

vegetable commonly found in the market was as tasteless as white field corn. The market people told us that to obtain sweet corn, it was necessary to plant northern seed every time, while the seed corn grown from northern seed always gave the tasteless variety.

Since, I believe, our sweet varieties of corn are derived by cultivation from the white field corn, this looks very like a case of atavistic mutation. I hope that Dr. White or some other investigators in Washington may be able to give us further information about this matter.

JOHN MURDOCH.

PUBLIC LIBRARY, BOSTON, MASS.,
January 12, 1903.

NOTES ON INORGANIC CHEMISTRY.

DISCOVERY OF NEW PLATINUM DEPOSITS.

A NEW YORK *World* dispatch from St. Petersburg of the date January 18 announces the discovery of vast deposits of platinum on the river Gusseva. It is said that within a month 25,000 men swarmed to the diggings, and before the police could reach the camp the miners got away with \$1,500,000 worth of platinum. The locality indicated in the dispatch is in the upper, or Goroblagodatsk district, on the eastern watershed of the Oural Mountains. The mines of this region are chiefly owned by Count Shouvalof and a number of companies. About eighty miles to the south is the Nizhni Tagilsk district, which is owned by the Demidoffs, and which has been the greatest producer of platinum in the past. The last few years the northern district has been a larger producer, but the sands and rock have run very low in platinum. While as recently as 1870 the richness of the sands was as high as one ounce to the ton, in 1895 the average was hardly one and a half pennyweights to the ton. The total production of that year was less than 150,000 ounces. If the figures of the *World* dispatch are reliable, it would indicate the production in a month of more than the usual annual output of late years. The platinum problem has become a very serious one, for while the demand has increased rapidly the last few years, the supply has been diminishing. Great efforts have been made to discover new fields, but without

much practical success. Platinum occurs in many places, but generally in insufficient quantities to pay for working. The Goroblagodatsk district consists chiefly of the river Iss and its tributaries. The total length of these streams is about sixty miles, and the Gusseva is one of these affluents. Allowing for all the probable exaggeration of the dispatch, it would seem that deposits have been discovered in this region which must be far richer than any which have been worked for many years. It is sincerely to be hoped that they shall prove to be of considerable area.

J. L. H.

CURRENT NOTES ON METEOROLOGY.

REPORT OF THE CHIEF OF THE WEATHER BUREAU.

THE 'Report of the Chief of the Weather Bureau' for 1901-1902 (4to, pp. 342) contains a number of interesting facts regarding the work of the Bureau. The storm warnings issued for the transatlantic steamship routes were so successful that the secretary of 'Lloyd's,' in London, conveyed to the Chief of the Bureau the congratulations of his committee 'on the infallibility of the predictions that have been supplied by the forecasts.' On August 1, 1902, 10,025 rural free mail-delivery routes were in operation, serving approximately 1,000,000 families. Of these families, 105,000, served by about 1,000 routes, were furnished with the forecasts of the Weather Bureau. If the necessary funds were available, it would be possible to make the distribution of the daily forecasts coextensive with the rural free delivery itself. Professor Abbe has acted as the general adviser of the trustees of the Carnegie Institution on matters pertaining to meteorology, and has also been charged with the oversight of the aerial research work of the Weather Bureau. A valuable set of nephoscope observations from the West Indies has been secured, from May, 1899, to May, 1902. Among the special studies carried on by the Bureau are the following: Investigation of the intensity of solar radiation by means of Angström's electric compensation pyrheliometer; a new barometric

system for the United States, Canada and the West Indies; a discussion of the vapor tension observations throughout the United States; a study of wind velocities and fluctuations of water level on Lake Erie, and of eclipse meteorology and allied problems.

The 'Report' also contains, besides the usual tables, tables showing the highest and lowest temperatures recorded at Weather Bureau stations for each month of the year, from the beginning of observations until the end of 1901 (with charts); the monthly and annual mean relative humidity for all Weather Bureau stations (with charts), etc.

SIMILAR BAROMETRIC VARIATIONS OVER LARGE AREAS.

SIR NORMAN LOCKYER and Dr. W. J. S. Lockyer, in England, and Professor F. H. Bigelow, in this country, have lately been investigating the similarity of curves representing many solar and meteorological phenomena. Several papers on this subject have already been published. In *Nature* for January 8, Dr. Lockyer presents some of his latest results. The curves showing the variations in pressure at Bombay, Colombo, Batavia, Mauritius, and Perth Adelaide and Sydney, Australia, are strikingly similar and indicate that the same kind of variations are in action over the whole region. The curves for Cordoba, Mobile, Jacksonville, Pensacola and San Diego, and the *inverted* curve for Bombay are also very similar to one another. Here, then, are two large areas indicating similar barometric variations from year to year, but one showing an excess while the other displays a deficiency. Professor Bigelow has also come to the conclusion (*Monthly Weather Review*, XXX., 347) that the same pressure variations prevail over very large areas, but that they vary from one district to another. Dr. Lockyer points out that the two investigations agree as to the following points: (1) The close connection between solar activity and barometric pressure; (2) the great extent over which very similar pressure variations exist, and (3) the presence of two large areas, the pressure variations over which are the reciprocal of each other.

WINTER ARIDITY INDOORS.

THE dryness of the air in furnace-heated houses is attracting more and more attention. In *SCIENCE* for March 23, 1900 (N. S., Vol. XI., 474), reference was made in these Notes to some observations of relative humidity made by the undersigned in his study during three weeks of November, 1899. In the *Journal of Geography* for December last, Professor Mark S. W. Jefferson, under the title 'Winter Aridity Indoors,' presents a simple mathematical treatment to show the actual quantities of water demanded in connection with a heating and ventilating plant to preserve a healthful humidity within doors in winter. Professor Jefferson concludes that, under the average conditions of temperature and humidity indoors during the three weeks referred to above, about two gallons of water per individual should be evaporated to humidify the daily supply of air. Such observations as these naturally suggest a useful line of work in connection with giving the air from our furnaces a proper supply of moisture.

NOTES.

THE rapid advance of balloon and of kite meteorology is evidenced by the fact that a new meteorological station has been established at Viborg, in northern Jutland, for the express purpose of carrying on the investigation of the free air by means of kites and balloons. This station is maintained through the cooperation of French, Swedish and Danish meteorologists. The location is an admirable one, being in a district where storms are frequent. Twenty-eight persons constitute the force at the new observatory, in whose establishment Messrs. de Bort, Hildebrandsson and Paulsen have been chiefly concerned.

R. DEC. WARD.

ELECTRICALLY UTILIZED POWER AT NIAGARA FALLS.

RECENT Consular Reports include one from Consul H. W. Brush, at Niagara Falls, Ontario, Canada, on the development of hydraulic power from the great falls. The original development of 50,000 horse-power on