

be placed, if not geographically, at least morally, at the East End of the town; that is, it must be built in a poor quarter. Even in common fairness, the poor have a right to the site of the next museum. When the natural history collections were removed from the British museum to South Kensington, a great opportunity was missed. There is no taste more common among the poor than the taste for natural history. Had the stuffed beasts and birds with which the people of the West End are so heartily, so naturally bored, been put up in Whitechapel, they would have been welcomed by streams of admirers. Such a mistake ought not to be made this time. Of course, the architects, the men of science, and the artists like to see ranges of imposing galleries, and consider the collections and the advantages of the site far more than they do the public that looks at them, or that pays for them. Even they, however, would relent if they realized how useful, how pleasure-giving, how healthful a triumph might be secured by placing the great collections of art and science within the reach of the poor. Practically, they cannot go to the collections, and so the collections should go to them wherever possible or reasonable. But the rich can go into the East End to see exhibitions, and the more they are compelled to go there, the better. Let them, by going to see the new institute, learn where the poor live in London, and let them realize the condition of life there, and discover how, though materially it is nothing like so awful as they fancy in their compassionate and sentimental moments, it is, as far as education, self-improvement, rational and healthful pleasure are concerned, far below any standard which we can be content with.

Although so much of this was written for English readers, its truths are of value in America.

THE HEALTH OF NEW YORK DURING AUGUST.

THE population of New York is estimated at 1,446,000. Of this number, 3,246 died in the month of August, a decrease of 952 deaths as compared with the preceding month. Among children under five years of age, 939 less deaths occurred than in July, while there was also a diminished mortality from diarrhoeal diseases, amounting to 677. Diphtheria proved fatal in 104 cases, as against 133 in July; and scarlet-fever caused but 15 deaths, a gain of 10 as compared with the preceding month. The week ending on the 28th is noteworthy as having no deaths recorded from scarlet-fever, which is a most remarkable incident in a city of a million and a half of people. The deaths from consumption

were 443, four more than are recorded for July. It will be seen from these figures that the health of New York is improving; and, unless the temperature and humidity of the early fall are unpropitious, we shall expect to see a gradual falling of the death-rate until winter sets in, when the deaths from diseases of the respiratory organs will so increase as to again augment it.

August was pre-eminently a cool month. The mean temperature was but 70.19° F. An examination of the record of temperature as far back as 1870 fails to show any August in which the mean was so low. The nearest approach to it was in 1874, when it was 70.25° F. In most of the years during the past decade the mean has been above 72° F., and in one year, 1877, reached 75.37° F. The maximum point attained by the mercury during the month was 90° F., at 4 P.M. of the 28th. In four of the past ten years the August temperature has been the same as this year. In 1884 and 1885 it was one degree higher, and in 1880 and 1883 one degree lower. 90° F. may be considered as the maximum temperature for August for the past ten years. The lowest recorded temperature this year was 53° F., at 3 A.M. of the 22d.

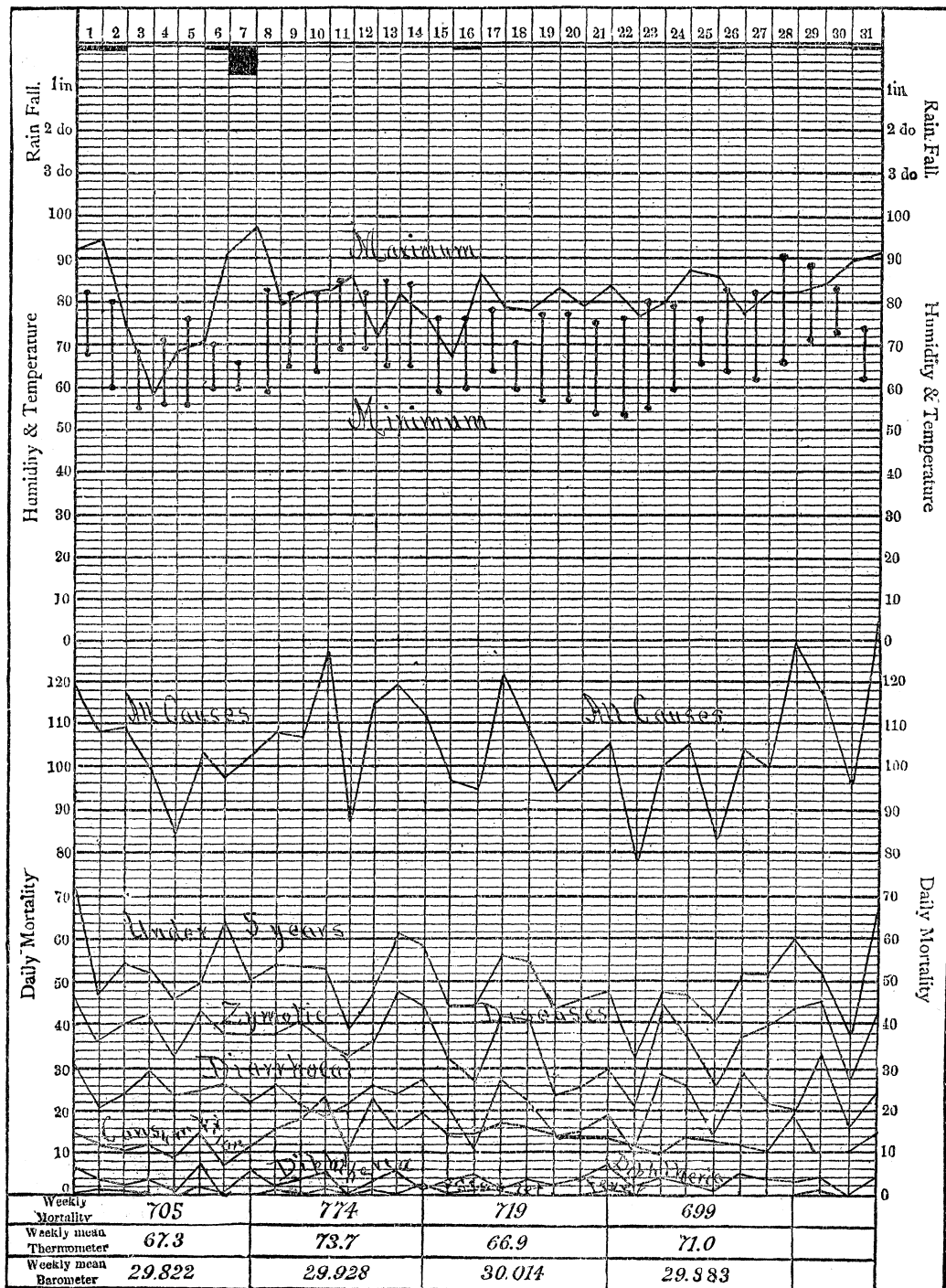
The rainfall of August, 1886, was also remarkable. Although some rain fell on six days of the month, the total amount was but .95 of an inch. From this it will be seen that the month was a very dry one. In but one year, 1881, since 1877, has the rainfall been so small. In 1885, 5.67 inches fell; and in the previous year, 1884, no less than 7.90 inches is recorded. The mean for ten years was 4.22 inches. July and August have been very noteworthy for the small quantity of rain which has fallen.

ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE Proceedings of the third annual convention of this association, which was held in Washington on the 26th and 27th of August, have just been issued as Bulletin No. 12 of the chemical division of the department of agriculture.

The benefit which has been derived from these meetings of the chemists of the country, who are engaged in the analysis and control of commercial fertilizers, has been very marked; and the adoption of a uniform official method of working has not only resulted in greater agreement among official chemists, but has also, by informing the analysts employed by those manufacturing fertilizers, of the methods in use, brought about greater harmony between the manufacturers and the control stations.

The results in this direction having been so sat-



isfactory, it was decided this year to enlarge the scope of the association, so that it now includes "the consideration of uniformity and accuracy in the analysis of fertilizers, soils, cattle-foods, dairy products, and other materials connected with agricultural industry," and "affords opportunity for the discussion of matters of interest to agricultural chemists." All persons exercising official control of the materials above named, or who are connected with departments of agriculture, agricultural experiment-stations, agricultural colleges, and state boards of agriculture, are eligible to membership. Under this extension of its field, the association will, no doubt, do as much for the improvement in accuracy and uniformity of the analysis of other materials as it has done for fertilizers.

The Proceedings contain the reports of committees on the estimation of phosphoric acid, nitrogen, and potash, the discussion of the previous year's experience, and concludes with the official methods adopted for the ensuing year.

The officers elected and the committees appointed by the president are as follows:—president, Dr. E. H. Jenkins of the Connecticut agricultural experiment-station; vice-president, Mr. P. E. Chazal, state chemist of South Carolina; secretary and treasurer, Clifford Richardson of the U. S. department of agriculture. Members of the executive committee: Dr. H. W. Wiley of the U. S. department of agriculture, Prof. M. A. Scovell of the Kentucky agricultural experiment-station. Other committees: phosphoric acid, Prof. W. C. Stubbs (Baton Rouge, La.), Prof. W. E. Moses (Knoxville, Tenn.), Dr. C. W. Dabney, jun. (Raleigh, N.C.); nitrogen, Dr. W. J. Gascoyne (Richmond, Va.), Mr. P. E. Chazal (Columbia, S.C.), Prof. M. A. Scovell (Lexington, Ky.); potash, Mr. Clifford Richardson (Washington, D.C.), Prof. H. A. Huston (Lafayette, Ind.), Prof. W. W. Cook (Burlington, Vt.); feeding-stuffs, Dr. G. C. Caldwell (Ithaca, N.Y.), Prof. W. H. Jordan (Orono, Me.), Mr. Clifford Richardson (Washington, D.C.); dairy products, Dr. H. W. Wiley (Washington, D.C.), Dr. S. M. Babcock (Geneva, N.Y.), Prof. H. P. Armsby (Madison, Wis.).

ARTIFICIAL RUBIES.

THE subject of artificial gems is at the present moment of considerable interest, not only financially, but also as furnishing an example of the manner in which the microscope is constantly called into use by almost every profession. Early this summer the Syndicate des diamants et pierres précieuses were informed that certain stones which had been sold as rubies from a new locality were

suspected to be of artificial origin. They were put upon the market by a Geneva house; and it was surmised that they were obtained by the fusion of large numbers of small rubies, worth at the most a few dollars a carat, into one fine gem worth from \$1,000 to \$2,500 a carat.

Some of these artificial stones were kindly pro-

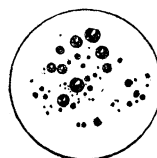


FIG. 1.—SPHERICAL CAVITIES IN ARTIFICIAL RUBY AS SEEN AT ONE TIME (ENLARGED 75 DIAMETERS).



FIG. 2.—SPHERICAL AND IRREGULAR CAVITIES IN ARTIFICIAL RUBY AS SEEN AT ONE TIME, EVIDENTLY FROM THE LOWER PART OF THE CRUCIBLE (ENLARGED 25 DIAMETERS).



FIG. 3.—ACICULAR CRYSTALS IN SAPPHIRE (ENLARGED 100 DIAMETERS).

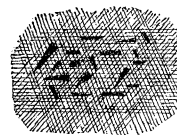


FIG. 4.—CUNEIFORM CRYSTALS IN RUBY AND SAPPHIRE (ENLARGED 200 DIAMETERS).

cured for me by Messrs. Tiffany & Co. I was not, however, permitted to break them for analysis, to observe the cleavage, or to have them cut so that I could observe the optical axes more correctly. I would at any time have detected the artificial nature of this production with a mere pocket-lens, as the whole structure is that peculiar to fused masses. Examination elicited the following facts. The principal distinguishing characteristic between these and the genuine stones is the presence in