

Texas.—Clarksville, 30th, crops suffering badly. In the counties of Atascosa, Arkansas, Bexar, Comanche, Faumin, Sabine, Hopkins, Henderson and Hunt, during the first part of month, crops suffered severely. Corsicana, 30th, month very dry, vegetation badly damaged. Indianola, 7th, cisterns empty, streams very low. *Virginia*.—Wytheville, 30th, cisterns and streams drying up, crops suffering. Lynchburg, 12th, small streams completely dried up, and even wells fail to meet their purpose; cattle have to be driven, in some instances, as far as 6 miles for water, crops suffering badly.

Waterspouts.—Somerset, Mass., 21st, 3.15 p. m., two waterspouts observed on Taunton river. Lake George, Fla., 14th, two heavy squalls from opposite directions, met squarely in the lake in front of the observer's place, producing a terrible whirl, the water immediately rising from the centre of the whirl, forming a long column, reaching from the clouds to the lake, and having the form of an hour-glass. It traveled some distance and as the whirl subsided, broke in two in the middle, the upper part ascending and mingling with the clouds, and the lower part falling into the lake with a splash.

TEMPERATURE OF WATER.

The Temperature of Water, as observed in rivers and harbors at Signal Service stations, with the average depth at which observations were taken, is given in the table on the left-hand side of chart No. III. Daily observations for the entire month were made at all stations, except at Escanaba, where they are wanting from the 5th to the 11th, inclusive.

ATMOSPHERIC ELECTRICITY.

Thunder Storms.—In the various districts they were reported on the following dates: New England, 1st to 4th, 5th, 10th to 18th, 20th, 21st, 23rd to 29th. Middle Atlantic states, 1st, 3rd, 4th to 7th, 11th to 14th, 16th, 19th to 23rd, 25th, 26th to 31st. South Atlantic states, 1st, 2nd, 8th to 15th, 17th to 23rd, 25th to 28th, 30th 31st. Florida, 1st to 3rd, 10th to 24th, 27th to 31st. Eastern Gulf states, 1st, 2nd, 9th to 14th, 17th, 18th, 23rd, 25th to 28th. Western Gulf states, (including Texas) 1st, 2nd, 3rd, 4th, 6th 9th, 10th, 12th to 18th, 21st, 22nd, 24th, 25th, 29th. Ohio valley and Tennessee, 6th to 17th, 21st, 22nd, 25th, 27th to 30th. Lower Lake region, 5th, 6th, 7th, 8th, 10th, 12th, 13th, 16th, 18th, 20th, 21st, 25th, 27th, 29th to 31st. Upper Lake region, 4th to 10th, 12th, 13th, 15th, 16th 20th to 25th. Upper Mississippi valley, 2nd, 6th to 17th, 20th, 21st, 24th. Lower Missouri valley, 6th to 17th, 19th, 20th, 22nd to 25th, 29th. Southern Slope, 1st, 2nd, 8th, 10th, 11th, 14th to 17th, 19th, 24th to 31st. Middle Slope, 2nd, 4th, 5th, 6th, 8th, 10th, 12th, 13th, 20th, 21st, 22nd, 25th, 29th. Northern Slope, 1st, 2nd, 9th, 11th, 13th, 14th, 16th to 20th, 23rd, 25th, 30th. Southern Plateau, 3rd to 8th, 10th, 11th, 14th, 16th to 26th, 27th, 30th. Middle Plateau, 1st, 2nd, 10th, 15th to 19th, 25th, 27th. Northern Plateau, 2nd, 3rd, 9th, 11th 15th, 18th, 19th, 23rd, 24th, 26th to 28th. Southern Pacific coast region, 3rd, 25th. Middle Pacific coast region, 4th. Northern Pacific coast region, 18th, 23rd, 30th, 31st.

The following items of interest connected with the peculiar manifestations of electricity during the progress of thunder storms were obtained from various sources: La Crosse, 21st, church spire demolished, six or seven houses badly damaged and a number of barns burned. Oakland, Wis., 21st, several buildings struck and burned. Port Washington, Wis., 21st, three boys, while crossing a bridge at a rapid gait, and elbow to elbow, were enveloped by a flash of lightning, instantly killing the two outside boys while the middle one was left uninjured. Richmond, Va., 13th, about eight miles from town a large tree was set on fire by electricity, and a shell which was lodged in the tree during the late war was exploded thereby with a deafening report. Carr Station, Col., 16th, a cow boy while riding his horse to seek shelter from the storm was instantly killed; his body was terribly disfigured and burned: the horse had its head split open and brains scattered about, while the remainder of the body was badly mangled; all the metallic portions of the saddle and bridle were burned off. On New York Bay, 15th, a small fishing schooner containing two ladies and one gentleman, had its mast shattered to splinters down to the step, without doing the slightest injury to the hull of the boat or its occupants; the heads of the ladies were within one foot of the mast when struck. Grafton, Ohio, 31st, in passing through the roof of a residence near one of its chimneys the electricity entered a room below where two little girls were playing. It struck one of them on the head and passed down the right side of her face and over her breast to her knees, leaving a mark about two inches wide and completely stripping off her clothing, which was torn into shreds; the child was instantly killed while her companion remained uninjured. Saugus, Essex Co., Mass., 21st, electricity entered the telegraph office upon a wire connected with the instruments, burning off the connections and completely destroying one of the wires; a lady who sat about two feet distant from the instrument table, copying a message, had her pen and penholder melted in her hand, the paper was scorched, the carpet burned, torn up and blackened and the room filled with smoke: there were several sharp cracking explosions, which were heard a considerable distance: the lady experienced no sensation, except a slight pain in her side nearest to the instruments, otherwise she was perfectly uninjured: the walls of the house were scorched and

blackened along the course pursued by the electricity. Concord, N. H., 21st, the wires in the Telephone Exchange were completely burned out, stopping all communication with surrounding towns. Schuylkill and Columbia Co's, Pa., 29th, most violent thunder storm for years; several persons killed by lightning and many buildings along the course of the storm badly shattered or burned. Wauwaukee, Wis., 20th, most violent thunder storm for past 25 years; the electricity tore a hole about 6-by 4 feet in the roof of a house and, passing thence down the chimney, demolished every wire-screen door in the building without injuring the occupants; 26 pigs, lying under a tree 25 rods from the house, were instantly killed. Fremont, Ohio, 8th, three horses instantly killed in an open, treeless field. Chicago, 20th, house struck, tearing off the shingles and siding as though so much paper; the electricity appeared to envelop the whole building, knocking the chimney into sections, cracking the stove and demolishing the windows; one person instantly killed in a group of three and the others seriously stunned. Columbus, Ohio, 22nd, house struck, tearing the chimney to pieces and filling the rooms with soot; the inmates were not injured in the least. Delaware, Ohio, 22nd, at a point about 8 miles west of town, electricity passed down the chimney of a house, splintering several joists; then moving onward and down the sides of the building it entered the room below, tearing a bed into shreds; from here it passed to a cook stove in an adjoining room, breaking it into innumerable pieces, and passing thence to a man who stood near, ran down his arm and leg and disappeared through the floor, in which it left a large hole. This person complained afterwards of sharp pains passing from one leg to the other, and was unable to close his hand.

Atmospheric Electricity Interfering with Telegraphic Communication.—Fort Missoula, Mont., 19th; Umatilla, Or., 2nd, 19th, 29th; Phoenix, Ariz., 23rd; Camp Grant, 21st, 23rd; Fort Cummings, 11th; Concho, 1st, 11th, 15th; Fort Davis, 8th and 16th; Decatur, 11th and 26th; Jacksboro, 1st, 15th; Fort Sill, 14th, 21st, 30th; Fort Mc Kavitt, 1st, 2nd, 14th; Eagle Pass, 1st; Castroville, 2nd, 16th; Uvalde, 16th, 17th; Bismarck, 18th 19th; La Crosse, 21st; Mason, 15th, 16th; Fredericksburg, 15th, 16th; Mount Washington, 16th, the electricity entered the printing office at the summit, scattering a case of type; it also burnt one of the wires in the telegraph office; in the Signal office it burnt the telephone wires, passed half way round the room, burning the wires in several places and scorching the woodwork.

Auroras.—The display of the 2d was the most widely observed of any reported during the month, the line of observation continuing westward from Sydney, N. S., to Bismarck, and northward from the 39th parallel to Duluth. The following stations reported, and generally between the hours of 9 p. m. and midnight: Halifax, N. S., Charlottetown, P. E. I., Toronto, Can., Gardiner, Me., Eastport, 9.15 to 11.30 p. m.; Portland, 9 p. m. until after midnight; New Haven, 9 p. m. until after midnight; Strafford, Vt., Contoocookville, N. H., Williamstown, Mass., Cambridge, Mass., Fall River, Mass., Springfield, Mass., Newport, R. I., 10 p. m. until after midnight; Freehold, N. J., Little Egg Harbor, N. J., Ithaca, N. Y., Sandusky, Ohio, Toledo, 10 p. m. until midnight; Detroit, 10 p. m. until after midnight; Grand Haven, 9.30 p. m. until after midnight; Madison, Wis., Mission House, Wis., Clinton, Ia., Ft. Madison, Ia., Duluth, 8.30 to 10.50 p. m.; Huron, Dak. Ty., 9.30 p. m. until after midnight; Bismarck, 10 p. m. until after midnight. The display of the 3d, a continuation, in most cases, of the 2d, was visible at scattering stations from Eastport westward to Yankton, and generally between midnight and 2 a. m.; Eastport, midnight to 2 a. m.; Newport, midnight to 1 a. m.; Grand Haven, midnight to 2 a. m.; Monticello, Iowa, midnight to 2.30 a. m.; Clear Creek, Nebr., midnight to 2 a. m.; Yankton, 8 to 9 p. m. Isolated displays were reported as follows: Westborough, Mass., 5th, 10.30 p. m.; Fall River, Mass., 6th, 15th; Newport, Vt., 29th; Madison Barracks, N. Y., 29th, 9.25 p. m.; Montreat, Can., 29th; Burlington, Vt., 22d, 10 to 11 p. m.; 23d, 9 to 11 p. m.; 29th, 10 p. m. to midnight; Toronto, Can., 25th, 29th; Halifax, N. S., 31st; Sydney, N. S., 24th, 25th; Fallsington, Pa., 21st, 31st; Vevay, Ind., 26th, 27th. (29th, 9.55 p. m.); St. Paul, Minn., 1st, 8.30 to 11 p. m.; 12th, 9 to 11.20 p. m.; 13th, 9 to 11 p. m.; Embarrass, Wis., 24th; St. Vincent, Minn., 12th, 9.40 p. m. until midnight; Ft. Stevenson, Dak., 17th.

Zodiacal Light.—Nashville, Tenn., 16th, 18th, 20th, to 23rd, 25th, 27th, to 31st, Monticello, Ia., 19th, 25th, 30th; Cambridge, Mass., 19th; Northport, Mich., 13th.

OPTICAL PHENOMENA.

Solar halos have been observed in the various districts on the following dates: New England, 3rd, 7th, 18th, 25th, 27th; Middle Atlantic states, 9th, 15th, 22nd, 29th, 30th; South Atlantic states, 6th, 7th, 29th; Florida, 12th and 30th; Eastern Gulf states, 30th; Texas, 14th; Ohio valley and Tennessee, 4th, 11th, 12th, 13th, 18th, 20th, 26th, 30th; Lower Lake region, 26th; Upper Lake region, 2nd, 3rd, 11th, 14th, 16th, 26th; Upper Mississippi valley, 13th; Missouri valley, 9th, 13th, 27th, 29th; Middle Slope, 11th 14th; Middle Plateau, 5th, 8th, 13th; Northern Pacific coast region, 24th, 29th.

Lunar halos have been observed in the various districts on the following dates: New England, 1st, 4th, 10th; Middle Atlantic states, 4th, 5th, 7th, 9th, 11th to 15th; South Atlantic states, 4th, 7th, 10th, 11th, 13th; Eastern Gulf states, 5th, 9th, 12th; Western Gulf states and Texas,