

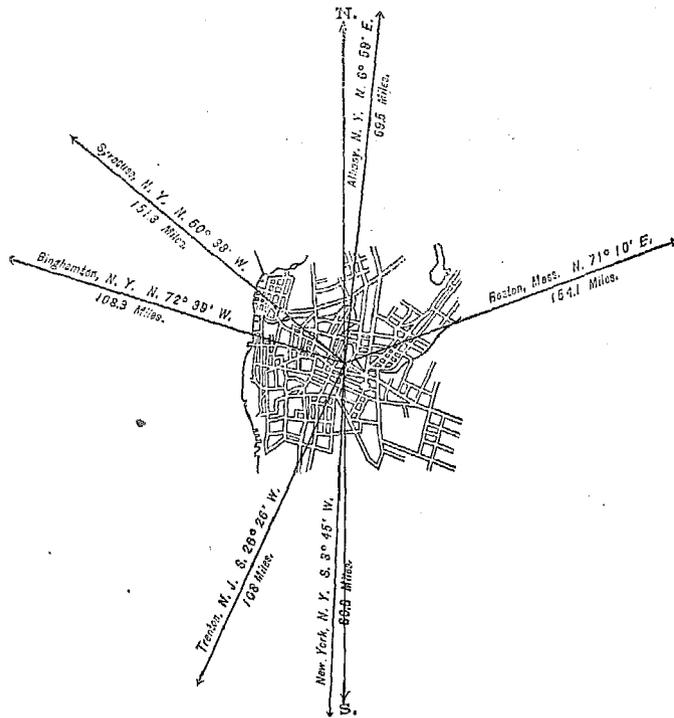
POUGHKEEPSIE, DUTCHESS COUNTY, NEW YORK.

POPULATION

IN THE
AGGREGATE,
1850-1880.

	Inhab.
1790.....	
1800.....	
1810.....	
1820.....	
1830.....	
1840.....	
1850.....	13,944
1860.....	14,726
1870.....	20,080
1880.....	20,207

a Population of the town. The city was incorporated in 1854.



POPULATION

BY
NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male.....	9,270
Female.....	10,937
—	
Native.....	16,413
Foreign-born.....	3,794
—	
White.....	19,513
Colored.....	* 694
* Including 1 Chinese and 2 Indians.	

Latitude: 41° 40' North; Longitude: 73° 55' (west from Greenwich); Altitude: 3 to 377 feet.

FINANCIAL CONDITION:

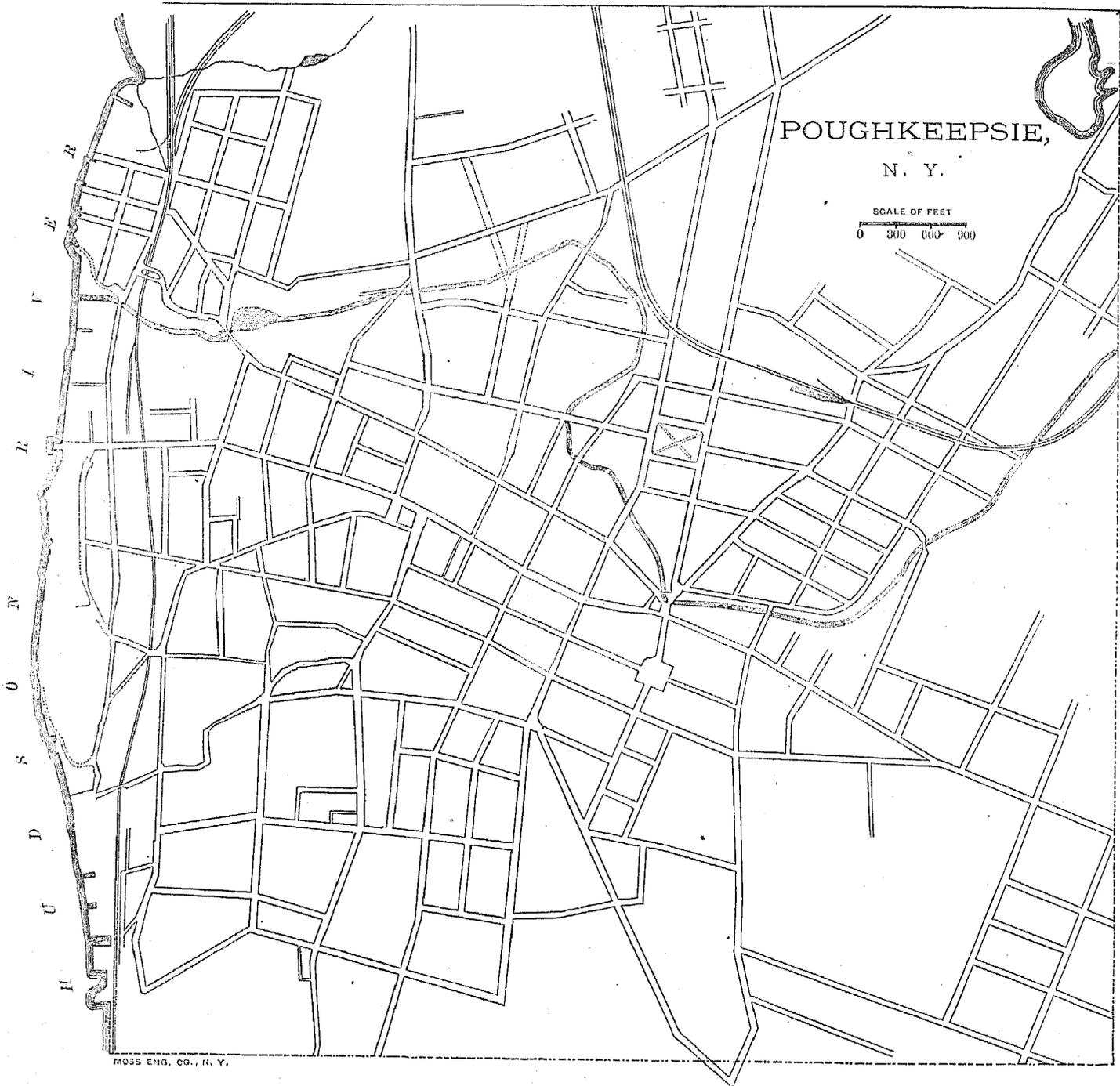
Total Valuation: \$11,799,293; per capita: \$584 00. Net Indebtedness: \$1,939,198; per capita: \$95 97. Tax per \$100: \$2 44.

HISTORICAL SKETCH.

Poughkeepsie was settled by the Dutch during the last years of the seventeenth century, and early became a place of considerable importance. Two events of importance occurred here during the period of the formation of our government. The legislature of New York met in Poughkeepsie to assent to the articles of confederation in 1778, and ten years later, July 26, 1788, the state convention was held here to ratify the Constitution of the United States. Poughkeepsie was incorporated as a village in 1799, and as a city March 28, 1854. It is one of the most beautiful places in the country, and is especially distinguished for its educational institutions. There are four private schools for girls in the city, two for boys, and a commercial college; while 2 miles east of the city, in the town of

POUGHKEEPSIE,
N. Y.

SCALE OF FEET
0 300 600 900



Poughkeepsie, stands Vassar college, perhaps the leading female college in the United States. This college was founded in 1861 by Matthew Vassar, to offer to women the educational facilities afforded to men by the best colleges. It was opened in 1865, and has proved highly successful. The leading manufactures of the city are dye-stuffs, carpets, iron, stoves, and pins.

POUGHKEEPSIE IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Poughkeepsie :

LOCATION.

Poughkeepsie is situated in latitude $41^{\circ} 40'$ north, and longitude $73^{\circ} 55'$ west from Greenwich, on the east bank of the Hudson river, about midway between Albany and New York city. The lowest point is 3 feet above mean high water in the Hudson, while the highest is 377 feet above the river-level.

RAILROAD COMMUNICATIONS.

Poughkeepsie is an important station of the Hudson River railroad, which connects it with New York and the West, and is the western terminus of the Poughkeepsie, Hartford, and Boston railroad, which brings it within easy reach of New England.

TRIBUTARY COUNTRY.

The country about Poughkeepsie is principally devoted to agriculture, but cotton and woolen manufacturing is carried on to a slight extent.

TOPOGRAPHY.

The underlying rock of the region about the city is argillaceous slate; the soil, clay and loam. The surface is undulating and the natural drainage good. The country is open, and but few marshes, ponds, or lakes are found.

CLIMATE.

No complete record of the temperature has been kept.

STREETS.

No information in regard to streets was furnished.

WATER-WORKS.

The city is supplied with water from the Hudson river, the water passing through filter-beds before being used. A pumping system is in use for supplying the reservoirs; but no detailed account of the cost of water-works, the system and cost of pumping, the annual expense of maintenance, and the receipts from water-rates was furnished.

GAS.

No information in regard to the gas-supply of Poughkeepsie was furnished.

PUBLIC BUILDINGS.

No information on this subject was furnished.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are no public parks or pleasure-grounds in the city.

PLACES OF AMUSEMENT.

The Collingwood opera-house is the only theater in the city; it has a seating capacity of 2,000. This theater pays an annual license of \$75 to the city. The Young Men's Christian Association hall, Arlington hall, Wright's hall, and Mulrien's hall, seating capacity not given, are used for concerts and lectures. There are no concert- and beer-gardens.

DRAINAGE.

The sewerage of Poughkeepsie was built when a public water-supply was introduced, during the years from 1871 to 1876, and its construction and maintenance are under the management and control of the water commissioners. Several ponds along the line of a small water-course running through the northerly part of the city were purchased, drained, and filled in, and the bed of the stream cleansed and the sides walled. A brick sewer, from 36 to 48 inches in diameter, was built along its banks for a distance of about a mile and a half, to receive the contents of sewers draining nearly half the city, thus preventing the contamination of the stream. The southerly part of the city is drained to a similar sewer on that side, 36 inches in diameter and about 2 miles long, also emptying into the Hudson river. This provides for all except a small tract in the central part of the city, which is drained by a 22-inch pipe sewer in Main street, as far as the Hudson River railroad; thence by a 28-inch brick sewer to the public landing; and thence to the pier-head by a double line of cast-iron pipes, 20 inches in diameter each. The ends of these pipes are turned down, so that the outlet is always submerged.

The area of the city within the district sewered is about 500 acres, having a frontage of about three-quarters of a mile on the Hudson river, and extending back nearly a mile. The surface rises rapidly from the river to a height of from 170 to 200 feet. Many streets, especially those running toward the river, have a descent as steep as 1 in 20, or 1 in 16, sometimes steeper. Sewers are laid nearly parallel with the street surface, and have about the same rates of fall. These heavy grades enable small-sized pipes to be used to such an extent that not less than 80 per cent. of the sewers consist of pipes from 12 to 22 inches in diameter. Storm-water is received from the streets by trapped basins, which are cleaned by contract. The price paid in 1880 was \$1 55 each, amounting to about \$425 per year. Flushing of sewers has not been done, except in protracted dry seasons. About 50 sewers were flushed in 1881 by regular employés of the water-works, at a cost of about \$5 each.

No information is given in regard to the cost of construction, except that the sewerage-system complete is said to have cost about \$6 per linear foot, including basins and manholes. Manholes are about 125 feet apart. The depth of cutting is from 11 to 13 feet. There were about 3 miles of brick and 10 miles of pipe sewers in 1876. None have been built since that year.

CEMETERIES.

Poughkeepsie makes use of 5 cemeteries, none of which are within the city limits:

Poughkeepsie Rural Cemetery is situated about $1\frac{1}{2}$ mile south of the city, between South avenue and the Hudson river; it contains about 57 acres, and was opened in 1850, since which time there have been 4,333 interments within it.

Brethren of Israel Cemetery (Jewish) is about $2\frac{1}{2}$ miles east of the city, between Vassar college and the turnpike; it contains about 3,750 square feet, and was opened in 1875. There have been about 12 interments.

Zion Cemetery (colored) adjoins the preceding, and contains three-quarters of an acre; about 21 interments have been made in it.

Dutch Reformed Cemetery is situated about $1\frac{1}{2}$ mile north of the city, on the east side of North avenue, and contains about 3 acres. No record of interments has been kept, and the ground is not kept in good repair.

Saint Peter's Cemetery is on the Salt Point road, about $2\frac{1}{2}$ miles northeast of the city, and was opened in 1854. It contains 11 acres. No records have been kept, but probably there have been about 1,800 interments within its limits.

The following burying-grounds are situated within the city limits, but are no longer used:

Methodist, on Jefferson street.

Baptist, on Garden street.

English, corner of Academy and Montgomery streets.

Saint Peter's and *Brethren of Israel*, on East Mansion street.

Friends', on Quaker lane.

No interment is allowed until a burial permit has been obtained from the health officer, who is required to issue one on receiving a certificate of death stating the name, age, sex, social condition (single, married, or widowed), color, cause of death, etc., of the deceased, signed by the attending physician, or, if there was none, by a responsible person. Graves in Rural cemetery must be 6 feet deep.

MARKETS.

There are no public or corporation markets in the city.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Poughkeepsie is vested in a board of health, consisting of seven members, appointed by the common council. The annual expense of the board is about \$500, but in case of an epidemic it may increase its expenses to any necessary amount. The power of the board in the absence of an epidemic is

subordinate to that of the common council, but during an epidemic it has unlimited authority. The chief officer of the board is the president, who receives no salary and has the same power and duties as the other members. A health officer (a physician) is employed at a salary of \$200 per annum, and has charge of all cases of contagious diseases and the issuing of burial permits. The health warden, salary \$200 a year, has charge of all nuisances. He makes the necessary inspections, orders the abatement of nuisances when necessary, and if his order is disregarded makes the abatement himself, charging the expense upon the estate where the nuisance existed. The board has control over all cases of defective house-drainage, cesspools, privy-vaults, and sources of drinking-water, and can order such changes as it deems best. In cases of defective sewerage and street-cleaning the board can compel observance of sanitary rules. The city ordinances forbid the pollution of the streams and harbor.

INFECTIOUS DISEASES.

Small-pox patients are removed to a pest-house about 1 mile from the city. Scarlet-fever patients are quarantined at home. If contagious diseases break out in the public schools the board of health has authority to take any action it thinks best. Vaccination is not compulsory, and is not done at public expense. The health officer makes a report of all deaths to the common council. No record of diseases seems to be kept.

REPORTS.

The board of health reports monthly to the common council, and its reports are published in the annual reports of the city officials.

No epidemic has visited the city since 1852.

MUNICIPAL CLEANSING.

Street-cleaning.—The city contracts for the cleaning of the streets, and obtains fairly clean streets in this way. The work is done entirely by hand, the streets being cleaned twice a week. The sweepings are deposited on a dumping-ground outside the city, and finally used as a fertilizer.

Removal of garbage and ashes.—Garbage and ashes are removed by the householders, who can, if they wish, keep them in the same vessel. Garbage is taken beyond the city limits, and ashes are used as filling.

Dead animals are removed and buried. The annual cost to the city is about \$25.

Liquid household wastes.—Chamber-slops and kitchen and laundry water are disposed of alike, all, or nearly all, being run into the public sewers. Very little runs into the street-gutters, which are flushed when necessary. Cesspools are very little used. Such as exist are nominally water-tight, and do not receive the wastes of water-closets. They must be cleaned at night, as much as possible, in the winter-time.

Human excreta.—About one-half the houses of the city are provided with water-closets, the other half depending upon privy-vaults. All, or nearly all, the water-closets empty into the public sewers. The privy-vaults are nearly all at least nominally water-tight. They must be cleaned between December 1 and March 1. The night-soil is used as manure, but none is put upon the gathering-ground of the public water-supply.

Manufacturing wastes.—No system has been formed to regulate the disposal of manufacturing wastes.

POLICE.

The police force of Poughkeepsie is appointed by the common council, and governed by a committee of that council, called the committee on police. The chief executive officer is the chief of police, who receives a salary of \$800 per annum and has the full charge of his department. There are 16 men in the force, who receive \$2 per day each, and two police constables. The uniform is the same as that of the New York city police, each man supplying his own. The men are equipped with billies, chain twisters, and revolvers, and are on duty ten hours each day. During the past year 617 arrests were made, the principal cause being intoxication. Special policemen are appointed by the common council to assist the regular force on days when such help is likely to be needed. The annual cost of the department is about \$13,000.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Poughkeepsie for 1880, being taken from tables prepared for the Tenth Census by Samuel J. Farnum, special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries	140	\$3,728,700	1,766	493	223	\$761,711	\$2,781,289	\$4,392,000
Blacksmithing (see also Wheelwrighting)	5	11,000	8	.....	.....	2,575	2,400	10,100
Boots and shoes, including custom work and repairing	6	511,400	148	80	70	44,953	138,815	202,596
Bread and other bakery products	6	49,000	27	1	15	16,100	64,100	98,100
Carpentering	9	45,100	81	.....	1	29,300	53,600	107,000
Carriages and wagons (see also Wheelwrighting)	7	66,900	93	.....	.....	37,457	58,955	122,400
Clothing, men's	5	60,500	77	10	2	28,400	78,000	176,500
Confectionery	3	52,000	17	27	14	6,850	32,200	56,000
Cooperage	4	64,000	118	.....	.....	53,500	100,000	200,000
Furniture	4	20,700	25	2	1	6,752	8,450	20,000
Iron and steel	3	913,000	162	.....	.....	66,016	565,554	746,543
Jewelry	4	41,500	13	.....	10	5,600	3,550	12,850
Liquors, malt	6	76,000	33	.....	.....	15,001	75,900	135,301
Marble and stone work	3	19,000	15	.....	1	7,685	8,500	33,150
Masonry, brick and stone	3	6,500	84	.....	.....	10,800	14,000	30,500
Painting and paperhanging	3	2,900	14	.....	.....	2,000	2,600	7,600
Photographing	3	8,500	7	2	.....	4,300	2,100	11,500
Plumbing and gasfitting	3	6,300	12	.....	.....	4,200	3,750	11,850
Printing and publishing	6	94,500	98	.....	6	42,773	16,346	82,420
Saddlery and harness	5	9,500	14	.....	.....	5,062	6,570	17,415
Sash, doors, and blinds	3	46,000	48	.....	8	6,641	28,800	57,550
Soap and candles	3	38,000	9	.....	.....	2,636	27,323	42,073
Tinware, copperware, and sheet-iron ware	6	19,800	42	.....	.....	14,838	16,535	42,600
Tobacco, cigars and cigarettes	7	20,700	33	.....	5	12,198	12,000	36,375
Wheelwrighting (see also Blacksmithing; Carriages and wagons)	4	7,000	10	.....	.....	2,510	6,200	14,230
All other industries (a)	29	1,538,300	628	371	84	333,558	1,459,982	2,118,238

a Embracing agricultural implements; bags, paper; carpets, other than rag; carpets, rag; cutlery and edge tools; dyestuffs and extracts; flouring- and grist-mill products; foundry and machine-shop products; furniture, chairs; glass; hardware; hones and whetstones; leather, curried; leather, tanned; mattresses and spring beds; mineral and soda waters; musical instruments, pianos and materials; shipbuilding; shirts; silk and silk goods; slaughtering and meat-packing; stone- and earthen-ware; watch and clock repairing; and wood, turned and carved.

From the foregoing table it appears that the average capital of all establishments is \$26,633 57; that the average wages of all hands employed is \$305 89 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$26,905 16.

ROCHESTER.

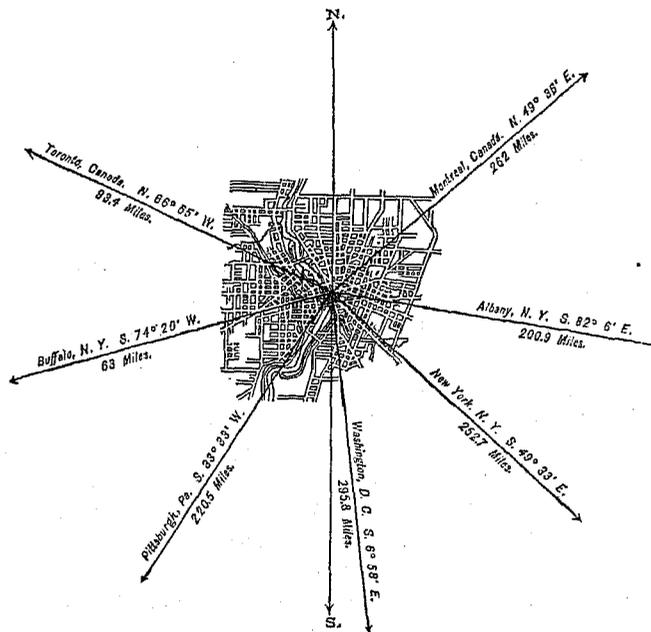
MONROE COUNTY, NEW YORK.

POPULATION

IN THE
AGGREGATE,

1830-1880.

	Inhab.
1790.....	
1800.....	
1810.....	
1820.....	
1830.....	9,207
1840.....	20,191
1850.....	36,403
1860.....	48,204
1870.....	62,386
1880.....	80,366



POPULATION

BY
SEX, NATIVITY, AND RACE,
AT

CENSUS OF 1880.

Male	42,338
Female	46,978
Native	62,744
Foreign-born	26,622
White.....	88,859
Colored	* 507
* Including 2 Chinese and 8 Indians.	

Latitude: 43° 8' North; Longitude: 77° 40' (west from Greenwich).

FINANCIAL CONDITION:

Total Valuation: \$42,121,252; per capita: \$471 00. Net Indebtedness: \$5,440,686; per capita: \$60 88. Tax per \$100: \$2 57.

HISTORICAL SKETCH.

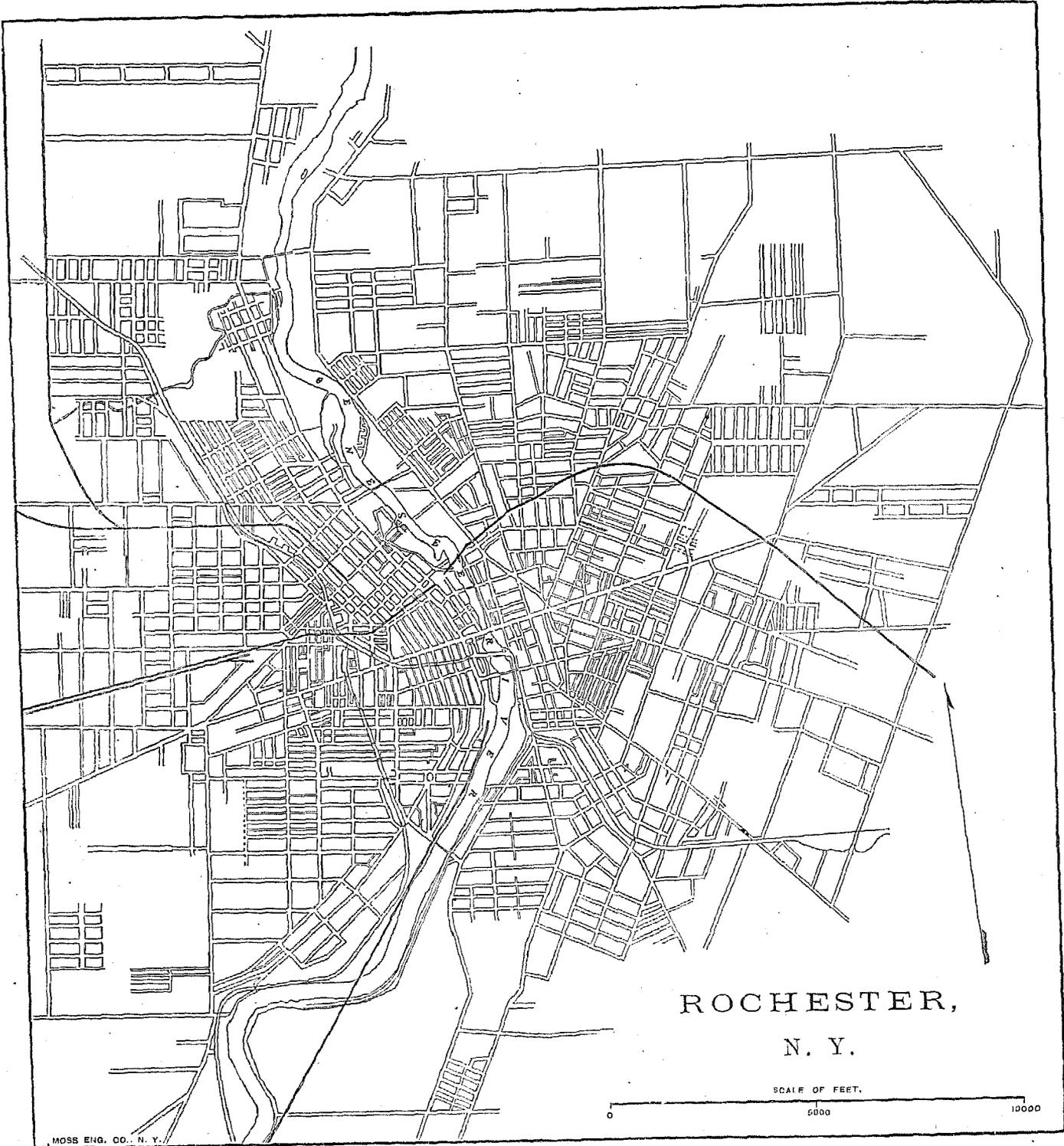
The following account of the past and present of the city of Rochester was prepared for the census by Mr. John Bower, at the request and with the assistance of the mayor, Hon. C. R. Parsons:

The settlement of Rochester dates from the year 1812, when Nathaniel Rochester, Charles H. Carroll, and William Fitzhugh surveyed the "hundred-acre tract" for village allotments, the site taking its name from the senior partner. This tract was a "mill-lot", formerly owned by Phelps and Gorham, and was by them transferred to a semi-civilized aboriginal, who had become known in the outlying regions as "Indian Allen", the consideration being the building of mills for grinding corn and sawing lumber for the few widely scattered settlers in the "Genesee

country". Decay and ruin, however, soon overtook the enterprise, as there was not sufficient business to maintain it. Allen, in consequence, sold his lot to Sir William Pultney, then a very large owner of lands in this section of the state, and it was from the latter that the founders of Rochester obtained their title. This was in 1802, and the price paid was \$15 50 per acre, so that the purchasers must have had, at this early day, great faith in the possibilities of the future of their purchase. This tract lies on the west side of the Genesee. On the east side of the river, Phelps and Gorham had sold (in 1790) some of their lands for the low price of 18 pence an acre, which shows that their prescience was not equal to Pultney's. Perhaps, however, this is not at all surprising, for 20 years afterward, viz., in 1810, the chronicles inform us that not a solitary hut stood on the ground now occupied by a great and prosperous city. All was primeval forest and swamp—the only denizens were the wild beasts and the roaming Indians. Even as late as 1813, pagan rites were performed on the ground now occupied by christian temples, and only the other day one of the early settlers who witnessed the ceremony passed away. During the first year of its village existence, Rochesterville—for that was its name—contained only two rude frame buildings. Three years later, in 1815, the population had increased only to 331; while in 1817, when it was organized by act of the legislature, it had increased to 1,049, the tax-levy being the modest sum of \$350. The war of 1812 seriously retarded the growth of all the frontier settlements, of which there were several which had made a beginning previously to the opening of hostilities. On the east there were Pittsford, Pennfield, and Brighton; on the west, Bergen, Riga, and Ogden; on the south, Avon and Scottsville; and on the north, Charlotte and Hanford's Landing. All of the above, excepting the last-named, are now thriving villages. Hanford's Landing, on the Genesee, served a useful purpose from 1810 to 1835, chiefly as a trading and shipping port, when it was destroyed by fire, and its trade transferred to Rochester, and to Charlotte at the mouth of the river. In 1821, the county of Monroe was organized, with Rochesterville as its capital, and in the following year the name was, by act of the legislature, abridged by the omission of "ville". A new era of growth began at this period. The Erie canal, which was approaching completion, imparted such a vitalizing influence that Rochester, at the opening of the canal in 1825, had increased its population to 5,273, and in five years after it had reached 9,207. In 1834 Rochester was incorporated as a city and divided into five wards, with a territorial extent of upward of 4,000 acres.

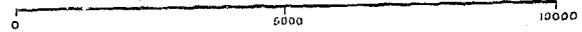
The fire department during this year received its first recognition by the common council, by the election of 10 fire-wardens—2 for each ward—and the passage of an ordinance for the election of a chief engineer and 2 assistants. Many ordinances were passed for the purpose of securing the order and efficiency of the department, and \$1,500 was raised by the tax-levy for its support. Great enthusiasm was manifested both by the people and by the council in the new order of things. The next year, October 13, 1835, Colonel Thomas S. Meacham, of Sandy Creek, Oswego county, presented a mammoth cheese to the newly created city, to be sold for the creation of a charitable fund for the relief of the disabled firemen, and the widows and orphans of such firemen as may lose their lives in the discharge "of their duty as firemen". The donor made a happy presentation speech, which was suitably replied to by the mayor, whilst the common council passed a series of flattering resolutions couched in very ornate diction. The weight of the cheese was 800 pounds, and it realized at an auction sale \$912. This nucleus of a fund, by careful management, has now reached the large sum of \$50,000. The days of the old volunteer fire department have passed away. Steam, the electric telegraph, and horse power have supplanted all the old methods of work and communication. In 1835 the city boundaries were extended, and in 1840 Mount Hope cemetery was included within the city limits. The population at this date was 20,191. In 1842 there was still another extension, and in 1845 wards 6, 7, 8, and 9 were created. Five years thereafter the charter was amended and consolidated, and in 1852 the city was divided into ten wards and ten supervising districts. The population had now reached about 38,000; and it is a suggestive fact that, whilst the tax-levy of this year was only \$79,752, Mayor Stilwell, in his inaugural address to the common council, remarked: "Our taxes, it scarcely need be said, are quite heavy, and the payment of them onerous to many of our citizens." The taxes, per capita, now raised are upward of 400 per cent. higher than in 1852, and yet, perhaps, owing to the changed condition of the people, are not felt to be heavier or more onerous than they were thirty years ago. In 1852 the city decided by popular vote to issue its bonds for \$300,000 as a subscription to aid in the building of the Genesee Valley railroad. In 1860 the population had reached 48,204. In the intervening years since 1852 two additional wards had been formed, and many improvements made, indicating steady progress in all the essentials that impart beauty and stability to a city's growth. The police system had been established, with a chief and 20 policemen; the charter had been revised by a commission; the industrial school had been incorporated and many innovations adopted, showing that Rochester was rapidly assuming the characteristics of larger cities. The charter was again amended in 1864. In the three previous years, Clarissa Street bridge was rebuilt, Main street was greatly improved by widening, a street-railway company was chartered, and four steam fire-engines and horses to draw them were purchased. The census of the next year (1865) showed a population of 50,940.

On March 16, 1865, news reached the city of a great flood up the Genesee valley, and that it was higher than ever before since 1835. The tidings became more and more startling as the hours passed by, until at last it was clearly foreseen that a calamity was near at hand. The next day the sea of waters had reached and overwhelmed the city in frightful disaster. The central and business portion of the city on the west side of the river was



ROCHESTER,
N. Y.

SCALE OF FEET.



MOSS ENG. CO. N. Y.

completely submerged to the depth of several feet, whilst the rush of waters through the streets was so powerful that heavy flagstones were hurled from the sidewalks, lamp-posts were torn away, streets were washed out and channeled, in some places to a great depth. The two railroad bridges were swept away, and the city bridge was considerably damaged. Several buildings on the banks of the river were demolished, and scores of others were greatly injured, while much valuable property was swept away, damaged, or destroyed. A large number of iron safes, some of which were of great weight, were washed away, with the building in which they were stored near the falls, and careful search failed to recover more than one or two, the others probably having been swept over the falls. Railroad communication was severed, the depots were surrounded with water, and hotels could be reached only in carriages and boats. Many people in stores and houses were cut off for one or two days from communication with their friends. Such was the force and rapidity of the current that no one was sufficiently daring to venture his life in any attempt at rescue or relief. The second day of the disaster was Sunday, and six of the churches, in the 1st and 2d wards, were inaccessible on foot. No newspapers were issued on Saturday. There was a general suspension of business throughout the city. Desolation seemed to reign supreme in the lower portion of the city, while the damage would count up to hundreds of thousands of dollars. This was the greatest flood known in the history of the Genesee valley. That of 1835 was lower by several feet, and it is improbable that a combination of circumstances such as produced this flood will ever occur again. As soon as the flood subsided prompt measures were taken to repair the damages to the streets, etc., and a commission was appointed by the legislature May 1, 1865, to devise and report measures to prevent inundations in Rochester from the Genesee river. A committee of the common council was also appointed for a like purpose, and at the council meeting March 20, 1866, an elaborate report on the subject was presented. The plans submitted were thoroughly canvassed, but necessitated such expense that none of them were ever acted upon to any considerable extent. And thus far events have justified the decision.

In March, 1866, the funded and bonded debt of the city was \$1,127,000, of which sum \$100,000 was for relief of soldiers' families, and \$430,000 for bounties to volunteers in the civil war. Ten years afterward (1876) it had risen to \$5,592,686, less \$172,000 Genesee railroad bonds provided for. It is now about \$5,500,000, less \$160,000 of the above bonds. The debt is being reduced from year to year, and, by constitutional inhibition, no debt can hereafter be contracted except for purely municipal purposes. Of this increase \$750,000 was for bonds issued in aid of the Rochester and Nunda railroad and the State Line railroad, the whole of which it is feared will be a total loss to the city treasury. The road to Nunda, for which the city issued \$150,000 bonds, was never built; the State Line railroad was, after much delay, finally finished, and opened up an important section of the country to the trade and resources of the city. A fair valuation of the city's corporate property amounts to \$5,500,000. Some indication of a city's growth in wealth and population may be gathered by a comparison of the amount raised by taxation within certain periods, provided the taxes are not at any time excessive or onerous. The following facts are in point: From the date of incorporation, 1834, to the year 1869, inclusive, a period of thirty-six years, the general city taxes amounted to \$4,655,703; whilst in the succeeding eleven years only they reached the sum of \$8,306,108, thus nearly doubling in amount in about one-third the time. About the same ratio of increase has taken place in regard to assessments for local improvements and miscellaneous purposes.

The last enumeration of population mentioned was 50,940, in 1865; ten years later it had reached 81,723, and now it is 89,366. It will thus be seen that Rochester has not experienced any period of decline, or even of stationary condition. From first to last, her march has, on the whole, been steadily forward; and from her situation and surroundings and the enterprise of her citizens, it may be fairly divined that her future progress will be as marked as in the past—not very rapid or fitful, but steady and substantial. Between the years 1860 and 1865 two new wards were added, and in 1874 the 15th and 16th wards were created by the extension of the city boundaries.

ROCHESTER IN 1880.

Rochester is divided by the Genesee river into two sections, designated the "East side" and the "West side", respectively, the former having the larger population by several thousands. The river is spanned by five city bridges and two railroad bridges. Of the city structures, four are built of iron resting on stone piers, and one—Main Street bridge—of massive stone masonry. There are also numerous bridges over the canals, two of which—over the Erie canal—are swinging bridges, and one is a lift bridge. One of the city bridges—Vincent Place—is below the upper falls, about three-quarters of a mile from the "four corners"; the others are distributed at convenient distances south of the above, the last—Clarissa Street—being about a mile and three-quarters from the first. The first bridge over the Genesee, between the lake and Avon, a distance of about 27 miles, was built at Rochesterville in 1812, and contributed in no small degree to develop the infant settlement. Another was completed just below the falls in 1819, known to local history as the celebrated Carthage bridge. It stood one year and one day, and then fell. It was built of timber, and was 718 feet long and 30 feet wide. From the summit of the arch to the water was 196 feet. About

forty years afterward a suspension bridge was erected near the same locality, which stood for only a brief period. Both these bridges were fatally defective in construction. No attempt at bridge-building has since been made at that locality.

Rochester is especially favored in regard to its surroundings. The "Genesee country" is so well known for its rich agricultural resources and productiveness, that it is only necessary to refer to the fact that Rochester is the natural trading-mart of its rich valleys as well as the center of many fruitful counties, to establish her pre-eminent advantages.

Rochester is universally acknowledged to be a beautiful city. It has many fine avenues and streets, lighted with 2,489 gas-lamps and 1,261 oil-lamps. Many of its dwellings are spacious and elegant, with beautifully adorned grounds and surroundings. Shade-trees are abundant—almost everywhere. The number of dwellings in the city is nearly equal to the number of families. While it does not contain an extensive public park, it has 18 small parks, or "squares", which are beautiful and attractive. It has also Mount Hope cemetery, of 200 acres, with its charming diversity of wooded hills and dales, beautified by art, and richly adorned with sculptural and rural tokens of affection, scattered profusely among its 30,000 graves. The University campus contains 21 acres, with open drives and walks amid shade and greensward. There are Arnold park and other parks—open driveways through groves, shrubs, and flowers, and lined with picturesque residences—all furnishing means of innocent and agreeable recreation. Mount Hope alone is visited yearly by tens of thousands of citizens and strangers. There are 25 fine public-school buildings, and a beautiful and spacious free academy; many parochial schools and academies under Catholic auspices, and about 40 private academies. It has an opera-house and academy of music, and a well-endowed theological seminary, and 6 daily newspapers, one of which publishes a Sunday edition. Two of the dailies are printed in the German language. There are 2 Sunday and 13 other papers; 133 societies and associations—literary, religious, benevolent, social, etc.; 17 building-lot associations; 62 churches, Protestant and Catholic, and 2 synagogues. Many of these buildings are spacious and imposing. There are 5 banks and several banking-houses; 4 savings-banks, with deposits of \$16,108,175. The nursery trade of Rochester is unsurpassed. In and around the city are from 1,500 to 2,000 acres devoted to the raising of fruit and ornamental trees, shrubs, grape and other vines, small fruit, flowering and ornamental plants, etc. The business in flower and vegetable seeds is very large. Among the many charitable institutions are Saint Mary's hospital (Catholic) and the city hospital (Protestant), both fine and spacious structures, and excellently managed. Some of the commercial buildings of Rochester are elegant and of palatial proportions. The manufacturing establishments of wood, metals, leather, beer, etc., are numerous and important. The boot and shoe and clothing manufactures alone amount to several millions yearly; while the jobbing trade in groceries, dry goods, etc., is very large. The great water-power of the Genesee keeps in motion a large amount of manufacturing machinery, which gave to the city for a long time pre-eminent rank in the manufacture of flour. At one time it was the largest in this respect in the country and in the world. It is still a very important interest, and gives abundant evidence to-day of long-continued prosperity, if not of a restoration of its former supremacy. There are many elegant public buildings—city, county, and state—among which are the city hall, court-house, and Western house of refuge, a state reformatory institution. The Erie Canal aqueduct, which crosses the Genesee, is a noble and well-built structure; its length is 848 feet and its width is 45 feet, interior dimensions. It is a stone structure with 7 arches, and cost \$600,000. Within the city limits are 3 falls, one in the center of the city, a perpendicular cataract of 96 feet, being the Genesee falls of note and notoriety. About $1\frac{1}{2}$ mile lower down the river are two others, of 84 and 25 feet, respectively. At the mouth of the river, 5 miles from the lower falls, is the port of Genesee—Rochester's port of entry, and the seat of considerable commerce on the lake. The assessed valuation of the city is \$42,121,252, of which \$4,244,800 is exempt from taxation. The actual value is not less than \$60,000,000.

Rochester is 229 miles west-northwest from Albany, and 68 miles east-northeast from Buffalo.

RAILROAD COMMUNICATIONS.

Rochester is touched by the following railroad lines:

The New York Central and Hudson River railroad, from New York to Buffalo. The road divides at Syracuse and meets here, the old line passing through Auburn and Canandaigua, and divides again at this point, one line running direct to Buffalo and the other going via Niagara Falls. There are 13 passenger trains going east daily—5 by the Auburn line—and the same number going west, 6 of the latter going via Niagara Falls. A branch also goes to Charlotte, at the mouth of the Genesee river, connecting there with the Lake Ontario Shore railroad.

The Northern Central railroad, to Harrisburg and Baltimore, comes into the city over the tracks of the New York Central railroad from Canandaigua.

The Rochester and State Line railroad, to Salamanca, New York, 108 miles, connects there with the New York, Pennsylvania, and Ohio railroad.

The Rochester division of the New York, Lake Erie, and Western railroad joins the main line at Corning, New York.

The Rochester and Lake Ontario railway runs 7 trains daily to Lake Beach and other points along lake Ontario.

A narrow-gauge road to Braddock's bay is soon to be built, the stock having been subscribed for. The Genesee Valley canal, which terminates here, now abandoned by the state, has been purchased by a railroad company, and the intention is soon to have it completed.

Five lines of stages leave the city daily to Greece, Penfield, Rush, Webster, and Ontario, and two semi-weekly to Lima and Honeoye Falls, respectively.

HORSE-RAILROADS.

The Rochester city and Brighton railroad has about 20 miles of horse-railroad, and about 70 cars running at short intervals to all the important sections of the city. They all start from one central point, locally known as the "four corners", at the junction of State, West Main, and Exchange streets. The several lines are excellently managed, and are being constantly extended into new territory.

CITY GOVERNMENT.

Under the amended charter of 1880 the city government of Rochester is composed of the mayor, treasurer, common council, executive board, municipal court, board of education, and police justice, all elected by the qualified voters of the city. There is also elected for each ward one supervisor, whose term of office is the same as that of the supervisor from the towns of Monroe county, of which Rochester is the capital. The common council appoints a city clerk, a city attorney, an overseer of the poor, 3 assessors, a sealer of weights and measures, a city surveyor, 3 excise commissioners, 3 commissioners of Mount Hope cemetery, and 2 police commissioners. The 2 members of the board of health, appointed by the mayor, must be confirmed by the council.

The nature of the powers and duties of these officials and boards is perhaps sufficiently denoted by the names, but a short account may not be out of place.

The mayor is the chief executive officer of the city, and is elected by popular vote for a term of two years. His salary is fixed by the common council, but can not be less than \$2,000. All acts, ordinances, etc., of the common council, except penal ordinances, rules or regulations, or any action in relation to appointments or removals from office, or to the reduction of the number of policemen, must have the mayor's written approval, and if this is refused can be passed only by a two-thirds vote of the council. The mayor's approval is not essential for the acts excepted as above. He is *ex officio* president of the board of health, and is a member and president of the board of police. The city treasurer is elected for a term of two years, and is the chief financial officer of the city; he receives all the moneys belonging to the city, unless otherwise provided by law; must deposit and keep the same as directed by the common council, and keep such an account of the moneys as the council may direct. Any elector of the city is entitled, during all reasonable hours, to examine all the treasurer's books and accounts, while the finance committee of the common council has the special duty of giving watchful attention to the city treasury and the financial interests of the city imposed upon it. The penalties fixed by the charter for the non-payment of taxes are severe, but just, and the treasurer may be authorized to buy in for the city all property sold for non-payment of taxes when the bids do not amount to the taxes due. His bond is fixed by the common council, but can not be less than \$50,000, and the mayor is the sole judge of the sufficiency of the sureties. His salary is also fixed by the council.

The common council consists of 16 members—1 for each ward—who are elected for a term of two years. Eight members are elected each year. The president is elected by the council, and appoints all the standing committees of that body; in case of the absence or inability of the mayor, he performs all the duties and exercises all the powers of that officer. The financial committee submits, on the first regular meeting in May of each year, an estimate of the sums needed to meet the expenses of the year. The council may alter or amend this statement, but can not raise the aggregate amount of the estimate except by a two-thirds vote and with the approval of the mayor. All legislative powers necessary for the proper conducting of all municipal affairs are in the hands of the council. On the last Thursday in March in each year the council audits and settles the accounts of the city treasurer, and of all other officers and persons having accounts with the city or claims against it.

The executive board consists of three members, salary \$2,000 per annum, for which they are required to devote all their time. They must be electors and freeholders of the city, and all chosen by the electors at the annual election, one each year, the term of office being three years. They have sole power to let all contracts to be made by the city in pursuance of all ordinances, except such as are by law directed to be otherwise made, and must superintend the execution of them, and have superintendence and control of all work ordered by the common council. All improvements, repairs, or construction of streets, sewers, bridges, and expenditures therefor, are under their control, except when the expense of such work or improvement is required to be defrayed by a local assessment. The common council alone has power to pass any ordinance for such purpose. The executive board has full control of the management of the water-works and the fire department, and all expenses in relation thereto, but must not exceed the limits of the appropriations prescribed by the common council at the time it authorized other moneys to be raised by general taxes. A detailed report of all receipts and expenditures must be kept and reported monthly to the common council, and these reports must be published. All moneys received from water-

rates or from other sources can be paid out only by order of the common council on their certified orders, except as otherwise provided. No sum greater than \$25,000 for extensions, additions, or improvements of the water-works or lines of pipes can be expended in any fiscal year, except by vote of the common council, nor can any extensions of the lines of pipe be made without the same authority. The rates for the use of water, and the rules and penalties for infractions thereof, are fixed by the executive board. It has full power for maintaining in perfect order and efficiency all the interests under its charge. Although these powers are great, the checks against usurpations or abuse are ample. All receipts of moneys from any source must be deposited with the city treasurer daily. Not more than \$1,500 can be drawn by orders upon the city treasurer, to be disbursed for labor only, during any one week, and these payments must appear in detail in the monthly report. In the execution of its trust the board may employ such help as it deems necessary.

The municipal court is a court of civil jurisdiction, and consists of two judges. It was established by a special act, and the present judges were appointed one for a term of five years, the other for a term of six years, from May 1, 1876. Hereafter the judges are to be elected by the electors of the city at the annual charter election next preceding the end of the term, and are to hold office for six years. Their annual salary is \$1,800, and they can appoint a clerk and deputy clerk at salaries of \$600 per year. The jurisdiction of the court extends over all cases of actions arising on contracts for the recovery of money only, or in actions for breach of contract when the claim to damage does not exceed \$500, or, if a matter of account, when the sum total of the accounts of both parties does not exceed \$1,000. The office of justice of peace in the city is abolished. All fees for process, and all moneys recovered for penalties or forfeitures, must be paid into the city treasury.

The board of education consists of sixteen commissioners, one for each ward. They are elected at the regular charter election by the qualified voters of the city, and serve for two years. Eight are elected each year. They appoint a president of the board, a superintendent, employ teachers and fix all salaries, but themselves serve without pay. An annual report concerning the schools is submitted in October of each year, and twenty days, at least, before the annual election, they submit an annual report of all receipts and disbursements. The funds for school purposes are voted by the council and raised by general taxation, but can not exceed in any year \$10,000 for repairs of school buildings, \$15,000 for the purchase of new houses or lands for the schools, or a sum for teachers' wages and contingent expenses exceeding \$13 per capita, based on the average attendance of resident pupils in the public schools for the school year next preceding the levying of the general taxes.

The city clerk has very responsible duties and trusts. His official term is two years, and his compensation is fixed by the council. He must keep minutes of all proceedings of the council, countersign all licenses, draw all checks on the treasurer for moneys authorized to be paid by the common council, and preserve a record of them, and fill all vouchers and papers relating to his official trust. He has the custody of the corporate seal, is clerk of the board of health, and commissioner of deeds.

The city attorney is appointed by the common council for a term of two years and at a salary fixed by the board, but may receive for himself, in addition, taxable costs in any action brought or defended by him for the city, if the city wins its case, provided they are collected of the adverse party. He is the legal adviser of the city's officials, and must attend to all its legal business, unless permitted by the council to employ additional counsel in special cases.

The city treasurer, overseer of the poor, and assessors may be removed by the council for official misconduct or neglect of duty.

In addition to the account of the city written by Mr. John Bower, the following detailed information in regard to the sanitary authority and municipal cleansing has been supplied by the city officials:

WATER-WORKS.

Notwithstanding the many changes and improvements that have been made during the past fifteen years, and which can not be enumerated here, none ranks higher in importance and magnitude than the Rochester water-works. For twelve or more years previously to the beginning of their construction, the subject of supplying the city with an abundance of pure water had been frequently agitated. Once during this period a company was formed for the purpose, but after expending about \$700,000, realized mainly from the sale of bonds, the whole enterprise completely failed and the labor and material were worthless. On April 27, 1872, an act was passed by the legislature entitled "An act to supply the city of Rochester with pure and wholesome water." This act authorized the mayor to appoint five commissioners to prepare and submit a plan, which, if approved by him, was to be adopted. The funds necessary to carry on and complete the works were to be raised by the sale of the bonds of the city, payable in not less than thirty years. The commissioners submitted an elaborate report November 15, 1872, in which they recommended the plan proposed by their chief engineer, Mr. J. Nelson Tubbs, this being a compound system—gravitating works from Hemlock lake for domestic use, and the Holly direct pressure system for the suppression of fires in the central portion of the city, the water-supply to be taken from the Genesee river. The plans having been adopted by the mayor, the contract was let April 12, 1873, and work was immediately begun, and in less than eight months the Holly system was completed. The length of pipe laid for this system is about 8½ miles, but as fast as the pipes were laid for the Hemlock they were connected with the Holly pressure and supplied with water

from the river. This use of the main continued until the latter part of January, 1876. On the 23d of that month Hemlock water was let into the reservoir, and soon flowed through the city mains, the connection between the two systems being now closed. Hemlock lake lies in Livingston county, 28 miles from Rochester. Its area is 1,828 acres and its water-shed 27,554 acres. Canadice lake, which the act allows the city to use when deemed necessary, lies in a narrow valley east of and adjacent to the Hemlock valley; it has an area of 648 acres. At present the supply from the former source is more than twice the amount used, although this will not be the case for any length of time, as the demand for the water is constantly increasing. The capacity of the conduit from the lake to the reservoirs is sufficient to supply a daily consumption of about 9,000,000 gallons. The rated capacity of the Holly works is 7,000,000 gallons. The total number of miles of pipe-mains laid in the city up to April 1, 1880, was 104.356. At the same date 898 hydrants and 1,089 stop-gates had been set. Hemlock lake is 388 feet above the Erie Canal aqueduct; Rush reservoir, 10 miles from city, 245 feet, and Mount Hope reservoir, distant $1\frac{3}{4}$ mile from the city hall, 127 feet. The capacity of the first-named is 80,000,000 gallons, and of the latter 30,000,000 gallons. The bonds issued by the city for these works amount to \$3,592,000, \$410,000 of which was for accumulated interest while the works were being built. Besides the above there has been raised, by taxation for pipe-extensions, the sum of \$225,000 during the past five years.

The Rochester water-works, it will be seen, have been costly, and for a considerable period tax-payers were much opposed to so great an outlay, many thinking that one system was sufficient for the present and for some time to come. It is apparent, however, that, whatever differences may have existed, there is to-day a general agreement as to the great value of the works to the city. They are unquestionably among the most perfect and efficient systems of water-works to be found.

EDUCATIONAL INSTITUTIONS, ETC.

Among the many educating influences which have imparted and established a lasting influence for the general well-being of the community, none can claim a higher rank than the university of Rochester. Fully to narrate its history would be to trace the history of the city since the time when the college began in an old building, once the United States hotel, in 1850, until the present, when it has a beautiful location, fine buildings valued at \$403,255, and other property valued at \$443,187 86. To the library and endowment funds the sum of \$264,564 60 has been contributed during the past year. The cabinets of geology and mineralogy in Anderson hall, collected by Professor Henry A. Ward, have been pronounced by competent scientists, who have closely examined them, as unsurpassed save by a few in some of the European capitals. The foundations have also been laid for cabinets of archæology and art, and much interesting material has already accumulated. The Trevor telescope, mounted equatorially in a building erected for the purpose on the university grounds, is a valuable adjunct to astronomical study and observation.

Rochester began at an early day to take an active interest in religious, social, and literary matters. Among the institutions to promote the latter were several that enjoyed considerable prosperity. One of these was the Rochester Athenæum; it was organized June 12, 1829. The object, as set forth in its articles of association, was "the procuring of newspapers of different states and countries, pamphlets, books, maps, charts, and of collecting historical and other documents connected with the history and antiquities of our country, and the useful arts, and generally to disseminate useful knowledge". It had a prosperous career for several years, but was finally overshadowed by another association, called "The Young Men's Literary Association". This had a brilliant career for some time, and several of its early members rose to national distinction. During the summer of 1838 the libraries and effects of these two organizations were united. At the next annual meeting, held May 1, 1839, a new constitution was adopted, and "Athenæum" was chosen as the name, in order to make use of the very favorable charter which had been granted by the legislature. The popular title combined both names. One of the queer things about the consolidated organization was that, under the new constitution, no person was eligible for membership who was over 35 years of age. Members passing this age were retired on a membership fee of \$5 per year, but had no voice in the management. Wisdom in those days seems to have developed and died at an early age.

There was still another organization at this date, "The Mechanics' Literary Association". It was incorporated by act of the legislature passed February 25, 1839. Besides having a library and reading-room, its plan embraced weekly debates. These excited considerable interest, and for several years the institution was popular and successful. Not a few gentlemen who became fluent public speakers took their first lessons in public speaking in the debates. The year 1847 found both these organizations in an enfeebled condition, and the more active members of each effected a consolidation in October, 1847. The new title adopted in its constitution was "The Rochester Athenæum and Mechanics' Association". On the completion of Corinthian hall in 1849, the athenæum, as it was popularly called, made this its quarters, and remained in these rooms nearly twenty-five years, during this period being very successful and popular. Its lecture courses were generally crowded, and furnished one of the chief attractions of the winter months.

It next removed to quarters in the Rochester Savings Bank building, to rent-free, very commodious, eligible quarters; but the bank's trustees did not long continue this act of generosity, and the consequence was the storage

of books and property of the athenæum until a day should come for its resuscitation. That day seems now to have arrived, as a very liberal conditional offer, made by two old citizens, Mr. M. F. Reynolds and Mr. George S. Riley, can not well fail of a successful issue.

Among the other valuable libraries in the city is that of Sibley hall, under charge of the university. The building is a modern structure, the gift of the gentleman whose name it bears, Mr. Hiram Sibley. Its cost was upward of \$100,000. It contains nearly 18,000 carefully selected volumes, has a permanent library fund of \$50,000—the Rathbone fund—and is free to all as a reading or consulting library. The students only can draw books from it. The books are admirably classified, and by means of card catalogues and indexes of periodical and miscellaneous literature any author or subject can readily be referred to. Another practically free library is the Central library, under control of the school commissioners. It contains about 10,000 volumes. The Rochester theological seminary, an old and prosperous institution, has a library, in a new and beautiful building lately erected, of 15,000 volumes, 5,000 of which were purchased from the library of Neander, the church historian.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Rochester is vested in a board of health consisting of the mayor *ex officio*, president of the board, and six members appointed by the mayor and confirmed by the common council. They are appointed for a term of three years, two members being chosen each year. At least two must be physicians, graduates of a regularly incorporated medical college. The board is subdivided into four committees: 1st, finance; 2d, sanitary; 3d, garbage and scavenging; 4th, law and ordinances. For the last eight or ten years the average annual expenses of the board have been about \$9,000, which includes the ordinary expenses of the board of health, the maintenance of a small-pox hospital, and, until the present year, the cost of collecting garbage. During an epidemic the board may increase its expenses by any necessary amount, but the appropriation must be made by the common council. In the absence of an epidemic the board has the general oversight of the sanitary condition of public and private buildings, sewers, garbage, privies, quarries, scavenging, etc.; and in all cases the violation of a penal ordinance referring to these can be enforced through the usual police routine. It can take any necessary measures and make any necessary regulations during the prevalence of an epidemic, but all money must be appropriated and all ordinances passed by the common council. The commissioners receive no salary. They appoint a health officer, who has such powers as the board may delegate to him; his salary is fixed by the common council, and is this year \$800. During the summer, regular meetings are held each week, during the winter every two weeks, and special meetings whenever they are called. Four inspectors are employed. These make daily inspections, each one having a regular route, the city being divided for this purpose into four sections, and are at work from 8 a. m. to 5 p. m., or later. They have no police powers, their authority being limited to an inspector's notice when nuisances are found. If this is disregarded the police compel obedience.

GARBAGE.

Until the present year the board has had the control of the removal of garbage. This is now done by the executive board, and the board of health has only the power of supervision. It is strictly forbidden to cast garbage, offal, or any putrid or decaying vegetable or animal matter into the streams, river, or canal.

BURIAL OF THE DEAD.

No interment is allowed until a permit of burial has been obtained at the cemetery. This permit is issued only on the receipt of a certificate of death signed by a physician.

INFECTIOUS DISEASES.

Small-pox patients are removed to Hope hospital, a pest-house outside of the city limits. In very favorable circumstances the patient is quarantined at home. Scarlet-fever patients are quarantined as far as possible; but the arrangements in this respect are unsatisfactory, as no regulation requires cases of scarlet fever to be reported at the central office of the board. The regulations are not as stringent as in cases of small-pox. The efforts of the board to control the schools in case contagious diseases break out there have thus far been unsuccessful.

Vaccination can be made compulsory when such action is necessary, and is done at public expense in times when an epidemic of small-pox is threatened.

REPORTS.

The board of health makes an annual report to the common council, and this report is published by the city. Certificates of births and deaths are made monthly by the physicians and returned to the central office of the board, when a summary is made by the clerk, and at the end of the year a report of births, deaths, diseases, etc., is published.

The dependence of the board on the common council and its lack of independence in its own province renders its work less complete and satisfactory than it would be were the board free from this control.

MUNICIPAL CLEANSING.

Street-cleaning is done by the city with its own force. A sweeping-machine is used on a few of the principal streets, but in general the work is done by hand. All improved streets are cleaned in the spring, and streets in the center of the city in the fall, as well as from time to time during the summer. The cost to the city is about \$15,000 each year. The sweepings are thrown into the Genesee river. The executive board, which has charge of the streets, gave notice in May that it would enforce an ordinance which requires every householder or occupant to clean the streets in front of his premises, between 5 p. m. Friday and 8 a. m. Saturday of each week between April and December, collecting the dirt in piles ready for removal. No estimate of the cost of this work is given.

Removal of garbage and ashes.—Garbage and ashes are removed by contractors employed by the city. Garbage is kept entirely separate from ashes, and is generally deposited in barrels while awaiting removal, and is finally taken outside the city, where it is used on farms as a fertilizer or in feeding swine. Ashes are taken and dumped in vacant lots. The annual cost to the city for removal is about \$3,000. The price paid to the contractors is insufficient to obtain a satisfactory performance of their duty; but no injury to health is known to have resulted, although considerable nuisance is caused by delay in removing the garbage.

Dead animals are removed by the garbage-contractor, who takes them to vacant lots outside the city. They are then disposed of by scavengers.

Liquid household wastes.—Chamber-slops and kitchen and laundry wastes are generally disposed of alike, by running them into the public sewers or into cesspools or privy-vaults. About 15 per cent. of these wastes go into the public sewers; none into the street-gutters. The cesspools and vaults are porous in most cases, and the sewers are rarely water-tight. As a consequence of this, and of the natural structure of the soil, which is very porous and which rests upon an underlying rock of limestone full of seams and crevices, nearly all the wells of the city have been contaminated, and many cases of zymotic disease have been traced directly to the use of water from them.

Human excreta.—Only about 15 per cent. of the houses in Rochester are provided with water-closets, most of which empty into the public sewers. The rest depend upon privy-vaults, which are mostly porous, perhaps one-quarter being nominally water-tight. The vaults are cleaned by the odorless-excavator process in many cases, but occasionally by the old methods. The regulations regarding this matter were not obtained. The ultimate disposal of the night-soil is not stated, but none is allowed to be used on the gathering-ground of the public water-supply.

Manufacturing wastes.—No information could be obtained on this subject, as the city authorities made no statement in regard to it.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Rochester for 1880, being taken from tables prepared for the Tenth Census by James S. Graham, chief special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries.....	735	\$13,161,870	9,292	4,052	1,263	\$5,217,713	\$16,446,815	\$26,478,266
Agricultural implements	3	23,000	26	.....	.....	13,744	13,372	49,055
Baking and yeast powders.....	3	30,500	6	.....	4	3,034	128,550	159,000
Baskets, rattan and willow ware	3	250	1	.....	.....	300	1,050	2,475
Blacksmithing (see also Wheelwrighting).....	32	29,350	48	.....	.....	22,853	23,509	78,476
Boots and shoes, including custom work and repairing.....	51	1,180,340	1,341	879	152	849,941	2,285,634	3,630,985
Boxes, cigar	3	14,600	21	3	3	7,170	16,800	28,000
Boxes, fancy and paper.....	3	12,000	15	34	24	13,495	32,700	53,943
Brass castings	3	12,800	5	.....	.....	2,634	9,000	17,000
Bread and other bakery products	38	136,300	88	9	4	38,399	210,841	331,583
Brick and tile.....	4	306,000	213	.....	15	61,207	37,825	172,000
Brooms and brushes	3	1,450	7	.....	2	2,800	12,575	17,000
Carpentering	61	194,075	597	1	5	254,691	620,354	1,099,000
Carriages and wagons (see also Wheelwrighting).....	9	564,000	401	3	12	159,427	232,370	461,989
Clothing, men's.....	16	1,970,200	598	1,885	255	795,900	3,037,000	4,342,000
Clothing, women's.....	4	74,000	7	218	2	66,000	173,000	293,000
Coffee and spices, roasted and ground.....	3	19,000	14	1	1	5,072	87,000	119,000
Confectionery	10	29,850	25	8	3	11,891	27,050	60,410
Cooperage	21	70,850	134	.....	.....	44,922	92,340	171,170
Cutlery and edge tools (see also Hardware).....	9	268,800	164	.....	7	53,165	110,485	200,700
Dentistry, mechanical	4	5,500	2	.....	.....	1,000	3,500	10,200

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
Engraving, wood	4	\$3,500	8			\$3,835	\$1,150	\$11,100
Files	3	45,300	43		2	20,300	20,100	65,250
Flouring- and grist-mill products	16	568,500	118			69,350	2,330,700	2,550,815
Foundry and machine-shop products (see also Steam fittings and heating apparatus).	32	983,500	764		73	378,826	606,635	1,282,120
Furniture (see also Upholstering).....	13	219,000	498	5	83	229,470	269,650	647,900
Furniture, chairs	3	200,000	285	10	31	94,375	110,000	265,000
Hardware (see also Cutlery and edge tools).....	3	43,500	36			12,300	28,700	52,000
Hats and caps, not including wool hats	4	5,000	7	2	1	3,700	7,000	14,300
Lasts	3	12,000	17			9,700	6,900	25,000
Leather, tanned	4	116,000	72		1	28,130	188,820	265,677
Liquors, malt	13	1,083,071	348		1	156,313	790,568	1,411,392
Lock and gun-smithing	3	2,900	2			564	3,368	7,200
Looking-glass and picture frames.....	7	78,500	124	6	20	59,704	94,300	267,000
Lumber, planed (see also Sash, doors, and blinds; Wood, turned and carved).	4	35,000	28			11,000	5,550	24,622
Lumber, sawed	4	220,000	77		10	27,500	100,500	164,000
Marble and stone work.....	9	264,300	235		1	91,452	90,308	247,323
Masonry, brick and stone.....	12	12,050	89			27,700	54,100	104,030
Mineral and soda waters.....	8	24,000	17		1	6,100	24,000	45,000
Models and patterns	3	1,900	5			3,345	820	6,725
Painting and paperhanging	31	18,575	84		3	37,147	35,371	99,311
Patent medicines and compounds	4	351,300	103	9	15	70,000	407,600	597,800
Perfumery and cosmetics.....	3	79,000	22	54	1	23,747	80,000	155,000
Photographing.....	15	52,600	33	17	7	26,452	23,790	79,900
Plumbing and gasfitting	12	36,600	63		2	20,890	58,750	120,200
Printing and publishing	13	474,838	344	41	93	236,180	307,825	660,888
Saddlery and harness	17	74,460	108	3		45,732	85,100	167,499
Safes, doors, and vaults, fire-proof.....	3	202,400	88		5	41,800	110,800	204,000
Sash, doors, and blinds (see also Lumber, planed; Wood, turned and carved).	9	60,700	69		5	27,972	50,750	114,900
Shipbuilding	4	105,000	88			35,668	85,000	147,100
Shirts.....	5	17,500	4	30	1	9,106	11,350	28,300
Soap and candles	6	55,600	14		6	6,560	82,188	103,527
Steam fittings and heating apparatus (see also Foundry and machine-shop products).	3	76,500	37			17,610	81,700	136,500
Stone- and earthen-ware	3	14,500	14		1	6,000	4,000	15,500
Tinware, copperware, and sheet-iron ware	27	212,200	180	71	14	89,134	165,770	328,800
Tobacco, chewing, smoking, and snuff (see also Tobacco, cigars and cigarettes).	4	541,000	207	248	110	155,600	963,478	1,200,747
Tobacco, cigars and cigarettes (see also Tobacco, chewing, smoking, and snuff).	29	41,975	66	2	11	30,484	60,943	136,723
Upholstering (see also Furniture)	6	13,000	25			11,281	37,300	73,670
Watch and clock repairing	4	4,500	3		1	1,475	1,700	6,800
Wheelwrighting (see also Blacksmithing; Carriages and wagons) ..	12	4,900	11			3,350	4,375	13,600
Whips	3	110,500	49	45	10	35,103	72,632	163,983
Wirework	3	12,000	11		2	6,528	15,300	23,930
Wood, turned and carved (see also Lumber, planed; Sash, doors, and blinds).	11	103,200	129	20	22	69,851	92,339	245,309
All other industries (a)	82	1,687,136	1,056	448	232	562,355	1,769,781	2,954,720

a Embracing artificial limbs; awnings and tents; bags, paper; belting and hose, leather; blacking; bluing; bookbinding and blank-book making; boot and shoe cut stock; boot and shoe findings; boot and shoe uppers; boxes, wooden packing; bridges; carpets, rag; carriages and sleds, children's; coffins, burial cases, and undertakers' goods; coppersmithing; cordage and twine; corsets; cotton goods; dentists' materials; drain and sewer pipe; explosives and fireworks; fancy articles; fruits and vegetables, canned and preserved; glass; gloves and mittens; hairwork; hand-stamps; hosiery and knit goods; ink; instruments, professional and scientific; iron forgings; iron railing, wrought; iron work, architectural and ornamental; ivory and bone work; jewelry; lamps and reflectors; liquors, vinous; lithographing; malt; mattresses and spring beds; millinery and lace goods; mixed textiles; musical instruments, pianos and materials; needles and pins; oil; lubricating; paper; pickles, preserves, and sauces; pumps; roofing and roofing materials; saws; scales and balances; show-cases; silk and silk goods; silverware; spectacles and eyeglasses; sporting goods; stencils and brands; stereotyping and electrotyping; tools; trunks and valises; and vinegar.

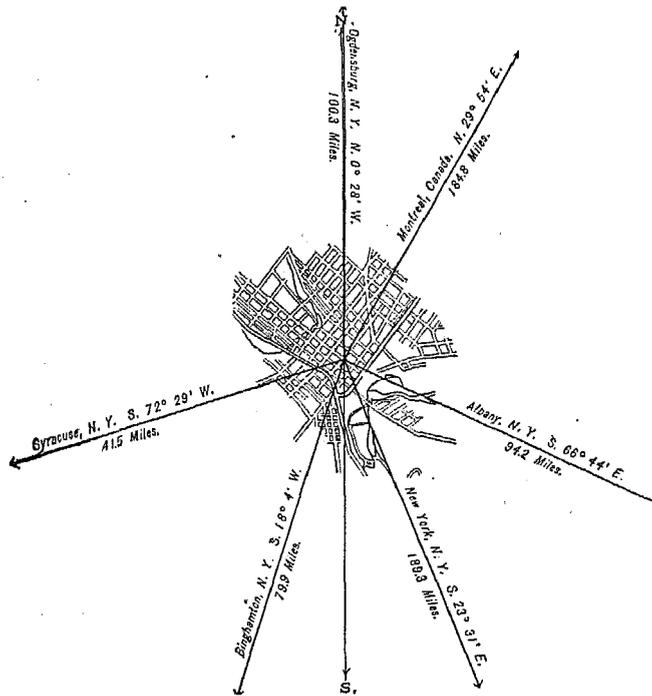
From the foregoing table it appears that the average capital of all establishments is \$17,907 31; that the average wages of all hands employed is \$357 21 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$30,549 99.

ROME,

ONEIDA COUNTY, NEW YORK.

POPULATION
IN THE
AGGREGATE,
1800-1880.

	Inhab.
1790.....	
1800.....	1,479
1810.....	2,003
1820.....	3,569
1830.....	4,360
1840.....	5,680
1850.....	7,918
1860.....	9,829
1870.....	11,000
1880.....	12,194



POPULATION
BY
SEX, NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male.....	5,950
Female.....	6,244
Native.....	9,698
Foreign-born.....	2,496
White.....	12,097
Colored.....	* 97

* Including 1 Indian.

Latitude: 43° 13' North; Longitude: 75° 27' (west from Greenwich).

FINANCIAL CONDITION:

Total Valuation: \$5,424,111; per capita: \$445 00. Net Indebtedness: \$160,000; per capita: \$13 12. Tax per \$100: \$1 70.

HISTORICAL SKETCH.^(a)

The site of Rome and its vicinity is replete with historic associations abounding in numerous and interesting incidents and tales of thrilling adventures connected with the Indian, French, and Revolutionary wars. At the time when the Canadas were under the French domination, and the government sought, by the erection of forts and the occupation of military stations on the borders of the great lakes and on the Mississippi river and its tributaries, to check the further progress of British colonization in North America, and to confine the English settlements to

^a The historical sketch of Rome was prepared for the Tenth Census by Hon. D. E. Wager.

the Atlantic seaboard, the site of Rome, by reason of its geographical and topographical location, was an important strategic point, second to no other in the colony of New York. It was on the great traveled thoroughfare through the central portion of the colony, and on the direct route between the seaboard and the Canadas. Canals and railroads were not then in use. The larger portion of New York state was a wilderness, and the means of travel in the interior was mainly by streams and the inland lakes. A glance at the map of New York will show that by means of the Hudson and Mohawk rivers, Wood creek, Oneida lake, Oneida and Oswego rivers, and lake Ontario there is a continuous water communication between the Atlantic seaboard and the Canadas, except as that communication is interrupted by rifts, rapids, or falls in the streams, and by that plateau of ground now occupied by the city of Rome. At this point the Mohawk river comes down from the north on the easterly side of the business portion of Rome, and as it reaches here turns abruptly to the eastward and flows in that direction until its waters mingle with the Hudson. On the westerly side of the business portion of the city Wood creek also comes from the north, and as it reaches a point directly opposite the aforesaid bend in the Mohawk turns westerly and flows in that direction, and 15 miles farther on unites with Fish creek, and both streams thus united empty into Oneida lake, 18 miles from Rome.

The distance between the bends of these two streams over and across this carrying-place is but three-quarters of a mile, and this intervening plateau of ground is the water-shed from which the waters flow in opposite directions. The bend in the Mohawk was at the head of navigation on that stream, while on Wood creek water-craft could not come up much, if any, higher than to a point some 2 miles west of the bend in that creek, unless in wet seasons, or for smaller boats. Those who look upon the shriveled-up Wood creek of to-day can hardly realize the size and importance of that stream a century ago, when it was as large as the present Mohawk and capable of floating upon its bosom, from its mouth to within a couple of miles or so of Rome, the ordinary water-craft then in use upon the inland waters. It was a tortuous stream, and by following its windings and turnings the distance from the carrying-place to Oneida lake was nearly 36 miles. Over the water-route above mentioned from the Atlantic to the Canadas, the missionaries of the cross, the fur-trader, and those engaged in traffic with the Indians, plied their several avocations in time of peace, while during active hostilities the same route was used to transport soldiers and munitions of war. In dry seasons the distance boats and their cargoes had to be carried from one stream to the other was about 3 miles, in wet seasons about 2. By reason of this portage or carriage by land, it acquired the name of the "carrying-place", and to distinguish it from the one at Little Falls and other places on the route, it was called the "Oneida carrying-place", from the Oneida tribe of Indians, located about a dozen miles to the south, and a member of the powerful Iroquois confederacy known as the Six Nations. The first mention of this locality by the above name which I have been able to find in any history or document is in the grant of the Oriskany patent in 1705, by which the governor of the colony of New York, with the approval of the king of Great Britain, granted a tract of 30,000 acres to five individuals, beginning at the mouth of the Oriskany creek, where it empties into the Mohawk, and extending for 2 miles on each side of and up that river, until it reaches the Indian path over the Oneida carrying-place, and then for the same distance on each side of that path for 3 miles farther. That "path" then occupied the route along which Dominick street and the road to West Rome now run. The Dutch of the Mohawk valley gave this carrying-place the name of "Trow Plat", while the Indians called it "De-O-Wain-Sta", signifying the place where canoes are carried from water to water. It is easy to see that such a locality, on a great thoroughfare, where boats and their cargoes were carried over land, was likely to become in time of peace an important point, and its possession in times of war of vital significance. The force that commanded and held this strategic point controlled the gateway between the East and the West, and presented an insurmountable obstacle to the passage of hostile troops and munitions of war to and from the French possessions in Canada. The importance of the place and the necessity for its fortification and protection were seen and recognized at an early day by those who were keenly alive to such matters. In 1736 the New York assembly was petitioned to erect a fort "at the upper end of Mohawk river".

As to the period at which the first fort was erected here history and tradition are alike silent; but in all probability not far from 1755, for in that year three completed forts were at the carrying-place, and the fourth one was in process of erection. In 1757 a secret agent or spy of the French government passed over the route from Oswego to Albany, carefully noting as he passed the roads and paths, the size and navigability of the streams, the situation of the country, the number and location of the fortifications and of every fortified dwelling, with such other matters concerning the English colonies as were deemed of interest to the French government. This "itinerary" of the French spy is in the archives of the French capital, and years ago, by the permission of that government, a copy was taken and published at length in the *Documentary History of New York*. That secret agent, after minutely describing the route from Oswego to the carrying-place, mentions that, from the latter point to what is now the city of Utica, there are two routes by land, one on the north side of the river, "which leads over hills and small mountains, and can be traveled only on foot or on horseback". The road south of that stream was described to be bad for 12 miles, and the country marshy, and in some places a great deal of mud, although it can be easily traversed at all times of the year on horseback, and in summer carriages and carts can pass over it. In 1757 there were no forts at the carrying-place, as they had been destroyed the year previous, as mentioned by that

French spy at forts Williams and Bull. An account of the destruction of fort Bull is fully given in "Paris Document No. XII", published in said documentary history, and which is the first authentic account of the existence of those forts.

From the best and most reliable accounts fort Craven was the first fort erected here. It stood on the west bank of the Mohawk river, a little below but near the aforesaid bend in that stream, and some rods below the point where the New York Central railroad now crosses that river. It was a small stockade fort, not formidable in its construction, and was probably not used after a stronger one was erected some 25 rods higher up the Mohawk. The last-named fort was called fort Williams; it was surrounded by heavy pickets, sharp-pointed at the top and from 18 to 20 feet above ground, well planked, and defended by cannon, and capable of holding from 150 to 200 men. It was on the same side of the river as was fort Craven, and stood near the landing-place on the Mohawk, the terminus of the Indian path or road over the carrying-place. It was well calculated to defend the east end of the portage, and to intercept the passage of hostile troops and supplies coming up or going down that river. Three miles to the west, and on the right bank (north side) of Wood creek, fort Bull stood as early as 1755. That fort was in the shape of a star, and was larger and more formidable in its construction than fort Williams; it was surrounded by a ditch, earthworks, and heavy pickets 15 to 20 feet long above ground, sharp-pointed at the top, and doubled inside to the height of a man's head. It had gates, port-holes, magazine, and other conveniences to withstand an attack. A dam was thrown across Wood creek, just below the fort, and thereby the ditch around the fort was filled with water with a view to make the approach to it by a hostile force still more difficult. It was designed to guard the west end of the carrying-place, and to intercept a hostile army from that direction. Fort Bull was quite likely at or near the head of navigation on Wood creek. On the summit-level and about one-third of the way from fort Williams to fort Bull, and on the site where the United States arsenal was erected in the war of 1812, fort Newport was in process of completion early in the year 1756. The tradition is that it was named after a Captain Newport massacred here by the Indians. It must be borne in mind that when the Oriskany patent was granted, in 1705, the Indian path over the Oneida carrying-place lay along the ridge of ground now traversed by Dominick street and the main highway, to what is now West Rome. (The map of Rome shows that patent to extend about 2 miles on either side of above street and road.) Prior to 1756, and probably about the time fort Bull was erected, the English cut a road from fort Williams to fort Newport, and thence by a shorter and more direct route to fort Bull, and had bridged the road (so says the narrative of the French spy) between the last two forts on account of the low and marshy state of the ground. It should be further borne in mind that a few rods to the south of this road which led over the carrying-place, from one stream to the other, extending the whole distance (and farther) between forts Williams and Bull, there was a dead-cedar swamp, impassable to man or beast except when frozen up solid in winter, and this swamp was 2 miles in width, and thus effectually protected the forts and the carrying-place from an attack in a southerly direction. Such was the condition of the forts at the Oneida carrying-place early in the year 1756, when the war, which had prevailed for the two years previous in other parts of the American colonies between the English and French nations, broke out with redoubled fury and earnestness on the formal declaration of war in that year by the two countries. In March, 1756, a French force, with a view to capture or destroy the forts at this point, started from Montreal, came by the way of Ogdensburg across the country through the northern part of New York, crossing Black river and other swollen streams, and made its way by or near the route which now lies through Ava, West Branch, and Lee Corners. That force consisted of French, Canadians, and Indians, and numbered 362 men, and was under the command of M. De Lery, a lieutenant-colonel of the colonial troops. It came through a dense and trackless forest, suffered innumerable hardships by reason of fatigue, cold, and hunger, and a number perished by the way. It was fifteen days on its journey, and the last two days the men were entirely out of provisions. On the night of March 26 the troops encamped a couple of miles or so to the north of the carrying-place, and at 4 o'clock the next morning resumed their march very much weakened by hunger and the hardships they had endured. In an hour and a half after they had resumed their march they struck the road which led over the carrying-place. They captured a dozen men or so who were even at that early hour engaged in transporting, in sleighs, from fort Williams to fort Bull, nine bateau-loads of provisions to be taken to Oswego. The invading force learned that fort Williams was then defended by four cannon and garrisoned by 150 men, 100 of whom had arrived the previous night, by orders of Sir William Johnson, who had heard rumors of De Lery's expedition, and that the fort was well supplied with provisions. Fort Bull was garrisoned by 90 men, had plenty of provisions, balls, powder, grenades, and other munitions of war, but no cannon, and those 15 bateaux loaded with provisions then lay in Wood creek, close by fort Bull, to start that evening for Oswego. De Lery made an immediate attack on fort Bull, while he detailed a force to protect his rear and to intercept a *sortie* from fort Williams, if one should be made. So unexpected and sudden was the attack that the garrison of fort Bull had barely time to close the gate before the French were at hand. The latter took possession of the port-holes and fired at those they could see on the inside, and at the same time fell to work to cut the gate to pieces. In the course of an hour the gate was cut down, and the French rushed in with a shout and put to the sword every one they could lay their hands on. One woman and four men succeeded in escaping from the fort into the woods, and in making their way to fort Williams; the rest were killed or made prisoners. De Lery's men went promptly to work and staved in the 15 bateaux, and threw the

provisions, powder, and other munitions of war into the water. One of the magazines caught fire, and before the flames could be extinguished they communicated to the powder, and the fort was blown up at three points, causing a great explosion, and killing some of the invaders before they could get out of the reach of the fragments, which were scattered in every direction. A large quantity of provisions, consisting of bread, butter, chocolate, sugar, etc., was destroyed, and some 40,000 pounds of powder were burned or thrown into the water. A *sortie* was made by the garrison of fort Williams, but it was repulsed. By that expedition the English lost fort Bull, 60 of their men were killed, 30 taken prisoners, and 30 horses carried off. De Lery that night encamped about a mile from fort Bull, but the next day he hurried back to Canada, fearing an attack from Sir William Johnson from the settlements lower down the Mohawk. Fort Bull was so much injured by the fire and explosion that it was never rebuilt or repaired; yet to this day the ditches and earthworks and its shape are plainly discernible, although it is covered by underbrush and a second growth of timber.

In August of the same year the French, under Montcalm, captured Oswego, and the news so alarmed General Webb, then in command of fort Williams, that he felled trees in Wood creek, destroyed the fort under his command, and fled precipitately down the Mohawk to the settlements nearer Albany, fearing Montcalm would follow up his victory and attack the carrying-place. That act left this locality entirely unprotected and defenseless.

The events of the years 1756 and 1757 were disastrous and discouraging to the British and to their American colonies. The loss of Oswego, the destruction of the forts at the carrying-place, the capture of the German flats in November, 1757, by the French (as a consequence of the destruction of the forts), the defeat of Braddock, and the failure of Sir William Johnson to capture Crown Point, were not only disastrous to the colonies, but left them and their Indian allies in a great measure defenseless and at the mercy of the French; such disasters tended strongly to alienate the Oneidas and other tribes from the English cause, or at least to induce them to occupy a neutral attitude. It was evident that more vigorous measures must be adopted if the colonies were to be saved to the British crown. Not by any means was that of the least importance which prompted the orders for the erection at the carrying-place of a fort more formidable in its plan and construction than any other in the colony. In 1758 General Abercrombie was commander of all the British forces in North America, and he gave orders early in that year for the erection of such a fort. Its construction was begun in August, 1758, and completed in November of the same year; its cost was \$266,400. It was named after and in honor of General John Stanwix, the English general who superintended its erection. It occupied about half an acre of ground, on a slight elevation some 40 or 50 rods west of the Mohawk and about 125 rods northwest of the site of fort Williams. The fort was a square one, having four bastions mounted with cannon, surrounded by a deep, broad ditch 15 to 20 feet wide at the top, and sloping to the bottom to the depth of 18 to 20 feet. In the center of the ditch were heavy perpendicular pickets, sharp-pointed at the top, and 18 to 20 feet long above the bottom of the ditch. There was another row of sharp-pointed horizontal pickets projecting from the ramparts; there was a covert-way, sally-port, drawbridge, glacis, magazine, officers' quarters, block-house, etc. The fort would accommodate 1,000 persons. Between the fort on the east and the Mohawk river was low ground, and to the north was another low strip of wet ground to the width of 50 rods. The fort was north of but close to the road which led over the carrying-place. What is now Spring street was the ditch on the east, and Liberty street the western boundary of the fort; and the ditch on the west ran between the present residence of Mr. Alva Mudge and the dwelling owned by Miss Whittemore. The erection of such a fort at this locality very naturally inspired confidence among the colonists and begat a feeling of security on the part of their Indian allies. That same year a small stockade fort was erected on the Mohawk, on the site where the city of Utica now stands, and named after and in honor of Colonel Peter Schuyler. In the year fort Stanwix was erected, General Bradstreet passed over this route with an army and captured Kingston from the French, and on his way back a large portion of his army sickened and died by partaking of the waters of Wood creek; and history records that 500 of his soldiers were buried at the Oneida carrying-place. Colonel Willett, then a lad of but 18 years of age, was of that expedition, and on his return he lay sick for many months at the fort which, nineteen years later, he heroically defended. In 1758 the acting governor of New York congratulated the assembly upon the taking of Louisburg, the capture of Kingston, and the erection of fort Stanwix, all in one year, thus, by coupling the erection of the fort with other great events, showing the importance attached to the erection of such a fort at that point.

In 1759, 400 troops were garrisoned at the fort, and a road was cut through the entire distance of 18 miles to the mouth of Wood creek. The taking of Quebec in that year from the French, and the surrender the next year of all the French possessions in Canada to the English, put an end to that French war and restored peace and quiet to the American colonies, and, as a consequence, rendered fort Stanwix of but little importance thereafter as a fortification. The fort had attained, however, such a world-wide notoriety that it very naturally attracted public attention, and presented inducements for persons to locate here.

In 1760 John Roof settled with his wife at the fort. Mr. Roof came from Germany the previous year, married his wife in the city of Philadelphia, and these pioneers pushed their way quite beyond the western limits of civilization and located 30 or 40 miles in the wilderness and from the nearest settlement. They were the first white settlers west of what is now Herkimer county. In August, 1761, a son was born unto Mrs. Roof, and at the christening of that first white child born at the fort Sir William Johnson was present and General Herkimer acted

as godfather. Fifteen years later father and son rendered service in the Revolutionary army. Four other children were born unto Mrs. Roof at the fort, and soon after 1760 four other families came and settled here. Their names were Bartholomew Brodock, Thomas Mayers, William Kline, and ——— Steers. Mr. Roof kept a tavern, and was the only one licensed to do so west of what was then Albany county, and assisted boatmen over the carrying-place. The other families squatted upon the Oriskany patent, cleared and cultivated lands below the aforesaid bend in the river, traded in furs, and assisted boatmen, and all accumulated quite a property. They remained here until driven out by the war of the Revolution. Soon after the breaking out of that war, Colonel Dayton was ordered to put fort Stanwix in a state of repair; it had not been in use since the French war, sixteen years before, and had gone considerably to decay. In the spring of 1777 General Gansevoort and Colonel Willett were ordered on to hasten the preparation. The repairs were barely completed when it was besieged by St. Leger, in August of that year. It is not proposed to write in this connection a detailed sketch of that siege, or of the battle of Oriskany, consequent thereon, as those matters properly belong to a general history, and are presumed to be familiar to the general reader. Enough only will be sketched in this local narrative still further to indicate the importance of the site of Rome in the war of the Revolution, and particularly in the campaign of 1777. The plan of that campaign on the part of the British was for a British army under General Burgoyne to enter New York from Canada via Lake Champlain, Saratoga, Albany, and the Hudson river, and unite with another English force under Sir Henry Clinton, to come up the Hudson from New York. The union of these two armies and the erection of a chain of forts along the Hudson, it was calculated, would cut off the New England states from the other states of the confederation and thereby end the war. To make this plan work more effectually, an army under St. Leger was to enter New York via Oswego, proceed thence to Oneida lake and Wood creek, capture or destroy fort Stanwix, and then proceed down the Mohawk valley to Albany and unite with the victorious troops of Burgoyne.

The army that was to attack fort Stanwix left Oswego on the 26th of July, 1777, and followed the route above mentioned. It consisted of 1,700 men, of which 1,000 were Indians under the command of the wily Brant. The rest were British regulars, Canadians, Hessians, and Tories, under the lead of the notorious Sir John Johnson. St. Leger was commander-in-chief. He was an officer of prominence in the British army, was captain of a company of troops at the siege of Louisberg nineteen years before, and had served with distinction under General Wolfe at the capture of Quebec. In anticipation of the attack, the Americans had felled trees in Wood creek, and this so obstructed that stream and hindered the passage of St. Leger, that in order to transport his cannon, baggage, munitions of war, and other supplies from Oneida lake to this point, he was obliged to construct a circuitous road through the woods for a distance of 25 miles.

On Sunday, August 2, an advance detachment of the invading force reached the carrying-place. On the same day two bateaux, loaded with provisions and guarded by 200 men, for the relief the garrison, came up the Mohawk, and had barely time to get inside the fort before they were attacked; as it was, the captain in command of the men was captured by the detachment. That same evening the fort was formally invested. The next morning the rest of St. Leger's army arrived, and at once formed in martial array at the bend of Wood creek, before mentioned, near the site of the United States arsenal. It was a bright beautiful morning, and St. Leger formed and marshaled his troops with a view to strike terror and dismay, if possible, into the hearts of the garrison. The British regulars were arrayed in bright scarlet uniform, taken out new and fresh that morning, while the Indians, in war paint and feathers, armed with battle-axes, scalping-knives, and poisoned arrows, spread out on the flanks, the Hessians and Tories deploying on each side to help swell and magnify the pageant. Thus arranged, the troops came along what is now the line of Dominick street, with flags waving, drums beating, bugles sounding, and music playing, until they reached the small open clearing which was on the westerly side of the fort. It was to a portion of the garrison a scene of gorgeous splendor. That garrison consisted of 750 men, and although some were veterans in the war and had seen service under Generals Bradstreet and Brideaux and Sir William Johnson, and at the battles of Ticonderoga and Crown Point, yet others were raw recruits, and some but lads of 17 or 18 years of age. The garrison was that morning paraded on the ramparts of the fort, and was expecting and watching for the approach of the attacking force. It witnessed the glittering pageant with what seemed feelings of terror, or of stupefied wonder or curiosity, but in reality with entirely different feelings: it was busily engaged in counting the number of the enemy.

St. Leger established his headquarters on Wood creek, and planted batteries on the eminence northeast of the fort (the site now occupied by Saint Peter's church), and placed a portion of his troops just over the brow of that hill, out of the reach of the cannon of the fort; another portion of his troops was stationed on the east side of Mohawk river, where Factory village is now, while the Tories, under Sir John Johnson, were located at the bend of the river below where the railroad bridge now crosses that stream. The Indians under Brant occupied the ridge of ground where the railroad freight-house now is, and during the nights generally roamed through the woods which surrounded the fort, making the locality a pandemonium by their hideous and unearthly yells. It will thus be seen how completely that little band was surrounded, with no help at hand nearer than the German Flats settlement, and all that intervening distance a dense wilderness.

Neither time nor space will permit a detailed sketch of that siege, or of the battle of Oriskany, August 6, occasioned by General Herkimer's coming to the succor of the garrison. Those are matters of general history.

Suffice it to say, that on Monday, August 10, the garrison being hard pressed, Colonel Willett and Lieutenant Stockwell, each armed with a spear as his only weapon, and with cheese and a few crackers as his only food, left the fort at 10 o'clock at night, with a view to elude the vigilance of the invaders and go down to the Mohawk settlements for help. The night was very dark, and they had to proceed with the utmost caution lest they should alarm the enemy. After leaving the sally-port of the fort they crawled on their hands and knees toward the point where Dominick Street bridge now crosses the river; that stream they crossed on a log, and once over they were in a dense forest and lost their way. While wandering about without knowing the direction they were taking, they alarmed a dog, which began barking furiously, and they found they were near an Indian encampment. They then stood still for several hours, waiting for daylight to appear. At the first glimmer of day they took a northeasterly course, in the direction of what is now the county fair grounds, and kept along that ridge of ground in an easterly direction to Herkimer. They took a zigzag course, wading in the river and other streams to baffle any one who should attempt to track them. The route lay through pathless woods and swamps, and two days were occupied before they reached fort Dayton, now the village of Herkimer. They aroused the people, a force was raised, and Benedict Arnold marched to the rescue of the garrison. August 22 the siege was raised by means of a ruse devised by General Arnold, and the invaders fled precipitately in the direction in which they had come three weeks before in such triumph.

The glorious termination of that siege, and the capitulation of Burgoyne's army in October thereafter on the fields of Saratoga, were a complete frustration of the British plan of the campaign for that year.

As a matter of local interest, it may be mentioned that a short time before the siege began, Katy Steers, a daughter of one of the pioneer settlers, was out picking berries near the spot now occupied by the railroad freight-house, when she was seized and scalped by savages who were then prowling around the fort; and the tree near where she was scalped was marked as the "scalping-tree" on a map made of the fort at the time of its siege. After the siege was raised the fort continued to be occupied, but no event of importance occurred there until the spring of 1781. By reason of floods and the melting of the deep snows that spring, the fort was inundated, and a fire occurred at the same time, so that it was so far injured that it was abandoned, and was of no further use during the war. There was such a hatred on the part of the colonies of every thing that was English that an unsuccessful attempt was made during the Revolution to change the name of fort Stanwix to fort Schuyler, in honor of General Philip Schuyler, an uncle of the one after whom the Utica fort was named. This has led to confusion in some instances, and has tended to confound and mislead. Cooper, the novelist, was so far off the track in one of his novels (*Wyandotte*) as to call Utica the site of old fort Stanwix. Old fort Schuyler at Utica had gone to decay, and was not in use during the Revolutionary war.

At the close of the Revolution the scattered population of the country either returned to their old homes to resume their former avocations and the peaceful pursuits of life, or else pushed their way beyond the border settlements to find new fields of labor, or in hopes to regain the means which they had lost by the seven years' war. The fort was widely and favorably known, and presented the advantages and inducements before mentioned. Here had gathered important assemblages. As early as 1768 a grand council assembled here, represented by the Six Nations, Delawares, Shawnees, and other tribes, and by the representatives of the British government, at which an important treaty was made. In 1784 another council convened here, at which a treaty was made by Commissioners Oliver Wolcott, Richard Butler, and Arthur Lee, in behalf of the United States, with the Indians, whereby the latter relinquished to the United States all the territory northwest of the Ohio river. General Lafayette was present at this treaty. In 1788 another great council was held here, at which the Six Nations gave up their claim to all the lands in New York west of and including fort Stanwix, estimated at 8,000,000 of acres. General William Floyd, one of the signers of the Declaration of Independence, Baron Steuben, Governor George Clinton, Colonel Willett, and Skenandoah, the noted Indian chief, were present and took part in this treaty.

Added to the other attractions and notoriety of this locality, Governor Livingston, of New Jersey, Governor Clinton, of New York, Baron Steuben, General George Washington, Colonel Willett, William Floyd, and other noted personages were the owners of large tracts of land at and near the fort. In 1786 the Oriskany patent was partitioned, and the share—one-fifth—which Oliver DeLancy had in that patent was confiscated and set off to the state by reason of DeLancy's attainder for treason in the Revolution. To pay the expenses of that partition 697 acres were first surveyed off out of the patent and sold at public auction. Dominick Lynch, of New York city, was the purchaser, at the cost of \$5,625. Those 697 acres were and are called the "expense lot", and include the sites of the fort, of the carrying-place, and the whole of what is now the business portion of the city. Its western boundary is Expense street west of Wood creek.

The partition of that patent, and the bringing of the lands into market, and the further fact that so many prominent personages were owners of land at and near the fort, very naturally induced settlers to locate here. In 1785 Jedediah Phelps was living in a log house then standing on Wood creek, near the site of the United States arsenal; he was a silversmith and brass-founder and came from Connecticut. That year or the next, Willett Ranney, Seth Ranney, and Bill Smith, all from Connecticut, lived in log houses at the fort; one log house stood on the southeast corner of the site of the old fort; another nearly opposite, just east of the opera house; another where St. Leger planted his batteries in 1777, and another a little northeast of the present site of the court-house,

near the present residence of Mr. G. N. Bissell. These five log houses were the only residences at the fort in January, 1787, and they sheltered the whole white population of the state west of and including those at fort Stanwix. The next year Colonel William Colbrath, the first sheriff of the county, located in a log house a couple of miles lower down the river. In 1789 Ebenezer and Thomas Wright, two brothers, also from Connecticut, each took up 100 acres of land and settled thereon, 3 miles north of the fort and farther up the Mohawk.

That was the first settlement upon farming lands in what is now Rome, or in the state west of Whitesborough. For a series of years the population about the fort increased, and new settlers came, and some of them pushed their way still farther into the wilderness. In 1795 a grist-mill was erected upon Wood creek, near where fort Newport stood forty years previously; and as evidence of its need and of the large custom-work it did, it may be stated that the next year a bateau loaded with corn to be ground into meal threaded its way from Ontario county down the Seneca river to Oneida river, thence up the latter stream to and through Oneida lake and into Wood creek and to the mill, and then returning with its load of meal by the same route. During the administration of the elder President Adams there was a general apprehension of a great Indian war, and fort Stanwix was repaired, put in a state of defense, and garrisoned with troops. The war did not come, however, and the fort was soon after abandoned, and it went to decay, and was never used for war purposes thereafter. About 1830 the site of the old fort was sold to different parties, and at once the work was begun of leveling off the embankments, filling up the ditches, and removing the pickets, old logs, and remnants of the old block-house, so that it was soon covered with grass-plats and gardens, dwellings, and other buildings, so that at this time hardly a vestige remains to indicate the spot where the famous old fort once stood.

In 1796 a territory of 46,000 acres was incorporated into the *town* of Rome, and George Huntington was its first supervisor. The population of the town at the first census, in 1800, was 1,479. After the town was incorporated by that name, the locality which had for forty years previously been called Fort Stanwix, or "The Fort", took the name of the town, although Mr. Lynch, the owner of the whole site, had mapped it out into blocks and streets, and gave it the name of "Lynchville" in all of his conveyances, in the hope that his own name might be impressed upon its future history. In 1797 a canal 2 miles in length was constructed by the "Western Inland Lock Navigation Company", to connect the waters of the Mohawk with those of Wood creek, across this carrying-place. The first directors of that company were General Schuyler, Colonel Willett, General James Clinton, Dominick Lynch, and others. By means of that canal, Durham boats, each carrying about 20 tons, could pass from one stream to the other. Fifteen years later it was ascertained that 300 boats, with 1,500 tons of merchandise, passed annually through that canal. William Weston, of England, was employed for the construction of this canal, and while here, in 1796, he laid out and mapped for Mr. Lynch the blocks and streets of the embryo city of Rome.

So much space has been taken in the sketch of this locality before it was incorporated as Rome, that its subsequent history must necessarily be brief and condensed, the more especially in view of the purpose for which this sketch is written and to be used. In 1796 and 1797 the first public school-house in the state west of Whitesborough was built in the West park, 20 rods or so northwest of the fort, at which some who are yet residents of Rome obtained a part of their early education. In 1798 Oneida county was formed, with Rome as one of the two shire towns of the county, with a provision in the act that the courts should be held at the school-house near fort Stanwix until a court-house was built, and that a court-house and jail should be built within 1 mile of the fort. The first term of the court of oyer and terminer in the county was held at this school-house in June, 1798, by Judge James Kent, author of *Kent's Commentaries*, and the first circuit court was held in the same place in September of that year by Chief Justice Lansing.

In August, 1799, the first newspaper was published in Rome by Thomas Walker and Ebenezer Eaton, two young men about 22 years of age. It was called the *Columbian Patriotic Gazette*. At that time the hamlet of Rome contained about 20 houses and 100 inhabitants. In September, 1800, the "First Religious Society of Rome" (Presbyterian) was organized, and in 1807 its first church edifice was erected. In 1802 the jail was erected, and the court-house in 1806, on lands given to the county by Mr. Lynch. In 1804 Mr. Lynch erected a grist-mill on the Mohawk, a mile below where fort Williams formerly stood, and about 1810 he erected a woolen factory on a race-way 100 rods or so easterly of old fort Stanwix—that factory was burned in 1817—and in 1814 he erected a cotton factory near there, and that was burned in 1849; that locality is hence called "Factory Village". In 1808 a state arsenal was erected upon the elevated ground where St. Leger planted his batteries at the time he besieged the fort; that arsenal was burned in 1819. In 1813 the United States arsenal was erected on the site of old fort Newport, and for nearly fifty years was used by the United States government for the storage of powder and other munitions of war, and for a considerable time many workmen were there employed in keeping the arms in repair. In 1873 it was sold by the United States to individuals and converted into a knitting-factory, and is now used for that purpose.

In 1817 the ceremonies of breaking the first ground for the construction of the Erie canal took place, southwesterly of the United States arsenal. Governor De Witt Clinton took part. That canal has taken in most of the waters of Wood creek, so that that stream is now but a mere rivulet.

In 1819, with 400 inhabitants, the hamlet of Rome was incorporated as a village, and sixteen years later its boundaries were enlarged and the charter was amended and improved. In 1825 Rome was honored by a visit from

Lafayette, who was then passing through the state via the Erie canal. He arrived in the evening, and the lights used by the procession to escort him through the streets were tallow candles, the best illuminators the time and place afforded. In 1844 a considerable portion of the business part of Rome, on the southerly side of Dominick street, was destroyed by fire, and two years later a much larger portion was burned on the opposite side. Both sides were speedily rebuilt and much improved. In 1869 the Union free-school system, with its graded schools and academic department, was established. In 1870 Rome was incorporated into a city, with five wards.

Rome has 4 banks, 14 churches, 200 wholesale and retail places of business, 2 knitting-works, 3 iron-mills, malleable iron-works, sash, door, and blind factories, and other manufacturing establishments. In 1875 an institution for the education of deaf-mutes was incorporated, and at the present time 150 pupils are in attendance, with accommodations ample for some 200. The site includes 6 to 8 acres of land, with large and commodious brick structures.

The streets and blocks of Rome were laid out in 1796. The blocks or "squares" are each 400 by 600 feet, with an alley through the center, and so divided as to make 18 lots in a block. The streets cross each other at right angles, and are wide and regularly laid out, and now are luxuriantly shaded with full-grown maples and elms.

The suburban places of the city are: Stanwix, 2 miles to the east; West Rome, the same distance to the west; Factory Village, before mentioned, and the "Ridge", a couple of miles to the north, up the Mohawk river. At the latter place a grist-mill and a saw-mill were erected as early as 1800, and soon thereafter carding-works, a fulling-mill, and a woolen or satinet factory were built.

ROME IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Rome:

LOCATION, ETC.

The city lies in latitude 43° 13' north, longitude 75° 27' west from Greenwich, on the Mohawk river, and at a point where the Black River canal joins the Erie canal. The river here is not navigable. The surrounding country is mainly agricultural, principally dairying and grain-raising, and is open. The soil is a sandy loam. The site of the city is a level plain at the head of the Mohawk valley, and the natural drainage is into the Mohawk river. The surrounding country is slightly higher than the city.

RAILROAD COMMUNICATIONS.

Rome is on the New York Central and Hudson River railroad, between New York and Buffalo, and is the terminus of the Rome and Clinton railroad to Clinton, and of the Rome, Watertown, and Ogdensburg railroad to the latter place.

STREETS.

Total length, 30 miles. Of this, 2 miles is paved with cobble-stones and 15 miles with gravel. The sidewalks are flagged with sandstone laid in one course, and varying in width from 4 to 12 feet. The gutters are laid with cobble-stones. Trees are planted in the streets along the edge of the gutters, at regular intervals of 40 feet. The average cost of planting is 50 cents for each tree. The construction work on the streets is done by contract, and the cost is assessed on the abutters. All repairs are done by the day, and the annual cost is about \$4,000.

WATER-WORKS.

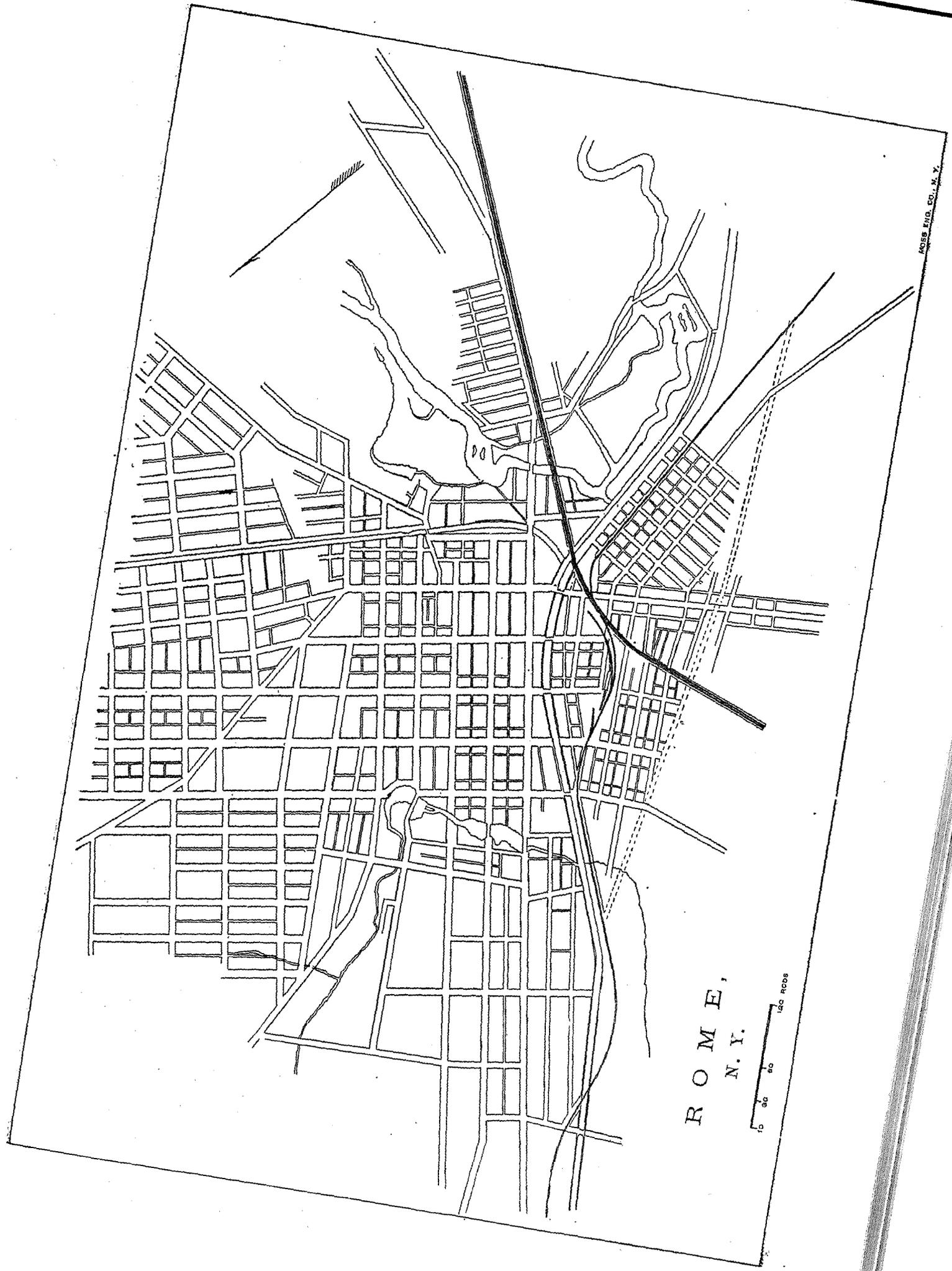
The water-works are owned by the city, and the total cost is \$181,077 17. The water is taken from the Mohawk river at the Ridge, 2 miles north of the city, and is pumped into a distributing reservoir by water-power. The average amount pumped per diem is 800,000 gallons. The pressure in the mains is 25 pounds to the square inch, and this can be increased by direct pumping to from 50 to 200 pounds to the square inch. The yearly cost of maintenance, aside from the cost of pumping, is \$1,500, and the yearly income from water-rates \$9,000. Water-meters are not used.

GAS.

Gas is supplied by a private corporation at a rate of \$3 50 per thousand cubic feet. The city pays 20 cents a night for each street-lamp, 75 in number.

PUBLIC BUILDINGS.

The city occupies a portion of the Opera House building for municipal purposes, and owns 3 engine-houses. The latter are used by the fire department. The cost of these last is not stated.



ROME,
N. Y.



MOSES ENG. CO., N. Y.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are 2 parks on James street, the business center of the city, with an area of one acre each. The land was donated to the city, and the yearly cost of maintenance is \$50 for both. They are controlled by a committee of the common council.

PLACES OF AMUSEMENT.

There is 1 opera-house, with a seating capacity of 1,500. It pays no license or other revenue to the city. In addition to the theater, there are 8 halls in the city, not connected with churches, with an average seating capacity of 250 each.

DRAINAGE.

No system of sewers exists in the city.

CEMETERIES.

There are 9 or 10 cemeteries in and around Rome. Among these are the *Rome Cemetery*, 2 miles north of the city; *Wright's Settlement Cemetery*, 4 miles east from the city; *Irish-Catholic Cemetery*, 2 miles southeast; 2 *German-Catholic* cemeteries, one 1 mile southeast and one 1½ mile northwest; and 3 private burial-grounds. The German-Catholic cemetery in the southeast and a private burial-ground north of the city are no longer used for interments. The Rome cemetery, owned by a private corporation, is well laid out, and is managed by the directors of the company. Since its opening there have been 1,500 interments made in this cemetery. No records exist as to the numbers made in the others. There are no ordinances regulating interments.

MARKETS.

There are no public or corporation markets in the city.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Rome is the board of health, an independent body appointed annually by the city council. It is composed of 5 members, one from each ward in the city, and one physician, who is the health officer. The members receive a per diem of \$1 50 for attending meetings, and the health officer is paid for services rendered. The annual expense of the board when there is no declared epidemic is \$250 for salaries, inspecting nuisances, printing, etc., and during an epidemic this sum can be increased to an unlimited amount. The authority of the board is almost absolute, under state laws, and there is no difference either in the absence of or during an epidemic. The board elects one of its members chairman, and he presides at the regular meetings, which are semi-monthly. The health officer is the executive officer. All the members of the board have police powers to the extent of making arrests and enforcing health ordinances and regulations through the courts. Inspections are made only as nuisances are reported. When a nuisance is reported it is inspected by the health officer, who reports and makes recommendations to the board. The street-cleaning is under the control of the common council. The board prohibits the keeping of garbage on premises so it will become a nuisance, or casting it into the streets. The board also forbids the pollution of any of the streams or canals in the city.

INFECTIOUS DISEASES.

Small-pox patients are either quarantined at home, or sent to the pest-house 3 miles outside the city limits. There are no regulations as to scarlet-fever patients. In the case of contagious disease in the public schools, the pupils affected are quarantined at home. Vaccination is not compulsory. There is no registration of diseases, births, or deaths, and the board makes no reports.

MUNICIPAL CLEANSING.

Street cleaning.—The ordinances provide that the abutters shall clean the streets in front of their premises once a week from April 15 to November 1, and sweep the dirt into piles. In case they fail to do this the street superintendent can cause the work to be done, and make a charge of 2 cents per linear foot against the property. The cost of this work or the final disposal of the sweepings was not stated.

Removal of garbage and ashes.—This is done by the city with its regular force. The garbage and ashes are required to be kept in closed boxes or covered barrels, and they can be kept in the same vessel. They are removed to a vacant lot outside the city limits and near the Mohawk river. No separate account is kept of the cost, it being included in the regular street work.

Dead animals.—The carcass of any animal dying within the city is removed by the street force under the direction of the board of health. The number removed annually is about 20, and the cost of this service is reported as very small.

Liquid household wastes and human excreta.—All liquid household wastes are either run into cesspools or thrown into privy-vaults, none being allowed to pass into the street-gutters. Very few of the houses have water-closets, and these deliver into cesspools. The cesspools and vaults are porous, and are excavated until living water is reached. When full they are usually covered up with lime and dirt and new ones constructed. By this arrangement but very little night-soil is removed from the vaults, and that little is used for manuring land, some of it going within the gathering-ground of the public water-supply outside the city limits.

POLICE.

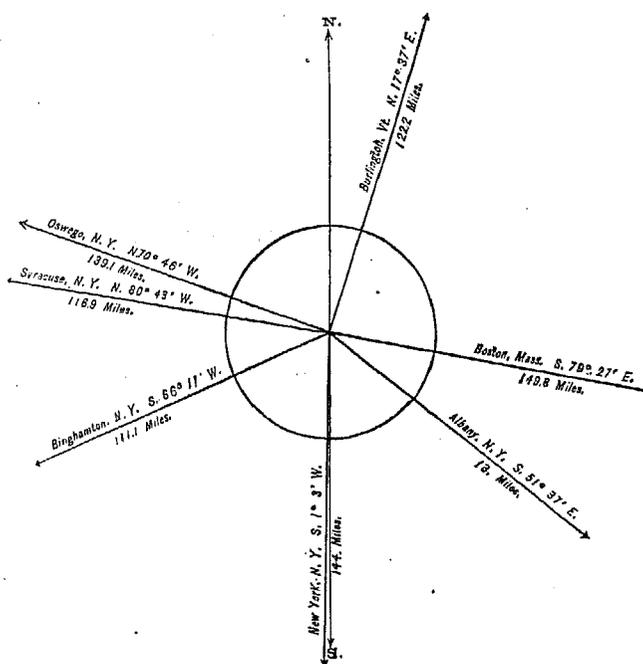
The police force is appointed by the mayor and common council, and is governed by the mayor. The chief of police is the executive officer, has control of the force, and administers it in accordance with regulations and under orders received from the mayor. His salary is \$70 a month. There are 4 policemen at \$50 a month each, and 1 captain of the night-watch, salary not stated. The uniform is dark blue, and the men provide their own. Each policeman carries a club. The tours of duty are twelve hours, and the whole city is patrolled by the force. The police made 424 arrests during the past year, the principal causes being grand and petit larceny, drunkenness, and disorderly conduct. These cases either paid fines and costs or were committed. There were 1,344 station-house lodgers during the year. The force is expected to co-operate with the other departments in the interests of the city. Special policemen are appointed by the mayor.

SCHENECTADY,

SCHENECTADY COUNTY, NEW YORK.

POPULATION IN THE AGGREGATE, 1800-1880.

	Inhab.
1790 .....	.....
1800	5,289
1810	5,908
1820	3,939
1830	4,268
1840	6,784
1850	8,921
1860	9,579
1870	11,026
1880	13,655



POPULATION BY SEX, NATIVITY, AND RACE, AT CENSUS OF 1880.

Male	6,607
Female	7,048
—	
Native	10,936
Foreign-born	2,719
—	
White	13,561
Colored	94

Latitude: 42° 47' North; Longitude: 73° 57' (west from Greenwich).

FINANCIAL CONDITION:

Total Valuation: \$3,393,410; per capita: \$249 00. Net Indebtedness: \$118,000; per capita: \$8 64. Tax per \$100: \$2 85.

HISTORICAL SKETCH.

Schenectady is situated in the beautiful valley of the Mohawk river, about 17 miles west of Albany. It is one of the oldest places in the United States, and was settled by the Dutch, who established a trading-post here in 1620. Thus Schenectady was an established place at the moment when the Pilgrims landed on Plymouth rock; but no regular grant was made of the land until 1661, while it was not until 1684 that a patent of the tract was issued to the settlers. Four years later, the French and Indians fell upon the settlement, taking the inhabitants by surprise, and when they departed left behind them only a heap of smoldering ruins and the bloody corpses of nearly all the settlers. This massacre has made the name of Schenectady celebrated in the early history

of the country. The town was burned again by the same enemies during the French and Indian war of 1748. Surmounting these calamities, however, Schenectady became an important place, for all goods sent to the settlements in western New York were distributed from Schenectady, whither they were brought from Albany, as the falls in the river near by prevented the shipment of goods direct from Albany by way of the Mohawk. The business of the city continued to be large and important until the building of the Erie canal made Schenectady simply a way-station instead of an important distributing point as heretofore. Yet, while its importance was thus diminished, it remained and still is a prosperous and influential city. Its trade by way of the Erie canal is great, and the various railroads which pass through it bring large additions to its domestic commerce. The New York Central railroad, which passes through the city, crossing the Mohawk river and the Erie canal, the first by a bridge nearly 1,000 feet in length, connects it with New York and the great West; while the Troy and Schenectady, Schenectady and Athens, Schenectady and Susquehanna, and Schenectady and Saratoga railroads, which center here, furnish communication with all parts of the state, and give back to Schenectady much of its old importance as a distributing-point for New York state. It is the seat of Union college, which was founded here in 1795, and which has become an influential educational institution, counting among its alumni and professors many distinguished men. The population has increased steadily but slowly from 6,784 in 1840 to 13,655 in 1880, thus doubling in a period of forty years. The Schenectady Locomotive Works build large numbers of engines yearly. There are several founderies; forge-works; sash, door, and blind factories; planing-mills; carriage manufactories; shawl-, hoopskirt-, and knitting-mills. The city is supplied with gas, and water was introduced in 1871 by a private corporation. It is taken from a filter-gallery, 100 feet long, 9 feet wide, and 9 feet high, built below low-water mark in the Mohawk and along the shore, walled in and arched with brick and surrounded by gravel. The water is clear and good, except at high stages of the river, when it becomes slightly turbid. The pressure in the pipes is maintained by the Holly pumping system, and is for ordinary purposes 50 pounds to the square inch, but in case of fire is increased to 110 pounds. There are 11 miles of iron and cement pipes, varying from 12 to 4 inches in diameter, and 132 fire-hydrants. The city pays \$71 86 annually for each hydrant. The average daily consumption is 1,000,000 gallons.

No further information regarding this city was furnished.

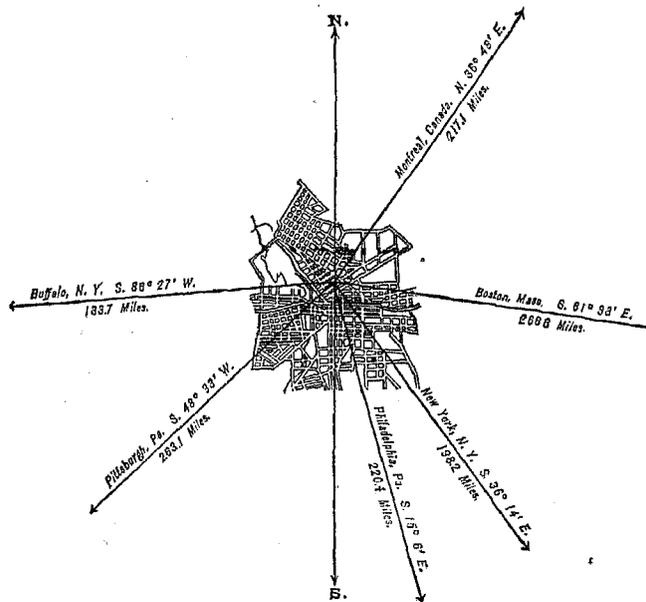
SYRACUSE,

ONONDAGA COUNTY, NEW YORK.

POPULATION

IN THE
AGGREGATE,
1850-1880.

	Inhab.
1790.....	
1800.....	
1810.....	
1820.....	
1830.....	
1840.....	
1850.....	22,271
1860.....	28,119
1870.....	43,051
1880.....	51,792



POPULATION

BY
SEX, NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male	24,675
Female	27,117
—	
Native	38,774
Foreign-born	13,018
—	
White	51,199
Colored	* 593
* Including 3 Indians.	

Latitude: 43° 2' North; Longitude: 76° 14' (west from Greenwich); Altitude: 330 to 500 feet.

FINANCIAL CONDITION:

Total Valuation: \$28,324,643; per capita: \$547 00. Net Indebtedness: \$1,351,500; per capita: \$26 09. Tax per \$100: \$2 32.

HISTORICAL SKETCH. (a)

The site of the present city of Syracuse originally formed a part of the Salt Springs reservation which was created by the legislature of New York in 1788, and in 1794, when Onondaga county was organized, it was included, together with all that part of the reservation east of Onondaga lake and creek, in the town of Manlius. The first locality within the present corporation limit to receive a name was called "Webster's Landing", from Ephraim Webster, who kept a few goods for trade with the Indians, in a little cabin on the banks of Onondaga creek near its outlet. Webster was succeeded by Benjamin Newkirk in 1793, at which time there was a considerable Indian

a Nearly all the information regarding Syracuse was collected and furnished by Virgil Bull, esq., of that city.

village on the west bank of the creek, while what is now the city was a dark, gloomy, and almost impenetrable swamp, full of wolves, bears, wildcats, mud-turtles, and rattlesnakes. Such was Syracuse in 1800, a wild swamp, the home of wild beasts and poor Indians, with one or two huts inhabited by white men. In the year 1804 the legislature of New York authorized the sale of 250 acres of the Salt Springs reservation. The lot was laid out so as to avoid the swamp as much as possible, but in spite of the irregular form it was found necessary to include part of the morass, some of which was covered with water the year round. The tract was sold at auction during the month of June, 1804, and was purchased by Abraham Walton for \$6,500, about \$26 20 an acre, and was thereafter called the "Walton tract". Mr. Walton laid out the land for a village. It was situated nearly in what is now the business center of the city, and seems to have been the beginning of an organized village in Syracuse. It was known as "South Salina". Here Mr. Walton erected mills on the bank of the creek, building the first dam across the creek. This was, however, washed away in about a year by a heavy spring freshet; it was rebuilt several rods farther up the creek, but was removed finally, between 1840 and 1850, on account of the supposed unhealthfulness of the mill-pond. The name South Salina did not meet with general approbation, and after a time was changed to Milan, a name that was in use several years. The Walton tract passed through several hands, and in 1814 was purchased by a firm which erected large slaughter-houses upon it, and during the war of 1812 carried on an extensive trade in packing beef, as it had large contracts with the government for army supplies. In 1819 the village plot was surveyed, and the name "Corinth" given to it, that of "Milan" being abandoned because there was another town of that name in the state. For several years the place was known as "Cossett's Corners", so called from the name of the tavern-keeper there, Mr. Cossett. Purchases of lots began to be made quite extensively, and, with 1820, what had been a dreary swamp began to make rapid progress toward becoming a prosperous city. In the fall of 1819, the man to whom more than to any other the city owes its prosperity, Judge Forman, moved with his family to Syracuse. There were then but two frame houses besides the tavern in the village. Log houses and cabins of slabs or planks were scattered here and there over the dry ground, most of them inhabited by workmen employed in building the Erie canal, which contributed so largely to the growth of the city, and which was completed from Montezuma to Utica in 1820. On July 4 of that year a great celebration was held in Syracuse, to which all the prominent friends of the canal were invited. That day is a memorable one in the history of Syracuse. Vast crowds thronged to the village, a procession paraded through the streets, the Declaration of Independence was read, an oration delivered, and a day of festivity enjoyed by all. The canal at once made the village an important place, and its growth became rapid and continuous. An attempt to obtain a post-office under the name of "Corinth" failed because, as in the case of Milan, there was already another of the name in New York, and with this year, 1820, the village assumed the name it now bears as a city. One obstacle stood in the way of success: the locality was very unhealthy, and the sickness among the canal laborers had been very great. It was clear that the village could not prosper unless the swamps were drained. Accordingly, in the winter of 1821-'22, Judge Forman procured the passage of a law authorizing the lowering of Onondaga lake, and the draining of the swamps and marshes about the villages of Syracuse and Salina. The necessary expense of this was assessed upon the landholders on the line of the drains in proportion to the amount of improvement afforded them. Each landholder was at liberty to construct his own drains; but in case of a refusal, commissioners were appointed and given authority to enter the lands, construct the drains, and charge the expense upon the owner. If any one refused to pay his assessment his lands were seized, and, after being advertised for sale for four weeks, were sold conditionally. If the original owner did not redeem the lands within six months, by paying his assessments, and interest at 10 per cent. on the price paid for his lands, the sale became valid and unchangeable. These measures may seem harsh and arbitrary, but public welfare demanded them, and it seemed impossible to obtain the desired end in any other way. The work was completed in the summer of 1822, and with the disappearance of the water sickness passed away, leaving Syracuse comparatively a healthy place. In 1825 the village was regularly incorporated. Village officers were duly elected, roads were regularly laid out, a fire department was organized, engines and apparatus were purchased, and every measure was taken to insure the welfare of the village. Ten years later the limits were extended, and in twelve years more, in 1847, Syracuse was incorporated as a city. It included within the corporate limits the old village of Salina, which had been laid out as a village in 1798 and regularly incorporated in 1809. Since becoming a city the progress of Syracuse has been steady and rapid. None of the former periods of commercial distress seem to have checked its growth, but the long period of depression beginning in 1873 has seriously lessened the prosperity of the city. Between 1860 and 1870 the population increased from 28,119 to 43,051, while in the next decade the increase was only to 51,792. Since the first establishment of public schools the citizens have been proud of them. The Syracuse university is located in the city, and embraces colleges of liberal art, of medicine, and of fine arts. There are good public libraries and many churches, so that the moral and intellectual interests of the citizens are cared for as carefully as are the financial.

The manufactures of Syracuse are numerous and varied, but the leading industry is the manufacture of salt. This is of such importance that the following history of the salt industry has been prepared for the census by Patrick H. Agan, esq., of Syracuse:

The annals of the French Jesuit missionaries contain the first authentic record of a saline deposit in the neighborhood of Syracuse. This record is found in the diary of Father Le Moine, written during his visit to the

Iroquois, on the banks of the Onondaga or "Salt lake", in the year 1653. He says: "In a basin half dry, we tasted the water of a spring, which the Indians are afraid to drink, saying it is inhabited by a demon, who renders it foul. I found it to be a fountain of salt water, from which we made a little salt, some of which we shall carry to Quebec."

Comfort Tyler and Asa Danforth, among the earliest pioneers of central New York, were the first salt-manufacturers. For this purpose they used an iron kettle suspended from a pole resting on two crocheted sticks driven into the ground. It is said that after having produced 13 bushels they ceased operations, and, hiding their kettle in the bushes, made their way homeward, a distance of 4 miles. The spring from which the brine was taken by Tyler and Danforth was simply a hole in the ground, from which the water was drawn with cups or pails. As the population increased the increasing demand for salt stimulated production. At first ordinary wells were sunk, producing brine of little strength. These were followed by deeper and larger wells, strongly curbed, from which the brine was drawn by ordinary hand-pumps. Finally the state began to sink wells on its own account, and assumed the work of distributing the brine among the manufactories. Later the size of the wells was greatly reduced, and wooden and, still later, iron tubing was introduced, and pumps driven by water and steam were employed. The substitution of this kind of tubing, by shutting out the surface-water, added immensely to the strength of the brine and the production of salt.

On the 12th of September, 1788, the "Onondaga Salt Springs reservation" was created by a treaty made between the state of New York and the Onondaga tribe of Indians. By the terms of this treaty it was provided that the "Salt lake" (Onondaga) and the lands for a distance of 1 mile around the same should forever remain for the common benefit of the people of the state, and of the Onondagas and their posterity, "for the purpose of making salt". This treaty continued in force until the 28th of July, 1795, when by the terms of a new treaty the Indian title was extinguished by a transfer to the people of the state. In consideration of this conveyance, the Indians were to receive from the state, in addition to certain moneys, 100 bushels of salt annually forever. This allowance of salt was subsequently increased to 150 bushels per year, and made payable on the written order of the chiefs of the tribe.

The title to the salt springs having passed to the state, the legislature two years thereafter enacted a law regulating the manufacture of salt, and taxing the article as a source of revenue. The act provided for the appointment by the governor, with the approval of the council of appointment, of a superintendent of the salt springs, who, among other duties, was empowered to execute leases to parties then engaged in the manufacture, as well as to others who might wish to engage in the business of making salt. One condition in these leases was that at least 10 bushels of salt per annum should be made in each kettle or pan used in the manufacture, and in case any manufacturer had a surplus of brine he was bound, without cost to himself, to deliver to others who might wish to engage in the business. The rate of tax levied by the act was 4 cents per bushel, with 1 cent additional as compensation to the superintendent. As a partial return for this tax, the manufacturers were allowed to gather fuel for their works from any portion of the reservation. The superintendent was authorized and directed to build a storehouse on the bank of the lake, into which all the salt produced was to be delivered by the manufacturers, and from which it should all be sold by the superintendent, and by him delivered to the consumers in such quantities only as were actually needed by themselves. No person except a citizen of the state could be a purchaser, and none of these except such as "depend on getting their salt at the salt-works" were entitled to the privilege of buying and using the product. There was also a clause in the act providing that such manufacturers as chose to do so might escape the 1-cent tax by erecting storehouses of their own, to be placed under lock and key and subject to the control of the superintendent.

Other features of the act deserve notice in this connection. The superintendent was required not only to have exclusive charge of the sales of salt, but to keep on hand a reserve of not less than 2,000 bushels. There was likewise a limitation fixed on the price of the commodity, under which it was not to be sold for more than 60 cents per bushel, duties included. This provision of law serves to show the high value set upon the article as an element in our domestic economy, and also a desire on the part of the legislature to protect the consumer against an unreasonable charge for one of the prime necessities of life.

During the year additional legislation was required to remedy the defects of the original act. In consequence of the inability or neglect of the superintendent to furnish storage room for the product by the erection of the necessary buildings for that purpose, the manufacturers were permitted to make returns to that officer, under oath, of the quantity of salt made during the previous year, and for every quarter thereafter, so long as that officer failed to provide the necessary storage room provided for under the previous act. The manufacturers were also allowed at their option to pay either the 4-cent tax previously imposed, or in lieu thereof a tax on the kettles used in their works, at the rate of 2 cents per gallon of capacity per quarter, and those who elected to take this course were permitted to sell their salt direct to consumers, but not in quantities exceeding 3 bushels to any individual otherwise than in packages made of well-seasoned timber, and branded with their own names and date of manufacture, and inspected by the superintendent and branded by him also. Leases were limited to blocks or works having a minimum capacity of 340 gallons.

As lawless characters were in the habit of trespassing on the reservation lands, the superintendent was authorized to build a fence around a portion of them to guard against the misappropriation of the timber which,

as heretofore stated, had been set apart for the exclusive benefit of the salt manufacturers. Beyond the reservation line, the manufacturers were forbidden from cutting or using any of the standing timber which then covered the ground in all directions. In addition to the fees allowed to the superintendent, that functionary was authorized to erect a dwelling for himself and family at a cost not exceeding the sum of \$260, and he was likewise permitted to occupy space for an office, free of charge, in the state block-house previously erected near the salt springs as a protection against threatened Indian invasion. And, furthermore, he was allowed the sum of \$100 per annum for the services of an assistant; and his accounts for necessary stationery, tools, etc., after being audited by the comptroller of the state, were required to be paid in full.

The superintendent having completed the state storehouse, he was required after the 1st day of May to receive and deposit therein all the salt made on the reservation, and to divide it into two parts, according to quality, marking the best as "first quality" and the poorer as "second quality", but the latter was not to be of a grade more than 25 per cent. below that of the best quality. The inspection of such by the state was now for the first time made obligatory. Under this requirement the salt was to be packed "in thoroughly seasoned white-oak water-tight casks, 20 inches long, with 19-inch heads, and hooped with 12 hoops each". The superintendent was required to fix the price at which the second quality was to be sold to consumers, and to designate the same by his brand legibly placed on the heads of the packages. Any person detected in an attempt to evade the payment of the duty was made liable to punishment for misdemeanor; and to give effect to this provision the superintendent was empowered to enter any boat, vessel, sled, sleigh, or wagon, or any building, for the purpose of seizing any salt which he might suspect to be contraband. The inspection of salt then established has, with the exception of one year, been continued to the present day, varying only in details according to the whim or caprice of those in authority.

Although the duties on the product were payable at the time of inspection, the manufacturers were often neglectful of this requirement. The delinquents, however, were treated with great leniency, and, indeed, seemed to be the most favored portion, for the state passed an act exempting them from the payment of the tax in money, and gave them the option of paying all deficiencies in salt at the market price. Even in cases of suits instituted for the recovery of unpaid duties this favor was shown, the penalties and costs being both included in the adjustment. For the salt thus taken in payment of duties, penalties, etc., the superintendent was required to allow the full legal value, but he might sell it at one-third less than the manufacturers were allowed to receive from their customers, the result being a loss to the state in duties of $33\frac{1}{3}$ per cent.

The state storehouse was situated nearly on a level with the lake, which at spring tide always overflowed the low marshy banks, facilitating the operations of the smugglers. As an aid in his work of detection, he was authorized to build a suitable row-boat at the state's expense.

In the year 1798 the village of Salina was laid out, in accordance with an act of the legislature passed that year. The territory included within the newly created town comprised a part of the salt reservation, and embraced all the erections for salt-manufacturing purposes then existing. The plot was divided into 16 blocks, each 392 feet square, intersected at right angles by necessary streets. The blocks were subdivided into four lots each. Thirty of these lots were to be retained by their occupants, at their option, on payment of the maximum price paid for the property. During the ensuing year a further sale of lots was authorized, with a limitation as to the minimum price, which was fixed at \$40, one-quarter to be paid down and the residue within one year thereafter. Purchasers of lots were required to erect buildings of the value of \$200 each, on the pain of forfeiture of the property to the state. The salt-manufactories were all then located along the west line of what was then and is now called Free street, and the territory covered by them, extending to the marsh-lands on the west, was divided into lots and apportioned to the owners of the works, the lots varying in width from 34 to 70 feet, according to the wants of the several manufacturers. The lots thus laid out were leased to their occupants on the usual conditions.

In the year 1799 the legislature repealed the provision of law requiring the superintendent to keep a minimum quantity of salt in store for sale. It was found to be an unnecessary precaution, the supply of salt being at all times adequate to the public wants, extortion of price being impossible under the existing statute. The 1-cent tax was also abolished on all salt which the superintendent was unable to receive into the state storehouse.

During the first year of the state supervision over the manufacture of salt the quantity produced was 25,474 bushels, on which the duties amounted to \$1,018 96. There is no record of the product previously to that time. The method of manufacture, as heretofore stated, was a very simple one. The first caldron kettle used in an arch for the purpose of making salt was set in the year 1793, by James Van Vleck. Soon afterward a second kettle, and then four, were used, with a separate fire under each. The enlargements of the "blocks" were in the direction of the width, instead of the length or depth. The "Federal Company", organized for the manufacture of salt, and the first one of its kind, built a block in 1798 containing 52 kettles, set in 8 parallel arches. Seventeen years afterward a block of 16 kettles, set in 2 parallel arches, was erected by William Buckley. This operated so favorably that in 1818 a block of 30 kettles, on the same plan, was built by E. W. Knapp. From that time onward the blocks have been lengthening, until now some of them contain 120 kettles each.

For more than three years after the state assumed control of the salt springs the manufacturers were compelled to procure the brine at their own expense. This burden was then assumed by the state, which, under the operations

of law, took exclusive control of the production and distribution of the brine, introducing from time to time new methods of facilitating the work as experience suggested. The production of salt in the infancy of the business was greatly stimulated by the extended water communications with which the works were closely connected. Before the year 1810 many consignments of salt were made to Pittsburgh, Pennsylvania, and large quantities were shipped to points in Ohio, and on the lower lakes and the Saint Lawrence. The freight charges on a barrel of salt to Pittsburgh were then about \$3.

The manufacture of solar or coarse salt was introduced in the year 1821, but did not assume much importance until many years afterward. It was entered upon under discouraging circumstances, being opposed by the manufacturers of boiled salt, who placed many obstacles in the way. A warm controversy arose over the matter, in which the superintendent of the salt springs was forced to act a conspicuous part. The office of superintendent was then held by William Kirkpatrick, a man of intelligence and much influence. He sided with the friends of this interest, and through his exertions the state authorities were induced to favor the enterprise. In April, 1822, he procured the passage of an act giving to the solar fields in certain cases a preference in the distribution of brine. The act also provided for the exemption from jury duty or military service of all persons engaged in this branch of the manufacture. Any person could erect solar works on his own lands on condition of paying the lawful duty. A drawback of 3 cents per bushel was likewise authorized, not, however, to cover more than an aggregate of 100,000 bushels. This act was productive of much bad blood on the reservation, and resulted in various attempts to destroy or injure the property belonging to the coarse-salt manufacturers, leading to stringent measures of repression on the part of the legislature, which enacted a law declaring any attempt to destroy or injure this species of property to be a felony.

Besides the village of Salina, the state laid out two other villages within the limits of the salt reservation—Geddes and Liverpool. The plots of these villages were mapped and lots sold for residences, and leases of others granted for the manufacture of salt. Population at these points rapidly increased, and they soon became noted for their business activity and thrifty condition. For many years the supply of brine was obtained from the wells at Salina. The first solar works were located within what is now the city of Syracuse.

As early as the year 1820 attempts were made for the discovery of fossil salt. During that year Benajah Byington was authorized by act of the legislature to search for rock salt anywhere on the reservation lands, and at intervals for twenty years thereafter, under various renewals of this authority, was engaged in efforts to find the coveted deposit, but without success. Nor have other attempts by the state and individuals met with success. But repeated failures have not ended these experiments. Within the past year wells have been sunk at three or four places in the Onondaga valley, several miles from the existing wells, in hopes of finding rock salt; and the state itself is now engaged in a renewal of its former experiments in lands contiguous to the wells which at this time furnish the main supply of brine. It may be mentioned here that about eighty wells in all have been sunk by the state and by individuals, about four-fifths of which have been abandoned for others which produce stronger brine and that of better quality. The brine from these wells is not of uniform strength, but varies from 7 to 10 degrees—the average now standing at 68 to 70 degrees, as measured by the salometer.

For the purpose of furnishing means for constructing the Erie canal, the legislature in 1817 passed an act increasing the duties on salt from 4 to 12½ cents per bushel. This scale of duties remained for a period of eighteen years, adding to the canal fund about \$2,500,000, more than one-third the cost of the canal. While this act was in force, smuggling of salt was a common occurrence, and at one period a conspiracy was entered into between certain subordinate officials connected with the management of the springs and a portion of the manufacturers to defraud the state out of its salt revenues. For a time the conspiracy was very successful, but ultimately detection followed and the conspiracy was exposed. In the year 1834 the tax was reduced to 6 cents per bushel, and in 1850 to 1 cent per bushel, at which rate it has since remained.

These, like other saline waters when first brought to the surface, contain certain impurities which must be eliminated before use, otherwise a deleterious effect is produced. Various processes of extracting them have from time to time been resorted to, but none of them have proved as efficacious as quicklime, although at one period the use of that ingredient was strictly prohibited. It is used only by the boiling-works, the brine consumed in the solar works purifying itself in the slow process of evaporation, leaving the crystallized product to be washed clean before delivery into the storehouses.

The manufacture of table and dairy salt was begun in the year 1841. The first production of this article was not satisfactory, the salt being reduced to fineness by cutting the grain with a foreign substance during the process of crystallization. Two years afterward mills for grinding the salt were built, and these worked satisfactorily, and have been employed down to this time with great success. During the last two years an article called "agricultural salt" has been manufactured to a considerable extent, under the operation of an act of the legislature. No inspection of this product is required, and in its manufacture the natural impurities of the brine are retained.

In 1841 the number of boiling manufactories amounted to 183, containing altogether 6,748 kettles, an average of 35 each. These works were distributed by districts as follows: Salina, 78; Liverpool, 51; Syracuse, 36; 1826—VOL 18—41

Geddes, 18. At that time wood was used exclusively for fuel, and the consumption of the article had long before completely exhausted the supply originally on the reservation. Forty bushels of salt to the cord was about the production. Besides the native timber on the reservation, the country for several miles around had been despoiled of the forest, and supplies of wood could be obtained only along the heavily timbered banks of the Seneca, Oneida, and Oswego rivers. Much the largest proportion of the salt then manufactured was marketed at Oswego, and the boats engaged in its transportation obtained profitable return cargoes of wood along the banks of those navigable streams, where it had been "ranked" during the winter season. In 1849 Thomas Spencer sought to introduce coal as fuel. At that period about 100,000 cords of wood were consumed annually in the manufacture of salt, and timber along the water-courses leading to the works was becoming scarce and dear. Even the islands in lake Ontario were drawn upon to furnish a supply of fuel, and the question of a future supply had become a serious one. Mr. Spencer's experiment was made with anthracite, then worth from \$4 to \$5 a ton. It was found impossible to obtain an effective draught with chimneys of the ordinary height, but by running them up 100 feet the difficulty was measurably overcome. The first one of these tall chimneys was built in 1857, but it was then found that even with the increased draft thus obtained the heat was insufficient for the purpose required. Finally, after repeated experiments with coarse coal, the refuse dust of the Scranton mines was found to be the best fuel adapted to the work of salt-manufacture, and it is now used exclusively by the boiling-works. Its cost is about \$2 per ton, and the supply is inexhaustible. In the infancy of the salt-manufacture a cord of wood was required to produce 10 bushels of salt. In 1820 the yield was 20 bushels to the cord; in 1840 about 40 bushels; but 50 to 60 bushels are produced with a ton of coal-dust. This has materially cheapened the cost of production, if it has not actually saved the business from annihilation.

During the interval running from the time when the state assumed control of the salt springs down to the year 1859, laws regulating their management were constantly undergoing changes of more or less importance. There had been so much of this legislative tinkering that it was not easy to obtain a clear understanding of the duties of the officials or the rights and responsibilities of the manufacturers under the law. As a remedy for this evil the legislature of 1859 passed an act codifying these laws, retaining what was of value and essential to a proper supervision of the salt springs, and sweeping away the accumulated rubbish of more than sixty years of legislation. This code, in all its essential features, still remains in force. It was prepared by Vivus W. Smith, at that time superintendent. Among the more important provisions of this code was one without parallel in any previous law. By this provision the superintendent was forbidden to furnish brine to the boiling-works during the months of December, January, February, and March. In the early stages of the salt-manufacture, and down to a period as late as 1840, a large part of the salt produced was made in the winter season. The fuel was more easily procured and at less expense than in the summer season. But it was generally acknowledged that the salt manufactured in cold weather contained more impurities than that made in the hot months of the year. The provision of law referred to was inserted for the purpose of improving the quality of the salt, and undoubtedly had the desired effect.

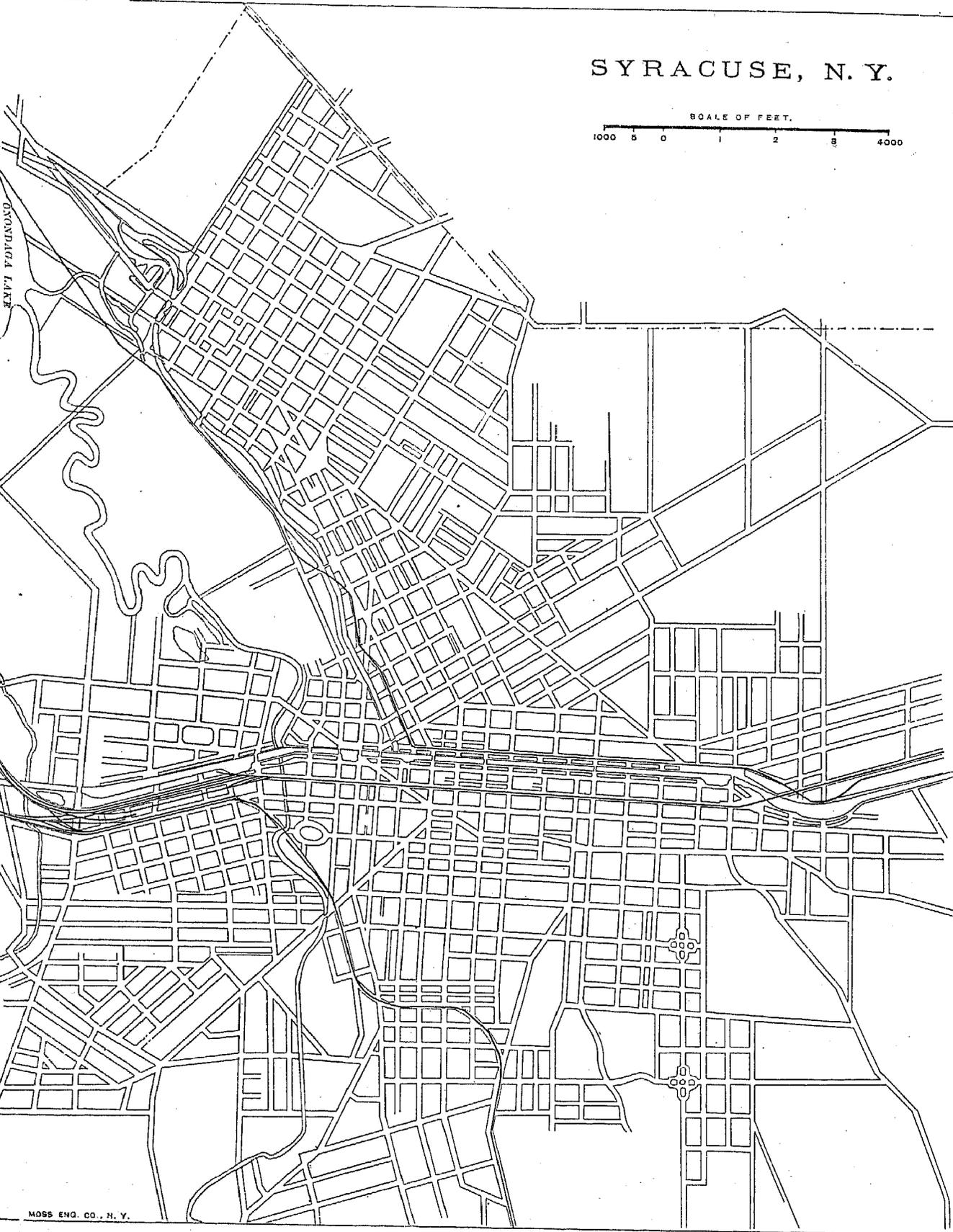
According to the annual reports of the superintendent of the salt springs, the quantity of salt manufactured since the state assumed control of the springs has been 2,179,812,357 bushels. As previously to the year 1841 no separate account was kept of the boiled and solar salt, the exact quantities of the relative kinds can not be obtained. Since the year 1840 this omission has been supplied. From that time to the year 1880 the total production of solar salt has been 52,657,916 bushels, or about 2.4 per cent. of the total production. The amount of coarse salt made previously to 1841 is estimated at about 2,000,000 bushels, which, added to the amount reported since 1840, would bring the total production of solar salt up to about 2.5 per cent. of the aggregate production. The salt reservation consists of about 550 acres, of which about 350 is apportioned to the manufacture of solar salt, and 75 to the boiling-works. At one period the number was more than twice as great; but as the aggregate diminished, the capacity was enlarged, so that the existing works are fully equal in capacity to the larger number. The manufacture of solar salt is carried on by corporate companies, partnership associations, and individuals, mostly by the first-named. The heaviest owner of these works, however, is an individual. The number of vats or covers in use is 41,281. The number of kettles in the boiling-blocks is 12,000. The annual yield of each vat or cover is therefore about 65 bushels, and of each kettle 45 bushels.

For many years before the discovery of brine in the valley of the Saginaw, a large proportion of Onondaga salt was marketed at Chicago. The rapid increase of production in Michigan interfered materially with the trade in Onondaga salt at western ports, although the packers at Chicago and elsewhere in the West find it to their interest to use the established brands of Onondaga salt. In lieu of the western market, a ready sale is now found in New England, New York city, and Philadelphia, where the Onondaga salt has secured an excellent reputation for purity and excellence. In the dairying districts of New England, New York, Michigan, and Wisconsin it finds great favor. To meet this demand about 1,000,000 bushels of dairy salt are now made yearly. Much of this salt is put up in packages varying in weight from 10 to 20 pounds each, and sold largely to families for kitchen and table use. Competition with foreign and domestic salt has stimulated improvement in the quality of Onondaga salt, until it has nothing to fear from a comparison with the foreign article or the domestic product elsewhere. By

SYRACUSE, N. Y.

SCALE OF FEET.
1000 5 0 1 2 3 4000

ONONDAGA LAKE



improved methods in packing and transportation, it reaches the consumer in much better condition than formerly. At first it was marketed everywhere in cheap wooden packages, and transported by water; now it goes largely by rail directly to the consumer, reaching him in as good condition as when taken from the storehouse at the works.

An analysis of the representative brines of the Onondaga and Saginaw valleys shows the following comparative result:

ONONDAGA. [Depth of wells, 320 feet.]		SAGINAW. [Depth of wells, 600 feet.]	
Sulphate of lime.....	0.5747	Sulphate of lime.....	0.0983
Chloride of calcium.....	0.0795	Chloride of calcium.....	2.6430
Chloride of magnesium.....	0.1449	Chloride of magnesium.....	1.0685
Chloride of iron.....	0.0029	Salt.....	17.5103
Salt.....	15.3570	Water.....	78.6799
Water.....	83.8410		
	<u>100.0000</u>		<u>100.0000</u>

SYRACUSE IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Syracuse:

LOCATION.

Syracuse is situated in latitude 43° 2' north, and longitude 76° 14' west of Greenwich, in the central part of New York state, about 80 miles east by south from Rochester, and 148 miles by railroad west by north from Albany. Its average altitude above the sea-level is 360 feet; the lowest point is 330 feet, the highest 500 feet. The city is not situated on navigable water, but the Erie canal furnishes a means of water communication with Albany and Buffalo, and the Oswego canal with Oswego.

RAILROAD COMMUNICATIONS.

Syracuse is touched by the following-named railroads:

The New York Central and Hudson River railroad, termini New York and Buffalo.

The Syracuse, Binghamton, and New York railroad, termini Syracuse and Binghamton.

The Oswego and Syracuse railroad.

*The Syracuse and Northern railroad, termini Syracuse and Richland on the Rome, Watertown, and Ogdensburg railroad.

The Syracuse, Chenango, and New York railroad, termini Syracuse and Earlville on the New York, Oswego, and Midland railroad.

The Syracuse, Geneva, and Corning railroad, termini Syracuse and Corning on the Erie railroad, connects the city with the leading cities and towns of New York state.

TRIBUTARY COUNTRY.

The country immediately surrounding the city for a radius of 30 miles, with which the city deals in its local trade, is agricultural and industrial rather than commercial. It is rich in agricultural resources, while in certain localities the manufacturing interests are considerable.

TOPOGRAPHY.

The geological formation of the country in and about Syracuse is made up of alternate layers of shale and limestone, with dips toward the south of from 20 to 40 feet to the mile. The lowest is the Clinton group of shales. Above these come the Niagara limestone and the red and green shales and gypsum, termed the Onondaga salt group. Above these, and partially within the city limits, there is the water-lime group, followed in the vicinity by the Oriskany sandstone, Onondaga limestone, Corniferous limestone, Seneca limestone, Marcellus shales, Hamilton shales, Tully limestone, Genesee slate, and Ithaca shales. The salt-wells lie within the red shales and mostly within the city limits. The city lies in a basin or valley extending south from the head of Onondaga lake, and upon ridges to the east of the lake. A marshy strip containing over a square mile lies along the lake, and is bordered by an abrupt declivity 20 or 30 feet high. From the summit of this declivity the surface spreads out into a plain almost perfectly level, and upon this the main portion of the city is built. The eastern line of the city runs along ridges varying in height from 100 to 200 feet. The Onondaga creek runs north and south through the valley, in a channel 20 feet deep, and affords drainage for the entire city into Onondaga lake, a body of water 6 miles long and 1 mile wide, and of an average depth of 50 feet.

To the southeast and southwest the hills rise to the height of 300 to 400 feet. The region of country within a radius of 5 miles is open, containing very little timber. It has a rich and very productive soil, being cultivated largely for gardens, and yielding abundant crops of hay, wheat, corn, oats, barley, rye, potatoes, and other root crops and vegetables. Apples, pears, plums, and grapes grow abundantly, and a few peaches are raised.

CLIMATE.

The highest recorded summer temperature is 99°, the highest summer temperature in average years being 95°. The lowest recorded winter temperature is -22°; the lowest temperature in average years is about -18°. The small interior lakes are thought to have but little influence on the climate of the city, but lake Ontario evidently renders the air more moist and increases the rainfall greatly. No perceptible effect is exerted by the high land in the vicinity, or by the marshes.

STREETS.

Syracuse has about 92 miles of streets, of which 17½ miles are paved. Of the paved streets 3¾ miles are paved with cobble-stones, 1 mile with stone blocks, 11 miles with broken stone, and 2 miles with wood. The cost per square yard of the cobble-stone pavement is 63 cents; of the stone blocks, \$2 75; of macadam broken stone, \$1 to \$1 50; of the ordinary broken stone, 30 to 40 cents, and of wood, from \$3 to \$3 50. As the repairs are made chiefly by day labor, under the direction of the street commissioners, no separate account of the cost of repairing is kept. The stone and macadam pavement are found to be the most economical and permanent.

The sidewalks on all the business streets are of flagstone, as are many on the residence streets; the others are chiefly of plank or concrete. The gutters are made of flat sandstone and of cobble-stones. Trees are planted along the sides of the streets between the walks and the gutters, and on a few streets there are double rows on either side, with a grass-plot from 12 to 15 feet wide between them. The construction of streets is done mostly by contract; repairs by day labor. The annual cost of street repairs and cleaning is from \$35,000 to \$40,000.

There are 5 horse-railway lines, owning in all 13.6 miles of tracks. They own 40 cars, 113 horses, employ 50 men, and during the past year carried 1,512,146 passengers. The rates of fare are 2, 3, 4, 5, and 6 cents. Two omnibuses find employment in transferring passengers from one railroad station to another. They use 4 horses and employ 4 men. The fares vary from 10 to 25 cents.

WATER-WORKS.

The city is supplied with water by a private corporation which has erected works at a total cost of about \$600,000. The system of supply is by gravity during the winter and spring, pumping being resorted to in the summer and fall. The pressure is from 107 to 165 pounds to the square inch. The engine used is a Worthington duplex engine of 10,000,000 gallons' capacity per day. The average amount pumped per diem is 4,000,000 gallons, the largest amount being 4,250,000 gallons, the smallest 3,000,000. The average cost of raising 1,000,000 gallons 1 foot high is 4¾ cents. Only a few water-meters are in use, chiefly on elevators. They are either Spooner, Ball & Fitz, or Worthington meters.

GAS.

The gas-works of Syracuse are owned by private persons. The daily average production is 150,000 cubic feet. The city pays from \$1 70 to \$2 per 1,000 feet, while individual consumers are charged \$2 50. The city pays \$1 70 per month each for gas street-lamps, of which there are 1,020.

PUBLIC BUILDINGS.

No detailed information as to the number and value of the buildings owned by the city and used for municipal purposes was furnished.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Syracuse has no large parks. There are 5 or 6 small parks or squares, containing from 1 to 4 acres. Two of these are kept in good condition by the city, the others are cared for by individuals. They were gifts to the city and have never been a source of expense. There are 3 pleasure-grounds in the outskirts of the city which contain from 3 to 7 acres each, and are owned by private persons who rent them for picnic purposes.

PLACES OF AMUSEMENT.

The city has two theaters, Wieting opera-house and Grand opera-house, each seating about 1,500. Theaters pay an annual license of \$50 to the city. There are 4 halls used for concert and lecture purposes. There are 3 beer-gardens and concert-halls. Turn hall, owned by an association of turners, seats about 600, and has a beer-garden attached which will accommodate 1,500 to 2,000. Ackerman and Stubor, brewers, have a beer-garden with a music-hall; it will seat 1,000. B. Haberle, brewer, has a small beer-garden, with room for from 200 to 300 persons. All of these gardens are well patronized.

DRAINAGE.

An area of about 1,200 acres in the central part of the city is more or less completely sewered, the work being carried out according to the plan adopted in 1870, which fixed the location, size, and depth of the sewers. The discharge is into a small stream running into the center of the city, and then flowing for a distance of about $1\frac{1}{2}$ mile through a marsh to Onondaga lake. There are at present 18 different sewer outfalls discharging into this stream, being one and sometimes two for nearly every street for a distance of about 1 mile. There has been expended, under the direction of the board of creek commissioners, for the improvement and cleansing of this stream, about \$25,000.

The total length of sewers constructed is about 20 miles, 13 miles being of brick, and the remainder of pipe. Sizes range from 18 inches to 6 feet diameter, some of the larger sewers being of egg-shaped section. The smallest size reported is 18 inches, and the prevailing sizes are 24 inches and 30 inches. No information is given as to the rate of fall, but it is stated that the removal of deposits by hand or by artificial flushing is not practiced, the flow of the water of heavy storms being sufficient to cleanse the sewers. In the central part of the city the inlet-basins are trapped; elsewhere they are left open as a means of ventilation. The mouths of all the outfalls are open to the air, the discharge being above the level of the water of the brook.

The following information as to the cost of the work is of interest and value:

The cost of all sewers not over 24 inches in diameter is assessed entirely upon the abutting property benefited, the assessment being laid practically on a basis of frontage, without reference to value or improvements. In the case of sewers of more than 24 inches diameter, the ordinary cost of a 2-foot sewer is assessed upon the property, and the remainder is paid by the city.

The cost of the principal sewers constructed previously to 1880 is as follows:

Brick sewer in Olive street, etc.: 4,500 feet long, 6 feet diameter, at an average depth of 22 to 23 feet; 2,207 feet long, 5 feet diameter, at an average depth of 15 to 17 feet—\$70,278.

Brick sewer in Harrison street, etc.: 4,700 feet long, egg-shaped, 6 by 4 feet; average depth, 15 feet—\$44,354.

Brick sewer in Fayette and Washington streets: 8,690 feet long, egg-shaped, 5 by 3 feet; average depth, 14 feet—\$62,000.

Brick sewer in Onondaga street: 2,050 feet, circular, 3.75 feet diameter; average depth, 17 feet; 1,931 feet, circular, 2.5 feet diameter; average depth, $12\frac{1}{2}$ feet—\$16,741.

Brick sewer in Leavenworth avenue and Genesee avenue: 2,119 feet long, circular, 3 feet diameter; average depth, 21 feet 6 inches—\$9,060.

Manholes cost \$20 each; inlet-basins \$30 each.

In 1880 only a few sewers were built, but these were built at unusually low prices.

Brick sewers, circular, 2 feet diameter, average depth 9 feet 6 inches, cost \$1 30 per foot.

Brick sewers, circular, $1\frac{1}{2}$ foot diameter, average depth 11 feet 9 inches, cost \$1 43 per foot.

CEMETERIES.

There are 8 cemeteries within the city of Syracuse, as follows:

First Ward Cemetery, situated in the northwestern part of the city, between Second, Bear, Third, and Center streets, contains about 4 acres.

Lodi Cemetery, on Beach street, in the eastern portion of Syracuse, contains about 1 acre.

Rose Hill Cemetery, on Lodi street, has an area of about 12 acres.

Saint Mary's Cemetery, on Renwick avenue, in the southeastern part of the city, not far from the university, has an area of 5 acres.

Saint Joseph's Cemetery, situated on Pond street, not far from the northern boundary of the city, contains 10 acres.

Saint Cecilia's Cemetery, situated on Highland street, also near the northern line of Syracuse, contains 30 acres.

Saint Agnes' Cemetery contains 35 acres.

Oakwood Cemetery, situated in the southeastern part of the town, near the university, contains 150 acres.

Of these cemeteries, First Ward, Lodi, and Saint Cecilia are little used and are sadly neglected. It is impossible to give the number of interments which have been made in these cemeteries, but it has been estimated at from 20,000 to 25,000.

Oakwood cemetery is owned by a private corporation, and is beautifully laid out and carefully tended. Lots in it are sold at prices varying from \$100 to \$500, according to their location. Saint Agnes' and Rose Hill cemeteries are being used, respectively, by Catholics and by Jews. They are kept in good condition, but all the others, except Oakwood, are much neglected.

MARKETS.

There are no public or corporation markets in the city. Certain places are designated by ordinance where vendors of fresh meat, grain, fruit, and fish can stand with their teams to dispose of the contents of their wagons. A small fee is paid for a license, and any one selling in the public streets without a license is punishable by a fine.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of the city is vested in a board of health which consists of the mayor, the ex-mayor next preceding the acting mayor, two aldermen chosen by the common council, and the city clerk. Each member receives an annual salary of \$100. The city physician is physician to the board, but is not a member. The annual expense, inclusive of the salaries of the members, is from \$5,000 to \$7,000. In case of an epidemic the board can increase its expenses to any amount it may think necessary to the public good and welfare. The authority of the board is unlimited over all things pertaining to the sanitary condition of the city. The mayor, president *ex officio*, is the chief executive officer. One health inspector is employed; he is not a physician. He is regarded as a special police officer, and has all the powers of a patrolman. Inspections are generally made only when complaint is made.

NUISANCES.

When a nuisance is reported, or the health inspector believes one to exist, an inspection is made, and if a nuisance is found, an order to remove or abate it is served upon the owner of the premises. If after six hours no abatement has been made, the inspector, under the order of the board, makes the abatement, and charges the expense upon the owner of the premises, who is liable, in addition, to a fine.

Defective house-drainage, sewerage, street-cleaning, privy-vaults, cesspools, and sources of drinking-water are treated by the board whenever they threaten the public health. The pollution of the streams and lake by casting dead or decaying animal or vegetable matter into them is forbidden.

GARBAGE.

The board has full control of the conservation and removal of garbage. House-offal must be kept in suitable vessels, in such way that it shall cause no nuisance, and is removed by persons licensed by the board, in water-tight carts made for the purpose and distinctly marked.

BURIAL OF THE DEAD.

All graves must be at least 5 feet deep. No other regulations seem to have been made in regard to interments.

INFECTIOUS DISEASES.

Small-pox patients are isolated by removing them to a pest-house just outside the city. Scarlet fever patients are cared for at home, without, it would seem, any strict system of quarantine. If contagious diseases break out in the public schools or in private institutions, the board, by isolation, disinfection, and quarantine, can take such steps as it may think best to stop the spread of the disease. Public funerals in such cases are forbidden. Vaccination is compulsory in cases of epidemics, and is then done at the public expense. The registrar of vital statistics keeps a complete record of births, deaths, and diseases.

REPORTS.

The registrar makes a monthly and an annual report. A synopsis of the proceedings of the board of health is generally presented to the common council.

MUNICIPAL CLEANSING.

Street-cleaning is done by the city, which contracts for the cleaning of the paved streets. Two sweeping-machines are used, and do nearly three-quarters of all the work. The streets are divided into two classes; those in class one are cleaned twice each week, while those in class two are cleaned but once a week. The annual cost to the city is from \$10,000 to \$12,000. The sweepings are deposited on dumping-grounds. The work is done under the supervision of the board of health, and gives general satisfaction.

Removal of garbage and ashes.—Garbage and ashes are removed by contractors hired by the board of health. While awaiting removal, garbage must be kept in tubs or barrels closely covered and entirely separate from ashes or house-dirt. The collection of garbage, under the city ordinances, must be made at least three times a week in June, July, August, and September; twice a week in May and October, and once a week during the rest of the year. The garbage is finally disposed of by burying it. Ashes are either thrown on a dump or used in filling streets. The work is all done at the expense of the city.

Dead animals are disposed of by the health inspector, who either buries them or sells them to manufacturers of phosphate and other fertilizers beyond the city limits. No account of the service is kept.

Liquid household wastes.—Most of the liquid household wastes run into the public sewers, a small amount goes into cesspools, and none at all into the street-gutters. The number of cesspools in the city is very small; in some few cases these receive the wastes of water-closets. They are cleaned out by the odorless-excavating process under the control of the board of health.

Human excreta.—No information could be obtained in regard to the relative number of houses provided with water-closets and privy-vaults, or in regard to the regulation governing the construction and cleaning of vaults. The night-soil is removed to the country and used as manure, but none is allowed on lands within the gathering-ground of the public water-supply.

Manufacturing wastes.—No system of disposal of manufacturing wastes has been elaborated.

POLICE.

The police force of Syracuse is appointed and governed by a board of police commissioners, consisting of four members appointed by the mayor, who must take two from each of the leading parties. The commissioners must appoint the chief of police, who is the chief executive officer, and must see that the members of the force are equally divided between the two leading parties. The chief of police has the general charge of his department; his salary is \$1,200 per annum. The rest of the force consists of a captain of the watch, salary \$1,000; 3 detectives, salary \$75 per month each; 2 roundsmen, 1 office man, and 34 patrolmen, salary \$60 a month each.

The uniform is of navy-blue cloth, with brass buttons on the coat and vest, and a white cord down the leg of the trousers. The hat is a Derby, with a yellow cord. The men provide their own uniforms. They are armed with clubs, handcuffs, and revolvers, and patrol about 50 miles of streets. The patrolmen are on duty from 7.30 p. m. to 4.30 a. m., though they are allowed thirty minutes recess for supper.

During the past year 2,493 arrests were made, the principal causes being intoxication, prostitution, and theft. The police force is expected to assist the fire department at all fires, and aid all other departments of the city government needing assistance.

Special policemen are appointed by the mayor, and are subject to the chief's orders like any regular policeman during the period for which they are appointed. The total cost of the department in 1880 was \$31,740.

FIRE DEPARTMENT.

The fire department is controlled by a board of fire commissioners, of whom the mayor is one. The force consists of 34 men.

The apparatus comprises 4 steam-engines, 1 in reserve; 1 champion fire-extinguisher, 1 hook-and-ladder truck, and 5 hose-carriages, 1 in reserve. There are 250 fire-hydrants and 12 cisterns. A fire-alarm telegraph, having 34 signal-boxes, is connected with the department. The total cost of the force in 1880 was \$31,588 99.

PUBLIC SCHOOLS.

The public schools are under the charge of a board of education, consisting of 8 members, chosen by the people of the several wards, each ward having a representative in the body. The clerk of the board is also acting superintendent of the schools.

There are 15 graded and 3 ungraded schools, including a high school, and 2 connected with charitable institutions.

The number of children between the ages of 5 and 21 years in the city is 17,747, of whom 9,310 are registered in the public schools. The average daily attendance is 7,348. There are 178 teachers employed. The total cost of the schools, exclusive of permanent repairs and new buildings, was \$104,895 91, of which \$80,548 87 was for salaries of teachers.

A public library containing 14,500 volumes is located in the high-school building.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Syracuse for 1880, being taken from tables prepared for the Tenth Census by George W. Fernald, chief special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries.....	724	\$8,186,818	7,513	2,871	582	\$3,042,135	\$8,544,436	\$14,095,074
Baking and yeast powders.....	4	14,000	11	4	2	4,550	31,000	43,000
Baskets, rattan and willowware.....	5	15,500	303	100	51	17,718	9,180	33,762
Blacksmithing (see also Wheelwrighting).....	21	15,950	39	.....	.....	19,135	14,391	51,500
Boots and shoes, including custom work and repairing.....	26	96,775	227	140	31	93,118	320,103	405,582
Bread and other bakery products.....	26	61,404	69	10	9	21,517	168,819	231,507
Brick and tile (see also Drain and sewer pipe).....	3	61,000	53	.....	3	18,000	9,726	33,830
Carpentering.....	88	77,200	426	.....	2	179,011	250,855	515,750
Carriages and wagons (see also Wheelwrighting).....	18	125,000	206	.....	18	86,591	163,705	328,574
Clothing, men's.....	27	918,300	829	1,852	86	487,271	1,581,888	2,542,433
Clothing, women's.....	5	26,200	5	101	3	17,931	79,830	106,409

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED:			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
Confectionery	8	\$54,500	36	6	2	\$15,698	\$95,632	\$126,842
Cooperage	26	66,200	218	.....	3	54,642	148,289	232,302
Cutlery and edge tools.....	3	504,300	236	.....	1	76,446	201,050	293,085
Dentistry, mechanical.....	17	26,780	7	.....	.....	3,100	8,900	47,560
Drain and sewer pipe (see also Brick and tile).....	3	8,400	13	.....	.....	5,902	25,400	40,200
Dyeing and cleaning	5	4,600	10	12	1	4,462	2,002	13,949
Flouring- and grist-mill products.....	4	149,000	38	.....	.....	16,652	566,525	644,065
Foundry and machine-shop products	13	603,300	351	.....	6	150,927	400,237	656,831
Furniture (see also Upholstering).....	27	206,425	205	1	18	82,855	205,310	360,633
Hairwork.....	3	11,200	3	5	.....	2,650	7,200	11,890
Kindling wood.....	8	10,400	14	.....	2	3,910	16,950	25,235
Liquors, malt.....	8	539,497	184	1	.....	64,594	327,996	580,295
Lock- and gun-smithing	4	7,000	8	.....	1	4,200	6,050	14,200
Looking-glass and picture frames.....	5	95,731	128	.....	26	41,383	77,000	161,414
Lumber, planed (see also Wood, turned and carved).....	6	118,000	92	.....	4	24,311	53,200	93,300
Marble and stone work	11	78,800	102	.....	.....	58,016	42,220	124,418
Masonry, brick and stone.....	19	39,000	228	.....	5	75,610	125,450	294,310
Millinery and lace goods.....	6	21,800	6	51	.....	17,456	65,120	107,960
Mineral and soda waters.....	3	17,000	7	.....	.....	3,154	8,000	17,090
Musical instruments, organs and materials	4	15,000	57	.....	.....	11,391	19,083	36,054
Painting and paperhanging	21	27,900	100	.....	.....	34,060	32,950	91,020
Patent medicines and compounds.....	7	42,200	11	7	1	4,682	23,865	48,534
Photographing	12	30,750	29	9	.....	12,732	10,756	41,570
Plumbing and gasfitting.....	10	51,600	57	.....	3	20,647	71,978	114,033
Printing and publishing	13	287,000	197	19	28	115,038	83,792	246,152
Roofing and roofing materials.....	12	17,525	36	.....	3	16,950	84,700	65,000
Saddlery and harness.....	13	22,000	39	.....	3	15,042	39,307	73,785
Salt.....	41	1,106,681	530	11	23	140,310	308,091	626,187
Salt, ground.....	4	229,200	130	33	.....	31,807	218,943	206,900
Shirts	7	26,950	24	153	11	43,877	44,366	150,586
Slaughtering and meat-packing, not including retail butchering.....	8	221,000	64	.....	.....	22,126	513,590	620,918
Soap and candles.....	4	94,000	21	.....	2	8,700	70,979	101,540
Tinware, copperware, and sheet-iron ware.....	22	64,850	112	1	5	37,521	87,000	150,519
Tobacco, cigars and cigarettes	55	256,830	532	77	77	248,542	407,343	847,093
Upholstering (see also Furniture).....	6	21,250	20	5	3	11,376	33,080	58,100
Vinegar	3	27,000	13	.....	.....	3,300	11,800	24,306
Watch and clock repairing	16	8,050	23	.....	.....	14,128	4,075	30,650
Wheelwrighting (see also Blacksmithing; Carriages and wagons).....	13	11,800	26	1	1	9,906	11,140	30,317
Wood, turned and carved (see also Lumber, planed).....	6	22,650	41	.....	2	12,573	17,148	37,031
All other industries (a).....	95	1,028,070	1,447	267	146	576,527	1,457,822	2,847,443

a Embracing agricultural implements; awnings and tents; belting and hose, leather; billiard tables and materials; bookbinding and blank-book making; boxes, cigar; boxes, fancy and paper; brass castings; brooms and brushes; carriage and wagon materials; celluloid and celluloid goods; cheese and butter (factory); coffee, roasted and ground; coffins, burial cases, and undertakers' goods; coppersmithing; dentists' materials; electroplating; engraving, steel; engraving, wood; fertilizers; files; fire-arms; fruits and vegetables, canned and preserved; furnishing goods, men's; furs, dressed; glass; glue; gunpowder; hand-knit goods; hand-stamps; hardware; hardware, saddlery; hats and caps; hones and whetstones; iron and steel; iron bolts, nuts, washers, and rivets; instruments, professional and scientific; jewelry; lasts; lead, bar, pipe, sheet, and shot; leather, curried; leather, tanned; lime; lithographing; lumber, sawed; matches; mattresses and spring beds; models and patterns; musical instruments and materials (not specified); musical instruments, pianos and materials; paints; paving materials; pens, gold; pickles, preserves, and sauces; pipes, tobacco; pumps; refrigerators; sash, doors, and blinds; saws; scales and balances; shipbuilding; silverware; stamped ware; stencils and brands; stone- and earthen-ware; tobacco, chewing, smoking, and snuff; umbrellas and canes; whips; wirework; and wooden ware.

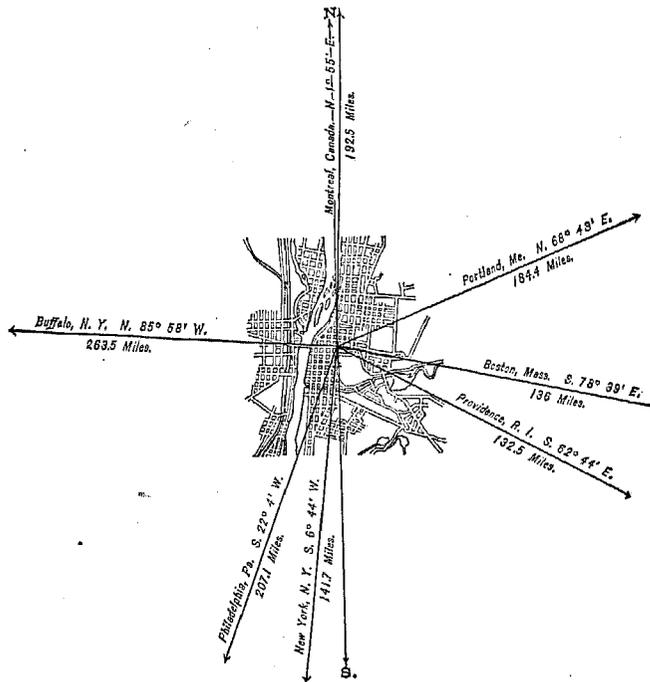
From the foregoing table it appears that the average capital of all establishments is \$11,307 76; that the average wages of all hands employed is \$277 42 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$16,682 02.

TROY,

RENSSELAER COUNTY, NEW YORK.

POPULATION
IN THE
AGGREGATE,
1800-1880.

Year	Inhab.
1790	.....
1800	4,926
1810	3,895
1820	5,264
1830	11,556
1840	19,334
1850	28,785
1860	39,235
1870	46,465
1880	56,747



POPULATION

BY
SEX, NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male	27,154
Female	29,593
Native	39,809
Foreign-born	16,938
White	56,185
Colored	* 562

* Including 1 Chinese and 4 Indians.

Latitude: 42° 44' North; Longitude: 73° 41' (west from Greenwich); Altitude: 0 to 400 feet.

FINANCIAL CONDITION:

Total Valuation: \$15,712,546; per capita: \$277 00. Net Indebtedness: \$958,296; per capita: \$16 89. Tax per \$100: \$4 48.

HISTORICAL SKETCH.

On a map made by Gillis van Scheudel, in 1630, appears a tract of land, on the east bank of Hudson's river, designated as "Pafracts Dael", the northernmost portion of which is now occupied by the city of Troy. Pafracts Dael, or the "paradise of the lazy man", was originally granted to the early Dutch settlers, and in 1786 the northern part of the tract was in the possession of the Van der Heyden family. At the close of the Revolution the tide of emigration from New England set toward the banks of the Hudson; but the Van der Heyden family, probably remembering the difficulties which had grown out of the vexed question relative to the earlier boundaries

of New Netherland, declined to part with any portion of their land to their Yankee neighbors. This turned the settlers toward New City (now Lansingburg), a little to the north, and the rapid progress made by that settlement under the stimulus of eastern emigration quickly opened the eyes of the Dutch patroon, Van der Heyden, to the opportunities for money-making that were passing his doors. In 1786 one of the Van der Heyden brothers sold a lot to one of the New England emigrants, and his example was quickly followed by the other members of the family. In 1787 the patroon had his land surveyed and laid out, with a view to its becoming a place of considerable importance, and Philadelphia, with its regular squares and streets at right angles, was taken as a model. The opening of these lots for settlement, and the further fact that the natural steepness of the banks of the river along the shore-line afforded vessels a close approach to land, caused the drift of emigration to the "New City" to be partially diverted, and the hamlet of "Vanderheyden", as it was called, began to take shape.

Elkanah Watson, returning from the West in 1788, thus describes the settlement in his journal:

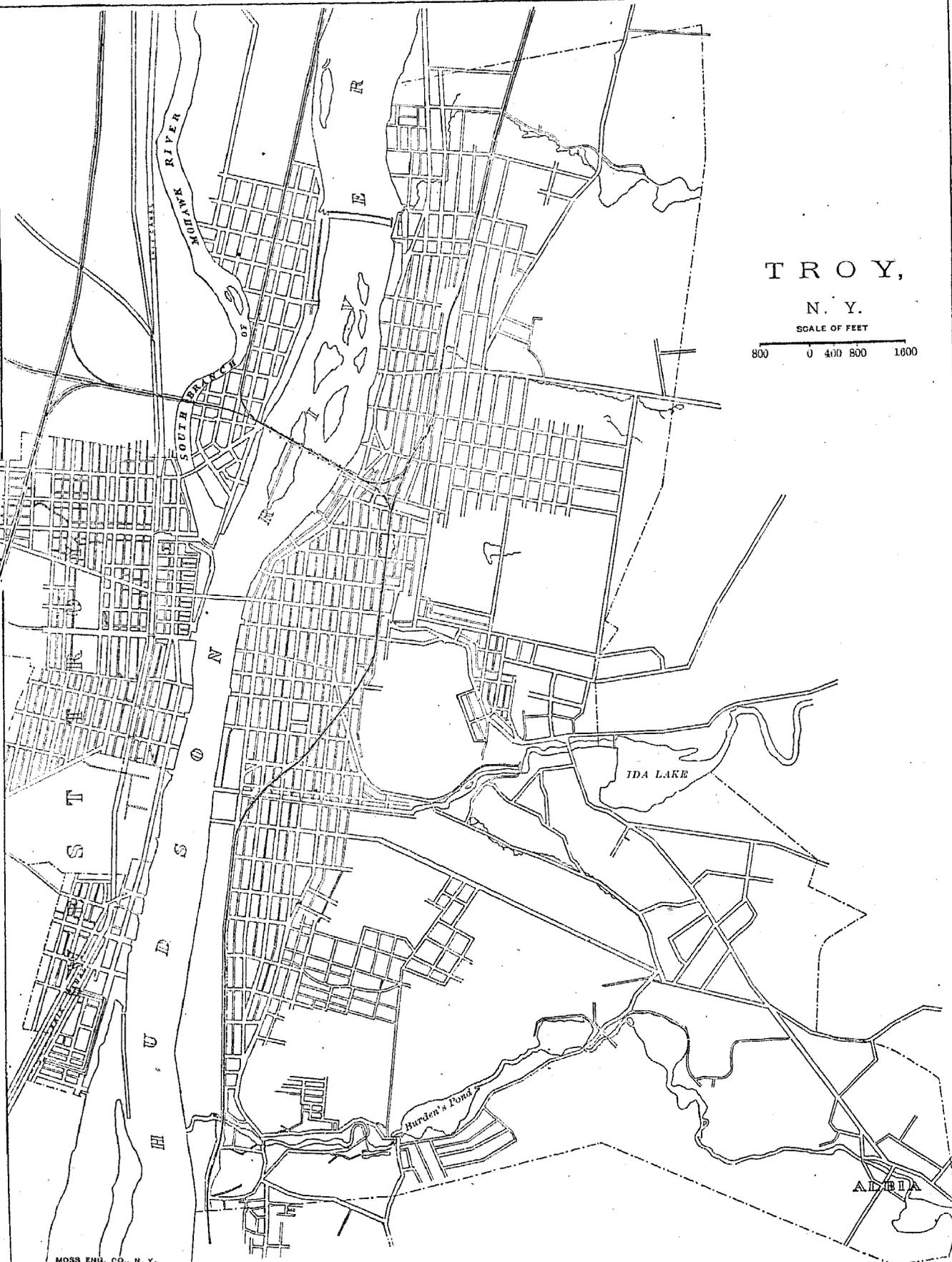
From Schenectady I passed the road to Ashley's ferry, 6 miles above Albany. On the east side of the river, at this point, a new town has been recently laid out, named Vanderheyden. This place is situated precisely at the head of navigation on the Hudson. Several bold and enterprising adventurers have already settled here; a number of capacious warehouses and several dwellings are already erected. It is favorably situated in reference to the important and growing trade of Vermont and Massachusetts, and I believe it not only bids fair to be a serious thorn in the side of New City, but in the issue a fatal rival. I think Vanderheyden must, from its more eligible position, attain ultimate ascendancy.

The rivalry referred to continued until 1793, when Troy was selected as the site for the county buildings, and the older town was forced to give up the race, many of her merchants moving to the county town. At a meeting of the freeholders of Vanderheyden, January 5, 1789, the name of Troy was adopted, and in April of the same year a daily line of stages was put on between Lansingburg (New City) and Albany, stopping at Troy *en route*. The town of Troy was formed from Rensselaerwyck in March, 1791, and on the 4th of April following a town-meeting was held and the first officers elected. Troy (or Vanderheyden, as it was called by some) was included in the township. From the first settlement, in 1786, to 1794 it had so enlarged the number of its inhabitants, both by distant and by neighboring immigration, that during the prevalence of small-pox in the latter year the population was estimated at between 400 and 500. March 25, 1794, the legislature passed an act incorporating the village of Troy. From now on the village increased rapidly, the influx of eastern people continuing, and the exodus of merchants from Lansingburg being still unabated. In 1797 the first newspaper, the *Farmer's Oracle*, made its appearance, and the next year saw the first fire-engine introduced. The municipal affairs of Troy at this time were conducted on an economical basis, as only \$128 50 was required this year for the village expenses, and this sum was levied on and collected from the inhabitants. In 1800 the Farmer's Bank, on the northern boundary line of Troy, was incorporated, with a capital of \$300,000. In 1804 the legislature passed a bill incorporating a bridge company, for the purpose of building a bridge over the Hudson river. The company was granted corporate power for seventy-five years, the capital stock was fixed at \$150,000, and it was provided that after the bridge was built no other one could be erected within 2 miles of it. Nothing further, however, was done in the matter for many years. In 1812 a steamboat began running between Troy and Albany, making two trips each way daily. The Troy Iron and Nail Factory, which was established the same year, manufactured an excellent quality of cut nails, which were offered for sale by the keg or ton; and in 1813 iron shovels and spades were made in large quantities.

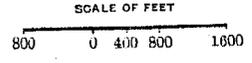
The war of 1812-'15 benefited Troy in a commercial sense, as large quantities of beef, flour, provisions, and whisky were sent from here to Plattsburg, New York, during the military operations along the northern frontier. The men of the village were represented in the army, and, in one or two instances the conduct of the Troy troops was honorably mentioned. The opening of the year 1814 inaugurated the long and persistent opposition which Troy, Lansingburg, and Waterford waged against the building of a bridge across the Hudson river at Albany. This opposition was so pronounced that for a time the project was abandoned, and finally when the bridge was built, half a century later, it was found that it did not seriously affect the navigation of the river above it, the main objection raised by its opponents. On April 12, 1816, the legislature granted to Troy a city charter, and on the 4th of the following May the citizens elected the first officers under it and inaugurated the city government.

On September 1, 1823, the state dam and sloop lock, connecting the waters of the Hudson river with lake Champlain by the Northern canal, were completed, and on the 8th of the following October the eastern portion of the Erie canal was opened. These two important events were fully celebrated by the citizens of Troy, and their effect on the city was soon felt. The amount exported from Troy by the canals from May 4 to December 14, 1824, was, merchandise, 9,836 tons; unenumerated articles, 1,016 tons; stone and brick, 376 tons; lumber, 30,000 feet; and laths, 33,000. In the same year the Troy and Boston stage-line was established, a stage leaving Troy three times a week, the fare to Boston being \$7 50. Stages from Boston made close connection at Troy with the lines for Schenectady and the West. In November the Rensselaer Polytechnic Institute, for teaching the physical sciences with their application to the arts of life, was established, and at the close of the year the number of buildings within the corporate limits of Troy was estimated at 991. From this time on the city steadily increased.

The completion, from time to time, of the several railroads now touching the city gave the citizens more extended markets for the products of their varied industries, while the bridges that spanned the Hudson gave easy communication with Albany and the country lying back of the west bank.



TROY,
N. Y.



Manufactures always claimed a prominent place in the city's growth. In 1830 there were 3 cotton- and woolen-mills, 3 iron-spike and nail factories, 2 iron air-furnaces, 1 steam-engine factory, and machine-shops and various other industries, as stoves, cooperage, soap, candles, carriages, sash and brush factories, flour-mills, tanneries, and breweries. Henry Burden, who became connected with the management of the Troy Iron and Nail Factory in 1822, has done much for the iron interests of Troy, and the Burden Iron Works to-day are among the largest in the country. He invented and perfected machines for making ship and railroad spikes and horseshoes, for preparing pig-iron, etc. The making of horseshoes has grown to large proportions, and during the civil war these works furnished the entire Union army with these important articles. In 1876 there were connected with the Burden works 60 puddling and 20 heating furnaces, 14 trains of rolls, 3 rotary squeezers, 9 horseshoe-machines, each of which can make 60 horseshoes a minute, and 12 rivet-machines. An overshot water-wheel, 60 feet in diameter and 22 feet wide, bearing 36 buckets, each 6 feet deep, and of 1,200 horse-power, with 15 small engines and 70 boilers, supplies the power needed. Exclusive of pig-iron, the capacity of these establishments is 40,000 tons per annum, and in the manufacture of horseshoes, 600,000 kegs per annum. The Albany and Rensselaer Iron and Steel Company have several large works at Troy. The manufacture of stoves, begun in 1815, is now a leading industry, some 25 firms being engaged in the business, while the making of linen collars and cuffs and paper collars has grown to large proportions. A reference to the table of manufactures, a few pages on, under the head of "Troy in 1880", will show the varied extent of the city's many industries.

Troy has been visited by several disastrous fires. On June 20, 1820, a fire started in a barn near First street, and before it could be subdued about 93 buildings were consumed. The loss was estimated at over \$700,000. On May 1, 1848, a fire started in a stable near the present site of the state armory, and all the buildings on the east and west sides of River street between Ferry and Congress streets were destroyed. On October 28, 1852, a fire consumed the block of buildings known as Union place. On August 25, 1854, an extensive conflagration destroyed 200 buildings and rendered 300 families homeless, entailing a loss of over \$1,000,000. The fire desolated an area of 30 acres. The most destructive fire that ever occurred in Troy broke out on May 10, 1862. It started in the wood-work of the Rensselaer and Troy railroad bridge, from there swept into the city, and, before it could be controlled, 75 acres of property were burned over. The number of buildings consumed, among them some of the best in the city, was 507, not including barns, out-houses, and sheds; and the total loss was estimated at \$3,000,000. The entire insurance was \$1,000,000. Though this fire occurred in the day-time, owing to the rapid movements of the flames several persons were unable to escape from the burning buildings, and so lost their lives. The citizens of Troy were not discouraged by these repeated losses, and after each fire the portion of the city that had been burned was quickly rebuilt.

Troy has had no periods of depression other than that affecting the country at large. The first settlers were Dutch—their descendants being still largely represented in both city and county—who were soon followed by immigrants from the eastern states. The manufactories attracted a number of Irish and Germans, as operatives, but the large majority of the population to-day is native-born.

TROY IN 1880.

The following statistical accounts, mainly collected by C. R. De Freest, esq., of Troy, indicate the present condition of that city:

LOCATION.

Troy lies in latitude 42° 44' north, longitude 73° 41' west from Greenwich, on the east bank of the Hudson river, at the head of tide-water, about 150 miles from the sea. The altitude of the city varies from tide-water in the river to 400 feet above. The river is navigable here for vessels of from 8 to 10 feet draught, and the rise and fall of the tide is 1½ foot. The Erie and Champlain canals practically terminate here, though the Erie continues to Albany.

RAILROAD COMMUNICATIONS.

Troy is touched by the following railroads: Hudson River and New York Central, between New York, Buffalo, and the West; Troy and Boston, and Boston, Hoosac Tunnel, and Western railroads, to North Adams, Massachusetts, and thence to Boston; and the Rensselaer and Saratoga railroad, between Troy and Whitehall, and thence to Canada.

TRIBUTARY COUNTRY.

The city is surrounded by a thriving farming country, interspersed with numerous prosperous villages, where, as in Troy, manufacturing is carried on to a large extent. All this trade centers here, and the city also derives benefit from the villages in Saratoga and Washington counties.

TOPOGRAPHY.

Troy is built mostly upon a narrow strip of level land which borders the east side of the Hudson river and terminates easterly in a high range of hills, portions of which are included in the city limits, and have of late years been largely taken up for building-purposes. The city is about 4 miles in length and nearly a mile in width. Four considerable streams, taking their rise in the Petersburg Mountain range, flow through the city to the Hudson. There are two considerable elevations within the city, known as mounts Olympus and Ida. The former rises to a height of 150 feet, and is of primordial calciferous sand-rock on the north side, and Hudson River slate on the south. The soil on which the city is built is variable, rich loam predominating, and the underlying rock is the Hudson River slate. The surrounding country is undulating and open, with numerous ponds and lakes. The several streams flowing through the city afford ample natural drainage.

CLIMATE.

Highest recorded summer temperature, 104°; highest summer temperature in average years, 95°. Lowest recorded winter temperature, -23°; lowest winter temperature in average years, -15°. The city is sheltered from the east winds by a range of hills.

STREETS.

Total length, 55 miles, paved as follows: Cobble-stones, 10 miles; stone blocks, 6 miles; and gravel, 39 miles. The cost of paving per square yard is, for cobble-stones, \$1 50; stone blocks, \$3; and gravel, 10 cents. The cost of keeping each in repair is, for cobble-stones and gravel 1 cent, and for stone blocks one-tenth of a cent, per square yard. As to quality and permanent economy, the stone blocks are ranked first, then the cobble-stones, and finally the gravel. The sidewalks are of North River bluestone and hard-burned bricks. In the streets paved with cobble-stones and gravel the gutters are of brick and cobble-stones, while in the other streets they are laid with stone blocks. Trees are generally planted in the streets, which are over 40 feet wide, at the edge of the sidewalks. The repair and construction of streets is done by contract work. The annual cost of repairs is \$1,500. The total length of horse-railroads in the city is 13.58 miles. There are 73 cars, with 352 horses in use, and 167 men employed. The total number of passengers carried during the year is 30,228,780, and the rates of fare are 5 cents within and 12 cents without the city limits. An omnibus line, with 3 vehicles, 8 horses, and employing 4 men, carried during the year 120,000 passengers, at rates of fare of 5 and 12 cents.

WATER-WORKS.

The water-works are owned by the city, and the cost, March 1, 1879, was \$558,796 20. The Holly pumping system is used, and the pressure in the pipes is 120 pounds to the square inch. The average amount of water pumped per diem is 6,000,000 gallons. The cost of raising 1,000,000 gallons 1 foot high is 20 cents. The yearly cost of maintenance, aside from the cost of pumping, is \$10,000, and the yearly income from water-rates is \$60,000. No water-meters are used.

GAS.

Gas is supplied by a private corporation. The daily average production is 240,000 cubic feet, and the charge to consumers is \$3 per thousand. The city pays \$34 a year for each street-lamp, 687 in number.

PUBLIC BUILDINGS.

The city owns and occupies for municipal purposes 1 city hall and station- and engine-houses. The total cost of the buildings is \$210,000. The city hall is owned and occupied entirely by the city, and cost \$120,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There is one large park, area about 4 acres, situated on a hill in the east part of Troy, the land for which was but recently donated to the city. Washington park, near the center of the city, between Washington, Adams, Second, and Third streets, has paths through it, but its size and cost were not given. The parks are controlled by the common council.

PLACES OF AMUSEMENT.

Griswold opera-house, seating capacity 1,500; Rand's hall, seating capacity 1,300, and Grand theater, seating capacity 800, are used for theatrical purposes. They pay an annual license of \$50 each to the city. Music hall, seating 1,200; Rand's concert-hall, seating 1,000, and Harmony hall, seating 800, are used for concerts, lectures, etc.

DRAINAGE.

Sewers in this city were first built along the line of ravines and hollows later they were constructed only along the lines of streets. The oldest brick sewer was built about 1854; before that there were only drains. Lateral sewers were generally laid in alleys. Many cesspools and privies are still in use. In a personal investigation into the history of the sewerage of Troy it was found that sewerage had generally been undertaken only because the convenience of drainage from private premises was desired, the statement being made that before there were sewers for the removal of storm-water there was no notable damage from accumulated rainfall.

There is no systematic plan according to which work is done. Sewers are built as ordered by the common council and board of health, a block or two in length at a time. None are constructed of other material than brick laid in hydraulic cement with 8-inch walls, and the smallest sewers are 3 feet 9 inches high by 2 feet 6 inches wide (egg-shaped).

No provision has been made for the ventilation of the sewers, but it is proposed to ventilate them through perforated manhole covers. The mouths of the sewers are fully exposed, and the discharge is directly into the Hudson river.

"Probably 200 to 300 cubic yards of deposits are taken from the sewers every year by hand." The cost of this removal is from 75 cents to \$1 per yard.

The whole cost of the work is assessed according to frontage on abutting property, none being paid by the city. The depth is generally 12 feet.

The items of cost given are as follows:

Four hundred and nineteen feet of brick sewer, circular, 4 feet in diameter, \$3 65 per foot.

Ten feet of brick sewer, 3 feet 9 inches high by 2 feet 6 inches wide (egg-shaped), \$2 50 per foot.

Five hundred and forty-one feet of brick sewer, 3 feet 9 inches high by 2 feet 6 inches wide (through rock), \$5 88 per foot.

Inlet-basins and their connections cost \$75 each. The average cost of each manhole of average depth is \$25.

R. M. Hasbrouck, esq., city engineer, closes his report as follows:

Sewers should not be less in size than 3 feet 9 inches high by 2 feet 6 inches wide, with brick walls 8 inches thick, laid solid in the best hydraulic cement, with manholes at every 100 feet, with perforated iron covers as ventilators.

CEMETERIES.

There are 6 cemeteries in or near the city—4 public and 2 private:

Oakwood Cemetery, on Oakwood avenue, 2 miles from the city hall, is partly in Lansingburg.

Mount Ida Cemetery, between Belle and Pine Woods avenues.

Mount Ida Cemetery 2d, between Pawling avenue and Ida lake.

Saint Joseph's Cemetery, on Elizabeth street, adjoining the almshouse property.

A small burying-ground on Chestnut street, and a small burying-ground on Vanderburg avenue.

The areas of the above cemeteries were not stated. Nothing could be learned regarding the number of interments in the several cemeteries. At least twenty-four hours' notice must be given to the superintendent of the cemetery before burials, and the notice is signed by the undertaker.

MARKETS.

There are no public or corporation markets in Troy.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Troy is vested in a board of health, an independent body created in accordance with the state laws. It is composed of the mayor, controller, city attorney, overseer of the poor, and a health officer, the latter being always a physician. The mayor is elected by the people and the other members are appointed by the common council. The annual expenses of the board when there is no declared epidemic are \$3,500, for salaries of health officer, inspectors, and clerk, for abating nuisances, etc., and for stationery, printing, etc. During an epidemic the expenses of the board are not limited. The board has full authority, in the absence of an epidemic, to do all things needful for the sanitary condition of the city, and during an epidemic can take such steps as may be necessary to check and control the disease. The mayor is chairman of the board, but receives no pay for this service. The health officer is the chief executive officer, and receives a salary of \$1,000 per annum. He has authority to abate nuisances and to see that all health regulations are properly enforced. The board meets twice a month, hears reports, and takes action thereon. In addition to the health officer, 3 inspectors are employed, and they make regular weekly inspections in all parts of the city. They have full police powers, being special policemen, and can, where parties will not abate nuisances, make arrests. The 3 city physicians also co-operate with the board. When a nuisance is reported it is inspected by the inspector in whose district it may exist, and ordered abated or removed. The board enforces the correction of all defective house-drainage, privy-vaults, cesspools, and sources of drinking-water. The health officer reports all defective sewerage and street-cleaning to the board for such action as it may deem proper, and the board then does what is best for the sanitary condition of the city. The board can order garbage removed from premises, and prosecutes persons not removing it. The board takes no control over the burial of the dead except during an epidemic.

INFECTIOUS DISEASES.

Small-pox patients are removed to the pest-house situated 1½ mile from the city, and scarlet-fever patients are quarantined at home. All physicians are required to report to the health officers any case of contagious disease

within three hours after he has knowledge of the fact. School-children from families where a case of contagious disease exists are not allowed to attend school, and the health officer sees that the regulations in this matter are enforced. Vaccination is compulsory, and, when necessary, is done at the public expense. Undertakers report to the superintendent of burials, who keeps a record of all diseases and deaths, and publishes a monthly mortality report.

REPORTS.

The board reports to the board of aldermen each year, and this report is published with the regular city documents.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned at the expense of the city and under a system of contracts. The work is done wholly by hand, no sweeping-machines being used. The paved and principal streets are swept every morning, and the others not less than three times a week, or oftener if necessary. It is reported that the work is so efficiently done that Troy has the reputation of being one of the cleanest cities in the Union. The annual cost of the work is \$35,000, and the sweepings are taken out of the city, being finally used as a fertilizer. The system is reported to give entire satisfaction. The contracts are let directly to the men who do the work, so many in each district, and no subletting of contracts is allowed.

Removal of ashes and garbage.—All garbage and ashes are removed at the expense of the city by the same contractors who take the cleaning of streets. It is kept in boxes or barrels pending removal, and the receptacles must be set out on the sidewalks on the days designated for removal. It is allowed to keep ashes and garbage in the same receptacle, and their final disposal is the same as that of street-sweepings. The cost of this service is about \$10,000 a year, and is included in the street-cleaning contracts. No injury to health is reported to have resulted from the manner of collecting or disposing of garbage, and the system is said to give satisfaction.

Dead animals.—The carcass of any animal dying within the city limits is removed by the sanitary inspectors, under direction of the board of health, and buried. The cost of this service is included in the salaries of the inspectors. The number of dead animals of different kinds removed annually is between 300 and 500.

Liquid household wastes.—Nearly all the liquid household wastes are run into the sewers, none being allowed to pass into the street-gutters. In the suburbs, or where sewers do not exist, the wastes go into vaults.

Human excreta.—About 33 per cent. of the houses in the city have water-closets, all delivering into the sewers, and the remainder use privy-vaults. There are no regulations regarding the construction of privy-vaults. They are required to be emptied in odorless air-tight vessels. The night-soil is taken out of the city and used for fertilizing purposes, none being allowed on land within the gathering-ground of the public water-supply. The dry-earth system is used but very little.

Manufacturing wastes.—All liquids are carried off by the sewers, while the solids are removed by the scavenger.

POLICE.

The police force of Troy is appointed and governed by 4 police commissioners chosen by the city council. The chief executive officer is the superintendent, who has entire charge of the force, and governs it under the orders of the commissioners. His salary is \$1,800 per annum. The remainder of the force consists of 3 captains and 3 detectives, at \$1,000 a year each; 10 sergeants, at \$900 a year each; 60 patrolmen, at \$850 a year each; 2 clerks, at \$1,000 a year each; 4 station-house keepers, at \$500 a year each; and 1 surgeon, at \$400 a year. There are also 6 supernumeraries who receive pay when on duty only. The uniform is dark-blue coat, trousers, and vest, with gilt buttons, a cap in winter and a straw hat in summer. The first cost of the uniform complete is \$75, and the men provide their own. Each policeman is equipped with a club and a revolver. The tours of duty are six hours on and six hours off, with every other day off, and all the streets of the city are patrolled by the force.

During the past year 2,557 arrests were made by the force, the principal causes being for intoxication and disorderly conduct. Most of these, on conviction, were either fined from \$3 to \$25, or sent to jail 5 or 10 days. During the year lost or stolen property to the value of \$4,108 55 was rescued by the police and returned to the owners. There were 3,194 station-house lodgers in 1880 as against 4,320 in 1879. The force assists the fire department at all fires, and enforces the regulations of the board of health when required. Special policemen are appointed by the commissioners at the request of private individuals, who pay them for their services. They have no connection with the regular force, but are under the command of the superintendent when their services are needed. The yearly cost of the police force (1880) is \$79,800.

FIRE DEPARTMENT.

The annual report of the chief engineer for the year ending March 4, 1879, shows the following regarding the fire department of Troy:

The total manual force of the department is 454, 23 being regularly employed and 426 being volunteers. The apparatus consists of 7 steam fire-engines, 1 hand-engine, 1 hook-and-ladder truck, 9 hose-carts, and 1 steam fire engine in reserve. There is 19,000 feet of hose on hand, 14,000 feet being in good condition and 5,000 feet in

ordinary condition. There are 16 horses used by the department. During the year 1878-'79 the department was called out 81 times. The total amount of loss by fire was \$158,362 97, on which insurance to the amount of \$119,254 97 was paid, making a total loss above insurance of \$39,108.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Troy for 1880, being taken from tables prepared for the Tenth Census by F. E. Wadhams, chief special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries	514	\$13,418,853	10,337	11,115	982	\$6,745,874	\$13,443,284	\$26,497,163
Blacksmithing (see also Wheelwrighting)	19	12,200	85			17,615	12,490	47,050
Boots and shoes, including custom work and repairing	24	112,350	118	2		46,421	64,445	153,910
Boxes, fancy and paper	5	41,100	37	151	2	57,033	90,742	176,790
Bread and other bakery products	23	79,200	111	4	1	58,646	233,515	258,013
Brick and tile	6	139,500	157		11	53,077	70,948	172,000
Brooms and brushes	3	11,500	80	1	11	11,793	25,500	44,022
Carpentering	23	48,300	203		1	105,524	152,031	307,533
Carriages and wagons (see also Wheelwrighting)	3	8,500	32			16,262	20,000	41,350
Clothing, men's	29	210,550	241	145		185,785	354,415	685,430
Clothing, women's	5	26,000	10	119		17,740	66,300	95,590
Coffee and spices, roasted and ground	3	60,000	26			14,444	88,820	130,764
Coffins, burial cases, and undertakers' goods	7	22,300	20			10,214	23,450	45,150
Confectionery	8	28,300	32	15		21,343	80,688	136,266
Dentistry, mechanical	5	3,650	2			1,322	3,487	14,550
Electroplating	3	27,000	76	1	4	22,726	18,500	56,719
Flouring- and grist-mill products	4	133,200	30		1	18,402	326,774	367,855
Foundry and machine-shop products	32	2,428,700	2,297		97	1,244,550	1,189,378	3,228,848
Furnishing goods, men's	18	830,000	384	4,036	100	918,932	1,123,147	2,636,614
Furniture (see also Upholstering)	3	18,700	42	3		21,000	26,400	65,900
Hosiery and knit goods	5	144,000	114	217	35	80,800	181,883	391,830
Iron and steel	4	4,550,000	3,857		495	1,657,396	4,618,862	8,702,189
Kindling wood	10	11,800	21		1	7,456	14,320	29,270
Liquors, malt	10	809,750	202			99,419	500,349	895,883
Looking-glass and picture frames	4	18,600	20		1	11,062	34,891	57,310
Marble and stone work	9	46,900	55			26,153	27,478	69,455
Masonry, brick and stone	10	23,500	149			45,260	83,200	183,159
Mineral and soda waters	4	59,500	39		1	19,959	53,414	80,720
Models and patterns	8	68,971	90	1		42,989	17,114	99,200
Painting and paperhanging	18	33,554	109			53,253	32,307	112,000
Paper	4	535,465	110	51	10	57,989	373,033	546,823
Photographing	6	17,600	11	3		5,644	7,200	25,978
Plumbing and gasfitting	8	58,500	74		8	43,247	85,700	155,200
Printing and publishing	14	245,838	218	3	9	123,923	103,607	310,700
Saddlery and harness	12	22,400	38		3	15,804	25,871	65,702
Shirts	16	874,000	255	6,217	31	992,084	1,379,319	2,919,591
Slaughtering and meat-packing, not including retail butchering	6	98,000	42		3	17,589	192,333	259,161
Tinware, copperware, and sheet-iron ware	17	88,400	82		5	33,733	62,750	124,600
Tobacco, cigars and cigarettes	32	165,025	240		53	132,586	200,842	466,661
Upholstering (see also Furniture)	5	14,000	20	2		11,028	21,000	43,050
Wheelwrighting (see also Blacksmithing; Carriages and wagons)	13	18,200	28		1	13,605	13,827	42,526
Wood, turned and carved	7	13,200	15		2	7,150	4,293	19,967
All other industries (a)	69	1,260,600	665	144	96	395,311	1,428,590	2,191,752

a Embracing awnings and tents; babbitt metal and solder; baking and yeast powders; bells; belting and hose, leather; bookbinding and blank-book making; boxes, cigar; boxes, wooden packing; brass castings; carriage and wagon materials; collars and cuffs, paper; cooperage; cordage and twine; corsets; cotton goods; cutlery and edge tools; drain and sewer pipe; drugs and chemicals; dyeing and cleaning; engraving and die-sinking; files; grease and tallow; hairwork; hand-stamps; hardware; hardware, saddlery; hats and caps; instruments, professional and scientific; iron forgings; iron railing, wrought; iron work, architectural and ornamental; japanning; leather, curried; lime; lock- and gun-smithing; lumber, planed; malt; mantels, slate, marble, and marbled; millstones; mixed textiles; paints; refrigerators; regalia and society banners and emblems; roofing and roofing materials; sash, doors, and blinds; silk and silk goods; springs, steel, car, and carriage; stencils and brands; varnish; vinegar; watch and clock repairing; wire; and wirework.

SOCIAL STATISTICS OF CITIES.

From the foregoing table it appears that the average capital of all establishments is \$26,106 72; that the average wages of all hands employed is \$300 70 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$40,844 92.

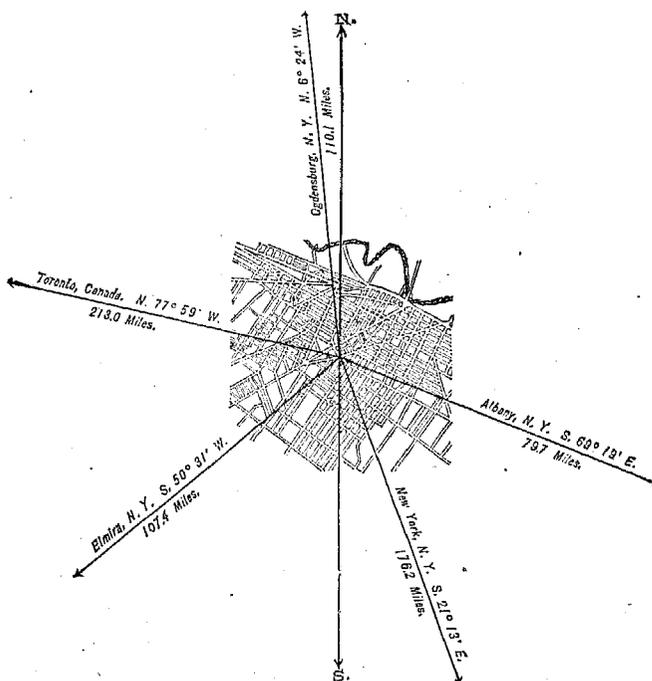
UTICA,

ONEIDA COUNTY, NEW YORK.

POPULATION

IN THE
AGGREGATE,
1820-1880.

	Inhab.
1790.....	.....
1800.....	.....
1810.....	.....
1820.....	2,972
1830.....	8,333
1840.....	12,782
1850.....	17,565
1860.....	22,529
1870.....	28,804
1880.....	33,914



POPULATION

BY
SEX, NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male.....	15,666
Female.....	18,248
—	
Native.....	24,531
Foreign-born.....	9,333
—	
White.....	33,664
Colored.....	250

Latitude: 43° 5' North ; Longitude: 75° 13' (west from Greenwich); Altitude: 395 to 605 feet.

FINANCIAL CONDITION:

Total Valuation: \$19,475,560; per capita: \$574 00. Net Indebtedness: \$566,000; per capita: \$16 69. Tax per \$100: \$1 66.

HISTORICAL SKETCH.

The land on which Utica now stands was originally within the limits of a tract in the Mohawk country, afterward known as Corly's Manor, granted by George II in 1734. Within this grant was a ford across the Mohawk river, and near it, on the south bank, fort Schuyler was built in 1758. The chief crossing of the river for this vicinity was here, and little by little—first log cabins, then dwellings, then stores and an inn—a settlement sprang up. In 1798 the number of inhabitants at this point warranted the incorporation of the village of Utica. In 1801 the Seneca Turnpike Company built a stone road, with Utica as the eastern and Seneca Falls—ultimately Buffalo—as the western terminus. This road started Utica's enterprise in various ways, and when the Erie canal was opened she had the lead of the neighboring villages, and has since kept it. Utica received a city charter February 13, 1832.

The city has never suffered from a sweeping fire. Being deeply interested in manufactures she has suffered in common with other cities during the periods of depression—1837, 1858, and 1873. During the past year, however, the citizens have invested largely in new manufacturing works. The population of Utica is mixed, and ever has been, her first half-dozen settlers being of three nationalities, but the native-born Americans predominate largely to-day.

UTICA IN 1880.

The following statistical accounts, mainly furnished by C. W. Adams, esq., indicate the present condition of Utica:

LOCATION.

The city lies in latitude $43^{\circ} 5'$ north, longitude $75^{\circ} 13'$ west from Greenwich, on the south bank of the Mohawk river, 95 miles west of Albany. The river here is not navigable. The average altitude above sea-level is 405 feet. The lowest point, low-water mark in the Mohawk river at the foot of Genesee street, is 395 feet, and the highest, at a point on Pleasant street, 605 feet above tide-water.

RAILROAD COMMUNICATIONS.

Utica is touched by the following railroads:

The New York Central and Hudson River railroad, between New York and Buffalo, with connection there for Chicago and the West, and at Albany for Boston.

The Utica and Black River railroad, to Morristown and Ogdensburg, and with Canadian roads at Alexandria Bay.

The Delaware, Lackawanna, and Western railroad, to Binghamton, and with branch to Richfield Springs.

The Utica, Clinton, and Binghamton railroad, to Hamilton Junction, connecting there with the New York, Ontario, and Western railroad.

The New York, West Shore, and Buffalo railroad, now under construction.

TRIBUTARY COUNTRY.

Utica is naturally the trade center for the country from Oneida, 30 miles west, to Canajoharie, 40 miles east, on the New York Central railroad; on the north to the Saint Lawrence river, 135 miles; on the south nearly to Binghamton, 94 miles, and to Richfield Springs and Cooperstown, on the southeast, 35 and 50 miles, respectively. Along the New York Central the villages are close and large, with large manufactures of various kinds in each. In all directions the country is almost wholly a dairy country, with many factories for making cheese, and Utica is the buying and shipping point; second to cheese is the hop culture, of which Utica is the center for supplies, though the hop-fields lie mainly from 10 to 30 miles south of the city.

TOPOGRAPHY.

The site of the city is nearly level, with a gentle declivity toward the north. The underlying rock is Utica slate, cropping out to the surface at various points. The overlying drift is blue clay, with hard pan underneath, and in a few localities sand and fine gravel is found in the clay. The surface soil is clayey. The surface to the north rises gradually, reaching a point 1,237 feet above tide-water on the Utica and Black River railroad, 23 miles from the city, with one neighboring hill 400 feet higher. To the south the rise is more abrupt, but not so high by a few hundred feet. To the west the country is open and level. The Sauquoit valley cuts through the southern range of hills.

CLIMATE.

Highest recorded summer temperature, 101° ; lowest recorded winter temperature, -27° . The highest summer and lowest winter temperatures in average years were not reported. Utica has heavy rainfalls in summer when Syracuse is in the midst of drought, and has often a foot of snow in winter when Albany has none.

STREETS.

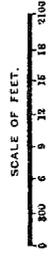
Total length of streets, 88.5 miles, of which 19.17 miles is paved. The different classes of pavement and their cost per square yard are as follows:

Cobble-stones: Length, 14.03 miles; cost, contractor furnishing work and materials, 81 cents.

Stone blocks: Length, 2.14 miles; cost, \$1 95. Same in 1870 cost \$2 47.



UTICA, N. Y.



MOSS ENG. CO., N. Y.

Broken stone: Length, 1.75 mile; cost, 16 inches deep, for work and material, \$1 45.

Wood: Length, 1.25 miles; cost, for Ballard, \$2 58; for Nicholson, \$2 80.

As the property-owners are required to repair the streets in their fronts to the center line, the cost of repairs is not known. Cobble-stones and wood require the most repair, while the other pavements need but little. The sidewalks are mostly of plank or sandstone, with a few of brick and cinders. In the paved streets the gutters are of the same kind of materials as the roadway, while in the unpaved streets a small percentage of the gutters are laid with cobble-stones. Trees are universal throughout the city, the older streets being planted with elms, while the newer streets have maples. About 90 per cent. of the streets are planted with a row of trees on each side, 3 per cent. have a double row of trees on each side, and 7 per cent. have no trees set out; these last are mainly in the suburbs. All new work on the streets is done by contract, and all repairs are made by the abutters. The city owns no steam stone-crusher, but one of the street contractors has one, and it is used with good effect. The horse-railroads in the city have a length of 10.09 miles; there are 35 cars in use, 120 horses, and 30 men employed; the total number of passengers carried in 1879 was 612,338, and the rates of fare are from 5 to 10 cents. There are no omnibus lines in the city.

WATER-WORKS.

The water-works are owned by a private corporation and cost \$440,000. The water is supplied by gravitation, and the pressure in the mains varies from 10 to 75 pounds to the square inch. The yearly cost of maintenance is \$12,000, and the yearly income from water-rates \$42,000.

About 50 meters are in use, and in every case, when used, the consumption of water is reduced from 30 to 50 per cent.

GAS.

Gas is supplied by a private company. The daily average production is 150,000 cubic feet, and the cost to consumers is \$2 15 per thousand. The city pays \$25 a year for each street-lamp, 655 in number.

PUBLIC BUILDINGS.

The city owns and occupies for municipal uses, wholly or in part, 1 city hall, 1 city library, 1 hall and school commissioners' headquarters, 1 city hospital, 1 city dispensary, 6 fire-department houses, and 20 school-houses; the total cost of the buildings is \$808,436. The city hall is owned entirely by the city, and cost \$75,000; it was built twenty-five years ago.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are 3 parks in the city, with a total area of 7 acres:

Chancellor Square, area 4 acres, between Elizabeth, Bleeker, Academy, and Kent streets.

Steuben Square, area $1\frac{1}{2}$ acre, between Rutger and Lansing streets.

Johnson Park, area $1\frac{1}{2}$ acre, in a partially built-up portion of the city.

All these parks are thoroughly cultivated, and tastily adorned with fountains, trees, shrubs, flowers, and turf, interspersed with foot-paths, under the designs of John Batchellor, esq. The land was donated to the city, and since 1873, \$37,000 has been expended on the parks. The yearly cost of maintenance for all three parks is now \$3,000. The parks are controlled by the common council, through the chairman of the standing committee on public grounds.

PLACES OF AMUSEMENT.

The Utica Mechanics' Association opera-house, with a seating capacity of 1,700, and the City opera-house (city hall), with a seating capacity of 800, are the only theaters in the city. The former pays a license of \$100 annually, and the latter, being owned by the city, pays no license. In addition to the theaters there are 8 or 10 halls in the city, varying in seating capacity from 400 to 150, that are used for lectures, concerts, etc. There are one or two small concert- and beer-gardens, costing about \$200 each and sheltering 200 people; the attendance is irregular, but small at all times.

DRAINAGE.

The Mohawk river skirts the northerly bounds of the city, with a slow current to the east, and emptying into the river at nearly equidistant points are three or four streams flowing through the city from the south. The most westerly stream, Mill creek, remains pure spring-water to the woolen-mills. All the sewers that, previously to 1876, sought this stream as an outlet are now accommodated by a 4-foot circular sewer running parallel to the lowest woolen-mill, and near the Erie canal, and near the northerly bounds of dwellings, etc. From this point to Mohawk river the sewage flows through Mill creek. As a matter of fact, this trunk-sewer should be extended about 1,000 feet farther north, to reach the extreme limits of dwellings

The Central, or Ballou's creek carries the sewage from much of the area of the southern part of the city for a distance of 3,000 feet, through thickly-settled parts of the city. For eight years a trunk sewer to accommodate this sewage, though not the stream proper, has been talked of by the common council and board of health. It is no nearer construction, though, to-day.

The easterly portion of the city is at this time being rapidly built up, and at present is not sewered more than sparsely. Grace creek is in the lowest ground. Plans are nearly completed for a trunk-sewer to take this stream and become an outlet for future smaller lateral sewers.

With the exception of the lunatic-asylum sewer, which is used by the asylum only, private sewers are rare. On the easterly suburban streets plank sewers have been put in by speculators, and two of them are in public use now.

No plan for the sewerage of the city has been efficiently adopted. A city ordinance makes it the city surveyor's duty to supervise all connections with the sewers and compel proper ventilation. This ordinance has never been enforced. A few owners ventilate their traps through the house-roofs. The street catch-basins, or wells, are untrapped, with very few exceptions, and sewers are thus ventilated.

The mouths of the sewers discharge into the Mohawk river at low water, and in summer are fully exposed. Some hand-cleaning has been necessary, though flushing from hydrants is in other cases efficient. In one of the trunk-sewers it became necessary to remove portions of the arch at intervals and shovel the deposit into pails, carrying these to the holes in the arch by hand.

The whole cost, including contract price, fees to city clerk, printing, and surveyor's fees (which are for plans and superintendence), is assessed on the property benefited, viz, the property drained by the sewers.

The assessment is by front foot.

The following table shows the cost of construction of cement-pipe sewers at the average depth given:

Average depth.	Size.	Cost per linear foot.
<i>Feet.</i>	<i>Inches.</i>	
7.75	12	\$0 53
7.23	12	49
8.32	12	49½
6.60	12	50
9.30	9	39½
9.71	12	95
8.95	9	47
9.10	12	95
7.34	12	50
8.52	12	53½
7.32	12	57
8.31	9	46½
7.67	12	53
7.44	15	1 05

The cost of inlet-basins (wells) ranges from \$7 to \$28 50.

The average cost of each manhole of average depth is \$42.

CEMETERIES.

There are 7 cemeteries in Utica:

Forest Hill Cemetery, the principal one, area 103 acres, lies 1 mile south of the city, on the range of hills between the Mohawk river and the Sauquoit creek.

Saint Joseph's Cemetery, Catholic, between Mohawk and Third streets, south of Eagle street.

Saint Agnes' Cemetery, Catholic, 1 mile west of the lunatic asylum.

Saint Ann's Cemetery, Catholic, on Kossuth avenue, near Eagle street.

Potter's Field, public, on Water street, near New York Central railroad.

Jews' Burial-ground, Jewett street, near Chenango canal.

Old Saint Joseph's Cemetery, near junction of Erie and Chenango canals.

The Potter's Field and Old Saint Joseph's are now no longer used for interments. Forest Hill cemetery has had 6,500 interments since its opening in 1850. It is as large in area as the other six combined, and more important, so far as interments or cost are concerned, and probably contains as many remains as all the others. Burial permits are issued by the health officer, or in his absence by the mayor, on the certificates of the attending physicians. The certificate of death must be presented to the city clerk before the burial permit is given.

MARKETS.

There are no public or corporation markets in the city. The city council, however, has designated a stand, for hay and straw vendors, at the junction of two wide streets. Its area is about one-third of an acre.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Utica is the board of health, an independent body composed of 7 members, including the health officer, appointed by the common council. The health officer and one other member of the board are physicians. The annual expenses of the board when there is no declared epidemic are \$1,750, for salaries, printing, stationery, advertising, and sundries, and during an epidemic the extent to which the expense may be increased is not limited. Under the state laws the authority of the board, either in the absence of or during an epidemic, is unlimited. The health officer is the chief executive officer, and sees that the health ordinances and regulations are properly enforced. His salary is \$700 a year. Two inspectors are employed during five months in the year; they have no police powers. The board meets monthly, the mayor being chairman, and the city clerk is clerk of the board. The milk and meat inspector goes out early each morning, and makes a personal inspection of all meat markets and meat and milk wagons. When nuisances are found to exist, the owner of the property on which they may be are notified to have them removed within a certain time, and if this notice is not complied with, then the work is done by the city scavenger and the cost is assessed to the property. When a complaint is made of defective house-drainage, privy-vaults, cesspools, sources of drinking-water, etc., an inspector visits the place and advises the best course to take in removing the same. In case of defective sewerage, notice is served on the street commissioner to have the difficulty removed. The board exercises no control over the conservation and removal of garbage. The board forbids the pollution of streams, and designates the times for the removal of excrement.

INFECTIOUS DISEASES.

Small-pox patients are either isolated at home or sent to the pest-house, which is situated on a lot in the rear of the city hospital. Scarlet-fever patients are not isolated in all cases. The board excludes from the public schools all children who have been exposed to contagion, and, in case of small-pox, vaccinates them all. Vaccination is compulsory only for school-children, and the poor of each ward are vaccinated by the ward physician. All physicians are required promptly to report to the health officer in writing all cases of contagious diseases, and householders are also required so to report. Blanks for this purpose are furnished by the board. All births and deaths are required to be reported to the city clerk within twelve hours after their occurrence.

REPORTS.

The board reports annually to the city council, and this report is published in pamphlet form.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned both by the abutters and by the city, the former cleaning to the center line in front of their premises, and the latter removing the dirt. The work is done entirely by hand, no sweeping-machines being used. The paved streets are cleaned weekly, and the others whenever necessary. The work on the main streets is thoroughly done, but the efficiency of the whole depends upon the city surveyor, who has charge of the work. The sweepings are deposited in a deep gully between Third and Mohawk streets, and are used to fill in embankments for the street-crossings. The annual cost to the city for this work is \$7,000. Mr. Adams says:

With an efficient officer in charge, the streets of the city can be kept thoroughly cleaned if he follows up his duty. But the labor of repeatedly notifying the property-owners to clean has a strong tendency to cause neglect on the part of this officer. The chief objection—the only objection—to the place of deposit, is the objectionable odor. But this is due largely to illegal deposits of refuse garbage by private persons.

Removal of garbage and ashes.—Garbage is removed by the householders. It is kept in tubs and barrels, and is gathered daily by the farmers living in the suburbs. Ashes and house-dirt are deposited in boxes and barrels, and removed by the city teams with the street-dirt. The cost is not known. The system is reported as working well, and the final disposal of the garbage is unobjectionable.

Dead animals.—The common council each year contracts for the removal and burial of all dead animals, at so much per carcass, varying according to the size of the animal. If the animal has any value, as a horse, it is taken by one of the bone factories at their own expense. The annual cost to the city is \$100. The system works well, the contractor getting a good price; hence he is willing and anxious to remove all carcasses, and the health officers are lynx-eyed in finding them.

Liquid household wastes.—A large part of the liquid household wastes are run into the sewers, and the remainder into cesspools. The wastes rarely pass into the gutters in the outskirts of the city. The cesspools are universally porous, generally overflow into the next neighbor's lot, through the soil, and are cleaned by the owners when they become offensive.

Human excreta.—About 5 per cent. of the houses in the city are provided with water-closets, all of which deliver into the sewers, and the remainder depend on privy-vaults. Very few of the vaults are water-tight, not more than

1 per cent. The night-soil is removed between the hours of 9 p. m. and 4 a. m., in covered conveyances, and is deposited on land outside of the city, none of it being used within the gathering-ground of the public water-supply. The dry-earth system is used in one or two instances.

Manufacturing wastes.—All that is affected by water-carriage is run into the sewers, ultimately reaching the Mohawk river.

POLICE.

The police force is appointed and governed by the board of fire and police commissioners. The board is composed of 4 members—2 from each of the principal political parties—appointed by the mayor. Their terms of office are so arranged that one commissioner goes out each year. The chief of police is the executive officer and has general superintendence of the force; his salary is \$100 a month. The rest of the force consists of 1 assistant chief at \$80 per month, and 18 patrolmen at \$60 a month each. The uniform is a navy-blue coat and trousers, and each man provides his own at a cost of \$60. The board furnishes each man with a belt, baton, shield, police-call, wreath, number, and uniform buttons. The men are on duty ten hours a day.

During the past year 1,150 arrests were made by the police, the principal causes being: Intoxication, 433; burglary, 27; arson, 2; grand larceny, 18, and the remainder minor offenses. During the same time lost and stolen property to the value of \$3,755 was recovered by the police and returned to the owners. There are no station-house lodgers at Utica. All tramps and vagrants are sent to the city hospital, and are made to break stone in return for the lodgings and meals furnished to them. Special policemen are appointed by the board for the benefit of persons or corporations, but they receive no pay from the city. The board may also appoint extra policemen, not to exceed 5 in number, and not for a longer period than ten days. The police force is required to co-operate with the fire department in keeping back crowds and protecting property at fires, and with the health department in reporting nuisances and serving notices. The yearly cost of the force (1880) is \$16,000.

FIRE DEPARTMENT.

The control and management of the fire department is vested in the board of fire and police commissioners. The annual report of the board for 1877 shows the force to consist of 1 chief and 2 assistant engineers and 57 men. The apparatus consists of 4 steam fire-engines, 4 hose-carriages, and 1 hook-and-ladder truck, in active use, and 2 old hose-carts, 1 supply-wagon, and 4 hose-sleds, with racks, in reserve. There are 15 horses and 7,900 feet of hose in the department. Water for fire-purposes is taken from 182 hydrants. The average annual appropriation for the department is \$39,000.

PUBLIC SCHOOLS.

The total number of public schools in the city is 34, divided as follows: 15 primary, 14 intermediate, 1 advanced, 1 academy, 1 ungraded, and 2 evening schools. The total number of sittings in the schools is 4,694, and the total number of teachers 102—9 males and 93 females. The following table shows the attendance, etc., in the public schools during the past year (1880):

Schools.	Number of pupils enrolled.	Average number being.	Average daily attendance.	PERCENTAGE OF DAILY ATTENDANCE.		Average number of pupils to a teacher.	Number of cases of tardiness.	Suspensions for misbehavior.		Average age of pupils.
				Number being.	Number enrolled.			ness.	conduct.	
All schools.....	5,491	4,046	3,727	90	65	51	4,308	2	24	13.0
Primary.....	2,604	1,786	1,649	92	63	68	2,105	1	5	13.0
Intermediate.....	1,719	1,369	1,246	91	72	49	1,582	1	10	10.7
Advanced.....	690	567	545	96	79	55	237	.....	.....	13.7
Academy.....	166	132	127	96	77	33	239	.....	6	16.8
Ungraded.....	77	50	40	80	52	.....	145	.....	1	.....
Evening schools.....	235	142	120	85	51	.....	.....	.....	2	16.3

The school expenses for the year were: Ordinary, \$65,483 22; extraordinary, \$12,132; total, \$77,615 22.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Utica for 1880, being taken from tables prepared for the Tenth Census by A. B. Northup, special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries.....	317	\$5,905,625	3,752	2,620	338	\$1,017,657	\$5,180,598	\$8,873,906
Blacksmithing (see also Wheelwrighting).....	13	6,975	13			4,950	8,775	21,700
Bookbinding and blank-book making.....	4	13,000	14	9	1	7,690	5,225	18,707
Boots and shoes, including custom work and repairing.....	29	587,000	437	308	51	257,480	710,582	1,125,724
Bread and other bakery products.....	9	61,100	46	7	11	18,722	81,380	113,494
Carpentering.....	27	29,550	107			48,684	76,150	161,425
Carriages and wagons (see also Wheelwrighting).....	3	38,000	38			15,220	18,500	47,000
Clothing, men's.....	20	931,300	941	1,537		453,625	1,391,297	2,256,375
Clothing, women's.....	4	15,500	3	38		5,947	25,700	42,500
Confectionery.....	4	14,000	12	4	3	6,200	25,400	44,400
Cooperage.....	3	1,800	3			900	1,750	3,900
Flouring- and grist-mill products.....	3	35,000	8			2,475	104,140	113,132
Foundry and machine-shop products.....	9	589,300	445	3	5	180,681	247,300	537,721
Furniture (see also Upholstering).....	7	82,000	60	2	4	23,280	53,000	107,000
Liquors, malt.....	6	100,660	50			23,655	120,550	210,000
Looking-glass and picture frames.....	5	14,500	12			5,174	22,800	38,000
Marble and stone work.....	9	38,500	55			21,200	38,800	77,600
Masonry, brick and stone.....	9	15,950	155			54,780	49,150	121,200
Painting and paperhanging.....	13	11,300	44		2	24,000	30,400	71,900
Plumbing and gasfitting.....	4	87,000	37		1	11,925	68,000	113,000
Printing and publishing.....	8	216,500	142			76,065	55,378	197,007
Saddlery and harness.....	6	12,200	13			5,625	13,100	26,800
Sash, doors, and blinds.....	4	136,000	153			61,111	187,496	305,078
Shirts.....	7	5,300	2	28		8,600	10,900	27,400
Soap and candles.....	3	24,000	8			3,408	35,292	46,424
Tinware, copperware, and sheet-iron ware.....	18	69,550	54		2	23,312	65,175	117,100
Tobacco, chewing, smoking, and snuff (see also Tobacco, cigars and cigarettes).....	3	315,000	46	7	33	23,000	140,900	196,815
Tobacco, cigars and cigarettes (see also Tobacco, chewing, smoking, and snuff).....	12	67,500	63	4	9	30,530	54,550	104,750
Upholstering (see also Furniture).....	3	6,100	5			1,820	6,800	11,750
Watch and clock repairing.....	16	23,600	19			9,275	13,100	33,800
Wheelwrighting (see also Blacksmithing; Carriages and wagons).....	10	16,400	18			6,668	10,025	26,400
All other industries (a).....	52	2,239,450	749	673	216	496,046	1,509,483	2,557,204

a Embracing awnings and tents; belting and hose, leather; boxes, cigar; boxes, wooden packing; brass castings; brick and tile; brooms and brushes; cement; coffee and spices, roasted and ground; cordage and twine; cotton goods; drain and sewer pipe; drugs and chemicals; electroplating; engraving, wood; files; furs, dressed; glass, cut, stained, and ornamented; gloves and mittens; hair work; hosiery and knit goods; iron work, architectural and ornamental; lamps and reflectors; lime; liquors, distilled; lock and gun-smithing; matches; mattresses and spring beds; mineral and soda waters; musical instruments, organs and materials; oilcloth, floor; perfumery and cosmetics; pumps; saws; shipbuilding; silverware; slaughtering and meat-packing; steam fitting and heating apparatus; telegraph and telephone apparatus; wood, turned and carved; wooden ware; and woolen goods.

From the foregoing table it appears that the average capital of all establishments is \$18,629 76; that the average wages of all hands employed is \$285 79 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$23,509 76.

WATERTOWN,

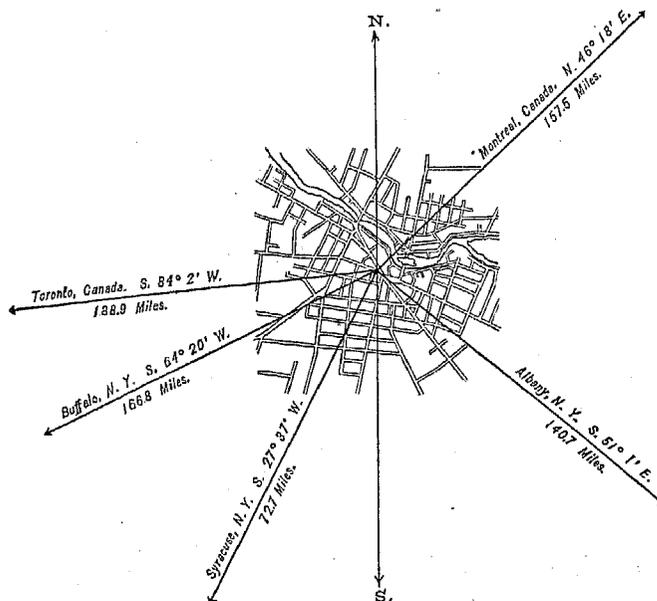
JEFFERSON COUNTY, NEW YORK.

POPULATION

IN THE
AGGREGATE,

1800-1880.

Year	Inhab
1790	.....
1800	119
1810	1,841
1820	2,763
1830	4,768
1840	8,027
1850	7,201
1860	7,567
1870	9,336
1880	10,697



POPULATION

BY
SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	4,985
Female	5,712
—	
Native	8,253
Foreign-born	2,444
—	
White	10,585
Colored	112

Latitude: 43° 58' North; Longitude: 75° 54' (west from Greenwich); Altitude: 352 to 600 feet.

FINANCIAL CONDITION:

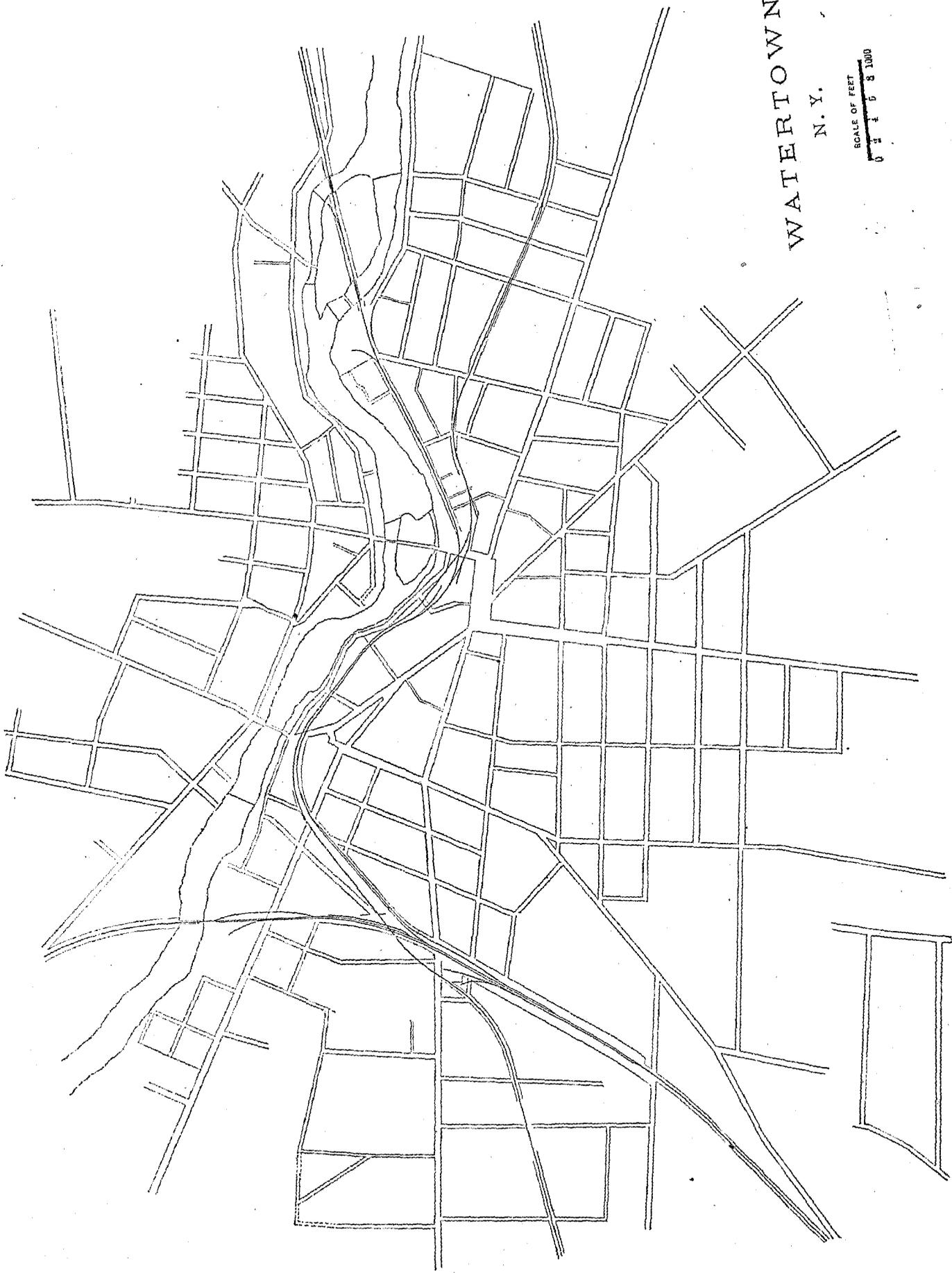
Total Valuation: \$6,196,145; per capita: \$579 00. Net Indebtedness: \$412,000; per capita: \$38 52. Tax per \$100: \$1 98.

HISTORICAL SKETCH.

Watertown, the capital of Jefferson county, was first surveyed by Benjamin Wright on the occasion of his employment by the state of New York, in 1796, to survey the northern and central portions of the state. Wright reported concerning the site of Watertown that most of the land was good; that it contained excellent pine timber; and especially that the river was "amazing rapid", and offered "some fine mill-sites". He said, further:

To speak generally, I think this to be an excellent township, and scarcely any poor land upon it. Will settle very fast if laid in lots and sold to settlers.

The city lies on both sides of the Black river, 7 miles from its mouth, where it empties into lake Ontario. The place derived its name from the fine water-power afforded by this river.



WATERTOWN,
N. Y.

SCALE OF FEET
0 1 2 3 4 5 6 7 8 1000

Settlements began here in 1800. In the fall of 1799, Henry Coffin, of Vermont, and Zachariah Butterfield visited the place and purchased farms. In the following spring they returned. Mr. Coffin was the first to arrive, reaching the place probably early in March, 1800, after a journey of 40 miles through the woods, with his family and household goods drawn on an old ox-sled. He erected his hut at a point near where New Court street enters Public square. Mr. Butterfield settled and built where Washington hall now stands. The next comer was Oliver Bartholomew, of Connecticut, who also arrived in March of the same year and settled a few miles to the northward. Only these three families wintered here in 1800-'01.

The years 1801 and 1802 saw quite a lively immigration into Watertown, many coming hither from Oneida county. The chief attraction was the water-power; but the fertility of the soil was also an active element among the attractions of the place. By September, 1802, over 80 families had arrived from the eastern states and counties. During this year a hotel was opened by Dr. Isaiah Massey, and Jonathan Curan built the first dam across Black river, at a point now known as Beebe's island, and began the erection of a grist-mill. In 1803 a bridge was built below the village, and in 1805 a dam was built below the bridge. In the same year a saw-mill was built on the north side of the river, and in 1806 a grist-mill. Other mills of each kind soon followed. In 1805, John Paddock and William Smith, who were among the more recent arrivals, opened the first store in the place, bringing their goods from Utica, 90 miles, in wagons. An idea of the hardships attending the mercantile interests of that day may be drawn from the fact that in March, 1807, 17 sleighs laden with goods for these pioneer merchants were twenty-three days in coming from Utica to Watertown, a distance now traversed in less than four hours many times each day by two railroad lines.

During the war of 1812, Watertown was often excited and made anxious by its proximity to Sackett's Harbor, an important naval station of the government and the scene of one or two spirited battles. In 1809 an arsenal had been erected here by the government and 500 stands of arms deposited therein. During the war of 1812, bodies of troops were stationed at Watertown for short periods, and the sick were often sent here from Sackett's Harbor for better attendance than could be had there. The academy, which was built in 1811, was used as a hospital for a considerable time during the war. In 1808 a paper-mill was built above Curan's grist-mill. Other paper-mills were built soon after, and the business soon became very large. The Black River Cotton and Woolen Manufacturing Company was formed December 28, 1818, with a capital of \$100,000. A stone mill was erected at a cost of \$72,000. This mill was run by the company for three years, was sold a few years afterward for \$7,000, and was finally destroyed by fire in 1849. Cotton- and woolen-mills followed in rapid succession, and a great amount of capital became invested in this direction. The first tannery on an extensive scale was built in 1825. The first foundry and the first machine-shop for the manufacture of iron into castings and machinery were built about 1820.

Henry Coffin established, in 1809, the first newspaper. It was called the *American Eagle*, and lived but three years. Since that time Watertown has seen over 30 different newspapers, daily, weekly, tri-weekly, and monthly, rise and fall in her midst. The first daily newspaper, the *Journal*, was started by Joel Greene in 1846. It was short-lived. In the same year was started the *Northern New York Journal*, which for many years was the leading newspaper in this section. A census of Watertown taken in 1827 gave a population of 2,039, with 321 buildings, of which 224 were dwellings.

The stable character of the attractions which recommended Watertown to its pioneer settlers gave assurance of the steady and permanent growth which it has since enjoyed. Watertown has had but one extensive fire, occurring in 1849, and sweeping off one-quarter of the valuable part of the town. The burnt territory was speedily rebuilt in a more substantial manner. The city of Watertown was taken from the town and incorporated separately May 8, 1869. The only great change which the population of the place has undergone was caused by the incoming of a considerable number of foreigners to work in the various manufactories of the place, and a constant emigration to the West, shared in by all sections of the East. But while the rural regions adjacent still show even a decreasing population, the increase in the city of Watertown is steady and satisfactory.

WATERTOWN IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Watertown:

LOCATION.

The city lies in latitude 43° 58' north, longitude 75° 54' west from Greenwich, on both sides of the Black river (which is here not navigable), 7 miles from its outlet into lake Ontario. The river is here 60 yards wide, and has within the city limits of 2 miles a fall of 112 feet. It is very rapid, and affords an immense water-power. The altitudes above low water of the lake are, average 464 feet; lowest point 352 feet; highest point 600 feet. The nearest lake port is Sackett's Harbor, 10 miles west.

RAILROAD COMMUNICATIONS.

The city is upon the lines of the Rome, Watertown, and Ogdensburg railroad, running from Ogdensburg to Rome; and the Carthage, Watertown, and Sackett's Harbor railroad, running from Carthage to Sackett's Harbor, with two branches—one to Clayton and one to Morristown.

TRIBUTARY COUNTRY.

Watertown is the center of a large agricultural region, the dairying interests predominating. There are 52 villages in the county, which trade mostly here. The trade of a considerable section of country around the Thousand islands also comes to this place.

TOPOGRAPHY.

The soil of the site varies, being loam, clay, sand, and gravel, most of which is very fertile. The underlying rock is Black River limestone; beneath this is the Potsdam sandstone, which overlies the gneiss or original rock. There are no ponds or marshes within a circuit of 5 miles. The general surface of the ground is undulating.

CLIMATE.

The highest recorded summer temperature is 96°. The average summer temperature is 65°. The lowest recorded winter temperature is about -26°. The average winter temperature is 20°. The adjacent waters of lake Ontario and the Saint Lawrence river soften the air in winter and cool it in summer. There is but one elevated point in the county, called Dry or Rutland hill, and it has probably a slight effect in attracting moisture. The prevailing winds are from the lake—southwest—and prevent extremes of heat or cold. The summer breeze coming from this direction is delightful, and forms a chief point of attraction at the Thousand islands, a few miles to the northwest.

STREETS.

The total length of streets is about 60 miles, and of this 15 miles is paved with broken stone and 5 miles with gravel. Sidewalks are made of stone of various kinds, asphaltum, and wood. The gutters are paved with cobble-stones. The construction and repair of streets is under the direction of the street commissioners, and is done by the day. Experience here indicates a preference for this class of work, both on the score of economy and of efficiency. Formerly a stone-crusher, run by water-power, was used, but it has been superseded by hand-pounding, as producing a better result and giving employment to the poor who would otherwise be a tax on the city. There are no horse-railroads or omnibus lines.

WATER-WORKS.

The water-works are owned by the city and cost \$160,000. The water is pumped, by water-power, into a reservoir, nearly a mile southeast of the city and nearly 200 feet above the public square, with a capacity of 6,500,000 gallons. The water is distributed to residences and 100 fire-hydrants throughout the city by 16 miles of pipes.

GAS.

Concerning gas no information was furnished.

PUBLIC BUILDINGS.

The city owns but one building, Fireman's hall No. 3, costing \$4,000. The council-room, rooms for the city offices, and recorder's court are rented by the city for these purposes.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There is but one park in Watertown, *Public Square*, located in the heart of the city and containing nearly 10 acres. This spot was set aside as a public park in 1805, and presented to the city by those who owned the adjacent land. Two large oval plots, with a smaller one between them, occupy a portion of this space, the two former being well supplied with lawn and shade and the latter embellished by an elaborate fountain. Around and between these plots are spacious driveways. The square is entered by six of the principal streets, and has therefore become an important business center.

PLACES OF AMUSEMENT.

Washington hall, with a seating capacity of 800, is used for theatrical exhibitions, concerts, lectures, etc. As a theater it pays an annual license of \$100 to the city. Musical Union hall, seating 400, and the Young Men's Christian Association hall, seating 300, are used for concerts, lectures, etc.; they pay no license. In addition to the above there are the following concert-halls and lecture-rooms: Democratic headquarters, Republican headquarters, Wilson's hall, Doolittle hall, Mechanics' hall, Masons' hall, Odd Fellows' hall, and No. 1 Fireman's hall. There are no concert- and beer-gardens.

DRAINAGE.

No information on this subject was furnished by the city authorities.

CEMETERIES.

The first plan of a public cemetery was accepted October 27, 1823, and in December, 1825, the lots, 1 square rod each, were balloted for, each taxable inhabitant being entitled to one share. This cemetery is located on Arsenal street, west of the railroad. The oldest Catholic cemetery is situated adjacent to it, and neither is now used for interments. Watertown has connection with five other cemeteries and burying-grounds. Among these is *Calvary Cemetery* (Catholic), situated in a pleasant and spacious grove, about 2 miles up the river and near the south bank; it was first used in 1869. Also *Brookside Cemetery*, located in a quiet and beautiful spot about 3 miles south of the city; it covers 70 acres of land, and abounds in hills, vales, and ravines. Beautiful by nature, it has been much improved by the laying out and careful maintenance of walks and drives.

MARKETS.

There are no public or corporation markets in Watertown for the sale of fish, meat, vegetables, etc., this being done by private storekeepers, butchers, hucksters, etc.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief health authority is the board of health. It is an independent board, consisting of the four senior aldermen, *i. e.*, the four having the shortest time to serve, none of whom need be a physician, who act in this capacity *ex officio*. The board incurs no expense. Both during and in the absence of an epidemic it generally co-operates and acts with the common council. It may remove nuisances, remove small-pox patients to pest-houses or hospitals, order vaccination of children, and generally may, by ordinance, "do all things meet and necessary to protect the lives and health of the citizens and sojourners in said city, so far as cleanliness, ventilation, and purification are concerned". The chief executive officer of the board is the health officer. He is appointed by the board, and must be "a respectable and competent physician", residing in the city. The board also fixes his salary and directs his labors, which consist in the reporting of nuisances which may come to his knowledge, and in carrying out the orders of the board in regard to action to be taken toward preserving the public health. No assistant health officers or inspectors are employed. The board transacts its business by meetings, upon call as occasion may require, and acting directly in some cases, in others reporting to and conferring with the common council. Inspections are made only as nuisances are reported. When a nuisance is reported a meeting of the board is called and it personally examines the case. This is also done in the case of defective house-drainage, privy-vaults, cesspools, sources of drinking-water, etc. The duty of keeping the streets clean devolves upon the street commissioners. Cases of defective sewers are said to be rare, due in a measure to their steep grades. The board exercises no special control over the conservation and removal of garbage unless it becomes a nuisance. There are no special regulations concerning the burial of the dead. The pollution of streams or any body of water is forbidden by a city ordinance.

INFECTIOUS DISEASES.

Small-pox patients are taken to the pest-house, away from the city residences. Scarlet-fever patients are quarantined at home. The board takes cognizance of the breaking out of contagious diseases in public and private schools by closing the schools. The board at any time may make vaccination compulsory. A record of the births, marriages, and deaths is kept by the clerks of school-districts, who report them once a year to the aldermen of the wards in which their respective schools are situated. It is the duty of said aldermen to record and transmit the same within fifteen days to the county clerk, who, within fifteen days thereafter, forwards an abstract thereof to the secretary of state. The board reports to the public through the newspapers.

MUNICIPAL CLEANSING.

Street-cleaning.—Streets are cleaned at the expense of the city, wholly by hand, and with its regular force. The cleaning is done every spring in the principal business streets, and as much oftener, both here and elsewhere, as seems needful. The annual cost of this work to the city is estimated to be between \$200 and \$300; to private persons it is little or nothing. The grades of the streets render rain-storms very efficient in removing much of the street dirt and washing it into the river. The sweepings are deposited on vacant lots, or used for filling and grading streets. The system is considered sufficient.

Removal of garbage and ashes.—Garbage is removed by private parties. Ashes and garbage may be kept in the same vessel. Garbage is disposed of by taking it to some low spot and using it as filling. Coal-ashes are used on the streets. No injury is reported from the ill-keeping, removal, or final use of the garbage, and the system seems to answer its purpose.

Dead animals.—The carcass of any animal dying within the limits of the city is taken into the country and buried. The annual cost of this service is slight and the number of such animals is small. The system is considered a very good one.

Liquid household wastes.—Chamber-slops are disposed of in the same way as laundry wastes and kitchen-slops, viz, carried into the public sewers, as is nearly all the liquid household waste of the city. It is said that there are no dry wells or cesspools in the city. Gutters receive no household wastes. No instances are reported of the contamination of drinking-water by the overflowing or the underground escape of the contents of privy-vaults. There are very few drinking-water wells in the city south of the river.

Human excreta.—About one-half of the houses of the city have water-closets, all of which deliver into public sewers. Privy-vaults are required to be made at least 3 feet deep. The dry-earth system is used to a very small extent. The use of night-soil for manuring land within the gathering-ground of the public water-supply is not forbidden.

Manufacturing wastes.—There are no special regulations concerning the disposal of liquid and solid manufacturing wastes. The practice is to run such into Black river, which carries them swiftly away. No defects are recognized in this system, as the water-supply is taken in above the city.

POLICE.

The police force of Watertown consists of 2 policemen elected by the people, for day duty, and 2 appointed by the common council and confirmed by the mayor, for night service. The mayor appoints one of these four as chief of police, who is the chief executive officer and who has immediate control over the force. The compensation of the men is fixed by the common council, and must not exceed \$700 per annum, payable monthly. The men provide their own uniforms, which are of blue cloth. Patrolmen are equipped with club and belt, and their hours of service are from 6 to 6; they patrol the entire city. The number of arrests during the past year was 177, the principal cause for which is said to be drunkenness. During the same time there was reported to the police, as lost or stolen, property to the value of about \$200, most of which was recovered and returned to the owners. During 1879 and 1880 there were no station-house lodgers. The force co-operates with the fire department at fires by exercising especial diligence in the preservation of order and the protection of property, both from fire and thieves, and with the health department by serving notices given to it for the purpose by the board of health. Special policemen are appointed by the mayor, and have the same powers as regular policemen within the limits of the special duty for which they are appointed. The yearly cost of the force is \$2,800.

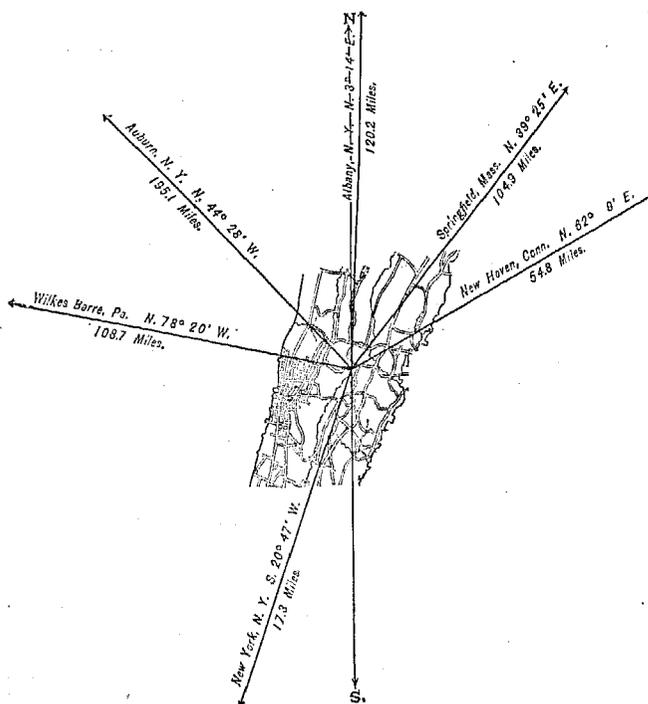
YONKERS,

WESTCHESTER COUNTY, NEW YORK.

POPULATION IN THE AGGREGATE, 1850-1880.

Year	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	.....
1840	.....
1850	4,160
1860	11,848
1870	18,357
1880	*18,892

* In 1872 a part of the town was set apart as Kingsbridge.



POPULATION BY SEX, NATIVITY, AND RACE, AT CENSUS OF 1880.

Male	8,890
Female	10,002
Native	13,274
Foreign-born	5,618
White	18,528
Colored	*364

* Including 22 Chinese and 1 Indian.

Latitude: 40° 56' North; Longitude: 73° 54' (west from Greenwich); Altitude: 0 to 400 feet.

FINANCIAL CONDITION:

Total Valuation: \$10,454,972; per capita: \$553 00. Net Indebtedness: \$1,389,000; per capita: \$73 52. Tax per \$100: \$3 20.

HISTORICAL SKETCH.

The land on which Yonkers stands was originally part of the possessions of the Mohegan Indians. Some portions of the township were conveyed by the Indians to the Dutch West India Company in 1639, but the bulk of the township was transferred in 1646, by the Indian sachem Jackarew, to Adran Van der Donk, who planted here a colony called "Colen-Donk". On the 26th of May, 1652, the states-general granted, by special permission, liberty to Van der Donk to bequeath this colony, or fief, by will. He probably died in the year 1654. On the 12th of March, 1664, all the Dutch possessions in North America were granted by patent to the duke of York and Albany, and on the 27th of August of the same year the whole of the New Netherlands, of which this township was a portion, became subject to English rule.

The widow of Van der Donk married Hugh O'Neale, and in the year 1666 claimed the "Younckers" land in right of her deceased lord. On the 8th of October, 1666, Richard Nichols, governor of the province, granted to Hugh O'Neale and wife the title to this estate, and on the 30th of the same month it was purchased by Elias Doughty. On the 29th of November, 1672, Elias Doughty sold it to Thomas Delaval, Frederick Philipse, and Thomas Lewis. In the year 1686, Frederick Philipse became vested with the title of the whole of the estate, comprising nearly all of the township. By royal charter, dated June 12, 1693, granted by Governor Fletcher, the whole tract was erected into a lordship or manor, and authority given to hold "court leet" or "court baron" therein. Frederick Philipse dying willed his "Yonkers plantation" to his grandson, who died in 1751, and his son, Colonel Frederick Philipse, became the devisee in tail-male of the whole manor of Philipsburg. He continued in possession thereof until the year 1779, when, on the 22d of October, his estate was confiscated by the state of New York, by an act of the legislature declaring him attainted of treason, and the estate was sold to different persons by the commissioners of forfeitures.

Thus ended Yonkers' existence as a manor, which had been maintained in as truly feudal style, perhaps, as any estate outside of England for eighty-six years. But the days of lords and fiefs were over in America, and the legislature had already, by act of March 7, 1788, organized the township of Yonkers. The name is derived from the Dutch word *Jonkheer* or *Jonker*, meaning "young gentleman", and was applied to the town because originally the heir-apparent of the lord of the manor made this portion of the family estate his residence, as separate from the residence of his father. In the old records the name is variously written "Younckers", "Jonkers", "Younkers".

Yonkers remained sparsely inhabited until 1848, when the Hudson River railroad was built, and access to New York city was facilitated to such an extent as to attract residents here doing business there. Factories were also built on the Nepperhan river, which here empties into the Hudson river. To these causes the later growth of Yonkers is chiefly due. April 12, 1855, a part of the town was incorporated as a village. In 1872 the south part of the town was created into a new town called Kingsbridge, which has since been annexed to New York city. The remaining part of the town of Yonkers was incorporated as a city June 1 of the same year.

YONKERS IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Yonkers:

LOCATION.

The city is located on the east side of the Hudson river, about 18 miles from its mouth at the Battery. The Nepperhan river here joins the Hudson, and flows directly through Yonkers. The Hudson is here 1 mile wide, and is a safe harbor, being protected on the west side by the Palisades, 440 feet high, and on the east by a hill rising 375 feet above tide. The depth of the channel, which extends nearly the whole width of the river, is from 40 to 48 feet. The current runs about 4 miles per hour.

RAILROAD COMMUNICATIONS.

Yonkers has the following railroads: The New York Central and Hudson River railroad and the New York and Northern railroad, both of which give easy communication with New York city and with all parts of the United States and Canada.

TRIBUTARY COUNTRY.

There is very little agriculture in the surrounding country, and Yonkers has but little trade with the neighboring towns. The industrial pursuits of the section are mostly carried on within the limits of the city itself.

TOPOGRAPHY.

The site of Yonkers is very hilly. Passing through the place are four major ridges of nearly equal height—say 300 feet—running nearly parallel with the Hudson river, and four corresponding rivers and valleys between, viz, the Nepperhan, flowing into the Hudson, and the Sprain and Grassy Sprain, which unite and flow into the Bronx, which enters East river at a point opposite Flushing bay. The underlying rock is gneiss, with occasional outcroppings of dolomitic marble overlaid by drift. The soil is light and generally poor, except in the valleys. The level varies very much, running from tide-water to 400 feet in less than 1 mile. The valley of the Hudson here has silted up above the rock bed 75 feet at least. The natural drainage is good. There are no near marshes or natural lakes, but there are 7 ponds for water-power, 6 for ice, and about the same number for ornament. The character of the surrounding country for a radius of 5 miles is about the same as that of Yonkers, with considerable wooded territory.



E A S T C H E S T E R

G R E E N B U R G H

N E W Y O R K

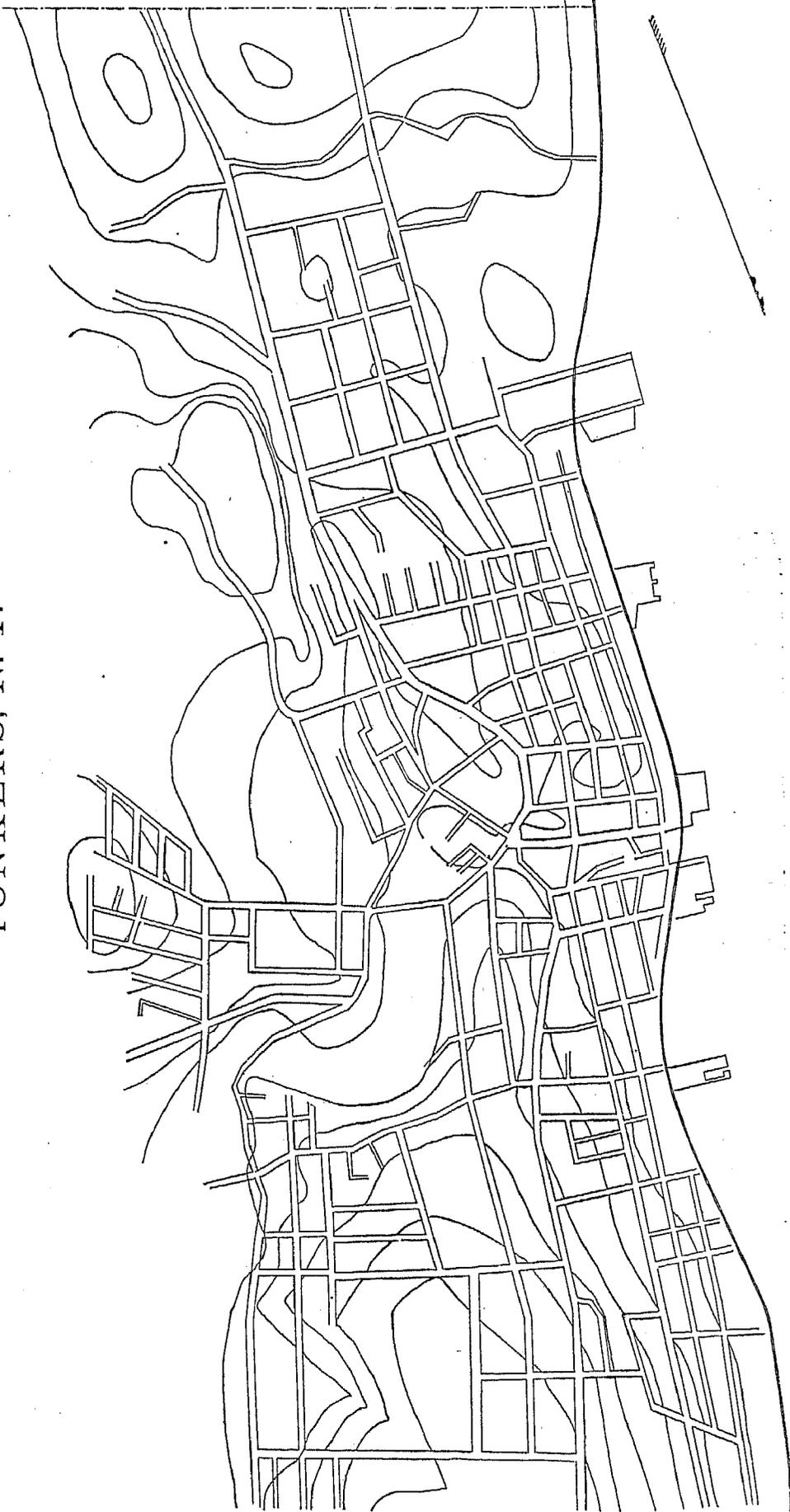
R I V E R

H U D S O N

YONKERS, N. Y.

SCALE OF FEET.
0 500 1000

YONKERS, N. Y.



CLIMATE.

Concerning the temperature of Yonkers there are no records. It is stated to be 2 or 3 degrees lower than that of New York city. The opinion is expressed that the influence of adjacent waters is to modify the extremes of heat and cold. The influence of elevated lands is said not to be noticeable. The prevailing winds are from the northeast, producing cooler weather than winds from any other direction. Easterly winds bring storms.

STREETS.

The total length of streets is 28 miles (and of suburban roads 30 miles). Of this, 20 miles is paved with broken stone. Sidewalks are made of bluestone flagging. Gutters are paved with trap-blocks, cobble-stones, and on light grades with bluestone flagging, with trap-rock or cobble-stone margin. Shade-trees are planted at the sides of streets only, and by the adjacent owners. Streets are constructed by contract, but they are repaired and kept in order by the street commissioner by day work. The annual cost of keeping streets in repair is from \$15,000 to \$20,000. The preference here is given to day work for repairs. In the construction of streets a steam stone-crusher is used. There are no horse-railroads in the city. There are 4 stage lines running to various points. Two of these traverse a distance of 4 miles, and charge 25 cents fare; the other 2 run but $1\frac{1}{2}$ mile, and the fare is 10 cents. No statistics regarding their business were reported.

WATER-WORKS.

The water-works are owned by the city, and the total cost is \$663,920 93. The water is pumped into a storage reservoir 114 feet above tide, to a distributing reservoir 184 feet higher, giving a maximum pressure in the mains of 134 pound to the square inch. While the pump is running the supply is directly from the pump. The average amount pumped per day is 800,000 gallons. The average cost of raising 1,000,000 gallons 1 foot high is \$0.0712. Yearly cost of maintenance, aside from the cost of pumping, is \$5,854 91. Yearly income from water-rates is \$10,826. The Worthington, Gem, and Union Rotary water-meters are used (the last-named being preferred) by 314 out of 611 water-takers. Meters are found to lessen waste, and probably consumption also. The works are controlled by a board of water commissioners. They were but recently constructed, and the population is but partially supplied.

GAS.

The gas-works are owned by a private company. The daily average production is 110,000 cubic feet. The charge per 1,000 feet is \$2 25. The city pays \$27 50 per annum for each street-lamp, 474 in number.

PUBLIC BUILDINGS.

The city owns and uses for municipal purposes, wholly or in part, the city hall, police station (with stable), and 2 buildings for the fire department; it hires 3 houses for the hose-carriages. The city's municipal buildings cost (including land) \$850,000. The city hall alone cost \$44,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are no public parks or pleasure-grounds in Yonkers.

PLACES OF AMUSEMENT.

There are no theaters in the city, but there is 1 public hall used for all kinds of entertainments. A license-fee of from \$5 to \$100 is required for each exhibition, the usual fee being the first-named sum. There are no concert- and beer-gardens in the place.

DRAINAGE.

For the sewerage of this city a general plan is well advanced, and all sewers now constructed are made to conform to it. This plan in its complete state has not yet been officially adopted. There is but one special instance of covering a troublesome water course and converting it into a sewer, and this is at Morgan street. Where streams of very slight importance have been so covered, if at all, no record appears. No private drains or covered water-ways have thus far been incorporated into the new system, nor is it proposed to do so.

The ventilation of the sewers is effected by means of perforated manhole-covers.

The mouth of only one sewer is fully open, "with resulting evils". Some discharge between tides and are sometimes open; others are closed by a flap-valve. The discharge is into the Hudson river.

Owing to the steep grades, there is very little deposit, and the cost of cleaning has been slight.

The whole cost of lateral sewers is paid by abutters, and the cost of main sewers is levied on an assessment district comprising the whole tributary drainage area. Assessments are by front foot.

Contracts for work are made for a lump sum for the work specified.

The total length of sewers constructed to the end of 1879 was 24,746 feet, with 98 manholes and 88 inlet-basins. The total approximate cost is \$108,000.

The large sewers have a rectangular section, in size 2 feet 6 inches by 4 feet 6 inches, and 2 feet 10 inches by 4 feet; brick sewer, from 3 feet 7 inches by 3 feet 6 inches to 1 foot 8 inches by 2 feet 6 inches. About 25 per cent. of the total length is 12-inch pipe. Sewers are generally laid from 9 to 13 feet deep—in exceptional cases from 6½ to 8 feet.

Public attention has been called to the sewerage difficulties growing out of a project for arching over the Nepperhan or Sawmill river, which flows through the city, and converting it into a sewer. This stream is now contaminated by sewage wastes from factories, street-wash, and privies. This project is opposed to the recommendation of the city engineer, who proposes building sewers along the course of the river to intercept the polluting substances of all sorts, leaving this stream of greatly varying volume in its natural condition.

CEMETERIES.

Connected with the city there are 4 public and private cemeteries and burying-grounds. The *Yonkers*, covering 65 acres; *Saint John's*, covering 5½ acres, each about 1 mile east of the center of the city; *Saint Mary's*, 2½ miles northeast of the center of the city; and *Saint Joseph's*, 3 miles north of the center of the city. The total number of interments in Yonkers cemetery since its opening in 1867 is 381; in Saint Joseph's cemetery, opened in 1877, 87. Saint John's and Saint Mary's cemeteries are old, and the total number of interments is not known; but since the beginning of records in the city clerk's office, October 16, 1875, they are as follows: Saint John's, 492; Saint Mary's, 690. Before interments can take place the undertaker must procure either a certificate from a physician, setting forth the cause of death, or a permit from a coroner, upon which the health officer grants the final permit for burial. The Yonkers cemetery is the only one in which any attempt is made toward ornamentation; it belongs to an association. Saint John's belongs to an Episcopal church, and Saint Mary's and Saint Joseph's to the Catholic church.

MARKETS.

There are no public or corporation markets in Yonkers.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief health organization is the board of health. This is composed of the mayor, supervisor, president of the common council, president of the board of water commissioners, president of the board of police, and the police surgeon, who is also health officer and the only physician on the board. The ordinary annual expense of the board is about \$1,200, of which \$1,000 is for salary of health officer. During an epidemic the expense may be increased only as the common council may appropriate. The powers of the board are extensive. It may order periodical vaccination, quarantine the city, quarantine those sick of pestilential or contagious disease or order their removal to the pest-house, exclude any suspected bedding or clothing, disinfect infected houses or districts, compel the proper construction and care of cesspools, privy-vaults, etc., and, broadly, do all things needful to preserve the public health. The chief executive officer of the board is the health officer, whose salary is \$1,000 per annum. His duties are to see that all ordinances of the city or regulations of the board, which in any way contribute to the preservation of public health, are enforced, and to report all matters pertinent to the sanitary condition of the city that shall come to his knowledge. He has special care and authority in the case of deaths by small-pox, yellow fever, and Asiatic cholera over the time, manner, and place of burial. No assistant health officers or inspectors are employed. The business of the board is transacted at meetings of which the mayor is president. Upon questions each member has a vote, and in case of a tie the president has also a casting vote. The board has stated meetings monthly, with special meetings when necessary. Inspections are made only as nuisances are reported. When these are reported and ascertained to be such, the board orders their abatement or prosecutes for maintaining the same. Concerning the inspection and correction of defective house-drainage, privy-vaults, cesspools, or sources of drinking-water, there is no regular system. The board acts upon each case on information or complaint. Regarding defective sewerage, street-cleaning, etc., no proceedings have ever been taken, except to make recommendations to the common council, which has control of both. The board exercises no control over the conservation and removal of garbage unless it become a nuisance. No interments are permitted except by permission of the health officer, which is granted upon a physician's certificate or a coroner's permit, or, if required, both. A city ordinance forbids the pollution of streams, ponds, etc., by throwing or permitting to come into them any offensive substance, excepting the Nepperhan river and its connections flowing through the heart of the city, into which sewers and drains tightly covered, underground and extending into the water at its lowest stage, may run. There are no special regulations regarding the removal of excrement.

INFECTIOUS DISEASES.

Small-pox patients are either isolated in their own homes or removed to the pest-house, which is situated on high ground remote from any residence. Scarlet-fever patients are sometimes quarantined at home in such manner as the health officer may direct. Vaccination is compulsory, and is done at the public expense.

A register of marriages, births, and deaths is kept by the city clerk. Marriages and births must be reported to him within five days after their occurrence. Deaths are immediately reported to the health officer for burial permits, and he, on the first day of each month, makes a return to the city clerk of all interments permitted by him.

REPORTS.

The board of health does not report to any one; but the health officer's monthly mortality reports and the annual mortality reports are printed.

MUNICIPAL CLEANSING.

Street-cleaning.—Streets are cleaned by the city with its own force and entirely by hand. This cleaning is done once a week and is said to be well done. The annual cost of the work to the city is \$2,000. The sweepings are used for filling in docks, and the system is reported to work very well.

Removal of garbage and ashes.—Garbage is removed by the city with its own force. There are no regulations as to its conservancy while awaiting removal, and garbage and ashes may be kept in the same vessel. The final disposition of both, like that of street-sweepings, is for the filling in of docks. The annual cost of their removal is about \$3,000. Concerning any probable influence on health, resulting from the handling or disposition of garbage, the city clerk writes:

The only objection here is in its final disposal. During the summer its deposit is objectionable and unhealthy at the only place the city has been able to obtain for its disposal. Steps are about being taken to compel the keeping and removal of garbage separate from the ashes.

Dead animals.—These are removed and buried by contract for \$400 per annum. The system works very satisfactorily. The police report such dead animals daily at headquarters, where the contractor is required daily to call.

Liquid household wastes.—Chamber-slops, laundry wastes, and kitchen-slops are disposed of in the same way. A part only of the liquid household wastes of the city delivers into sewers, a small portion runs into street-gutters (which is contrary to law), and probably about two-thirds into cesspools on the premises. These cesspools are porous and are without overflows, except where the soil is impervious, when they deliver wherever they best can, according to circumstances. The street commissioner is required, when necessary, and periodically in some localities, to flush those street-gutters into which household wastes are allowed to run. Where cesspools and dry wells are used they generally receive the wastes of water-closets. Concerning the contamination of drinking-water by the overflowing or the underground escape of the contents of vaults and cesspools, the city clerk writes: "The drinking-water of many wells is undoubtedly contaminated, but we have no definite experience. People are introducing city water quite extensively, and the use of well-water is being reduced constantly." Cesspools are cleaned out by the city scavenger, and in case of neglect it is compelled by the board of health.

Human excreta.—Not more than one-third of the houses in the city have water-closets, at least two-thirds relying on privy-vaults. About one-quarter of the water-closets deliver into public sewers and the rest into cesspools. Very few of the privy-vaults are nominally water-tight. There are no rules for the construction of privy-vaults, and the rules for the emptying of cesspools apply also to these. The dry-earth system is not in use. The ultimate disposal of night-soil is as manure, none of it being allowed on land within the gathering-ground of the public water-supply.

Manufacturing wastes.—Liquid manufacturing wastes are run into the Nepperhan river, on the line of which all the factories are situated. Solid wastes, consisting chiefly of woolen matter, are mixed with night-soil and used for manure.

POLICE.

The police force is appointed and governed by the board of police. The chief executive officer is the captain of police, whose duties are a general supervision of all police business, including the telegraph system connected with the department; his salary is \$2,000 per annum. The rest of the force and their salaries are as follows: 2 sergeants, at \$1,600 a year each; 2 roundsmen, at \$1,350 a year each; 15 patrolmen, first grade, at \$1,200 a year each; 5 patrolmen, second grade, at \$1,000 a year each; 2 doormen, at \$600 a year each; and 1 hostler, at \$600 a year. The full-dress uniform of the force is of navy-blue cloth, except for the sergeants. The summer dress is of blue flannel, and the winter overcoat is of blue beaver cloth. The cost per man per year is \$125. The men provide their own uniforms, but the goods are selected by the board. Patrolmen are furnished with baton, revolver, and whistle; their hours of service average about 11 each, and 58 miles of streets are patrolled.

The number of arrests during the past year was 696, in which the principal causes were intoxication, assault and battery, burglary, and embezzlement. Their final disposition was: Sent to state prison, 6; to Albany penitentiary, 18; to county jail, 103, and fined, 287. During the same time property to the amount of \$5,812 46 was reported to the police as lost or stolen. Of this there was recovered and returned to the owners \$1,995 96. The number of station-house lodgers for the year was 1,331, as against 1,768 in 1879. No free meals were given to the lodgers. The force is required to co-operate with the fire department by attendance at fires, assistance of firemen,

and protection of property; and with the health department in removing nuisances from all public places. Special policemen may be appointed by the board of police on the request of companies or individuals for special service. They have patrolmen's powers, and are subject to the same authority as regular patrolmen. The yearly cost of the police force (1880) is \$37,500. The captain of police, who furnishes the above information, adds the following note:

To patrol as large a territory as we have with so small a force it became necessary to adopt what we call "the wagon system", and the "telegraph-signal system". The city is chiefly patrolled by the wagon system by day, which enables two officers to cover a large space of territory in a short time, and thus keeps in reserve a large portion of the force for night duty only. The telegraph-signal system is arranged with a series of signal-boxes along the route which each officer patrols, connected with headquarters, and signals are received at headquarters from the officers on duty every five minutes during the night and every thirty minutes during the day, thus enabling us in case of emergency to call the entire force, or any portion of it, to headquarters, or concentrate them at any particular point in a few minutes.

FIRE DEPARTMENT.

The force of the fire department consists of a chief engineer, 2 assistant engineers, and 284 members of engine, hose, and hook-and-ladder companies, making a total force of 287 men, divided as follows:

Protection Engine Company, No. 1, 55 men; Mountain Engine Company, No. 2, 26 men; Hope Hook-and-ladder Company, No. 1, 47 men; Hudson Hose Company, No. 1, 31 men; Lady Washington Hose Company, No. 2, 25 men; City Hose Company, No. 3, 40 men; Palisade Hose Company, No. 4, 36 men; Irving Hose Company, No. 5, 27 men.

The department has 2,700 feet of good hose and considerable that is worthless. The cost of the department for the year ending September 1, 1880, including \$1,160 paid for new hose, \$100 for a carriage, and \$175 for rent, was \$2,740. During the same period the department was called out 12 times, 2 of the alarms being false.

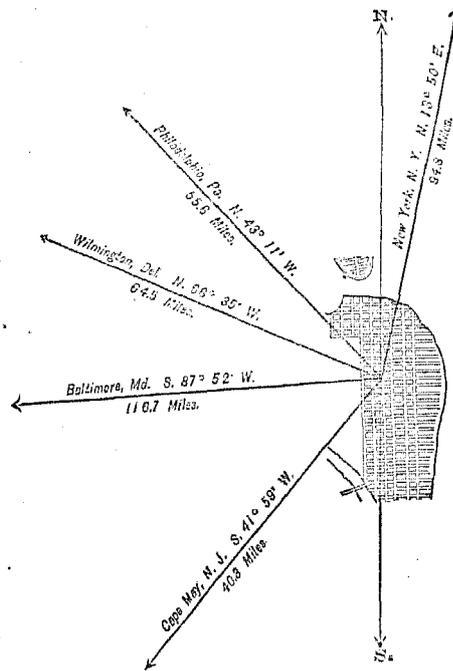
NEW JERSEY.

ATLANTIC CITY, ATLANTIC COUNTY, NEW JERSEY.

POPULATION

IN THE
AGGREGATE,
1860-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	.....
1840	.....
1850	.....
1860	687
1870	1,043
1880	5,477



POPULATION

BY
SEX, NATIVITY, AND RACE,
AT
CENSUS OF 1880.

Male	2,764
Female	2,713
Native	4,939
Foreign-born	538
White	4,714
Colored	763

Latitude: 39° 22' North; Longitude: 74° 26' (west from Greenwich); Altitude: 0 to 11.5 feet.

FINANCIAL CONDITION:

Total Valuation: \$1,707,760; per capita: \$311 00.

HISTORICAL SKETCH.(a)

The first settler in Atlantic City was Jeremiah Leeds, who came to the spot in 1783. He bought nearly the whole of the small and irregularly shaped island on which the city is situated—the exception being a small strip of land near the inlet—for 50 cents per acre. The place at that time abounded in game and attracted only hunters, and others interested in the plunder to be obtained from the not infrequent wrecks of vessels near this spot. For a long time the character of the place remained unchanged. Toward the middle of this century, however, it began

^a Mr. George L. Garrett kindly collected and furnished the following information regarding Atlantic City.

to be settled by people from the adjacent mainland. On the 15th of March, 1852, the city was incorporated, and obtained a charter on the 18th of March, 1854. The advantages of the locality as a watering-place began to be recognized, and with the opening of the Camden and Atlantic railroad came prosperity and a full recognition of its claims. Philadelphians early patronized the place, and Philadelphia capital and enterprise have largely contributed to its settlement and improvement; have made it, in fact, what it is, one of the most fashionable watering-places on the "Jersey coast". It has suffered from no real (local) periods of depression and has had no serious ravages by fire.

ATLANTIC CITY IN 1880.

LOCATION.

Atlantic City is located on a small island on the southeastern coast of New Jersey, in latitude $39^{\circ} 22'$ north, longitude $74^{\circ} 26'$ west from Greenwich. It is 3 miles southwest of Absecon inlet, and 60 miles southeast of Philadelphia. Absecon inlet or bay is large enough for an enormous fleet of vessels, and, by a moderate amount of dredging and the construction of a pier or breakwater, could be made a valuable port of entry.

RAILROAD COMMUNICATIONS.

There are three lines of railroads running between Atlantic City and Philadelphia, viz, the Camden and Atlantic railroad, the West Jersey railroad, and the Philadelphia and Atlantic railroad.

TRIBUTARY COUNTRY.

The city is separated from the mainland by 5 miles of meadows and marshes, and the tributary country is entirely agricultural; her local trade, consequently, is entirely with "truckers" and farmers.

TOPOGRAPHY.

The town-site is perfectly flat, with the exception of some low sandhills at its southwestern extremity, caused by the driving of the beach-sand, by winds, among cedar groves in that locality. The center of the city, at Atlantic and New York avenues, is slightly higher than other portions. The soil is entirely sand.

CLIMATE.

Highest recorded summer temperature, 99° ; highest summer temperature in average years, 72° . Lowest recorded winter temperature, -5° ; lowest winter temperature in average years, 30° . No fresh water enters the sea within 10 miles of the place. The air is that of the sea, and the climate is mild and equable, the proximity of the Gulf stream being undoubtedly felt.

STREETS.

There are 20 miles of streets opened, of which 16 miles are paved with gravel. This gravel is brought from the mainland by rail, and costs 50 cents per square yard. Sidewalks are of gravel and flagstone, and gutters are paved with stone and gravel. Shade-trees, principally maple and willow, are planted along the streets. The former variety does not thrive, owing to the presence of brackish water, which frequently during stormy weather rises to the surface. There are, however, some portions of the town, as where the land is slightly elevated, and where they are protected from the severity of the gales by buildings, where the trees attain considerable size. Labor on streets is done both by contract and by the day, with a preference for the latter.

There is one horse-railroad, owned by the Camden and Atlantic Railroad Company, with a length of track of $2\frac{1}{2}$ miles, having 18 cars and 100 horses, employing 50 men, and carrying during the year 40,000 passengers, at a fare of 6 cents each. There is also one regular omnibus line. This has 8 vehicles and 36 horses, employs 15 men, and charges a fare of 6 cents.

WATER-WORKS.

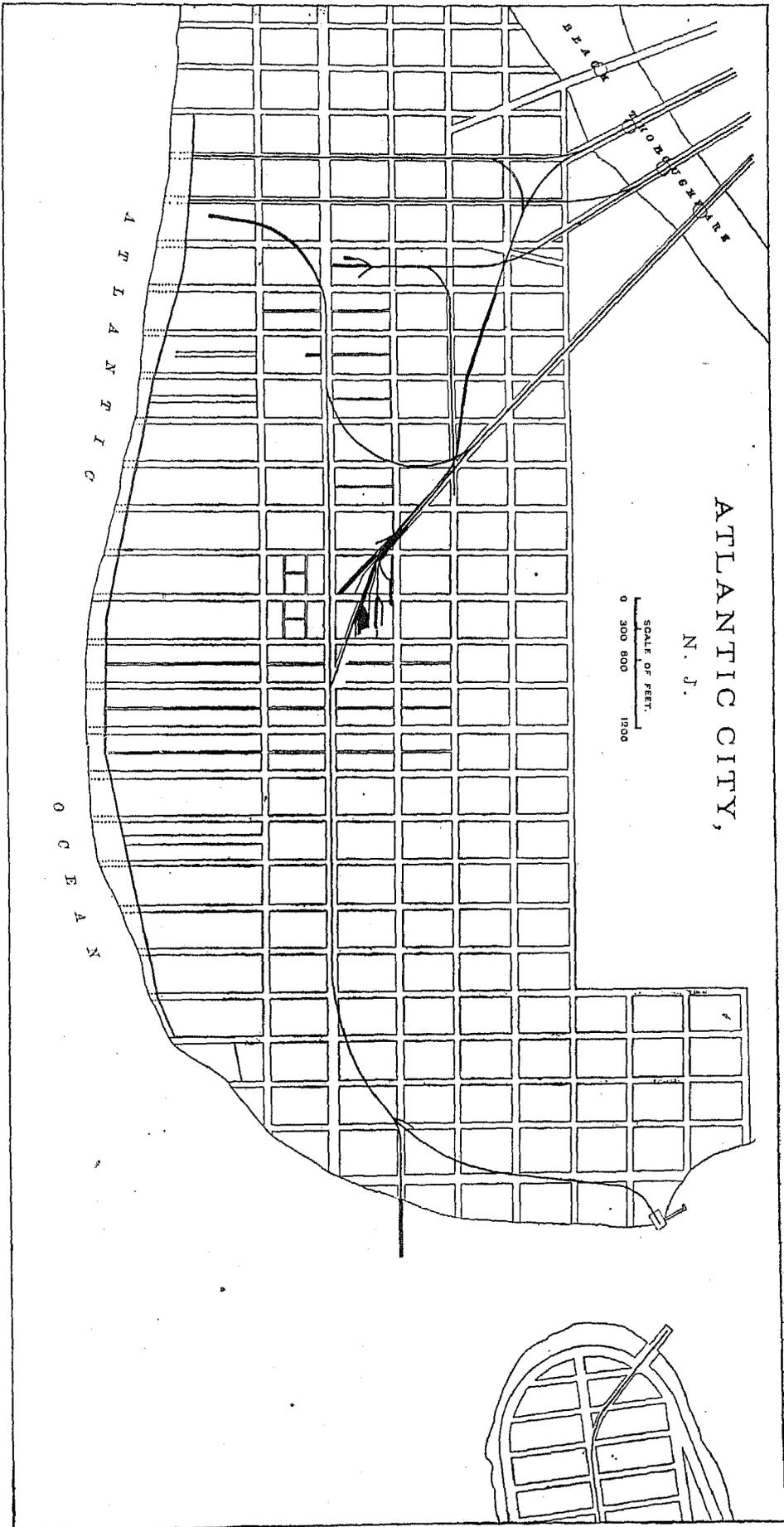
The water-works are owned by a private corporation and cost \$300,000. The water is pumped into a stand-pipe, giving a pressure of 60 pounds. The daily average quantity pumped is 200,000 gallons. Water-meters are used to some extent.

GAS.

The gas-works are the property of a private corporation. The daily average production is 35,000 cubic feet. The charge per 1,000 feet varies from \$1 50 to \$3. For each of its 150 street-lamps the city pays annually \$18 50.

PUBLIC BUILDINGS.

The only municipal building owned by the city is the city hall, which cost \$16,000.



PUBLIC PARKS AND PLEASURE-GROUNDS.

On this topic the reply is made:

There are no public parks, with the exception of a pleasure-ground given to the city by Hamilton Disston and Charles Lee on Park avenue. The beach serves as a park.

PLACES OF AMUSEMENT.

Atlantic City has no theaters. The city hall is used for entertainments. "There is one museum of small capacity."

There are 2 concert and beer-gardens of small capacity. "Most every lager-beer saloon has a small place attached which they call a garden."

DRAINAGE.

The city is as yet without sewerage. The question is being agitated, and several plans have been presented, but nothing definite has been done.

CEMETERIES.

The people of Atlantic City have heretofore been in the habit of burying their dead in various cemeteries on the mainland. Lately land for a cemetery at Pleasantville, 5 miles distant (also on the mainland), has been purchased. In this, thus far, but one interment has been made.

MARKETS.

There is no public market in Atlantic City. The inhabitants are supplied entirely by private meat and provision stores, and by wagons from the adjacent country. As to the wholesale supply of meat, fish, poultry, vegetables, etc., each provision-dealer has his agent in Philadelphia, from which place fresh supplies arrive daily.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary organization is the board of health. This board is an independent body composed of 7 members, including 1 physician, appointed by the mayor and confirmed by the city council. None of its members can be removed under three years, and then not more than 3 at one time. They receive no salary, and have no ordinary expenses except for stationery and the salary of their health inspector, who receives \$7.0 per annum. During an epidemic they may increase their expenses to any amount necessary to protect the health of the city. In the absence of epidemics the board of health has authority to regulate and control all trades, works, and acts liable through their use or misuse to menace the healthfulness of the city; and, broadly, "the board of health of Atlantic City shall, under the general laws as to the care of all nuisances or matters prejudicial to health, have power summarily to direct the health inspector to take such measures as in their judgment the interest of the public health may require". A published *Sanitary Code of Atlantic City* defines and fixes what may and what may not be done, with the respective penalties for disobedience. During epidemics the board may—and does—require physicians to report cases of the more dangerous contagious diseases. It may effect the seclusion of such cases, and may prevent the landing of vessels having such cases on board. The health inspector is the chief executive officer of the board. He keeps the record of complaints, inquiring into and inspecting these and reporting the facts to the board. He is also required to make regular inspections of all hotels, boarding-houses, and rented cottages. The board meets bi-monthly in winter and weekly in summer; receives reports from committees and from the health inspector; audits bills, and attends to any other business coming before it, according to parliamentary rules. No assistant health officers or inspectors are employed, except that in summer policemen are sometimes detailed to assist the board in emergencies. The health inspector has police powers and may serve processes and make arrests. When nuisances are reported, the health inspector ascertains the facts, and, if a nuisance really exists, notifies the offender, under a penalty, to abate the same within a given time (usually five days). The board is now giving particular attention to the inspection and correction of defective house drainage, privy-vaults, cesspools, sources of drinking-water, etc. With defective street-cleaning it does not concern itself unless the streets become so dirty as to become a nuisance. The board has full control over the conservation and removal of garbage, requiring it to be suitably stored and conveniently placed for removal by the garbage-collectors. No burials are permitted upon the island upon which the city is situated. The board forbids the pollution in any manner of streams and water-courses, and requires that privy-vaults be emptied by the odorless-excavating process.

INFECTIOUS DISEASES.

Small-pox patients are removed to the pest-house or hospital, located a mile or more away from the city. Regulations require the isolation of scarlet-fever patients, but they are not always enforced. Nothing worse than measles has ever broken out in the public schools, and the treatment of this the board did not control. Vaccination

is not compulsory, but is done at the public expense. Marriages, births, and deaths are required to be reported by physicians, midwives, nurses, clergymen, etc., to the secretary of the board of health, by whom they are returned to the secretary of the state board of health, who tabulates them.

REPORTS.

The board reports annually to the state board of health, which incorporates these reports in its own annual reports. The statement is made, in conclusion, that "Atlantic City is famed for the salubrity of its climate, and is largely frequented by morbid visitors at all seasons of the year".

MUNICIPAL CLEANSING.

Street-cleaning is done by the city's own force by hand and with the aid of horses. The streets are cleaned about once in five weeks, and are well cleaned. The sweepings are sold for fertilizer.

Removal of garbage and ashes.—The city removes garbage, having the work done by contract. Household-ers are required to place their garbage for removal in suitable barrels, buckets, etc., and to keep all improper substances, including ashes, out of the same. The contractors are required to take the garbage at least 5 miles beyond the limits of the city in water-tight vessels and sealed wagons. It is finally disposed of for farming-purposes. It is not allowed at any time to become a nuisance. Ashes are used for grading. The annual cost to the city of the foregoing service is \$4,500.

Dead animals.—The carcasses of dead animals are removed under direction of the board of health. No record is kept of the number annually removed, but the cost of the service is about \$50.

Liquid household wastes.—All liquid household wastes are run into cesspools, except the waste from water-closets, which run into privy-vaults. These cesspools and privy-vaults are nominally water-tight, as required by the board of health. Their contents are generally removed by the odorless-excavating system, and must be removed not less than once a year. No waste is allowed to run into street-gutters. The water of the city being derived either from the water-works supply or from cisterns, drinking-water is not contaminated by the escape of the contents of cesspools or privy-vaults. Night-soil is taken at least 5 miles from the city and is used for fertilizer.

Manufacturing wastes.—There are none produced in the city.

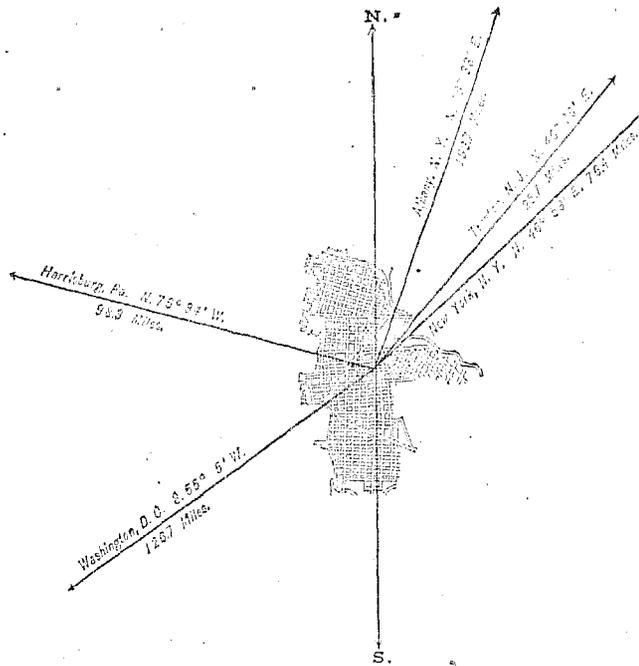
POLICE.

The police force of Atlantic City is appointed by the city council and governed by the mayor. The chief of police is the head executive officer. He receives \$60 per month, and has general charge and supervision over the force and its belongings and appurtenances. He is broadly held responsible for the maintenance of peace and the efficiency of the force. The rest of the force consists of 1 sergeant and 26 patrolmen (13 of whom are kept all the time, and 13 are kept from July 1 to September 1), at salaries of \$50 per month each. The uniform is the same as that of the police of Philadelphia, and is provided by the men themselves. The men are armed with pistol, black-jack, club, nippers, and whistle, serve 12 hours per day, and patrol 10 miles of streets. The principal causes for arrest are fast driving, disorderly conduct, and assault and battery. During 1880 free meals were given to station-house lodgers, at a cost of about \$125. No record of the number of lodgers was kept. The police force is required to co-operate with and assist the health and fire departments. Special policemen are appointed for hotels, etc., and to assist the regular force if called on so to do.

CAMDEN, CAMDEN COUNTY, NEW JERSEY.

POPULATION IN THE AGGREGATE, 1840-1880.

Year	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	.....
1840	3,371
1850	9,479
1860	14,358
1870	20,045
1880	41,656



POPULATION BY SEX, NATIVITY, AND RACE, AT CENSUS OF 1880.

Male	19,923
Female	21,736

Native	37,164
Foreign-born	4,495

White	38,065
Colored	*3,594

* Including 2 Chinese and 13 Indians.

Latitude: 39° 57' North; Longitude: 75° 7' (west from Greenwich); Altitude: 0 to 25 feet. (a)

FINANCIAL CONDITION:

Total Valuation: \$11,566,085; per capita: \$278 00. Net Indebtedness: \$1,164,900; per capita: \$27 96. Tax per \$100: \$2 10.

HISTORICAL SKETCH.

The first appropriation of lands lying within the limits of the present city of Camden was made in 1678, when the tract between Little Newton creek and Line street, in Fetterville, was sold to Samuel Norris. In the following year William Cooper, a distinguished Friend, built a mansion on a high bank above "Pyne point", as he called it, now known as Cooper's point, and purchased lands extending from the point to the present Cooper street. The land between these two estates was taken in 1681 by William Royden; but in the next year he sold it to Cooper, who, in order to make his title absolutely safe, also obtained a deed of the lands from the Indians.

a Above mean tide in the Delaware river.

The history of the city thus started is marked by no event of special importance or of more than local interest. The proximity of Philadelphia, which is just across the Delaware from Camden, prevented, possibly, the growth of the latter, as the larger city may have attracted to itself those who would otherwise perhaps have staid in Camden; but if Philadelphia is responsible for the slowness of Camden's growth in the past, it is also the cause of the wonderfully rapid increase in population which has taken place in the last decade.

For many years the mansion and ferry at Cooper's Point, the middle ferry at the foot of Cooper street, and the four or five huts of the ferrymen constituted the whole of Camden. About the middle of the last century, however, another ferry was started at the foot of Federal street, stimulating the growth of the place, which now began to be dignified by the name of Pluckemin. During the Revolution the English, while in possession of Philadelphia, found Cooper's Point a convenient outpost, and stationed some Hessian and Highland regiments there. Numerous skirmishes between the English and the continental forces occurred, but no event of any great importance.

After the close of the war the name of the hamlet was changed to Camden, in honor of Earl Camden, lord chancellor from 1765 to 1770, who had taken a conspicuous part with Chatham and others in maintaining the justice of the American cause.

The growth of the place was slow and its history uneventful. In the year 1828 Camden was incorporated as a city, but was not set apart from the township of Newton, in which it had belonged, until three years later. The charter has been amended from time to time as the progress of the city made changes necessary. In 1845 the Camden Water Works Company was chartered to supply the city with water. The company was given the exclusive right for fifty years, and at the expiration of that time the city was to have the right of purchasing the works by paying an amount equal to the principal of the revenue of the company at the time of the purchase, at the legal rate of interest. Without waiting, however, for the expiration of the fifty years, the city purchased the works in 1870, paying for them \$200,000; since then over \$300,000 has been expended in enlarging and perfecting the system. A fire department on the volunteer system had been maintained until 1869, but in that year the department was changed to the paid system. A board of health was organized in 1872.

The growth of the city since its incorporation was slow until during the past decade, when it became very rapid. Between 1870 and 1880 the population more than doubled, increasing from 20,045 to 41,659. This large increase took place during a time of great commercial depression. It was due probably to the overflow of population from Philadelphia, Camden being practically a suburb of the larger city.

CAMDEN IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Camden:

LOCATION.

Camden is situated in latitude $39^{\circ} 57'$ north, and longitude $75^{\circ} 7'$ west from Greenwich, on the east bank of the Delaware river, opposite Philadelphia. The lowest point in the city is level with tide-water in the Delaware, while the highest point is 25 feet above that level. The Delaware river at this point is from 18 to 24 feet deep, and has a channel capacity sufficient for the largest vessels. Cooper's creek, which runs along the eastern part of the northern half of the city, is from 10 to 15 feet deep, and offers good wharf facilities. Camden thus has excellent water communication with the world.

RAILROAD COMMUNICATIONS.

The following-named railroads connect Camden with the chief cities of New Jersey, and by their connections with the whole country:

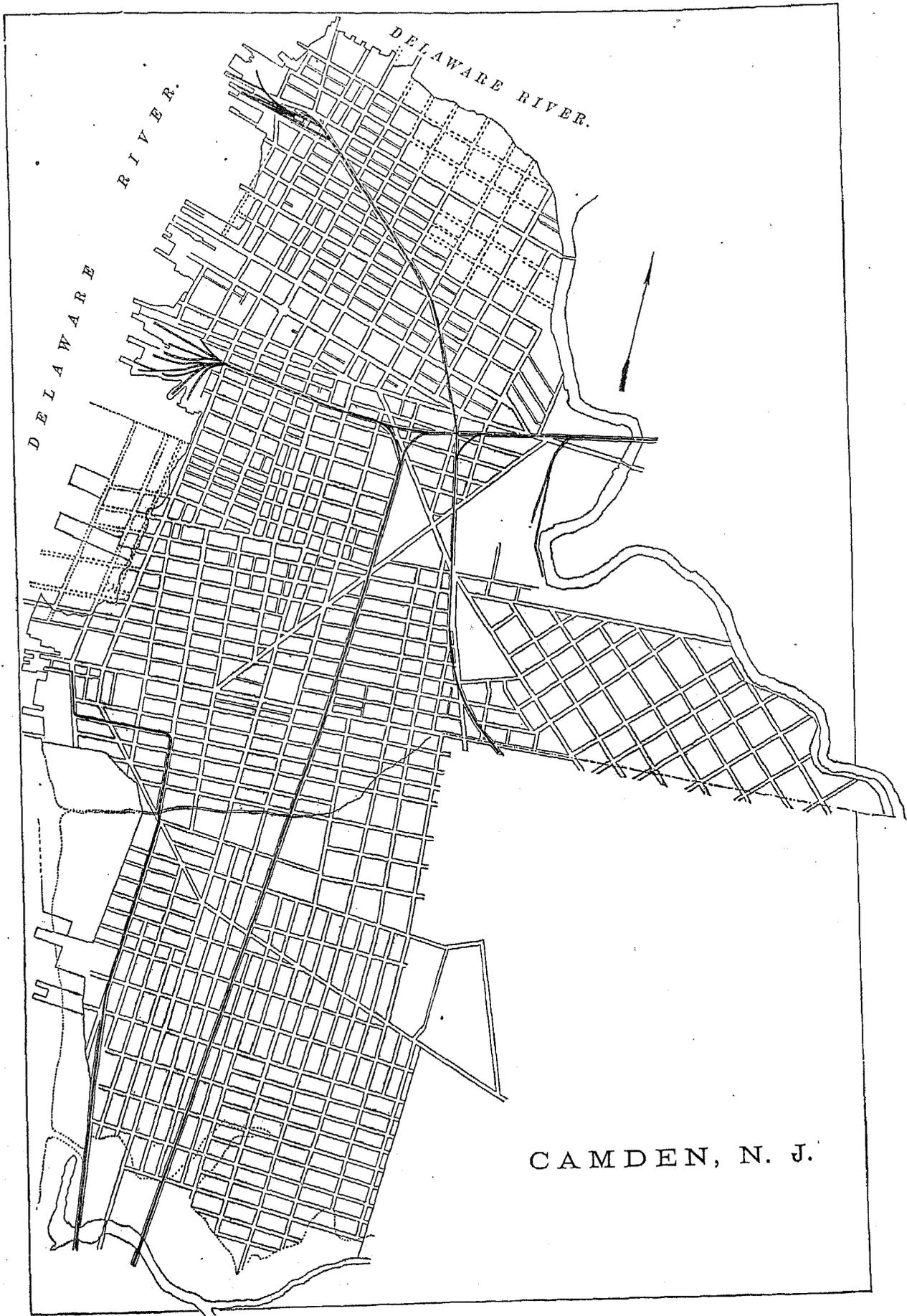
The Amboy division of the Pennsylvania railroad connects Camden with South Amboy and New York; the West Jersey railroad with Cape May; the Camden and Atlantic railroad with Atlantic City; the West Jersey and Atlantic railroad with other cities of the state. All these railroads make Camden one of their terminal points.

TRIBUTARY COUNTRY.

The country about Camden is devoted exclusively to agriculture, and large quantities of fruit and market produce are raised for the Philadelphia market. The city has a considerable local trade with all the agricultural district of West Jersey.

TOPOGRAPHY.

The soil is composed of sand, loam, and clay resting upon an underlying layer of gneiss. The variation of levels is slight, the land rising from the Delaware river to a height of 25 feet, and then gradually sloping down to the level of Cooper's creek. The country is comparatively open.



DELAWARE RIVER.

DELAWARE RIVER.

CAMDEN, N. J.

CLIMATE.

The climate of Camden is reported as being the same as that of Philadelphia. For further information the report on the climate of Philadelphia may be consulted.

STREETS.

The city has about 60 miles of streets; of these, about 20 miles are paved with cobble-stones, one-half mile with stone blocks, one-half mile with asphaltum blocks, 1 mile with broken stone, and about 6 miles with rubble pavement. The cost of each of these is as follows: Cobble-stone, 65 cents per square yard; stone blocks, \$1 80 per square yard; asphalt, \$2 per square yard; broken stone, \$3 per linear yard; and rubble, 71 cents per linear yard.

The sidewalks are of brick, stone, slate, or artificial stone. The gutters are built of Connecticut granite and are 10 inches in width. Trees are planted along the sides of the street, being placed between the walks and the curbing, about 18 inches back from the curb. The construction and repair of the streets are done by contract. There are 9 miles of horse-railroads; these own 27 cars and 84 horses; they employ 52 men, and carry passengers about the city at a uniform rate of 5 cents. The omnibus lines own 9 vehicles and 28 horses, and employ 12 men. The rate of fare is 3 cents.

WATER-WORKS.

The water-works of Camden are owned by the city, and have cost it \$302,982 69 since January 1, 1871. The works were erected by a private corporation in 1845 and purchased by the city in 1870 for about \$200,000. A single reservoir, with a capacity of about 450,000 gallons, is in use, the water being raised to it by pumping. The pumping pressure is 25 pounds to the square inch, with a head of 70 feet. The daily consumption in July, 1880, was 2,350,871 gallons, while the average amount pumped each day is stated at 2,081,300 gallons. The yearly cost of maintenance, aside from the cost of pumping, is \$19,000, and the yearly income from water-rates is \$57,306. No water-meters are in use. There are 43½ miles of pipes. The total collections of water-rates in 1880 amounted to \$67,358, but a part of this was collected from the delinquents of past years.

GAS.

The gas-works of Camden are owned by a private corporation, and no detailed report could be obtained.

PUBLIC BUILDINGS.

The city hall of Camden is valued at \$140,000. Besides this hall the city owns two fire-engine houses, together valued at about \$20,000. No information as to the number and value of the school-buildings, or other buildings used for municipal purposes, was furnished.

PUBLIC PARKS AND PLEASURE-GROUNDS.

The city has no public parks at present, but the city council is endeavoring to locate one.

PLACES OF AMUSEMENT.

There are no theaters in the city. The following-named halls are used as lecture- and concert-rooms: Morgan hall, seating capacity about 800; Association hall, 500; Reed's hall, 300; Ross' hall, 300; Mechanic hall, 500; Wildey's hall, 600, and Andrews hall, 300. There are no concert- and beer-gardens.

DRAINAGE.

No plan of sewerage is furnished in connection with the responses received, and the only statement made in reply to the question as to plan is that the average depth of the sewers is 8 feet. They are ventilated through the inlets.

The sewage is discharged at low-water level directly into the Delaware. The river-front is very flat.

The cost of construction is divided between the city and property-holders in proportion to the area of the streets and the area of the property.

Brick sewers 3 feet in diameter cost \$1 50 per foot; 2 feet in diameter cost \$1 09 per foot. Inlet-basins cost \$90, and manholes \$14 50 each.

CEMETERIES.

Camden makes use of three cemeteries, one of which lies beyond the city limits:

Camden Cemetery, situated on Main street, in the 7th ward, is owned by a corporation and was started in 1836. Its area at present is about 5 acres, but the charter empowers the corporation to extend the area to 25 acres by the purchase of additional territory.

Evergreen Cemetery, situated just outside the city, on the Mount Ephraim turnpike, contains 32 acres, and is also owned by a private corporation.

There is besides these two a cemetery of the Orthodox Friends.

The following burying-grounds are now abandoned: Proprietary Gift burial-ground, situated between Fifth and Plum streets, and containing about 2 acres, has been abandoned for twenty years. The Hicksite burial-ground, adjoining the Hicksite meeting-house, and, like the former, near the center of the city, is also given up. It contained 1 acre. A Baptist burial-ground, containing one-half acre, is now no longer in use.

The state laws require that before any burial is made a permit of interment shall be obtained from the city clerk, who is bound to grant it on receiving a certificate of death from a physician. General custom also requires a permit from the secretary of the cemetery. No complete record of the number of interments in the various cemeteries seems to have been kept.

Evergreen cemetery is finely laid out and carefully maintained; as to the others, little attention seems to be paid to the beauty or attractiveness of the grounds.

MARKETS.

Camden has 2 large corporation markets, but no detailed information in regard to them was supplied.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Camden is vested in a board of health, consisting of five members of the city council, appointed, like any other standing committee of that body, by the president. When there are physicians among the councilmen it is common to appoint them to the board of health, but it is a matter of chance whether or not there will be a physician on the board. The annual expenses of the board are about \$3,000, which is expended in the removal of nuisances, the cleansing of cesspools, the purchase of medicines, and the employment of physicians for the sick poor, etc. The board is required to keep its expenses within the limits of the appropriation placed at its disposal by the common council, but in case of necessity supplementary credits are granted by the council on application by the board. It has authority to remove all nuisances; to remove or care for those sick from infectious or contagious diseases; to quarantine vessels coming from ports where infections may be feared; and, in general, to attend to the sanitary condition of the city. If more extended authority is desired, the council is asked to extend the powers of the board, and generally does so. An inspector is employed, at a salary of \$150, to make all ordinary inspections and to carry out the instructions of the board.

Inspections are made regularly at stated intervals in all parts of the city, and also when nuisances are reported. None of the board of health have police powers, but it is the duty of the chief of police to assist them whenever police authority is necessary.

NUISANCES.

Nuisances are inspected by the inspector of the board, who removes or abates them if it is within his authority. If not, he reports to the board, and receives from it the necessary power. All removals are made at the expense of the owner of the premises, the charges being collected by the city solicitor. In addition to these charges the person who neglects or disobeys the orders of the board is liable to a fine. The pollution of the streams is strictly forbidden. In cases of defective house-drainage, privy-vaults, cesspools, and sources of drinking-water, the board has authority to compel a rectification of all faults. If the construction of a sewer is essential to the public health and the ordinary course of events would take too long a time, the board of health constructs the sewer and asks for a special appropriation for the purpose.

GARBAGE.

The ordinances of the city prohibit the casting of garbage upon the public streets or ways, or into the streams. The removal of garbage is under the control of the committee on streets and highways.

BURIAL OF THE DEAD.

All persons dying of malignant, infectious, or contagious diseases must be buried within twelve hours after death. No interment is allowed until a permit has been obtained from the city clerk. This permit is issued on receipt of a certificate of death signed by the attending physician, stating the name, age, sex, cause of death, etc., of the deceased. The certificate is countersigned by the undertaker, and delivered to the sexton in charge of the cemetery in which the interment is to be made. The sexton must enter the contents in a schedule furnished by the board of health and return this to the clerk of the board. No ordinance seems to regulate the depth of graves.

INFECTIOUS DISEASES.

Small-pox patients are isolated in their own houses or in the city hospital. If, however, the disease is epidemic a pest-house is built and all patients are removed thither, and when the epidemic has ended the house is destroyed.

Scarlet-fever patients are quarantined at home. Children from families where contagious or infectious diseases exist are prevented from attending the schools. Vaccination is compulsory among those attending the public schools, but otherwise is not; it is done at public expense when necessary.

REPORTS.

The board of health reports regularly each month, like any other committee, to the common council, but these reports are not officially published. The board meets during the summer at least once a week. The registration of diseases, births, and deaths is under state law, returns being made to the state board of health.

MUNICIPAL CLEANSING.

Street-cleaning.—The city contracts for the cleaning of the streets, and the work is done by the contractors under the inspection of a supervisor of highways, who reports any neglect on their part. The paved streets are cleaned once a month, one sweeping-machine being used as an assistance to the hand labor. The cost to the city is estimated by the supervisor at \$40,000 for the present year (1880). The sweepings are composted and used by farmers as fertilizers.

Removal of garbage and ashes.—Garbage is removed by contractors under the control of the committee on streets and highways. While awaiting removal it is kept in closed vessels, which every Wednesday and Saturday are placed upon the sidewalks in a position convenient for removal by the contractors. No regulation requires garbage to be kept separate from ashes, and the same contractors remove both. They are finally disposed of by using them in filling up docks or low places on the public streets. The cost to the city is about \$4,000 annually. No evil effects are known to have resulted from the system.

Dead animals are generally disposed of by selling them to rendering-establishments or glue factories. Sometimes the carcasses are buried. The city under this system is put to no expense.

Liquid household wastes.—Much the larger part of the liquid household wastes is run into the public sewers; of the remainder about half is run into the street-gutters, the other half going into cesspools, which in many cases also receive the wastes from water-closets. Cesspools must not be within 2 feet of any party-line; they can be cleansed only after a permit has been obtained from the city clerk, and, unless the cleansing is done by the odorless-excavator process, they can be cleansed only between the 1st day of October and the 1st of June, and between the hours of 10 p. m. and 4 a. m. In the city ordinances cesspools and privy-vaults are treated as one and the same. The contents must be removed in water-tight carts and taken beyond the city limits.

Human excreta.—About half the houses of the city are provided with water-closets; of these, half deliver into the public sewers and half into cesspools. The rest of the houses depend on privy-vaults, very few of which are even nominally water-tight. The regulations in regard to the cleansing of these vaults are the same as those given above for cesspools. The night-soil is used as manure, sometimes on the gathering-grounds of the public water supply. No ordinance forbids such a disposition of the night-soil.

Manufacturing wastes.—Liquid wastes are run into the Delaware river and Cooper's creek. No regulations govern the disposal of these wastes.

POLICE.

The police force of Camden is appointed and governed by the mayor and the police committee of the city council. The chief executive officer is the chief of police, who receives a salary of \$1,000 per year, and has the general supervision and control of his department, subject to the mayor and police committee. The rest of the force is limited by law to 25 men, but at the present time there are only 16 patrolmen and 2 hall officers. Each of these receives a yearly salary of \$750, and a further sum of \$50 to be applied to the purchase of a uniform, which is of blue cloth. The men are equipped with short heavy clubs, twisters, whistles, etc., and are on duty from 7 p. m. until daylight, patrolling about 40 miles of streets. The number of arrests during the past year (1880) is 1,127, the principal cause being drunkenness. There were 3,960 station-house lodgers, as against 3,550 in 1879. No meals are furnished to these lodgers. The police force is required to assist the fire department, both by aiding in giving alarms of fire and in protecting property at fires. They also aid the board of health when called upon. No special policemen are appointed. The total cost of the department during the past year was \$15,350.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Camden, being taken from tables prepared for the Tenth Census by Joseph B. Fox, special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries.....	321	\$5,032,835	3,293	826	251	\$1,626,306	\$4,348,710	\$7,614,705
Blacksmithing (see also Wheelwrighting).....	14	8,000	20			8,296	11,306	31,098
Boots and shoes, including custom work and repairing.....	35	29,475	140	57	4	66,532	125,827	246,975
Bread and other bakery products.....	29	64,900	37	1		13,291	74,672	122,284
Carpentering.....	18	55,000	87			43,801	66,176	143,382
Carpets, rag.....	7	5,600	10			2,940	7,600	17,420
Carriages and wagons (see also Wheelwrighting).....	7	183,000	192	2	7	61,528	58,600	180,700
Coffins, burial cases, and undertakers' goods.....	4	15,700	8			4,550	3,300	11,920
Confectionery.....	9	9,400	20	6	2	9,166	33,200	52,970
Drugs and chemicals (see also Patent medicines and compounds).....	3	800,000	180		1	93,752	504,333	751,613
Foundry and machine-shop products.....	6	815,000	869		42	366,091	734,226	1,293,050
Furniture.....	6	11,550	21			7,138	7,400	22,280
Hats and caps, not including wool hats.....	3	3,200	6	3		2,785	2,950	8,791
Lumber, sawed.....	3	445,000	50		3	20,500	293,900	307,000
Marble and stone work.....	4	5,700	8	1	1	2,600	4,075	14,306
Masonry, brick and stone.....	19	37,700	98			49,156	51,005	134,850
Painting and paperhanging.....	17	21,800	63			28,918	33,778	87,788
Patent medicines and compounds (see also Drugs and chemicals).....	3	3,300	3		1	1,396	5,100	11,675
Plumbing and gasfitting.....	8	16,000	30			14,329	13,340	55,050
Printing and publishing.....	9	96,225	70		11	26,350	25,914	75,250
Roofing and roofing materials.....	3	20,560	19			9,610	26,341	53,350
Saddlery and harness.....	4	25,350	15			7,024	15,946	28,700
Sash, doors, and blinds.....	5	202,000	152			56,634	124,464	210,200
Shipbuilding.....	13	484,400	206			161,355	209,640	438,576
Tinware, copperware, and sheet-iron ware.....	6	33,950	74	1	6	40,893	81,100	156,421
Tobacco, cigars and cigarettes.....	17	24,575	40		2	16,478	17,937	56,448
Watch and clock repairing.....	4	7,000	5			2,300	1,800	8,030
Wheelwrighting (see also Blacksmithing; Carriages and wagons).....	6	10,850	13			5,900	7,410	17,400
Woolen goods.....	3	570,000	235	91	43	116,900	401,084	754,500
All other industries (a).....	51	1,022,600	562	664	128	380,085	1,485,287	2,344,278

a Embracing baskets, rattan and willow ware; boxes, cigar; brass castings; brick and tile; brooms and brushes; cigar molds; clothing, men's; coffee and spices, roasted and ground; cooperage; cotton goods; dentistry, mechanical; dyestuffs and extracts; flouring and grist-mill products; fruits and vegetables, canned and preserved; furnishing goods, men's; glass; gold and silver leaf and foil; grease and tallow; hairwork; hosiery and knit goods; ink; iron work, architectural and ornamental; kindling wood; leather, curried; lime; lock and gun-smithing; looking-glass and picture frames; mixed textiles; oilcloth, floor; paints; paper; pens, steel; photographing; pumps; shirts; silk and silk goods; soap and candles; straw goods; slaughtering and meat-packing; vinegar; and worsted goods.

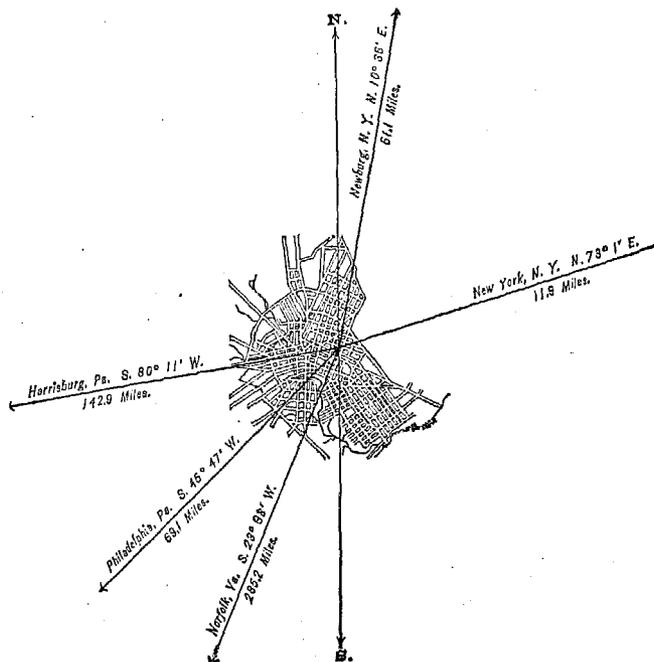
From the foregoing table it appears that the average capital of all establishments is \$15,678 61; that the average wages of all hands employed is \$372 15 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$19,554 47.

ELIZABETH,

UNION COUNTY, NEW JERSEY.

POPULATION IN THE AGGREGATE, 1820-1880.

Year	Inhab.
1790	.....
1800	.....
1810	.....
1820	3,515
1830	3,455
1840	4,184
1850	5,583
1860	11,567
1870	20,832
1880	28,229



POPULATION BY SEX, NATIVITY, AND RACE; AT CENSUS OF 1880.

Male	13,608
Female	14,621
Native	20,644
Foreign-born	7,585
White	27,477
Colored	* 752
* Including 2 Indians	

Latitude: 40° 40' North; Longitude: 74° 13' (west from Greenwich); Altitude: 0 to 60 feet.

FINANCIAL CONDITION:

Total Valuation: \$11,540,835; per capita: \$409 00. Net Indebtedness: \$5,512,638; per capita: \$195 28. Tax per \$100: \$2 10.

HISTORICAL SKETCH.

The first settlement of Elizabeth was made in 1665, the settlers coming from the New England states, principally from Connecticut. The "new charter" for the borough of Elizabeth is dated 1789. The charter for the city of Elizabeth was granted March 13, 1855. The present city is only about one-tenth the size of the old borough. There have been no extensive fires. The periods of depression were in 1837, and from 1871 to 1877. Elizabeth was formerly the capital of New Jersey, but ceased to be such about 1790.

ELIZABETH IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of the city:

LOCATION.

Elizabeth lies in latitude 40° 40' north, longitude 74° 13' west from Greenwich, about 14 miles by rail west of New York. The average elevation of the city above sea-level is 30 feet, the lowest point being tide-water and the highest 60 feet above. There is a water-front of about 1 mile upon Newark bay and Arthur Kill channel, the depth being from 16 to 21 feet. The depth at pier-line is from 12 to 14 feet. Elizabeth has water communication with New York and Raritan bays, and thence by either route to the ocean.

RAILROAD COMMUNICATIONS.

The city has the two following railroad lines:

The Pennsylvania railroad, for New York, Philadelphia, and the West.

The Central Railroad of New Jersey, for New York, Philadelphia, and Long Branch.

TRIBUTARY COUNTRY.

The tributary country is chiefly manufacturing. The most prominent enterprise is the Singer Sewing Machine Manufacturing Company, which employs an average of 1,500 hands. The agricultural interest is small, the farmers and gardeners raising only enough for the supply of the city. Elizabeth has no local trade.

TOPOGRAPHY.

The soil is a heavy loam with a large proportion of clay. There are veins of sand and gravel; underlying is red shale, often near the surface, and in some places more than 40 feet below it. The city is level, the streets having a grade of 6 to 1 in 100 feet. The country north of the city is rolling, and there is little woodland in the vicinity.

CLIMATE.

There being no reliable records from which to obtain the temperature of Elizabeth, it is assumed that the climate differs but little from Newark, New Jersey, which see.

STREETS.

The total length of streets is 79 miles. Of these, 3 miles are paved with cobble-stones, 10 miles with stone blocks, 1 mile with asphalt or other composition, 1 mile with broken stone, and 12 miles with wood. The cost of these per square yard, as nearly as may be estimated, was: Cobble-stones, \$1 50; stone blocks, \$2 50; asphalt or other composition, \$4; broken stone, \$2 50; wood, \$4. There are 93 miles of sidewalks of bluestone flagging 4 feet wide. The average cost was \$2 25 per square yard. The streets which are paved with cobble-stones have gutters of bluestone, 14 inches wide. The other streets have their gutters formed of the same material with which the street is paved. Trees are planted to a very considerable extent; they are usually placed just inside the curb line. The construction of the streets is done by contract, the repairs by the day. All work amounting to over \$100 has to be advertised and let to the lowest bidder. The annual cost of this work is at present nominal. Contract work is preferred. A steam-roller has been used with satisfactory result. The total length of horse-railroads is 5 miles, with 20 cars and 60 horses, and 25 men employed. The rates of fare are 5 and 6 cents, and the total number of passengers carried during the year was 742,000.

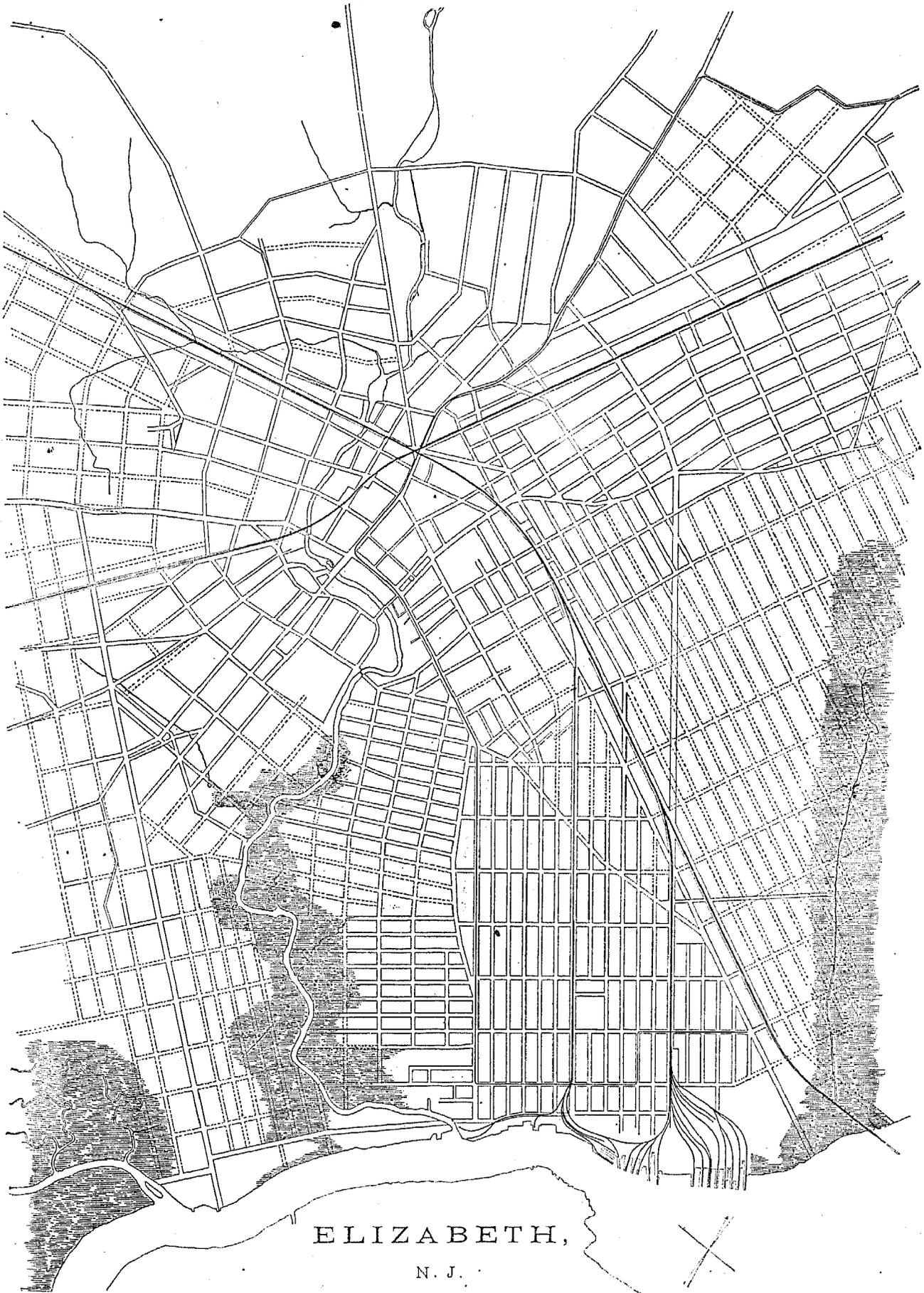
There is one omnibus line, which has 1 vehicle and 2 horses and employs 2 men. The rate of fare is 10 cents, and the total number of passengers carried during the year was 40,000.

WATER-WORKS.

The water-works belong to a private corporation, and their cost was \$800,000. Water is pumped from Ursine lake into a reservoir. The greatest amount pumped per diem is 3,000,000 gallons, and the least 2,000,000. The average cost of raising 1,000,000 gallons 1 foot high is 10 cents. The yearly cost of maintenance, aside from cost of pumping, is \$40,700, and the yearly income from water-rates is \$51,900. The Worthington meters are used, and are found to prevent waste of water.

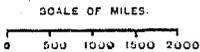
GAS.

The gas-works are owned by a private corporation. The daily average production is 78,000 feet, the cost being \$2 50 per 1,000 feet. There are 350 street-lamps, and the city pays \$26 50 a year for each. The yearly income from meter-rates is \$50,000.



ELIZABETH,
N. J.

MOSS ENG. CO., N. Y.



PUBLIC BUILDINGS.

The city owns 1 city hall, cost \$150,000; 3 school-houses, cost \$175,000; 7 engine-houses, cost \$78,500; and 1 almshouse, cost \$40,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are 5 public parks, having a total area of 24 acres and costing \$424,000. These are: *Jefferson Park*, 4 acres, cost \$200,000; *Jackson Park*, 6 acres, cost \$100,000; *North Park*, 10 acres, cost \$75,000; *Scott Park*, 3 acres, cost \$40,000; *Sheridan Park*, 1 acre, cost \$9,000. There are no records of the yearly cost of maintenance. The parks are under the control of the commissioner of streets.

PLACES OF AMUSEMENT.

There are no theaters. The principal hall, where all entertainments are given, is known as Library hall, and is situated on Broad street. It was built in 1857, is 56 by 200 feet in size, and cost about \$40,000. It has a seating capacity of 800. It is used for concerts, lectures, and occasionally for dramatic performances. There are no concert- or beer-gardens.

DRAINAGE.

The following information concerning the sewerage of Elizabeth is furnished by Mr. Ernest L. Meyer, city surveyor:

The system comprises over 30 miles of brick and pipe sewers. Before their construction there were a few private drains. The work was completed about 1875. The whole system is constructed according to a regular plan, the discharge being above mean low water, but the mouths of the sewers are covered at high tide. The discharge is into "the river, Staten Island sound, and Newark bay". The whole system was constructed without provision for ventilation. The city surveyor has recommended the use of perforated manhole-covers. "The sewers have all been self-cleansing, except a few of the brick sewers from which deposits had to be removed by hand; this was found necessary, however, only a few times since the sewers were built. No deposits whatever accumulated in the pipe sewers." The cost of cleansing is said to have been trifling.

The cost of the sewers was assessed by a commission on the property benefited; but the courts have overruled many of these assessments, and a large amount will have to be paid by the city at large. The assessments are by area and frontage.

The cost of each inlet-basin and its connection with the sewer was about \$90, and the average cost of each manhole of average depth was about \$30.

CEMETERIES.

There are 4 cemeteries connected with the city:

Evergreen Cemetery contains 40 acres, and is situated about 1½ mile from the city hall, between Elizabeth and Newark.

Mount Olivet Cemetery contains 20½ acres, and is situated 3 miles north of Elizabeth.

The First Presbyterian Burial-ground, on Broad street, and *Saint John's Church Burial ground*, also on Broad street, are both connected with the churches from which they are named, and only old lot-owners are interred therein.

The grounds of Evergreen cemetery were laid out an expense of \$60,000. It belongs to a corporation, and is governed by a board of trustees chosen by the lot-owners. In the past five years there have been 2,676 interments, the total number being between 6,000 and 7,000. The cemetery contains about 8 miles of pathways and drives. Mount Olivet cemetery is Roman Catholic, and is governed by the diocese of Newark. The lots are 8 by 10 feet, and cost \$30 each. The number of interments is 2,500.

MARKETS.

There is one public market—City market—situated under the city hall. The cost of construction is included in the cost of the city hall, and therefore can not be accurately given. The market contains 8 stalls, 4 of which are at present occupied. Farmers and venders are not allowed to occupy the surrounding space. The stalls rent for from \$5 to \$6 per month. The receipts for the year were \$650, and expenses \$480. The ordinance requires the market to be open from sunrise to midnight, but it is the custom to close from noon till 4 p. m., closing for the day at 8 p. m.

The market supplies about one-half of the inhabitants, the other half being supplied by two resident wholesale butchers.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary organization is an independent board of health composed of 7 members, 2 of whom are physicians. The annual expense of the board is \$700, and in case of an epidemic the increase is unlimited. In absence of epidemics the board has power to remove infected persons to the pest-house and infected materials

beyond the city limits; it may declare portions of the city to be infected districts, and prevent persons passing to and from them; it may enter houses and premises at all proper times, and, when necessary, may cause the removal or disinfection of any thing injurious to the public health. The chief executive officer is the health inspector, who has a salary of \$200 per year. The board is organized with the mayor as president and the city clerk as clerk of the board. Any three members constitute a quorum for transacting business. There are no assistant inspectors. The police force has no power, but is required to lend all necessary assistance. When nuisances are reported the inspector visits the place complained of and makes a report to the board. The board is appointed by the city council and meets upon call of the mayor. It inspects and corrects defective house-drainage, privy-vaults, cesspools, and sources of drinking-water, corrects defective sewerage, but has no control over streets. It exercises supervision over the conservation and removal of garbage. Permits are required for the burial of the dead, and are issued by the city clerk. The board fines any person bathing in the Elizabethtown river, and does not allow the draining or throwing of any offensive substance into it. Scavengers are required to have a license, and none but the Odorless Excavating Company are allowed to collect or convey any excrement through the streets until after 10 p. m.

INFECTIOUS DISEASES.

Small-pox patients are quarantined at home, or, if considered necessary, sent to the small-pox hospital. Scarlet-fever patients are not isolated. In case of the breaking out of contagious diseases in the public schools, the attending physician notifies the health officer, who communicates with the principal of the school, and instructs him as to the action to be taken. The pest-house is situated upon the poor-house farm. Vaccination is not compulsory, and is not done at the public expense. Births and deaths are registered by the city clerk and a record is kept by him. The board makes no reports.

MUNICIPAL CLEANSING.

Street-cleaning.—There is no regular system of street-cleaning in Elizabeth. The cleaning is done by the city with its own force, wholly by hand, no sweeping-machines being used. It is done as often as required, and is said to be satisfactory. The annual cost to the city is about \$4,000. The sweepings are deposited on vacant lots.

Removal of garbage and ashes.—The garbage and ashes are removed by the city's force three times a week. While awaiting removal it is kept in receptacles, but there is no regulation for keeping the garbage and ashes separate. Ashes are sometimes used for filling-purposes, otherwise they are dumped on vacant lots with the garbage. The annual cost to the city is about \$2,200. There appears to be no injury to the public health caused by this system.

Dead animals.—The carcass of any animal dying within the city limits is removed by the city's force and buried. There is no record kept of the number removed or of the cost of removal.

Liquid household wastes.—Almost all the liquid household wastes go into the public sewers, none being allowed to run into the street-gutters. Cesspools and dry wells are used to a small extent where there are no sewers, and are required to be built not less than 8 feet deep, with stone sides. These are open at the bottom and are porous. There is no record as to overflows or water-closet wastes. The cesspools may be cleaned out only between the hours of 10 p. m. and 4 a. m. There are no cases reported of the contamination to drinking-water from the overflowing or underground escape from cesspools.

Human excreta.—The majority of the houses depend on privy-vaults. All water-closets in the city deliver into the public sewers. There is no regulation as to the construction of privy-vaults, and it is not stated whether or not they are water-tight. On complaint being made to the health inspector, they are emptied by parties licensed by the city, the contents being used as a fertilizer, not being allowed, however, within the gathering-ground of the public water-supply. The dry-earth system is used to a very small extent.

Manufacturing wastes.—As far as possible the liquid manufacturing wastes are run into the sewers, but there is no ordinance regulating their disposal.

POLICE.

The police force is appointed by the city council, and is governed by the mayor and police committee. The head of the force is the chief of police, salary \$1,500 per annum, whose duty it is to command the force subject to the orders of the mayor and city council. The force consists of 1 captain, salary \$1,000 per annum; 2 lieutenants, salary \$900 each per annum; 3 sergeants, salary \$2 25 per day each; and 25 patrolmen, salary \$2 per day each. The men provide their own uniforms of dark-blue cloth, at an annual cost of \$75. They are equipped with batons and revolvers, each man furnishing his own. The hours for duty are 9½ by day and 8 by night, and there are 30 miles of streets patrolled. There have been 782 arrests in the past year, the principal causes being felony and misdemeanors; of these, some were committed for trial and some fined or sentenced to the county jail. The amount of property reported stolen or lost was \$2,300, of which \$1,100 was recovered and returned to owners. There were 1,953 station-house lodgers during the year, as against 1,078 in 1879; there were no free meals given. Special policemen are appointed by the mayor, but their duties do not extend beyond the premises where they may be employed. The cost of the force during the year 1880 was \$23,327 71.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Elizabeth for 1880, being taken from tables prepared for the Tenth Census by J. F. Wiley, special agent:

Mechanical and manufacturing industries.	No. of establishments.	Capital.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	Value of materials.	Value of products.
			Males above 16 years.	Females above 15 years.	Children and youths.			
All industries.....	149	\$2,453,180	3,151	216	482	\$1,749,456	\$2,915,851	\$6,828,027
Blacksmithing (see also Wheelwrighting).....	10	12,200	25			10,820	14,000	33,600
Boots and shoes, including custom work and repairing.....	3	26,600	23	7		17,420	36,600	63,800
Bread and other bakery products.....	19	31,050	50	1		20,528	99,095	150,900
Brick and tile.....	3	75,000	98		1	44,000	70,500	138,000
Carpentering.....	5	11,800	48			20,425	56,500	97,000
Carriages and wagons (see also Wheelwrighting).....	3	2,500	10			3,940	6,800	16,000
Clothing, men's.....	6	16,300	23	13	2	13,100	24,700	51,000
Confectionery.....	3	26,300	9	5	1	5,450	57,000	87,000
Dyeing and cleaning.....	3	3,800	7	3		2,400	1,950	6,750
Foundry and machine-shop products.....	3	165,000	152		10	90,000	110,000	248,000
Kindling wood.....	4	4,450	5		1	1,660	3,410	9,000
Painting and paperhanging.....	7	12,700	32	2		15,450	28,100	81,500
Photographing.....	3	5,900	4			2,630	2,900	9,500
Plumbing and gasfitting.....	6	24,400	39			16,000	28,500	55,300
Printing and publishing.....	6	41,600	63		11	29,580	34,700	73,600
Tobacco, cigars and cigarettes.....	13	15,350	19		3	8,100	22,830	43,850
Upholstering.....	4	8,000	9			4,850	12,200	21,800
Wheelwrighting (see also Blacksmithing; Carriages and wagons).....	3	860	3			860	1,200	3,500
All other industries (a).....	46	2,030,030	2,542	185	453	1,433,303	2,304,806	5,637,327

a Embracing clothing, women's; combs; cordage and twine; cutlery and edge tools; drugs and chemicals; fancy articles; fertilizers; flouring- and grist-mill products; hardware, saddlery; instruments, professional and scientific; iron and steel; lamps and reflectors; leather, curried; leather, tanned; liquors, malt; lumber, sawed; marble and stone work; masonry, brick and stone; mineral and soda waters; musical instruments and materials (not specified); oilcloth, floor; patent medicines and compounds; paving materials; roofing and roofing materials; rubber and elastic goods; saddlery and harness; sash, doors, and blinds; saws; sewing-machines and attachments; shipbuilding; spectacles and eyeglasses; stone- and earthen-ware; straw goods; tinware, copperware, and sheet-iron ware; umbrellas and canes; and wood, turned and carved.

From the foregoing table it appears that the average capital of all establishments is \$16,464 30; that the average wages of all hands employed is \$452 18 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is \$32,238 24.