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Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as Ammonium sulpho-cyanide, Acetic acid, Ascents, mountain and balloon, etc., with corresponding page numbers.

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Table listing sections I through VII, including ENGINEERING AND MECHANICS, TECHNOLOGY, ARCHITECTURE AND BUILDING, CHEMISTRY AND METALLURGY, ELECTRICITY, LIGHT, HEAT, ETC., NATURAL HISTORY, GEOLOGY, ETC., and CHESS RECORD.

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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.

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.

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.

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.

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.

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.

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.

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.

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.