reading of the thermometer (wet and dry bulb), dewpoint, mean humidity, direction and force of the wind and clouds and appearance of the face of the sky. From these, with a thorough (?) knowledge of the laws of storms, the officer is enabled to predict, with tolerable accuracy what will be the condition of the weather for the ensuing twenty-four hours. And, as telegraphic messages can travel with such lightning rapidity, the officers of the signal service can be kept informed as to different changes in the weather and issue bulletins accordingly.

St. Louis, Washington, San Francisco, Boston and St. Paul, and other cities, are centres from which bulletins are issued in the United States. In Canada, Toronto.

[According to Ben. Perley Poore, the earliest Weather Reports on this Continent were inaugurated about 1852 by A. H. Stephens, then a representative from Georgia at Washington, who was well acquainted with Espy, the meteorologist. Stephens suggested daily telegraphic reports, and Espy approved; agreeing to enquire whether the telegraph companies would furnish reports free. Stephens agreed to see Col. Seaton, of the *National Intelligencer*, and ask him to publish the reports as news items, free. All that was asked was granted, and from this, the present far-reaching system originated.—W. H. S.]

Southern New England suffered from terrible rain storms and cloud bursts this July. Waters were very high, dams burst, places were flooded and in one or two instances people drowned. "Limited areas will suffer from excessive rains," said my Summer forecast, and "streaks of heavy rainfall in places, "my probabilities for July.

The month of April, 1887, in Canada, was remarkable for the number and severity of the storms which passed over the eastern section, also for the storms of the 28-29 in the Lake region. The average atmospheric pressure was above the normal at almost all stations East of Lake Ontario. From Lake Ontario to the Rockies it was below. The average temperature was below the normal in Ontario, Quebec and New Brunswick, but slightly above along the Atlantic coast of Nova Scotia, in Manitoba and the North-West. In British Columbia it was below normal. Canada's minimum thermometer reading during April, 1887, was—26° below zero at Hillview, Man, on 2nd. The maximum reading was 90°, at Sourisford and St. Albans, Man., on the 29th and 30th respectively.

May, 1887, in Canada, was remarkable for fine, dry and warm weather; in Ontario and Quebec, also, for the absence of high winds from the Lakes to the Atlantic. The average temperature was above the normal at all stations. Light rainfall. During the first three weeks the crops suffered from drought and hot sunshine. Of 510 predictions issued by the Toronto office during May, 447 were fully verified. The maximum reading was 95° at Glichen on the 30th, and the minimum 12° at Savanne on the 4th.

June in Canada gave a temperature above the normal in Ontario, Quebec, Northern New Brunswick and Manitoba. In British Columbia and the Rocky Mountain region it was below the normal. The highest temperature of the month (94°5') occurred on the 15th at St. Albans, Man., and the lowest, (26°4') on the 3rd, at Swift Current, Assiniboia. Of 543 predictions issued by the Toronto office 425 were fully verified.

July, 1887, at Montreal, gave a mean temperature of 73°48' as compared with 69°19', the mean of the past 13 years. The maximum temperature was 90°4' on 4; minimum 56°3' on 14, a range of 34°1'. Rain fell on 16 days to the extent of 2.66 inches, as compared with a mean July rainfall of 4.25 inches. Pretty hot and pretty dry, eh? The mean temperature is the greatest monthly mean in the past 13 years, and the rainfall is the smallest for the month of July for the same period. Highest barometer reading 30.169 on 24, lowest 29.502 on 10, or a range of 0.667 inches.

Mr. Parker reports from New Brunswick my forecasts for July verified. The month entered with temperatures running up to the nineties, with thunder storms for several days in succession. Large hail in sections and high winds that blew down barns and moved heavy buildings. uncommonly cool for the time of year 11 to 15. Six inches of rain fell between the 1st and the 18th.

The average temperature at Oshkosh, Wis., for the first 12 days of July, 1887, was 91°. In 1886 it was 87° and in 1885, 84°.

The "relative humidity" on May 11-12 was remarkable at Nashua, N.H., when the dryness was such that the cotton in the Jackson Company's mills became highly electrified, to an extent unknown except in very dry, windy days in Winter. The trouble was great, causing as it did, the cotton to adhere to the cards, until steam was discharged into the room.

In Minnesota, Mr. Brandenburgh's report shows June to have been noticeable for its abnormally high temperatures and for deficiency of precipitation in western counties. A frost on the 23rd did a little damage. The mean temperature for the State was 68°3' or 2°9' above 1886 and 4°2' above 1885. The minimum temperature of the month was registered on the 4-5 at Grand Forks and Pokegama Falls, where it was 32°. Frosts went as low as the 43rd parallel. Precipitation was greatly deficient.

When it is 85° in the shade "by standard thermometer" it is usually about 140 in the sun on the pavements.

A tornado and hailstorm swept parts of Hughes and Sully Counties, Dak., on July 11.

Experts estimate this year's United States cotton crop at 7,500,000 bales, and value it at $300,000,000. This is $75,000,000 below the value of the annual hay crop of that country, $50,000,000 less than the average wheat crop and $340,000,000 below the average corn crop.

New England was visited by another very heavy rain storm on August 18, which caused washouts on several railways.

London, Eng., was struck by a terrific storm on August 17. Three persons were killed.

Nova Scotia has suffered, like a great many other places, from extreme heat and prolonged drought.

Mr. Simmons sends the following temperatures from Charleston, S. C.: July 11, maximum 96°; 13, 92°; 14, 95°; 15, 96°; 17, 97°; 18, 102°; 19, 96°; 20, 96°: 21, 93° and 22, 96°.

Mr. Moore reports June at Charleston a remarkable month, entering cool, with local showers to 10th, after which it turned dry for 15 days and the longer the drought continued the hotter it got until it nearly parched up the corn. From June 25 to end it was cooler, with rains, July opening cool and showery. Two earthquake shocks in June. Up to July 6, cool and showery, after which it grew warmer, the drought again coming on and getting worse and worse until the 24th, some days proving still and very sultry, "deadening hot by day and suffocating at night," the thermometer registering for seven consecutive days from 97° to 99° in the shade. A great many persons and animals were sunstruck and several died. On the 24th a terrific thunder storm occurred, the thermometer registering 92° at midnight. After the rain, the next evening (25) proved cool and Fall like.

Mr. Birt reports July hot at Utica, N.Y. Maximum, 103°, minimum 40°; mean 71°82'. Maximum barometer, 29°64', minimum 29°10'; mean 29°484. Five electrical storms, one on the 30th proving remarkable for the quantity of electrical manifestations.

At Philadelphia, July 16 gave a temperature of 102°, the hottest with one exception for over 30 years. Thirty cases of sunstroke that day.

At Glasgow, Scotland, the heat during June 1887 was phenomenal, not having been surpassed for over 25 years. On June 25 it was 82°7' in the shade and 133°2' in the sun.

The infant mortality during the heated terms this Summer, in the cities, has been appalling. Parents on the approach of hot weather, should make every effort to remove their little ones to cooler quarters.