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sions as will aid in furthering its objects. It is requested that all who intend to contribute papers will notify the secretary (William Kent, 92 Reade Street, New York) as soon as possible. The committee on the best method of teaching mechanical engineering, — Prof. J. Burkitt Webb, Prof. George J. Alden, Dr. Calvin M. Woodward, and Prof. Arthur Beardsley, — and the committee on the use and value of accurate standards, screws, surfaces, and gauges, — Prof. William A. Rogers, Mr. Oberlin Smith, and Prof. J. Burkitt Webb, — are expected to present reports at the Buffalo meeting.

— The fish commission steamer Albatross arrived at Nassau, New Providence, March 19, after a most successful trip. The ship was chiefly engaged in making soundings. Two naturalists were landed at Watling's Island, San Salvador, where much valuable scientific material was gathered during a stay of two weeks. But little dredging has been done, so that few accessions of marine life have been made. At Rum Cay, Conception Island, Cat Island, and Great Exuma Island, the naturalists of the expedition obtained many valuable specimens of fish, lizards, bird's-nests, eggs, cave relics, pottery, and about five hundred bird-skins. These islands are very small, and thinly populated. Vegetation is scarce, and the islands themselves are formed almost entirely of rock. Coconut-trees and bananas are abundant, but oranges and apples rather scarce. The Albatross is now at Key West, and will spend some time dredging in the Gulf of Mexico and vicinity.

— General Hazen said recently, in his testimony before a congressional committee, that foreign signal stations were a necessity, and the establishment of a station in the West Indies had fully demonstrated this fact. It is quite probable that congress will authorize the establishment of stations at important foreign points.

— The commissioners of the District of Columbia have refused the gift of Judge Pacificus Ord, of a tract of land along Rock Creek for a zoological garden. The grant was made on the express condition that the property should be used for a free zoological garden and free public baths, to be kept by officers created by congress for that purpose. The commissioners think there is no present need of a zoological garden or bath-house, nor have they the means to establish them.

— The U. S. fish commission is busily engaged in stocking the Great Lakes with white-fish. Cars Nos. 2 and 3 are now at Northville, Mich. About April 15 the shad distribution will begin. The

eggs are hatched at the Fort Washington station, and shipped to the central station of the commission at Washington, the distribution being made from there. The distribution of carp has ceased for this season, as it has been found impracticable to ship these fish after the first of March; the young carp developing fungus, and becoming emaciated.

— No less than forty-four wrecks appear on the April number of the 'Pilot chart' issued by the hydrographic office. Some were seen in January, but the greater number are reported from observations late in February and through March. Three recent cases of disastrous collision with sunken wrecks are quoted. It is announced that the vessels of the National line, including all the cattle-steamers, have made arrangements for the regular use of oil in rough weather.

— The bark Flora (Spanish) reports that on March 21, Cape Hatteras, bearing W.S.W., distant thirty-five miles, three very large seas came up from astern [vessel probably heading north], and in passing caused the vessel to roll deeply. At the time the sea was very smooth, and became so again immediately after the passage of the heavy swells. There was a light breeze from S.S.W. The captain says he never saw or heard of such an occurrence before. On p. 266, vol. ii., of the 'Voyage of the Challenger,' Sir Wyville Thomson says, "It must be a wonderful phenomenon, an enormously heavy swell arising in a perfectly calm sea, without any apparent cause, and breaking against the leeward coast of the island (Ascension) with almost irresistible fury."

— A bottle was found floating near the beach at Colon, on the 1st of February. It had the appearance of having been some time in salt water, and was found to contain two papers on which was written as follows: "Lat. 13° 47' N., Long. 24° 47' W., noon, Saturday, 20th December, 1884; ship Patriarch 60 days out from New Castle (N.S.W.), and bound for London; all well."

— The New York *Evening post* states that "the treasury commission for investigating the coast survey have addressed a communication to the secretary of the treasury in which they say, 'In the light of the demonstrated inaccuracy of some of the evidence upon which the committee relied, and to the extent hereinbefore indicated, it is but just to admit that the criticism of Mr. C. S. Peirce in the committee's report was unwarranted by the facts.' It is understood to be admitted that Mr. Peirce's expenditures were overstated, and his work undervalued. The only criticism the committee continue to maintain is, that he

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practically conducted his operations as he saw fit. His work has been done under detailed instructions issued by the superintendent of the survey, and these instructions have been based upon projects which Mr. Peirce was required to submit each season. We will only add that this finding is what every one acquainted with Mr. Peirce must have expected as the result of a calm and unprejudiced examination."

— Telegrams received from Professor Pickering announce the discovery of three new asteroids by Dr. Palisa of Vienna. The first was discovered on March 31, and was of the thirteenth magnitude; the other two, on April 2 and 3, of the thirteenth and twelfth magnitudes. These three will receive the numbers 254, 255, and 256 respectively, and will raise the whole number discovered by Dr. Palisa to fifty-three.

— The programme for the second half of the course of lectures under the auspices of the Anthropological and biological societies of Washington is as follows: Saturday, April 10, Dr. Washington Matthews, U.S.A., The gods of the Navajos; Friday, April 16, Dr. D. B. Simmons, Social status of the women of Japan; Saturday, April 24, Prof. W. K. Brooks, Life; Saturday, May 1, Mr. Lester F. Ward, Heredity and opportunity; Saturday, May 8, Dr. J. S. Billings, U.S.A., Animal heat.

— The series of summer schools of the Mont-eagle (Tenn.) assembly is announced to open on June 30, and continue to Aug. 25. The scientific instruction in chemistry, geology, and botany, will be under the charge of Prof. J. I. D. Hinds.

— We cut the following from the Atlantic 'Pilot chart' for April: "Mr. J. H. Barker, an oil-merchant of New York, informs the branch hydrographic office that he has the contract with, and since Jan. 1 of this year has furnished, the National line of steamships with oil to be used to lessen the dangerous effects of heavy seas. Ten vessels, including all the cattle-steamers, have been provided with the necessary appliances to use oil when occasion requires. The company's requisition called for fish-oil, but the recent experiments proved it thickened too rapidly when in contact with water at the general low winter temperatures. To obviate this tendency, Mr. Barker has mixed a mineral oil having a low, cold test, with fish-oil which has a comparatively high test: the result is an oil which coagulates at a much lower temperature than ordinary fish-oil, but which it is claimed will be as efficacious. The mineral oil has stood the test as a lubricant for railroads in cold weather, and it is claimed

will be very useful for sea purposes when mixed with a proper proportion of fish-oil, during the mild and warm months fish alone is to be supplied. The method adopted of using oil is by means of punctured canvas bags filled with oakum."

— From numerous experiments on flies, beetles, hymenoptera, neuroptera, and lepidoptera, M. Plateau concludes that insects with compound eyes, with or without simple eyes, pay no heed to differences of form in the light openings of a half-darkened room, but fly with equal readiness to the apparently easy and apparently difficult way of escape; that they are attracted to the more intensely lightened opening or to one with apparently greater surface; and that, in short, they cannot by vision distinguish form, or only to a very slight extent.

— Chief engineer Melville of the ill-fated *Jeanette* has recently stated that he is still endeavoring to organize another polar expedition, and, although his schemes have met with little success, he will yet continue to work upon them.

— The question of the movements of the ulna and radius of the human arm during the act of pronation and supination has of late provoked considerable discussion among students of anatomy. The view most commonly held and taught, that the elbow-joint is a perfect hinge, and that the ulna remains fixed during pronation and supination, has been disputed by some recent investigators. At the last meeting of the Biological society of Washington, Dr. Frank Baker read a paper upon this subject, in which he concludes that the ulna is capable of considerable lateral movement, and that in pronation and supination both the ulna and radius rotate. Dr. Harrison Allen of Philadelphia has also been studying this question with the aid of instantaneous photographic apparatus, and is said to have reached similar conclusions.

— Harrison & Sons, London, announce 'Physico-chemical constants, melting and boiling point tables,' by Thomas Carnelley, professor of chemistry in University college, Dundee. These tables will contain about fifty thousand melting and boiling point data. The object of the tables is as follows: 1. To present as complete a list as possible of all known melting and boiling point data, and at the same time to indicate which of them is probably the most exact, when there are several determinations referring to the same substance; 2. To state as fully as possible the constitution of each substance to which the data refer; 3. To adopt such a system of ar-

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