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OFFERED FOR A RAMIE CLEANING MACHINE.

Ramie, and China grass), and the terms on which machines ciated as they ought to be. As this machine has not since been adapted to practical use, | are designed. and no better process of preparing the fiber of the rheea has ' If a large appropriation and a corps of salaried officials do capable without difficulty of adaptation to practical use.

stems.

machine, illustrated by plans drawn to scale, shall be pre- sary expenses. pared and published (Government paying the cost) for the information of the public; and that after the expiration of three years from date of award, the public shall have the right of manufacturing similar machines, on payment to the owner of a royalty of 10 per cent on the cost of each machine so manufactured. All persons desiring to compete are requested to make known their intention not later than December, 1878, giving their name, residence, profession, and a brief description of each machine entered for compeform to all rules which may be prescribed by the judges appointed to conduct the trials.

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 hitherto made into the nature of its fiber will be found on another page of this issue.

already largely employed for this purpose by Englishmanu- divided between meal and coarse herbage. facturers in Leeds and Bradford.

THE PARIS EXPOSITION IN CONGRESS.

AN OPPORTUNITY FOR INVENTORS.-\$24,000 REWARD perative everywhere, and Jowhere so much as in the control of government expenditures. Nor did the Vienna The Department of State has received a circular from the \$200,000 save our representation from becoming a failure. Government of India, from which it appears that in 1871 a The American contribution to that show was not represenprize of £5,000 was offered to the inventor of the best ma- tative of our industries, the official management fell into chine or process for the preparation of the fiber of the disrepute, and the results of the work of the scientific com-Böhmeria nives (popularly known under the names of Rheea, missioners and artisans are by no means as highly appre-

would be admitted to competition were widely notified in Official reports on these Expositions, in any event, can India, Europe, and America, but only one machine was hardly be worth to the people the money they cost. The brought to trial, which, having been carefully tested at Sa- press with its enormous facilities for gathering and prompt háranpur in 1872, was found imperfect, and the inventor was ly presenting intelligence, an ticipates them by considerable adjudged not entitled to the full reward. He was, however, periods of time, and affords much fuller information at very presented with £1,500 in consideration of his partial success. much less expense to the classes for whose benefit reports

been discovered, the conditions which induced the offer of a , no good, at least it should be expected that they will not deprize in 1871 remain substantially unchanged, and the gov- feat their own object; and we are not sure but that this was ernment therefore offers a reward of about fifty thousand ru- the sum total of the Vienna experience. At the recent pees (about \$23,110) to the inventor of the best machine or Leather Exposition in Germany, our representation was a process which will separate the bark and fiber from the splendid success, and it was managed entirely by private stem, and the fiber from the bark, of the Böhmeria nivea; a parties. So also in 1851, the exhibits-notably the McCorsmaller reward not exceeding ten thousand rupees (\$4,622), mick reaper and the yacht America-were wholly unaided will be given to the inventor of the next best machine or by official help. On the other hand, it is desirable that, if process, provided it is adjudged to possess merit and to be we are going to have any representation at all in Paris, it should be one befitting our industrial importance; and it What is required is a machine or process capable of pro-would no doubt facilitate this result to have some persons offiducing a ton of dressed fiber of a quality worth not less than cially authorized to organize and manage the general display £45 per ton in the English market, at a total cost of not and confer with the Exposition authorities. The Journal of more than £15 per ton laid down at any port of shipment in Commerce pertinently suggests that the Government appoint India. The processes of preparation are to be understood these commissioners to serve without salary, an idea which to include all the operations required subsequent to the cut- seems to us excellent. There are numbers of well known ting of the stems from the plants in the field until the fiber citizens who intend to visit the Exposition, and who would is in a condition fit for market. The machinery employed glady undertake the service for the honor it brings. To must be simple, durable, and inexpensive, and should be these gentlemen the existence of a salary would be a bar to adapted for treatment of the fresh stems as cut from the their acceptance of the positions, as its amount would be no plant. The treatment of dried stems offers certain difficul- object to them, nor would they consent to have their serties, and the fiber prepared from them must, moreover, al-vices reckoned on any cash or business basis whatever. In ways be much more costly than that produced from green the case of an honorary commission, there would be sundry minor expenses, clerk hire, office rent, etc., which would The trials will be held at Saháranpur in the Northwestern have to be provided for, and for these a small appropriation Provinces in August and September, 1879. Machines en- might be made, as of course no personal outlay should be tered for competition should be ready for trial not later than imposed upon the members of the commission. This ar-August 15, the competition commencing the next day. The rangement would leave the bulk of the whole expenditure judges will be appointed by the government, and they will to be met by private subscription among the exhibitors and watch the whole of the trials; but the machines are to be other parties directly benefited, and this many have exworked and adjusted by the competitors themselves. The pressed their willingness to do, at present, however, with government will provide accommodation and motive power the tacit proviso, "unless Congress makes an appropriat Saháranpur for all competing machines, and will also pay ation." The matter is pressing for speedy settlement owing for the transport from the sea coast to Saháranpur of all to the very brief time which now remains before the show machines up to the limit of one ton each, the freight on any will be opened. As Congress has already once refused to excess weight to be defrayed by the owners. The owner or grant a large specific appropriation, it can easily omit reconowners of the successful machine or machines shall not be sideration of that subject, and can confine its legislation to entitled to receive the reward offered except on the following the authorization of a board of honorary commissioners and conditions, viz. : That a complete technical description of the the setting apart of a few thousand dollars for their neces-

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 anitition. They must also declare themselves bound to con- mal 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. Mr. Miller description of the ramie plant and of the investigations has conducted physiological investigations into the functions of the four stomachs of the cow, whence it appears that meal follows the same course as herbaceous food, and stays It should be understood that ramie is sought to be utilized longer in the rumen than coarse food, while it also digests as a substitute for silk and not for cotton: and that it is more thoroughly than when the energies of the stomach are

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 President Hayes, in his recent message to Congress, makes by the Western New York Dairymen's Association, shows

- CHEMISTRY AND METALLURGY.-Chrysolin, or New Yellow Dye derived from Resorcin. By F REVERDIN.-Laberatory Notes. By T. A. EDISON.-New Method of Determining Phosphorus, Arsenic, Sul-phur, Chlorine, Bromine, and Iodine, in Organic Substances. By M.G. BRUGELMANN.-Aluminum Nitride.-A New Carbo-hydrate in Milk.-On Mixing Emulsions, 1 engraving.
- OR MIXING EMULSIONS. 1 engraving.
 V. ELECTRICITY, LIGHT, HEAT, ETC.—On the Minute Measurements of Modern Science. By ADERED M. MAYER. Art. IX. On the Appli-cation of Rotating Miltors to the Measurement of Minute Lengths, Angles, and Times. Interesting Biographical Sketch of Joseph Sax-ton, and Description of his Remarkable Inventions. Saxton's Reflect-ing Comparator. 6 engravings.
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- The Motions of the Leaves in Oxans. —The Human Fossis of Europe.
 VII. CHESS REECORD.—Biographical Sketch of John G. Belden, with Por-trait and two of his Problems. Problem by J. Wilkinson.—Game by Mr. Belden.—First Grand Tourney of the American Chess and Prob-lem Association. Prizes and Conditions.—The Clipper Tournament. Clipper Tournay Cup Game.—Solutions to Problems.

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of a similar corps of officials.

We have so frequently pointed out the objections to Con- ing; and at the time of going back to hay, the cows had gress devoting any large amount of the people's money to neither lost nor gained flesh. After returning to hay, their purposes of international shows that it is not necessary to stomachs filled and ruminating went on normally, healthy enter into their details here. Public funds should not be calves were dropped, and when turned to grass the animals spent to advertise private individuals. People send their took on flesh faster than those wintered in the usual way. exhibits across the Atlantic for business purposes, and in Their daily yield of milk was 29 lbs. 3 ozs., or 1 lb. 11 ozs. the hope of gaining business advantage; and there is no per cow more than that of any other herd sent to the same more reason why the United States Government should co- cheese factory.

operate to help them, any more than it should pay. their advertising bills at home. The \$200,000 for Vienna was ap. out that one bushel of corn, ground and tolled, will last an propriated before the panic. Since then the whole financial ordinary sized cow of 900 lbs. weight 12 days, and is equal condition of the country has changed, rigid economy is im- to 240 lbs. of hay. Corn at 60 cents per bushel is therefore

special reference to the French Exposition of 1878, and to the following facts: The examination was conducted upon the necessity of an appropriation to enable exhibitors from Mr. Miller's herd of Chatauqua county native cows, the the United States to participate in the show. The President average live weight of which was 900 lbs. The herd were recalls the fact that \$200,000 was appropriated for the fed exclusively upon corn meal for seven weeks, each ani-Vienna Exposition of 1873, and that practical artisans and mal, according to its digestive capacity, making an average scientific men, besides commissioners, were appointed to re- of about three quarts of meal per day for each cow. The present the country; from which the inference is that he re- animals did not ruminate, did not manifest so much desire commends the granting of a like sum and the organization 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 suffer-

As regards the economy of meal feeding, Mr. Miller points