54 to 69; Gulf States, 53 to 73; Ohio valley and Tennessee, 56 to 62; Lake region, 54 to 68; Northwest, 52 to 72; Rocky Mountain stations, (excepting Pike's Peak,) 33 to 61; Pacific coast, 65 to 73.

WINDS.

The prevailing directions of the wind are shown by the arrows on chart No. II, from which it will be seen that the south and southeast winds have corresponded throughout the interior of the country very clearly to the distribution of barometric pressure.

Total movements.—Largest: Pike's Peak, 17,483; Dodge City, 11,998; Cape Lookout, 11,598; Cape May, 10,357; Breckenridge, 10,301. Smallest: Portland, Or., 2,394; Lynchburg, 2,569; Shreveport, 2,771; Augusta, 2,955.

Highest winds.—The highest velocities in miles per hour have been: 126 at Mt. Washington; 84 at North Platte; 70 at Pike's Peak; 60 at Cape Henry and Duluth.

Local storms, tornadoes, &c., are reported as follows: 6th, a tornado passed over St. Marks, Fla., at 1:50 p. m., demolishing several houses, chimneys, &c.; another occurred in Sabine, Tex. 14th, a whirlwind at Eastport, Me. 18th, tornadoes at St. Hyppolite, Can., and near Quebec. The tornado of the 18th, passing from Saratoga co., N. Y., southeastward into Bennington co., Vt., was especially destructive at Argyle and Cambridge, N. Y., and Bennington co., Vt.; the average width of destructive winds and hail is said to have been less than 2 miles, and its length about 50 miles; hail-stones of 5, 6 and 8 inches in circumference and weighing 4 ounces were picked up, and the very heavy rain accompanying it did additional damage; it began about 1 p. m., and probably ended about 3 p. m. in Vt. 20th, Marion, Ind. and Blackearth, Wis., severe storms. 21st, Key West, Fla. water-spout half mile NW. of station. 22nd, Wytheville, Va., severe wind-storm. 26th, Boerne, Texas, violent tornado. Sand-storm at Yuma, A. T., on the 28th, and "terriffic" sand-storm on the 29th. On the 16th to 19th the unusual occurrence is noted of a very heavy "Kona" storm and rain over the Sandwich Islands; heavy snow fell on the mountains, and a large water-spout was observed at Honolulu. (The "Kona" is a strong northerly wind, interrupting the regular NE. trade, and usually preceding a hurricane.) 30th, St. Paul, Minn., violent storm.

VERIFICATIONS.

Indications.—The detailed comparison of the tri-daily weather Indications with the telegraphic weather reports for the succeeding 24 hours shows a general percentage of omissions of 0.1 per cent., and of verifications of 85.9 per cent. Out of 3,713 predictions, 2,719, or 73.3 per cent., have been fully verified; 292, or 7.9 per cent., have been three-fourths verified; 459, or 12.4 per cent., have been one-half verified; 83, or 2.3 per cent., one-fourth verified; 160, or 4.4 per cent., have failed. The percentages for the four elements have been: Weather, 94.4; Wind, 87.5; Temperature, 84.1; Barometer, 77.6. The percentages of verifications by geographical districts have been: New England, 84.7; Middle Atlantic States, 87.0; South Atlantic States, 85.4; East Gulf States, 88.8; West Gulf States, 88.3; Lower Lakes, 86.4; Upper Lakes, 82.5; Tennessee and the Ohio valley, 87.9; Upper Mississippi valley, 83.7; Lower Missouri valley, 83.8.

Cautionary Signals.—During the month 83 Cautionary Signals have been displayed at stations on the Gulf and Atlantic coasts and the Lakes. Of these, 49, or 59 per cent., were justified by subsequent high winds within one hundred miles of the stations where they were displayed, and 34, or 41 per cent., were not justified so far as known. Fifty-one instances of high winds, when no signals were displayed, have also been reported from these stations. Telegraphic communication with the North Carolina coast stations has been interrupted during the month.

NAVIGATION.

Stages of Water.—In the table on chart No III is shown the highest and lowest readings on the river-gauges for the month. It will be seen that the lowest water in the Missouri and the extreme upper portion of the Mississippi occurred about the middle of the month, after which time these rivers rose until they reached their highest readings, at the close of the month. The lower portion of the Mississippi, as also the Ohio and its tributaries, and the Red river, all reached their lowest readings on the last day of the month. The Mississippi was slightly above the danger-line at Vicksburg from the 1st to the 23rd. At Keokuk, on the 28th, navigation was obstructed by the very low stage of water; also at Pittsburgh on the 29th. At Cambridge, Texas, on the 21st, water was very high in the Red river. At Indianola, on the 16th, tide was 8 feet higher than usual. At Leavenworth, destructive freshet on the 18th, and river very high on 30th. At Creswell, Marion county, Kan., highest flood for many years. At Sedgwick, Kan., on the 19th, river rose 23 ft. in 24 hours. At Hutchinson, and other towns in eastern Kansas, destructive freshet on the 20th, and subsequently.