

Excessive monthly precipitation—Continued.

State.	No. years noted.	State.	No. years noted.
Florida	2	Vermont	1
Kentucky	2	Wisconsin	1
Maryland	2	Arizona	0
New Hampshire	2	California	0
New Jersey	2	Delaware	0
Oregon	2	District of Columbia	0
Washington	2	Idaho	0
Ohio	2	Iowa	0
South Carolina	2	Maine	0
Colorado	1	Minnesota	0
Connecticut	1	Montana	0
Indian Territory	1	Nevada	0
Massachusetts	1	New Mexico	0
Michigan	1	Rhode Island	0
Missouri	1	The Dakotas	0
Nebraska	1	Utah	0
New York	1	West Virginia	0
Pennsylvania	1	Wyoming	0

Excessive daily precipitation (24 hours).

State.	No. years noted.	State.	No. years noted.
Louisiana	15	Pennsylvania	3
Texas	15	Colorado	2
Alabama	14	Massachusetts	2
Arkansas	14	Minnesota	2
Georgia	14	Oregon	2
Tennessee	14	Vermont	2
Mississippi	13	Wisconsin	2
North Carolina	13	Maine	1
Florida	10	Michigan	1
Kansas	10	Montana	1
The Dakotas	9	New Jersey	1
Illinois	9	New Mexico	1
Indian Territory	8	Ohio	1
Indiana	8	Rhode Island	1
Iowa	6	Wyoming	1
Kentucky	6	Arizona	0
Missouri	6	Delaware	0
Nebraska	6	District of Columbia	0
California	4	Idaho	0
Maryland	4	Nevada	0
South Carolina	4	New Hampshire	0
Virginia	4	Utah	0
Connecticut	3	Washington	0
New York	3	West Virginia	0

Excessive hourly precipitation.

State.	No. years noted.	State.	No. years noted.
Texas	11	California	0
Arkansas	5	Colorado	0
Florida	5	Connecticut	0
Kansas	4	Delaware	0
Tennessee	4	District of Columbia	0
Illinois	4	Idaho	0
Iowa	4	Indiana	0
North Carolina	4	Kentucky	0
Alabama	3	Maine	0
Georgia	3	Massachusetts	0
Louisiana	3	Minnesota	0
Mississippi	3	Montana	0
South Carolina	2	Nevada	0
The Dakotas	2	New Hampshire	0
Indian Territory	2	New York	0
Maryland	1	Oregon	0
Michigan	1	Rhode Island	0
Nebraska	1	Utah	0
New Jersey	1	Vermont	0
New Mexico	1	Virginia	0
Ohio	1	Washington	0
Pennsylvania	1	West Virginia	0
Arizona	0	Wisconsin	0
		Wyoming	0

Daily (24 hours).

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			Inches.	
Terrell, Tex.	18.00	22-24, 1879	Point Pleasant, La.	6.02	2, 1885
Mount St. Helena, Cal.	14.70	20-21, 1880	Hammond, La.	5.98	21-22, 1892
Point Pleasant, La.	12.28	5, 1885	Montgomery, Ala.	5.97	2, 1876
Fort Smith, Ark.	11.00	23, 1879	Healdton, Ind. T.	5.97	28, 1892
Vaiden, Miss.	9.92	4-6, 1892	Baton Rouge, La.	5.97	21-22, 1892
Healdsburg, Cal.	9.73	20-21, 1880	Julian, Cal.	5.92	1-2, 1892
Bay Saint Louis, Miss.	9.60	21-22, 1892	New Haven, Conn.	5.90	3-4, 1876
New Orleans, La.	9.22	7-8, 1883	Baltimore, Md.	5.82	25-26, 1889
Fayette, Miss.	9.00	15-16, 1880	Kosciusko, Miss.	5.80	6, 1892
Florence, Ala.	8.71	5-7, 1892	Columbia, La.	5.75	3, 1890
Sugar Ex. Station, La.	8.12	21-22, 1892	Saint Marys, Ga.	5.70	2-3, 1876
Gallinas, Tex.	8.12	20-21, 1891	Jasper, Ga.	5.69	5-6, 1892
Melissa, Tex.	8.00	22-23, 1879	Adamsville, Ga.	5.63	5-6, 1892
Palo Alto, Miss.	7.81	6-7, 1892	Colorado, Tex.	5.60	23, 1890
Austin, Mo.	7.50	8-9, 1891	Diamond, Ga.	5.58	6, 1892
New Orleans, La.	7.49	21-22, 1892	Scottsboro, Ala.	5.55	5, 1892
Ship Island, Miss.	7.48	21-22, 1892	Kendall Green, D. C.	5.54	25-26, 1889
Brookhaven, Miss.	7.45	17-19, 1874	Rome, Ga.	5.54	5-6, 1892
Gadsden, Ala.	7.43	5-7, 1892	New Orleans, La.	5.51	7, 1876
Point Pleasant, La.	7.35	6-7, 1883	Abingdon, Ill.	5.50	13, 1876
Santa Maria, Tex.	7.34	19-20, 1888	Clarksville, Tex.	5.50	22-23, 1879
Mobile, Ala.	7.30	19, 1888	Washington B'ks, D. C.	5.45	24-25, 1889
Modesto, Cal.	7.00	20-21, 1880	Maurepas, La.	5.42	22, 1892
Jordan Grove, Ill.	7.00	3-4, 1892	Gainesville, Tex.	5.40	24, 1890
Pana, Ill.	7.00	3-4, 1892	Columbus, Miss.	5.40	6-7, 1892
Shell Beach, La.	7.00	21, 1890	Mobile, Ala.	5.34	24, 1881
Valley Head, Ala.	6.89	5-6, 1892	Fort Myer, Va.	5.30	25-27, 1889
Helena, Ark.	6.85	22-23, 1879	Sacramento, Cal.	5.28	20, 1880
Tuscumbia, Ala.	6.84	4-5, 1892	Nevada City, Cal.	5.20	21, 1880
West End, La.	6.80	21-22, 1892	Gallinas, Tex.	5.20	17, 1891
Marengo, Ind.	6.77?	22, 1887	Norfolk, Va.	5.19	16-17, 1883
Wallace, La.	6.75	21, 1892	Saint Marks, Fla.	5.15	14-15, 1879
Hat Creek, Wyo.	6.74	21-23, 1879	Breckenridge, Minn.	5.12	10-11, 1878
Santa Rosa, Cal.	6.70	20-21, 1880	New Ulm, Tex.	5.12	23-24, 1879
Emilie, La.	6.62	21-22, 1892	Charleston, S. C.	5.09	16-17, 1879
Amite City, La.	6.57	22-23, 1890	Nashville, Tenn.	5.04	21-22, 1883
Foust City, Cal.	6.54	20-21, 1880	Elk Falls, Kans.	5.04	20, 1885
Fort Sill, Ind. T.	6.46	21-22, 1879	Tomales, Cal.	5.02	20-21, 1880
Corsicana, Tex.	6.31	22, 1879	Grainfield, Kans.	5.00	27, 1888
Covington, Ga.	6.30	23, 1883	Dallas, Tex.	5.00	27, 1888
Fayetteville, N. C.	6.25	27-28, 1879	Melissa, Tex.	5.00	17, 1877
Marksville, La.	6.25	22, 1890	Weatherford, Tex.	5.00	27-28, 1888
Dardanelle, Ark.	6.20	15-16, 1890	Newport, Ark.	5.00	17, 1886
Charleston, Ill.	6.12	3-4, 1892	Lonoke, Ark.	5.00	3, 1890
Savannah, Ga.	6.11	16-17, 1879	Fort McHenry, Md.	5.00	23-26, 1889

One hour and less.

Station and state.	Amount.	Time.	Date.
	Inches.	h. m.	
Philadelphia, Pa.	0.45	0 05	16, 1891
Memphis, Tenn.	0.35	0 05	15, 1891
Do	0.30	0 05	20, 1892
Atlanta, Ga.	0.30	0 05	7, 1892
Indianapolis, Ind.	0.27	0 05	28, 1892
Buffalo, N. Y.	0.25	0 05	9, 1890
Kansas City, Mo.	0.25	0 05	17, 1892
New Orleans, La.	0.25	0 05	17, 1890
Dodge City, Kans.	0.25	0 05	15, 1891
Water Works, Philadelphia, Pa.	0.25	0 05	16, 1891
Adrian, Mich.	1.50*	0 10	5, 1888
Philadelphia, Pa.	0.67	0 10	16, 1891
Memphis, Tenn.	0.55	0 10	15, 1891
New Orleans, La.	0.53	0 10	17, 1890
Water Works, Philadelphia, Pa.	0.50	0 10	16, 1891
Egg Harbor City, N. J.	1.39	0 15	27, 1890
Jacksonville, Fla.	1.50*	0 20	23, 1883
Denmark, Iowa.	1.00	0 20	24, 1880
Titusville, Fla.	1.78	0 25	19, 1888
Cabaniss, Ga.	2.00	0 30	1, 1874
Denmark, Iowa.	1.87	0 30	8, 1882
Little Rock, Ark.	1.50	0 30	6, 1882
Black Rock, Ark.	3.42	0 40	20, 1892
Pilot Point, Tex.	3.00	0 45	28, 1879
Lozier, Tex.	3.50	1 00	11, 1891

\* Estimated.

SNOW (in inches and tenths).

The following tables give exceptionally heavy monthly, daily, and hourly precipitation reported for April during the last 22 years:

Monthly.

Station and state.	Am't.	Year.	Station and state.	Am't.	Year.
	Inches.			Inches.	
Summit, Cal.	30.40	1880	Mount Washington, N. H.	23.41	1878
Jackson, Miss.	23.80	1874	Newport, Ark.	21.20	1886
Paulding, Miss.	23.60	1871	Brookhaven, Miss.	20.35	1876

On the 1st heavy snow was reported in the Black Hills near Rapid City, S. Dak., and at Deadwood the amount of snow, 12 to 15, was the greatest of the season. On the 3d and 4th a heavy snowstorm prevailed from Colorado and Wyoming to Iowa. At Rapid City, S. Dak., 12 fell, and the snow drifted 4 to 6 feet in depth, causing a suspension of business and traffic. At Sundance, Wyo., 1 foot of snow fell, causing loss of cattle on the ranges. Snow in the Black Hills region of South Dakota until the 8th caused loss of stock. Heavy snow fell in Utah on the 7th, a depth of 3 being noted at Logan. A report from Rapid City, S. Dak., stated that stockmen esti-

mated the loss of cattle resulting from snowstorms during April at 10 per cent., that the melting snow disclosed thousands of dead cattle, and that farm work was several weeks late.

#### MONTHLY SNOWFALL.

The depth of snowfall for the month, as reported by regular and voluntary observers of the Weather Bureau, is shown on Chart V. The greatest depth of snowfall was reported in the mountains of Colorado, where more than 50.0 fell; the amount exceeded 40 at Central Pacific Railroad stations, on the summit of the Sierra Nevada Mountains, Cal., in west-central Nebraska, and southwestern South Dakota; it was greater than 30.0 at Flagstaff, Ariz., Cokedale, Mont., and Battle Mountain, Nev.; more than 20.0 fell in north-central Idaho, southwestern Oregon, northern Wyoming, northern New Mexico, northwestern Iowa, and south-central Minnesota; and the monthly amount exceeded 10.0 in the mountains of south-central Pennsylvania, in southwestern Wisconsin, central North Dakota, western Kansas, and central Utah. Along the immediate Atlantic coast snow fell as far south as Delaware; in the eastern mountain ranges it was reported as far south as western North Carolina and southern Tennessee. In the central valleys snow was noted to the middle and upper Ohio River, to south-central Illinois, and in southeastern Kansas; in the Rocky Mountain and plateau regions to extreme southeastern Arizona; and in the interior of the Pacific coast states to the 39th parallel.

Snowfall of 5 inches, or more, was reported as follows, and in states and territories where the maximum depth was less than that amount the station reporting the greatest is given: *Alabama*.—Valley Head, 0.4? *Arizona*.—Flagstaff, 33; Chiricahua Mountains, 26; Natural Bridge, 7; Payson, 5. *California*.—Summit, 45; Cisco, 27; Truckee, 19.5; Towles, 19; Sisson, 13; Emigrant Gap, 12; Boca, 11; Fort Bidwell, 8.3; Susanville, 5. *Colorado*.—Breckenridge, 59.5; Ward District, 44; Dillon, 34.5; Saint Cloud, 32.5; Cumbres, 31; Climax and Gold Hill, 28; Castle Rock, 26.6; Le Roy and Stamford, 22.5; Georgetown, 21.8; Moraine, 18.5; Julesburg, 17.2; Amherst, 15.8; Carson, 15; Platoro, 14.5; Twin Lakes and Monte Vista, 14; Crook, 13.4; Glen Eyrie, 13; San Luis, 12.9; Husted, 12.5; Pagoda (near) and Robb, 12; Alamosa, 11.5; Red Cliff and Yuma, 11; Alma, 10; Cope, 9.2; Box Elder, Como (near), and Thon, 9; Apishapa, 8.5; Fort Collins, 8; Magnolia, 7.6; Avoca and Leslie, 7.5; Gaynor, 6.5; Denver, 6.4; Abbott and Fort Collins (near), 6; Dumont, 5.2; Arboles and Sheridan Lake, 5.

*Connecticut*.—Norwalk (a), 0.2. *District of Columbia*.—Washington, trace. *Iowa*.—Elk City, 22.5; Henrys Lake, 11; Moscow, 6.1; Era, 5.5. *Illinois*.—Lanark, 4. *Indiana*.—Angola, 7.4; Hammond, 6. *Iowa*.—Storm Lake, 22.2; Algona, 18; Larrabee, 17; Hampton, 14; Fayette and Iowa Falls, 12; Alta (a and b), 11; Grundy Centre, 10.5; Bancroft, Carroll, Havelock, and Oskaloosa, 10; Vinton, 8.3; Galva, Osage, and Webster City, 8; Williams, 6.5; Cedar Falls, Hawk Eye, and Logan, 6; Dubuque, 5.5; Blakeville, Charles City, Cresco, and Monticello, 5. *Kansas*.—Wallace (a), 10; Weskau (a), 7. *Kentucky*.—Lexington, ? *Maine*.—Orono, 0.5. *Maryland*.—Taneytown, 2. *Massachusetts*.—Monroe and Nantucket, 2. *Michigan*.—Mottville, 5.5; Jeddo, 5.

*Minnesota*.—Rolling Green, 20; Kinbrae, 13; Bingham Lake, 12; Crookston, 10; Saint Charles, 8.5; Camden, 8; Albert Lea, 7; Sheldon, 6.2. *Missouri*.—Oregon (b), 2.8. *Montana*.—Cokedale, 32.5; Choteau, 15; Virginia City, 14; Fort Assinaboine, 7.5. *Nebraska*.—Whitman, 42; Kimball, 29.8; Springview and Long Pine, 27; Alliance, 26; Valentine, 24.4; Gering, 21.8; Fort Sidney, 21; Hayes Centre, 17; Kennedy and Ough, 14.5; Fort Robinson, 14.1; Bassett, 12; Hartington, 11.5; Agee, 11; O'Neill, 10; Oakdale, 5.5. *Nevada*.—Battle Mountain, 35.2; Tuscarora, 12; Mill City, 9.2; Halleck, 8; Winnemucca, 6.2; South Camp and Toano, 5.2; Humboldt, McDermitt, and Palisade, 5. *New Hampshire*.—Plymouth, 2. *New Jersey*.—Moorestown, 0.5?

*New Mexico*.—Chama, 24; Dulce, 12; Folsom, 10.5; Springer, 6; Monero, 5. *New York*.—Humphrey, 8.6; Oxford, 6; Le Roy and Number Four, 5.5; South Canisteo, 5.3. *North Carolina*.—Horse Cove, trace. *North Dakota*.—Grand Forks, 12.5; Saint Johns, 12; Bismarck, 10.8; Napoleon, 8.8; Grafton, 8.5; Ellendale, 8.2; White Earth, 7.9; Grand Rapids, 7.5; Gallatin, 6.8; Power, 6.6; Valley City and Wahpeton, 6; Milton and Minto, 5. *Ohio*.—Garrettsville, 4.5. *Oregon*.—Siskiyou, 24; Joseph, 19.1; Happy Valley, 9; Crook, 8.8; Silver Lake and Sparta, 6.5; John Day Junction, 6.3; Beulah, 6. *Pennsylvania*.—Blue Knob, 12.5; Grampian Hills, 6; State College, 5.5. *Rhode Island*.—Kingston (a) and Providence (a), trace.

*South Dakota*.—Cross, 41.4; Rosebud, 41; Oelrichs, 40; Spearfish, 31; Kimball, 21.7; Fort Meade, 18.4; Wessington Springs, 16.8; Parkston, 15.6; Elkton, 14; Rapid City and Mitchell, 12; Yankton, 11.5; Aberdeen, 11; Forestburg, 10; Alexandria, Clark, and Saint Lawrence, 8; Webster, 7.8; DeSmet, 7; Flandreau, 6.3; Faulkton, 6; Salem, 5. *Tennessee*.—Sharp, 5.6. *Texas*.—Kent, 1. *Utah*.—Park City, 13.5; Parowan, 11.5; Nephi, 7; Fort DuChesne, 6.5; Stockton, 5.5. *Vermont*.—Enosburgh Falls, 7. *Virginia*.—Lexington and Spottsville, trace. *Washington*.—Waterville, 2.5. *West Virginia*.—Rowlesburgh, 2. *Wisconsin*.—Viroqua, 10; Hillsborough, 9; Prairie du Chien, 8; Portage, 7; Dodgeville, 6; Baraboo and Beaver Dam, 5. *Wyoming*.—Fort McKinney, 28.5; Fort Washakie, 23.3; Sundance, 18.5; Camp Pilot Butte, 16.5; Evanston, 12.5; Cheyenne, 11.6.

#### HAIL.

Description of the more severe hailstorms of the month is given under "Local storms." Hail was reported as follows: 1st, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, North Dakota, South Carolina, South Dakota, Utah, and Wisconsin. 2d, Arkansas, California, Minnesota, Mississippi, Oregon, Utah, and Washington. 3d, Arizona, Arkansas, California, Illinois, Indiana, Indian Territory, Iowa, Kansas, Missouri, Nebraska, Nevada, Ohio, Oklahoma Territory, Pennsylvania, South Dakota, Texas, Utah, Washington, and West Virginia. 4th, Arizona, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Tennessee, Utah, and Wisconsin. 5th, New York, Pennsylvania, and Wisconsin. 6th, Georgia, Louisiana, Minnesota, Montana, North Dakota, Texas, and Washington. 7th, Colorado, Nebraska, North Carolina, Tennessee, and Washington. 8th, Michigan and Ohio. 9th, Kansas, Maryland, New York, Pennsylvania, and Virginia. 10th, Colorado, Kentucky, Nebraska, Texas, and Washington. 11th, Arkansas, California, and Utah. 12th, Arkansas, Colorado, Nebraska, Nevada, and Oklahoma Territory. 13th, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Missouri, Nebraska, and Texas. 14th, California, Georgia, Indiana, Kentucky, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Virginia, Washington, and West Virginia.

15th, California, North Carolina, Oregon, South Carolina, Tennessee, and Washington. 16th, Arizona, California, Montana, Nebraska, and Oregon. 17th, Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming. 18th, Arkansas, Colorado, Illinois, Kentucky, Missouri, Nebraska, Nevada, North Carolina, Oklahoma Territory, Pennsylvania, Tennessee, Texas, Virginia, and Washington. 19th, Arizona, Arkansas, Georgia, Illinois, Indiana, Kansas, Missouri, Nebraska, New Mexico, North Carolina, Oklahoma Territory, Tennessee, Texas, and Washington.

20th, Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Maryland, Missouri, Nevada, Pennsylvania, Texas, Utah, and Washington. 21st, Arkansas, Illinois, Kansas, Louisiana, Pennsylvania, Texas, and Wisconsin. 22d, Georgia, Kansas, Nevada, North Carolina, Oregon, and Virginia. 23d, Colorado, Louisiana, Montana, North Carolina, Ohio, Oklahoma

Territory, Texas, Utah, and Washington. 24th, Arkansas, California, Louisiana, Missouri, Oklahoma Territory, Oregon, South Dakota, and Texas.

25th, California, Colorado, Louisiana, New Jersey, Oregon, Pennsylvania, Washington, West Virginia, and Wyoming. 26th, Iowa, Minnesota, Missouri, Nebraska, South Dakota, and Wyoming. 27th, Idaho, Indiana, Kansas, Louisiana, Michigan, Missouri, North Dakota, Oklahoma Territory, South Dakota, and Wisconsin. 28th, Connecticut, Indiana, Kansas, Massachusetts, Michigan, Missouri, New Hampshire, New Mexico, New York, Ohio, and Texas. 29th, California, Minnesota, Pennsylvania, South Dakota, and Texas. 30th, California, Iowa, Kansas, Maine, Minnesota, Missouri, Nebraska, Nevada, South Carolina, and Texas.

## SLEET.

Sleet was reported as follows: 2d, Alabama. 3d, Alabama, Nebraska, Nevada, and South Dakota. 4th, Alabama and Nebraska. 5th, Texas. 6th, Washington. 8th, Ohio. 9th, Maryland. 10th, Connecticut and Maine. 11th, Connecticut. 13th, Illinois, Iowa, Nebraska, and North Dakota. 14th, New York, Ohio, and Pennsylvania. 15th, Georgia, Massachusetts, and New York. 17th, Nevada. 18th, Colorado, Illinois, Nevada, and Pennsylvania. 19th, Kansas and Nebraska. 20th, Iowa, Kansas, and Pennsylvania. 21st, Iowa and Kansas. 24th, Nebraska and Ohio. 25th, Nevada, Ohio, and Pennsylvania. 26th, Nevada, Ohio, and Utah. 28th, Massachusetts. 29th, Idaho, Pennsylvania, and South Dakota. 30th, Nevada.

## WINDS.

The prevailing winds in April, 1892, are shown on Chart II by arrows flying with the wind. In New England, the middle Atlantic states, the lower lake region, on the northeast slope of the Rocky Mountains, over the plateau region, and along the middle Pacific coast they were generally from southwest to northwest; in the south Atlantic states, from southeast to southwest; over the Florida Peninsula, from the southeast; in the Gulf States and the Missouri Valley, from east to south; in the Ohio Valley and Tennessee, from southeast to northeast, except in the upper Ohio Valley, where they were from northwest to north; in the upper lake region and the extreme northwest, from north to east; in the upper Mississippi valley, from northeast to southeast; on the middle-eastern and southeastern slopes of the Rocky Mountains, from south to west; on the north Pacific coast, from south to southwest; and on the south Pacific coast, from west to northwest.

## HIGH WINDS.

[In miles per hour.]

Wind velocities of 50 miles, or more, per hour were reported at regular stations of the Weather Bureau as follows: 1st, 66, sw., at Leavenworth, Kans.; 64, sw., at Des Moines, Iowa; 64, w., at Amarillo, Tex.; 60, s., at Concordia, Kans.; 60, sw., at Davenport, Iowa; 60, nw., at Kearney, Nebr.; 60, s., at Sioux City, Iowa; 59, se., at Fort Canby, Wash.; 58, nw., at Dodge City, Kans.; 58, nw., at Cheyenne, Wyo.; 56, nw., at Valentine, Nebr.; 54, sw., at Chicago, Ill.; 52, sw., at Kansas City, Mo.; 50, w., at Wichita, Kans. 2d, 60, sw., at Fort Stanton, N. Mex.; 60, s., at Lexington, Ky.; 57, sw., at Port Huron, Mich.; 54, sw., at Chicago, Ill.; 54, sw., at Detroit, Mich.; 52, sw., at Davenport, Iowa. 3d, 64, s., at Amarillo, Tex.; 52, w., at Fort Stanton, N. Mex.; 50, sw., at El Paso, Tex. 4th, 66, s., at Amarillo, Tex.; 54, nw., at Kearney, Nebr.; 52, n., at Valentine, Nebr.; 51, sw., at Leavenworth, Kans.; 50, se., at Lexington, Ky. 5th, 63, sw., at Chicago, Ill.; 60, sw., at Port Huron, Mich.; 60, w., at Toledo, Ohio; 57, sw., at Detroit, Mich.; 52, sw., at Fort Assinaboine, Mont.; 50, sw., at Davenport, Iowa.

8th, 54, n., at Amarillo, Tex. 9th, 50, s., at Fort Canby, Wash. 10th, 54, n., at Amarillo, Tex. 13th, 54, nw., at Kearney, Nebr. 14th, 82, s., at Fort Canby, Wash.; 65, n., at Chicago, Ill.; 54, s., at Tatoosh Island, Wash.; 53, s., at Kitty Hawk, N. C. 15th, 54, ne., at Block Island, R. I. 21st, 60, se., at Lexington, Ky. 24th, 72, se., at Fort Canby, Wash.; 60, sw., at Winnemucca, Nev.; 50, e., at Tatoosh Island, Wash. 26th, 51, se., at Huron, S. Dak.; 50, nw., at North Platte, Nebr. 27th, 62, w., at Huron, S. Dak.; 54, se., at Kearney, Nebr.; 54, w., at Red Wing, Minn.; 52, sw., at Chicago, Ill.; 50, nw., at Saint Vincent, Minn.; 50, nw., at Bismarck, N. Dak. 28th, 68, s., at Fort Canby, Wash.; 65, nw., at Saint Vincent, Minn.; 52, w., at Red Wing, Minn.; 52, e., at Tatoosh Island, Wash. 29th, 62, sw., at Winnemucca, Nev.; 60, s., at Fort Canby, Wash.; 52, ne., at Kitty Hawk, N. C. 30th, 50, sw., at Dodge City, Kans.

## LOCAL STORMS.

**1st.**—High winds and local storms prevailed from Kansas, Nebraska, and Texas to the western lake region. A destructive windstorm continued throughout the day at Cheyenne, Wyo. At Valentine, Nebr., the pressure decreased rapidly, and at 8 a. m. had fallen to 29.16, the lowest noted in 2 years. A thunderstorm, with heavy rain, ended in the early morning. A violent windstorm, with velocity 40 to 58 miles per hour, continued 24 hours, unroofing houses, etc. At North Platte, Nebr., a severe northwest gale prevailed. At Ottawa, Kans., a southwest gale in the early morning damaged property to the extent of about \$1,000. At Lawrence, Kans., the wind maintained a velocity of 70 to 79 miles per hour from 8 a. m. to 2 p. m., and reached a velocity of 90 miles per hour from 11.35 to 11.40 a. m. The estimated damage by high wind at Leavenworth, Kans., was \$50,000. A tornado moved northeast over the west part of Harvey county, Kans., destroying one house and prostrating a large number of trees.

High wind destroyed small buildings at Wakefield, Shields, Seneca, and Manhattan, Kans. At Topeka, Kans., the wind reached a velocity of 84 miles per hour from 11.20 to 11.25 a. m., and continued at the rate of 72 miles per hour until 3 p. m., causing damage of a minor character. The pressure decreased to 29.00 at 8 a. m. at Concordia, Kans., and the wind reached a velocity of 60 miles per hour, causing some damage. No serious damage was reported in southwestern Kansas. At Kansas City, Mo., a destructive gale began 2.20 a. m. and ended 7.05 p. m.; 6 persons were injured, one seriously, and property was destroyed to the value of about \$15,000. At Warrensburgh, Mo., a church was blown down and other buildings were damaged. Considerable damage was caused by wind in Monroe county, Mo. Damage of a minor character was caused by high wind at Saint Louis, Mo.

Heavy gales prevailed over Iowa. At Des Moines, Iowa, the pressure was the lowest recorded in 5 years, and the velocity of the wind, 65 miles per hour at 3 p. m., with an extreme velocity of 100 miles per hour at 2.57 p. m., was the highest ever noted at that station. At Davenport, Iowa, a heavy rain and thunder storm occurred from 1.10 to 3.10 p. m., and the wind reached a velocity of 60 miles per hour. Considerable damage was caused by wind at Dubuque and other points in Iowa. At Chicago, Ill., a southeasterly gale continued throughout the day. A thunderstorm from 6.56 to 7.10 p. m. was attended by loss of life and great destruction of property. The wind reached a velocity of 54 miles per hour from the southwest; several buildings were blown down; a 7 story building was blown upon a 2 story tenement, killing at least 6 persons, and injuring many others. The estimated loss to property by the storm was \$40,000.

At Hinesborough, Ill., a tornado moved northeast in a path 200 feet in width at 5.30 p. m., with thunder and lightning and heavy rain after; one person was injured and the damage to property was placed at \$2,000. A second tornado was re-