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(Illustrated articles are marked with an asterisk.)

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AN OPPORTUNITY FOR INVENTORS.—\$24,000 REWARD OFFERED FOR A RAMIE CLEANING MACHINE.

The Department of State has received a circular from the Government of India, from which it appears that in 1871 a prize of £5,000 was offered to the inventor of the best machine or process for the preparation of the fiber of the Böhmeria nivea (popularly known under the names of Rhea, Ramie, and China grass), and the terms on which machines would be admitted to competition were widely notified in India, Europe, and America, but only one machine was brought to trial, which, having been carefully tested at Saharanpur in 1872, was found imperfect, and the inventor was adjudged not entitled to the full reward.

What is required is a machine or process capable of producing a ton of dressed fiber of a quality worth not less than £45 per ton in the English market, at a total cost of not more than £15 per ton laid down at any port of shipment in India. The processes of preparation are to be understood to include all the operations required subsequent to the cutting of the stems from the plants in the field until the fiber is in a condition fit for market.

The trials will be held at Saharanpur in the Northwestern Provinces in August and September, 1879. Machines entered for competition should be ready for trial not later than August 15, the competition commencing the next day. The judges will be appointed by the government, and they will watch the whole of the trials; but the machines are to be worked and adjusted by the competitors themselves. The government will provide accommodation and motive power at Saharanpur for all competing machines, and will also pay for the transport from the sea coast to Saharanpur of all machines up to the limit of one ton each, the freight on any excess weight to be defrayed by the owners.

More detailed information than is contained in the circular above summarized may be obtained by addressing the Secretary to the Government of India, Calcutta, to whom notices of intention to compete should be sent. A complete description of the ramie plant and of the investigations hitherto made into the nature of its fiber will be found on another page of this issue.

It should be understood that ramie is sought to be utilized as a substitute for silk and not for cotton; and that it is already largely employed for this purpose by English manufacturers in Leeds and Bradford.

THE PARIS EXPOSITION IN CONGRESS.

President Hayes, in his recent message to Congress, makes special reference to the French Exposition of 1878, and to the necessity of an appropriation to enable exhibitors from the United States to participate in the show. The President recalls the fact that \$200,000 was appropriated for the Vienna Exposition of 1873, and that practical artisans and scientific men, besides commissioners, were appointed to represent the country; from which the inference is that he recommends the granting of a like sum and the organization of a similar corps of officials.

We have so frequently pointed out the objections to Congress devoting any large amount of the people's money to purposes of international shows that it is not necessary to enter into their details here. Public funds should not be spent to advertise private individuals. People send their exhibits across the Atlantic for business purposes, and in the hope of gaining business advantage; and there is no more reason why the United States Government should cooperate to help them, any more than it should pay their advertising bills at home.

perative everywhere, and nowhere so much as in the control of government expenditures. Nor did the Vienna \$200,000 save our representation from becoming a failure. The American contribution to that show was not representative of our industries, the official management fell into disrepute, and the results of the work of the scientific commissioners and artisans are by no means as highly appreciated as they ought to be.

Official reports on these Expositions, in any event, can hardly be worth to the people the money they cost. The press with its enormous facilities for gathering and promptly presenting intelligence, anticipates them by considerable periods of time, and affords much fuller information at very much less expense to the classes for whose benefit reports are designed.

If a large appropriation and a corps of salaried officials do no good, at least it should be expected that they will not defeat their own object; and we are not sure but that this was the sum total of the Vienna experience. At the recent Leather Exposition in Germany, our representation was a splendid success, and it was managed entirely by private parties. So also in 1851, the exhibits—notably the McCormick reaper and the yacht America—were wholly unaided by official help. On the other hand, it is desirable that, if we are going to have any representation at all in Paris, it should be one befitting our industrial importance; and it would no doubt facilitate this result to have some persons officially authorized to organize and manage the general display and confer with the Exposition authorities.

IMPROVED METHOD OF WINTERING COWS.

Mr. Linus W. Miller, of Stockton, N. Y., an experienced dairyman, advocates, in a pamphlet entitled "Meal Feeding and Animal Digestion," a system of feeding cows during winter, which involves the use of but three quarts of meal per day. He asserts that this amount of good Indian meal, fed under proper conditions, is more than the equivalent for all the good hay a cow can be coaxed to eat—that the animal does not need to have its stomach distended with a great bulk of woody fiber, which imposes upon the system a large amount of extra mechanical work both in the processes of digestion and remastication—that, in brief, bulk in food is not advantageous but to the contrary, and that nutriment in food governs the condition and health of the animal, and that condensation of nutriment is true economy.

Whatever may be the correct theory in this regard, results of actual practice appear to bear out Mr. Miller's views. The report of a committee, appointed to examine into the system by the Western New York Dairymen's Association, shows the following facts: The examination was conducted upon Mr. Miller's herd of Chataqua county native cows, the average live weight of which was 900 lbs. The herd were fed exclusively upon corn meal for seven weeks, each animal, according to its digestive capacity, making an average of about three quarts of meal per day for each cow. The animals did not ruminate, did not manifest so much desire for food as cows fed on hay alone in the usual way, a little less than they will eat, showed no signs of unrest or suffering; and at the time of going back to hay, the cows had neither lost nor gained flesh. After returning to hay, their stomachs filled and ruminating went on normally, healthy calves were dropped, and when turned to grass the animals took on flesh faster than those wintered in the usual way. Their daily yield of milk was 29 lbs. 3 ozs., or 1 lb. 11 ozs. per cow more than that of any other herd sent to the same cheese factory.

As regards the economy of meal feeding, Mr. Miller points out that one bushel of corn, ground and tolled, will last an ordinary sized cow of 900 lbs. weight 12 days, and is equal to 240 lbs. of hay. Corn at 60 cents per bushel is therefore