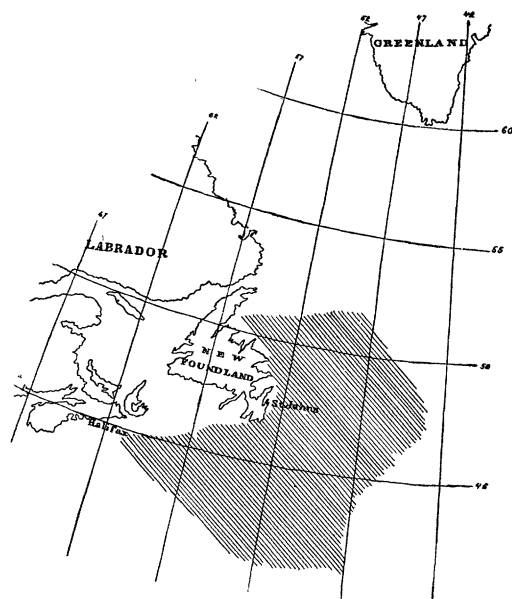


to property are reported from Clark and Crawford counties. South Carolina reports a tornado at Bishopville about 8 A.M. of the 23d. The main track was about a hundred and fifty yards wide, and within it every thing was swept away. North Carolina reports a tornado at 7 A.M. of the 23d, with a path a hundred and fifty yards wide and about four miles long. In Tennessee, winds of great violence are reported at Chattanooga from 4.40 to 5.10 P.M. of the 22d. At Knoxville, 3.75 inches of rain fell



on the 22d, which is the greatest fall in twenty-four hours for five years.

Accompanying is the iceberg chart for April. The icebergs appear to have been most numerous between latitude 41.5° and 43.5°, and longitude 51° and 49° W. This region is less extensive than in April, 1882; and, while solid field-ice was reported as far as latitude 44° last year, none was seen this. The map, p. 537, shows, that, as usual in this month, the winter area of high pressure in the Rocky Mountain region is giving way to the summer area of low pressure. The mean pressure is generally below the normal, except in New England, where it is .07 inch above.

The mean temperature east of the 100th meridian was 1.95° above the mean for the past ten Aprils, the Atlantic states and the lower lake region only, having temperature deficiencies.

Deficiencies in rainfall of .05 inch and over

are found in New England, upper lakes, northern Rocky Mountain plateau, and the middle Pacific coast region. Above thirty inches of snow fell in Cisco and Summit, Cal., and on Mount Washington, New Hampshire.

A total air motion of 23,900 miles is reported from Mount Washington, with a maximum velocity of 88 miles per hour on the 11th. At Cape Mendocino, California, on the 15th, the wind rose to 120 miles per hour, when the anemometer cups were blown away. 124 cautionary signals were displayed, of which 91% were justified by winds 25 or more miles per hour.

Severe freshets occurred in Canada and New England from melting snows as much as from rains. The Mississippi was above danger-line at Cairo, Vicksburg, and New Orleans, but no serious damage had resulted. On the 21st, Helena, Ark., experienced the heaviest rain in many years. Nashville, Tenn., on the night of the 21st, had five inches of rain, which raised the river sixteen feet in twenty-four hours, causing damage to bridges and railroads.

Two prominent auroral displays may be noted. The less brilliant, on the 3d, was generally observed in Canada and New England; it was also noted in Washington Territory. On the 24th was observed the more brilliant and extensive one. This was seen at Nashville, Tenn., at 7.50 A.M., as an arc of whitish light extending to the height of 9° and over 40° of the northern horizon: it was seen as far west as Fort Benton, Montana. Less important displays were seen in the United States on nearly every night.

Prof. D. P. Todd of Amherst reports sunspots most prominent on the 15th, and least so on the 30th.

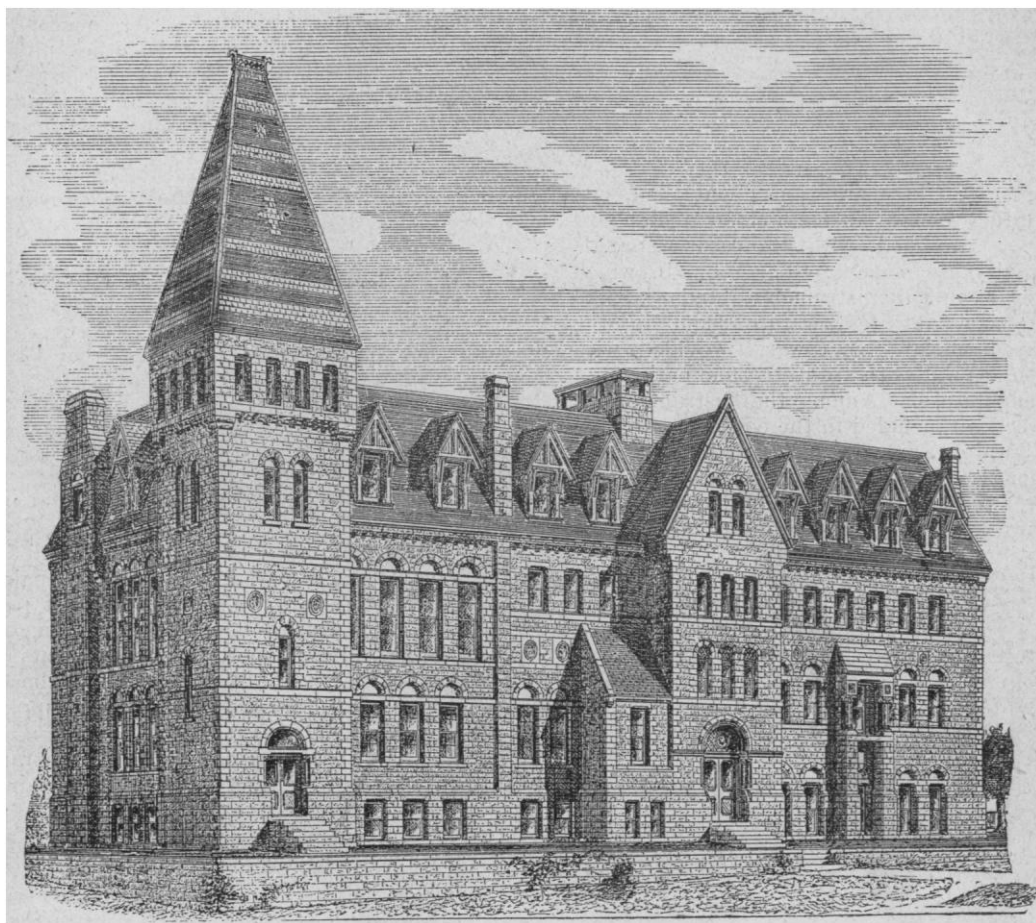
At 8.50 A.M. of the 2d, two light earthquakes were felt in San Francisco, and at 2.36 A.M. of the 12th a heavy shock was felt at Cairo, Ill. *The New York herald* reports a severe shock in Catania, Sicily, on the 3d, and *Nature* reports a shock in Finland at 9 A.M. of the 8th.

NEW LABORATORY FOR PHYSICS AND CHEMISTRY AT CORNELL UNIVERSITY.

THE new laboratory of physics and chemistry, of which the plans and perspective drawing are given, is now practically completed, and will be ready for occupancy at the beginning of the next autumn term. The general arrangement of the building will be readily under-

stood from the plans. The basement contains the laboratory of assaying, the large physical laboratory, and a number of rooms devoted to special purposes in the department of physics, three of which have floors of cement, affording at any point sufficiently firm foundation for galvanometers. Certain other rooms are pro-

Power from a large turbine, situated in the gorge north of the building, serves for driving dynamos, ventilating machinery, and air-pumps for vacuum and blast, as well as for the purposes of the workshop. The latter is fully equipped with tools and machinery, and is in the charge of a skilful mechanic from



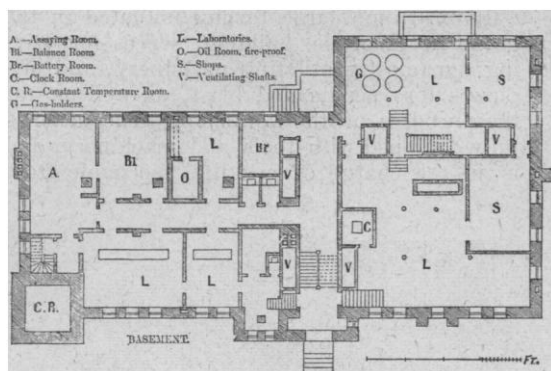
NEW LABORATORY FOR PHYSICS AND CHEMISTRY, CORNELL UNIVERSITY.

vided with solid masonry piers for apparatus requiring immovable support.

The large physical lecture-room, with its adjoining apparatus-rooms, occupies one-half of the first floor. The remainder consists of laboratories and work-rooms designed for various purposes of instruction in physics, several of which are also provided with masonry piers. One room (without windows) is for photometric work.

Göttingen, who devotes his whole time to the manufacture of apparatus.

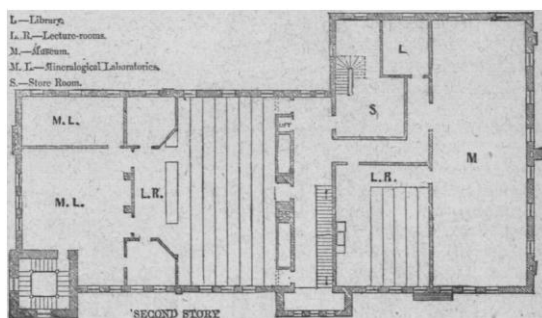
All the principal rooms of the building are supplied with water, steam, house-gas, oxygen, hydrogen, vacuum, and blast. The oxygen and hydrogen are generated by electricity from the dynamos, and stored in large gasometers, the apparatus employed producing hydrogen at the rate of three cubic feet per hour. In all the rooms where time observations are to



be made, there are clocks controlled, according to Jones's method, by a standard clock provided with Professor Young's gravity escapement. The room in which this beautiful instrument stands is, like the constant temperature room in the basement of the tower, provided with double walls to prevent fluctuations of temperature. Among the instruments of precision included in the equipment of the laboratory, may be mentioned two cathetometers, a standard metre and yard by Professor Rogers of Cambridge, one comparator, two fine chronographs, three spe-

nations involving measurements of the greatest accuracy.

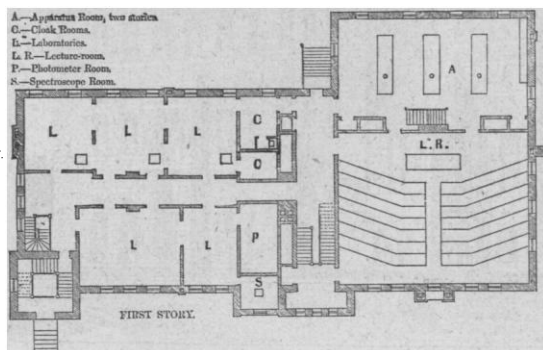
On the second floor are the mineralogical laboratory, furnished with blowpipe tables covered with white Minton tiles, the large chemical lecture-room, the museum for the collections of mineralogy and industrial chemistry, storerooms, and private laboratories. The third floor consists of the laboratories for qualitative and quantitative analysis, the photographic laboratory, rooms for special work in organic chemistry and gas analysis, balance-room, reading-room, and storerooms.



The equipment of the building will be complete in every particular; and no pains have been spared to secure the most perfect apparatus to be obtained at home or abroad. Many important improvements in the fixtures and arrangement of the laboratories, work-tables, gas and water supply, have been introduced.

The two departments have been rapidly outgrowing their accommodations during the past few years, and the increased laboratory space the new building will afford will effect a marked increase in the amount of special and original work.

SPENCER B. NEWBURY.



rometers, a spectrometer with twelve-inch circle reading to single seconds, two magnetometers, several galvanometers of high and low resistance, sets of resistance coils, and different forms of calorimetric apparatus.

Students entering the laboratory begin with simple illustrative experiments, and, as they acquire skill in manipulation, are assigned experiments requiring the use of instruments of precision. Some of the more advanced are now making determi-

