

North Pacific coast region.—7th, 17th, 21st, 22d, 23d, 27th, 28th.  
 Middle Pacific coast region.—7th to 17th, 22d to 28th.  
 South Pacific coast region.—San Diego, California, 10th.

ICE.

Ice formed in the southern parts of the country as follows:

- Arizona.—Wickenburg, 9th, 15th.
- Florida.—Jacksonville, 11th.
- Georgia.—Savannah, 11th, 21st; Athens, 10th to 24th; Augusta, 12th.
- Louisiana.—Liberty Hill, 10th.
- North Carolina.—Fort Macon, 11th, 19th, 20th, 21st; Portsmouth, 20th, 21st, 22d; Kitty Hawk, 11th, 19th, 21st, 22d; New River Inlet, 17th, 19th to 23d.
- Texas.—Galveston, 10th; Indianola, 10th, 14th.

PRECIPITATION.

[Expressed in inches and hundredths.]

The distribution of rainfall over the United States and Canada, for the month of February, 1885, as determined from reports from more than seven hundred stations, is exhibited on chart iii.

In the northern and middle Rocky mountain districts, the Rio Grande valley, and Florida peninsula the precipitation for February was in excess of the average, the departures being slight except in Florida peninsula where they were more than three inches above the average. The most important feature in connection with the monthly precipitation is the large area of deficiencies which, with exception of a few isolated localities, includes nearly all districts east of the Rocky mountains. The deficiencies are most marked in California, the lower lake region, upper Mississippi and Missouri valleys, Tennessee and the Gulf states. In northern California where the February average for several years is about four inches, this year it is but little more than one-half inch, and in southern California there was an almost entire absence of rain, the average for February in former years being about two and one-half inches.

Owing to large deficiencies in the February precipitation in the central valleys, and the prevalence of unusually low temperatures, which prevented a sudden melting of the winter snowfall, a repetition of the destructive floods of February, 1883 and 1884, have not occurred.

In the following table are shown, for each of the geographical districts, as deduced from Signal Service observations, the average February precipitation for a series of years; the average for February, 1885, and the departures from the normal.

Average precipitation for February, 1885.

Districts.	Average for Feb. Signal-Service observations.		Comparison of Feb., 1885, with the average for several years.
	For several years.	For 1885.	
	Inches.	Inches	Inches.
New England.....	4.00	3.12	-0.94
Middle Atlantic states.....	3.50	3.28	-0.22
South Atlantic states.....	3.94	3.80	-0.14
Florida peninsula.....	2.63	0.11	+3.48
Eastern Gulf states.....	5.11	3.38	-1.73
Western Gulf states.....	4.31	2.50	-1.75
Rio Grande valley.....	1.38	1.82	+0.44
Tennessee.....	5.69	2.46	-3.23
Ohio valley.....	4.01	2.14	-1.87
Lower lake region.....	2.72	1.27	-1.45
Upper lake region.....	1.97	1.53	-0.44
Extreme north west.....	0.71	0.26	-0.45
Upper Mississippi valley.....	2.48	0.81	-1.67
Missouri valley.....	0.90	0.44	-0.46
Northern slope.....	0.51	0.94	+0.43
Middle slope.....	0.42	0.51	+0.09
Southern slope.....	0.66	0.53	-0.13
Southern plateau.....	1.14	0.62	-0.52
Middle plateau.....	1.31	1.48	+0.17
Northern plateau.....	2.68	2.80	+0.12
North Pacific coast region.....	7.45	6.56	-0.89
Middle Pacific coast region.....	4.75	0.66	-3.49
South Pacific coast region.....	2.52	0.08	-2.44
Mount Washington, N. H.....	4.15	1.87	-2.28
Pike's Peak, Colo.....	1.61	3.91	+2.30

Table of excessive, and greatest monthly precipitation—February, 1885.

Station.	Specially heavy.		Largest monthly Amount.	Station.	Specially heavy.		Largest monthly Amount.
	Date.	Amt.			Date.	Amt.	
Alabama.				New Jersey.			
Newton.....	9	2.00	6.25	Paterson.....	8, 9	2.23	.....
Do.....	25	2.75	.....	New York.			
California.				New York City.....	9, 10	2.62	6.09
Fort Gaston.....			6.26	David's Island.....	9	2.10	.....
Connecticut.				Fort Hamilton.....	9	2.06	.....
Bethel.....	9	2.00	.....	Fort Columbus.....	9, 10	2.08	.....
Southington.....	9, 10	2.10	.....	White Plains.....	9	2.00	.....
Hartford.....	9, 10	2.10	.....	Do.....	17, 18	2.65	.....
New London.....	9, 10	2.05	.....	North Carolina.			
New Haven.....	9, 10	2.10	.....	Kitty Hawk.....	6	2.10	6.17
Florida.				Brevard.....	8, 9	2.05	.....
Cedar Keys.....	13, 14	2.88	9.02	Oregon.			
Do.....	25	3.27	.....	Bandon.....	2, 3	3.09	12.42
Newport.....	8, 9	2.95	7.13	Do.....	16, 17	2.48	.....
Do.....	24, 25	2.52	.....	Astoria.....	18, 19	2.60	10.59
Archer.....			6.90	Do.....	25, 26	2.22	.....
Saint Augustine.....	12, 13	3.21	.....	Eola.....			7.06
Fort Barrancas.....	24	3.10	.....	Portland.....			6.72
Sanford.....	13, 14	2.37	.....	East Portland.....			6.08
Jacksonville.....	13, 14	2.20	.....	Pennsylvania.			
Pensacola.....	24	2.33	.....	West Chester.....	15, 16	2.05	6.39
Limona.....	12	2.20	.....	South Bethlehem	16	2.29	6.23
Georgia.				Haverford Col-			
Gainesville.....			6.20	lege.....	16	2.05	.....
Louisiana.				Rhode Island.			
Shreveport.....	23, 24	2.19	.....	Nyatt Point.....	10	2.00	.....
Maine.				Texas.			
Gardiner.....	10	3.25	6.44	Palestine.....	23	2.44	.....
Portland.....	10	2.95	.....	Washington Ter.			
Orono.....	9, 10	2.20	.....	Neah Bay.....	12, 13	4.40	18.50
Maryland.				Do.....	18, 19	3.35	.....
Great Falls.....	10	2.10	.....	Do.....	24, 25	2.75	.....
Massachusetts.				Tatoosh Island.....	1, 2, 3	3.66	13.28
Wood's Holl.....			6.06	Do.....	18, 19	2.75	.....
Amherst.....	9, 10	2.12	.....	Do.....	24, 25	2.17	.....
Leicester.....	9, 10	2.07	.....	Pyshb.....	1 to 4	5.23	12.37
Westborough.....	9, 10	2.56	.....	Do.....	18, 19	2.07	.....
Rowe.....	16	2.00	.....	Fort Canby.....	18, 19	2.32	11.20
Worcester.....	8, 9	2.15	.....	Do.....	25, 26	3.09	.....
Mississippi.				Olympia.....	3, 4	2.45	7.67
Vicksburg.....	24	2.24	.....				

DEVIATIONS FROM AVERAGE PRECIPITATION.

The departures exhibited by reports from the regular Signal Service stations are shown in the table of average precipitation for the several districts and in the table of miscellaneous meteorological data. The following notes in connection with this subject are reported by voluntary observers:

Arkansas.—Lead Hill, Boone county: monthly precipitation, 1.47, is 7.89 below the February average for the three preceding years.

Dakota.—Webster, Day county: precipitation for the month was inappreciable, the February average for the two preceding years being 4.82.

Illinois.—Mattoon, Coles county: monthly precipitation, 0.65, is 6.00 below the February average for the last five years.

Sycamore, DeKalb county: monthly precipitation, 1.55, is 1.23 below the February average for the last three years.

Riley, McHenry county: monthly precipitation, 1.92, is 0.27 in excess of the February average for the last twenty-two years.

Anna, Union county: monthly precipitation, 1.22, is 3.01 below the February average for the last ten years.

Swanwick, Perry county: monthly precipitation, 0.66, is 6.01 below the February average the three preceding years.

Indiana.—Logansport, Cass county: monthly precipitation, 4.10, is 1.26 above the February average for the last twenty-six years.

Wabash, Wabash county: monthly precipitation, 1.26, is 2.12 below the February average for the last nine years. The monthly snowfall for January and February, 34.3 inches, is the largest that has occurred for many years.

Vevay, Switzerland county: monthly precipitation, 2.46, is 1.30 below the February average for the last twenty-one years. The snowfall, 9.1 inches, exceeds the February average by 5.3 inches, and has been greater in February but once in the above period, viz: 11.8 inches in 1867.

Spiceland, Henry county: monthly precipitation, 1.53, is 1.05 below the February average for the last thirty-one years. The snowfall, 10.8 inches, is 5 inches in excess of the February average.

*Iowa.*—Muscatine, Muscatine county: monthly precipitation, 2.21, is 0.39 above the February average for the last thirty-eight years.

*Kansas.*—Yates Centre, Woodson county: monthly precipitation, 0.55, is 1.85 below the February average for the last eight years. The precipitation for the winter months, 4.61, is about the normal, but the winter snow-fall is more than double the average amount.

Lawrence, Douglas county: monthly precipitation, 1.12, is 0.19 below the February average for the last seventeen years. The monthly snowfall, 11 inches, is nearly three times the February average.

Wellington, Sumner county: monthly precipitation, 0.57, is 0.55 below the February average for the last seven years.

*Maryland.*—Fallston, Harford county: monthly precipitation, 4.59, is 0.78 above the February average for the last fourteen years.

*Massachusetts.*—Worcester, Worcester county: monthly precipitation, 3.49, is 0.34 in excess of the February average.

*New Hampshire.*—Contoocook, Merrimac county: monthly precipitation, 3.80, is 1.00 above the February average. The monthly snowfall, 22 inches, exceeds the February average by 4 inches.

*New York.*—Palermo, Oswego county: monthly precipitation, 2.55, is 0.30 below the February average for the last thirty-two years. The monthly snowfall, 25.5 inches, is 3 inches above the February average for the period above named. The largest and smallest monthly snowfalls during the same time, are, 61 inches in 1856, and 1 inch in 1877.

North Volney, Oswego county: monthly precipitation is 2.20, or 0.52 below the February average for the last thirteen years. The precipitation for the winter of 1884-'85 is 8.85, the average for the above period being 9.27.

*Ohio.*—Wauseon, Fulton county: monthly precipitation, 1.15, is 1.94 below the February average for the last eleven years. The snowfall, 10.2 inches, is about 2 inches above the average.

*Pennsylvania.*—Dyberry, Wayne county: monthly precipitation, 2.75, is about the February average for the last sixteen years. The monthly snowfall, 22 inches, exceeds by 7 inches the average for a period of twenty-nine years.

*Vermont.*—Woodstock, Windsor county: monthly precipitation is 2.85, the average for February during the last sixteen years being 2.82.

*Virginia.*—Variety Mills, Nelson county: monthly precipitation, 3.61, is 0.08 above the average for the last six years.

Wytheville, Wythe county: monthly precipitation, 1.94, is 1.50 below the February average for a period of seventeen years.

*West Virginia.*—Helvetia, Randolph county: monthly precipitation, 2.65, is 1.90 below the February average for the last nine years.

#### SNOW.

The dates on which snow fell in the various districts are as follows:

*New England.*—1st to 11th, 13th to 18th, 21st, 23d, 24th, 25th, 27th, 28th.

*Middle Atlantic states.*—1st, 2d, 3d, 5th, 6th, 8th to 11th, 13th, 20th, 22d, 24th to 28th.

*South Atlantic states.*—5th, 12th to 16th, 18th, 19th, 20th, 24th.

*Eastern Gulf states.*—Vicksburg, Mississippi, and Mount Vernon Barracks, Alabama, 11th, 12th; Montgomery, Birmingham, Green Springs, Greensborough, Alabama, and Forsyth, Georgia, 12th; Athens, Georgia, 12th, 15th, 17th.

*Western Gulf states.*—Palestine and Cleburne, Texas, 11th, 12th, 13th; Shreveport, Louisiana, 11th, 12th, 13th, 21st; Point Pleasant, Louisiana, 2d, 6th, 7th, 10th, 16th, 26th, 27th; Fort Smith, Arkansas, 9th, 15th, 16th; Little Rock, Arkansas, 13th, 16th; Lead Hill, Arkansas, 23d, 28th.

*Tennessee.*—9th, 10th, 12th to 16th, 18th, 19th.

*Ohio valley.*—1st, 2d, 5th, 6th, 7th, 9th to 20th, 22d to 27th.

*Lower lake region.*—1st to 12th, 14th to 27th.

*Upper lake region.*—1st to 16th, 18th to 22d, 26th, 27th, 28th.

*Extreme northwest.*—1st, 3d to 8th, 10th, 11th, 13th, 14th, 16th, 17th, 18th, 20th, 22d, 23d, 28th.

*Upper Mississippi valley.*—1st, 2d, 4th to 9th, 11th to 17th, 19th to 23d, 24th, 28th.

*Missouri valley.*—1st, 3d to 9th, 11th to 17th, 19th, 21st to 24th, 28th.

*Northern slope.*—4th, 6th to 28th.

*Middle slope.*—4th, 7th, 8th, 9th, 10th, 12th, 14th, 15th, 17th, 19th to 25th, 28th.

*Southern slope.*—Forts Concho, Davis and Stockton, Texas, 13th.

*Southern plateau.*—8th, 14th, 22d to 25th, 28th.

*Middle plateau.*—4th, 6th to 15th, 18th, 19th, 20th, 22d, 23d, 27th.

*Northern plateau.*—6th to 13th, 18th.

*North Pacific coast region.*—Pysht, Washington Territory, 9th.

The following notes relate to the severe snow-storms of the month.

Portland, Maine: the snow-storm on the night of the 1-2d delayed trains for several hours.

Detroit, Michigan: snow fell to a depth of eight inches on the 9th; during the 9th, 10th and 11th all trains were delayed in consequence of snow blockades and the intensely cold weather.

Grand Haven, Michigan: trains were delayed on the 7th by the heavy snowfall; on the 9th the snow drifted to depths of from one to seven feet; all trains from the north and east were delayed from twelve to fifteen hours. Railroad traffic was interrupted until the 13th in consequence of snow blockades and the extremely cold weather.

Jackson, Jackson county, Michigan: the severe snow-storm of the 9th and 10th ended during the morning of the latter date, when the snow was three feet deep on the level.

Grand Rapids, Michigan: the snow-storm of the 9th and 10th was the severest of the winter; snow fell to a depth of three feet; no trains arrived and but one left this place on the 10th.

Port Huron, Michigan: the severest snow-storm of the season prevailed on the 9th, blockading the railroads; the snow blockade continued on the 10th and 11th.

Chicago, Illinois: trains were delayed by snow blockades on the 9th and 10th.

Des Moines, Iowa: on the 9th the snow drifted to depths of from four to five feet and travel on the railroads was interrupted; the snow blockades continued on the 10th; trains were run regularly on the 11th.

Dubuque, Iowa: the snow storm of the 9th was the severest of the season; all railroads entering the city were blockaded on the 9th, 10th and 11th. On the 16th and 19th the high winds caused the snow to drift badly, resulting in much inconvenience.

Cape May, New Jersey: snow fell all day on the 13th; it began again at 1 p. m. on the 14th and ended during the night; on the 15th it was twelve inches deep on the level, and, in places, drifts were from seven to nine feet deep.

Plymouth, Grafton county, New Hampshire: the severest snow storm of the season occurred during the night of the 16-17th; snow fell to a depth of eighteen inches, causing the delay of railway trains and rendering the highways impassable.

Chester, Windsor county, Vermont: the snow storm on the night of the 16-17th was very severe; roads were rendered impassable by snow-drifts.

Troy, New York: the severe snow storm on the 16th, blockaded the railroads and caused much inconvenience; the country roads were, in some places obstructed by drifts twenty feet in depth.

Oswego, New York: all trains on the Rome, Watertown and Ogdensburg railroad were abandoned on the 16th, except those running between Charlotte and Niagara Falls.

Bangor, Maine: snow fell to a depth of twelve inches on the 17th; deep drifts formed, causing delay of trains from five to six hours.

Montreal, Province of Quebec: no trains arrived at this place on the 17th owing to the large quantities of snow drifted on the tracks.

MONTHLY SNOW-FALLS.

[Expressed in inches and tenths.]

Monthly snowfalls of three inches or more were reported from the various states and territories during the month as follows:

*Alabama*.—Greensborough, 6.5; Green Springs, 6.0.

*Arkansas*.—Lead Hill, 7.5.

*California*.—Summit, 5.0.

*Colorado*.—Pike's Peak, 38.9; Denver, 7; Pueblo, 6.0; West Las Animas, 3.9.

*Connecticut*.—North Colebrook, 23.0; Bethel, 14.2; New London, 10.1; Southington, 8.5; Hartford, 7.0; New Haven, 6.4; Voluntown, 5.0.

*Dakota*.—Fort Buford, 26.1; Deadwood, 14.1; Yankton, 4.1; Bismarek, 3.5; Fort Bennett, 3.2.

*Delaware*.—Delaware Breakwater, 8.1.

*District of Columbia*.—Washington City, 13.2; West Washington, 11.8.

*Georgia*.—Augusta, 4.7.

*Idaho*.—Lewiston, 24.0.

*Illinois*.—Rockford, 25.0; Edgington, 24.5; Aurora, 20.9; Riley and Marengo, 19.8; Chicago, 19.0; Charleston, 16.6; Greenville, 16.5; Sycamore, 15.5; Prairieville, 14.5; Wilton Center, 13.0; Sandwich, 12.5; Springfield, 11.3; Anna and Peoria, 11.0; Mascoutah, Centralia, and McLeansborough, 8.5; Anna, 8.2; Bunker Hill, 7.2; Mattoon, 7.0; Fairfield, 5.6; Swanwick, 5.5.

*Indiana*.—Logansport, 23.2; Dana, 20.0; Lafayette, 17.2; Sunman, 15.1; Guilford, 14.7; La Grange, 14.3; Mauzy, 13.6; Knightstown, 12.0; Wabash, 11.5; Greencastle, 11.0; Spice-land, 10.8; Columbus, 10.2; Brookville, 10.1; Miami, Fort Wayne, and Terre Haute, 10.0; Farmland, 9.5; Vevay, 9.1; Degonia Springs and Princeton, 9.0; Worthington, 8.8; Richmond, 8.6; Greenfield and Franklin, 8.5; Indianapolis, 8.1; Noblesville, 6.0; Blue Lick, 5.8; Huntingburg, 4.8; Jefferson, 4.0; Laconia, 3.5; Marengo, 3.0.

*Iowa*.—Muscatine, 24.2; Ottumwa, 19.0; Keokuk, 17.4; Cedar Rapids, 17.1; Fort Madison, 15.0; Davenport, 14.9; Oskaloosa, 14.8; Des Moines, 11.6; Humboldt, 10.4; West Union, 9.9; Dubuque, 9.0; Independence, 8.6; Monticello, 7.2; Cresco, 3.5.

*Kansas*.—Fort Scott, 15.5; Clay Centre, 11.9; Leavenworth, 11.7; Aetison, 11.5; Wyandotte, 11.2; Lawrence, 11.0; Holton, 10.8; Allison, 9.4; Maud, 9.0; Wellington, 5.5; Manhattan, 6.0; Yates Centre, 5.5; Sherlock, 5.3; Emporia, 4.6; Dodge City, 4.5.

*Kentucky*.—Frankfort, 6.1; Richmond, 5.8; Louisville, 3.6.

*Maine*.—Gardiner, 26.8; Orono, 22.0; Waterville, 17.5; Eastport, 12.0; Portland, 7.2.

*Maryland*.—Cumberland, 20.0; Baltimore, 17.2; Fallston, 16.0; Woodstock, 12.6.

*Massachusetts*.—Rowe, 21.2; Williamstown, 14.5; New Bedford, 13.0; Kingston, 12.0; Leicester, 11.5; Princeton, 11.0; Taunton and Dudley, 10.2; Fall River, 10.0; Somerset, 9.5; Westborough, 8.8; Readville and Blue Hill, 7.9; Lowell, 7.0; Amherst, 6.5; Fitchburg, 6.2; Concord, 5.2.

*Michigan*.—Traverse City, 30.0; Thornville, 22.5; Ionia, 22.0; Grand Haven, 20.4; Mottville, 18.5; Alpena, 18.2; Port Huron, 18.1; Manistique, 17.8; Harrisville, 16.6; Swartz Creek, 16.0; Detroit, 15.3; Moorestown and Ann Arbor, 14.0; Mackinaw City, 13.4; Lausing, 12.4; Hudson, 10.5; Northport, 9.0; Marquette, 6.7; Escanaba, 6.6.

*Minnesota*.—Northfield, 7.5; Chester, 5.0; Duluth, 4.4; Minneapolis, 3.3.

*Missouri*.—Curryville, 11.2; Independence, 10.0; Pierce City, 9.0; Springfield, 4.5; Saint Louis, 4.2.

*Montana*.—Fort Custer, 20.3; Fort Shaw, 10.6; Fort Magin- nis, 9.8; Poplar River 9.5; Helena, 7.7; Fort Benton, 5.9; Fort Assinaboine, 4.0.

*Nebraska*.—Superior, 17.5; Tecumseh and Syracuse, 15.0; Fairbury, 13.0; Weeping Water and Red Willow, 12.0; Madison, 11.5; Stockham, 10.5; Dawson and Neligh, 10.0; Genoa, 9.2; Ogallala, 9.0; Beaver Creek, 8.8; Keene, 8.0; De Soto, 7.6; Fremont, 6.3; Ashland, 6.0; Omaha, Crete, and Marquette, 5.8.

*Nevada*.—Palisade, 13.0; Otego, 9.2; Battle Mountain, Wells, and Toana, 6.5; Winnemucca, 5.7; Elko, 4.0; Carlin, 3.0.

*New Hampshire*.—Contoocook, 24.0; Concord, 13.0; Han- over, 10.0; Mount Washington, 9.5.

*New Jersey*.—Atlantic City, 22.0; Somerville, 21.0; Cape Henry and Moorestown, 20.8; South Orange and Vineland, 13.0; Sandy Hook, 10.8; Paterson, 10.5; Phillipsburg, 8.0; Little Egg Harbor, 7.4; Dover, 7.0; Barnegat City, 4.6.

*New Mexico*.—Santa Fé, 5.8.

*New York*.—Palermo, 25.5; Cooperstown, 24.0; Auburn, 23.5; Port Jervis, 21.0; Factoryville, 19.1; Ithaca, 18.9; Rochester, 17.0; New York City, 16.7; Humphrey, 15.0; White Plains, 13.5; Penn Yan, 13.0; Menand Station, 11.8; Le Roy, 11.6; Buffalo, 10.8; Mountainville, 10.2; Albany, 9.8; Oswego, 8.1.

*North Carolina*.—Statesville, 9.5; Brevard, 7.0; Chapel Hill, 6.6; Lenoir, 6.0; Charlotte, 4.9; Weldon, 3.6.

*Ohio*.—Jacksonborough, 19.0; McConnellsville, 17.2; College Hill, 13.8; Cincinnati, and Washington Court House, 13.3; North Lewisburg and Columbus, 11.5; Hiram, 11.0; Wauseon, 10.2; Garrettsville, 9.8; Portsmouth, 9.5; Westerville, 9.3; Marietta and Ruggles, 7.0; Toledo, 6.7; Tiffin, 6.0; Upper Sandusky, 5.9; Sandusky, 3.2.

*Pennsylvania*.—Wellsborough, 22.6; Dyberry, 22.0; Bloom- ing Grove, 21.5; Troy, 21.0; Catawissa, 20.4; Easton, Ger- mautown, and Grampian Hills, 19.0; West Chester and Cham- bersburg, 18.2; Leetsdale, 17.8; Falsington, 17.2; Erie, 17.0; Quakertown, 15.5; Haverford College, 15.2; South Bethlehem, 15.0; Pittsburg, 14.2; Philadelphia, 13.4; Dillingersville, 11.2.

*Rhode Island*.—Block Island, 10.3; Providence, 10.0; Point Judith, 6.5; Nyatt Point, 5.6.

*Tennessee*.—Fostoria and Grief, 6.5; Farmingdale, 6.1; Ash- wood and Greenville, 5.0; Chattanooga, 4.9; Savannah, 4.0; Milan, 3.2; Austin and Sweet Water, 3.0.

*Texas*.—Fort Elliott, 6.4; Fort Stockton, 5.2.

*Utah*.—Ogden, 21.2; Promontory, 17.2; Corinne, 16.5; Salt Lake City, 13.6; Kelton, 6.5; Blue Creek, 3.8.

*Vermont*.—Newport, 28.8; Dorset, 24.0; Lunenburg, 22.5; Woodstock, 22.0; Strafford, 19.0; Charlotte, 11.0; Burlington and Brattleborough, 16.0; Post Mills, 6.0.

*Virginia*.—Dale Enterprise, 17.0; Chincoteague, 15.6; Wythe- ville, 14.0; Fort Myer, 10.8; Marion and Blacksburg, 10.0; Lynchburg, 9.9; Bird's Nest, 9.0; Variety Mills, 7.7.

*Washington Territory*.—Dayton, 5.9; Spokane Falls, 3.3.

*West Virginia*.—Helvetia, 23.0; Wellsburg, 9.0.

*Wisconsin*.—Sussex, 12.6; Beloit, 12.1; Madison, 8.8; Mani- towoc, 7.6; Prairie du Chien, 7.3; Embarras, 6.2; La Crosse, 3.6; Milwaukee, 3.5.

*Wyoming*.—Cheyenne, 10.3.

DEPTH OF UNMELTED SNOW ON GROUND AT END OF THE MONTH.

[Expressed in inches and tenths.]

*Colorado*.—Pike's Peak, 12.0; Denver, 3.0.

*Connecticut*.—North Colebrook, 16.0; Bethel and Hartford, 3.0; New London, 2.3; Southington, 2.0.

*Dakota*.—Deadwood, 6.5; Fort Buford, 5.0; Bismarek, 2.0; Webster, trace; Fort Totten, snow in the woods and ravines, none on ground.

*District of Columbia*.—West Washington, 3.0; Washington, 1.0.

*Illinois*.—Chicago, 18.3; Edgington, 16.0; Sandwich, 14.0; Sycamore and Wilton Centre, 13.0; Marengo, 10.0; Aurora and Prairieville, 8.0; Riley, 6 to 15; Mattoon, trace to 48.0; Swanwick and Springfield, trace.

*Indiana*.—Wabash, 20.0; Logansport and Lafayette, 6.0;

Fort Wayne, 4.5; Greencastle, about 2.0; Guilford and Spiceland, 1.0; La Grange, in drifts; Sunman, trace.

*Iowa.*—Cresco, 20.0; West Union, 18.0; Humboldt, 15.0; Cedar Rapids, 12.0; Muscatine and Independence, 10.0; Monticello, 6.0; Des Moines, 5.0; Keokuk, 4.0; Manchester, 3.0; Dubuque, 0.5.

*Kansas.*—Allison, in drifts; Dodge City, Yates Center, and Wyandotte, trace.

*Maine.*—Orono, 30.0; Gardiner, 24.0; Eastport, 12.0; Portland, 6.0.

*Maryland.*—Cumberland, 6.0; Emmitsburg and Woodstock, 4.0; Fallston, 2.0; Baltimore, 1.0.

*Massachusetts.*—Rowe, in the woods, 30.0, and in open field from one to five feet; Deerfield, 19.0; Leicester, 10.0; Amherst, 6.0 to 8.0; Mendon and Westborough, 5.0; Williamstown, 4.0; Boston, 3.0; Fall River, 2.0; Readville, 1.0.

*Michigan.*—Marquette, 37.0 (?); Ionia, 30.0; Swartz Creek and Moorestown, 24.0; Thornville, 20.0; Grand Haven, 18.0; Traverse City, 17.0; Hudson, 16.0; Detroit, 15.0; Mackinaw City, 8.0; Alpena, 7.0; Port Huron, 6.5; Ann Arbor, 6.0; Northport, 3.2; Escanaba, 0.5.

*Minnesota.*—Saint Vincent, 4.0; Duluth, 3.0; Northfield, 2.6; Saut Paul, 2.0.

*Missouri.*—Independence, 4; Curryville, Pierce City, and Lamar, trace.

*Montana.*—Poplar River, 4.0; Fort Maginnis, 2.5.

*Nebraska.*—Tecumseh, 8.0; Red Willow, 1.0; Fairbury and De Soto, 0.5; Marquette and Beaver Creek, trace.

*New Hampshire.*—Contoocook, 22.0; Mount Washington, 18.0.

*New Jersey.*—Paterson, 4.0; Cape May, 3.0; South Orange, 2.0; Sandy Hook, 1.5; Barnegat, 1.0; Atlantic City, trace.

*New Mexico.*—Santa Fé, on mountains, 24.0 and none in valleys.

*New York.*—Palermo, 31.0; North Volney, 25.0; Oswego, 24.0; Le Roy and Cooperstown, 20.0; Auburn, 18.0; Humphrey and Menand Station, 14.0; Rochester, 11.0; Penn Yan, 10.0; Albany, 8.0; Ithaca, 7.0; Buffalo, 6.0; Factoryville, 5.0; White Plains, 4.0.

*Ohio.*—Wauseon, 13.0; Garrettsville, 8.5; Hiram, 6.0; Tiffin, 5.0; Toledo, 3.5; North Lewisburg, 3.0; Sandusky, 2.0; Ruggles, 0.6; Jacksonborough and Cleveland, 1.0; College Hill, Columbus, and Cincinnati, trace.

*Pennsylvania.*—Dyberry and Grampian Hills, 18.0; Blooming Grove, 15.0; Wellsboro, 10.5; Dillingersville, 8.0; Chambersburg, 7.8; Quakertown, 7.1; South Bethlehem, 6.0; Fallsington, West Chester, and Troy, 3.0; Leetsdale, Pittsburg, Haverford College, and Philadelphia, 2.0; Erie, 1.0.

*Rhode Island.*—Block Island, trace.

*Vermont.*—Strafford, 30.0; Post Mills, 20.0; Woodstock, 19.4; Dorset, 16.0; Burlington, 8.0; Charlotte, 2.0.

*Virginia.*—Dale Enterprise, 4.0; Wytheville, Variety Mills, and Blacksburg, 2.0; Lynchburg, 0.5; Marion, trace.

*West Virginia.*—Helvetia, 8.0; Wellsboro, 1.0.

*Wisconsin.*—Manitowoc, 48.0 to 60.0; Embarras, 20.0; Wausau, 14.0; Neillsville, 12.5; La Crosse, 11.0; Madison, 8.0; Beloit, 4.0; Milwaukee, 0.5.

*Wyoming.*—Cheyenne, 0.5.

## SLEET.

*Arizona.*—Prescott, 23d; Fort Bowie, 12th.

*Arkansas.*—Little Rock, 23d, covering all exposed objects with a coating of ice; the telegraph lines in all directions were broken. Fort Smith, 23d.

*Connecticut.*—Bethel, 9th, 16th; Hartford and North Colebrook, 16th.

*Dakota.*—Fort Sully, 5th.

*District of Columbia.*—Washington City, 1st, 2d, 5th.

*Georgia.*—Athens, 15th, 24th.

*Illinois.*—Cairo, 9th.

*Indiana.*—Sunman, 13th; Logansport, 8th; Greencastle, 9th, 26th; Indianapolis, 9th, 24th.

*Kansas.*—Yates Centre, 25th.

*Kentucky.*—Louisville, 15th, 24th.

*Maine.*—Cornish, 16th; Eastport, 5th; Bangor, 10th.

*Maryland.*—Emmitsburg, 4th, 9th; Baltimore, 6th.

*Michigan.*—Escanaba, 3d; Detroit, 9th.

*Missouri.*—Saint Louis, 9th.

*New Hampshire.*—Mount Washington, 10th.

*New Jersey.*—Atlantic City, 14th, 15th.

*New York.*—Rochester and Oswego, 9th; Buffalo, 1st; Albany, 10th; New York City, 16th.

*North Carolina.*—Statesville, 12th, 15th, 24th; Charlotte, 14th.

*Ohio.*—Toledo, 9th; Cleveland, 4th, 5th.

*Tennessee.*—Milan and Memphis, 23d; Nashville and Chattanooga, 24th.

*Texas.*—Palestine, 21st; El Paso, 25th.

*Virginia.*—Fort Myer, 1st; Cape Henry and Fort Monroe, 14th.

*Wisconsin.*—Embarras, 27th.

## HAIL.

Hail is reported to have fallen in the various states and territories as follows:

*Alabama.*—Mount Vernon Barracks, 12th, 21st; Mobile, 21st.

*Arizona.*—Fort Grant, 22d.

*Connecticut.*—Bethel, 9th, 16th, 17th.

*Florida.*—Mayport, 5th.

*Georgia.*—Savannah, 5th.

*Idaho.*—Cœur d'Alene, 16th, 27th.

*Illinois.*—Cairo, 8th.

*Indiana.*—Wabash and Fort Wayne, 9th; La Fayette, 8th; Spiceland, 24th.

*Louisiana.*—Point Pleasant, 17th.

*Maine.*—Waterville, 10th.

*Maryland.*—Woodstock, 10th.

*Massachusetts.*—Williamstown, 9th; Taunton, 8th.

*New Jersey.*—Moorestown, 16th.

*New York.*—New York City, Menand Station (near Albany), and Mountainville, 10th; Humphrey, 9th; Fort Columbus, 8th.

*North Carolina.*—Weldon, 13th, 14th; Statesville, 9th.

*Ohio.*—Jacksonborough, 9th.

*Oregon.*—Portland, 6th; Roseburg, 7th.

*Pennsylvania.*—Fallsington, 16th; Grampian Hills, 9th.

*South Carolina.*—Stateburg, 4th.

*Tennessee.*—Austin, 15th.

*Texas.*—Austin, 24th; Fort Davis, 25th.

*Vermont.*—Woodstock, 9th.

*Virginia.*—Fort Myer, 10th; Bird's Nest, 10th, 14th, 27th; Wytheville, 24th.

*Washington Territory.*—Tacoma, 26th.

## SNOW SLIDE.

Salt Lake City, Utah: during the night of the 13-14th, the village of Alta, about forty miles southeast of Salt Lake City, was nearly buried beneath an immense snow slide. It had been snowing for nearly a week and the snow had accumulated to great depths. The snow slide occurred about 8 p. m., burying about three-fourths of the place. In the buildings under the snow were twenty-eight persons, some of whom were killed. The damage is estimated at more than \$40,000.

## WINDS.

The most frequent directions of the wind during February, 1885, are shown on chart ii. by arrows flying with the wind. In the lake region and central Mississippi and Ohio valleys they were westerly and southwesterly; in the Missouri valley, Gulf states, and on the middle Atlantic coast, they were northerly and northwesterly; in the north Pacific coast region, they were southerly; in the south Atlantic states, California, and in the Rocky mountain districts, they were variable.

## HIGH WINDS.

(In miles per hour.)

Wind velocities of fifty or more miles per hour were recorded during the month as follows: