

Anderson has been the Superintendent since organization.

A separate company was organized in West Pittston in 1871, to which water was furnished by an 8-in. pipe laid across the bed of the river. This company was purchased by the Pittston company in 1877.

CCLXX.—GENEVA.

Geneva, New York, in lat. 42° 52' N., long. 77° 8' W., at the foot of Seneca Lake, is in a gently rolling and very fertile region. Settled in 1787, it was incorporated as a village in 1806.

Water-works were built by a private corporation shortly after a charter was granted to it in 1797. The works were designed and built by W. S. Dezeug. The supply is taken from the "White Springs," and collected in two reservoirs, one 150 ft. square and 16 ft. deep. The other, 25 ft. lower, is 80 ft. in diameter and 7 ft. deep, and is 125 ft. above the lake and the lower part of the village. The distribution is by cast-iron pipes, of which 4 miles are laid, of from 10-in. to 4-in. diameter, with 24 fire hydrants and 300 taps. The village pays \$60 per year for each hydrant. Service pipes are of iron. The population in 1880 was 5,861. The consumption is not given nor the cost of the works. There is a bonded debt of \$85,000 at 6 per cent. interest. No further financial statements are furnished. A. L. Chew is the Secretary and Treasurer and S. S. Graves the Superintendent.

CCLXXI.—GREENWICH.

Greenwich, Connecticut, in lat. 40° 59' N., long. 73° 39' 4" W., is on Long Island Sound. The surrounding territory is rough and rocky. It was settled in 1611.

Water-works were built in 1880 by a private company, after plans and under the superintendence of William B. Rider, C. E.

The supply is procured by gravity from an impounding reservoir on a stream of 4 square miles water-shed, 4 miles from the town and about 280 ft. above its lower portion.

The water is filtered through charcoal in flumes, with satisfactory results. It is then conveyed through 4 miles of 12-in. cast-iron pipe, and distributed by 2½ miles of cast-iron pipe of 8 to 4-in. diameter, with 26 fire hydrants, 28 gates and 120 taps. The town pays \$1,000 per annum for use of fire hydrants. Lead service pipes are used. The population in 1880 was 7,965.

The capital stock of the company is \$100,000. The works have cost \$84,000. There is no debt. Further financial statements are not given. G. G. McHall is Secretary of the company, and W. B. Rider the Engineer.

CCLXXII.—DANVERS.

Danvers, Massachusetts, in lat. 42° 40' N., long. 70° 57' W., on Porter's River, an arm of the sea, is on rolling ground, rising from the sea-level to an elevation of 260 ft. It was originally a part of Salem.

Water-works were built in 1876 for the town, after the plans of George H. Bishop, C. E., by George H. Norman.

The supply is taken from Middleton Pond, 5 miles from the town. Its area is 106 acres and its watershed 3 square miles. It is about 90 ft. above sea-level. A Worthington duplex tank engine of 2,000,000 gallons capacity, erected in 1876, and a duplicate of the same, erected in 1882, pump the water through a 12-in. wrought-iron and cement pipe 2.6 miles long to a reservoir on Hawthorne Hill, in the grounds of the State Insane Asylum, 230 ft. above sea-level, in excavation and embankment, and holding 5,000,000 gallons.

Distribution is by wrought-iron and cement pipe of from 12 to 4 in. in diameter. Twenty-nine and one-quarter miles are laid, 17 of which are of 4-in. diameter. There are 196 fire hydrants, 169 gates, 881 taps and 20 meters. The sum paid by the town annually, out of taxation, for deficiency in revenue, amounts to about \$25 per hydrant. Service pipes are of 1 in. wrought iron, cement lined. The population in 1880 was 6,500 and the daily consumption, in 1881, 400,000 gallons, including water furnished to the Insane Asylum. The cost of construction had been to Jan. 1, 1882, \$222,479.65. The State paid \$12,500 of this and also pays \$1,000 per annum for the Asylum supply. The gross receipts have been \$66,140. The bonded debt is \$205,000 at 4 and 5 per cent. interest.

The expenses in 1880 and 1881 were as follows:

	1880.	1881.
For maintenance.....	\$3,990.64	\$6,561.60
For interest.....	9,000.00	9,500.00
The receipts from water rents were.....	10,106.76	11,205.11

The works are managed by three Commissioners, one of whom is elected each year. Benjamin E. Newhall is the Superintendent.

CCLXXIII.—MOLINE.

Moline, Illinois, in lat. 41° 30' N., long. 90° 33' W., on the Mississippi River, is on bottom lands about half a mile wide and bluffs back of them 150 ft. high.

Settled in 1848, it was incorporated as a village in 1858 and as a city in 1872. Water-works were built in 1877 by the city, after plans of M. A. Gould, the City Engineer.

The supply is taken from a pool above a dam built by the U. S. Government from the Illinois shore to Rock Island. This dam is of stone, 4,000 ft. long, 20 ft. high, 8 ft. wide at bottom and 4 ft. at top, with buttresses. The water is drawn from the channel to a settling basin through a box conduit, 14 by 36 in., of 2-in. pine plank, and 1,000 ft. long. From the settling basin it was pumped by a Knowles pump erected in 1879. A Worthington duplex pump was substituted for it on Jan. 1, 1882. Water is pumped directly into the mains, with an ordinary pressure of 45 lbs. and a fire pressure of 100 lbs. An intermittent supply is furnished to some consumers on the bluffs. It is proposed to build a reservoir in 1883 on the bluffs 150 ft. above the river.

Distribution is by 2½ miles of 8-in. and 6-in. cast-iron pipe, with 50 fire hydrants and 12 gates. The number of taps is not given. The pumps are furnished and run by a contractor in consideration of the payment by the city of \$50 per year for each fire hydrant. The contractor also receives rentals from consumers.

The population in 1880 was 7,740 and the daily consumption 12,000 gallons in 1880 and 25,000 in 1882. Service pipes are of wrought iron.

The works cost \$18,000, exclusive of the pumps. No further financial statements are given.

Some trouble has been experienced with anchor ice at the inlet.

The works are in charge of M. A. Gould, the City Engineer.

ACKNOWLEDGMENTS.—The receipt of statistics as follows, is acknowledged with thanks: From W. B. Cunningham, general superintendent, statistics and water rates of the water-works of Trinidad, Colorado. From R. W. Bagnell, superintendent, report of Plymouth, Mass., water commissioners for 1881. From John Anderson, superintendent, statistics and water rates of the water-works of Pittston, Pa. From W. B. Rider, C. E., statistics and water rates of the water-works of Greenwich, Conn. From Benjamin E. Newhall, superintendent, statistics and water rates of the water-works of Danvers, Mass., and reports of water board.

RAILWAY NECROLOGY FOR 1881.

LIST OF RAILWAY OFFICERS, FORMER OFFICERS, NOTED CONTRACTORS, ETC., WHO DIED LAST YEAR.

[From the Chicago Railway Age.]

JANUARY.

Charles R. Clement, general baggage agent of the Pennsylvania and Northern Central, died at Philadelphia.

General Charles B. Stewart, chief engineer of the Connotton Valley road, died at Cleveland, O., aged 67.

Benjamin Stevenson, formerly auditor of the Mobile & New Orleans.

Zebina C. Campa, great railroad contractor, builder of Vermont Central and other roads, died in Montpelier, Vt.

John B. Brown, prominent in the building of the Atlantic & St. Lawrence, Maine Central, Portland & Ogdensburg, and Portland & Rochester, died in Portland, Me.

Fred. P. Mosely, purchasing agent of the Old Colony railroad and steamship companies, died in Boston.

John S. Daily, cashier of the Chicago, Burlington and Quincy Railroad in Boston, and agent of the associated railways of Virginia and the Carolinas, died in Boston.

Joseph N. Stinson, general depot baggage agent of the Illinois Central, Michigan Central and Chicago, Burlington & Quincy roads, died in Chicago.

James M. Walker, general solicitor of the Chicago, Burlington & Quincy, president of the Union Stock-yards Transit Company, and formerly president of the Chicago, Burlington & Quincy, died in Chicago.

FEBRUARY.

Henry Waters, confidential secretary of General Superintendent Tillinghast, of the New York Central, was instantly killed January 8, by the falling of the roof of the Buffalo passenger depot.

General Robert Thomson, president of the Philadelphia & Erie Railroad Company, died at Philadelphia, aged 53.

A. D. Briggs, one of the railroad commissioners of Massachusetts, a civil engineer and bridge builder, died at Springfield, Mass., aged 61.

E. W. Strader, who was general passenger agent of the Little Miami road from 1848 to 1867, died in Ashtabula, O., aged 78.

MARCH.

Robert Hayes, superintendent of the Woodruff Sleeping and Parlor Coach Company, was run over at Cleveland by a locomotive and instantly killed.

Colonel Darius Hunkins, who was concerned in the construction of the Baltimore & Ohio, of which he was for a time superintendent, subsequently was a contractor on numerous Eastern and Western roads, and was president of the Keokuk Northern Line Packet Company, and president

and superintendent of the Galena and Wisconsin, died in Galena, aged 69.

Captain Benjamin H. Fletcher vice-president of the Lockport and Buffalo Railroad Company, died at Lockport, N. Y.

L. B. Boomer, a well known bridge-builder in Chicago, died suddenly in New York. In connection with Mr. A. B. Stone, he built the first bridge over the Mississippi River at Rock Island.

T. A. Brooks, master carpenter of the New York division of the Pennsylvania Railroad was killed by a locomotive near Trenton, N. J.

Benj. W. Healy, formerly superintendent of the Rhode Island locomotive works, died at Nicaragua.

Washington L. Hedge, traveling agent for the Red Line Transportation Company, died at Worcester, Mass., aged 51.

John G. Turner, formerly paymaster of the Terre Haute & Indianapolis road, died near Carthage, Mo.

APRIL.

Francis A. Stevens, inventor of the Stevens car-brake, died in Chicago.

Isaac N. Ross, director and formerly superintendent of the Boston, Barre & Gardner Railroad, died in Holden, Mass.

Hocum Hosford, for several years manager of the Boston & Lowell Railroad, died in Lowell, Mass., aged 57.

Edward Huntington, one of the engineers for the construction of the old Utica and Schenectady Railroad, and afterwards engaged on the enlargement of the Erie Canal, died at Utica, N. Y., aged 64.

Richard Meldrum, general western freight agent of the Pittsburg, Fort Wayne & Chicago Railway died at Jacksonville, Fla., aged 59.

William C. Longstreth, for many years President of the Williamsport & Elmira Railroad Company, died in Philadelphia, aged 61.

Thomas Hogg, who in 1837 took the first locomotive west of the Alleghanies, and was afterwards master mechanic on the Mad River & Lake Erie road and on the Sandusky, Mansfield & Newark road died in Danbury, Ohio, aged 78.

MAY.

R. J. Reekie, an extensive railway contractor in this country and abroad, and at one time connected with the Grand Trunk Railway of Canada, died in London, England, aged 70.

Judge John P. Devereux, for a long time land commissioner of the Kansas Pacific Railway, and subsequently in charge of the legal business of the Kansas Pacific and Union Pacific companies in Kansas, died at Lawrence, Kansas, aged 60.

Col. Thomas A. Scott, President of the Pennsylvania Railroad Company for many years and for some time president of the Union Pacific Railway Company and of the Texas & Pacific Railway Company and of many other corporations, died in Philadelphia, May 21, aged 57. He was previously general superintendent and vice-president of the Pennsylvania system, and during the civil war was assistant secretary of war.

Nathan Carruth, the first president of the Old Colony Railroad Company, died in Dorchester, Mass., aged 72.

S. T. De Ford, Jr., formerly western passenger agent of the Chesapeake & Ohio, and Southern passenger agent of the Pennsylvania Railroad, and in 1857, general freight agent of the Marietta & Cincinnati, died at Louisville, Ky.

JUNE.

Colonel George W. Flower, a well known Railway contractor of Watertown, N. Y., died in New York City.

Leonard Phlegar, inventor and mechanical engineer, who ran the first engine on the Philadelphia, Wilmington & Baltimore road, was at one time superintendent of that company's shops at Gray's Ferry, and afterwards in charge of the Philadelphia & Reading shops at Tamaqua, died in Philadelphia.

John M. Courtney, president of the New York & West Shore Railway, aged 56.

JULY.

James Abbott, chief engineer of the Continental Railway, and at one time chief engineer of the Rockfort, Rock Island & St. Louis died at Akron, Ohio.

William S. Hudson, the celebrated locomotive builder, an apprentice of Robert Stephenson, at one time the master mechanic of the Attica and Buffalo Railroad, and later superintendent of the Rogers locomotive works, died near Paterson, N. J., in his 72d year.

Colonel W. Milnor Roberts, the eminent civil engineer, died in Rio de Janeiro, South America, aged 72. He had charge of the surveys of several of the great railways of this country, made plans for the great St. Louis bridge, and at the time of his death was chief engineer of public works for Brazil.

James Robb, formerly president of the Chicago & Alton Railroad Company, died at Cincinnati.

AUGUST.

Joseph H. Moore, formerly superintendent of