observatories were afforded to all investigators who desired to make standardization comparisons of their instruments; and in response to numerous requests information, or observational data, was furnished for practical application or for use in special investigations of terrestrial magnetism and allied phenomena.

Appendix No. 6, constituting the concluding portion of a manual of tides, treats of the flow of water, of river tides, tidal currents, permanent currents, annual inequality, lake tides, seiches, and miscellaneous tidal matters.

Charts of concurrent lines are given for the principal marginal waters along the Atlantic Coast of the United States. The numbers upon these lines show the times of the maximum flood current.

The dependence of the permanent ocean currents and the annual height in equality upon the prevailing winds is briefly pointed out. Seiches are shown to exist in harbors and other tongues of water, as well as in lakes; but their character is fundamentally different in some respects.

The analyses of observations upon the tides of Lake Superior show that they follow closely the equilibrium theory although the range is only 1½ inches at Duluth and one third inch at Marquette.

In Appendix No. 7 is given a detailed description with appropriate illustrations of the Long Wire Drag, a device for detecting erratic obstructions of small extent in navigable waters. The method of operating can be understood from the simple statement that the drag is a wire varying in length from 480 to 1,400 feet, supported at suitable intervals and maintained at any desired depth below the surface of the water. This drag is towed over any given area by launches, and in the area so searched no elevation of the bottom above the depth at which the wire is suspended can escape detection. Buoys floating at regular intervals above the drag indicate to observers in the launches when and where an obstruction is touched, and the spot so indicated is then accurately determined.

This method of sweeping has proved a sure means of detecting pinnacle rocks and similar erratic obstructions which heretofore have eluded the hydrographic surveyor, since it is almost impossible to discover them by lines of soundings with the lead. Only the navigator in whose hands rest many lives and much property can realize the relief from mental strain that comes from knowing that the water in which he is sailing is absolutely free from hidden dangers or that every menace is charted. The device has proved very satisfactory under widely varying conditions and marks a decided advance in marine surveying.

This report, or any one of the Appendices, numbered 3 to 7, may be obtained by interested persons, free of charge, upon application to the Superintendent of the Coast and Geodetic Survey, Washington, D. C.

BERMUDA BIOLOGICAL STATION FOR RESEARCH

By arrangement with the Bermuda Natural History Society, the Station for Research at Agar's Island will be open for about seven weeks this summer. There are accommodations for a limited number of instructors or research students in either zoology or botany.

Members of the expedition will sail from New York on the steamer *Bermudian* (Quebec Steamship Co.) at 11 A.M., on Tuesday, June 16, arriving in Bermuda, June 18, and will return on August 5, reaching New York August 7. Those who can not sail on June 16, may do so two weeks later, June 30.

The expense will be $110 for first-class passage from New York to Bermuda and return, and for board and lodging at the islands six weeks and six days. For the shorter time—four weeks and six days—the expense will be $90. Payments are to be made to the undersigned, fifty dollars on or before June 1, the balance on arriving in Bermuda.

For further information apply to

E. L. Mark

109 Irving Street,
Cambridge, Mass.

CONFERENCE ON THE CONSERVATION OF NATURAL RESOURCES

In a sense the federal and state scientific work to date culminates in the Conference on