

and the condition and speed of the vessel. There must be stated, also, the position and character of the apparatus for the use of oil, the amount of oil used per hour, and the kind of oil used, according to the temperature of the water.

As stated above, each of these three competitions closes Jan. 31, 1891, by which time all reports must have been handed in to the Chamber of Commerce, Bordeaux, France. The published programme makes no specifications as to the nationality of the competitors or the language to be used, and the competition is therefore understood to be open to any one, subject only to the rules stated above, which should be carefully adhered to. The Hydrographic Office will gladly receive and forward any reports offered in competition, whether sent to Washington or handed in at any branch hydrographic office.

It will be noticed that it is the desire of the Bordeaux Chamber of Commerce to encourage the use of oil by masters of vessels, and the prizes are offered with this end in view. Reports are wanted regarding actual trials undertaken and reported as described above.

#### NOTES AND NEWS.

A PIECE of crown glass forty inches in diameter and two inches and a half thick has been shipped from Paris to Clark Brothers of Cambridge, Mass. It is intended for a forty-inch object-glass of a telescope for the University of Southern California, exceeding in size the Lick telescope. About two years' careful labor will be required to convert the rough glass into a finished lens.

— At a recent meeting of the American Meteorological Society in Washington, resolutions were adopted favoring the recognition of the eminent services of American electricians by perpetuating their names in the nomenclature of electrical units. In the names of units thus far adopted the names of Americans, such as Franklin and Joseph Henry, have not been recognized. It is proposed, as a beginning, that at the electrical conference to be held in this country in 1892 the name of Henry, or some modification of it, be given to the unit of self induction, he having been the first to investigate that phenomenon, and his investigations having been more complete than those of other electricians before or since.

— A special aim of those connected with the Wharton School of Finance and Economy at the University of Pennsylvania has been for some time past the securing of a complete series of the laws of all countries. Such an undertaking it requires scores of years to complete. In this department, however, the Wharton School library has already made a good beginning. There has been presented to it a set of the Prussian Statutes at large, including the years 1806 to 1886. There are to be found all the laws of the new German Empire, from its creation in 1866 down to 1886; a collection of works on German constitutional and administrative laws; and a work upon the public administration of Austria, by Ulbrich.

— Professor Edmund J. James, of the University of Pennsylvania, will present a paper before the American Academy of Political and Social Science on a new system of passenger fares. He will show that the railways of the United States, by their failure to adopt a reasonable and simple system of tariffs for passenger traffic, have prevented that development of this branch of their business which could have been expected, considering the natural tendency of Americans to travel. England has, relative to her population, nearly four times as many passengers on the railroads as the United States, though the character of the American people gives good reason to suppose that we should naturally have twice as many as England.

— The committee having in charge the interests, in this country, of the forthcoming Jamaica International Exhibition are working vigorously to insure a good representation of our manufactures and products. They have secured specially low freight rates for exhibits, and have made arrangements whereby exhibition goods will be returned free of freight from Jamaica, by the line on which they were shipped, on production of the outward bill of lading. Space will be reserved for empty cases, and all exhibits

will be conveyed from the wharf to the building free of charge. Exhibitors of apparatus requiring the use of water, gas, or steam, should state, on applying for admission, the quantity considered necessary. Those who wish to show machinery in motion must state the rate of speed at which the machine is to be driven. Motive power to the extent of 100 horse-power will be provided by the commissioners free of charge, but all counter-shafting, pulleys, and connections with main steam-pipe, must be provided by the exhibitors. The motive power will be under the direct control of the commissioners. Applications for space can be sent to the committee up to June 12, or to Kingston up to July 1, and goods will be received in this city from Aug. 20 to Nov. 15, 1890. The despatch, transmission, unpacking, removal of empty cases, fitting up and erection of exhibits, must be done by private agents. A list of those prepared to act as such, both here and through their representatives in Kingston, will be furnished upon application to the committee.

— The latest of the Johns Hopkins University Studies in Historical and Political Science is a pamphlet on "Spanish Colonization in the South-west," by Frank W. Blackmar. The subject of which it treats is much less familiar to the mass of historical readers than the English and French colonization of the Atlantic coast and the Mississippi valley, and yet in its bearings on the history and the legal systems of California and New Mexico it is of great importance. Hence Mr. Blackmar's monograph will be of use. He begins with a general account of Spanish policy, with a somewhat lengthy comparison between Spanish and Roman colonies, which has little bearing on the subject in hand; but after this introductory matter he gives a careful and interesting description of the different kinds of colonies established by the Spaniards in the South-west, with some account of the minute laws and regulations framed by the home authorities for their government. The most interesting chapter is that on the mission system, which tells the story of the settlements of converted Indians under the control of the priests, which formed so marked and unique a feature of Spanish control in the South-west. Altogether this is one of the best monographs of the series to which it belongs.

— We have received several numbers of "The Humboldt Library," a series of pamphlets issued by the Humboldt Publishing Company of this city. They are reprints of foreign works in clear type and on good paper, and are sold at the low price of fifteen cents each; double numbers, thirty cents. Some of those now before us, as, for instance, Mill's "Utilitarianism," are so old and familiar as to call for no remark; while others are of more recent composition. Mr. S. Laing's "Modern Science and Modern Thought," which is probably familiar to many of our readers, is an attempt to see how much of Christianity can be reconciled with physical science and historical criticism. It is written in a thoughtful and reverent spirit, but does not contain much but what is now the common property of minds that have been trained in scientific thought. Another of the pamphlets contains Mr. David G. Ritchie's essay on "Darwinism and Politics" and Professor Huxley's well-known paper on "Administrative Nihilism." Mr. Ritchie's work is chiefly a criticism of the doctrine of the "struggle for existence" as applied to social life. He, of course, admits the fact of such a struggle, but insists, in opposition to Spencer and his followers, that it is our duty to regulate it in accordance with reason and right, and that it is wrong to let the struggle proceed in human life and society in the same unmoral way as it does among the brutes. So far we agree with Mr. Ritchie, but we are sorry to have to add that his remedy for the ills of life is socialism. Professor Huxley's paper, as is well known, is an able argument for extended activity on the part of the State, but without any tendency of a socialistic character. Professor A. Schäffle's "Quintessence of Socialism," translated from the German, is a careful, and we think very correct, statement of the practical aims of the State socialists. It is written by an opponent of the system, but is eminently fair as well as thoroughly studied and carefully expressed, while the author's criticisms are pointed and sometimes profound. The work is well worth reading by all who are interested in the subject.