

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	2798	Press Mis.
<u>199-200</u>		
Dated	15 th October 1869.	

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Revenue Department,
15th October 1869.*

No. 199. Read the following Extract from the Proceedings of the Government of India in the Home Department, (Public,) under date Simla, the 22nd September 1869, No. 4,304 :—

READ again—

Letters Nos. 1,825 to 1,827, dated the 19th April last to the Agricultural and Horticultural Societies of Calcutta, Lahore, and Lucknow, requesting to be furnished with information on the subject of the cultivation in India of the Rhea plant or China-grass.

Read also the following replies from those Societies and other papers :—

Agricultural and Horticultural Society, Calcutta, dated 29th April.

“ “ “ “ Lahore, “ “
“ “ “ “ Lucknow, dated 5th May.

Memorandum by Dr. Brandis, Inspector-General of Forests, dated 27th May.

“ by Mr. King, Officiating Superintendent, Botanical Gardens, Saharunpore.

“ by Mr. Sandys of Bhaugulpore, dated 30th June.

Extract from a demi-official letter from Mr. Thornton, Secretary to the Government of the Punjab, dated 10th June, and its Annexures I. and III.

RESOLUTION.

IN the opinion of His Excellency the Governor-General in Council these papers prove satisfactorily the following facts :—

1st,—That the China-grass plant produces, when properly manipulated, one of the strongest known vegetable fibres, fully three times as strong as the best Russian hemp, while very inferior preparations of the fibre yield a material equal to the best hemp ;

2nd,—That there is practically an unlimited demand for all reasonably good qualities of the China-grass fibre in the English and American markets, if regularly deliverable there in considerable quantities, at prices varying from £30 to £80 (or even £100) per ton according to quality ;

3rd,—That in India there is an unlimited extent of country, throughout which the plant can be grown (with or without irrigation, according to situation and climate) cheaply and easily, the plant being suited to the climate, hardy, tenacious of life, and susceptible of rapid propagation by suckers, shoots, and cuttings ;

4th,—That, although the merits of the fibre have been well known for the last fifty years, and various attempts made from time to time by Government and the various Agricultural and Horticultural Societies to encourage the growth of this plant, and develop a trade in its fibre, all such attempts have failed, owing to the absence of suitable mechanical appliances for the separation of the fibre and bark from the stem, and of the fibre from the bark, and the great cost of effecting such separation by manual labour.

2. The only real obstacle, therefore, to the development of an extensive trade in this article is the want of suitable separating machinery. Difficulties are said to exist in dyeing and manipulating the fibre, and it is not impossible that these will never be overcome so long as the supply of the article continues too limited to induce manufacturers, as a body, to devote their energies steadily to the subject ; but if once a regular and large supply finds its way into the English and American markets at comparatively reasonable prices, it is not too much to expect that all or most of these difficulties will be speedily obviated. Experience shows

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that similar difficulties with regard to the application of dyes to mixed stuffs have, by the aid of practical science, been easily overcome.

3. The only real obstacle, therefore, is the lack of suitable mechanical appliances for effecting the preparation of the fibre for transmission to English and foreign markets. Existing flax and hemp-preparing machinery has, so far as it has been tried, failed where the China-grass plant is concerned. What is required, is either a new machine or new adaptation of some existing machinery and process.

4. Mechanical inventions cannot be had to order. The history of cotton manufacture, or of that of the various implements for preparing hemp and flax, shows by what slow degrees, under the pressure of brisk demand and severe competition, the first rude appliances grew into the perfect machines to which England now owes nearly half her commerce. India affords no such stimulus to the development of machinery, and while the marts of Europe continue stocked with other, though for the most part inferior fibres, it seems little likely that private enterprise will proximately supply the required incentive to mechanists to solve the problem under consideration. With the certainty of securing thereby an enormous addition to the trade of India, it appears to His Excellency the Governor-General in Council, all the circumstances of the case considered, to be actually incumbent on Government to intervene to secure the speedy acquisition of the requisite appliances.

5. On the one hand an unlimited supply, on the other an unlimited demand, with only one single link wanting in the chain that should connect the former with the latter. Under such circumstances, it is the duty of Government to make every effort to secure that missing link. Private enterprise during more than fifty years has failed, and still seems likely for an indefinite period to fail to furnish it; and it is surely now time for the guardians of the public interests to exert themselves to secure this one desideratum. Assuming that where cultivation has once been fairly established on an extended scale, the cost of producing and cutting plant enough to yield a ton of fibre (allowing only one-fourth of a ton per acre), will not, in favourable situations in Northern India, exceed £10, and that the cost of carriage, even from Northern India to the port of embarkation, of shipping, insurance, freight, landing, and wharfage dues, brokerage, etc., will not exceed £17 per ton; what is required is machinery and a process capable of preparing (using animal, water or steam-power) a ton of fibre of a quality which shall average in value not less than £50 per ton in the English market at a total cost, all processes of manufacture and allowance for wear and tear included, of not more than £15 per ton, in place of the £38 per ton, which is the minimum cost at which the manufacture by manual labour can be now estimated.

6. To stimulate the invention or adaptation of such machinery or process, the Government of India might offer prizes sufficiently large to secure the attention of the first European mechanists. Two prizes of £5,000 and £2,000 for the two best inventions, fulfilling all requirements, with an intimation that proportionate rewards would be given for really meritorious inventions, even though failing to fulfil quite all the conditions, would probably suffice to bring the best available talent to bear

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on the question. To facilitate experiments at home, a regular Government plantation of moderate extent might be established in the Dhoon or elsewhere, whence supplies of carefully-dried stems might be despatched, if necessary, tinned up in bales, to mechanical firms in England desirous of competing. Here, too, supplies of fresh plant should always be available to all parties devising and desirous of testing machinery. The large prizes offered would even render it worth the while of eminent firms in England to send out representatives to test machinery in process of elaboration with the fresh plant.

7. Besides sending to England the dry stems, considerable quantities of the bark with the fibre adhering to it, and of the fibre simply separated from the bark, but subjected to no other process, should be prepared at the Government plantation and forwarded to Europe, so as to give mechanical Engineers there the best possible insight into the work required of them. In regard to the machinery, it will be necessary to insist upon its being strong, simple, and durable; upon its securing the manufacture of the fibre at £15 per ton, including not only all working expenses, but also a fair allowance for wear and tear, and upon the condition that the fibre turned out shall average £50 per ton in the English market. All machinery, etc., to be brought by the competitors to the Government plantation, and there worked under the supervision of their own representatives for a sufficient time to enable the judges appointed by Government to determine how far all the conditions have been complied with, machinery might be allowed to be brought at any time; but the prizes would not be distributed until the close of the period, say three years, allowed for competition. The machines to which prizes are awarded to be transferred, if required, to Government at five per cent. above cost price; the patent right in any such machines to be also transferred, if required, to Government, on the latter securing to the patentee a royalty of five per cent. on the cost price of all machines manufactured under the patent during its currency.

ORDER.—Ordered, that a copy of the above Resolution be forwarded to the Public Works Department with a view to the preparation of an advertisement inviting the attention of mechanists to the rewards offered by the Government of India for publication both in this country and in England.

Ordered, that a copy of this Resolution and of the papers referred to be forwarded to the Financial Department for information and for sanction of the expenditure proposed.

Ordered, also, that a copy of this Resolution be forwarded to the Governments of Madras, Bombay, Bengal, North-Western Provinces, and Punjab; the Chief Commissioners of Oudh, Central Provinces, British Burmah, and Coorg, and to the Resident at Hyderabad, for information.

Ordered further, that a copy of this Resolution be forwarded to Mr. Sandys for information.

(True Extract.)

(Signed) E. C. BAYLEY,
Secretary to the Govt. of India.

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15th October 1869.*

No. 200.

ORDER THEREON, 15th October 1869, No. 2,798.

Miscellaneous.

COMMUNICATED to the Board of
Revenue and Chamber of Commerce
for their information.

(True Extract.)

(Signed) R. A. DALYELL,

Acting Secretary to Government.

To the Board of Revenue.
,, the Chamber of Commerce.

Exd. F. R. Bantleman.

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Communicated to the B^d of Revenue
and Chamber of Commerce for their
information.

15th October / 69

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Oct. 17 1869 J. M. M.

REVENUE.

To

THE BOARD OF REVENUE,

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Dated October, 15th.

Recd.

Encl.

G. O., 15th October 1869, No. 2,798.

Minute No. 3/18 of 1869.

CCIOBER.

Nos. 189-200.

Fibre cleaning machines.—Resolution from
Government of India offering rewards for their
invention, communicated to Board of Revenue and
Chamber of Commerce.