and New England coasts, when high westerly winds prevailed at nearly all of them, while signals had been ordered for the exposed stations alone.

NAVIGATION.

Height of Rivers.—Upon chart No. III is a table giving the highest and lowest water-marks, with the dates upon which they occurred. The *Red river* rose slowly, but steadily, at Shreveport, from 4 ft. 5 in., 1st, to 11 ft. 8 in., 31st. In the *Arkansas*, at Little Rock, the fluctuations were very slight, and the water continued low; it was frozen over the 8th. The *Missouri* and *Upper Mississippi* continued frozen over and low the entire month. *Lower Mississippi.*—Navigation suspended between Memphis and Cairo till the 14th, when the ice-gorges passed off. Below Cairo the rise continued to the close of the month, due to the water from the Ohio, Cumberland and Tennessee rivers. From Cairo to St. Louis the ice blockade continued at the end of the month. *Cumberland.*—The ice-gorges below Nashville moved down on the 10th and 11th, after which navigation was resumed. *Tennessee.*—At Paducah the ice-gorge moved out into the Ohio the 15th. *Alleghany.*—Closed during the month. *Monongahela.*—Ice-gorges passed off on the 13th and 14th, with great destruction. *Ohio.*—At Cairo the river was clear on the 12th. The ice-gorges moved some on the 9th at Ironton, O.; 12th and 13th, at Cincinnati. On the 14th there was a general movement of the ice from Pittsburgh to Paducah, which commenced passing Cairo the 15th, after which the resumption of navigation took place. The loss of property above Louisville was very heavy in the shape of steamers, barges, coal, &c. *Potomac.*—At Georgetown, D. C., the ice-gorge gave way the 18th, damaging vessels and property along the banks. *Hudson.*—At Garrison's, opposite West Point, has remained open, but above and below teams cross on the ice.

TEMPERATURE OF WATER.

As heretofore, the maximum and minimum temperatures alone, with the average depth of the water, are given in the table on chart No. II.

ATMOSPHERIC ELECTRICITY.

Thunder-storms.—1st, Daytona, Fla.; St. Mary's, Ga. 7th, Howard, Neb. 8th and 12th, Fayette, Miss. 14th, Santa Fe; Sedgewick, Kan. 15th, St. Louis; Anna, Ill.; Brookhaven, Miss.; Weldon, N. C.; Jackson, Tenn. 17th, Mobile; Fayette, Miss. 18th, Montgomery. 20th, Galveston. 21st, Charleston; Galveston; Tybee Island, Ga.; New Orleans. 22nd, Tybee Island; New Orleans; Fayette, Miss. 23rd, Aiken, S. C. 25th, Melissa, Tex. 28th, San Bernardino, Cal. 30th, Stanley, Kan.; Starkey, N. Y.; Oregon, Mo.

Distant Lightning.—13th, Fayette, Miss. 17th, Montgomery. 19th, Jackson, Tenn. 20th, Atlanta, Ga. 21st, Savannah. 27th, Portsmouth, N. C.

Auroras.—6th, Cornish, West Waterville, Surry, Gardiner, Standish and Orono, Me; St. Paul, Duluth, Breckenridge and Minneapolis, Minn.; Malone, N. Y.; Fort Pembina and Bismarck, Dak.; West Charlotte, Vt. 7th, Gardiner, Me.; Minneapolis, St. Paul and Duluth, Minn.; Escanaba; St. John's, N. F. 8th, Escanaba. 13th, Wappinger's Falls, N. Y. 14th, Gardiner, Me.; Waltham, Mass.; North Argyle, N. Y.; Fort Pembina, Dak. 15th, Duluth; Fort Pembina, Dak. 16th, Fort Brady, Mich. 19th, Denver. 20th, Hillsboro, Ohio.

Electric Ground Currents.—The observer at Barnegat, N. J., reports strong electric currents on the 17th; the telegraph line was working at 6 p. m., although grounded north and south.

OPTICAL PHENOMENA.

Solar Halos.—1st, Iowa, Minn., N. H., N. Y., Penn. 2nd, Iowa, N. Y., Penn. 3rd, Ill., N. Y. 4th, Me., Neb., Vt. 5th, Dak., Ill., Ind., Mich., Minn., Neb., N. Y., Ohio. 6th, Cal., Ill., Mass., Mich., N. Y., Ohio, Vt. 7th, Iowa, La., Minn., Miss., Neb. 8th, Dak., Ill., Mass., Minn., N. H., R. I. 9th, Conn., Ind., Mich., Minn., Neb., Ohio, Penn. 10th, Mass., Minn., R. I., Tenn. 11th, Iowa, Me., Mass., Neb., N. H., N. J., N. Y., Penn. 12th, Me., Neb., N. J., N. Y., Vt. 13th, N. H., Vt. 14th, Dak., Ill. 15th, Col., Dak., Ga., Iowa, Neb., S. C. 16th, Dak., Ga., Ill., Mich., S. C. 17th, Me., Minn., Neb., N. H., N. Y., R. I. 18th, Minn., Neb. 19th, Col., Dak., N. Y., Va. 20th, Dak., Ga., Iowa, Minn., Neb. 21st, Iowa, Kan., Minn., Neb., N. Y., Ohio, S. C. 22nd, Col., Ind., Ohio. 23rd, Can., Iowa, Minn., Penn. 24th, Iowa, N. Y. 25th, N. J., N. C., Ohio, S. C., Vt. 26th, Me., N. H., Vt. 27th, Ill., Texas. 28th, Ill., Me., N. H., N. Y., Tenn., Vt. 29th, Ill., Mich, Minn., N. Y., Tenn. 30th, Ill., Ind., Mich., Ohio. 31st, Ala., Me., Minn., Miss., N. H., N. Y., Tenn.

Lunar Halos.—1st, Dak., Iowa, Penn., Tenn., Va. 2nd, Ill., Iowa, Minn., N. Y., N. C., Tenn., Wis. 3rd, Dak., Iowa, Ohio, Tenn. 4th, Vt. 5th, Ind., Mo., Neb., N. J., Ohio, Tex. 6th, Cal., Mass., N. H.,