

DETAILS OF THE WEATHER OF THE MONTH IN THE UNITED STATES.

CYCLONES AND ANTICYCLONES.

By A. J. HENRY, Meteorologist.

The tracks of 14 primary and 8 secondary cyclones have been plotted on Chart III. The great majority of these were without distinguishing features. The movement in latitude was more widely distributed than usual and there was an apparent lack of stability in most of the cyclones, as evidenced by the large number of secondaries that developed in the Rocky Mountain and Plateau region; also in the Northern Appalachian region. There was also a distinct tendency on the part of the cyclonic systems to assume the trough form east of the Mississippi. The track of cyclones plotted as III Ba and III Bb represent storms of widespread precipitation—snow in the mountains and rain in the lowlands. Near the close of the month a cyclonic system centered over southwest Arizona was apparently prevented from moving northeast by the pressure distribution over the plateau region. As it lingered over Arizona, flood-producing rains fell over that State, the first for several years. This cyclone finally moved east-southeast and appeared to dissipate over the mouth of the Rio Grande on the 25th. A few days later a fresh cyclone developed over Oklahoma and moved rapidly to the Lake Region as a storm of considerable energy. See track XIV.

Anticyclones.—Thirteen anticyclones have been plotted on Chart II. All of these first appeared on the daily weather maps west of the 95th meridian, and like the cyclones a number of them dissipated before reaching the Atlantic. The Western Plateau region was occupied by an anticyclone from the 13th to the 18th and again from the 21st to the 23d. The southeastward movement of anticyclones was a feature of the month; four of the total number reached the Gulf States and apparently dissipated there. The movement of both cyclones and anticyclones during the month was more diverse than usual.

THE WEATHER ELEMENTS.

By P. C. DAY, Climatologist and Chief of Division.

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PRESSURE AND WINDS.

The early part of the first decade of the month had pressure values generally below normal, particularly toward the south and east. No decided storm centers were apparent, however, until about the middle of the decade, when a low area that had moved eastward across the Great Lakes probably combined with another that apparently developed off the New Jersey coast and by the morning of the 5th appeared as a severe storm near the Massachusetts coast, with low barometer readings and high winds from New Jersey to Maine. This storm slowly dissipated eastward, strong winds continuing for a day or two along the New England coast.

The latter part of the decade had strong high pressure over northern districts, with low pressure in the South, the latter developing into a well-defined storm that had moved northward and was central at the end of the decade in the upper Mississippi Valley. This storm was attended by heavy rains in the central valleys and by snows to the north and west of the center, the falls being particularly heavy in portions of eastern Colorado and western Nebraska. Early in the second decade high pressure overspread the Northwest and cold weather for

the season prevailed for several days over most districts, the temperature falling to 20° below zero at points in Wyoming, and to freezing, or lower, in the interior of the Gulf States. Moderate pressure prevailed during the remaining portion of the second decade, but with a rising tendency, so that by the end it was well above normal over most eastern districts and high and rising to westward of the Rocky Mountains.

Pressure continued high in the West for several days, but in the East it rapidly gave way, and by the middle of the last decade pressure was low and falling from Texas northeastward to the lower Lakes and stormy conditions prevailed for several days over the eastern and southern districts, with heavy precipitation in the central valleys. At the same time high pressure was advancing into the upper Missouri Valley, the barometer reading at Havre, Mont., rising above 31 inches, the highest ever observed at that point. Low temperatures prevailed over all northern districts for several days, extending southward and westward over the Plains and Mountain districts, where the lowest temperatures for the month were generally observed. Near the close of the month pressure had fallen over central and eastern districts and a storm of wide area, attended by rain or snow, moved during the last two days from Texas northeastward to the Lower St. Lawrence Valley. At the same time high pressure and cold weather were again advancing into the Northwest.

The average pressure for the month showed the highest area extending as usual from the South Atlantic States northwestward to the northern Rocky Mountain and Plateau regions, with the maximum pressure, 30.20 inches, sea level, over central Wyoming. Pressure was lowest over the far Southwest, where the negative departures from the normal were likewise the greatest. The average pressure was above normal in southern Canada and generally over the northern and central portions of the United States, but in the most southern sections the averages for the month were less than normal.

November was a month with more wind than is usual over extensive areas, in fact several stations report the wind movement as greater than in any previous November. Winds were especially high and damaging at points on the New England coast on the 5th and 6th and in the vicinity of western Lake Erie on the 29th and 30th, where they were as high as, or higher than, ever before observed. The prevailing wind directions were mostly north to west along the Atlantic and Gulf coasts and over much of the interior of the country. In portions of the Ohio Valley and the Lake region they were frequently from the south or southwest and these directions prevailed extensively in the far Northwest.

TEMPERATURE.

November opened with unseasonably high temperature in the Ohio Valley and thence southeastward, but from the upper Lakes westward and southwestward cold weather for the season prevailed.

During the next few days considerably colder weather overspread the Atlantic Coast States, with frost from Virginia northward and in the Ohio Valley, and there was a general rise in temperature over most western districts, except that it was much colder in the Dakotas and adjacent States on the 4th. During the latter half of the first decade cool weather for the season prevailed in the Plains region and thence westward, but the daily