Francisco Bay, Boston and Portsmouth Harbors and Southeastern Alaska."

It is probable that, besides their value for the reasons mentioned, they will be of value for other purposes of commerce and industry. According to a statement of Herbert F. Prytherch, of the Bureau of Fisheries, these tide and current surveys will prove of practical value in scientific oyster culture because of the fact that oysters spawn and develop better in waters slightly tempered by the warmer surface water circulated by means of tidal current. That statement was made in the case of studies of the subject at Milford Harbor, Conn., on Long Island Sound.

Captain P. C. Whitney, chief of the Tides and Currents Division of the Coast and Geodetic Survey, announced that the survey will make an investigation of the work now in progress along Long Island Sound. Officially designated, the area under survey comprises "Long Island Sound and tributaries from Throg's Neck on the west to Little Narragansett Bay on the east." The personnel is under instructions to take advantage of every opportunity in periods of favorable weather for observations at stations located at exposed places in this territory.

At the control stations, observations will be continued during the period that observations are made in the whole particular section, but at stations other than "control stations" observations are being made for periods of 25 hours each. Where the surveys constitute what are called cross-sections, as many stations as practicable are being occupied simultaneously.

The observations of currents are made by both poles and meters. The poles are standard 15-foot devices weighted at the bottom with sheet lead or lead casting. The observations are made with the poles every half hour and the direction of the current is determined by use of a prelorus fastened to the taffrail or otherwise. Meter observations are made half-hourly at three depths.

The tidal observations are made with portable automatic tide gauges for periods of one or more days while the current observations are being made in the same vicinities. These tidal observations will be made at Throg's Neck, Willets Point, Bayside, City Island, Port Washington, New Rochelle, Glen Cove, Roslyn, Lloyd Harbor Light, Stamford, Shippan Point, Sheffield Island, South Norwalk, Saugatuck River, Northport, East Bridgeport and Orient Point.

THE ADLER PLANETARIUM AND ASTRONOMICAL MUSEUM

ALL who have interested themselves in the popular dissemination of science have realized the difficulties that are encountered when attempts are made by lectures or demonstrations to present the complex phenomena in form which will be intelligible and inspiring to laymen. In the field of astronomy an instrument has been devised under the incentive of Dr. Oskar von Miller, director of the German Museum in Munich, and with the cooperation of the Carl Zeiss Works in Jena, which portrays in an inspiring way the heavens and all the phenomena which arise from the motions of the celestial bodies. This instrument, known as a planetarium, is largely the creation of Dr. Bauersfeld, of Jena. It projects the stars of the heavens upon the interior surface of a great dome. The bodies of the solar system have separate, individual projectors and by means of suitable mechanism all the motions of the heavens are reproduced—of course, in general, greatly accelerated.

The first of these instruments was completed in 1924. At the present time there are fifteen in Germany, one in Austria, two in Italy, and one in Russia. It is the unanimous testimony of all who have visited these planetaria that in them has been achieved a means of instruction and entertainment of superlative merit. Dr. Strömgren, of Copenhagen, writes, "Never before has a means of entertainment been provided which is so instructive as this, never one which is so fascinating, never one which has such general appeal. It is a school, a theater, a cinema in one; a schoolroom under the vault of heaven, a drama with the celestial bodies as actors."

Mr. Max Adler, of Chicago, has presented to that city the first of these instruments to come to America. Under his gift of $500,000 there is being erected on the lake shore, near the Field Museum and the Shedd Aquarium, a beautiful building to house this instrument and an astronomical museum. The building is 160 feet in diameter, dodecagonal in form, with a central circular hall seventy feet in diameter, above which is the dome. This central hall is the planetarium room: the broad corridors about it house the museum features, research instruments, offices, lecture room and library. So far as possible, the exhibits in the museum will be in action so that the actual phenomena or method of operation can be clearly seen. A considerable number of exhibits have already been collected. The building will be finished and ready for opening to the public on the first of January, 1930.

Professor Philip Fox, for the past twenty years director of the Dearborn Observatory, has been appointed director of the Adler Planetarium. He sails for Europe on the twenty-seventh of July to inspect various continental museums and the German planetaria, especially those in Munich and Jena.