ing of the Plant of the Standard Oil Company at Bayonne, N. J., July 5, 6, and 7, 1900,' by W. H. Mitchell, notes the formation of cumulus clouds over the smoke from the fire, and the fact that the surface winds were drawn in towards the fire from a distance of over half a mile. The 'Climatology of St. Kitts, W. I.,' by W. H. Alexander, Observer Weather Bureau, discusses observations made in 1892–1899. Professor A. J. Henry considers 'The Hot Weather of August, 1900.' The initial movement which led to the hot wave during August was the slow drift of an area of high pressure southward and southwestward from southern New York, where it was located on August 4th, to the Ohio and Upper Mississippi valleys, in which region it culminated about the 8th. The warm weather extended from the Rocky Mountains to the Atlantic, and within this general area of high temperature there were small areas of excessive heating, as near St. Paul and St. Louis. At St. Paul the monthly mean temperature was 77.2 °, a higher average than has before been recorded there, and at St. Louis, also, the August mean was higher than any previously observed there. Two additional points are of special interest. From August 6th to August 11th, when the highest temperatures were recorded in Pennsylvania, Maryland, the District of Columbia and Virginia, the winds were from a northerly quarter. Secondly, between the 6th and the 11th the diurnal variation of the barometer at Washington was almost tropical in its regularity, and was very marked. Professor Abbe calls attention to the fact that a *Monthly Statement of Average Weather Conditions*, giving a brief discussion of the average weather conditions of each month as determined by long observation, is hereafter to be issued by our Weather Bureau. These statements are prepared in response to a popular demand for something in the way of a long range weather forecast. The first of these statements, that concerning August weather, is printed in this number of the *Monthly Weather Review*. Professor Abbe also has a paper on 'The Influence of the Lakes on the Temperature of the Land,' in which he concludes that "the direct influence of the lake water upon the temperature is appreciable for a few miles only; the indirect influence, by reason of the formation of cloud and rain, may be felt for 50 miles."

CLIMATE OF CORDOBA (ARGENTINA).

Under the direction of Mr. Walter G. Davis, the Argentine Meteorological Office is issuing a series of reports on the climate of Argentina with a rapidity and to an extent which is certainly phenomenal. The latest volume, XIII., bearing the date 1900, embraces 620 pages, 33 of which concern the Annual Reports of the Director for 1894 and 1895, and the remainder of which (*i. e.*, 587 pages) consists of meteorological tables for Cordoba. These tables are a continuation of those published in Vol. IX., of the *Anales* of the Argentine Meteorological Office, which ended with the year 1893. The number of years included in the present volume is five, ending with 1898. The completeness of tabular presentation is admirable, there being, for example, twenty-six distinct tables giving the results of observations on evaporation alone. It is impossible to overestimate the value of the data contained in such reports as this.

R. DeC. Ward.

AN EXPLOSION OF SCIENTIFIC INTEREST.

A singular though not unprecedented accident took place at the Mammoth mine, in Utah, recently, illustrating applied thermodynamics in an interesting but fatal manner, causing the death of one and the severe injury of another of the engineers of the mine.

The cylinder of an air-compressor exploded while in operation in regular work, and with such violence as gave evidence of more than the action of the normal air-pressure in its production. The back cylinder-head and the cylinder itself were shattered; the violence of the explosion was terrific. The two men were thrown across the room and badly mangled and one instantly killed. Fragments of metal and of flesh were found outside the building and a long distance away. The air-pressure, at delivery from the compressor, was but 80 pounds per square inch. The cause of the explosion is presumed to have been the compression of the vapors of petroleum given off by oil used for lubrication in too large quantity and of too light

a quality. Mingled with air in the right proportion for combustion, the mixture of air and vapor was heated by thermodynamic action of compression, approximately adiabatic up to the temperature of ignition, and the explosion followed. This action is precisely that relied upon in the Diesel gas-engine, recently attracting so much attention, for the ignition of its charge independently of gas-torch or electric spark. The phenomenon has long been known to the engineering profession, although instances of this kind of accident are rare. The use of effective methods of cooling the compressor-cylinder and the employment of lubricating oils of high flashing point constitute the preventives.

R. H. THURSTON.

SCIENTIFIC NOTES AND NEWS.

A BUST of the late Francis A. Walker is now being erected in the courtyard of the Boston Public Library, where it is planned to commemorate other eminent citizens of the city. The bust, which is in bronze, has been made by Mr. Richard E. Brooks, and the cost has been defrayed by an appropriation of $2,500 by the City Council.

THE London Society of Arts has awarded a silver medal to Professor R. W. Wood, of the University of Wisconsin, in recognition of his work on the diffraction process of color photography.

PROFESSOR MAX PETTENKOFER, of Munich, has been awarded the Pasteur medal of the Swedish Medical Association. This is the first award of the medal which is to be given every ten years for the most important work in hygiene and bacteriology.

DR. HERMAN S. DAVIS, recently expert computer of the U. S. Coast Survey, has been appointed observer at the International Latitude Observatory at Gaithersburg, Maryland, one of the six stations established by the Centralbureau der Internationalen Erdmessung for an investigation of variations of latitude.

LIEUT. C. LECOINTE has been appointed director of the astronomical work at the Brussels Observatory.

A LITTLE more than a year ago, says *Nature*, the attention of the Council of the Manchester Literary and Philosophical Society was directed to the fact that Dalton's tomb in Ardwick cemetery, Manchester, was in a very bad condition, owing to neglect. A committee was appointed to take steps to put the monument in a thorough state of repair, and there was no difficulty in obtaining subscriptions for this purpose. A full-page illustration of the tomb in its restored condition appears in the latest number of the *Memoirs and Proceedings* of the Society.

THE New York Board of Health is building, at a cost of $20,000, a laboratory to be wholly devoted to the study of the bubonic plague. It will be erected on the East River front on the grounds of the Willard Parker Memorial Hospital, and special care will be taken in its construction. The laboratory is to be of two-stories 25 x 50 feet. The ground floor will be occupied chiefly with eight stalls for horses that will supply the anti-plague serum. A staircase from the outside will lead to the upper floor, where experiments will be carried on. The walls and floor are of steel and cement, so as to be rat proof, and the windows are especially screened to keep out flies and mosquitoes.

During the recent visit of the *Albatross* to Japan considerable collections were made of the fauna of the coast within the 100-fathom line and on the edge of the Black Stream, the warm current which sweeps close to the eastern shores of the Japanese Islands. A number of rare and interesting species were taken and the collections will be worked up by specialists in the several groups represented. The fishes have already been placed in the hands of President Jordan, of Leland Stanford Jr. University, together with specimens collected by the *Albatross* during a previous visit to Japanese waters. In addition to the Fish Commission collections, Dr. Jordan has in his possession the great collection made by him during the past summer and all the Japanese fishes of the United States National Museum, the Imperial University of Tokyo, the Imperial Museum of Japan and several minor collections.

THE great Serpent Mound of Ohio, which has long been a subject of study and research for American archeologists, has been given by the