could never be made suitable for the purposes of the bureau. The delicate physical apparatus is constantly affected by vibrations from the heavy printing presses. At least twenty-five rooms in the main building are so dark that it is impossible to work in them without the aid of artificial light. In the darkest of these rooms forty-five persons are working from 9 in the morning until 4:30 in the afternoon by the help of electric light. Unless they are soon provided with better-lighted rooms their vision will be permanently impaired and their capacity for work correspondingly decreased.

Not the least important reason for housing the survey in a modern, fire-proof building of its own is the consideration that government property and records valued at approximately $6,000,000 are in constant danger of loss by fire. Recently, over $10,000 worth of property was destroyed in twenty minutes by a fire in the photographic laboratory on the top floor of the main building. The buildings contain over 100,000 square feet of varnished and inflammable wooden partitions, along which fire could spread with great rapidity. Many of the records thus flimsily sheltered could not be replaced at any price.

What the survey needs is a strong, fire-proof, well-lighted building containing a net available space of at least 150,000 square feet, exclusive of basement and halls. Such a building would cost about $1,200,000. The annual rent paid on the buildings now occupied is $34,900, which is nearly three per cent. on $1,200,000.

A bill for such a structure as is required was introduced in the senate by Mr. Frank P. Flint, of California, on March 21 and in the house of representatives by Mr. James S. Sherman, of New York, on March 26.

UNIVERSITY OF THE PACIFIC AND THE EARTHQUAKE.

THE University of the Pacific, San Jose, California, the oldest institution of higher learning on the Pacific coast, was damaged to the extent of about $60,000, net, during the recent earthquake. East Hall, a large four-story brick building, the only building on the campus seriously damaged, will be lowered to two stories. The fourteen rooms on the ground floor are occupied by laboratories. Two thousand dollars had just been put into additional equipment; but the entire loss of apparatus, chemicals, etc., will not amount to more than $500. The Monday following the earthquake the laboratories were running as usual, as were the other departments of the university. The other buildings on the campus were not damaged except in the loss of plaster. The executive committee has decided to erect a two-story 'earthquake-proof' building to take the place of the upper half of East Hall. The Jacks-Goodall observatory on the southwest corner of the campus was not injured. Seven buildings owned by the university in San Francisco were entirely lost; but they will be rebuilt at once. The residence of President McClish was destroyed, but it will be rebuilt. Among the professors, the residences of Dr. Hatzell and Dr. Sawyer were the only ones damaged, and those but slightly. No lives were lost, but two students were injured by falling bricks.

NEW YORK OBSERVATORY AND NAUTICAL MUSEUM.

PRELIMINARY plans have just been formulated for the organization of a great marine museum for the city of New York. It is expected that this will mean to the navigator what the Metropolitan Museum means to the lover of art and the American Museum to the student of natural history. The new institution will take its place as one of the three great museums of the city of New York, and in it one can study the tides, navigation and marine instruments at first hand.

As the science of navigation is based on astronomy, it will be necessary to have an astronomical observatory as an adjunct to it. The capitals of Europe, London, Paris and Berlin, each has its magnificent observatory; and in the United States the cities of Washington, Boston, Chicago, San Francisco and Pittsburg, have their big telescopes and finely equipped observatories. The commercial capital of the United States, the second largest city in the

world, has done very little for astronomy, and it is with profound satisfaction we learn that commerce and navigation, on which the supremacy of New York largely depends, is to be aided by the founding of the 'New York Observatory and Nautical Museum.'

This institution will consist of two distinct departments:

1. *A Nautical Museum,* where will be collected and exhibited models of all types of vessels, safety and signal devices, nautical instruments and methods of determining position, charts, marine engines and motors, and historic instruments and relics. The museum and collections will be open to the public and will be arranged so that properly qualified persons can avail themselves of the facilities there offered for investigation and research.

2. *An Astronomical Observatory,* where will be made scientific investigations in the field of astronomy, navigation and kindred subjects, and for this purpose the observatory will be provided with a great telescope, for photographic and visual work, astrophysical instruments for the investigations of interesting problems of the sun, magnetometers, seismographs, etc. A time service will be instituted so that chronometers may be rated, all kinds of marine instruments will be tested, and tidal investigations will be taken up.

The institution is to have an endowment of not less than $500,000, and in addition to this it is expected that the city of New York will provide a site in Bronx Park adjacent to the Botanical Garden and Zoological Park, and will also erect the museum building and the domes and smaller buildings for the observatory.

The organization committee consists of such well-known New Yorkers as Frederick G. Bourne, Cornelius Vanderbilt, Edward S. Isham, George A. Cormack, J. D. Jerrold Kelley and Charles Lane Poor, and their backing means success. Dr. Poor, professor of astronomy at Columbia University, has made an enviable record for himself through his cometary researches, and by his recent discovery that the sun is a vibrating body continually changing its shape. Further researches carried out through a series of years will probably make clear the meaning of this change; and this will go a long way towards solving some of the outstanding problems of astronomy.

There is every reason to believe that the new observatory will be founded and will at once take its place among the great observatories of the world.

BILLS OF SCIENTIFIC INTEREST PASSED BY THE NEW YORK LEGISLATURE.

The New York legislature has passed a bill providing for a new building for the State Museum, State Library and the Education Department, to cost not more than four million dollars. The bill carries an appropriation for the acquisition of a site and the preparing of plans. For these plans twenty thousand dollars in prizes are to be awarded to the first, second and third choice of plans submitted to the commission having the erection of the building in charge.

The legislature also passed a bill to acquire Watkins Glen, one of the many ravines running into the Finger Lakes of western New York, for a state reservation.

The following legislation was passed in regard to the protection of Niagara Falls: Four inactive charters were repealed, leaving four others still outstanding, two of which are actively engaged in diverting water. The legislature also passed the Foelker bill to prevent any abstraction of water beyond the present chartered limits of abstraction.

A referendum for a constitutional amendment to permit the flooding of parts of the state reservation in the Adirondacks for the manufacture of power by private corporations was also passed.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The work of the local committee in arranging for the Ithaca meeting is approaching completion. In addition to the usual sessions for the reading of papers the program will include the following events:

Thursday evening, June 28, an informal smoker at the Town and Gown Club.