

Educational (1916) Department.

Misc. SERIES.

G.O. No. 781-Ed

DATED 17-7-16

[Despatch Abstract.]

Informing Dr L. A. Groth Director
Electro Leather Industries, London that
this Govt are not at present prepared to take
any action in the matter of the development
of the electro-tanning industry as suggested
by him.

DEPARTMENT.

CURRENT No.

From _____

Received _____ 191 . Registered _____ 191 .

Subject.



PRIVATE SECRETARY'S OFFICE, MADRAS.

*C.No 451 Ball
4-2-16*



Memo. No. *548-P*

Transferred to the Secretary to Government, *Educational*

Department, for favour of disposal. *The Copy of "Modern Tamiya"*

ENCLOSURES:

5

(By order of His Excellency the Governor.)

Lt. Col.

Private Secretary.

Madras,

The 3rd February 1916.



Chemical Department.
Antiseptic and Purified Chemical Specialities
for the Leather Industries.

**Electric and Engineering
Department.**

Modern and Economic Plants
of every description.

Sterilization Department.
Fermentation prevented by means of
Gothine, destroying Anthrax Spores,
and preserving Hides and Skins from loss of
weight, saving 5/- upwards per hide.

Tanning Department.
Modern Tannage, with Extracts of any kind,
producing Sole Leather, best quality, in
six weeks at about half ordinary cost.

*Hides received for Tanning and
Sterilization on behalf of the Trade.*

Great Economic Result
is obtained by substituting
Modern means and Methods
for
Waste and Inefficiency,
reducing
cost of production,
leaving absolutely
Increased Profit.

What we offer we do under
Guarantee of good Results.

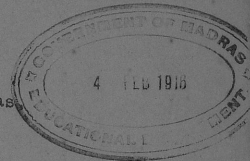
"Modern Tannage."
with Illustrations, post free for 2/-.

11, TOTHILL STREET, WESTMINSTER.

LONDON, S.W., December 15th 1915.

Reference.

His Excellency,
The Governor of Madras,
Madras.



Your Excellency,

The Secretary of State for India has ad-
vised me to address you, as per enclosed copy
of his letter of 16th November.

May I, therefore, most respectfully en-
close copy of "Modern Tannage", and draw
attention to

The Tanning Industry and the great waste
and economic losses that dominate one of our
staple industries, pages 43/47.

The Hide and Skin Trade and the enormous
losses caused by fermentation, pages 61/62,
66/67.

The Infectious Disease of Animals and
their cure, pages 68/78.

The Anthrax Spores and their destruction,
page 67.

The Tanning Extracts and their manufacture

The Army Losses on hides and skins re-
quired by H.M. Government, page 45; and

The Supply of Leather, pages 38/40-90/94,
in six weeks at less than half ordinary
cost, with a working capital reduced by 75
per cent, while the quality of the heaviest
leather is unsurpassed by reason of its
uniform tannage.

The time of tannage would naturally be shorter in
India, but the quality of the leather produced cannot be
surpassed.



11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W., 15/12 1915

(2)

The Report by the Fifth Indian Industrial Conference states that:-

"The increasing importance of tanning extracts is clear in connection with the hide and leather industry.

The demand for bark and wood for extraction in Europe and America are, indeed, so enormous that fears are entertained of shortage, if not extinction, at no distant date, of the supply of raw materials from the forests that are being indiscriminately massacred to meet the World's demand for tanning extracts. In France the yearly disappearance is 3,000 acres of chestnut trees for the production of tanning extracts."

"From the description of the various Indian tanning materials an idea can be formed as to the enormous tannin resources of India, and as to the extent this country may take in supplying the tanning extract demand of the world, as many of these materials compare very favourably with the raw materials of Europe and America in the percentage being in most cases much richer in tannin".

"When it in Europe pays to extract woods and barks with 3.4 per cent of tannin, there is no reason why the pioneer manufacturers of India should not be able to develop a well-organised and flourishing tanning extract industry with great profit, especially as any difficulties in the supply of raw materials will be overcome since the Government is always ready to extend careful and sympathetic consideration to the development of this important industry."

The "Forest Research Institute" in the "United Provinces of India" is making enquiries as to the possibility of utilising Indian oak-bark as a tanning material, either in its raw state, or as an Extract, although the "Babul" bark (*acacia arabica*) and Myrabalams are considerably cheaper. Oak-bark extract can be made according to my system at a cost of roughly £6 per ton; it is, therefore, evident that an enormous new industry may easily be established.



11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W., 1872 1915

It may be permissible to state that all Tanning Materials contain two distinct properties, viz., "Tannin" and "Colouring Matter", each of great commercial value when obtained and used separately, combined, however, they are of considerably less value. By present methods of preparing Tanning Extracts it is impossible to separate them, hence the Tanning Extracts contain also the colouring matters, which make them almost useless for tanning purpose, hence, the necessity of decolorisation, a costly and unsatisfactory procedure, as the colouring matters are wasted and lost while the greater part still remains, affecting seriously the Extracts. By my system the two properties are separately extracted direct from the raw materials, increasing their commercial value considerably, yet at less cost of production.

From the enclosed circular, circulated amongst the Mayors of leading towns, our object in view is expressed.

India being the provider of hides and skins to the whole World, and possessing tanning materials of inestimable value offers, therefore, an exhaustible field for development and establishment of new industries of the greatest national importance.

May I, therefore, most respectfully request the assistance of your Excellency with advice how best to proceed, and by granting to me concessions in such a form and extension that will encourage capitalists to provide the necessary capital.



11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W., 15/12 1915

I do not know the exact districts where the tanning materials are available, but if, for instance, concessions could be granted for tracts of such lands, large enough for development during years to come, on reasonable conditions say free during the first ten years, and afterwards at a percentage of the income realised, I have been assured that the capital will be forthcoming.

Will your Excellency also grant me concessions for the establishment of Tanneries, eventually with Abattoirs in the leading towns and hide centres, or to whom shall I apply?

His Majesty's Government (The War Office) have undertaken to assist me financially for the erection of a "Demonstration Plant" for purpose of enabling H.M. Government to investigate the value of my systems. The Works are now being built at Coulsdon, Surrey.

Such an investigation, if possible, at the small expense of about £1,000 by H.M. Indian Government, would be of great value as the conditions in India are so different to ours. In this case I would be willing to go to India to supervise such an investigation and bring all the necessary electric plants and instruments, all included in the above sum.

Would your Excellency be good enough to grant such an expenditure or recommend it to be done by proper authorities.

I have the honour to be,

Your Excellency's most obedient humble servant,

L. A. Gorth

Copy.

India Office,
Whitehall,
London, S. W.
November 16, 1915.

R. & S. 6906/15.

Sir,

In reply to your letter dated the 25th October, enclosing a copy of "Modern Tannage" and referring to your proposals for the development of leather industries, I am directed by the Secretary of State for India in Council to say that any applications you may wish to make for sites or other facilities for the establishment of tanneries or works in India should be addressed to the Local Governments of the various provinces. It is open to you in the same way to bring your methods and preparations to the notice of the United Provinces Government and other Local Governments for consideration of the question of a trial being made of them in Government institutions for technical or industrial instruction or demonstration.

With reference to your request to be supplied with the official year-books referring to the Indian trade, I am to say that there are no annual official publications dealing specially with the leather trade, to which your request is understood to refer. The available publications including annual reports on, and statistics of, Indian trade generally, and monographs on the leather industries in a number of provinces, can be consulted on application to the Record Department of this Office.

I am,

Sir,

Your obedient Servant,

(Signed) E. J. TURNER.

Dr L. A. Groth,
Electro Leather Industries,
11, Tothill Street,
Westminster, S. W.



Chemical Department.
Antiseptic and Purified Chemical Specialities
for the Leather Industries.

Electric and Engineering Department.
Modern and Economic Plants
of every description.

Sterilization Department.
Fermentation prevented by means of
Grothine, destroying Anthrax Spores,
and preserving Hides and Skins from loss of
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Increased Profit.

What we offer we do under
Guarantee of good Results.

"Modern Tannage,"
with Illustrations, post free for 2/-.

11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W., 15 December 191

Reference. R & S. 6906/15.

The Under Secretary of State for India,
Revenue Department,
India Office,
London, S. W.

Sir,

Referring to your letter of 16th November
and subsequent interviews, may I most respect-
fully request you to be good enough to bring
to the notice of the Local Governments of the
various provinces and the United Provinces
Government, and other Local Authorities the
National importance of my systems of

- Sterilisation of animal and vegetable matter, especially for the preservation of hides, skins, jute, hemp, pig-bristles etc.
- Electro Tanning producing leather of unsurpassed quality in weeks as compared with months, at less than half the ordinary cost, and
- Manufacture of Tanning Extracts.

for which purpose I shall be glad to place at
your disposal any number of copies of "Modern
Tannage", twelve copies of which I enclose.

The great assistance rendered to me by the High
Commissioners and Agent Generals of Australia, New Zealand,
Canada, and the Union of South Africa by requesting copies
of "Modern Tannage" for distribution in their respective
Dominions may justify my respectful application to you
to do the same.



11, TOTHILL STREET, WESTMINSTER,
LONDON, S.W.,

191

In an official publication (at the Imperial Institute) it is stated that the Indian Railway Companies desire to induce the establishment of new industries along their lines. May I therefore be permitted respectfully to ask you to be good enough to draw their attention to my above mentioned matter, and likewise to forward to them copies of "Modern Tannage".

What are their proper addresses?

The "Forest Research Institute" in the United Provinces of India is making enquiries as to the possibility of utilising Indian oak-bark as a tanning material, either in its raw state or as Extract, although the "Babul" (*Accacia Arabica*) bark and Myrabalam are considerably cheaper, but as oak-bark extract can be made by my method at a cost of not exceeding £6 per ton, it is evident that an enormous business may be done. May I ask for the proper address of the said Institute, and will you also draw its attention to "Modern Tannage"?

May I ask to be furnished with a copy of "The Report of the Fifth Indian Industrial Conference" (1911) ?

I have the honour to be

Sir,

Your obedient servant,

L. A. Groth



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11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W.,

191

Reference.

To
His Honour
The Worshipful the Mayor of

Sir,—

May we take the liberty of sending you
a copy of 'Modern Tannage' and at the same
time most respectfully draw attention to the
enormous Waste and Economic losses that are
still permitted to predominate in the Leather
Trade—one of the greatest and most important
of Industries.

The "Inter-State Trade Commission of
Australia," has recently reported:

"That the only prospect of extending
the exports of Leather lies in the
improvement of tanning methods";

"That the application of scientific
methods and the resources of chemis-
try to the industry are imperfect."

Hides and skins are rapidly and seri-
ously affected by fermentation greatly
increased by transport, impairing their
commercial value, which, in conjunction with
the ancient methods of tanning now in vogue,
constitute means by which the State, as well
as the individual trader, suffers losses of
appalling greatness.

Our object is to avoid these losses by
erecting Tanneries upon the most modern prin-
ciples in leading towns and hide centres, and
to organize their working on co-operative
principles under one and the same management.
Leather of the highest quality would be



11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W.

Telephone: VICTORIA, 1702.



11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W.,

191

produced in six weeks at less than half the ordinary cost, with a working capital reduced by 75 per cent.

To enable us to carry out this scheme of great National importance we only ask, most respectfully, for the Goodwill and encouragement of the Government and the co-operation and assistance of the respective Municipalities by granting to us Concessions for the erection of Leather Works and eventually also of Abattoirs, and Works for the manufacture of Tanning Extracts in places where suitable raw material is available.

The Concessions should be granted to our Dr. L. A. Groth, K.G.V., with about 3 acres of suitable land, free, if possible, and situated near water, railway station and electric power station. The most favourable terms and conditions should be granted so as to appeal to British investors. Concessions have been granted to Dr. Groth by the Corporation of Burton-on-Trent and other leading towns.

Could such a co-operation be arranged, we have been assured that the necessary capital would be forthcoming, for the resuscitation and organization of the entire Tanning Industry upon modern principles.

To save time would you be good enough to send us complete Documents, and such information as would enable us to prepare the Prospectus and take steps for the issue of the proposed Company. We may remark, that it is considerably cheaper to erect entirely new Tanneries than to acquire old ones for reconstruction, which, however, will not prevent existing tanners from acquiring Licences to work our processes upon terms which would enable them to continue their business with greatly improved economic results.

An early reply would oblige.

Yours faithfully,

L. A. Groth



THE importance to science and industry of Dr Groth's Systems of "Sterilisation" and "Electro Tanning" has induced us, in conjunction with "The British Drug Houses, Ltd.," "The General Electric Co., Ltd., London," "Messrs Palgrave & Co., Architects," and Messrs A. J. Staines & Co., Ltd., Builders," to acquire the exclusive right of their exploitation.

Hides and Skins are preserved from loss of gelatinous matter at a saving of 6s upwards per hide. Trials may be made on 25 hides free from Royalty at the small cost only of the antiseptic.

Grothine is the most powerful and the only practical germicide for such purposes. It checks instantly

Fermentation and Putrefaction and destroys in five minutes

Anthrax Spores, preventing thereby **contagion and infection**.

Hides are received for sterilisation and electro tanning on behalf of the trade.

Chemical Specialities for the trade are made antiseptic and purified, enabling maximum power of action, namely:

Aquemol, "Waterproof," claimed to be the best and most effective.

Apnetol, "Watersoftener."

Calcol, "De-Limer."

Colloidal, "Hide and Skin Cleanser."

Murcerol, "Hide Softener," free from iron and formic acid.

Perfuol, "Effluent Purifier."

Villusol, "Unhairer," free from iron, in powder form.

Most of the above specialities are in powder or tablets and will therefore cause great saving in handling and freight.

Electro Tanning produces a pure and strong tannage, of heavy leather in **six weeks** at about half ordinary cost. For instance, four suspenders will enable a weekly input of 40 hides; all other pits, together with the great manual labour connected therewith, are entirely dispensed with.

Waste and Inefficiency are thereby reduced to a minimum.

Licenses both for Sterilisation and Electro Tanning are granted.

Co-operation is the best means to oust our foreign trade enemies.

Scepticism and Prejudice are overcome by a visit to our works.

Modern Tannage, just published, will be useful to **you**. Order it to-day, **now**. 2/-, post free.

Agents appointed at Home and Abroad where not yet represented.

Correspondence cordially invited.

What we offer we do under **Guarantee of Good Results**.



TRADE MARK

Electro Leather Industries,
11 Tothill Street, Westminster, London, S.W.



TRADE MARK

Reprinted from "Shoe and Leather Trader," October, 1915

"MODERN TANNAGE"

This interesting and instructive book is written by Dr L. A. Groth, K.G.V., and issued by "Electro Leather Industries," 11 Tothill Street, Westminster, London, S.W., a British concern which has secured jointly with "The British Drug Houses, Ltd.," "The General Electric Co., Ltd.," Messrs Fulgrave & Co., architects, and Messrs A. J. Staines & Co., Ltd., builders, the exclusive right to exploit Dr Groth's systems of "Sterilisation," "Electro-Tanning," and the "Manufacture" of Grothine, the antiseptic germicide, and other chemical specialities used in the leather industries, but now delivered in antiseptic and purified conditions.

Progress of science is gaining ground everywhere with unprecedented rapidity, revolutionising processes which were considered perfect in almost every industry, but seemingly without affecting the tanning trade, although the creation of new industries extend the employment of leather for a multitude of new and important purposes, all of which demand new and improved methods to suit the special treatments required by its various applications.

The sooner the ancient methods dominating the tanning trade are abandoned and modern methods adopted in accordance with progress of time, the better will be the commercial trading with increased economic results.

The interest fostered by H.M. Government in raising industrial capabilities cannot but inspire confidence. As soon as facilities are provided, proper co-operation arranged, and economic organisation adopted, business will force itself inevitably in everywhere, develop rapidly, and open up chances of magnitude akin to world-wide industrial monopoly.

"Modern Tannage" differs from the general trade literature, by not only giving the results of Dr Groth's evidently most serious research and investigation, but also describes how results are obtained, which are referred to by the scientific press as being "great discoveries"; to us their great value appears to be in the initiation as to their application for practical purposes.

We have been informed that "Electro Leather Industries," at the instigation of H.M. Government, are putting up a plant at Huxley Mills, London, for the purpose of demonstrating the "Sterilisation" and "Electro-Tannage" of 100 hides weekly, and for the manufacture of Grothine and other chemical specialities used in the leather industry, but in antiseptic and purified condition.

The claims of Dr Groth are (1) That the loss in weight of fresh market hides, caused by fermentation, will be entirely avoided by means of "Grothine"; and (2) That a pure and strong tannage of heavy hides will be produced in six weeks with a reduced working capital by 75 per cent. and at 50 per cent. of the ordinary cost of production, the quality of the leather produced being unsurpassed by reason of its uniform tannage. Four suspender pits only being needed for a weekly input of 40 hides, all the other ordinary pits being dispensed with.

The supervision of the working and checking of figures, we understand, will be undertaken by representatives of H.M. Government, of the Governors, the High Commissioners, and the Agent Generals for the Colonies, as well as by a committee of professional gentlemen in the hide, tanning, leather, and boot and shoe trades.

"Modern Tannage" is published at 2s. post free, and will be useful to every professional man.

Est. Department
No. 451-186
7.2.16
[Cm 51]
Letter - 5
Dr L. A. Groth,
Electro Leather Industries,
11, Tothill Street,
Westminster, S.W.
London.

Sir,

With reference to your letter, dated the 15th December 1915. I am directed to state that the copy of "Modern Tannage" which is said to have been forwarded with it has not been received. I am to request that a copy may now be sent to this Govt.

I have etc.,

8K
8.2.16.

8K
8/2/16

DRP
92.16.

At the same time you need not delay the General Question. Examine it.
DRP
92

Est. Depart.
[Cm 4.57]

End to 10.4.57-2.58

Referred to the Director
of Industries for remarks

OK
19.4.16.

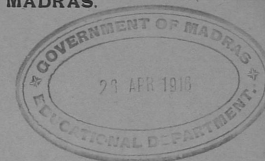
CA
19.4.16

The S. I. (with current
+ enclosures in
original to be ret.)

Noted in CB
22.4.16

PRIVATE SECRETARY'S OFFICE, MADRAS.

Memo. No. 26-P



Transferred to the Secretary to Government, Educational
Department, for favour of disposal, in continuation of the office Endorsement
N^o. 548-P, dated 3rd February 1916.

ENCLOSURES:
3 and
10 Copies of
"Modern Language."

(By order of His Excellency the Governor.)

[Signature]
Private Secretary.

Telephone:

Telegraphic Address: "GROTHINE, COULSDON, SURREY."



Factory:
GROTHINE WORKS,
COULSDON, SURREY.

26, HART STREET, BLOOMSBURY SQUARE,

LONDON, W.C. February 24, 1916

Chemical Department.

Antiseptic and Purified Chemical Specialities
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Your REF
Our REF

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with Illustrations, post free 2/-.

His Excellency,
Lord Pentland,
Government House,
Madras.

My Lord,

In respectful reply to your letter of the
3rd instant, I have the pleasure of forwarding
twelve copies of "Modern Tannage", for free
distribution.

Yours respectfully,

L. A. Groth.

*2 copies
already read
to copies now read
with this letter.*



Telephone: VICTORIA, 1702.



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11, TOTHILL STREET, WESTMINSTER,

LONDON, S.W.,

December 1915.

Reference.

Change of Address.

Dear Sir,

We beg to inform you that we have
removed from the above address to more central
offices at

26, Hart Street,

Bloomsbury Square,

London, W.C.

The address remains the same, how-
ever, for our

Grothine Works,

Brighton Road,

Coulsdon, Surrey.

which now are being completed under Government
Control.

Yours faithfully,

Téléphone:

Télégrammes: "GROTHINE, COULSDON, SURREY."



Section de Chimie.

Spécialités chimiques antiseptiques et purifiées
pour les Industries du Cuir.

26, HART STREET, BLOOMSBURY SQUARE,

LONDRES, W.C.

191

Section d'Électricité et de Mécanique.

Appareillages modernes et économiques
de tous genres.

A Monsieur le Président

du Conseil Municipal.

Service de Stérilisation.

Suppression de la fermentation
au moyen de la Grothine.

Destruction des spores d'anthrax
et préservation des peaux contre toute perte
de poids, avec économie de 6 fr. et davantage
par peau.

Monsieur le Président,

Son Excellence l'Ambassadeur Français a

bien voulu nous donner votre adresse en nous
conseillant de vous écrire directement, c'est
pourquoi nous prenons la liberté de vous
envoyer un exemplaire du "Tannage Moderne" et
d'attirer respectueusement votre attention non
seulement sur le gaspillage et les pertes
économiques énormes qui sont encore tolérés
en grand dans l'Industrie des Cuirs - une des
plus vastes et des plus importantes - mais
aussi sur les moyens qui permettent d'éviter
entièrement ces pertes.

Service de Tannage.

Tannage moderne avec tous extraits,
produisant des cuirs à semelles de la meilleure
qualité en six semaines, à environ la moitié
du coût ordinaire.

*Notre nous chargeons du Tannage
et de la Stérilisation des peaux
pour l'Industrie.*

On réalise de grandes économies

à substituer les moyens et méthodes modernes
au gaspillage et au manque d'efficacité.
Les frais de production en sont réduits,
et les bénéfices absolument multipliés.

Ce que nous offrons, nous le réalisons
sous la garantie des résultats.

"Le Tannage Moderne"

Illustré, 2fr. 50c. franco.

La "Commission du Commerce entre les États
de l'Australie" a déclaré dans un récent Rapport
"que l'application à l'industrie des
"méthodes scientifiques et des ressources
"de la chimie est encore imparfaite."

Il arrive encore aux peaux et aux cuirs verts
d'être rapidement et sérieusement endommagés
par la fermentation, que les transports



Telephone
CONTRIBUTION

CONTINUATION



FEUILLE No. 2.

contribuent beaucoup à activer, et de perdre ainsi une grande partie de leur valeur commerciale, d'où pour l'Etat aussi bien que pour l'industriel des pertes dont l'importance fait frémir, et tout cela à cause de la persistance des anciennes méthodes de tannage encore en vogue.

Or nous aspirons à mettre fin à ces pertes en installant des Tanneries sur les principes les plus modernes dans les villes importantes et les centres de peausserie, Tanneries qui seraient exploitées coopérativement sous une direction unique. Une telle organisation permettrait l'achat de matières premières de choix: peaux, cuirs verts, produits tanniques, huile etc., sur les meilleurs marchés et aux plus bas prix de gros, et leur distribution en temps utile entre les différentes tanneries au fur et à mesure de leurs besoins.

Les peaux les plus épaisses seraient transformées, en l'espace de six semaines, en cuir de la meilleure qualité pour moins de la moitié des frais habituels et avec des fonds de roulement réduits de 75 pour cent.

Pour nous permettre de réaliser cet objectif, de si grande importance nationale, tout ce que nous demandons avec le plus profond respect, outre la bienveillance et les encouragements du Gouvernement, c'est que les Municipalités intéressées nous prêtent leur concours et leur assistance en nous accordant des concessions pour l'installation d'ateliers de tannage et d'abattoirs aussi ultérieurement, ainsi que d'usines pour la fabrication des extraits tanniques dans les localités offrant les matières premières requises.

Les concessions seraient accordées au nom de notre sieur Dr. L.A. Groth et comprendraient environ 120 ares de

Section de Chimie.
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pour les industries du Cuir.

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Appareils électriques et mécaniques
de tous genres.

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et préservation des peaux contre toutes formes
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par peau.

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Tannage moderne avec tous ses avantages
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On réalise de grandes économies
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Ces usines offrent aussi la possibilité
de la fabrication des vêtements.

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Haines, 211, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013, 1015, 1017, 1019, 1021, 1023, 1025, 1027, 1029, 1031, 1033, 1035, 1037, 1039, 1041, 1043, 1045, 1047, 1049, 1051, 1053, 1055, 1057, 1059, 1061, 1063, 1065, 1067, 1069, 1071, 1073, 1075, 1077, 1079, 1081, 1083, 1085, 1087, 1089, 1091, 1093, 1095, 1097, 1099, 1101, 1103, 1105, 1107, 1109, 1111, 1113, 1115, 1117, 1119, 1121, 1123, 1125, 1127, 1129, 1131, 1133, 1135, 1137, 1139, 1141, 1143, 1145, 1147, 1149, 1151, 1153, 1155, 1157, 1159, 1161, 1163, 1165, 1167, 1169, 1171, 1173, 1175, 1177, 1179, 1181, 1183, 1185, 1187, 1189, 1191, 1193, 1195, 1197, 1199, 1201, 1203, 1205, 1207, 1209, 1211, 1213, 1215, 1217, 1219, 1221, 1223, 1225, 1227, 1229, 1231, 1233, 1235, 1237, 1239, 1241, 1243, 1245, 1247, 1249, 1251, 1253, 1255, 1257, 1259, 1261, 1263, 1265, 1267, 1269, 1271, 1273, 1275, 1277, 1279, 1281, 1283, 1285, 1287, 1289, 1291, 1293, 1295, 1297, 1299, 1301, 1303, 1305, 1307, 1309, 1311, 1313, 1315, 1317, 1319, 1321, 1323, 1325, 1327, 1329, 1331, 1333, 1335, 1337, 1339, 1341, 1343, 1345, 1347, 1349, 1351, 1353, 1355, 1357, 1359, 1361, 1363, 1365, 1367, 1369, 1371, 1373, 1375, 1377, 1379, 1381, 1383, 1385, 1387, 1389, 1391, 1393, 1395, 1397, 1399, 1401, 1403, 1405, 1407, 1409, 1411, 1413, 1415, 1417, 1419, 1421, 1423, 1425, 1427, 1429, 1431, 1433, 1435, 1437, 1439, 1441, 1443, 1445, 1447, 1449, 1451, 1453, 1455, 1457, 1459, 1461, 1463, 1465, 1467, 1469, 1471, 1473, 1475, 1477, 1479, 1481, 1483, 1485, 1487, 1489, 1491, 1493, 1495, 1497, 1499, 1501, 1503, 1505, 1507, 1509, 1511, 1513, 1515, 1517, 1519, 1521, 1523, 1525, 1527, 1529, 1531, 1533, 1535, 1537, 1539, 1541, 1543, 1545, 1547, 1549, 1551, 1553, 1555, 1557, 1559, 1561, 1563, 1565, 1567, 1569, 1571, 1573, 1575, 1577, 1579, 1581, 1583, 1585, 1587, 1589, 1591, 1593, 1595, 1597, 1599, 1601, 1603, 1605, 1607, 1609, 1611, 1613, 1615, 1617, 1619, 1621, 1623, 1625, 1627, 1629, 1631, 1633, 1635, 1637, 1639, 1641, 1643, 1645, 1647, 1649, 1651, 1653, 1655, 1657, 1659, 1661, 1663, 1665, 1667, 1669, 1671, 1673, 1675, 1677, 1679, 1681, 1683, 1685, 1687, 1689, 1691, 1693, 1695, 1697, 1699, 1701, 1703, 1705, 1707, 1709, 1711, 1713, 1715, 1717, 1719, 1721, 1723, 1725, 1727, 1729, 1731, 1733, 1735, 1737, 1739, 1741, 1743, 1745, 1747, 1749, 1751, 1753, 1755, 1757, 1759, 1761, 1763, 1765, 1767, 1769, 1771, 1773, 1775, 1777, 1779, 1781, 1783, 1785, 1787, 1789, 1791, 1793, 1795, 1797, 1799, 1801, 1803, 1805, 1807, 1809, 1811, 1813, 1815, 1817, 1819, 1821, 1823, 1825, 1827, 1829, 1831, 1833, 1835, 1837, 1839, 1841, 1843, 1845, 1847, 1849, 1851, 1853, 1855, 1857, 1859, 1861, 1863, 1865, 1867, 1869, 1871, 1873, 1875, 1877, 1879, 1881, 1883, 1885, 1887, 1889, 1891, 1893, 1895, 1897, 1899, 1901, 1903, 1905, 1907, 1909, 1911, 1913, 1915, 1917, 1919, 1921, 1923, 1925, 1927, 1929, 1931, 1933, 1935, 1937, 1939, 1941, 1943, 1945, 1947, 1949, 1951, 1953, 1955, 1957, 1959, 1961, 1963, 1965, 1967, 1969, 1971, 1973, 1975, 1977, 1979, 1981, 1983, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023, 2025, 2027, 2029, 2031, 2033, 2035, 2037, 2039, 2041, 2043, 2045, 2047, 2049, 2051, 2053, 2055, 2057, 2059, 2061, 2063, 2065, 2067, 2069, 2071, 2073, 2075, 2077, 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2411, 2413, 2415, 2417, 2419, 2421, 2423, 2425, 2427, 2429, 2431, 2433, 2435, 2437, 2439, 2441, 2443, 2445, 2447, 2449, 2451, 2453, 2455, 2457, 2459, 2461, 2463, 2465, 2467, 2469, 2471, 2473, 2475, 2477, 2479, 2481, 2483, 2485, 2487, 2489, 2491, 2493, 2495, 2497, 2499, 2501, 2503, 2505, 2507, 2509, 2511, 2513, 2515, 2517, 2519, 2521, 2523, 2525, 2527, 2529, 2531, 2533, 2535, 2537, 2539, 2541, 2543, 2545, 2547, 2549, 2551, 2553, 2555, 2557, 2559, 2561, 2563, 2565, 2567, 2569, 2571, 2573, 2575, 2577, 2579, 2581, 2583, 2585, 2587, 2589, 2591, 2593, 2595, 2597, 2599, 2601, 2603, 2605, 2607, 2609, 2611, 2613, 2615, 2617, 2619, 2621, 2623, 2625, 2627, 2629, 2631, 2633, 2635, 2637, 2639, 2641, 2643, 2645, 2647, 2649, 2651, 2653, 2655, 2657, 2659, 2661, 2663, 2665, 2667, 2669, 2671, 2673, 2675, 2677, 2679, 2681, 2683, 2685, 2687, 2689, 2691, 2693, 2695, 2697, 2699, 2701, 2703, 2705, 2707, 2709, 2711, 2713, 2715, 2717, 2719, 2721, 2723, 2725, 2727, 2729, 2731, 2733, 2735, 2737, 2739, 2741, 2743, 2745, 2747, 2749, 2751, 2753, 2755, 2757, 2759, 2761, 2763, 2765, 2767, 2769, 2771, 2773, 2775, 2777, 2779, 2781, 2783, 2785, 2787, 2789, 2791, 2793, 2795, 2797, 2799, 2801, 2803, 2805, 2807, 2809, 2811, 2813, 2815, 2817, 2819, 2821, 2823, 2825, 2827, 2829, 2831, 2833, 2835, 2837, 2839, 2841, 2843, 2845, 2847, 2849, 2851, 2853, 2855, 2857, 2859, 2861, 2863, 2865, 2867, 2869, 2871, 2873, 2875, 2877, 2879, 2881, 2883, 2885, 2887, 2889, 2891, 2893, 2895, 2897, 2899, 2901, 2903, 2905, 2907, 2909, 2911, 2913, 2915, 2917, 2919, 2921, 2923, 2925, 2927, 2929, 2931, 2933, 2935, 2937, 2939, 2941, 2943, 2945, 2947, 2949, 2951, 2953, 2955, 2957, 2959, 2961, 2963, 2965, 2967, 2969, 2971, 2973, 2975, 2977, 2979, 2981, 2983, 2985, 2987, 2989, 2991, 2993, 2995, 2997, 2999, 3001, 3003, 3005, 3007, 3009, 3011, 3013, 3015, 3017, 3019, 3021, 3023, 3025, 3027, 3029, 3031, 3033, 3035, 3037, 3039, 3041, 3043, 3045, 3047, 3049, 3051, 3053, 3055, 3057, 3059, 3061, 3063, 3065, 3067, 3069, 3071, 3073, 3075, 3077, 3079, 3081, 3083, 3085, 3087, 3089, 3091, 3093, 3095, 3097, 3099, 3101, 3103, 3105, 3107, 3109, 3111, 3113, 3115, 3117, 3119, 3121, 3123, 3125, 3127, 3129, 3131, 3133, 3135, 3137, 3139, 3141, 3143, 3145, 3147, 3149, 3151, 3153, 3155, 3157, 3159, 3161, 3163, 3165, 3167, 3169, 3171, 3173, 3175, 3177, 3179, 3181, 3183, 3185, 3187, 3189, 3191, 3193, 3195, 3197, 3199, 3201, 3203, 3205, 3207, 3209, 3211, 3213, 3215, 3217, 3219, 3221, 3223, 3225, 3227, 3229, 3231, 3233, 3235, 3237, 3239, 3241, 3243, 3245, 3247, 3249, 3251, 3253, 3255, 3257, 3259, 3261, 3263, 3265, 3267, 3269, 3271, 3273, 3275, 3277, 3279, 3281, 3283, 3285, 3287, 3289, 3291, 3293, 3295, 3297, 3299, 3301, 3303, 3305, 3307, 3309, 3311, 3313, 3315, 3317, 3319, 3321, 3323, 3325, 3327, 3329, 3331, 3333, 3335, 3337, 3339, 3341, 3343, 3345, 3347, 3349, 3351, 3353, 3355, 3357, 3359, 3361, 3363, 3365, 3367, 3369, 3371, 3373, 3375, 3377, 3379, 3381, 3383, 3385, 3387, 3389, 3391, 3393, 3395, 3397, 3399, 3401, 3403, 3405, 3407, 3409, 3411, 3413, 3415, 3417, 3419, 3421, 3423, 3425, 3427, 3429, 3431, 3433, 3435, 3437, 3439, 3441, 3443, 3445, 3447, 3449, 3451, 3453, 3455, 3457, 3459, 3461, 3463, 3465, 3467, 3469, 3471, 3473, 3475, 3477, 3479, 3481, 3483, 3485, 3487, 3489, 3491, 3493, 3495, 3497, 3499, 3501, 3503, 3505, 3507, 3509, 3511, 3513, 3515, 3517, 3519, 3521, 3523, 3525, 3527, 3529, 3531, 3533, 3535, 3537, 3539, 3541, 3543, 3545, 3547, 3549, 3551, 3553, 3555, 3557, 3559, 3561, 3563, 3565, 3567, 3569, 3571, 3573, 3575, 3577, 3579, 3581, 3583, 3585, 3587, 3589, 3591, 3593, 3595, 3597, 3599, 3601, 3603, 3605, 3607, 3609, 3611, 3613, 3615, 3617, 3619, 3621, 3623, 3625, 3627, 3629, 3631, 3633, 3635, 3637, 3639, 3641, 3643, 3645, 3647, 3649, 3651, 3653, 3655, 3657, 3659, 3661, 3663, 3665, 3667, 3669, 3671, 3673, 3675, 3677, 3679, 3681, 3683, 3685, 3687, 3689, 3691, 3693, 3695, 3697, 3699, 3701, 3703, 3705, 3707, 3709, 3711, 3713, 3715, 3717, 3719, 3721, 3723, 3725, 3727, 3729, 3731, 3733, 3735, 3737, 3739, 3741, 3743, 3745, 3747, 3749, 3751, 3753, 3755, 3757, 3759, 3761, 3763, 3765, 3767, 3769, 3771, 3773, 3775, 3777, 3779, 3781, 3783, 3785, 3787, 3789, 3791, 3793, 3795, 3797, 3799, 3801, 3803, 3805, 3807, 3809, 3811, 3813, 3815, 3817, 3819, 3821, 3823, 3825, 3827, 3829, 3831, 3833, 3835, 3837, 3839, 3841, 3843, 3845, 3847, 3849, 3851, 3853, 3855, 3857, 3859, 3861, 3863, 3865, 3867, 3869, 3871, 3873, 3875, 3877, 3879, 3881, 3883, 3885, 3887, 3889, 3891, 3893, 3895, 3897, 3899, 3901, 3903, 3905, 3907, 3909, 3911, 3913, 3915, 3917, 3919, 3921, 3923, 3925, 3927, 3929, 3931, 3933, 3935, 3937, 3939, 3941, 3943, 3945, 3947, 3949, 3951, 3953, 3955, 3957, 3959, 3961, 3963, 3965, 3967, 3969, 3971, 3973, 3975, 3977, 3979, 3981, 3983, 3985, 3987, 3989, 3991, 3993, 3995, 3997, 3999, 4001, 4003, 4005, 4007, 4009, 4011, 4013, 4015, 4017, 4019, 4021, 4023, 4025, 4027, 4029, 4



contribuons beaucoup à réaliser, et de parer ainsi une grande partie de leur valeur commerciale, afin pour l'Etat aussi bien que pour l'industrie des peaux dont l'importance fait l'objet de tout cela à cause de la persistance des anciennes méthodes de tannage encore en usage.

Or nous espérons à moyen fin à nos pertes en installant les tanneries sur les principes les plus modernes dans les villes importantes et les centres de peaux, tanneries qui seraient exploitées collectivement sous une direction unique. Une telle organisation permettrait l'échange de matières premières de chaux, peaux, autres vertes, produits tanniques, huile etc., aux meilleures marchés et aux plus bas prix de gros, et leur distribution en temps utile entre les différentes tanneries au fur et à mesure de leurs besoins, en les peaux les plus défectueuses seraient transformées, en l'absence de six semaines, en cuir de la meilleure qualité pour moins de la moitié des frais habituels et avec des fonds de roulement réduits de 75 pour cent.

Pour nous permettre de réaliser cet objectif, de la grande importance nationale, nous nous adressons avec la plus profonde respect, contre la bienveillance et les encouragements du Gouvernement, c'est que les Municipalités nous prêtent leur concours et leur assistance en nous accordant des concessions pour l'installation d'ateliers de tannage et d'abattoirs à l'usage des peaux et de la fabrication des extractions tanniques dans les localités offrant les meilleures possibilités. Les concessions seraient accordées au nom de notre siége Dr. H. A. Croth et comprendraient environ 100 acres de

terrains appropriés, exempts de charges si possible et situés à proximité d'un cours d'eau, d'une station de chemin de fer et d'une usine génératrice d'énergie électrique. Les conditions devraient être aussi peu onéreuses que possible pour attirer les capitalistes anglais. De telles concession ont déjà été accordées à M. le Dr. Croth pour notre compte par les Municipalités de Burton-on-Trent et de quatre autres villes anglaises, et par plusieurs Municipalités coloniales.

Nous avons reçu des assurances que les capitaux nécessaires seraient réunis si une telle coopération pouvait s'établir pour la résurrection et l'organisation de l'Industrie entière de la Tannerie sur des principes modernes.

Nous vous prions de noter qu'il n'est nullement de notre intention de faire concurrence aux tanneries existantes, mais au contraire, de leur accorder des licences pour la mise en oeuvre de nos procédés, à des conditions qui leur permettraient de poursuivre leur industrie avec de bien meilleurs résultats économiques.

Nous apprécierons avec gratitude la faveur d'une prompt réponse et nous vous prions d'agréer, Monsieur le Président, l'expression de nos respectueux sentiments.

ELECTRO LEATHER INDUSTRIES.

DIRECTOR

English Tanning.

PAST. PRESENT. FUTURE.

[By Dr L. A. Groth, K.G.V.]

The endeavour to conquer the industrial market of the world is acknowledged by the Press, by Authorities, and by the goodwill of H.M. Government, to be a matter of great supreme importance to our nation.

The best means whereby such a satisfactory result may be achieved is, however, difficult to indicate. As a main point and principal inducement, it is stated that the necessary capital will be forthcoming.

To the optimist this seems well and good, but even the good-looking nut may contain a decayed kernel. In this particular case, the bad kernel is represented by the abundance of available British capital, which may constitute a real obstacle in the matter.

Such a wealth of opportunity for investment is always to hand that individual claims, however well justified, are apt to be overlooked unless their case is presented to the public in a very formidable manner.

In the industrial field especially, there are incidents which one might recall with advantage at the present time of strife, as they may have a great bearing upon our endeavours to capture the markets.

At the meeting at Versailles, Paris, after the conclusion of the Franco-German War, 1871, Prince Bismarck, in his historical speech, said—

"We have gained the War; Your Majesty has been proclaimed Emperor; we have got the millions of francs which will assist in creating great prosperity; yet, all this will be the ruin of the German Empire."

These prophetic words have now, after a lapse of more than forty years, a particular significance.

At the following World's Exhibition of Vienna, 1873, probably the greatest and most important international exhibition ever held, Germany, with its extensive and most attractive exhibits, gained the admiration, not to say the envy, of the whole world.

Each exhibit being visibly marked with its low price, and labelled "Made in Germany," supplied appropriate means, no doubt, for facilitating the conquest of the industrial markets of the world, a result the certainty of which was doubted by nobody.

Professor Reulaux, a German, well-known the world over by his text books on Mechanical Engineering, acted as President of the German section of the International Jury. In due course he issued his report, remarkable for its length, for the extraordinary knowledge displayed, even to the surveying of almost every part of the respective machines, but above all for its conclusions, which were contrary to general expectations. His judgment on the exhibits being, in short, "cheap and bad."

Such an opinion by so acknowledged an expert amongst a people imbued with the idea of conquest at a time of international competition, created a sensation the world over, which may be easier understood than described. Indignities of many kinds, and of a serious nature, had to be endured and borne by him. Professor Reulaux remained firm, however, and nothing could induce him to retract his judgment. The hate was converted into admiration, and the general opinion accorded him the acknowledgment that he had saved Germany from industrial ruin.

The consequent industrial organisation which followed may truly be considered as one of the world's wonders. Universities and technical colleges were overhauled, and compelled to change their methods of teaching, in order to facilitate the study of inventions and the means of their appropriate application to industries. The favourable results obtained, with great economic advantages, created a general and feverish desire to assist in securing the co-opera-

tion of science and industry, which brought Germany, deservedly, to the top of the ladder; but her very growing success increased the peril of the position.

The only counter-move made by England consisted in marking English manufactures "Made in England," in order to denote their superiority. How far this designation may at the present time be appropriately applicable to the British-made leather is a matter for consideration.

English sole leather was in the past known and acknowledged as "the best in the world," but that verdict was based upon the quality of oak-bark tanned leather.

Since then Universities and Technical Colleges have been established, with the praiseworthy and special object of teaching, theoretically and practically, how to improve still further the manufacture of the "best leather in the world."

In summarising the results obtained, it is advisable to confine one's opinion strictly to facts, leaving deductions severely alone.

The vegetable tanned sole leather of to-day consists of an over-filled, yet insufficiently tanned leather, which will become empty and porous in contact with water. It is more often the exception than the rule to be able to obtain a pair of boots (even at 22s 6d) in which the soles, after a few hours' wear in the wet, are not soaked through, even leaving the socks wringing wet.

The mineral or chrome tanned leather is even less waterproof, and when once wet it is very difficult to dry, and sometimes impossible to dry at all. An officer at the front suggests, as a deserved punishment that the chrome tanner should be compelled to wear continually his own produced leather in "wet-weather."

The India-rubber tanned leather "draws the feet," and is, therefore, uncomfortable to wear.

The substance which is responsible in such a deplorable way for the deterioration of the leather is now the very substance that is employed for the tanning of it. As for this purpose it is used in the form of a concentrated extract in a manner contrary to all scientific principles, it becomes principally the effective means of increasing the weight, without tanning the leather—an ingenious method of adulteration.

Taught and advocated by the trade experts—who always demand greater and greater weight, whilst leaving the quality as a secondary matter—the method is extensively, if not exclusively, used.

Adulteration of leather has been prohibited by various countries, including our Colonies. Germany, from the 1st January, 1916, prohibited adulteration, even with concentrated tanning extracts, under a heavy penalty and imprisonment for one year.

The medical profession is constantly referring to the seriousness of the matter, as the leather of to-day causes a greater annual death rate than even the present war has done.

Our Colonies always being the first in offering facilities for the establishment and improvement of industries, the statement of "The Inter-State Trade Commission of Australia"—

"That the application of scientific methods, and the resources of chemistry to the leather industry are imperfect"—

should be taken to heart principally by the Mother Country.

For the tuition in our Universities and Technical Colleges to be serviceable and fulfil the required object, their methods must be drastically reformed.

In the meantime, the misled tanner must wake up and put his own house in order, without waiting for legislative compulsion. He will then, once more, honourably prove to the world that—"English leather is the best."

Encl. Deptt.

[CN-1578.]

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Ten copies of the pamphlet "Modern Tanning" received from Dr. L. A. Groth, London, will be forwarded to the Director of Industries for free distribution.

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The D. A. Groth
with ten copies of the book.



THE importance to science and industry of Dr Groth's systems of "Sterilisation" and "Electro-Tanning" may now be investigated at our Grothine Works, Brighton Road, Coulsdon, Surrey, erected at the instigation of H.M. Government, under the supervision of the Military Authorities, Dr Groth's electrical plant having been declared by the Ministry of Munitions as War Work.

Hides and Skins are preserved from loss of gelatinous matter at a saving of 6s upwards per hide. Trials may be made by the trade on 25 hides free from Royalty at the small cost only of the antiseptic.

Grothine is the most powerful and the only practical germicide for such purposes. It checks instantly

Fermentation and Putrefaction and destroys in five minutes

Anthrax Spores, preventing thereby contagion and infection.

Chemical Specialties for the trade are made antiseptic and purified, enabling maximum power of action, namely:

Aquamol, "Waterproof," claimed to be the best and most effective.

Aquitol, "Water softener."

Calzol, "De-Limer."

Colloidol, "Hide and Skin Cleanser."

Marcerol, "Hide Softener," free from iron and formic acid.

Pestisol, "Effluent Purifier."

Villusol, "Unhairer," free from iron, in powder form.

Most of the above specialities are in powder or tablets and will therefore cause great saving in handling and freight.

Electro Tanning produces a pure and strong tannage of heavy leather in six weeks at about half ordinary cost. For instance, four suspenders will enable a weekly input of 40 hides; all other pits, together with the great manual labour connected therewith, are entirely dispensed with.

Waste and Inefficiency are thereby reduced to a minimum.

Hides are received for sterilisation and electro tanning on behalf of the trade.

Licenses both for Sterilisation and Electro Tanning are granted.

Co-operation is the best means to oust our foreign trade enemies.

Scepticism and Prejudice are overcome by a visit to our works.

Modern Tannage, just published, will be useful to you. Order it to-day, now. 2/-, post free.

Agents appointed at Home and Abroad where not yet represented.

Correspondence cordially invited.

What we offer we do under Guarantee of Good Results.

Electro Leather Industries,

26 Hart Street, Bloomsbury Square, London, W.C.

GROTHINE WORKS, Brighton Road, Coulsdon, Surrey.

Telegraphic Address: "Grothine, Coulsdon, Surrey."



DEPARTMENT.

Received



Registered

19 5 1916

Subject.

Submitting remarks on Dr. Groth's application.

ENCLOS RES.

No. Letter of 19
Sheets + Current
At 451-2 Ed 1
 Spare copies 4-2-16

No. A17Station Madras, Dated the 18th May, 1916.From (Name) K.T.B. Trassler, Esq.(Designation) Director of Industries,To The Secretary to the Government of Madras,
EDUCATIONAL Department.

Sir,

In returning herewith enclosure to endorsement
 No. 451-2 Ed 1., I have the honor to offer the following
 remarks.

2. So far as I can see from his letter to the India
 Office, Dr. Groth wants assistance in (a) developing a
 system of Electric Tanning, (b) manufacturing Tanning
 Extracts and (c) pushing his patent Antiseptic (Grothine).
 In addressing the Government of Madras, he merely asks for
 assistance as regards items 1 & 2. So far as I can see,
 he proposes that Government should give him concessions
 for the exploiting of tanning material and the establish-
 ment of tanneries. He further suggests that Government

-2- *24*

should give him about £ 1000/- for which he would "supervise investigations".

3. As regards tanning extracts, I am unable to see that there is a case for assisting Dr. Groth. If he likes to make tanning extracts, he might be given a concession on certain terms, but I do not see that he need be assisted as well. As regards electric tanning, this process is by no means a new one, but hitherto no practical system of electric tannage seems to have been devised. From the literature before me, I rather doubt if Dr. Groth's system can be regarded as commercially established, but I personally have a good deal of faith in the future of electric tanning and, if I regarded Dr. Groth as a scientist, who required an opportunity of demonstrating his process on a large scale, I should, on receiving particulars of this process, be quite prepared to recommend a certain grant.

4. The hand book on Modern Tanning, ^{has been} which Dr. Groth is distributing, does not, I must confess, predispose me to Dr. Groth's favour. It is a miscellaneous collection of odd facts and trade puffs, ^{indicating} ~~tracing~~ the hand not of the struggling scientist but of the advertiser.. The question of tanning materials was under investigation by Mr. Guthrie and, although his conclusions were not altogether unfavorable, they led to the conclusion that the problem was one that would have to be handled with the greatest care and skill if it was to prove remunerative. From the Doctor's letter it is evident to me that he does not appreciate the difficulties of collection and transport. Again, I do not quite see how the Doctor's company will get into the slaughtering business. He might be able to do so, but I certainly think, before anything is done, that Dr. Groth might be asked to explain exactly what his ideas are. I should ^{infer from} ~~say~~ that Government ~~are~~ quite prepared to consider concessions, but could not deal with the matter without some concrete schemes before them.

25
-3- *24*

5. So far as the grant of £1000/- is concerned, I think that the Doctor might be invited to state exactly what he proposes to offer the Madras Government in return for the amount.

I have the honor to be,

Sir,

Your most obedient servant,

K. M. S.

Director of Industries.

OFFICE NOTE.

5

SUBJECT. New processes in leather industries.

From Dr. L. A. Groth, London. 2. 15. 2. 15.

Register No. 457.

cf.

page 13 of cf.

Dr. Groth of the Electro Leather Industries, London, requests that facilities may be afforded to him to introduce in this country the new processes in leather industries, invented by him. His book "Modern Tanning" copy of which is stated to have been sent to this Govt. has not been received and he has been asked to forward another copy. Apparently the book deals with the new processes and it is doubtful whether in the absence of it the Director of Industries or his assistants will be able to express an opinion in regard to the desirability

city

Gr. No. 613
10.7.12 (N)

vide H's order
mp: 13CF.

city of trying the processes here. This Govt have recently opened a leather Trade School & a tannery in Madras to teach improved methods of tanning etc. The new processes of Dr. Groth may perhaps be tried in this tannery. It is for orders whether Dr. Groth's letter may be referred to the Director of Industries at once for remarks or whether the receipt of the book may be awaited.

SK
15.2.16. g
15/2/16 Let the book
Come first
RB
7/2/16

Two copies of the book "Modern Tannage" have been received. Dr. Groth's letter in the current file may, it is submitted, be referred to the Director of Industries for remarks. A draft endorsement is submitted for approval.

SK
19.4.16. g
19.4.16

Encd No 451-28724.4.16.]

(There was no covering letter received with the book.)

CN 1578. From the P. G. 26 P. 3. 2. 16

including two
referred to book.

page 9 of c.

page 7 of c.

Dr. Groth has forwarded twelve copies of his book "Modern Language" for free distribution. One copy has been sent to the Director of Industries for remarks along with his letters on the subject of electro-tanning. It is for orders whether the other copies should be distributed immediately. It is not known whether the copies are intended for distribution to private firms. ^{also} If the copies should be distributed at once they may be sent to the Director for the purpose, one copy being retained here.

SK
28.4.16. CA
28/4/16

Sent all to the P. G. for
Gives to the P. G. for
Set 1. one copy
for the P. G.
28/4/16

SK
28/4

A draft memo is submitted for approval.

SK CR
30.4.16 1.5.16

[Handwritten signature]

page 5 of cf.

ds

In his letter on pages 23 and 24 of current file Mr. Tressler submits his remarks on Dr. Groth's application for assistance. From his letter it is observed that the Home Government have provided facilities for testing the new processes on a large scale. As Dr. Groth considers that the conditions in India are different from those in the United Kingdom he desires to make separate trials in this country. Dr. Groth's requests are --

- (1) that the Government should assign to him tracts of land where tanning materials are available, large enough for development during years to come, free during the first ten years and then at a percentage of the income realized;
- (2) that the Government should grant him concessions for the establishment of tanneries eventually with ~~abattoirs~~ abattoirs in the leading towns and hide centres; and
- (3) that a sum of £1,000 should be placed at

his

his disposal so that he may investigate the value of ^{the} systems in this country.

The first two concessions are applied for with a view to attract capitalists to undertake the business.

2. With regard to the first of these requests

Mr. Tressler states that experiments in the extraction of tanning materials should be handled with the greatest care and skill and that Dr. Groth does not appreciate the difficulties of collection and transport. He, however, considers that concessions on certain terms might be granted to him but does not specify what those terms are. There is no information as to where tanning materials ^{of the kind Dr. Groth has in view} abound in this Presidency. If such tracts are pointed out and if Dr. Groth can convince Government that such investigation could be undertaken with advantage, the Revenue Department may be requested to consider whether those tracts could be assigned to Dr. Groth on the terms suggested by him. But before anything of the kind could be done Dr. Groth should be able to set for himself some definite scheme.

3. As regards the second request Mr. Tressler

desires to have more particulars before he could consider the question of recommending any grant. He suggests that Dr. Groth may be informed that the Government are prepared to consider concessions if some concrete schemes are placed before them. Here too no immediate action is possible.

4. With regard to the third request of Dr. Groth viz., the grant of £1,000 for carrying on investigations, Mr. Tressler suggests that he should be invited to state exactly what he proposes to offer in return for the amount. It is doubtful whether Dr. Groth has developed any scheme at all, and much less will he be able to furnish any information on this point. Dr. Groth is prepared to go over here if the help asked for is promised. Apparently he cannot develop his scheme until he comes here. It is not obviously possible to try his processes in the Leather school or in any of the tanneries in this Presidency without his personal supervision. If he should come to India he might be able to carry on investigations in other provinces also.

para 3 + 4. page 26 of ch.

para 5. page 25 of ch.

page 5 of ch.

He seems to have addressed other Local Governments such as that of the United Provinces in the matter. Even they are not likely to make definite promises of assistance to him before specific schemes are laid before them.

Dr. Groth himself does not seem to expect any detailed promise of help. What he appears to need is a general promise of assistance from Government and this may perhaps be given with the reservation that he should first submit definite and concrete proposals with estimates and specify what sort of assistance he expects from Government and convince them that this ^{experiment} could be undertaken with advantage.

SK CR
26/5/16

With Mr. Cunningham
Kindly print this file and
open his remarks thereon?

W

26.5.16

20110 451-3

26/5/16

(With one
book)

Shree
with book

In the absence of Mr. Gathorne the only man I know of whose opinion would be worth having is the Agricultural Chemist, Dr. Harrison. I suggest that the Dir. of Agric. may be asked to obtain his opinion on the paper & to state if it would be worth while to offer any facilities for the ^{introduction of the} process in Madras. Dr. Harrison has some technical knowledge of the subject of tanning.

M.R.
27.5.16.

Educational Department

Submitted that Mr. Dir. may be asked to obtain the remarks of Dr. Harrison on the application of the process for tanning skins.

27.5.16
N. S. M.
25/16.

Rev. Secy.



27.5.16

Colno 457-4

30/5/16

Sett. No. 234
6.6.16.

Rev. No. No. 1161 E 16 24
2-6-16



It would seem best to send

the papers to Dr. Harrison through the Board of Agric. and the Dir. of Agric. S. 21.6.16
M.R.
31.5.16

page 10 & 12 infra.

Dr. Harrison's remarks are appended.

18. 28.6

Rev. Dept. No. 2832 29.6.16

Rev. Dept.

to Under Secy

The file may now be returned to the Educational Dept with Dr. Harrison's remarks.

PR.

2.9.16

4.7.9/16

Est. No. 4.7.16

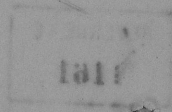
Rev. No. 1161E/16-2

5.7.16

CR 5/7/16

Notes in CO (one book)

5/7/16



NOTE ON "MODERN TANNAGE"

By

L. A. GROTH, D.Sc., Ph.D.

A perusal of this handbook shows that it is primarily designed to push the business of the Electro Leather Industries Company, which includes the patent rights of an electric method of tanning, the sale of special machinery and apparatus designed to suit the process and the exploitation of proprietary goods to be used at several stages of the tanning process. The two last items call for no comment.

So far as electric tannage is concerned, this is by no means a new application and dates back so far as 1849. In 1874, a tannery employing this process was in operation at St. Petersburg for several years and works were also started in Sweden in 1889 and in France in 1887. Groth is stated to have invented his process about 1888.

There is not the slightest doubt that the passage of an electric current through the tan pits accelerates the rate of tanning and makes it possible to turn out good leather in a short time but, notwithstanding this fact, the process remains one which has not met with favour with practical tanners.

This is due to some extent to the fact that a direct electric current tends to destroy the tanning present in solution in the tannery pits producing bye-products which affect the hides, causing the necessity for very skilled supervision, but mainly to the fact that the time taken to produce a good heavy leather by ordinary methods has been very materially reduced in recent years.

In this connection, the remarks of Dr. J. Gordon Parker, made before a meeting of the Society of Chemical Industry on June 2nd 1913 when the subject of Electro-Tannage was under discussion, are very pertinent. In the course of a lengthy speech he states in effect (1) That the undoubted acceleration of this tannage loses its importance in view of the fact that

that good sole leather is now produced in 12 weeks and that it is possible to tan a good leather in 12 days.

(2). He had experimented in his laboratory for several years with various systems of electro-tannage and had totally failed to produce a process which offered considerable commercial advantages. In other words, he had never been able to tan on a practical scale quicker or better by the aid of an electric current than he had been able to tan by various mechanical means with chemical assistance, added to which the latter were cheaper. He however did not look upon electro-tannage as hopeless.

This is the opinion of the head of one of the largest leather schools in England and being a mature opinion given in 1913 and based on much experimental work, it may be contrasted with his early opinion of 1898 as quoted on page 91 of Groth's book in support of the latter's system.

It may be accepted therefore, that Dr. Groth's system of electro-tannage, although probably capable of development, is not, as yet, a commercial proposition and this opinion receives strong support from the fact that the British Government can only see their way to provide financial support for the erection of a demonstration plant for the investigation of the value of the system (vide Dr. Groth's letter to His Excellency The Governor of Madras, dated 15-12-1915.).

If Dr. Groth's claims of a reduction of working capital by 75 per cent., cost of production by 50 per cent. and the production of a leather of unsurpassed quality, have been substantiated it is surprising that, with the present demand for leather, there has been no commercial development and it is found necessary to "investigate the value of the system".

In view of this, I cannot recommend that Dr. Groth be granted facilities for demonstrating his system in India. It would be preferable to await the result of the independent investigation by the British Government and if this is favourable the introduction of it into India could be considered.

Apart from this, the process does not appeal to me as one suited to the tanning industry in South India which is carried on by a number of small firms with very primitive arrangements and often very small capital as a backing. Such firms could not possibly contemplate the adoption of Dr. Groth's system and in effect, I can only conceive it successful in connection with large centralized works such as are found at Cawnpur.

With regard to the question raised by Dr. Groth of exploiting the tanning material resources of South India little can be said owing to the vagueness of the proposal. No particular material is referred to and the account of his system of extraction by which the colouring matters and the tannins are separated at a low cost is only given in outline. No reference is made to any place where it is worked on a commercial scale, where enquiries could be made and no comparative costs of production are given. The scheme appears to me to bear the hall mark of one who is wishful to experiment at Government's expense with a view of attracting capital to his company and not that of a person who possesses a successful commercial process and is anxious to introduce it to new countries.

W. H. Hammon
Govt. Agricultural Chemist.

Educational Sept.

Please see Dr. Harrison's remarks on pages 10 to 12 supra. It is for orders whether Dr. Groth may be informed that this Govt are not prepared at present to comply with ^{any of} his requests. Mr. Conchman SK may perhaps see the file with reference to his note on page 8 supra.
b.7.16.

CR
b.7.16

See Conchman for
personal and records if any

Enclos 451-5
7.7.16

(with book)

Notes in CR.
12.7.16

CR
11/7

Rem & returned

Dr. Harrison's report is full & clear, & shows that it would be premature to spend any money on Dr. Groth's process. He may be informed that the government are not prepared to take any action in the matter.

M.S.P.
11.11.16

25. Department

A draft letter to Dr. Groth is
submitted for approval.

SK CA
13-7-16 13-7-16

10/15/16

29
Est. Department

Letter to 101 E.H. 17.7.16
ms
Dr. L. A. Groth,
Electro Leather Industries,
26, Hart Street,
Bloomsbury Square,
London W.C.

Sir,

With reference to
your letter to His Excellency
the Governor of Madras
dated the 15th December 1915.
I am directed to state
that the Madras Govt.
(at present)
are not prepared ~~at present~~
to take any action in
the matter of the develop-
ment of the ~~Electro. tanning~~
industry as suggested
in your letter.

I have etc.

SK
13.7.16.

CR
13.7.16

pag 2 of cp.

15/19

191

DATE:

SURES o C. No.

OF GOVERNMENT

OVERMENT.

WITH DITTO.

ES NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

N.B.—

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