

# SCIENCE

FRIDAY, APRIL 20, 1888.

HUNDREDS OF REPORTS have been received at the Hydrographic Office of the Navy Department from vessels that experienced the storm of March 11-15, more than seventy of them from vessels that were immediately off the coast of the United States. An interesting feature of these latter is the descriptions of the use of oil to calm the waves. More than a dozen captains and sailing-masters caught in the storm when it was at its worst say that they believe that their vessels were saved by it. The sailing-master of the yacht 'Iroquois' says that the furious waves would be coming down upon them with an immense comb, threatening to swamp them; but, when it encountered a patch of oil no larger than a dining-room table, its top would be rounded, and there would not be even a wind-ripple upon it, and the yacht would bob over it like a gull. The reports of the storm have brought no new facts in regard to the use of oil to still the waves, but they confirm the opinions heretofore held, and will undoubtedly lead to its more frequent employment. The great service which the Hydrographic Office has rendered to navigation in this regard is now recognized in all maritime countries. Only lately, Capt. W. J. L. Wharton, R.N., hydrographer to the British Admiralty, in *Nature*, began an article by saying that the employment of oil by the ships of all countries was due to the efforts of the United States Hydrographic Office in forcing the subject upon the attention of navigators. Similar testimony has been given by high officers of the French Navy in recent publications.

THE PHILADELPHIA *Press*, in commenting upon some recent remarks of *Science* touching the wastefulness caused by the delays in printing scientific reports of the government, remarks that good editors are needed in Washington as much as more printers and better management of the Government Printing-Office. This is true, and the remark is applicable to all other bureaus and departments as well as those engaged in scientific work. Scarcely a volume is published by the government that would not be greatly improved by condensation. Examples are hardly necessary for those who are in the habit of looking over government publications, but one or two may be given in illustration. Congress has just ordered an extra edition of twenty-five thousand copies of a report on 'Cattle and Dairy Farming,' made by the consuls of the United States abroad, of which the original edition has been exhausted, and for which there has been much call by the cattle-raisers and dairy-farmers of the United States. It comprises two volumes, together containing 855 pages of letterpress, besides 369 full-page lithographic engravings. The book contains a large amount of very valuable information that can be obtained nowhere else; but, if it had been edited only to the extent of cutting out nothing but duplications, the dimensions of the book might have been reduced one-half, and its value greatly increased. In many instances several consuls in the same country went over the same ground, and sometimes obtained their information from the same sources. The best of these reports ought to have been selected for publication in full, and only the additional matter contained in the others added in carefully selected extracts. But instead of doing this, the State Department put the reports and enclosures all in, in full, and thus made a book that is likely to frighten a farmer by its very size. Another example of enormous waste in printing, to say nothing of the doubtful expediency of preparing the matter, is to be seen in a 'Report upon an Examination of Wools and other Animals,' by Dr. Mc-

Murtrie, prepared under the direction of the commissioner of agriculture. It is a quarto book of more than 600 pages, about 100 of which are filled with letterpress and illustrations, and 500 with solid tables of figures. One of these, filling 32 pages, is a 'Table for Reduction of Centimillimetres to Fractions of an Inch.' No printer will have to be told how expensive this rule-and-figure work, with its 21 columns to a page, is. Another, filling 102 pages with solid figures, gives the 'Results of Actual Measurements of Length, Crimp, and Fineness, with Recapitulations and Reductions.' And so on for 500 pages. Now, if it was necessary to make all these measurements, it certainly was not necessary to print them. The results of them are set forth in the body of the report, and these are all practical men want. If a scientific man desired to see all the figures made to obtain these results, he could go to the files of the Agricultural Department and examine them there. An octavo volume of 200 pages would have contained all that it was necessary to print, and would not have cost, with illustrations, more than one-fourth as much. The government needs an editor.

THE WORK upon the marble terrace which is to surround the Capitol at Washington on three sides is nearly completed, and the effect of it upon the architectural appearance of the building can now be seen. From any point on Pennsylvania Avenue between the Treasury Department and the western entrance to the Capitol grounds, the effect is unquestionably pleasing. The terrace will appear as though it was the foundation of the building, thus making it seem to be decidedly higher, and relieving it of that 'squatty' appearance which has always offended the eyes of those who have an appreciation of proper proportions in a grand structure. Viewed from a distant point either on the north, south, or west, therefore, this marble terrace seems to be an architectural success. But, as soon as one enters the west Capitol park and approaches the building, he discovers that this so-called improvement, expensive as it has been, is a blemish rather than an embellishment of the Capitol. Long before reaching the foot of the grand stairway, the marble terrace not only ceases to appear as a part of the building, but hides a part of its beautiful front. At the Marshall statue the upper edge of it is projected against the marble columns of the two wings of the Capitol halfway from their bases to their capitals, and from many parts of the grounds on the west they greatly disfigure the noble structure. It is just as important that the proportions of the Capitol shall appear to be correct when viewed from a point that is near as from one that is removed; but the architect seems to have supposed, that, when a person has once entered the grounds from the west, he will be so much impressed with the grand marble stairway that he will not raise his eyes to the building to which they lead.

THE PLAN OF ESTABLISHING a zoölogical garden in Boston, which has been pending for twenty-one years, seems to lead at last to practical results. The council of the Boston Society of Natural History has taken the matter in hand. It gained the co-operation of the park commissioners, who offered two separate sites for the garden. The society proposes to make the enterprise thoroughly educational. In view of the climate of New England, no attempt will be made to make the garden of so general a nature as they are made in Europe. It will be rather an effort to show specimens of American animals, especially those of New England. Finally it was resolved to make an attempt to raise a sum of \$200,000, and then to proceed with the establishment of a garden and aquaria. The en-

ergetic efforts of the committee will undoubtedly succeed in arousing a general interest in the matter and in raising the necessary funds. The educational value of a garden like the one proposed can hardly be overestimated, as it affords to the inhabitants of the city those advantages which, as a rule, only those living in the country enjoy.

THE AMERICAN PHILOSOPHICAL SOCIETY has paid considerable attention to the subject of a universal language; and on Oct. 21, 1887, a committee was appointed, of which Prof. D. G. Brinton was chairman, to examine into the scientific value of Volapük. The committee recently presented its report, and the society adopted the following resolution: "That the president of the American Philosophical Society be requested to address a letter to all learned bodies with which this society is in official relations, and to such other societies and individuals as he may deem proper, asking their co-operation in perfecting a language for learned and commercial purposes, based on the Aryan vocabulary and grammar in their simplest forms; and to that end proposing an International Congress, the first meeting of which shall be held in London or Paris." The introductory remarks to the report of the committee, referring to the desirability of an international scientific terminology, will be approved by all scientists; but many will rather join Max Müller's appeal to the learned writers of the world to express themselves in English, German, French, Spanish, Italian, or Latin, than support the plan of establishing a new universal language. The proposals of the committee are founded on the process of formation of jargons. Grammatical forms are eliminated, and the order of words determines the meaning of the sentence. The phonetics are to be simple, and the vocabulary based on the vocabulary which is common to the leading Aryan tongues. As Volapük and other universal languages are not formed according to these principles, the committee considers them as not apt to meet the requirements of international intercourse. All this may be true, but it would seem to us that scientists, even if successful in the attempt at forming an artificial language which would be as well adapted for thinking as for writing and speaking, would increase the amount of necessary work instead of diminishing it. Before the era of nationalities, as we may well designate our time, English, German, French, and Spanish were almost exclusively used in scientific publications of any importance. The same feeling that prompted writers to use their own language, however few the men speaking it may be, will prevent the general adoption of a universal language; and when this feeling has subsided, those few European languages will again become the means of scientific intercourse. And how should we make use of the treasures contained in the literature of the past, or in popular writing, without learning these languages? We believe that these difficulties, even aside from that of making a satisfactory language, will prevent the scheme of a universal language being successful.

#### YUKON EXPEDITION, 1887.

WE noticed several times the progress of the Yukon expedition undertaken by the Canadian Government in 1887. The present number of *Science* is accompanied by a map showing the results of this important expedition. The map is a reduction of a large-scale map published by the Department of the Interior of Canada, a number of corrections being added by Dr. Dawson. The coast-line is founded upon the charts of the Coast Survey. While the greater part of the topography of the interior is the result of last year's expedition, a few older explorations were available for constructing the map. The lower part of the Stikine River was surveyed in 1877 by J. Hunter. The traverse from Telegraph Creek down the Hotalingqua River, to latitude 60° north, was made by the Telegraph Exploration in 1867. Schwatka's maps were used for constructing the lower part of Pelly River, while Chilkat River is founded on Dr. A. Krause's surveys in 1882.

The recent expedition was undertaken in consequence of the necessity of ascertaining the nature and extent of the developments

of placer gold-mining, which of late years has attracted an increasing number of miners into that part of the North-west Territories lying between British Columbia and Alaska. We reported in No. 243 of *Science* on the progress of Dr. Dawson's expedition up to the 29th of July. Mr. William Ogilvie had reached the lower part of Pelly River by a different route. He had started from Chilkoot Inlet, and reached the summit of Chilkoot Pass on June 8. On June 27, after considerable difficulty occasioned by stormy weather, the first lake was reached. Mr. Ogilvie experienced considerable difficulty in carrying his instrumental survey across the mountains. He says in his report to Captain Deville, "Beginning from the summit of Chilkoot Pass, we descend almost one-third of a mile to Crater Lake, the fall in that distance being by barometer 367 feet. At four miles and a half from the summit, Mountain Lake, which is about a mile and a half in length, is reached, the fall in this distance being about 575 feet. At this point the first trees on the north-east side of the summit are seen, but they are of no importance, being small and of stunted growth." Lake Lindeman was found to be 1,237 feet below Chilkoot Pass. The party then crossed Lake Bennett and Lake Marsh, and began their descent of the Lewes River. "At 125 miles from salt water, the cañon is reached. At this point the river flows through a fissure in a barrier of basaltic rocks which intersects its course. The cañon proper is about five-eighths of a mile long and about 100 feet wide, with perpendicular walls from 60 to 80 feet high. The current through it is swift and the water rough; but with a fairly large boat, the only risk in running through it would be from contact with the sides, in which case one would be certain to come to grief. The passage through it is made in from three to four minutes. The cañon and its rapids are altogether two miles and three-quarters long. The last rapid, which is three-eighths of a mile in length, is a bad one, and we had to portage every thing round it, and let our boat down with ropes from the shore. This rapid is called by the miners the 'White Horse,' from the fact that nearly all the water is white with foam. Several parties have run through the rapid on rafts, and one or two in boats, but few want to repeat the trip." In proceeding farther down the river, the travellers passed Big Salmon River. Looking up its valley, a distant view was had of many mountain-peaks covered with snow, the presence of which in summer is proof of a considerable altitude. Ogilvie found that the upper part of the river was almost deserted by the miners, who have gone to Forty-Mile Creek, where considerable quantities of gold have been found.

Dr. Dawson, who had reached the Pelly River by way of the Stikine and Frances Lakes, describes the latter part of his journey as follows: "Our Indians, who had for a long time been very uneasy because of their distance from the coast and the unknown character of the country into which they had been taken, were now paid off, and, to their great delight, allowed to turn back. As a dangerous rapid was reported to exist on the upper part of the Pelly, it was decided to construct a canvas canoe in preference to building a boat, which it might prove impossible to portage past the rapid. Having completed the canoe, we descended the Pelly, making a portage of half a mile past Hoole's Rapid, and reached the confluence of the Lewes branch of the Pelly on the 11th of August. We had now reached the line of route which is used by the miners, and expected to find at the mouth of the Lewes a memorandum from Mr. Ogilvie, from whom we had separated in May. As we could not find any such memorandum, and as Mr. Ogilvie had not been seen on the lower river by a party of miners whom we met here on their way up the Lewes, we were forced to conclude that he had not yet reached this point. The same party informed us that few miners were during the summer on the Stewart River, where most of the work had been carried on in 1886, but that in consequence of the discovery of 'coarse' gold on Forty-Mile Creek, about 120 miles farther down the river, all had gone there, and that Harper's trading-post, where I had hoped to be able to get an additional supply of provisions should we fail to connect with Mr. Ogilvie, had also been moved from the mouth of the Stewart to Forty-Mile Creek. From the place where we now were, we still had a journey of over 400 miles to the coast, with the swift waters of the Lewes to contend against for most of the distance. If, therefore, it should have become necessary to go down stream 220 miles to Forty-Mile Creek for provisions, so much would have