ *op. cit.*, Vol. I, p. 407; Vol. II, p. 19.

²⁴ *Japan in the beginning of the 20th century*; by the Department of Agriculture, Tokyo, 1904; p. 415.

In 1898 the Government placed 5,000,000 yen at the disposal of the Hypothec Bank for the purpose of making loans to industrial undertakings.²⁵ The Bank was instructed to proceed carefully in order not to cause undue inflation, and, to prevent industries helped from relying too much on Government aid, each case was to be investigated carefully before a loan was granted.²⁶

Assistance to industry is also extended by special Government banks which grant lower rates than the regular banks for floating bonds, financing exports, etc.²⁷

In 1902 the Industrial Bank was founded; it makes advances largely on the security of sites and buildings of factories. The Government has come to its assistance on more than one occasion, e.g., in 1913 the Government advanced to it 13,500,000 yen at a cheap rate through the Bank of Japan and the Yokohama Specie Bank. The capital of the Bank is 20,504,000 yen, of which 7,550,000 yen is held by foreign capitalists.²⁸

²⁵ H. H. Van Kol, *De Ontwikkeling der Groot Industrie in Japan*, Vol. I, p. 62.

²⁶ W. A. Graham Clark, *Cotton Goods in Japan*; U. S. A. Department of Commerce, Bureau of Foreign and Domestic Commerce, Special Agents Series—No. 86; 1914; p. 46.

²⁷ *Cotton Goods in Japan*, p. 215.

²⁸ *Japan Year Book*, 1919-20, p. 399.

CHAPTER VII

Guarantees, etc.

UNITED KINGDOM

In connection with certain arrangements made during the war, the Government of the United Kingdom has entered into a contract with the Government of the Commonwealth of Australia to purchase the whole exportable surplus of zinc concentrates and slimes in Australia, up to 300,000 tons per annum, at certain prices which are fixed till the 30th June 1925, and then determined by a formula. This contract expires at the end of 1930.¹

JAMAICA

In 1902 the Secretary of State for the Colonies assented to the introduction of a bill in the Legislative Council of Jamaica, to authorize a Government guarantee of interest for a limited period on sums expended in the erection of central sugar factories, the consent of the Secretary of State being required in each case.

The scope of the Central Factories' law which was passed under this authority was considerably wider than had been anticipated, as it authorized a guarantee of capital as well as interest—the latter at a rate not exceeding 5 per cent. if interest alone were guaranteed, and not exceeding 3½ per cent. if both capital and interest were guaranteed. The law was not disallowed, but as it was feared that a guarantee of capital and interest in such undertakings might be considered by the Brussels Permanent Sugar Commission to be open to construction as a bounty, the law remained inoperative.

CANADA

In order to encourage shipbuilding, the Dominion Government was authorized in 1920 to endorse promissory notes drawn in favour of a shipbuilder in Canada by the purchaser of a vessel of 1,000 tons or more to be built in Canada. The value of the notes endorsed may not exceed half the cost of the vessel. Ten per cent. of the price must have been paid, and the payment of another 15 per cent. in certain prescribed instalments must have been secured to the satisfaction of the Government and satisfactory arrangements must have been made for the payment of a further 25 per cent. The Government must be given a first mortgage on the vessel for the full amount of the notes endorsed, and the

¹ The War Cabinet's Report for the year 1918, (Cmd. 325, 1919), p. 224.

vessel must be insured in favour of the Government. The total amount for which notes may be endorsed is \$20,000,000.²

QUEENSLAND

By the Sugar Works' Guarantee Act of 1893, passed by the Queensland Parliament, the Government was authorized to guarantee the capital of and interest on debentures issued for defraying the cost of sugar works and of their erection, the debentures being repayable in 15 years and the interest being at 5 per cent. The Government had to be satisfied that sufficient suitable land had been, or would be, planted with sugarcane and maintained to keep the sugar works employed. The sugar works, and, if necessary, additional freehold land, had to be mortgaged as a first mortgage to the Government as security, the value of the security being double the possible liability of the Government under its guarantee; the capital of the debentures had to be paid to the Government in 14 equal annual payments, beginning from the second year, interest being allowed at 3½ per cent.; these repayments were a first charge on the profits of the works, and, in default of payment, the Government could take over the works and manage them or sell them; the Government could insure the works if necessary, and recover the cost of insurance. The amount of the guarantee was limited by regulation to double the capital of the Company, of which at least one-tenth had to have been actually paid up.³

² An Act respecting the shipbuilding 1920; Canada Year Book, 1920, p. 219.
³ Reports on Bounties other than those on (c-7960), p. 18.

Statutes of Canada, cap. 70 of granted in the Colonies, 1895

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CHAPTER VIII

Government factories

UNITED KINGDOM

Some account of two factories recently established by the Government in England on a commercial scale may be of interest, though they are intended to establish the industries by experimental, demonstrational and educational methods.

Vegetable drying and fruit preserving

Soon after the Great War broke out in 1914 it was decided by Government to undertake experiments to test untried or partially tried methods of preservation of fruit and vegetables with a view to encouraging the formation of rural industries in vegetable drying and fruit preserving. This work was undertaken partly in connection with the war to meet expected unemployment, especially of women, and to preserve home products, but it had in view also the permanent establishment of the industries, and especially the preservation of fruit in years of glut. Two factories—one for drying vegetables and the other for preserving fruit—were started with the assistance of grants from the Development Fund. The capital advanced (£26,000) has been covered by the profits earned. As the war proceeded the problem of unemployment disappeared, but the factories continued to supply the army. At the end of the war, the factory for drying vegetables was given up, but in 1919 it was decided to establish a model factory on a commercial scale for preserving fruit. A factory at Chipping Campden, which had been used for other purposes was acquired and adapted. Experimental work was carried out, and three educational courses were opened, (1) a short course for persons desiring to make jam in their own houses; (2) a month's course for domestic economy teachers; and (3) a course for the training of factory managers. The first two classes have been well attended, but the class for managers was found to involve heavy expenditure and competition with jam manufacturers on account of the scale on which work should be done. Representative exhibits of the products of the factory were sent to shows throughout the country. Much useful work has been done in respect of experiment and education, especially in connection with improved methods of making and storing pulp, jellying of jam, sugar contents, &c and the preservation of fruit in times of glut. Many enquiries were answered through the factory, but there has not been an expansion of the industry, because the high price of sugar led to the failure of small jam manufacturers.¹

¹ Tenth Report of the Development Commissioners for the year ended the 31st March, 1920 (H. C. 230), pp. 141, 142.

The Government has established a lactose (milk-sugar) factory, which is partly experimental and partly commercial. Owing to the concentration of dairy industries, including cheese-making, in depôts, considerable quantities of whey are produced; its disposal presents difficulties, as it pollutes streams, wells and the filter beds of sewers, and its distribution to farmers for use is too expensive. At the same time it is a valuable food material; about 2½ per cent. B. P. lactose can be extracted from it besides about 4 per cent. of other valuable products. Lactose has hitherto been imported from foreign countries. In 1918 the Government decided to establish the factory because a certain amount of research is necessary, there is no experience of such a factory in England, and the establishment of a factory involves considerable capital outlay compared with the probable returns till experience is gained. A grant of £15,000 was made from the Development Fund in 1919-20.² Further grants amounting to £9,900 have been made from the same Fund.³

The factory, which has been recently completed, has been constructed near a cheese factory and is designed to deal with 3,000 gallons of whey a day. The erection and equipment cost about £23,000. In the whey season whey is dried for storage, and is refined in the winter. Owing to the high cost of transporting whey, attempts are being made to find a means of concentrating it, so that it can be taken more easily to a central refinery. It is too early yet to expect the factory to have any effect on the establishment of the industry, but many enquiries have been received and the prospects are considered good.

WEST INDIES

In connection with the establishment of the cotton growing industry in the West Indies, the Barbados Legislature in 1903 voted £250 for the provision of suitable machinery for ginning, bailing, etc., and placed a building at the disposal of the Imperial Department of Agriculture for its accommodation. The factory was transferred to the Barbados Cotton Factory, Ltd., in 1905.⁴ In 1902 the area planted with cotton was 16 acres; in 1907-08 the area had risen to 7,194 acres, but the area was less in subsequent years owing to the attacks of insect pests and fungoid diseases and to a drop in prices.

In 1903-4 the sum of £1,850 was spent by the Imperial Commissioner of Agriculture on the erection of a ginning factory in St. Vincent; the factory contained 8 gins and was capable of dealing with the production of 2,000 acres.

In Nevis a small cotton ginning factory was privately established, the machinery being lent by the Government.

² Tenth Report of the Development Commissioners for the year ended the 31st March, 1920, (H. C. 230), pp. 140, 141.

³ Eleventh Report of the Development Commissioners, 1921 (H. C. 220), p. 49.

⁴ Handbook of Barbados, 1913, p. 204.

In Antigua the Government provided funds for the erection of ginning machinery.

BRITISH GUIANA

In 1916 the British Guiana Government established at a cost of \$3,100 a factory for concentrating lime-juice and distilling oil from it. In the fifteen months ended 30th June 1920 about 19,300 gallons of lime-juice were dealt with, and the net profit, after allowing for depreciation (but apparently not for interest), amounted to \$2,170. As the work was insufficient for the boiler and engine, a No. 7 Engleberg Huller was installed to hull locally grown rice; in January 1920 a No. 1 Engleberg huller was added. In 1919 a small grain-mill for making cornmeal was connected to a shaft of the lime factory. These additions led to more economical working and increased the net profits of the undertaking in fifteen months in 1919-20 to \$5,200.⁵

MAURITIUS

The Government of Mauritius established a tobacco factory in 1919; it was moved to permanent premises in July 1920. During 1920 about 4,500 kilos. of green leaves and 5,000 kilos. of dried leaves were handled at the factory; of these quantities, 2,650 kilos. of green leaves and 1,870 kilos. of dried leaves were grown by the Government, the remainder being purchased from private growers. The manufactured cigarette tobacco is now in regular demand. To encourage development about 25 acres of Crown land have been leased free of tax for tobacco cultivation on condition that the tobacco is sold to the factory. The results so far obtained are regarded as satisfactory.⁶

SOUTH AUSTRALIA

The State Government of South Australia owns a freezing plant capable of dealing with 8,000 sheep a day; it also deals with the bye-products, such as the manufacture of tallow. The Government also started a butter factory as a check on private butter factories. It has also a canning factory (at which beef and mutton are canned) and an ice factory, and undertakes cold storage. These enterprises are managed by the Government Produce Department. The output varies from year to year. The total expenditure on land, buildings, plant and machinery from 1894 up to 30th June 1921 was £277,500; interest charged on the capital up to the same date was £116,500, and the net profit from 1894 to the 31st June 1921, after providing for interest, working expenses, maintenance and depreciation, was £31,400, the profits being high during the years 1914-15, and 1917-20. According to the balance sheet, the liabilities on the 30th June

⁵ Report of the Government Factory at Onderneeming, 1920; Georgetown, Demarara (C. S. O. No. 5841/20).

⁶ Annual Report of the Department of Agriculture for the year 1920, Mauritius, pp. 6, 16.

1921 included £148,300 on account of a loan from the Government and £19,700 on cash account with the Treasury. The loss on the year's working (1920-21), after allowing for maintenance, interest and depreciation, was £31,200. This loss is ascribed to the absence of any export of lamb or mutton during the year on account of the general depression that followed the boom prices of the war period.⁷

QUEENSLAND

The Queensland Government has undertaken a variety of enterprises, including cattle-stations, butchers' shops, sawmills, shipping, mines, petrolcum bores, hotels, licensed houses, refreshment-rooms, central sugar works and insurance.⁸ We are concerned here only with manufacturing enterprises.

During the season 1919-20 six State mills were under the control of the Bureau of Central Sugar Mills. Two Sugar factories of these had been built by the State; the other four had passed into the possession of the State Treasurer because the owners had obtained advances from the State and had failed to make annual repayments of interest and redemption. Of the six mills only four worked during the season.

The financial position of the Babinda Mill (which had been built by the State) on the June 30th, 1920 was satisfactory. The liabilities shown on the balance sheet included a Government loan of £346,400 and a liability to the Treasury Trust Fund of £21,400 and capital of £24,700, but during the year interest amounting to £14,300 was paid and £12,500 was credited to the Redemption Reserve Fund. Labour troubles in the mill and fields seriously interfered with the working of the mill and caused loss.

The South Johnstone Mill—the other mill built by the State—had on the 30th June 1920 an excess of liabilities over assets amounting to £70,100. The liabilities included a Government loan of £547,500, a sum of £30,700 due to the Treasury Trust Fund and £15,800 interest on loan. The quantity of cane crushed was 86,554 tons as against 39,448 tons in the previous year, and the Auditor General regarded the prospects as greatly improved.

The other two State mills worked had deficits on the year's working, but one showed a small manufacturing profit. The Auditor General remarked that one mill loses time through insufficient cane supply because farmers postpone cutting until a higher density in the cane prevails and recommended the adoption of the "relative percentage scheme" of payment which was in force at Babinda and certain other mills.

The other two mills were not worked as the crops were poor. The mills had resulted in annual losses to the State, and the Auditor

⁷ Report of the Minister of Agriculture for the year ended June 30th, 1921; Adelaide, South Australia (A.No. 43); p. 71.

⁸ Socialism at Work, 1918, published by the Queensland Government.

General recommended the removal of one to an area where a sufficient and regular supply of cane can be obtained.⁹

The State saw mills were first established in 1916. The accumulated losses to the 30th June 1918 amounted to £9,000, but in the two following years profits amounting to £13,300 were realized after the payment to the Treasury of interest on advances.

The State cannery began operations in January 1920; the balance sheet (30th June 1920), shows liabilities of £50,500 on account of a Government loan and £13,200 to the Government Trust Account. The cannery began operations before it was fully equipped in order to enable the soldiers in the Beerburum Settlement to find a ready market for their fruit.¹⁰

NEW SOUTH WALES

The Government of New South Wales controls various industrial undertakings, the revenue and expenditure of which are not included in the Consolidated Revenue Fund but are principally included in the Special Deposits Fund. They include a bakery, quarries, brick works, a clothing factory, a drug dépôt, pipe works, a motor garage, a power station, saw mills, a timber yard, etc. and trawlers.

The first State undertakings were established in 1911. The brick works, pipe works, metal quarries, motor garage and saw mills compete in general trade; the timber yard and trawlers are almost wholly engaged in supply to the public; the bakery, drug dépôt and clothing factory are restricted to supplying "purely sectional needs."

The capital invested in them on the 30th June 1919 was £711,341 and the net loss on them during the year ended on that date was £53,607; the principal losses were £68,238 on the timber yard, etc., and £10,672 on the trawlers.¹¹

In 1919-20 there were losses on two undertakings out of thirteen, viz., £68,476 on the trawling industry and £1,709 on the power station, making accumulated losses on these two industries of £106,450 and £9,872, respectively; the loss on the power station is, however, now apportioned among the undertakings supplied with power. The loss on the trawlers is ascribed to "inefficient management" and "faulty development policy." On the timber yard, which was "peculiarly unfortunate in its management and administration" till September 1919, a profit of £7,119 was made, the accumulated loss on it being reduced to £127,517. The net profits on ten other undertakings during the year varied from £104 to

⁹ Report of the Auditor General on the Accounts of the Central Sugar Mills under Government Control and Self-controlled mills indebted to the Treasury for the year ended 30th June 1920, (C. A. 64-1920).

¹⁰ Report of the Auditor General upon the accounts of the State enterprises for the year ended 30th June 1920 (C. A. 73-1920).

¹¹ Official Year Book of New South Wales, 1919, pp. 135, 352, 375.

£12,411; the total net profits on profitable undertakings were £52,356. The accumulated net profits on 10 undertakings were £199,055 and the accumulated net losses on 3 undertakings were £243,839.¹²

During the year 1920-21 the operations of a State canning factory resulted in a loss of over £205,000, or £21,000 more than its fixed capital.¹³

FRANCE

In the second half of the 17th century Colbert established in France State factories of soap, glass, lace, carpets and cloth, but these factories required much protection and after Colbert's day lost vigour, and only those that ministered to luxury escaped decay.¹⁴ Two, however, are still managed by the State now, viz., the "Manufacture de tapisseries des Gobelins," and the "Manufacture de tapisseries de Beauvais." In the latter furniture tapestry is made. To both are attached museums and technical schools. The "Manufacture nationale de porcelaines de Sèvres" dates from the time of Louis XV; a museum, a laboratory for research and a practical school are attached to it now.¹⁵

The French State monopolies include the manufactures of tobacco, matches and blasting gum and 'foreign commerce' powders. Tobacco is grown in 25 departments by private firms under State supervision. In 1913 the receipts from the sale of tobacco in various forms amounted to fr. 542,000,000 and the cost of manufacture was fr. 115,000,000. In the same year the profits on the sale of matches were over fr. 33,000,000 and the net result of the sale of powders manufactured by the State and of a tax on dynamite and nitro-glycerine manufactured under State supervision amounted to fr. 28,000,000.¹⁶

JAPAN

In the early days of the industrial development of Japan the Government started several factories. In 1872 the Government established a model silk-filature at Tomioka to introduce labour saving contrivances and to train operatives;¹⁷ 1874 the Government established shipyards at Tategami; in 1875 a cement factory at Fukagawa; in 1876 a glass factory at Shinagawa; in 1877 a silk filature at Shimmachi to utilize silk waste and waste cocoons, wool-weaving works at Senju, model cotton weaving works at Aichi and Hiroshima, sugar refineries in Hokkaido, paper factories and printing works at Tokyo, and type-

¹² Auditor General's Report for 1919-20.

¹³ Auditor General's Report for 1920-21, quoted in the Times, Jan. 7, 1922.

¹⁴ Enc. Brit., XI Edn., Vol. 10, pp. 842, 843.

¹⁵ French Year Book, 1919, p. 801.

¹⁶ French Year Book, 1919, pp. 799, 800.

¹⁷ Japan in the beginning of the 20th century, by the Department of Agriculture and Commerce, Japan; pp. 145, 146.

foundries, engineering works, smelting works and soap works in Kamaishi. In 1881 the Government built four cotton spinning mills in various parts of the country, and in 1886 a hemp spinning mill for training spinners. The Government also started the industries of making porcelain in Western style and of making paint. In addition the Government arranged training for female operatives in all new forms of industry.¹⁸

The financial results of these factories were not always satisfactory. Japanese artisans and engineers were lacking in experience, and high wages had to be paid to foreign assistants. Other reasons assigned for financial failure are mismanagement, neglect to give foreign experts a free hand and the employment of a large number of useless and lazy officials, with the result that the expenses were unduly swollen. The educational aspect of these institutions was often lost sight of, e.g., a considerable amount of money was wasted in Hokkaido, a thinly populated island which is far removed from the consumer and lacks means of communication, and could not be converted into a large industrial centre owing to the shortage of labour and the absence of suitable markets for the output.¹⁹

After 1880 the Government in many cases transferred its factories to private companies, as similar private factories were established, and has generally confined its direct management to ordnance and similar factories and the State monopolies of tobacco, camphor and salt.

In 1899 the Government established the Imperial Iron and Steel Works at Yawata-machi with the object of making steel from European pig-iron. The plant, on which about £10,000,000 have been spent, has a capacity of about 300,000 to 350,000 tons of pig-iron per annum, and includes a large and well equipped by-product recovery plant. There are five large modern blast furnaces, each having a capacity of 250 tons of pig-iron. A sixth blast furnace with a capacity of 300 tons is under construction; the capacity of the factory will then be raised to 400,000 tons of pig-iron per annum. The steel plant includes twelve 25-ton open hearth furnaces, six 50-ton furnaces and two 60-ton furnaces. The output of steel materials is at present 563,000 tons per annum, but this is to be raised to 650,000 tons. The total horse power of the factory is 118,128 and it employs over 14,000 hands. The factory is said to have been handicapped by want of experience and want of skill on the part of the workmen.²⁰

Since 1903 the Government has established several saw mills in connection with the State forests but it has been decided to sell some of them.²¹

¹⁸ H. H. Van Kol, *De Ontwikkeling der Groot Industrie in Japan*, Vol. I, pp. 65, 66; *Japan in the beginning of the 20th century*, pp. 415, 416.

¹⁹ *De Ontwikkeling, etc.*, Vol. I, pp. 65, 66.

²⁰ *Times Trade Supplement, Japanese Section*, April 16th, 1921, p. 16; and *Japan Year Book*, 1919-20, pp. 562, 594.

²¹ *Japan Year Book*, 1919-20, pp. 535, 594.

The Insatsukyoku paper mill at first made paper for official purposes, but about 1883 began to make ordinary printing paper and sell it to the public. The guild of paper manufacturers protested, without result, that they could not compete with the Insatsukyoku as the payment of its running expenses by the Government gave it an unfair advantage.²²

The Government monopolies are salt, tobacco and camphor. Tobacco and salt were made State monopolies in 1898 and 1905 with the object of raising revenue; camphor was made a State monopoly in 1898 in order to protect the industry in Formosa.²³ The Monopoly Bureau had sixty-three factories in 1917.²⁴

Salt has been a State monopoly since the 1st January 1906.²⁵ Manufacturers of salt are licensed by the Government and have to sell their salt at a fixed price to the Monopoly Bureau.²⁶ The net profit in 1917-18 from this monopoly was 7,469,000 yen.²⁷

A duty had been levied on tobacco since 1876. After the war with China the law was amended in order to ensure better results, but they were not satisfactory. The Government sent missions to study the administration of the tobacco excise in Europe and America, and in 1898 passed a law, based on the information obtained, which constituted the present tobacco monopoly. Since 1904 the monopoly has covered the manufacture of cigarettes and cigars as well as cut tobacco.²⁸ Permits are issued for the cultivation of tobacco and the leaves are purchased by the Government, which began the manufacture of cigarettes in 1904. In 1908 the Government began the manufacture of cigars from imported tobacco. The finished product is sold by Government to wholesale merchants.²⁹

The results of this monopoly have been very satisfactory; in 1917-18 the net profits amounted to 72,968,000 yen.³⁰

²² *Japanese paper mills*, 1907. Diplomatic and Consular Reports, Misc. Series, No. 669 (ed. 3284-4); pp. 7, 8.

²³ *Japan Year Book*, 1919-20, p. 630.

²⁴ *The Nineteenth Financial and Economic Annual of Japan*, 1919, p. 63.

²⁵ Le Comte de Saint-Maurice, *La Civilisation Economique de Japon*, 1908, 22.

²⁶ *Times Trade Supplement*, p. 20.

²⁷ *The Nineteenth Financial and Economic Annual of Japan*, 1919, p. 24. See also pp. 14, 15.

²⁸ *The Financial and Economic Annual of Japan*, 1904, p. 21; 1908, p. 30; *Japan Year Book*, 1919-20, p. 630.

²⁹ *La Civilisation Economique de Japon*, 1908, pp. 19 to 22.

³⁰ *The Nineteenth Financial and Economic Annual of Japan*, p. 24; see also 14, 15.

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APPENDIX

Bibliography

NOTE.—Part I of the bibliography relates to the industrial development of the countries named, but is not confined to those special forms of State assistance regarding which details have been given in the report. Part II relates to these special forms of State assistance. The bibliographies are very brief as regards unofficial publications but contain longer lists of official publications. Some of the books included in this bibliography contain bibliographies; a statement of lists of publications likely to be useful to persons desiring to consult fuller bibliographies has been added.

PART I

GENERAL

Publications by the Government of the United Kingdom

Statistical abstract for the British self-governing Dominions, Colonies, Possessions and Protectorates. (Annual.)

Statistical abstract for the principal and other foreign countries. (Annual.)

Statistical abstract for the United Kingdom. (Annual.)

Publication by the Government of the Dominion of Canada

Report of the Royal Commission on Industrial Training and Technical Education; Sessional Paper No. 191, d—A 1913.

Publication by the Government of the Province of Ontario

Seath, John. *Education for industrial purposes*. 1911. Department of Education, Toronto.

Publications by the Government of the United States of America

Jones, G. M. *Navigation Laws—comparative study of the principal features of the laws of the United States, Great Britain, Germany, Norway, France and Japan*. 1916. Department of Commerce; Bureau of Foreign and Domestic Commerce; Special Agents Series, No. 114.

Tavernier, René and Leighton, M. O. *The public utility of water powers and their Governmental regulation*. 1910. Geological Survey; Water-supply paper 238.

(Includes a discussion of hydraulic power and irrigation; French, Italian and Swiss legislation relative to the development of hydro-electric power; and legislation by the United States of America on the same subject.)

Wolfe, A. J. *Commercial Laws of England, Scotland, Germany and France*. 1915. Department of Commerce; Bureau of Foreign and Domestic Commerce; Special Agents Series, No. 97.

Seventeenth Annual Report of the Commissioners of Labor, 1902. Trade and Technical Education. House of Representatives, 57th Congress, 2nd Session, document No. 18.

Report on Co-operation in American Export Trade. Two Parts, 1916. Federal Trade Commission.¹

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Ashley, Percy. *Modern tariff history*. 1920. John Murray.²

Grunzet, Josef. *Economic protectionism*. 1916. Carnegie Endowment for International Peace; Division of Economics and History. Clarendon Press, Oxford.

Jevons, W. S. *The State in relation to labour*. Macmillan & Co.

(Chapter II contains a discussion on Government inspection, merchandise marks and trade marks.)

Marshall, Alfred. *Industry and trade*. 1920. Macmillan & Co.

Palgrave, Sir R. H. I. *Dictionary of political economy*. 3 Vols. 1915. Macmillan & Co.
(Includes articles on "bounties" and "Government regulation of industry").

UNITED KINGDOM

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Report of Committee appointed to investigate the question of Financial Facilities for Trade. 1916. (Cd. 8346).

Report of a Departmental Committee on the post-war position of the Sulphuric acid and Fertiliser Trades. 1918. (Cd. 8994).

Report of the Committee appointed to consider the question of Electric Power Supply. 1918. (Cd. 9062).

Report of the Departmental Committee appointed to consider the position of the Textile Trades after the war. 1918. (Cd. 9070).

(Includes paragraphs on elementary education and scientific and technical education, scientific and technical research, transport, etc., and a section on "The State and Industry.")

Report of the Departmental Committee appointed to consider the position of the Iron and Steel Trades after the war. 1918. (Cd. 9071).

(Includes sections on protection, means of transport, technical education, commercial intelligence, etc.)

¹ Includes a bibliography.

² Contains a brief bibliography.

Report of the Departmental Committee appointed to consider the position of the Electrical Trades after the war. 1918. (Cd. 9072).

Report of the Departmental Committee appointed to consider the position of the Shipping and Shipbuilding Industries after the war. 1918. (Cd. 9092).

Report of the Departmental Committee appointed to consider the position of the Coal Trade after the war. 1918. (Cd. 9093).

Report of the Engineering Trades (New Industries) Committee. 1918. (Cd. 9226).

(Includes paragraphs on research, exhibitions, education, etc.)

Report of Committee to examine the question of Government machinery for dealing with Trade and Commerce. 1919. (Cmd. 319).

Report of the Departmental Committee appointed to investigate the Non-Ferrous Mining Industry. 1920. (Cmd. 652).
(Includes sections on Transport, Taxation and State aid to mining.)

The War Cabinet's Report for the year 1917; (Cd. 9005; 1918).

The War Cabinet's Report for the year 1918; (Cmd. 325; 1919).

(They include chapters on the control and development of industry.)
Final Report of the Committee on Commercial and Industrial Policy after the war. 1918. (Cd. 9035).

Safeguarding of Industries Act, 1921, (11 and 12 Geo. 5, Ch. 47.)

Publications by the Government of the United States of America.

Clark, W. Graham. *Manufacture of woollen, worsted and shoddy in France and England and jute in Scotland*. 1908. Department of Commerce and Labor; Bureau of Manufactures.

Clark, W. Graham. *Lace industry in England and France*. 1908. Department of Commerce and Labor; Bureau of Manufactures.

Wolfe, A. J. *Commercial Organizations in the United Kingdom*. 1915. Department of Commerce; Bureau of Foreign and Domestic Commerce; Special Agents Series; No. 102.

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Powell, F. W. *British industrial reconstruction and commercial policies*. 1920. Department of Commerce; Bureau of Foreign and Domestic Commerce; Special Agents Series; No. 192.

Other publications

Burns, C. Delisle. *Government and industry*. 1921.
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246.

Carter, Huntley. *The limits of State industrial control; a symposium on the present situation and how to meet it.* 1919. T. Fisher, Unwin, Ltd.

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Cheyney, E. P. *Industrial and social history of England.* Macmillan & Co.

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Cunningham, W. *The growth of English industry and commerce during the early and middle ages.* Cambridge University Press.³

Cunningham, W. *The growth of English industry and commerce in modern times; Part I, the mercantile system; Part II, laissez faire.* 2 Vols. Cambridge University Press.³

Innes, D. Arthur. *England's industrial development.* 1912. Rivingtons.⁴

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CROWN COLONIES

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Colonial Reports (annual).

WEST INDIES

Publications by the Government of the United Kingdom

Report of the West India Royal Commission. 1897. (c.865b.)

Watts, Francis. *Report on the sugar industry in Antigua and St. Kitts-Nevis, 1881 to 1905.* 1906. Colonial Reports, Miscellaneous No. 35 (Cd. 2878).

Report of the West Indian Shipping Committee. 1919. (Cmd. 372.)

(Deals with direct mail and passenger services between the United Kingdom and the West Indies; inter-colonial services; steamship communication between the West Indies and Canada; subsidies to steamship companies; and the development of certain West Indian ports.)

³ Contain full bibliographies.

⁴ Contains a short bibliography in the preface.

⁵ Contains bibliographies.

Publication by the Government of Jamaica.

Handbook of Jamaica (annual).

Other publications

Aspinall, A. E. *The British West Indies.* 1912. Putnam & Sons.

CEYLON

Publications by the Government of Ceylon

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Report of the Colonial Research Committee (annual).

HONGKONG

Publications by the Government of Hongkong

Report of the Economic Resources Committee—Factory, Home and Cottage Industries Sub-Committee. 1920.

BRITISH HONDURAS

Publication by the Crown Agents for the Colonies, London

Report on the economic and natural features of British Honduras in relation to agriculture with proposals for development.

UGANDA

Publication by the Government of Uganda

Report of the Uganda Development Commission. 1920.

KENYA

Publication by the Government of Kenya

Final Report of the Economic Commission, Part I. 1919.

DOMINIONS

Publication by the Government of the United Kingdom.

Reports of the Royal Commission on the Natural Resources, Trade and Legislation of Certain Portions of His Majesty's Dominions. (Reports:—Cd. 6515, 7210, 7505, 7711, 8457, 8462 (final); evidence:—Cd. 6516, 6517, 7170 to 7173, 7351, 7706, 7707, 7710, 7898, 7971, 8458 to 8460; memorandum and tables relating to the food and raw material requirements of the United Kingdom:—Cd. 8123; memorandum and tables as to the trade statistics and

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CANADA

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Canada statistical abstract and record (1886 to 1888). Department of Agriculture.

Statistical year-book of Canada (Annual, 1889 to 1904). Department of Agriculture.

Canada year-book (Annual from 1905.) Bureau of Statistics.⁶

Publication of the Government of Quebec

Statistical year-book of Quebec (annual).

Other publications

Griffith, W. L. *The Dominion of Canada*. 1911. Sir Isaac Pitman & Sons.

AUSTRALIA

Publications by the Government of the Commonwealth of Australia

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Official year-book of the Commonwealth of Australia (annual).⁷

Publication by the Government of New South Wales

The official year-book of New South Wales (annual).

Publication by the Government of South Australia

Handbook of South Australia.

Publication by the Government of Victoria

Victorian year-book (annual).

Publication by the Government of the United States of America

Baker Henry, D. *Australia, its resources, industries and trade*. 1911. Department of Commerce and Labor; Bureau of Manufactures; special consular reports, No. 47.

⁶ Contains lists of the principal acts of the Dominion Parliament and of the principal publications of the Dominion and Provincial Governments.

⁷ Contains a bibliography.

Other publications

Wise, Honourable B. R. *The Commonwealth of Australia*, 2nd Edn., 1913. Sir Isaac Pitman & Sons.

NEW ZEALAND

Publication by the Government of New Zealand

New Zealand official year-book (annual).

Publication by the Government of the United States of America

Baker, Henry, D. *New Zealand, its resources, industries and trade*. 1912. Department of Commerce and Labor; Bureau of Foreign and Domestic Commerce; special consular series; No. 57.

Other publications

Douglas, Sir Arthur P. *The Dominion of New Zealand*. Sir Isaac Pitman & Sons.

SOUTH AFRICA

Publication by the Government of the Union of South Africa

Official year-book of the Union of South Africa (annual).⁸

Other publications

Worsfold, W. B. *The Union of South Africa*. Sir Isaac Pitman & Sons.

FRANCE

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Papers relative to French industry and commerce. 1878. Commercial No. 16 (1878). (C.-2085.)

Publication by the Government of France

Annuaire Statistique, Ministère du Travail.

Publications by the Government of the United States of America

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⁸ Contains a bibliography.

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Reports of the Departmental Committee appointed to consider the position of the Shipping and Shipbuilding industries after the war. 1918. (Cd. 9092.)

(The first report deals with "the German control stations and the Atlantic emigrant traffic;" an appendix to the second report relates to industrial banks in Germany; the final report contains a section on "German competition.")

Diplomatic and Consular Reports, miscellaneous series:—

No. 561. Chemical instruction in Germany and the growth and present condition of the German chemical industries. (Cd. 430-16.)

No. 566. Technical, agricultural, industrial, commercial and art schools of Wurtemberg. (Cd. 787-2.)

No. 573. Supplementary report on Chemical instruction and chemical industries in Germany. (Cd. 787-9.)

No. 574. Prussian railways. (Cd. 787-10.)

No. 591. Technical high schools in Germany. (Cd. 1387-4.)

No. 594. Agricultural instruction in Germany and the development of German agriculture and agricultural industries. (Cd. 1387-7.)

No. 597. Instruction in mining and metallurgy in Germany and German mining and metallurgical industries. (Cd. 1767-1.)

No. 600. Technical instruction in Germany; building and engineering trades' schools. (Cd. 1767-4.)

No. 601. Technical instruction in Germany; special schools and courses for mechanical engineering and electro-technics. (Cd. 1767-5.)

* Contains a short bibliography in the preface.

No. 602. Textile technical schools in Germany and development of the textile industries. (Cd. 1767-6.)

No. 603. Technical schools in Germany for special branches of the metal industries. (Cd. 1767-7.)

No. 608. Special schools for ship engineers in Germany. (Cd. 1767-12.)

No. 609. Technical instruction in naval architecture and engineering in Germany. (Cd. 1767-13.)

No. 611. Navigation schools in Germany. (Cd. 1767-15.)

No. 615. Special technical schools for the ceramic industries. (Cd. 1767-19.)

No. 618. Special technical schools for the wood-working industries. (Cd. 1767-22.)

No. 619. Commercial instruction in Germany. (Cd. 2237.)

No. 621. Art-trade schools in Germany. (Cd. 2237-2.)

No. 630. Technical instruction in Germany, supplementary and miscellaneous. (Cd. 2237-11.)

No. 636. German sea-fishing industry and trade. (Cd. 2683.)

No. 642. German paper industry and export trade. (Cd. 2683-6 shows the beneficial effects of the official paper-testing institute on the industry).

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Clapham, J. H. *The economic development of France and Germany, 1815-1914*. 1921. Cambridge University Press.¹⁰

¹⁰ Contains a short bibliography in the preface.

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Dawson, W. H. *Municipal life and government in Germany*. 2nd Edn. 1916. Longmans & Co.

Dawson, W. H. *The evolution of modern Germany*. 1908. T. Fisher Unwin.

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(Separate reports for each consular district.)

Diplomatic and consular reports; miscellaneous series:—

No. 625. Rice industry in the United States. (Cd. 2237-6.)

No. 627. United States railways. (Cd. 2237-8.)

Publications by the Government of the United States of America

Report on the manufactures of the United States at the tenth census (June 1st, 1880). 1883. Department of the Interior; Census Office.

(Contains histories of certain manufactures, but little mention of State assistance. Vol. II, of the "Census of manufactures, 1914," contains reports for selected industries but not much historical matter except comparisons with previous censuses.)

Report of the Industrial Commission, Vol. XIX, final report, 1902, 57th Congress, 1st Session; H. R. Doc., No. 380.

Rules and regulations under the Grain Standards Act of August 11th, 1916. Department of Agriculture; Office of the Secretary; Circular No. 70.

(Includes a copy of the Act.)

Vocational Education Act, 1917; 64th Congress, 2nd Session, Chap. 114.

Rules and regulations for carrying out the Federal Aid Road Act, 1916. Department of Agriculture; Circular No. 65.

(Includes copy of the Act authorizing grants by the Federal Government to State Governments for roads on certain conditions.)

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Statistical Abstract of the United States, (annual). Department of Commerce; Bureau of Foreign and Domestic Commerce.

Other publications

Bishop, J. L. *A history of American manufactures from 1608 to 1860*. 3 Vols. 1866. Samson Low & Co.

¹¹ Contains bibliographies.

Bogart, E. L. *The economic history of the United States*, 3rd Edn. 1915. Longmans, Green & Co.¹²

Clark, Victor S. *History of Manufactures in the United States, 1607 to 1860*. 1916. Carnegie Institution of Washington.¹³

Coman, Katherine. *The industrial history of the United States*. Revised Edn. 1920. Macmillan & Co.¹²

Franc, Alissa. *Use your Government; What your Government does for you*. 1918. E. P. Dutton & Co., New York.

Lippincott, J. B. *The economic development of the United States*. 1921.

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Diplomatic and consular reports, miscellaneous series:—

No. 564. Foreign Trade and Shipping of Japan, 1872-1900. (Cd. 787.)

No. 635. Japanese paper-making. 1905. (Cd. 2237-16.)

No. 660. Japanese paper-mills. 1907. (Cd. 3284-4.)

No. 672. Silk industry of Japan. 1909. (Cd. 4447.)

(Contains some account of encouragement by Government.)

No. 674. Matting industry in Japan. 1909. (Cd. 4447-2.)

(Contains information about Government inspection and experiment departments.)

No. 675. Sugar industry in South Formosa. (Cd. 4447-3.)

(Contains Government regulations and discussion of success of encouragement offered.)

¹² Contains a full bibliography.

¹³ Contains full bibliographies.

Publications by the Government of the United States of America

Clark, W. Graham. *Cotton Goods in Japan*. 1914. Department of Commerce, Bureau of Foreign and Domestic Commerce. Special Agents Series; No. 86.

Commercial Japan in 1904. Monthly summary of commerce and finance of the United States; Department of Commerce and Labor; Bureau of Statistics; No. 8 series; 1903-04. February 1904; pp. 2871 to 3018.

Publication by the Government of Holland

Van Kol, H. H. *De Ontwikkeling der groot industrie in Japan*. 2 Vols. 1916.

Publications by the Government of Japan

History of the Empire of Japan; compiled and translated for the Imperial Japanese Commission of the World's Columbian Exposition, 1893. Department of Education.
(Refers to Government assistance to industries, but not in detail.)

Statistics illustrating the financial and economic condition of the Empire of Japan from 1893 to 1901. Department of Finance.

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PART II

BOUNTIES ON THE MANUFACTURE OF SUGAR

Publications of the Government of the United Kingdom

Report from the Select Committee of the House of Commons on Sugar Industries, with Minutes of Evidence and Appendix, 1879. (H. C. 321.)

Report from the Select Committee of the House of Commons on Sugar Industries, with Minutes of Evidence and Appendix, March, 1880. (H. C. 406.)

Report from the Select Committee of the House of Commons on Sugar Industries, with Minutes of Evidence and Appendix, August, 1880. (H. C. 332.)

Further correspondence respecting the sugar question, 1880. Commercial No. 11 (1880). (C.-2476.)
(Includes reports on the state of the sugar industry in various foreign countries.)

Return of correspondence and memoranda on the subject of export bounties on sugar, May, 1881. (H. C. 229.)

Memorandum on the correspondence in relation to the sugar bounties, August, 1881. (H. C. 422.)

Correspondence relative to the Conference on Sugar Bounties held in London in 1887. Commercial No. 2 (1888). (C.-5259.)

Minutes of proceedings and papers laid before the International Conference on the Sugar Question, 1888. Commercial No. 3 (1888). (C.-5260.)

(Includes the laws on the taxation of sugar in various foreign countries.)

Minutes of proceedings and papers laid before the International Conference on the Sugar Question, (2nd and 3rd sessions) 1888. Commercial No. 13 (1888). (C.-5577.)

(Includes the Convention.)

Further correspondence respecting the International Conference on the Sugar Question, 1888. Commercial No. 15 (1888). (C.-5604.)
(Includes resolutions, etc., showing satisfaction of West Indies at the conclusion of the Convention.)

Report to the Board of Trade entitled "Progress of the Sugar Trade" with Appendices, 27th May 1889. (H. C. 172.)
(Includes chapters on bounties and the amount of sugar exported from countries giving bounties.)

Sugar Conference at Brussels—Despatch from the British Delegates enclosing copy of the Convention signed on March 5th, 1902. Miscellaneous No. 4 (1902). (Cd. 1003.)

Correspondence relating to the Sugar Conference at Brussels, 1901-1902, (Colonies), April, 1902. (Cd. 940.)

(Includes memorials, etc., showing adverse effects of bounties on colonies and resolutions, etc., showing satisfaction at the conclusion of the convention.)

Correspondence relating to the Brussels Sugar Bounty Conference, 1902. Miscellaneous No. 5 (1902). (Cd. 1013.)

(Contains invitations to conference and proposals to be placed before it and copy of the Convention signed on March 5th, 1902.)

Correspondence respecting the ratification of the Sugar Convention signed at Brussels, March 5th, 1902. Commercial No. 2 (1903). (Cd. 1470.)

(United Kingdom ratified subject to conditions that the penal clause be not applied in the United Kingdom to British Colonial sugar and fiscal relations between Great Britain and the British Colonies and possessions must remain outside the Convention.)

Findings of the Permanent Sugar Commission established under the Sugar Convention of March 5th, 1902. Commercial No. 6 (1903). (Cd. 1632.)

(Includes proposals regarding bounties in Spain, Denmark, Japan, Roumania and Russia.)

Further Findings of the Permanent Sugar Commission established under the Sugar Convention of March 5th, 1902. Commercial No. 5 (1904). (Cd. 2094.)

(Includes a statement of the attitude of India and Crown Colonies towards the Convention, and a statement regarding the sugar industry in certain countries; countervailing duties paid on sugars from Chile, Costa Rica and Dominican Republic; discussion regarding "produits sucrés").

Further Findings of the Permanent Sugar Commission established under the Sugar Convention of March 5th, 1902. Commercial No. 1 (1905). (Cd. 2349.)

(Contains decisions regarding countervailing duties on sugar from certain countries.)

International Sugar Commission. Report of British Delegates and Correspondence. Commercial No. 3 (1905). (Cd. 2531.)

International Sugar Commission, Spring Session 1906. Report of proceedings. Commercial No. 5 (1906).

(Contains a report on the sugar industry in Brazil.)

International Sugar Commission. Report of Proceedings, Autumn Session, 1906. Commercial No. 1 (1907). (Cd. 3301.)

Papers relating to the Brussels Sugar Convention (Colonies), 1907. (Cd. 3565.)

(Includes protests from Colonies against withdrawal from the Convention.)

Despatch to His Majesty's Minister at Brussels respecting the International Sugar Convention of March 5th, 1902. Commercial No. 5, (1907). (Cd. 3577.)

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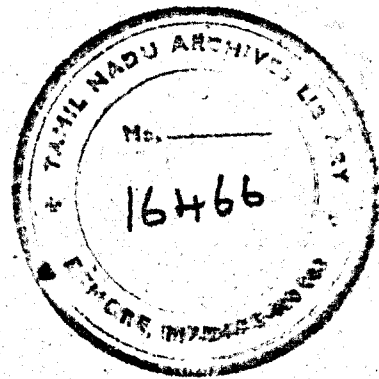
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