VIRGINIA.

ALEXANDRIA,

ALEXANDRIA COUNTY, VIRGINIA.

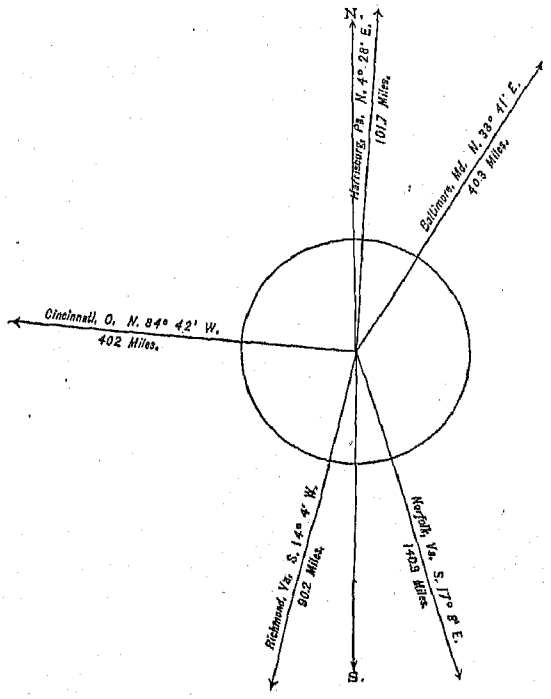
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	4,971
1810	7,227
1820	8,218
1830	8,241
1840	8,459
1850	8,734
1860	12,652
1870	13,570
1880	13,659



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	6,438
Female	7,221
Native	13,060
Foreign-born	599
White	8,279
Colored	5,380

Latitude: 38° 48′ North; Longitude: 77° 2′ (west from Greenwich); **Altitude: 56 feet.** (*a*)

FINANCIAL CONDITION:

Total Valuation: $3,673,674; per capita: $269 00. Net Indebtedness: $1,037,088; per capita: $75 93. Tax per $100: $2 73.

HISTORICAL SKETCH.

In 1608 Captain John Smith and 14 companions explored the Potomac and saw, first of all white men, the site of Alexandria. It was occupied by a small tribe of Indians, called "Toags". Captain Smith's account of the place is very short, but sufficiently bespeaks the hospitality of the inhabitants: "At Toags they did their best to content us." Other Indians inhabited localities near, but all were driven away or killed, in 1676, by the fierce onslaught made upon the red men, which originated to protect the settlement against savage inroads. A few years before,

a At Smithsonian station.

in 1669, Robert Howison had obtained a patent for the land on which Alexandria stands, and had sold the patent to John Alexander, a Stafford planter, for 6,000 pounds of tobacco. The first known settlement on this patent was made in 1695 by Thomas Pearson, upon Pearson's island. The principal product of the time and locality was tobacco, and fields of the weed soon succeeded the original growth. Tobacco-growing required a warehouse, and in 1731 the Hunting Creek warehouse was built by the county authorities of Prince William county, on the high bluff overlooking the river, near where the gas-works now stand. Around this warehouse gathered the hamlet of Belhaven. With this hamlet for a nucleus, in 1749, William Ramsey, John Carlyle, and their associates founded the town of Alexandria. The town thus originated was laid out and gradually spread over old fields from which the first fertility had been sucked by tobacco.

The town plot was the very picture of colonial loyalty, the "Royal" and "Fairfax" family names ran side by side in its two long streets, which were crossed by the short streets bearing the Fairfax title.

The town grew up amid restrictions on commerce and fetters on manufactures which it now seems incredible that any community schooled in *Magna Charta* could have borne; but the colonists in Alexandria, like Anglo-Saxons everywhere, had a profound respect for law. They submitted to these restrictions because they were accustomed to them, and as they were pressed by French power, and in constant dread of the Indians, which still lingered near, they expected British aid, and thought the profits which England made by a monopoly of their trade was a high price to pay for such assistance, but at least it was a price paid for something. But when Braddock came, and the British troops, instead of protecting the colonists, had been compelled to rely on the colonial troops to protect them, the feeling changed.

The British monopoly of their trade and the restrictions on navigation and manufactures annoyed them. They felt the yoke, and when the time came for throwing it off, it found the people of Alexandria radically for it.

Before the close of the Revolution the political changes already effected demanded new municipal organizations. On the 9th of March, 1790, the first municipal government went into operation, with Robert Townshend Hooe as mayor. The first business of the new government was to grade the streets so as to make an easy approach to the river. The town had been built upon a bluff overlooking the Potomac river, and the inclines to the shore were rough and steep. As the future of the city was deemed to be a commercial one, it was considered wise to cut down this bluff, and it was done, reducing the level here from 10 to 15 feet. The town having been graded, the work of paving streets was begun in 1795. Before the close of the century Alexandria was ceded by Virginia to the federal government as a part of the District of Columbia, and, on the 27th of February, 1801, the exclusive legislation of Congress was extended over the town, but the charter of 1779, with the subsequent acts of Virginia in relation thereto, were continued in force until the 25th of February, 1804, when Congress enacted a new charter for the town.

After the close of the war, Alexandria's commerce grew apace; but soon—1799—came the war with France, and many of her finest vessels were captured by French cruisers. After this blow there came the terrible yellow fever in 1803, "which made a lazar house of the river-front and carried off one in ten of the Alexandrians that dwelt between Fairfax street and the river". The shipping business had scarcely recovered from this when the embargo act, in 1809, fell upon it like a paralytic stroke. In a few years more came the war with Great Britain, "making the port and its commerce a prey to the British frigates 'Euryalus' and 'Sea Horse', which, in August, 1814, sailed up the Potomac with bomb-ketches and captured the town". The captors plundered the warehouses of all the tobacco, flour, cotton, and liquor they found there, and, loading these on to vessels which they seized, sailed away. When peace came in 1815, Alexandria had lost all chance of competition with Baltimore, and she had, too, a nearer rival in the presence of Washington city, which was already drawing trade and population from the Virginia side. The wealth of the nation was used to build up its capital, but very little money was spent on the Virginia portion of the District of Columbia. Deprived of the aid which a connection with Virginia would have afforded, the town remained in a corner of the district, a useless adjunct to the federal territory. Whatever favors Congress conferred were given to Washington, and Alexandria beheld the growth of other cities without power to imitate them. Under these circumstances the town authorities did all that was within their power. Streets were extended and improved, the town was lighted, in the manner then usual, with oil-lamps, and, in 1817, the market building with the cupola and town clock was erected. On January 18, 1827, began a very destructive fire, which burned through the city to the foot of Duke street, destroying 53 houses and causing a loss of $103,000.

In 1828 the Ohio and Chesapeake canal was begun, and in 1829–'30 the Alexandria aqueduct, crossing the Potomac on granite piers, was begun, thus connecting Alexandria by a lateral canal with the Chesapeake and Ohio canal. It was completed in ten or twelve years, but Georgetown, 9 miles nearer the sources of its commerce, reaped the benefit. The place seemed doomed to decay. It was then that Alexandria, isolated in one corner of the District of Columbia, was about to decrease instead of increasing her population; an earnest appeal was made to the state of Virginia, and in 1846 the general assembly opened the arms of the commonwealth to her long-estranged child; the federal government consented and the voters of the town approved, and in September, 1846, with processions, bonfires, and illuminations, and a celebration extending over three days, Alexandria again became a Virginia town. The state began at once to extend substantial aid to the town. It purchased at par the valueless bonds of the Alexandria canal held by the town, thus taking off three-fifths of its debt. With state aid the Orange and Alexandria railroad, with its extensions, the Manassas Gap, and the Alexandria, Loudoun, and Hampshire railroads, were begun, and hundreds of miles were constructed. An era of prosperity began. Over 100 houses were built in a single year; many large and fine ones, including the Pioneer mills, cotton factory, and large warehouses along the river-

front, were erected. On May 7, 1852, the general assembly granted to Alexandria a city charter, and the same was accepted by the people on the 4th of the following August. In June, 1860, there were 77 manufacturing establishments in operation, employing 785 hands, and producing, from raw material valued at $91,000, manufactured articles worth $860,000. Trade, both with foreign ports and coastwise, increased and assumed most encouraging proportions. The future was full of promise. The main reliance for commercial prosperity was on the valley of Virginia, of which Alexandria is the natural trade outlet. But, in the presence of railways, water-channels became valueless, and the contest for the trade of the valley became a matter of railroad enterprise. To reach Harrisonburg or Staunton was thought to be all that was needed to put Alexandria's commercial future beyond the reach of chance. The hope, the expectation, seemed well founded, and Alexandria, strong in the favor of the commonwealth, which her trade would help to build up, was sure of protection until the Manassas road was completed to Harrisonburg and commercial connections made that would never be broken. This was the outlook of the city in 1860. The iron rails to make the connection with Harrisonburg complete were piled on her wharves, where stood, on May 25, 1861, the Virginia pickets, whose warning guns announced the movement in force of the troops of the United States who occupied the place. Alexandria became, as it had been during the Revolutionary war, a hospital town. Thenceforward her commerce was ended. A blockade was declared, and the iron rails, bought to finish the Manassas road, were seized and sent off to make a military railroad near Bethel and Fortress Monroe. When the war ended, all chance of Alexandria's exclusive connection with the valley of Virginia was ended too. Baltimore helped to rebuild the road and controlled it. The connection between Winchester and Strasburg was made and managed also for the interest of that great city.

On the 27th of January, 1865, a new charter was granted, by which the government of the city was committed to a single body, called the city council, composed of four members from each ward, alternating by pairs, each two years. Under this charter all officers of the city except the mayor were chosen by the council. But this charter was in turn superseded by another, adopted on the 25th of the next January (1866), which arranged the legislative government of the city into two branches—a board of aldermen and a common council—together composing the city council. This remained in force until superseded by a new one, approved February 20, 1871, but not changing the form of government.

The census of 1870 found Alexandria with a slight decrease in her white population. Since that time, with many discouraging circumstances, Alexandria's progress has been measurably satisfactory; and, with a solid basis in the shape of additional trade and manufactures, which she is gaining, and her most favorable situation, she may reasonably expect yet more flattering corporate gains.

ALEXANDRIA IN 1880.

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

LOCATION.

The city lies in latitude 38° 48′ north, longitude 77° 2′ west from Greenwich, on the west bank of the Potomac river, 7 miles below Washington, 100 miles above the Chesapeake bay, where the river empties, and 200 miles from the Atlantic ocean. The situation of the Smithsonian Observatory station at Alexandria is 56 feet above mean sea-level. The river is here 1 mile wide, and accommodates vessels drawing 30 feet of water, thus affording water communication with Washington and, via the Chesapeake bay, the ports of the world.

RAILROAD COMMUNICATIONS.

Alexandria is touched by the following railroads:

The Virginia Midland railroad, running to Lynchburg and Danville, Virginia, and its connections.

The Alexandria and Fredericksburg railroad, running to Richmond.

The Alexandria and Washington railroad, to Washington and the North.

The Washington and Ohio railroad, to Point Pleasant, on the Ohio river (completed only to Round Hill, a distance of 56 miles).

TRIBUTARY COUNTRY.

Alexandria has a large trade with neighboring counties, by way of the river, in grain of all kinds; from the Maryland side much tobacco is also received. Steamers ply daily between this place and Norfolk, connecting with steamers on the James river and to the North; and for the accommodation of local river trade three lines of steamers are engaged. There is a considerable growth of new timber in the country surrounding, which has grown up since the cutting of the old growth during the rebellion.

STREETS.

The city's streets are 35 miles in length, of which 20 miles are paved with cobble-stones, at a cost of 60 cents per square yard. Sidewalks are paved with brick, and gutters are paved with cobble-stones, with brick centers. Tree-planting is very generally carried out by property-owners on the street lines. Street-repairing is done by day work, under the supervision of an officer of the city specially delegated for the purpose. As between the contract system and day work it is stated that the contract system is regarded as the better, as under the day's-work system inefficient laborers are never gotten rid of. At the same time, it is thought that the latter method secures more thorough work.

WATER-WORKS.

The water-works are owned by a private corporation, and their total cost was $95,700. The pumping system is used, the pressure in the pipes being 30 pounds to the square inch. The average amount of water pumped per diem is about 288,000 gallons. The yearly cost of maintenance, aside from the cost of pumping, is $4,916 05, and the yearly income from water-rates is $14,500. Water-meters are not used.

GAS.

The gas-works are owned by the city. The daily average production is, in winter 70,000, and in summer 20,000 cubic feet. The charge per 1,000 feet is $2. The city pays $30 for each street-lamp, 150 in number.

PUBLIC BUILDINGS.

The city's municipal offices are contained in its large and fine market building, being the council-chamber and station-house, and mayor's, corporation counsel's, and other offices. The total cost of the municipal buildings belonging to the city is $260,000. The city hall, including market buildings, cost $58,000. It was rebuilt in 1872, and the income up to the present year has repaid the cost. This resource now constitutes a portion of the sinking-fund for the extinguishment of the city's debt.

PUBLIC PARKS AND PLEASURE-GROUNDS.

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

PLACES OF AMUSEMENT.

Alexandria has the following concert-halls and lecture-rooms, but no theaters: Sarepta hall, seating 400; Alexandria Light Infantry hall, seating 800; Peabody School Building hall, seating 400; Burney's hall, seating 600; and Harmonic hall, seating 350. Halls used for amusements pay a yearly license fee of $25 each. There are the following concert- and beer-gardens: Englehardt's beer-garden and Portner's beer-garden.

DRAINAGE; CEMETERIES; MARKETS.

No information on any of these subjects was furnished by the city authorities.

SANITARY AUTHORITY—BOARD OF HEALTH.

The board of health is Alexandria's chief sanitary organization. It is an independent board, having twelve members, appointed annually by the city council, but one of whom, the health officer, who is president *ex officio*, is a physician. When there is no declared epidemic the annual expense of the board does not exceed $50, incurred in inquests on the bodies of persons drowned. During an epidemic the expenses of the board are limited by the appropriations of the city council. In the absence of an epidemic the board is authorized to do all such acts as it shall consider necessary to carry into execution the laws in relation to the removal of nuisances and the preservation of the health of the city. During an epidemic, either in the city or at points with which it has communication, the board may establish quarantine. It may order the removal of patients sick with contagious diseases to a temporary hospital. It may provide accommodations for persons who belong on board vessels undergoing quarantine, and generally exert a power over those matters influencing the sanitary condition of the city commensurate with the exigencies of the occasion. The health officer is the chief executive officer of the board, though the superintendent of police is required directly to serve all written orders to remove or abate nuisances which may be given him by any member of the board. The salary of the health officer is $50 per annum. The business of the board is transacted at meetings held monthly, or oftener if necessary, at which a majority of all the members makes a quorum, and a majority of the quorum may act. Only in case of epidemics are assistant health officers or inspectors employed. When necessary, extraordinary powers are given to them by the council. Inspections are not made regularly, but only as nuisances are reported, in the event of which the superintendent of police is ordered to have the nuisance removed at once. The recommendations of the city council, by which the board is appointed, are also invariably observed and acted upon. All interments must be made in the public burying-ground, and graves must be 6 feet deep.

INFECTIOUS DISEASES.

Small-pox patients are isolated either in their own home, when a yellow flag is placed at the door, or by removal to a hospital provided for the purpose. Scarlet-fever patients are not isolated. When necessary, vaccination is made compulsory, and, in the case of paupers, it is done at the public expense.

A register of the births, marriages, and deaths is kept by the clerk of the council.

REPORTS.

No stated reports are required of the board, but it occasionally makes reports in the city newspapers.

MUNICIPAL CLEANSING.

Street-cleaning.—This work is done by the city's force, wholly by hand, and at the public cost. The cleaning is done on the different streets when their condition requires it, and is well done. The cost of this work to the city in 1879 was $812 03. The sweepings are deposited on the outskirts of the city.

Removal of garbage and ashes.—Garbage is removed daily by the city's own force. While awaiting removal garbage must be stored in suitable vessels, ashes not being kept in the same receptacle. It is taken to the almshouse, and there fed to swine. Ashes are used for street-filling in the suburbs. The annual cost to the city for the removal of both is about $1,100. No nuisance or injury to health is reported to result from the improper handling or disposal of garbage and ashes, and the system pursued is considered a good one.

Dead animals.—These are removed and buried by the owners, or by the superintendent of police at their expense, if they can be found; if not, then at the expense of the city. Such animals, if they exceed the size of a cat, must be buried beyond the inhabited parts of the corporation; if they do not, they may be buried on the premises. The annual cost of this service is trifling.

Liquid household wastes.—It is reported that nearly all the liquid household wastes of the city are delivered into the public sewers. No other information on this subject was reported.

Human excreta.—Privy-vaults are cleaned out, and the contents are removed, only by the annually appointed night-scavenger, and he can perform his duties only between the hours of 11 p. m. and 4 a. m. The carts employed in this service must be tight and have a suitable cover. For his services he receives fixed sums, differing according to the sizes of the vaults. The night-soil is carried out of the city and used as a fertilizer, but not on land within the gathering-ground of the city's water-supply.

POLICE.

The police force consists of a captain at a salary of $550 per year; a lieutenant at a salary of $500 per year; and 15 patrolmen at a salary each of $480 per year. The men provide their own uniforms. The force is appointed by the city council, and is directly controlled by the mayor. A number of extra policemen, for special occasions, are appointed. There are also 4 candidates on the list for appointment to vacancies occurring on the force. These are called "ready men". The total cost of the department for the year ending March 31, 1880, was $8,374 90, including $124 90 for extra police service.

LYNCHBURG,

CAMPBELL COUNTY, VIRGINIA.

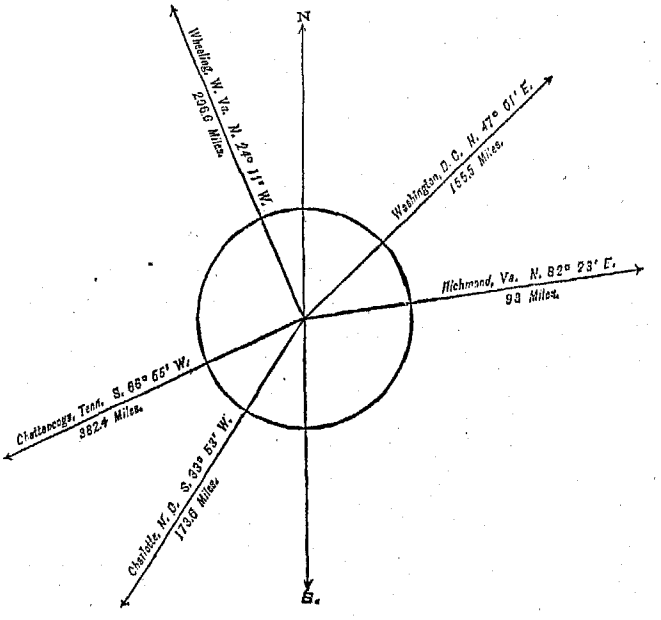
POPULATION

IN THE

AGGREGATE,

1830-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	4,630
1840	6,395
1850	8,071
1860	6,853
1870	6,825
1880	15,959



POPULATI

BY

SEX, NATIVITY, AN

AT

CENSUS OF 1

Male .....

Female .....

Native .....

Foreign-born .....

White .....

Colored .....

Latitude: 37° 22′ North; Longitude: 79° 7′ (west from Greenwich); **Altitude: 528 to 858 feet.**

FINANCIAL CONDITION:

Total Valuation: $8,405,610; per capita: $527 00. Net Indebtedness: $794,837; per capita: $49 80. Tax per $10(

HISTORICAL SKETCH.

Lynchburg owes its foundation to the legislature of Virginia, which, in October, 1786, appointed trustees to lay out 45 acres of the land of John Lynch "lying contiguous to Lynch's ferry", in the co Campbell. The trustees proceeded to sell the land, in half-acre lots, first at public auction, and later by sale, for the benefit of Lynch, in whose honor they named the village they had laid out "Lynchburg". S with an area of 45 acres, the village was increased as fast as new lots could be laid out, and its bounds ha extended from time to time, as these additions made changes necessary. In 1805, when it was incorporat town, a considerable addition to its territory was made; and as late as 1870, when the present boun assigned, the last and most extensive annexation took place. The trustees continued in the execution duty until 1817, but had no other control of the town than in regard to the title of unsold lots.

The first attempt at a water-supply was made by the Lynchburg fire company, which in 1799 obtained permission to sink wells and put pumps in them for the general use. They made little use of the privilege, however; and a public supply of water being greatly needed, the council granted to John Lynch the right to convey water in wooden pipes through the streets, from springs on his farm near the head of Horseford branch, and to charge the citizens who used the water a certain price. The town reserved to itself the right to take water free of charge for use in case of fire. This was the only supply used—a very inadequate one; so in 1827 an agitation of the question began, and finally in 1830 new water-works were completed. They consisted of a dam and a pump-house, where, by means of a double force-pump driven by a breast-wheel, water from the James river was raised to a reservoir capable of holding 400,000 gallons, situated on Clay street, 253 feet above the level of the town. The works cost $50,000, and to pay for them Lynchburg contracted its first debt. It was supposed at the time that ample provision had been made for an indefinite future, but the growth of the city in the last few years has compelled the construction of a large reservoir on College hill. A bequest of $20,000, left by Mr. Samuel Miller in 1869 for additions to the water-works, contributed largely to meet the cost of this work.

The first court-house was built in 1812, and a market in 1813. Both these buildings have now disappeared, the first having been replaced by the present court-house in 1852, and the last, after receiving many additions, was demolished in 1872. A new market-house was built in the next year. In 1816 the town had a population of about 3,000. Its growth in wealth far outstripped the increase in numbers, for in 1850, while the population was only 8,071, the trade was reckoned in millions, and the value of its manufactures exceeded $700,000 a year.

The construction of the James River and Kanawha canal and the Virginia and Tennessee railroad added greatly to the advantages of Lynchburg as a trading center. In 1850 it had about 30 tobacco factories, several large flouring-mills, a cotton-mill, and an iron foundery. Lynchburg was made a city in 1852, but in the decade from 1850 to 1860 the population fell off more than 1,000, and during the war and the reconstruction period was nearly stationary. At the breaking out of the civil war the city sent nearly 1,000 men to the confederate army, and hardly a battle was fought in which Lynchburg was not called to lament the loss of some of her citizens. The city was not entered by the federal forces until after the capture of Appomattox Court-House.

After the war Lynchburg entered upon a new period of growth, and is to-day one of the most flourishing cities of Virginia. The James, which is here about 600 feet wide and 4 feet deep, offers a magnificent water-power, which only needs to be completely developed to make Lynchburg a very important manufacturing city. Since 1870 the population has increased from 6,825 to 15,959, nearly 134 per cent. The city has about 30 large tobacco factories and 6 warehouses, 3 large iron founderies, 3 large flouring-mills, and many other industries. As an inducement to the establishment of new industries the city exempts from taxes, for a space of ten years, all capital so employed. The region about Lynchburg is very rich in coal and other mineral deposits, and the development of these is destined vastly to increase the city's wealth. The present valuation of real and personal estate is over $8,000,000. There are 16 churches and chapels; 4 banks, with an aggregate capital of $525,000; 2 newspapers; and good schools, partly maintained by the Peabody fund.

The location is a peculiarly beautiful one. The James, which 20 miles to the west has broken through the Blue ridge, reaches along its beautiful valley by the city; the wooded country stretching out on all sides leads the eyes gently upward, until in the distant southern horizon they rest upon the famed peak of the Otter; and when one remembers that this beautiful prospect covers deposits of coal and minerals of great value, and that the James furnishes the power necessary to reduce these minerals to usefulness, he may well believe, with the energetic and prosperous people of Lynchburg, that a future of increasing wealth and importance lies open before the city.

LYNCHBURG IN 1880.

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

LOCATION.

Lynchburg is situated in latitude 37° 22′ north, and longitude 79° 7′ west, on the right or south bank of the James river, about 100 miles west by south from Richmond. The lowest point is about 528 and the highest 858 feet above the sea-level, the average level being about 651.5 feet. The James, which is here about 600 feet wide and 4 feet deep, is not navigable, the only means of water communication being by the James River and Kanawha canal, termini Richmond and Buchanan, the former 147 and the latter 50 miles from Lynchburg by the canal.

RAILROAD COMMUNICATIONS.

The Atlantic, Mississippi, and Ohio railroad, termini Bristol, Tennessee, and Norfolk, Virginia, and the Washington City, Virginia Midland, and Great Southern railroad, termini Alexandria and Danville, Virginia, connect the city with this terminal point, and put the city on the trunk-lines connecting the South with the seaboard.

TRIBUTARY COUNTRY.

The country about Lynchburg is mainly devoted to agriculture, tobacco being the principal crop. Market-gardening is carried on to a considerable extent.

TOPOGRAPHY.

The soil is red clay and gravel, with occasional immense bowlders of water-worn sandstone. The general rock formation is gneiss, with outcroppings of mica-schist and bastard granite. The variations of level are very abrupt, frequently as much as 24 feet in 100. The natural drainage is excellent—on one side directly into the river, and on the other into a small creek or natural course, which the city is fast making into a sewer.

The surrounding country is more elevated than the general level of the city. There are no marshes, ponds, or lakes of any consequence in the vicinity. Within a radius of 5 miles of the city, the forests, which used to be quite extensive, have been nearly all cut off.

CLIMATE.

The highest recorded summer temperature since 1873 is 100°, the temperature in average years reaching its highest point at 97.21°. The lowest recorded winter temperature in the same period is —5°, the lowest in average years being 2.75°. The climate is regarded as especially beneficial to invalids suffering from debility or pulmonary disease. The extreme heat of summer is tempered by cool breezes from the south, and the nights are always cool. Malarial fevers are very rare.

STREETS.

Lynchburg has 47½ miles of streets, 3 miles of which are paved with cobble-stones, about one-half mile with Belgian stone-block paving, and three-quarters of a mile with broken stone. The remaining 43¼ miles are unpaved. The cost of the Belgian pavement per square yard is $2 65; of the broken stone, 60 to 75 cents; and of cobble-stone, $1 to $1 25. The Belgian blocks are most easily kept in repair, the cobbles next, and the broken stone last in the scale of ease. No statement of the cost of repairs per year can be made, as no separate account of the expense is kept. The sidewalks are of flat stones of gneiss. The street-way extends from curb to curb, no separate gutter being made. The curbstones are generally of gneiss, sometimes of granite. The abutters have planted trees along the sides of the streets, placing them, by the direction of the city engineers, 12 inches back from the curb. The cost of constructing and repairing the streets varies from year to year. In 1878–'79 it was $21,613; in 1879–'80, $18,857; and in 1880–'81, $28,297. The total length of the horse-railroads is about 2 miles. There are 6 cars in all, drawn by 12 horses and 12 mules, and employing 8 men. The cash-fare is 6 cents; tickets, 5 cents. There are no omnibus lines.

WATER-WORKS.

No more detailed account of the water-works can be given than the information embodied in the "historical sketch" of the city.

GAS.

The city is supplied with gas by a private corporation. No information as to the amount of gas produced, or of the rates charged, could be obtained.

PUBLIC BUILDINGS.

The city owns and uses for municipal purposes a court-house, 6 engine-houses, and 4 school-houses. No record of the value of these buildings could be found. The city hires one engine-house and a building for the use of the city treasurer and other officers.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Lynchburg owns a lot of about 10 acres, known as the "Fair grounds", which it leases to the Agricultural Society, by which all improvements have been made. When not in use by the society, these grounds are open to the public. They are situated just beyond the southwestern part of the city, and were a gift to it. No expense is incurred by Lynchburg in maintaining them. They are controlled by a committee of the city council and the city engineer.

PLACES OF AMUSEMENT.

The Lynchburg opera-house, which has a seating capacity of about 1,500, is the only theater in the city. Holcombe hall, seating about 600, is used for concerts, lectures, and entertainments. Theaters pay a license of $100 per annum to the city, and to the state $3 and 1 per cent. of the receipts for each entertainment. A concert- and beer-garden is in process of erection.

DRAINAGE.

The city has as yet no system of public sewers. No information of the present system of drainage could be obtained.

CEMETERIES.

Lynchburg has 5 cemeteries, as follows:

The Old Methodist or *Public Cemetery*, situated in the western part of the city—area about 12 acres—has been in use about 60 years. No charge is made for interment in this ground, which is controlled by the city council through a superintendent.

Presbyterian Cemetery, situated in the southern part of the city—area 12 acres—is controlled by a board of trustees. It has been in use about 45 years. Lots 16 by 20 feet in size are sold to private persons at a uniform price of $50.

Spring Hill Cemetery, just beyond the corporate limits to the southwest, contains 30 acres, which are laid off in lots varying in price from $40 to $250. It has been in use 26 years.

Saint Francis Xavier Cemetery (Catholic) contains 4 acres. It is a private enterprise of the priest, who sells lots, 16 by 17 feet, at $50. It is situated north of the city, and has been in use 8 years.

White Rock Cemetery is a new burial-ground, lying to the south of Lynchburg, and owned by colored people. It contains 8 acres.

The number of interments in these cemeteries is estimated at 18,000.

MARKETS.

The city owns a market-building, which cost $26,000, and controls an area of 15,312 square feet around it, which is used for wagon-stands. Stalls are rented at various prices according to their location and the use which is to be made of them. Butchers' stalls cost $220, $230, $240, $270, and $300; hucksters', from $30 to $75. The total rental is about $4,000. They are open from daylight until 12 m., and on Saturday all day. The gross amount of the annual sales could not be obtained.

SANITARY AUTHORITY—BOARD OF HEALTH.

The city council elects annually 3 physicians to serve as a board of health, who have the general charge of the sanitary condition of the city. This board, which meets regularly once a month, has unlimited power, both during and in the absence of an epidemic, to take such steps as seem necessary to prevent the origin and spread of any contagious or infectious diseases, to abate nuisances, and, in general, to preserve the public health. Each of the members receives a salary of $100 a year, and all have equal authority, except that only the president of the board can summon a meeting. No health officers or assistants are regularly employed, but if their services are necessary the council will allow them to be appointed.

The police are the regular agents of the board, and visit all parts of the city, reporting to the president of the board any thing prejudicial to the public health. Inspections are regularly made only when complaint is entered. If on examination a nuisance is found to exist, the owner of the premises is ordered to abate it; if he refuses, the abatement is made by the mayor's orders, and the expense, with 20 per cent. additional as a penalty, is collected from the estate. Defective house-drainage, privy-vaults, cesspools, and sources of drinking-water are treated as nuisances, as are also defects in street-cleaning and in the few sewers.

The board has full control of the conservation and removal of garbage. The pollution of the river and streams is prohibited.

BURIAL OF THE DEAD.

Interments are generally made from 24 to 36 hours after the death has occurred. A permit must be obtained from the board of health before an interment will be allowed or the removal of a body from the city permitted. This permit is granted on receiving from the undertaker a certificate of death, signed by the attending physician, or the coroner when the case comes under his notice, stating the name of the deceased, sex, color, occupation, civil condition (single, married, or widowed), birthplace, etc. Graves in the cemeteries are dug 4 feet 8 inches deep for adults, and somewhat less deep for children.

INFECTIOUS DISEASES.

Small-pox patients are removed if possible to a small-pox hospital; if not possible, then the patient is quarantined at home. No action is taken in regard to scarlet-fever patients. All physicians are required to report any cases of infectious, contagious, or malignant disease coming under their notice. The authority of the board is sufficiently extensive to close the schools should contagious diseases break out in them. A pest-house is now in process of construction beyond the city limits, the old one, which was within the city, having been demolished. Vaccination is compulsory only for the children in the public schools, and is done at the public expense. The city ordinances require that the board of health shall always have vaccine matter at hand, and vaccinate, free of charge, all desiring it.

REPORTS.

The board reports monthly to the city council, but only the mortuary records are published.

No system of registering births has been in use. Diseases are registered by the board from the physicians' report, and deaths from the certificates of death in the hands of the undertakers.

MUNICIPAL CLEANSING.

Street-cleaning.—Along the paved streets the abutters are compelled to clean one-half the width of the streets opposite their premises, depositing the dirt in heaps in the middle of the street. These heaps are then removed by a contractor paid by the city. The unpaved streets are not cleaned at all. The city pays the contractor $1,800 a year; the cost of the cleaning to the abutters can not be stated. Such of the sweepings as are inoffensive are used for filling; the offensive part is dumped into the river below the city.

Removal of garbage and ashes.—Garbage, which is defined by the board of health as kitchen offal, and coal or other ashes, are removed by the person who takes away the street-dirt, and are included in the contract for that service. The garbage must be kept in vessels, placed where the contractor can easily get at them, and is removed twice in each week. The garbage is finally disposed of by dumping it into the river below the city. Ashes, when separate from offal, are used as filling, but if mixed with it are dumped into the river.

Dead animals are removed by the owners beyond the city limits. No estimate of the cost can be found, and no record of the number removed is kept.

Liquid household wastes.—Chamber-slops and kitchen and laundry wastes are disposed of alike, by running them into the public drains where these exist. A small amount is run into the street-gutters, which are flushed occasionally by the city during the summer months. The property-owners are required to keep the gutters clean. There are said to be no cesspools in the city.

Human excreta.—Less than one-fifth the houses are provided with water-closets, all of which empty into public drains or sewers. In those houses where privies are used the vaults are generally wooden boxes. No privy-vaults can be nearer than 10 feet to the line of any street or to any property line without the consent of the owner of the adjoining premises. The vaults must be cleaned when necessary, the work being done by licensed persons between 10 p. m. and daylight. The dry-earth system is rarely used. Night-soil is frequently buried in gardens in the suburbs, but is sometimes taken beyond the city limits, and in occasional cases is thrown into the river below the city. No regulation has as yet been necessary to prevent the use of night-soil as a manure on lands within the gathering-ground of the public water-supply.

Manufacturing wastes.—Lynchburg has no manufactures having wastes likely to become a nuisance, and so has made no regulation regarding the disposal of waste product.

NORFOLK,

NORFOLK COUNTY, VIRGINIA.

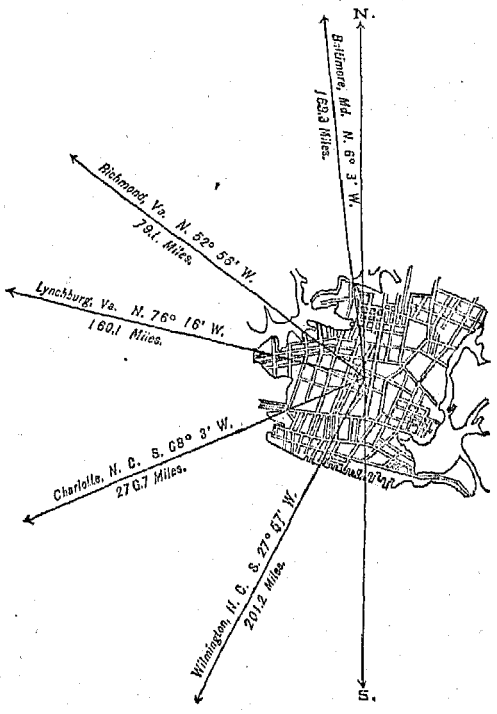
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	6,926
1810	.....
1820	8,478
1830	9,814
1840	10,920
1850	14,326
1860	14,620
1870	19,229
1880	21,966



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	10,069
Female	11,897
Native	21,131
Foreign-born	835
White	11,898
Colored	10,068

Latitude: 36° 51′ North; Longitude: 76° 17′ (west from Greenwich); **Altitude: 0 to 20 feet.**

FINANCIAL CONDITION:

Total Valuation: $11,057,249; per capita: $503 00. Net Indebtedness: $2,187,371; per capita: $99 58. Tax per $100: $3 35.

HISTORICAL SKETCH.

In 1680 the colonial assembly passed an act entitled "An act for the cohabitation and encouragement of trade and manufactures". It authorized the establishment of several towns on the various water-courses of the state, and, among others, "the town of Norfolk, in lower Norfolk, on Nicholas Wise his land on the eastern branch of the Elizabeth river, at the entrance of the branch". The town was first planted on its present eastern terminus, and for many years Bermuda street was its main avenue of trade and commerce, the principal wharves being in its immediate vicinity. On the 15th of September, 1736, Norfolk was raised to the dignity of a borough by letters patent from King George II, the preamble of the charter reciting that "the place was healthful and commodious for trade and navigation".

In the early days of its boroughship Norfolk grew and flourished, and at the breaking out of the Revolution was one of the most prosperous ports of the colonies. The Revolution, however, brought ruin to Norfolk. On the 1st of January, 1776, six months before the declaration of independence, an English fleet, consisting of five vessels, under Lord Dunmore, opened a heavy cannonade upon the town, and every house in it was burned, with the exception of an outhouse used as a dairy, situated near Market square. In a short time, however, the people had rebuilt the borough, and it again advanced on its onward course. In 1780, 1,000 houses had been built since the fire, and the trade of the place was assuming the most important proportions. In 1805, 1806, and 1807 the annual exports of the place varied from $5,000,000 to $7,000,000, and the imports were correspondingly large. At this time it was the center of the West India trade with the country, did a large business in tobacco and naval stores, and promised to be the commercial emporium of the whole country. But the embargo proclamation, in 1807, closed the harbor of Norfolk, in common with all other American ports, to all foreign ships, and reduced its commerce to a coasting trade. In 1809 the embargo was raised, and the commerce of Norfolk again revived and prospered until it was again suspended by the war of 1812. The navigation act of 1820, which prohibited commerce between British colonies and American ports, struck a heavy blow at Norfolk, and produced a panic and bankruptcy among many of the merchants, and brought general distress and depression upon the people. The commerce of the town began to decline, and for many years continued to do so.

On February 12, 1845, Norfolk ceased to be a borough, and by virtue of the amended charter of that date became a city. The increase in the value of real estate during the year following was $122,048, and the tonnage entered and cleared at the custom-house showed a gain of 100 per cent. In 1847 the famine in Ireland produced an extraordinary demand for corn, and the export of this article from Norfolk was very great. From 1847 to 1855 Norfolk advanced slowly. In the summer of the latter year the city was afflicted with an outbreak of yellow fever, and before the disease was checked about 2,000 of the population fell victims to the deadly character of the epidemic.

From 1855 to the breaking out of the civil war the people of Norfolk were bravely engaged in recuperating their shattered energies, and by 1860 had nearly succeeded in recovering their lost ground. The war put a stop to all business, and at its close Norfolk found her capital impaired and her trade destroyed. Nothing daunted, the inhabitants went to work with a will, and in a few years the city was more prosperous than ever. The railroad and canal connections were reopened and extended, and large quantities of cotton came in. The market-gardens for supplying the northern cities with fruits and vegetables and the oyster fisheries have contributed much to the wealth and advancement of the city. Norfolk also handles the greater portion of the peanut crop of the country. During the year 1878 the value of the exports was $10,052,062, and the total tonnage cleared for foreign ports during the same time was 91,624 tons. Detailed tables, showing the industries, etc., of Norfolk, will be found a few pages farther on.

NORFOLK IN 1880.

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

LOCATION.

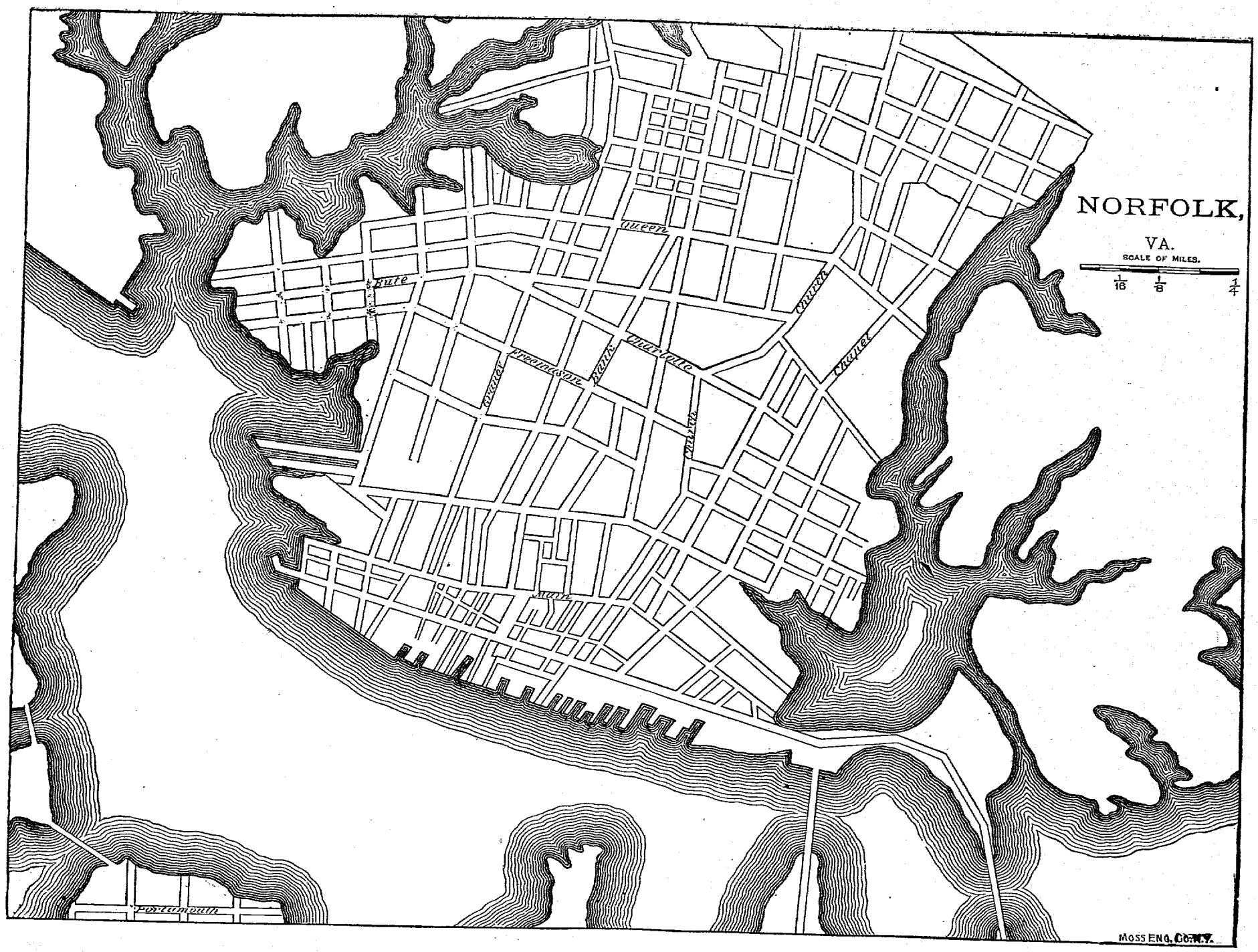
The city lies in latitude 36° 51′ north, longitude 76° 17′ west from Greenwich, on the north bank of the Elizabeth river, at the confluence of the eastern and western branches of that river, 8 miles from Hampton road, and 23 miles from capes Charles and Henry, on the Atlantic coast. The altitude above average high-water mark ranges from 10 to 20 feet. The channel capacity of the river is between 1,000 and 1,200 feet, with a draught of water of 22 feet, and the current is about 1 mile per hour.

RAILROAD COMMUNICATIONS.

Norfolk is touched by the following railroads:
The Norfolk and Western railroad, to Bristol, Tennessee.
The Elizabeth City and Norfolk railroad, to Elizabeth City, North Carolina.
The Norfolk and Ocean View railroad, to Ocean View, Virginia.

TRIBUTARY COUNTRY.

The country immediately tributary to the city, and with which it has a local trade, is agricultural, being entirely devoted to "truck-farming". The principal products are hay, cabbages, strawberries, and all early vegetables, and large quantities are annually shipped to the northern cities from Norfolk. The oyster fisheries and canning establishments employ a large number of persons. The location of the city and its climatic advantages have already earned for it the title of the "Atlantic Garden".


NORFOLK,
VA.
SCALE OF MILES.
1/16
1/8
1/4
Bute
Queen
Church
Chapel
Granby
Freemason
Main
Charlotte
Wide
Water
Portsmouth
MOSS ENG. CO. N.Y.

TOPOGRAPHY.

The site of the city is low. The strata met with in boring a well to the depth of 100 feet at the head of Market square were superficial soil, vegetable detritus, etc., a few inches; clay mixed with a little sand, about 7 feet; quicksand, from 12 to 20 feet; marl, firm and dry, composed chiefly of water-shells, about 30 feet; and decomposed marl, loose and interrupted at distances of 7 or 8 feet by strata of sand and gravel a foot or more in depth, the latter becoming coarser with the increase in depth, assuming the size of bowlders at the lowest point. The variations of level are from 0 to 20 feet above mean sea-level. Natural drainage is good. The elevation of the surrounding country is about the same as that of the city. There are no lakes or ponds. The salt-marshes are on the tributary of the river.

CLIMATE.

Highest recorded summer temperature, 102½°; highest summer temperature in average years, 99°. Lowest recorded winter temperature, 6°; lowest winter temperature in average years, 11°. The lands nearest salt-water courses are less liable to injury from frost than others. The Chesapeake bay to the north, and the ocean, with the nearness of the Gulf stream, modify the climate, rendering it milder here than on the same parallel a few miles in the interior. Marshes that are covered by the salt tides are considered innocuous; those above tide-water, or where the tides have no influence, are malarious. The winds from the north, south, and west are most salubrious, while those from the east are damp and charged with malaria.

STREETS.

The total length of streets approximates 26 miles, paved as follows: Cobble-stones, 6 miles; stone blocks, ⅕ mile; oyster-shells, 5 miles; rubble-stone, 3 miles; and dirt, 11⅘ miles. The cost per square yard of each, as near as it may be estimated, is, for cobble-stones, by contract, 36 cents; for rubble, by contract, 64 cents; for stone blocks, by day work, $1 57; and for oyster-shell, by day work, 12 cents. The relative facility with which each is kept clean is given as stone blocks first, and then rubble, cobble-stone, shell, and finally the dirt roads. The stone blocks are preferred for heavy traffic and the shell for light traffic. The sidewalks are of brick and flag, and are reported as bad, particularly with reference to grades. There is no system of tree-planting. The work of construction and repairs of streets is at present done by the day. The cost last year, by contract, was about $10,000. For work of any magnitude contract is preferred, but for repairs, day work. There is one horse-railroad with a total length of 3¾ miles. It has 12 cars and 32 horses, and gives employment to 21 men. The rates of fare are 4 and 5 cents.

WATER-WORKS.

The water-works are owned by the city, and their total cost is $500,000. The Holly system, or direct pumping, is used; the pressure in the mains per square inch, for domestic purposes is 40 pounds, and for fire purposes 90 to 110 pounds. The average amount pumped per diem is 650,000 gallons, the greatest being 800,000 and the least 460,000 gallons. The average cost of raising 1,000,000 gallons 1 foot high is 7 cents. The yearly cost of maintenance is $15,240, and the yearly income from water-rates is $22,866. There are about 62 water-meters in use, and it is reported that they pay for themselves in a very short time in saving water. There are 24½ miles of street-mains and 110 hydrants.

GAS.

The gas-works are owned by a private corporation. The daily average production is 76,279 cubic feet, and the charge per thousand feet is $2 40. The city pays $30 per annum for each street-lamp, 259 in number.

PUBLIC BUILDINGS.

The city owns and occupies for municipal uses, wholly or in part, 1 city hall, 1 jail, and 1 station-house, 1 fire-department building, 1 almshouse, 1 pest-house, and 7 school-houses. The total cost of these is given as $184,000. The city hall is owned entirely by the city, and cost $70,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are no parks in Norfolk.

PLACES OF AMUSEMENT.

There are 3 theatres in the city:
The Varieties, seating capacity 400, gives a performance every night.
The Norfolk opera-house, seating capacity 1,350, is hired by traveling shows.

The Academy of Music, seating capacity 1,500, hired occasionally for shows.

These theaters pay a license to the city of $1 for each performance, or $5 a week, and a license to the state of $3, and 1 per cent. of the gross receipts for each performance.

In addition to the theaters there are Masonic hall, Mechanics' hall, Oliver's hall and Dalten's hall, used for concerts, lectures, etc.

DRAINAGE.

There is no system of sewerage in Norfolk, but the whole matter is now under advisement. From the reports of the city officials, and the general feeling of the citizens, at the close of the census year, it is evident that the city will be sewered on the "separate system" now in use at Memphis, Tennessee.

CEMETERIES.

There are 3 public cemeteries belonging to the city, one near the northern boundary, area 8¼ acres; one just north of the city limits, area about 24 acres; and one in a northeasterly direction, area 12 acres.

Saint Paul's Church-yard, corner of Church and Cove streets, area 2 acres, is now no longer used for interments. From 1875 to 1880 there were 2,418 interments made in the 3 public cemeteries. No interment can be made except upon a physician's certificate of death. The depth of grave is 4 feet.

MARKETS.

There is one public market in the city. It is an iron building, in fair condition, with a ground space 200 by 40 feet, has 42 stalls, and cost $18,000. There is a space 200 by 25 feet reserved for hucksters, and the street is also used for this purpose. The stalls are all of one class, and the annual rent for each one is $150. The total rental of the market is $13,000. The hours during which the market is open are from 4 a. m. to 12 noon, every day except Saturday, when the closing hour is extended to 9 p. m. Meats, poultry, fish, and vegetables are principally sold at the market.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of Norfolk is vested in the board of health, composed of 5 members, 3 of whom are physicians. They are appointed annually by the common council and are subject to its control. The annual expense of the board when there is no epidemic varies from $3,500 to $4,000, expended for drainage, sewerage, and sanitary measures generally. During an epidemic there is no limit to the increase of expense. Either in the absence or during an epidemic the board has entire control over all sanitary measures, and its authority is pre-eminent. The president is the chief executive officer; he receives no salary; he presides at all meetings, enforces all rules and regulations of the board, approves the accounts, and has general supervision over sanitation. One sanitary inspector is employed; he has no police powers. The board meets weekly during the summer and every two weeks during the winter. The sanitary inspector is constantly on duty and makes inspections in all parts of the city. When a nuisance is discovered it is ordered to be abated, a reasonable number of days being given for the purpose, and if the parties responsible fail to comply with the order they are dealt with according to law. The board has control over the removal of excrement.

INFECTIOUS DISEASES.

Small-pox patients are removed to the pest-house, half a mile outside the city limits. Scarlet-fever patients are not isolated. Vaccination is not compulsory, but it is done at the public expense.

The record of diseases, births, and deaths is kept by the physician to the almshouse, and he makes monthly returns to the board.

REPORTS.

The board makes an annual report to the mayor, and this is published with his message to the city council.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned at the expense of the city and with its own force. The work is done wholly by hand, no sweeping-machines being used. There is no stated time for cleaning the streets of different classes, a gang of men being at work all the time. The principal streets receive attention about once a week or once in ten days, and the efficiency of the work is reported as satisfactory. The annual cost to the city is about $11,000, which includes the removal of garbage, and the sweepings are sold and taken out of the city.

Removal of garbage and ashes.—All garbage and ashes are removed by the city with its own force. It is kept in boxes or barrels, and put out on the sidewalk every other day for removal, the empty vessels being at once taken in. Garbage and ashes are allowed to be kept in the same vessels. They are dumped outside of the city, and are taken by farmers for agricultural purposes. The cost of the service is included in the street-cleaning.

Dead animals.—Dead horses and cows are removed by the owners at their own expense. Dead dogs, cats, etc., are removed by the city, and the police are required to inform the street inspector of all dead animals they find on their beats. The annual cost of this service is included in the removal of garbage. No account of the number of large animals was kept, but during the year 161 dogs and 26 cats were removed from the streets.

Liquid household wastes.—There being no sewers in Norfolk, all laundry wastes are run into the gutters, while all offensive wastes are run into tight boxes or cesspools. The cesspools are generally porous, are not provided with overflows, receive the wastes from water-closets, and are allowed to be emptied only by the odorless-excavator process. The sanitary inspector can order the cesspools cleaned whenever he deems it necessary. During the summer season the gutters are flooded every other day, and in winter they are swept about as often.

Human excreta.—About one-eighth of the houses in the city have water-closets, and the remainder depend on privy-vaults. All of the water-closets deliver into cesspools or tight boxes, except a few that are connected with private sewers or drains. All the old privy-vaults are porous, but the law now requires that they shall be water-tight. They are emptied by the odorless-excavator process, and the night-soil is taken beyond the city limits; none of it is allowed on land within the gathering-ground of the public water-supply.

Manufacturing wastes.—There are no regulations regarding manufacturing wastes, but it is reported that they are generally carried into the street-gutters. The system is said to be objectionable.

POLICE.

The police force of Norfolk is appointed by the board of police commissioners, with the exception of the chief and assistant chief, whose appointments are confirmed by the city council, and is governed by the same authority. The chief of police is the executive officer, and has general supervision over the force; his salary is $3 a day. The remainder of the force consists of 1 assistant chief at $2 75 per day, 2 sergeants at $2 50 per day each, and 2 turnkeys and 31 patrolmen at $2 a day each. The uniform is the same as that worn by the New York police, with the exception of the hat, which is a black derby in winter and a white one in summer. The average cost of the uniform is $125, and each man provides his own. The patrolmen are equipped with a club, a revolver, nippers, and a "black-jack". The hours of service are 6 on and 12 off, and the force patrols 26 miles of streets and alleys.

During the past year there were 2,509 arrests made, the principal causes for such being drunk, or drunk and disorderly. The principal portion of those arrested paid fines, and the rest were committed in default. The total amount of property lost or stolen during the year and reported to the police was $200, and of this, two-thirds was recovered and one-third returned to the owners. The number of station-house lodgers during the year was 173, as against 93 in 1879. Nothing but crackers, at a cost of $12 annually, is given to the lodgers in the shape of free meals. The force is required to co-operate with the fire, health, and building departments, by rendering any assistance necessary. Special policemen are appointed only in cases of emergency, and they are under the supervision of the chief and the board of police commissioners. The yearly cost of the force (1880) is $28,534 93. A portion of this amount was paid as salaries to the chain-gang guards, viz, $1 50 each per day, whenever the chain-gang went out to work. There are also three substitutes on the force, who attend all roll-calls, and are available for vacancies.

COMMERCE AND NAVIGATION.

[From the reports of the Bureau of Statistics for the fiscal years ending June 30.]

Customs district of Norfolk and Portsmouth, Virginia.	1879.	1880.
Total value of imports	$33, 814	$47, 057
Total value of exports:		
Domestic	$9, 830, 352	$14, 065, 455
Foreign		
Total number of immigrants		

Customs district of Norfolk and Portsmouth, Virginia.	1879.		1880.	
	Number.	Tons.	Number.	Tons.
Vessels in foreign trade:				
Entered	64	64, 451	53	62, 802
Cleared	112	92, 599	120	118, 880
Vessels in coast trade and fisheries:				
Entered	1, 022	988, 704	1, 206	1, 164, 117
Cleared	1, 001	1, 003, 428	1, 057	1, 091, 475
Vessels registered, enrolled, and licensed in district	377	13, 422	407	14, 521
Vessels built during the year	11	232	12	145

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Norfolk for 1880, being taken from tables prepared for the Tenth Census by D. P. Morris, 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	105	$570,276	668	61	23	$317,528	$861,026	$1,455,987
Agricultural implements	3	71,000	19	.....	.....	8,250	31,200	49,500
Blacksmithing	8	2,550	23	.....	.....	8,350	9,200	23,800
Boots and shoes, including custom work and repairing	4	2,500	7	.....	.....	3,069	6,450	12,750
Bread and other bakery products	9	39,200	66	15	7	25,921	144,000	200,700
Carpentering	6	15,300	57	.....	1	25,900	32,100	74,500
Carriages and wagons	4	81,200	68	.....	5	27,500	75,500	123,800
Clothing, men's	9	22,800	40	39	.....	37,305	39,200	100,800
Cooperage	3	906	6	.....	.....	2,443	1,050	6,500
Flouring- and grist-mill products	5	96,500	24	.....	.....	8,762	287,060	336,737
Foundery and machine-shop products	4	73,000	83	.....	2	35,800	33,236	82,850
Plumbing and gasfitting	3	3,700	18	.....	1	8,700	9,900	25,200
Printing and publishing	5	55,600	73	.....	.....	41,000	27,300	94,400
Shipbuilding	3	26,600	18	.....	.....	12,100	15,300	34,300
Tinware, copperware, and sheet-iron ware	9	31,000	71	.....	3	33,600	54,173	108,400
Tobacco, cigars and cigarettes	7	5,500	24	.....	1	9,850	9,294	25,000
Watch and clock repairing	3	10,000	14	.....	.....	9,052	4,100	18,000
All other industries (a)	20	32,920	57	7	3	10,926	81,063	138,750

a Embracing coffee and spices, roasted and ground; coffins, burial cases, and undertakers' goods; confectionery; iron railing, wrought; kindling wood; leather, tanned; lumber, planed; marble and stone work; masonry, brick and stone; painting and paperhanging; pumps; saddlery and harness; shirts; stationery goods; and wheelwrighting.

From the foregoing table it appears that the average capital of all establishments is $5,431 20; that the average wages of all hands employed is $422 24 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $11,550 20.

PETERSBURG,

DINWIDDIE COUNTY, VIRGINIA.

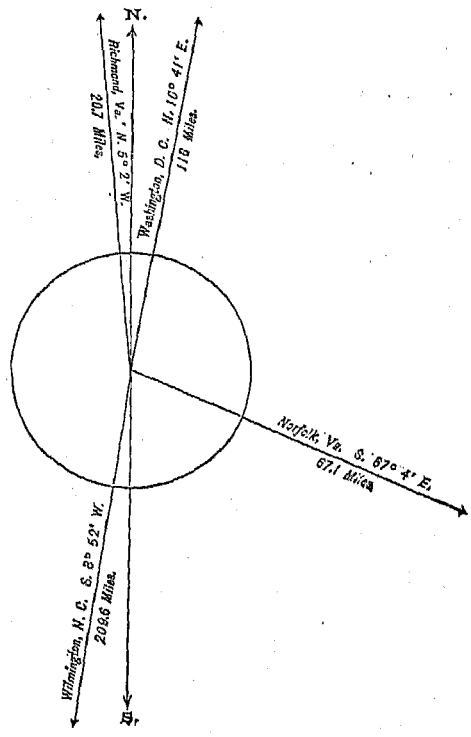
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	3,521
1810	5,668
1820	6,690
1830	8,322
1840	11,136
1850	14,010
1860	18,266
1870	18,950
1880	21,656



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	9,779
Female	11,877
Native	21,300
Foreign-born	356
White	9,950
Colored	*11,706

* Including 5 Indians.

Latitude: 37° 14′ North; Longitude: 77° 24′ (west form Greenwich).

FINANCIAL CONDITION:

Total Valuation: $9,132,330; per capita: $422 00. Net Indebtedness: $1,136,100; per capita: $52 46. Tax per $100: $1 95.

HISTORICAL SKETCH.[a]

Petersburg, the capital of Dinwiddie county, is 23 miles south of Richmond, on the right bank of the Appomattox river, 12 miles from its mouth. It is picturesquely situated on the declivities of a hill sloping gradually to the river-bank, affording good natural drainage. It is located on the site of an Indian village, burnt by Nathaniel Bacon in 1676. The place was laid out simultaneously with Richmond, in 1733, by Colonel William Byrd; was incorporated in 1748, and reincorporated in 1781, and was twice during the Revolutionary war occupied as the headquarters of the British forces. A gallant company of Petersburg volunteers, in the war of

a No data for the history of Petersburg being furnished by the city authorities, the present brief sketch was gleaned from other sources.

1812, earned for it the title of "Cockade City of the South". Its heroic defense during the closing scenes of the late war has rendered it memorable as the "last citadel of the confederacy". The limits of the city include its quondam rival, the now decayed village of Blanford, the ruins of whose church are among the most interesting and picturesque of Virginia's possessions. In 1815 a great fire occurred here, by which 400 houses were consumed. A good water-power is furnished by the falls near the city, which stop tide-water. A canal around them continues the means of communication more than 100 miles for flat-boats. Petersburg is connected with Richmond, Norfolk, Lynchburg, Weldon, and City Point by means of the Atlantic, Mississippi, and Ohio; the Petersburg; and the Richmond and Petersburg railroads. It is well supplied with churches, schools, and newspapers, and has a large interest in manufactories, including many of tobacco, several of cotton goods, and iron and wooden ware. It is an important shipping point for southern agricultural staples, as flour, cotton, peanuts, and tobacco, the exportation of which in 1874 was 46 per cent. of the entire freight export of the latter article from the United States. The population remained nearly stationary during the decade 1860 to 1870, but since then it has increased and improved in many ways, and the place may justly be termed one of the most flourishing cities of the South.

PETERSBURG IN 1880.

No information was furnished regarding the following topics: Altitude, railroad communications, tributary country, topography, and climate.

STREETS.

Petersburg has about 60 miles of streets, of which 5 or 6 miles are paved with cobble-stones and 3 or 4 miles with broken stones. The cost of cobble-stone pavement is from 55 to 60 cents per square yard, and of broken stone from 20 to 30 cents per square yard. The annual cost of keeping streets in repair is from $12,000 to $15,000. Sidewalks are paved in a portion of the city with granite flagging and bricks, while in the rest of the city they are simply of gravel. Gutters are laid with cobble-stones and broken granite. There are no horse-railroads or omnibus lines.

WATER-WORKS.

The water-works are owned by the city, and their total cost was $125,000. The water is pumped into a reservoir elevated 110 feet. The average cost of raising 1,000,000 gallons 1 foot high is 6 cents. The average yearly cost of maintenance, aside from the cost of pumping, is $100, and the yearly income from water-rates is $8,000. No water-meters are used.

GAS.

The gas-works are owned by a private company. The daily average production is 30,000 cubic feet, and the charge per 1,000 feet is $2 85. The city pays annually $23 16⅔ for each street-lamp, 265 in number.

PUBLIC BUILDINGS.

The city owns and occupies for municipal purposes, wholly or in part, 1 court-house, city clerk's office, city jail, almshouse, and the fire-engine houses. Their total cost was not given.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Petersburg has a public park, called "*Poplar Lawn*", area 10 acres, which is situated near the center of the city. Its total cost was $40,000. It is in the care of a keeper, under the control of a committee of the common council.

PLACES OF AMUSEMENT.

The Academy of Music, with a seating capacity for 650 persons, is used as a theater. All theaters are required to pay a license to the city of $3 for each performance. There are no concert- and beer-gardens.

DRAINAGE; CEMETERIES; MARKETS.

No information on these subjects was furnished.

SANITARY AUTHORITY—BOARD OF HEALTH.

The sanitary interests of the city are in the hands of a board of health, consisting of the mayor, president of the council, chief of police, and the four physicians to the poor—seven members in all. It is elected by and is responsible to the city council. The ordinary annual expense of the board is $500, for disinfectants and removing nuisances. There is no restriction, within the monthly appropriation of the council, to the expense of the board during epidemics. In absence of an epidemic the board has general supervision over the sanitary condition of the

city, and during an epidemic can take all steps necessary to check and control the disease. The health officer is president of the board and chief executive officer. His powers and duties are defined by the state laws. He is also secretary of the board. He receives no salary for his services. All the members of the board are clothed with police powers. A regular inspector is employed, with necessary details from the police force as assistants. The board holds monthly meetings, and has special sittings upon the call of the president. The city is divided into districts, each one being in charge of a physician, and inspections are made regularly therein, as well as when nuisances are reported. When a nuisance is reported the inspector investigates and reports; if found to be such the health officer orders the party causing the same to remove it; and if this is not done it is removed by the city and the expense is charged to the property. The regular inspections include the correction of all defective house-drainage, privy-vaults, cesspools, and sources of drinking-water. The board has charge of the conservation and removal of garbage. The board issues burial permits, on certificates of cause of death, made by the attending physician; and sextons are required to report all interments made by them to the board. The board controls the removal of excrement, and appoints a scavenger for that purpose.

INFECTIOUS DISEASES.

Small-pox patients are removed to the hospital. Scarlet-fever patients are not isolated. By ordinance, vaccination is made compulsory, but it does not seem to be enforced; periodically it is done at the public expense.

REPORTS.

The board reports annually to the city council, and the report is published with the regular city documents. Mayor Cameron, who communicated the foregoing regarding health, adds:

> Theoretically the board has all necessary power; but the city has no system of sewerage, and the surface drainage is defective, except in rainy weather; therefore the board is powerless to go beneath the surface of evils with which it has to deal.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned at the expense of the city and with its regular force. The work is done wholly by hand. The paved streets are cleaned weekly, and the work is reported as well done. The board of health may require, for sanitary precautions, the draining or cleaning out of the ditches, gutters, or low places in the streets or public grounds. Abutters are required to keep foot-ways clean and gutters open and free from obstructions.

Removal of garbage and ashes.—Garbage is removed by the city with its own force. While awaiting removal it must be kept in boxes and barrels. It is taken away four times a week in summer and once a week in winter. Light dirt, paper, ashes, etc., are removed, along with the street-sweepings, once a week, by the city's carts. The estimated cost of the removal to the city is $2,000 annually. The system is reported as fairly efficient.

Dead animals are removed by the city scavenger under a regular schedule of prices, and the cost is paid by the owner or person upon whose property the carcass is found. The animals are buried outside the city. The cost of the service to the city is only nominal.

Liquid household wastes.—But a small portion of these wastes are run into the sewers, as the city has none except on four of the principal streets; much is run into street-gutters, especially wash-water—including some surreptitious chamber-slops; in the thickly built-up portions of the city much is run into dry wells, and but comparatively little into privy-vaults. Dry wells are not regulated, but privy-vaults, or "cesspools" (as the term is here used), are required by ordinance to be laid with brick or stone, in hydraulic cement, and to be at least 10 feet deep; they are unprovided with overflows. When the water-supply is sufficient, gutters receiving household wastes are flushed when needful; when the supply is short, as has been the case for the last two summers, no flushing is done. There is no absolute knowledge that drinking-water is contaminated by the overflowing or leakage of privy-vaults or dry wells. Fortunately but few drinking-water wells exist in those parts of the city where dry wells most abound.

Human excreta.—About 8 per cent. of the houses in the city have water-closets, and the rest depend on receptacles for holding the excrement. It is the policy of the board of health to abolish privy-vaults, and to substitute therefor "surface privies" where water-closets can not be had for want of sewerage. Three-fifths of the water-closets deliver into the public sewers, one-fifth into private sewers, and one-fifth into privy-vaults. All privy-vaults constructed after the passage of the ordinance of April 1, 1879, are nominally water-tight. They are cleaned out by the city scavenger between the hours of 11 p. m. and 4 a. m., and the contents must be deodorized before being removed in close carts. The night-soil is taken to the country and used for manure.

Manufacturing wastes.—These, both solid and liquid, are run into the Appomattox river.

Concerning the handling and disposal of the wastes of the city, Mayor Cameron says:

> The whole system is defective—not in minor regulations nor in efficiency of subordinate administration, but on account of absence of proper surface drainage and insufficient supply of water for flushing drains. Movement now under way to sewer the city.

POLICE.

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

FIRE DEPARTMENT.

The force of the fire department in 1879 consisted of 33 men, and the apparatus of 2 steam fire-engines, 6 hose-reels, 1 hook-and-ladder truck, and 1,500 feet of good hose; there were 4 horses in the department. During the year ending July 1, 1879, the cost of the department was $9,207 96. During the same time it responded to 31 alarms, including 3 false alarms, and the total loss by fire was about $110,000.

PUBLIC SCHOOLS.

The following statistics are for the school year ending June 15, 1879:

Petersburg has 1 white high school, 2 white graded schools, and 2 colored graded schools. The total enrollment (white and colored) is 1,985; average monthly enrollment, 1,578, and average daily attendance, 1,494. The number of teachers employed, including principal of schools and writing-master, is 29. The total cost of the schools for the year was $14,154 25.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Petersburg for 1880, being taken from tables prepared for the Tenth Census by S. S. Northington, 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	115	$1,755,415	2,209	1,245	742	$602,749	$3,290,116	$4,643,015
Agricultural implements	3	31,000	68	.....	.....	21,430	22,490	50,505
Blacksmithing (see also Wheelwrighting)	7	3,080	9	.....	.....	2,400	2,625	9,000
Boots and shoes, including custom work and repairing	15	680	28	.....	.....	4,860	5,104	15,110
Bread and other bakery products	8	6,750	32	2	1	7,402	40,600	57,900
Carpentering	7	5,075	63	.....	.....	17,850	27,600	52,700
Clothing, men's	5	6,130	16	9	.....	8,186	18,380	36,280
Cotton goods	5	855,100	201	368	167	111,052	458,899	747,812
Flouring- and grist-mill products	4	107,500	28	.....	.....	8,400	181,360	210,545
Painting and paperhanging	3	1,050	8	.....	.....	2,075	3,000	5,023
Photographing	3	1,300	.....	.....	.....	.....	1,400	4,200
Printing and publishing	3	12,000	29	.....	2	15,252	14,800	37,000
Tinware, copperware, and sheet-iron ware	4	6,200	20	.....	.....	6,600	16,100	33,600
Tobacco, chewing, smoking, and snuff	14	658,500	1,516	864	562	347,345	2,395,196	3,194,245
Watch and clock repairing	3	800	2	.....	.....	250	1,000	3,325
Wheelwrighting (see also Blacksmithing)	5	2,225	11	.....	.....	2,595	2,720	8,400
All other industries (a)	26	57,125	183	2	10	46,992	98,851	176,404

a Embracing brick and tile; brooms and brushes; carriages and wagons; coffins, burial cases, and undertakers' goods; cooperage; foundery and machine-shop products; lock- and gun-smithing; lumber, planed; marble and stone work; masonry, brick and stone; patent medicines and compounds; plumbing and gasfitting; saddlery and harness; sash, doors, and blinds; slaughtering and meat-packing; soap and candles; tobacco, cigars and cigarettes; upholstering, and upholstering materials.

From the foregoing table it appears that the average capital of all establishments is $15,624 48; that the average wages of all hands employed is $143 65 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $34,766 87.

PORTSMOUTH,

NORFOLK COUNTY, VIRGINIA.

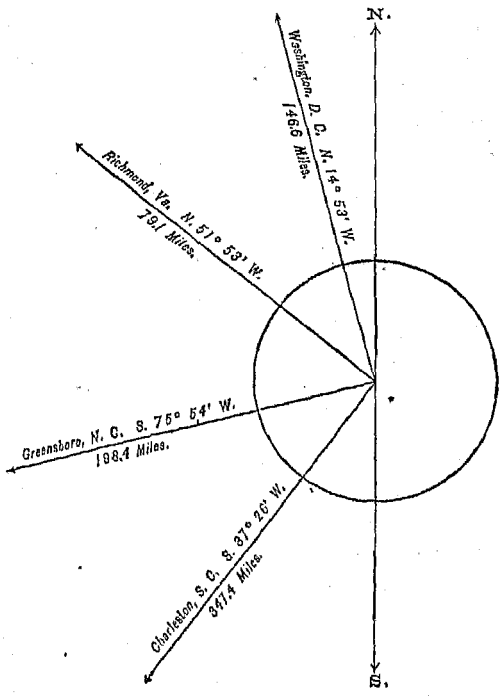
POPULATION

IN THE

AGGREGATE,

1840-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	.....
1840	6,477
1850	8,122
1860	9,496
1870	10,590
1880	11,390



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	5,489
Female	5,901
Native	10,864
Foreign-born	526
White	7,554
Colored	*3,836

*Including 7 Indians.

Latitude: 36° 50′ North; Longitude: 76° 18′ (west from Greenwich); **Average Altitude: 10 feet.**

FINANCIAL CONDITION:

Total Valuation: $2,906,324; per capita: $255 00. Net Indebtedness: $283,014; per capita: $24 85. Tax per $100: $2 01.

HISTORICAL SKETCH.

Few places of the size and importance of Portsmouth have a history so destitute of interesting events. From its foundation in 1752 to the present time it has pursued its way in silence, while its history has been lost in that of its more prosperous neighbor, Norfolk. The city has a magnificent harbor, one of the finest on the Atlantic coast; and in Gosport, one of its suburbs, is situated the celebrated Norfolk navy-yard. No period of rapid growth either in population or in wealth has marked the progress of the city. Its exports are cotton, lumber, oak-staves, naval stores, pig-iron, and early vegetables for the northern markets. A single daily newspaper is published in Portsmouth. There are several churches and many public and private schools.

PORTSMOUTH IN 1880.

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

LOCATION.

Portsmouth is situated in latitude 36° 50′ north, longitude 76° 18′ west from Greenwich, on the west bank of the Elizabeth river as it enters Chesapeake bay. It is opposite Norfolk, 1 mile away, 8 miles from Hampton roads, and 105 miles east-southeast from Richmond. The lowest point is level with the tide-water, and the average altitude 10 feet above this mark. The harbor has a channel varying in width from 1,000 to 1,200 feet, and the depth of water is about 22 feet. The tidal current flows at the rate of 1 mile per hour. Lines of steamboats connect the city with important points on the Atlantic coast, and by river with Richmond.

RAILROAD COMMUNICATIONS.

The Seaboard and Roanoke railroad, termini Portsmouth, and Weldon, North Carolina, connects the city with lines of railroads offering almost direct communication with the important cities of the south Atlantic seaboard.

TRIBUTARY COUNTRY.

The country immediately surrounding the city is devoted exclusively to agriculture. Strawberries, peanuts, cabbages, potatoes, etc., are raised in large quantities, and sent, by way of Portsmouth and Norfolk, to the northern markets.

TOPOGRAPHY.

Portsmouth is situated on the land between the South and East branches of the Elizabeth river. Its general geological structure is the same as that of Norfolk, which see.

CLIMATE.

The climate is the same as that of Norfolk.

STREETS.

Portsmouth has about 17 miles of streets, of which $1\frac{3}{5}$ mile is paved with cobble-stones and 2 miles with oyster-shells, while the rest are simple dirt roads. About half the sidewalks are of brick and the other half of dirt. The gutters are generally paved with cobble-stones and supported by 4-inch bluestone curbs. All the new streets have gutters 5 feet wide. No trees are planted along the streets by the city. The construction of the streets is generally done by contract, the repairs by day labor. The annual expense for repairs is about $4,500. Neither steam stone-crusher nor roller is used. There are no horse-railroads or omnibus lines.

WATER-WORKS.

There is no public water-supply. Cistern-water is generally used.

GAS.

Gas is supplied by a private corporation. The average daily production is about 23,000 feet; the charge per 1,000 feet is $3, but persons using more than 1,000 feet pay at the rate of $2 50. The city pays $22 a year for each of the 83 gas street-lamps in use.

PUBLIC BUILDINGS.

The city owns a mayor's office, and 3 engine-houses for the fire department. The total value of these buildings is $11,500. In addition, Portsmouth, jointly with Norfolk county, owns a court-house, valued at $30,000, and a jail worth $6,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are no public parks in the city.

PLACES OF AMUSEMENT.

Oxford hall, seating 600, is used by traveling shows, and for concerts and entertainments. The only other hall in the city is Maupin's hall. Theaters pay a license of $15 per annum to the city, and to the state $3 50 per night or $10 per week, and 1 per cent. on the gross receipts. There are no concert- and beer-gardens.

DRAINAGE.

The city has no public system of sewerage, and no information as to its drainage was furnished.

CEMETERIES.

There are 2 public cemeteries and 3 private or corporation cemeteries in Portsmouth. The public cemeteries are situated one in the northwestern, the other in the southwestern part of the city, and have an area, respectively, of 8 and 4 acres. One of the private cemeteries is situated to the northwest of the city, and about three-quarters of a mile beyond its limits; it contains about 10 acres. The other two private burial-grounds are no longer used; one, *Trinity Church-yard*, is on the south side of Glascow street, between Dinwiddie and Court streets. No record of the number of interments in these grounds has been kept. A certificate of death and a permit for interment must be obtained before any burial will be allowed. Graves are required to be 4 feet deep.

MARKETS.

There are 3 markets in the city. The meat market is a low wooden structure, 200 feet by 30 feet in size, and contains 28 stalls; the rental varies from $60 to $150. The vegetable market has no building, but controls a space of 245 feet by 22 feet, which is divided into 31 hucksters' and farmers' stalls, the former renting at $25 a year, the latter at 10 cents a day. The fish market controls a space 16 by 80 feet, and has no stalls. Fish-carts pay 25 cents a day for their stands. The total rental of the fish market is $1,960; of the two others $2,950. They are open from daylight until 12 m. every day except Saturday, when they do not close until 10 p. m. No estimate of the gross annual sales can be given.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary authority of the city is vested in a board of health consisting of 5 members appointed annually by the city council, and the city physician, who is *ex officio* health officer and a member of the board. The annual expense of the board in the absence of an epidemic is about $4,000, which is expended in removing night-soil and garbage, in paying the salary of an inspector ($600), and in meeting incidental expenses. The city clerk is *ex officio* clerk of the board. Meetings are held weekly from March to November, and fortnightly from November to March. In case of an epidemic the board may increase its expenses to any necessary amount. The authority of the board both during and in the absence of an epidemic is unlimited in all ways to protect and insure the maintenance of the public health. The chief executive officer is the health officer, whose salary is $600; besides being city physician, he is also registrar of vital statistics. A single inspector is employed. He has, like the members of the board, authority to enter and examine premises, but has no other police powers. Inspections are made regularly in all parts of the city.

NUISANCES.

Nuisances are inspected when reported or found by the inspector, and the owner or occupant of the premises is ordered to remove them. If this order is not complied with in twenty-four hours, the person offending incurs a fine of not less than $5, and the inspector, health officer, or member of the board sues to recover the penalty, which increases not less than $5 for every day of neglect.

The board has authority to compel the rectification of all defective house-drainage, privy-vaults, cesspools, and sources of drinking-water. The cleaning of the streets is not under the charge of the board.

GARBAGE.

The board of health controls the conservation and removal of garbage.

BURIAL OF THE DEAD.

A burial permit must be obtained before any interment is allowed to be made. This permit is issued by the health officer on receiving a certificate of death signed by the attending physician when there is one, or by a competent person. The ordinances of the city forbid an interment in any private lot, garden, or other parcel of ground, or any burying-ground within the city, unless the person so interred has a father, mother, husband, wife, brother, sister, or child already interred therein.

INFECTIOUS DISEASES.

Small-pox patients are removed to a pest-house about 4 miles beyond the city limits. Scarlet-fever patients are quarantined at home.

Should contagious diseases break out in the public or private schools, the board of health has authority to close the schools, or to take such other precautions as it deems best. Vaccination is compulsory whenever ordered by the board, but is done at the public expense only for those who are unable to pay for it. A strict quarantine is

maintained at all times for vessels from infected ports, or those on which any one has been sick or has died, or the cargoes of which have been damaged. Any breach of quarantine law is punished by a fine of not less than $20 nor more than $500.

REPORTS.

No regular report is made by the board. Accounts of its regular meetings are published by the city newspapers. The registrar of vital statistics records all births, diseases, and deaths.

MUNICIPAL CLEANSING.

Street-cleaning is done by the city with its own force and entirely by hand labor. The principal business streets are cleaned twice a week, the others about once a month, and the work is very efficiently done. The annual cost to the city is $2,000. The sweepings are deposited on the ends of streets extending into a salt-marsh. The system is regarded as excellent.

Removal of garbage and ashes.—Garbage is removed by a contractor hired by the board of health and paid by the city. While awaiting removal, garbage, which must not be mixed with ashes, must be kept in water-tight vessels until called for by the contractor's carts, which visit every part of the city every day. It is disposed of by using it as manure. Ashes are also removed by a city contractor, and are disposed of in the same way as the street-sweepings. No injury to the public health has arisen under this system of disposing of garbage.

Dead animals.—No system has been formed for the removal of the carcasses of dead animals. They are generally taken by the street department and buried. The number is very small.

Liquid household wastes.—Kitchen and laundry wastes and chamber-slops are disposed of alike. A large amount is run into the street-gutters, and a little into cesspools, which are porous and nearly always without overflows. They rarely receive the wastes of water-closets. There is no practice in regard to flushing the street-gutters. Cesspools are ignored by the city ordinances, which, however, require that privy-vaults shall be cleaned every three months, or oftener if necessary.

Human excreta.—The houses almost without exception depend on privy-vaults, which are generally tubs or boxes of various sizes. The work of cleaning the privies is done by a city scavenger appointed by the board of health. They must be cleaned four times a year, or oftener if necessary, and between the hours of 11 p. m. and 3 a. m. The fees for this service are determined by the board of health. The night-soil is removed beyond the city limits, and is used in manuring land. Its use within a quarter of a mile of the city limits is occasioning complaint.

Manufacturing wastes.—There are no manufactures carried on in the city producing wastes needing to be disposed of.

RICHMOND,

HENRICO COUNTY, VIRGINIA.

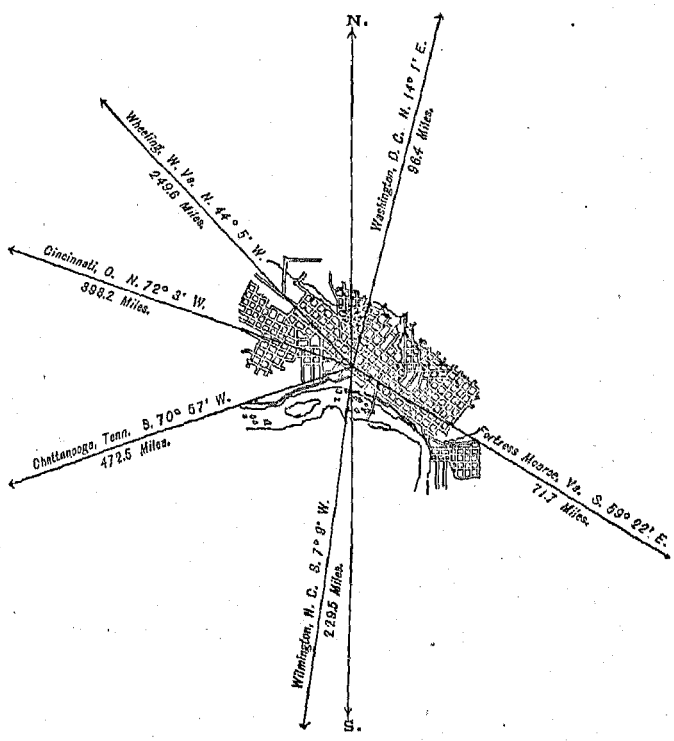
POPULATION

IN THE

AGGREGATE,

1790-1880.

	Inhab.
1790	3,761
1800	5,737
1810	9,736
1820	12,067
1830	16,060
1840	20,153
1850	27,570
1860	37,910
1870	51,038
1880	63,600



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	29,483
Female	34,117
Native	60,260
Foreign-born	3,340
White	35,765
Colored	* 27,835

*Including 3 Chinese.

Latitude: 37° 32′ North; Longitude: 77° 26′ (west from Greenwich); **Altitude: 172 feet.** (*a*)

FINANCIAL CONDITION:

Total Valuation: $39,522,356; per capita: $621 00. Net Indebtedness: $4,399,021; per capita: $69 17. Tax per $100: $1 85.

HISTORICAL SKETCH.

Although, from its eminence in the past, the capital of the Old Dominion deserves an extended notice, it is impossible here to give more than a cursory sketch of its history. The first settlement was made in 1609, when a small party sent out from Jamestown established themselves at this point. The settlement thus founded was only an outpost against the Indians, and its frontier character was illustrated by the erection of "Fort Charles", in 1644–'45, as a still further protection to the other settlements. The spot was the scene of a bloody contest in 1656 between a party of border rangers, under Colonel Hill, and the Indians, in which the former were defeated; and during the time of Bacon's rebellion, in 1676, it was again brought into prominence.

A mill was erected here by William Byrd in 1679, and some years later a warehouse was built here, which gave to the little place the name of "Byrd's Warehouse", by which it was known until its incorporation as the town of

a At Smithsonian station.

Richmond in 1742. It was laid out in streets and lots in 1737 by Colonel William Byrd, the real founder of the city, and was designed to cover about 3 square miles. It was in Saint John's church that Patrick Henry, addressing the Virginia convention in 1775, uttered his ever memorable "Give me liberty or give me death!"; and this convention is the only incident of general interest which marks the history of the town from its incorporation until 1779, when it was made the capital of Virginia in place of Williamsburg, where the assembly had met since 1698. Little more than a year after being made the capital of Virginia, Richmond, which then contained about 300 houses, was burnt by Arnold and Simsoe during their foray in Virginia in the year 1781. Recovering from this mishap, it advanced in wealth and population slowly but surely, and in 1800 was a place of about 5,700 inhabitants. The corner-stone of the state capitol building was laid in 1785, and the edifice, which was built after a design brought by Thomas Jefferson from Nîmes, France, was completed not long after. In 1794 a canal was built around the falls in the James river near Richmond, and this proved the germ of the James River and Kanawha canal, which was completed to Lynchburg in 1835, and became one of the most fruitful sources of the later prosperity of Richmond. The city was the scene of a great calamity in 1811, when on the night of December 26 the Richmond theater was burnt during a performance, and the lives of more than sixty persons, among them George William Smith, the governor of the state, were lost. The Monumental Episcopal church marks the spot of this tragedy, and is a memorial to those lost in the sad event.

The construction of the James River and Kanawha canal, the building of the railroads to Acquia creek, to Meherin, and to Petersburg, and the partial utilization of the water-power of the James river, led to a large increase in the city, which by 1850 contained 27,570 inhabitants. Richmond was supplied with water from three large reservoirs, each capable of holding 1,000,000 gallons, into which water was pumped from the James. It had large manufactures of tobacco and flour, and its export trade in these staples and in coal amounted to between $6,000,000 and $7,000,000 a year. The James was then navigable for vessels drawing 14 feet of water to within 5 or 6 miles of the city, while those drawing 10 feet could come up to its wharves. The decade from 1850 to 1860 was a period of rapid advance, and at its close Richmond had a population of 37,910, and was one of the most important cities of the South. The cause to which its citizens then looked to increase the prosperity of their city very nearly became its destruction. In June, 1861, Richmond was made the capital of the Southern Confederacy, and on July 20 the confederate congress began its sessions there. From this time until April 2, 1865, the city was the great object of attack by the Union forces, and on the latter date it was evacuated and set on fire by the retreating confederate troops, and in the conflagration which followed, property to the value of $8,000,000 was destroyed.

Starting again from its ruins, Richmond has in fifteen years reached a height of prosperity never before known in its history. Its population in 1870 had increased to 51,038, and now is 63,600. The assessed valuation of its real estate in 1875 was $29,142,655, and of its personal estate, $11,315,838, and the increase since then has been large. The United States government has made improvements in the James river which, with the work done by the city of Richmond, enable vessels drawing 16 feet to come to the lower end of the city. Its manufactures have been greatly extended. In 1874 the value of the manufactured products of the city was $17,746,720, while in 1880 it was $20,790,106.

There are about fifty tobacco factories, and many iron- and flour-mills and other manufacturing establishments, which will be given in detail under "Richmond in 1880". The water-power of the James is not half utilized as yet; the valuable products of the surrounding country are only beginning to come to the city, and it is recovering the command of the southern trade which immediately after the war passed almost entirely into the hands of the northern cities.

Its railroad communications are already excellent.

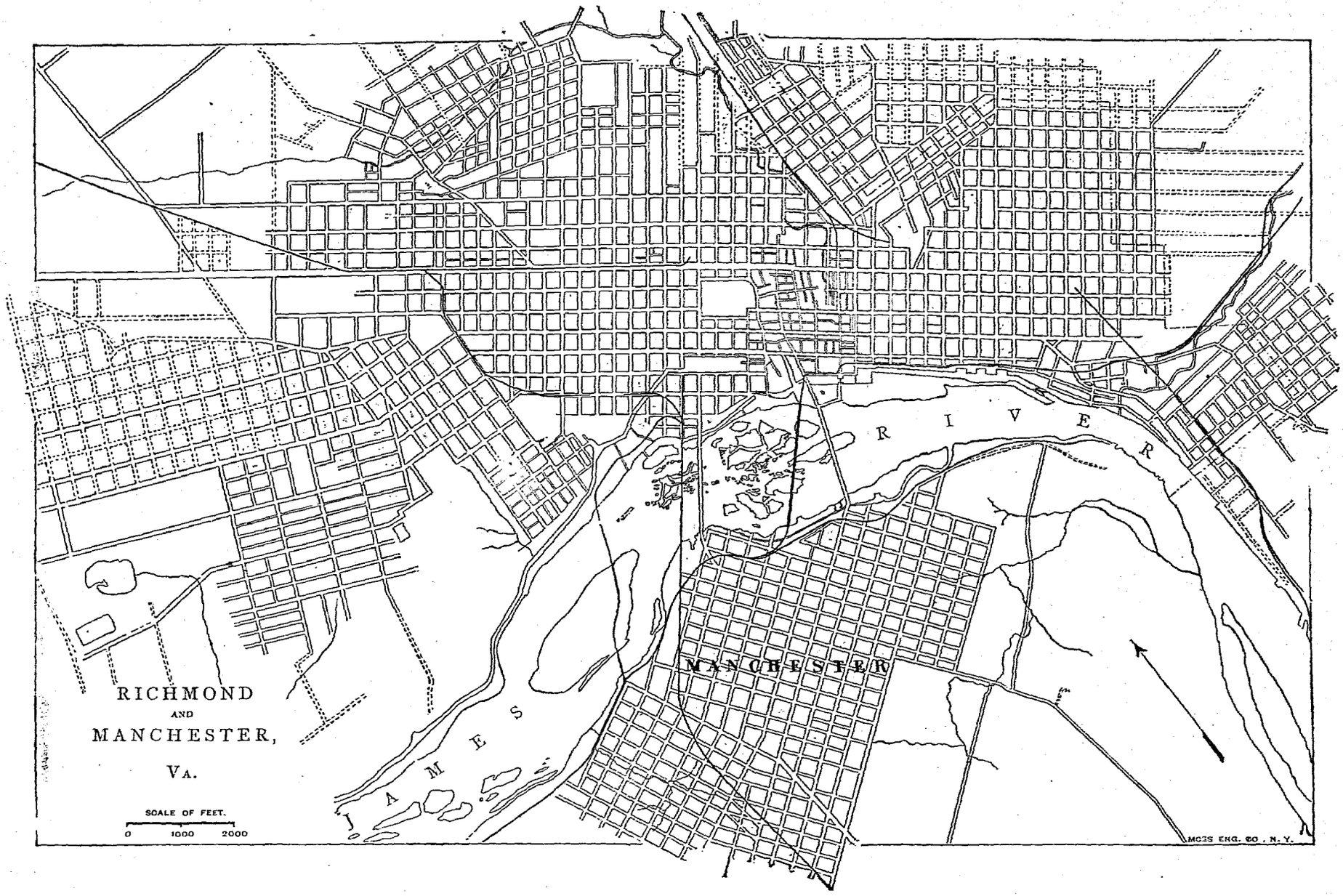
While its financial interests have thus been attended to, its educational, social, and religious interests have not been neglected. Its free public schools are said to be in excellent condition, and to compare favorably with those of other cities; it has about fifty churches of the various denominations, many of the church edifices being fine architectural ornaments to the city; it is considered one of the most healthful of American cities.

RICHMOND IN 1880.

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

LOCATION.

Richmond is situated in latitude 37° 32′ north, longitude 77° 26′ west from Greenwich, at the head of navigation and tide-water on the James river, 74 miles in an air-line from the sea, and 150 miles by the river. The lowest sections of the city range from 15 to 40 feet, and the highest from 150 to 200 feet above tide-level. The corporate limits include 6.12 square miles. The James river is here about half a mile wide, though in the narrowest part the width does not exceed 1,000 feet. Regular lines of steamers run to Norfolk, New York, Baltimore, and Philadelphia. The mean range of the rise and fall of the tide in the river is about 3½ feet.


RICHMOND
AND
MANCHESTER,
VA.
SCALE OF FEET.
0 1000 2000
JAMES
RIVER
MANCHESTER
MOTS ENG. CO. N. Y.

RAILROAD COMMUNICATIONS.

Richmond is connected by the following-named railroads with the principal cities of the state, and, through their connections, with the leading places in the whole country:

The Richmond, Fredericksburg, and Potomac railroad, termini Richmond and Quantico.
The Richmond and Danville railroad, termini Richmond, and Charlotte, North Carolina.
The Chesapeake and Ohio railroad, termini Richmond, and Huntington, West Virginia.
The Richmond and Petersburg railroad, termini Richmond and Petersburg.
The Richmond and Alleghany railroad, termini Richmond and Columbia.
The Richmond, York River, and Chesapeake railroad, termini Richmond and West Point.

Nearly all are parts of trunk-lines, and have aided greatly in increasing the city's prosperity.

TRIBUTARY COUNTRY.

The country tributary to Richmond is rich in all kinds of mineral and agricultural wealth. Iron, copper, and manganese ores are found in abundance; the finest of sand for glass-making, and kaolin, granite, and slate, are found within the region tributary to the city, while lumber and coal are easily reached. The agricultural products are tobacco, grain, and vegetables.

TOPOGRAPHY.

The city is built upon two undulating plateaus, resting on granite, divided by the valley of the Shockoe creek, and subdivided by smaller valleys and ravines, through one of which flows Gillie's creek. The country for miles around is hilly.

CLIMATE.

No information as to the highest and lowest recorded temperatures could be obtained. The mean temperature for the year is about 60°. The elevation of the city above the sea makes its air pure and healthful.

STREETS.

The principal streets are laid out from east to west roughly parallel with the river, the cross-streets intersecting them at right angles. The total length of the streets can not be given, and no detailed information as to the cost of paving and repairs was furnished. The paving is either of broken stone or of stone blocks where the streets are paved at all. In the year ending February, 1879, the total cost of the construction and repairs of the streets and sewers was $65,159 13. The sidewalks are of brick or flagstone when they are paved at all, and are from 10 to 12 feet in width.

The Richmond City Passenger railway is the only horse-railroad in the city. It passes through Main and Broad streets, the two principal thoroughfares, and has a total length of about 3 miles. Omnibuses run to and from the railroad depots and the steamboat landings.

WATER-WORKS.

The city owns both the water- and the gas-works. The total cost of the water-works from the beginning, in 1830, to February, 1879, was $2,258,801 03, and the receipts during the same period were $1,490,163 46.

The water is taken from the James river. The maximum pumping capacity is 24,000,000 gallons per day, and the total storage capacity of the reservoirs is 52,000,000 gallons. There are over 50 miles of pipes and mains, varying from 30 to 1½ inches in diameter. The annual income is from $25,000 to $30,000.

GAS.

The gas-works were built in 1851. There are about 50 miles of mains, and nearly 90,000,000 cubic feet of gas are manufactured annually. The income is about $50,000 annually.

PUBLIC BUILDINGS.

The buildings owned by the city and used in whole or part for municipal purposes include a city hall, a jail, an almshouse, 2 police stations, 2 markets, and 3 engine-houses. The school-houses are valued at about $250,000. No information as to the value of the other public buildings was furnished.

PUBLIC PARKS AND PLEASURE-GROUNDS.

The total area of the public parks and pleasure-grounds is about 40 acres. *Chimborazo Park*, 29 square acres, and *Libby Hill Park*, 3½ acres, are in the eastern part of the city, about 150 feet above the river, and command a fine view of the James and the surrounding country. *Capitol Park*, 13 acres, is situated in the center of the city, and contains the state-house and the celebrated equestrian statue of Washington designed by Crawford. This statue rests upon a massive granite pedestal, surrounded by bronze statues of Patrick Henry, Thomas Jefferson,

John Marshall, George Mason, Thomas Nelson, and Andrew Lewis. A marble statue of Henry Clay, and Foley's statue of "Stonewall" Jackson, are among the other adornments of this park. *Gamble's Hill Park*, 8½ acres, on the south and river front of the city, and *Monroe Park*, nearly 9 acres, in the western part of Richmond, complete the list of public parks.

The *Old Reservoir* grounds, just on the western edge of the city, form another public pleasure-ground; and the *New Reservoir Park*, a mile beyond the city limits, embracing 160 acres, is the driving-park of the Richmond people.

PLACES OF AMUSEMENT.

The Richmond theater and Mozart hall are the principal places of amusement. Virginia hall and Assembly hall are used as concert- and lecture-rooms. No information was furnished of the seating capacity of these.

DRAINAGE.

No information on this subject was furnished.

CEMETERIES.

Richmond has 12 cemeteries which are now in use, 1 now no longer used, and 3 national cemeteries, where the federal soldiers killed during the attacks on the city in the civil war lie buried. The following are the cemeteries now in use:

Hollywood Cemetery, situated on Cherry street, in the western extremity of the city, near the river, contains about 77 acres, and is owned and managed by a corporation consisting of the lot-owners. It was first used in 1848, and 9,858 interments have been made in it, besides the 12,000 or 13,000 soldiers who lie buried there.

Shockoe Hill Cemetery, situated near the northern bounds of the city on Shockoe hill, contains 12½ acres, in which only white persons are buried, and 2½ acres where colored persons are interred. It was established in 1822, and contains the bodies of 16,989 white and 2,470 colored persons. It is open only to the inhabitants of the city of Richmond or of Henrico county.

Hebrew Cemetery, area not stated, adjoins the latter on the east.

Saint Mary's Cemetery lies about half a mile north of the city limits, on the Henrico turnpike, and contains 2½ acres. Since its establishment in 1874, there have been 169 interments made in it, and 71 bodies have been moved thither from other places.

Oakwood Cemetery is situated about half a mile east of the city, on Oakwood avenue, and contains 66¼ acres. Only white persons are allowed to be interred in it. There have been 20,300 interments. It is owned and maintained by the city.

The following 6 cemeteries are all owned and used by colored persons:

Ham's Cemetery, area 3 acres, contains 2,314 bodies; *Sycamore Cemetery*, 3 acres, contains 1,312 bodies; *Ebenezer Cemetery*, 1 acre; *Mechanics' Cemetery*, 5 acres; *Cedar Wood Cemetery*, ½ acre; and *Methodist Cemetery*, ½ acre. These are all situated about a quarter of a mile north of the city, on Saint James road.

The *Catholic Cemetery* is situated about half a mile east of the city, on the Mechanicsville road. No information as to its area or the number of interments made in it was furnished.

Saint John's Cemetery, the church-yard around Saint John's church, is now full and is no longer used. The 3 national cemeteries are situated far beyond the city limits, one about 1½ mile to the east of the city; the second, on the same road, 5 or 6 miles below, near Seven Pines; and the third, about 5 or 6 miles below the city, on the River road, near fort Harrison. All have been highly improved, but no statistics in regard to them could be obtained.

Hollywood, Oakwood, and Shockoe Hill cemeteries are finely laid out. Graves in Oakwood are required to be 6 feet deep; the depth in the others was not ascertained. No undertaker is allowed to make any interment until he has received a certificate from the attending physician stating the cause of the death and such other information as the schedules of the board of health call for.

MARKETS.

There are two markets in the city, each having a meat, vegetable, and fish department, and controlling a number of curbstone-stands. The First market contains in all 78 stalls. The meat department is 350 by 50 feet in size, and contains 40 stalls, which rent at from $9 to $9 50 per month; the vegetable department is 150 by 50 feet, and has 28 stalls, renting at from $2 to $5 per month; the fish department is 40 by 50 feet, and has 10 stalls, the rent of which is from $2 to $3 50 a month. The curb-stands rent at from $2 to $5 per month. In addition, there is a large open space beyond the market, used exclusively by farmers and truckers, who pay a small sum each. The total monthly rental is $805 50.

The meat market of the Second market has an area of 150 by 67 feet, and contains 32 stalls, the rent of which is from $6 to $12 50 a month; the vegetable market is 165 by 60 feet, and has 42 stalls, renting at from $2 33 to $4 a month; and the fish market is 60 by 28 feet, and has 12 stalls, the monthly rent of which is from $2 33 to $3 33.

There are 48 curbstone-stands, the rent of which is from $2 50 to $4 a month. The average monthly rental is $625.

Both markets are open from daylight until noon every week day except Saturday, when they do not close until 10 p. m. A large amount of business is done by private stores outside the markets.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief health organization of the city is a board of health, elected by the municipal authorities for a term of two years, and consists of three members, all of them physicians. The board is advisory to the municipal authorities; it can not make ordinances nor enforce them, and is charged with the duty of recommending measures for the general health of the community, of reporting all violations of the health ordinances and seeing that all causes of complaint under this head are removed, and of taking charge of street-cleaning and the removal of garbage. The expenses of the board are about $1,400 a year, $900 of which is for the salary of the president, $100 each for the other two members of the board, and the balance for incidental expenses. The board can under no circumstances exceed the appropriation placed at its disposal by the city councils, and its authority is the same both in the absence of and during an epidemic. The president is the chief health officer, and is also quarantine officer, while the other members are his assistants. Should quarantine be established, he is entitled to an additional compensation of $5 per day. Since 1865 there have been but two occasions when quarantine was established.

The board has no regular time of meeting, but is called together when occasion demands, and the president has the entire management of the department.

The committee on health, consisting of 2 members of the board of aldermen and 3 members of the council, constitutes another branch of the sanitary authority. This committee meets quarterly, or oftener if necessary. The president of the board of health is expected to be present to give the views of the board on any question. The committee has special charge of the small-pox hospital, and directs the disbursement of the amount appropriated to the board of health; it is expected to examine questions relating to the public health, and to be the exponent of the board of health before the aldermen and council.

Three policemen from the regular police force are detailed for duty as sanitary inspectors, to act under the orders of the president of the board. The city is divided into 3 sanitary districts, and 1 inspector is assigned to each. He makes inspections regularly in all parts of his district, and especially where nuisances are reported.

NUISANCES.

The list of nuisances includes all things, other than diseases, injurious to the health or comfort of the citizens. Nuisances are inspected whenever discovered or reported, and a notice is served on the owner or occupant of the premises requiring a removal within a specified number of days. If this is not complied with, the party is reported to the police court. Cases of defective house-drainage, cesspools, privy-vaults, and sources of drinking-water are treated as nuisances. Defective sewerage when reported by the board is rectified by the city authorities, or by private persons if the defect is on their premises. Defective street-cleaning is directly remedied by the board so far as their appropriation will allow.

GARBAGE.

Garbage is defined as kitchen offal alone, and is removed by collectors appointed and governed by the board of health. The regulations of the garbage service require that householders shall keep the garbage in water-tight vessels, in places convenient for the collectors, but not on the sidewalks or in any public place, and separate from other refuse matter.

BURIAL OF THE DEAD.

No interment is allowed until the undertaker has received from the attending physician, the coroner, or, in their absence, from any competent person, a certificate stating the cause of death, the age, sex, color, civil condition (single, married, or widowed), residence, occupation, birthplace, place of death, and length of residence in the city of the deceased. The sextons receive these certificates, and are required to make a weekly return of all interments made by them, the return stating the information contained in the certificate of death. Graves must be not less than 5 feet in depth, and must in all cases be 6 feet deep, unless in the "public portion" of any cemetery the board of health permits a less depth. No body is allowed to be removed from the city without a permit from the board of health.

INFECTIOUS DISEASES.

Small-pox patients are removed to a small-pox hospital in the western part of the city in a completely isolated spot, unless perfectly safe arrangements can be made to care for the patient at home. Scarlet-fever patients are not isolated or quarantined in any way, and attempts by the board to obtain favorable action from the councils looking toward better precautions in cases of scarlet fever have proved fruitless. The school-board acts in thorough harmony with the board of health, and, when contagious diseases appear among the pupils in the public schools, immediately requires the absence of the pupils and all from the same family from school, until a physician has certified that danger of contagion no longer exists. The clergy of the city have consented to abandon public funerals for persons dying of small-pox, scarlet fever, and diphtheria. Vaccination is not compulsory, but is performed without charge at the city almshouse and dispensary for those wishing it.

REPORTS.

The board of health reports annually to the mayor and city council, and this report is published in pamphlet form. When occasion demands, special written reports are made, and these are generally printed.

The registration of births, diseases, and deaths is under the charge of the board, and is carefully attended to, the records being compiled weekly in cases of diseases and deaths.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned by the city with its own force and entirely by hand labor. The work is entirely under the control of the board of health, and is done whenever the condition of the streets makes it necessary. The great defect of the system is stated by the president of the board to lie in the fact that an insufficient and inefficient force of men is placed at the disposal of the board of health for that purpose. Such of the sweepings as can be used for manure are sold to farmers; the rest is used in filling up ravines in the extension of new streets. The cost of the street-cleaning and removal of garbage and ashes is $8,700 a year.

Removal of garbage and ashes.—Garbage is removed at the expense of the city by collectors licensed and controlled by the board of health. It must be kept in water-tight vessels, entirely separate from ashes, and placed where the collector can easily get at it. The collections are made twice in each week. It is finally disposed of by removing it beyond the city limits. Ashes are also removed at the city's expense, and are either sold or used in filling up ravines. The defect of the system is the unfrequent removal of the garbage, from which some discomfort and possibly some injury to health arises.

Dead animals.—The carcasses of animals dying within the city are removed by a contractor, who pays a small bonus to the city for the privilege. He must remove the carcasses within six hours after notification by the owner, under penalty of a fine. During the past year 148 horses, 24 mules, and 58 cows were removed beyond the city limits. The system has proved an excellent one.

Liquid household wastes.—When there are public sewers the chamber-slops and kitchen and laundry wastes all run alike into the sewers; but in other places the kitchen and laundry wastes pass into the street-gutters, and chamber-slops are thrown into cesspools. The number of cesspools is small; those that exist are porous, and are unprovided with overflows, which are not allowed by the city. The gutters are flushed whenever the supply of water will justify such a use of it. Chemical examination of some of the wells in the city has shown that they are nearly all polluted by the overflow or inflow from cesspools and privy-vaults.

Human excreta.—About one-third of the houses in the city depend on water-closets, while the other two-thirds make use of privy-vaults. The water-closets in almost every case deliver into the public sewers. None of the privy-vaults are even nominally water-tight. They must be cleansed when full or offensive, the work being done by scavengers licensed by the board of health. The rates charged for cleansing are fixed by the board. The night-soil is removed beyond the city limits and utilized there. It is not allowed to be used in manuring land within the gathering-ground of the public water-supply.

Manufacturing wastes.—Liquid wastes are allowed to pass into the sewers; solid wastes are removed beyond the city limits, and in many cases utilized there. No ill effects have resulted from the system.

COMMERCE AND NAVIGATION.

[From the reports of the Bureau of Statistics for the fiscal years ending June 30.]

Customs district of Richmond, Virginia.	1879.	1880.
Total value of imports	$188,459	$111,061
Total value of exports:		
Domestic	$2,992,597	$2,326,915
Foreign	None.	None.
Total number of immigrants	None.	None.

Customs district of Richmond, Virginia.	1879.		1880.	
	Number.	Tons.	Number.	Tons.
Vessels in foreign trade:				
Entered	47	15,380	42	14,512
Cleared	148	48,935	135	45,741
Vessels in coast trade and fisheries:				
Entered	446	426,118	618	494,360
Cleared	504	470,951	549	516,089
Vessels registered, enrolled, and licensed in district	49	6,733	30	4,057
Vessels built during the year	3	155	...	...

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Richmond for 1880, being taken from tables prepared for the Tenth Census by James A. Cabell, 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	598	$6,884,386	9,218	2,872	1,957	$3,006,456	$12,141,512	$20,790,106
Agricultural implements	5	219,530	246	.....	2	82,904	114,972	320,988
Blacksmithing (see also Wheelwrighting)	8	1,925	15	.....	.....	2,410	2,430	8,170
Boots and shoes, including custom work and repairing	78	30,900	224	13	3	38,046	104,060	208,681
Boxes, cigar	3	6,100	15	9	5	5,700	21,500	35,600
Boxes, fancy and paper	3	18,000	52	87	102	48,596	26,210	107,410
Boxes, wooden packing	8	97,600	121	.....	12	51,671	114,482	206,011
Bread and other bakery products	20	59,000	74	14	1	30,311	148,540	232,000
Brick and tile	4	21,500	64	.....	10	17,900	9,125	36,460
Carpentering	34	41,000	158	.....	2	58,055	136,410	272,000
Carriages and wagons (see also Wheelwrighting)	9	63,000	101	.....	2	31,750	56,900	140,000
Clothing, men's	24	155,367	103	405	2	80,308	169,511	359,022
Coffee and spices, roasted and ground	5	46,000	36	1	1	13,060	143,000	241,000
Confectionery	13	69,700	63	7	6	23,687	98,624	151,450
Cooperage	15	33,700	238	.....	9	36,765	89,722	155,282
Drugs and chemicals (see also Patent medicines and compounds)	7	142,500	247	.....	3	39,200	160,250	247,790
Dyeing and cleaning	5	5,150	12	7	1	4,800	10,400	23,000
Fertilizers	5	298,000	172	3	.....	28,960	326,450	476,600
Flouring- and grist-mill products	5	1,226,500	191	.....	.....	79,565	2,147,762	2,443,432
Foundery and machine-shop products	13	523,500	1,044	.....	61	287,993	541,898	1,056,351
Furniture	26	108,650	124	10	13	55,605	96,570	232,010
Hairwork	4	7,500	5	36	.....	8,200	16,900	33,000
Iron and steel	3	702,000	1,004	.....	50	336,311	1,173,801	1,973,016
Lock- and gun-smithing	4	4,400	11	.....	.....	4,200	5,650	16,700
Looking-glass and picture frames	7	8,950	28	.....	9	10,400	21,850	50,500
Marble and stone work	7	20,400	56	.....	.....	24,200	28,600	71,100
Oil, lubricating	3	12,000	7	.....	1	990	11,300	20,500
Painting and paperhanging	9	14,200	36	.....	.....	12,250	19,500	47,850
Patent medicines and compounds (see also Drugs and chemicals)	8	37,000	32	1	.....	10,150	25,900	52,900
Photographing	9	21,000	36	1	2	17,444	9,900	49,300
Plumbing and gasfitting	5	22,000	28	.....	7	15,230	40,500	79,500
Printing and publishing	17	177,300	241	4	24	131,495	112,834	328,325
Saddlery and harness	12	38,100	74	.....	9	37,044	71,020	141,400
Sash, doors, and blinds	6	73,500	100	.....	.....	39,092	201,513	311,184
Shipbuilding	4	3,500	23	.....	.....	9,360	8,900	23,500
Soap and candles	3	26,000	17	1	.....	7,100	19,400	38,000
Tinware, copperware, and sheet-iron ware	26	88,050	143	.....	3	55,800	135,700	265,500
Tobacco, chewing, smoking, and snuff (see also Tobacco, cigars and cigarettes).	39	1,333,100	2,338	1,704	1,179	895,057	3,109,076	6,580,984
Tobacco, cigars and cigarettes (see also Tobacco, chewing, smoking, and snuff).	26	140,430	261	19	78	76,770	152,980	343,702
Tobacco stemming	27	435,184	369	470	202	81,215	767,973	1,074,005
Watch and clock repairing	10	15,700	16	.....	3	10,361	7,030	28,300
Wheelwrighting (see also Blacksmithing; Carriages and wagons)	24	27,450	77	.....	1	17,976	25,210	69,000
All other industries (*a*)	55	509,000	456	80	145	187,385	1,657,159	2,237,023

a Embracing bagging, flax, hemp, and jute; bags, other than paper; bags, paper; baskets, rattan and willow ware; bookbinding and blank-book making; boot and shoe uppers; brass castings; brooms and brushes; coppersmithing; engraving, wood; food preparations; furs, dressed; grease and tallow; instruments, professional and scientific; iron bolts, nuts, washers, and rivets; iron forgings; iron work, architectural and ornamental; kindling wood; leather, tanned; liquors, vinous; lithographing; lumber, planed; mineral and soda waters; musical instruments, organs and materials; masonry, brick and tile; nets and seines; paints; paper; pumps; regalia and society banners and emblems; saws; slaughtering and meat-packing; stencils and brands; stone- and earthen-ware; trunks and valises; type founding; umbrellas and canes; upholstering; and wirework.

From the foregoing table it appears that the average capital of all establishments is $11,512 35; that the average wages of all hands employed is $214 03 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $26,021 79.

WEST VIRGINIA.

WHEELING,

OHIO COUNTY, WEST VIRGINIA.

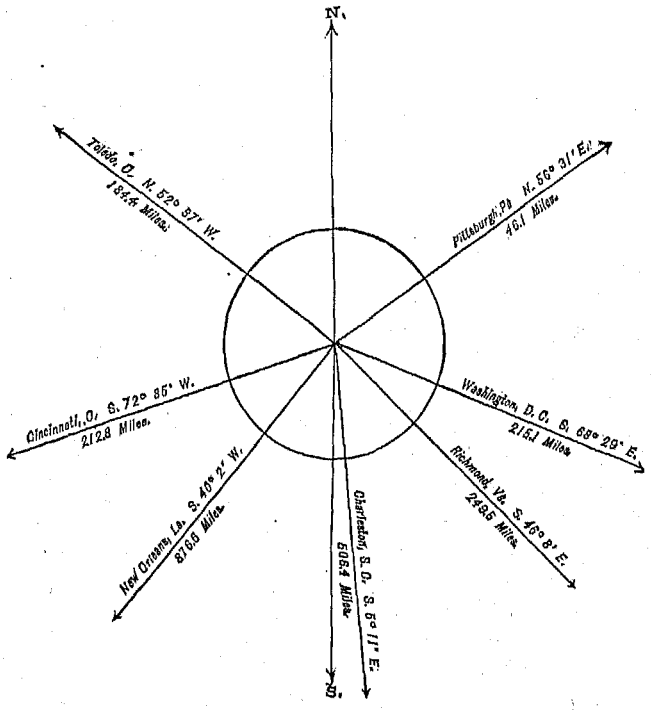
POPULATION

IN THE

AGGREGATE,

1810-1880.

	Inhab.
1790	.....
1800	.....
1810	914
1820	1,567
1830	5,221
1840	7,385
1850	11,435
1860	14,083
1870	19,280
1880	30,737



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	15,127
Female	15,610
Native	24,623
Foreign-born	6,114
White	29,998
Colored	*739

*Including 5 Chinese and 5 Indians.

Latitude: 40° 5′ North; Longitude: 80° 43′ (west from Greenwich); **Altitude: 650 feet.**

FINANCIAL CONDITION:

Total Valuation: $14,173,600; per capita: $461 00. Net Indebtedness: $531,882; per capita: $17 30. Tax per $100: $1 68.

HISTORICAL SKETCH.(a)

The settlement of Wheeling is claimed to have begun in 1769, when Colonel Ebenezer Zane, Elias Zane, and Jonathan Zane, three brothers, then living on what is now known as the south branch of the Potomac river, near the present town of Moorfield, West Virginia, moved farther west, with the intention of relocating and settling on lands supposed to be more desirable. They followed a trail frequented by Indians and traders to Redstone fort, the present site of Brownsville, Pennsylvania, and there, learning of a beautiful and fertile country bordering the

a By Dana L. Hubbard, esq.

waters of the Ohio river, they crossed the intervening country to the head-waters of the stream now known as Wheeling creek, and traveled along its banks to its confluence with the river. Here they marked out in three divisions a strip of territory including nearly all of the present site of Wheeling. In the following spring, Colonel Ebenezer Zane brought his family from the South branch of the Potomac by way of Redstone fort to the new settlement, coming from Redstone in canoes and pirogues, which were floated down the Ohio. Other families speedily joined the settlement, and in 1774, for its protection against hostile Indians, a well-constructed work of defense was built, called "Fort Fincastle", which name, in 1776, was changed to "Fort Henry." Constantly recurring warfare with the Indians checked the growth of the settlement, which in 1782 consisted of the fort, and a few log cabins surrounding it. Its early history was made up of almost continuous struggles against the efforts of the savages to destroy it, and the name "Wheeling" is said to have been derived from the killing of a white settler by the Delaware Indians, and the placing of his head on a pole near the center of the site of the present city, the word *wheeling* signifying "head" in the dialect of the Delaware tribe. Another tradition states that the place was named after a Catholic priest named Whalen, and still another that it took its name from the creek which pursued a wheeling or winding course through its boundaries.

The development of Wheeling as a municipality began in January, 1806, when it was incorporated as a village. In 1810 it had 914 inhabitants. The building of the Cumberland road to the Ohio river in 1818, and its subsequent extension through the state of Ohio about this time, gave Wheeling additional prominence as an avenue and distributing-point for passengers and freight east and west, until the national turnpike was superseded by railroads. The population increased rapidly. In 1836 Wheeling was incorporated as a city and the present city water-works were built. In 1847 the project of building a bridge over the Ohio river at Wheeling, which had been previously advocated unsuccessfully by some of the western states as a national measure before Congress, was revived by the people of Wheeling as a private enterprise, and under a charter from the state of Virginia a suspension bridge with a clear span of 1,010 feet was in 1849 built over the main channel, and connected with the Ohio shore by a pier-bridge previously built—the two structures being subsequently protected by an act of Congress declaring them post-roads. The suspension span was blown down in 1853, and was rebuilt during the same year.

In 1831 the city was made a port of delivery, and boat-building, which had been carried on to some extent previously, became one of its important industries. From 1849 to 1879, 99 steamboats, varying from 651 to 14 tons burden, were launched from Wheeling boat-yards. The quality, abundance, and location of the coal strata adjacent to Wheeling induced the establishment of other manufactures, notably of glass and iron, at an early day, and wagons, furniture, and other similar products were turned out in considerable quantities for western and southern markets. With the establishment of such manufactures came a further proportionate increase in the population of the city, besides a very considerable increase in its suburban towns and villages. This growth was assisted largely by the opening of the Baltimore and Ohio railroad to Wheeling in 1853, and the completion of its branch connections with the West, Northwest, and South; the completion of the Cleveland and Pittsburgh railroad and other branches of the Pennsylvania system, and of minor roads, opening up communication with adjacent territory. In 1848 the gas-works, now owned by the city, were begun by a private corporation. In 1851–'52 the building known as Washington hall, which was subsequently burnt and replaced by the present structure, was erected, and in 1859 the present custom-house, post-office, and United States court building was built. Street-cars were introduced in 1866, and at this time connect the extremities of the city and furnish a means of communication with all towns lying within a radius of 5 miles from its center.

Subsequently to the passage of the ordinance of secession by the state of Virginia, and the beginning of the civil war, a provisional government, called the "restored government of Virginia", was formed (June 19, 1861) by citizens of Virginia opposed to the secession of that state, which fixed its capital in the city of Wheeling. After the formation of the new state of West Virginia in 1863 the capital of the restored government of Virginia was removed to Alexandria, Virginia, and the capital of the new state was established at Wheeling. It remained here until removed to Charleston, in Kanawha county, by the legislature of the new state, in 1870. In 1875 it was again removed by the legislature to Wheeling, the taxpayers of the latter city building, at a cost of $160,000, and furnishing to the state gratuitously, so long as it desired to occupy it, a handsome and commodious capitol building in the central portion of the city. In 1877, by a vote of the people of the state, taken under regulations provided by the legislature, it was determined that the capitol should be removed to Charleston at the expiration of 8 years, and, unless future changes are made by the legislature, Wheeling will cease to be the capital May 1, 1885.

Wheeling suffered considerably from some of the periods of business depression which have affected the country at various times since its settlement, but they do not seem to have interfered with its steady growth. During the hard times closely following the war of 1812–'15, between the United States and Great Britain—from 1817 to 1825—her manufactures, trade, and industries of every character were more or less prostrated. The subsidence of the western land speculation, and the panic of 1837, produced similar disastrous effects, and the monetary troubles of 1842, 1857, 1861–'62, and 1873–'75 were severely felt; but their bad effects appear to have been only temporary. Notwithstanding these adverse years, there was a steady increase in the population from 1820 to 1880. The city has been singularly free from ravages by fire, for at no one time has it suffered the loss of more than two or three buildings.

WHEELING IN 1880.

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

LOCATION.

Wheeling, the present capital of West Virginia, and the county-seat of Ohio county, is in the extreme northwestern portion of the state, on the east bank of the Ohio river, 92 miles below Pittsburgh, in latitude 40° 5′ north, longitude 80° 43′ west from Greenwich, and at an average altitude of 650 feet above the sea-level, and from 40 to 95 feet above low-water mark in the Ohio river. The depth of water in the river varies from 20 inches at the lowest stage to 30 or 40 feet during the spring and fall freshets. The harbor capacity is 1,250 feet, length of levee. The channel capacity (width) is from 100 feet at low water to 1,000 feet at high water. The current varies from 2 to 8 miles per hour, according to the stage of water, the current at the ordinary boating stage being 5½ miles per hour.

RAILROAD COMMUNICATIONS.

Wheeling is touched by two of the largest trunk lines between the East and the West—the Baltimore and Ohio railroad, to Baltimore on the east, and, via the Central Railroad of Ohio, to Chicago, Cincinnati, and Saint Louis on the west, and the Wheeling, Pittsburgh, and Baltimore branch to Washington, Pennsylvania; and the Pennsylvania railroad, with its connections, to all the large cities in the country. The Cleveland, Tuscarawas Valley, and Wheeling railroad, from Cleveland, terminates here.

TRIBUTARY COUNTRY.

The character of the surrounding country with which Wheeling has local dealings is, so far as agriculture is concerned, principally grain-growing, although grazing and tobacco-growing are carried on to a considerable extent in West Virginia, eastern Ohio, and western Pennsylvania. The industries are mainly iron and glass manufacturing and coal mining. There are no distinctive features in the commercial interests, they being made up of dealings in the usual supplies furnished to farming and manufacturing communities.

TOPOGRAPHY.

Wheeling is divided into 8 wards, which include Wheeling island in the Ohio river opposite the central portion of the city, making up the 7th ward, and Ritchietown, which was annexed to the city in 1870, comprised in the 8th ward. The main portion of the city, bounded on the east by a chain of hills averaging 400 feet in height above the river, extends along the eastern bank of the Ohio a distance of 4 miles, with a breadth of from two to eight squares, and, including the island, covers an area of about 4 square miles. A small portion of Main and Market streets, its principal business avenues, and a part of the island ward, which is mainly used for residences, are lower than the immediate banks of the river, but the surface drainage in other parts of the city is carried without difficulty into Wheeling creek and the Ohio river, and the current in both is sufficient to prevent any serious inconvenience to residents from accumulation of impurities in either. There are no lakes, ponds, or marshes in or about the city. The surrounding country is open, the hillsides only being wooded. The geological characteristics of the site are thus described by Dr. James E. Reeves:

"Geological stratification of Wheeling hill"—ascending. The dip of all the strata is southeast, 12.07 feet per mile. Bed of Wheeling creek, magnesian limestone containing fossil, ferruginous clay, and blue clay; depth of strata unknown.

	Total depth, feet.
1. Sandstone, containing pyrites; 25 feet of this is good building-stone, the remainder loose and of no practical value	100
2. Limestone bowlders, blue clay, yellow clay, nodular sandstone	25
3. Bituminous coal, with strata of basic, central, and roofing slate	6
4. Reddish-yellow soapstone, blue clay, limestone	25
5. Bituminous shale in thin layers; sandstone, with deposit of oxide of iron; fire-clay	10
6. Bluish or mottled clay-slate, soft, without minerals; sand- or flagging-stone, with deposit of oxide of iron	28
7. Limestone, yellow clay, yellow soapstone, fire-clay	70
8. Sandstone of different qualities, some very hard and fine-grained; limestone of different quality and color; yellow clay; bituminous shale	48
9. Brown limestone and gray sandstone, stratified	35
10. Cannel coal	1½
11. Sandstone, different varieties stratified; limestone, hydraulic; sandstone, micaceous, with carbonate of iron	55
12. Remainder to subsoil, irregular and non-primitive superstrata	180
13. Subsoil, tough yellow clay	14

CLIMATE.

Highest recorded summer temperature, 104° (1854); mean summer temperature in average years, 72°. Lowest recorded winter temperature, −15° (1856); mean winter temperature in average years, 33°. Frosts do not occur later than May, nor earlier than the first or middle of October. The direction of the winds is almost constantly from the southeast and northwest, rarely from the south—a fact accounted for by the comparatively open country on the west and north and the presence of the Alleghany mountains on the east.

STREETS.

The city contains 35¾ miles of streets, and about the same length of alleys. With few exceptions the streets intersect at right angles, and have a width of from 60 to 66 feet. Of the streets, 4½ miles are paved with cobble-stones and 5¼ miles with broken stone. The cost of the cobble-stone paving is $1 15, and of the broken stone 90 cents per square yard. The cobble-stone is preferred for quality, permanent economy, and the relative facility with which it is kept clean. The sidewalks are from 11 to 14 feet in width and are paved with brick and flagstone. The alleys are from 12 to 20 feet in width, and, with the exception of about 2 miles of paving, are unimproved. The gutters on the streets paved with cobble-stones are paved in the same manner, while on the streets with broken stone they are of the same material though in much larger blocks. No trees are planted along the streets by the city. Some few are set out by the abutters at their own cost, and are placed only in front of their residences, at the curbstone. There are no grass-plots in the streets or along the sidewalks. The construction and repairs of streets are done almost entirely by day labor, at an average annual cost of $30,000. For construction, contract work is deemed best, while for repairs the preference is given to day labor. There is no steam stone-crusher, but a 5-ton horse-roller is used on the macadamized streets. The total length of horse-railroads in the city is 6 miles, with 36 cars and 96 horses and mules. The number of men employed is 46, and the number of passengers carried during the year is 1,125,000. The rates of fare are 5 and 6 cents within the city limits. There are no regular street omnibus lines, but 13 vehicles, with 19 horses, and giving employment to 9 men, run from the several railroad stations, and carry passengers to different parts of the city for 25 cents for each fare.

WATER-WORKS.

The water-works are owned by the city, but their total cost is not given. The system is by direct pumping, with high-pressure, double-acting, piston pump, the pressure per square inch being 92 pounds on the pump-valves and 47 pounds on the distributing mains. The greatest amount pumped in 24 hours is 3,417,500 gallons, and the least 1,370,800 gallons. The average cost of raising 1,000,000 gallons 1 foot high, estimated in only the actual working expense, is 11.16 cents. The yearly cost of maintenance, aside from the cost of pumping, is $13,755.99, and the yearly income from water-rates averages $45,000. Water-meters are not used.

GAS.

The gas-works are owned by the city. The average daily production is 146,180 cubic feet, and the charge per 1,000 feet is $1 08 net. There are 311 street lamps.

PUBLIC BUILDINGS.

The city owns and occupies for municipal uses, wholly or in part, the city hall, the market-house, the city prison, and the court-house. The city hall, built originally for a Masonic temple, was purchased by the city for $10,000. The city and county buildings are not owned in common, although the city uses the basement of the county court-house as a lockup. The state capitol building will revert to the city in 1885, and will then be used for municipal purposes.

PUBLIC PARKS AND PLEASURE-GROUNDS.

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

PLACES OF AMUSEMENT.

There are two theaters in the city—the opera-house, with a seating capacity of 900, and the Academy of Music, with a seating capacity of 1,000. These pay an annual license of $150 each to the city. There are, also, Assembly hall, Franzheim's hall, Germania hall, Harmom's hall, Koch's hall, La Belle hall, Mozart hall, Nolte's hall, Otto hall, Parker's hall, Turner hall, Walter's hall, and Westwood's hall. These are principally controlled by private societies, which frequently give public concerts, balls, lectures, etc. Most of them hold government licenses for the sale of beer and wine. When an admission fee is charged to persons who are not members of the society giving the entertainment, the city charges a license fee of $5 for each evening's entertainment.

DRAINAGE; CEMETERIES; MARKETS.

No information on either of these subjects was furnished.

SANITARY AUTHORITY—HEALTH COMMITTEE.

The chief sanitary organization of Wheeling is the health committee, composed of five members of the common council, selected annually from that body, and one health officer, a physician, elected biennially by the common

council. The committee is controlled by the common council, and if any members of that body happen to be physicians, they are generally appointed on the committee. The annual expense of the committee in ordinary times is $1,500, expended for salaries, sanitary inspections, etc. The extent to which the committee may increase its expense in the presence of an epidemic is limited to the amount authorized by the common council. The health officer, however, has authority during an epidemic, or the threatened approach of one, to purchase disinfectants, to order the street commissioner to clean such localities as he may deem necessary for the health of the city, and to have the gutters of such streets and alleys flushed as may in his judgment require it. He also has discretionary power to remove to the pest-house persons afflicted with contagious disease. The health officer is also chief executive officer of the committee. His duties are to exercise general supervision over the sanitary condition of the city; to see that nuisances are abated; to prevent the accumulation of filth and garbage; and to attend, free of cost, the prisoners in the city prison and the city patients in the hospital. His salary is $600 per annum. Two or three health inspectors are employed during a short time each spring. They are under the orders of the health officer, as a rule are not physicians, and have no police power. The committee meets once a month and reports all business to the common council, which acts on its reports. The inspectors report all nuisances to the health officer, who orders them abated. When private persons report nuisances the health officer makes a personal inspection. The custom concerning the inspection and correction of defective house-drainage, privy-vaults, cesspools, sources of drinking-water, sewerage, street-cleaning, etc., is the same as that observed toward nuisances. The committee exercises no control over the conservation and removal of garbage, but the place for its final disposal is designated by the health officer. All burial permits are issued by the health officer. The committee has no regulations regarding the pollution of rivers or streams, or the removal of excrement.

INFECTIOUS DISEASES.

Small-pox patients are either sent to the pest-house in the extreme northeast part of the city and well isolated, or quarantined at home, the place being watched by persons appointed for the purpose by the health officer. As a rule, only the friendless poor are sent to the pest-house. Scarlet-fever cases are not isolated, except in very rare instances. On the breaking out of contagious diseases in the schools the committee requests that they be closed, and the board of education generally grants the request. Vaccination is compulsory, when the health officer thinks it is necessary, and in cases where persons are unable to pay it is done at the public expense.

The record of diseases and deaths is kept by the health officer, who publishes the same in the city papers once a month.

REPORTS.

The health committee reports to the common council at its own pleasure or by request of that body. These reports are published in the daily papers.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned at the expense of the city, and, since May 1, 1880, with its own force. Prior to this date the work was done by contract. The work is done wholly by hand. The paved streets are cleaned once a month, macadamized streets twice a year, and crossings once a week. Since the expiration of the contract the cleaning has been very inefficiently done. The annual cost of the work is $2,500 to the city, and the sweepings are deposited on the river-bank or on vacant lots. The system, while the contract lasted, is reported as nearly perfect. The only disadvantage in the place of deposit is that the sweepings are sometimes washed into the river and may assist in making bars in the channel.

Removal of garbage and ashes.—All garbage is removed at the expense of the city and under contract. It is required to be kept in suitable vessels, unmixed with ashes, in places convenient for removal. It is taken away every day in warm weather and twice a week in cool weather. It is finally dumped into the Ohio river. The annual cost to the city for this work is $2,300. Ashes are removed by the householders, and they are placed in back alleys or lots and used for grading. Temporary nuisances from the improper handling of garbage are reported. The system is good if enforced properly; but, owing to the negligence of householders to report omissions, the collectors are careless.

Dead animals.—The carcasses of dead animals are thrown, by the owners, into the Ohio river, at such distance from shore as to be carried away by the current. A failure to comply with the ordinance regarding this matter subjects the owner to a fine. The system is good so far as the city is concerned; its defect is the deleterious effect it may have on the water of the Ohio river.

Liquid household wastes.—In those parts of the city where sewers extend, all household wastes pass into them. Where there are no sewers, the chamber-slops are thrown into vaults or cesspools, while the laundry wastes and kitchen-slops run into the street-gutters. About two-fifths of the city has no sewers. The cesspools are porous at the bottom, are not provided with overflows, in some cases receive the wastes from water-closets, and are cleaned out in the same manner as privy-vaults. The street-gutters depend almost entirely on rain for flushing.

Human excreta.—Hardly 5 per cent. of the houses in the city have water-closets; nearly all of these deliver into the sewers, and the remainder depend on privy vaults. The vaults must be not less than 10 feet deep, lined

on the sides with either brick or stone, and slushed with mortar, so that the sides shall be water-tight. About 20 per cent. of them are nominally water-tight. They must be cleaned when full, or when ordered to be so by the health officer, and the contents must be disinfected. The odorless-excavator apparatus is generally used; where night-carts and buckets are used, the work must be done between 10 p. m. and 5 a. m. The dry-earth system is reported as used to a considerable extent—about 30 per cent. The night-soil is deposited in the Ohio river, outside the city limits, and not within 100 feet of the shore.

Manufacturing wastes are deposited either in Wheeling creek or in the Ohio river. The defects of this system are great. Most of the wastes from slaughter-houses, gas-works, and oil-refineries go into a creek which passes through the city. In summer the creek has little or no current, and at such times the odor arising from it is extremely offensive.

No information concerning police or fire department was furnished.

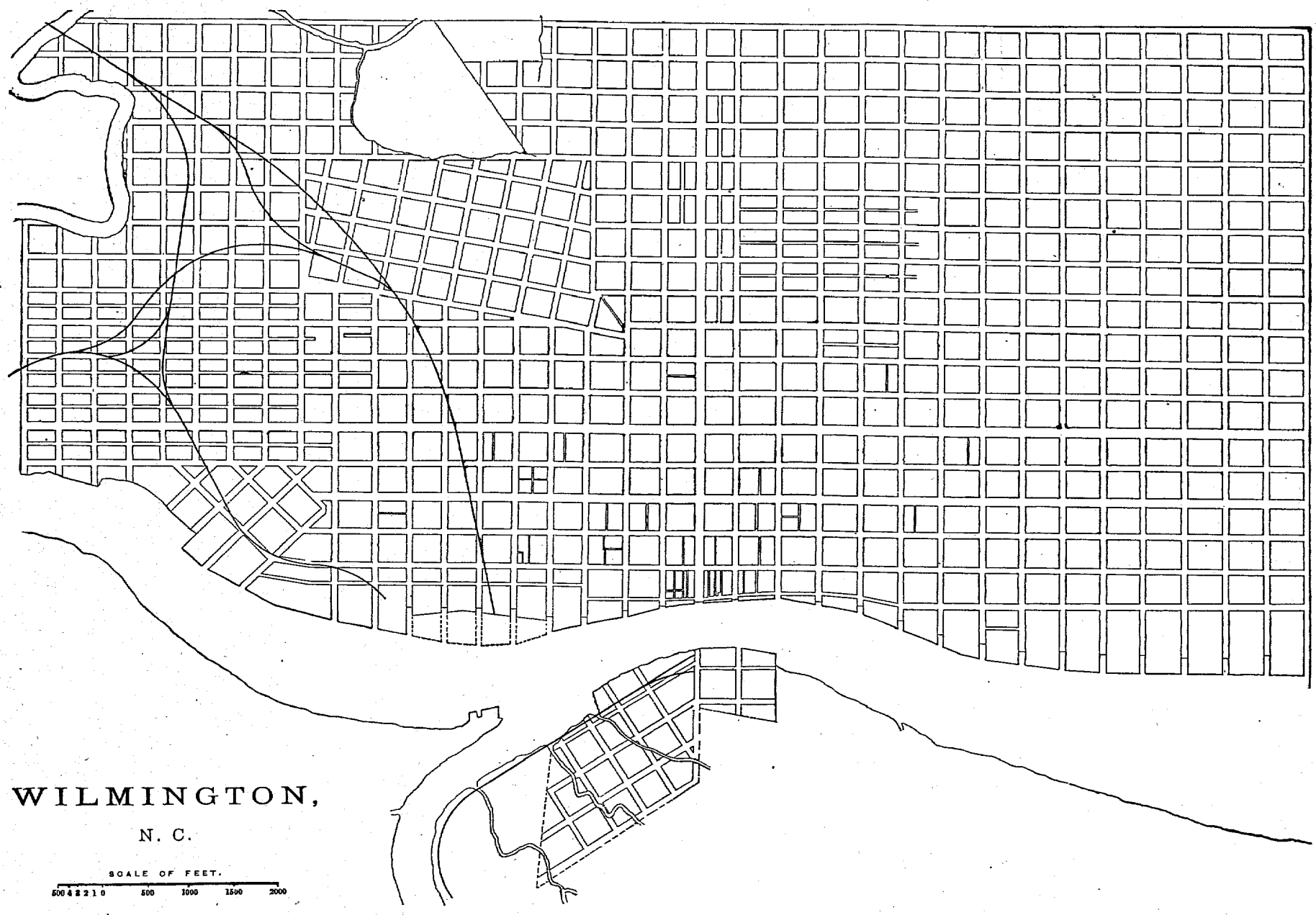
MANUFACTURES.

The following is a summary of the statistics of the manufactures of Wheeling for 1880, being taken from tables prepared for the Tenth Census by Dana L. Hubbard, 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	227	$4,868,288	4,658	196	658	$2,192,255	$5,203,931	$9,259,844
Baskets, rattan and willow ware	3	2,200	3	.....	.....	1,580	1,100	4,700
Blacksmithing	7	15,200	14	.....	.....	5,820	5,575	18,721
Brick and tile	7	32,000	77	.....	18	11,149	2,664	24,560
Carpentering	4	27,000	25	.....	.....	16,450	46,648	85,700
Carriages and wagons	4	172,000	78	.....	1	36,234	54,000	145,000
Clothing, men's	27	85,000	160	10	15	47,500	108,000	220,684
Confectionery	5	9,050	18	2	.....	6,002	51,300	64,964
Cooperage	5	25,800	63	.....	32	42,608	38,339	89,000
Foundery and machine-shop products	6	221,500	198	.....	1	89,339	69,471	228,702
Furniture	3	48,000	103	.....	2	40,616	31,342	98,827
Glass	3	500,522	525	87	206	296,450	192,564	714,000
Iron and steel	7	2,214,425	2,327	.....	246	1,098,296	2,472,053	4,306,567
Leather, curried	4	123,200	58	.....	.....	34,800	377,258	447,972
Leather, tanned	4	166,000	61	1	.....	21,422	334,740	378,152
Liquors, malt	5	203,017	85	.....	.....	33,329	153,082	256,588
Lumber, planed	4	148,000	83	.....	2	38,990	173,500	237,400
Marble and stone work	3	14,750	30	.....	.....	12,860	9,600	33,334
Masonry, brick and stone	3	2,000	30	.....	.....	11,940	5,869	22,700
Painting and paperhanging	3	1,500	9	.....	.....	4,066	6,167	12,850
Plumbing and gasfitting	6	54,015	45	.....	.....	23,288	58,113	99,453
Printing and publishing	7	122,500	127	15	35	67,892	41,864	165,356
Roofing and roofing materials	3	1,200	6	.....	1	1,400	6,000	11,100
Saddlery and harness	6	16,100	18	.....	.....	9,572	23,750	43,450
Shipbuilding	3	7,500	9	.....	.....	6,850	16,800	27,550
Shirts	4	1,200	.....	40	.....	9,200	20,240	33,890
Slaughtering and meat-packing, not including retail butchering	4	97,361	25	.....	.....	11,350	243,440	270,500
Tinware, copperware, and sheet-iron ware	11	40,373	49	.....	5	23,393	49,461	94,405
Tobacco, cigars and cigarettes	45	124,965	232	3	19	86,294	217,521	366,984
All other industries (*a*)	31	391,910	200	38	75	104,065	392,570	755,775

a Embracing agricultural implements; baking and yeast powders; boots and shoes; boxes, fancy and paper; brass castings; bread and other bakery products; brooms and brushes; carriage and wagon materials; coffee and spices, roasted and ground; coke; dyeing and finishing textiles; files; flouring- and grist-mill products; food preparations; gloves and mittens; hardware; iron nails and spikes, cut and wrought; lamps and reflectors; lock- and gun-smithing; lumber, sawed; patent medicines and compounds; sash, doors, and blinds; soap and candles; stencils and brands; vinegar; wirework; and wheelwrighting.

From the foregoing table it appears that the average capital of all establishments is $21,446 20; that the average wages of all hands employed is $397 72 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $33,869 09.


WILMINGTON,
N. C.
SCALE OF FEET.
500 4 3 2 1 0
500
1000
1500
2000

NORTH CAROLINA.

WILMINGTON,

NEW HANOVER COUNTY, NORTH CAROLINA.

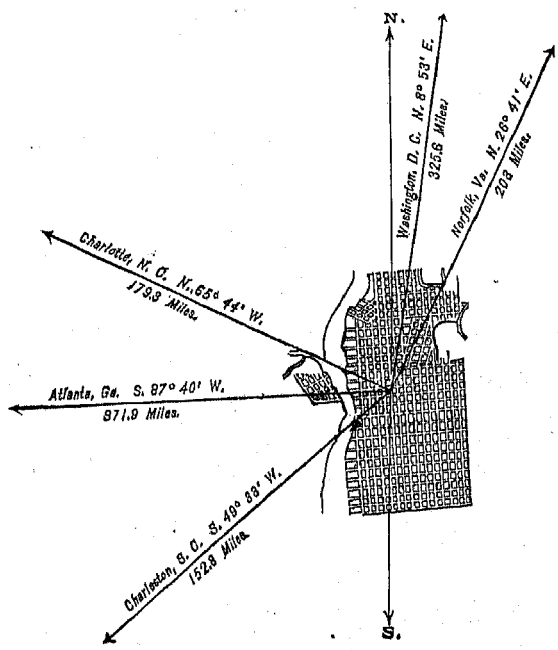
POPULATION

IN THE

AGGREGATE,

1840-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	.....
1840	4,744
1850	7,264
1860	9,552
1870	13,446
1880	17,350



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	7,910
Female	9,440
Native	16,822
Foreign-born	528
White	6,888
Colored	10,462

Latitude: 34° 14′ North; Longitude: 77° 56′ (west from Greenwich); **Altitude: 26 feet.** (*a*)

FINANCIAL CONDITION:

Total Valuation: $4,759,890; per capita: $274 00. Net Indebtedness: $539,845; per capita: $31 11. Tax per $100: $3 13.

WILMINGTON IN 1880. (*b*)

Wilmington, the capital of New Hanover county, is the principal seaport and the largest city in the state. It is on the east bank of the Cape Fear river, and 30 miles from the ocean. It has an extensive commerce, by sailing vessels, with all parts of the world. The draught of water at the entrance to the river, and of the river itself, has been much improved during the past decade. It has in fair proportions the usual concomitants of modern

a At Smithsonian station.

b Of the schedules of interrogatories, 10 in number, sent to Wilmington, but 2—that relating to *places of amusement*, and that relating to *municipal cleansing*—were returned with the information asked for.

American cities in the way of schools, churches, newspapers, etc. Of manufactories of different kinds it has a considerable number. The principal exports of the place are naval stores, lumber, shingles, and cotton. The exports for 1875, of which about one-half went to foreign ports, aggregated about $10,000,000 in value. Wilmington has long been a leading market for naval stores.

PLACES OF AMUSEMENT.

Wilmington has 1 opera-house, 1 concert-hall seating 600, and 3 lecture-halls seating from 250 to 300 each. There are 2 beer-gardens in the city; one, established 13 years ago, seats 200 persons, covers about 4 acres, and cost $10,000; and one, established 5 years ago, covers about the same number of acres and cost about the same amount.

MUNICIPAL CLEANSING.

Street-cleaning.—The city cleans the streets with its own force, and entirely by hand. The cleaning is constantly going on, under the direction of the chief of police, aided by the superintendent of streets, and its annual cost is $10,000. The sweepings are deposited half a mile beyond the city limits. The doing of the work by the city, as compared with contract work, finds favor on account of its greater efficiency.

Removal of garbage and ashes.—Garbage is removed by the city with its own force. While awaiting removal it is required to be kept in barrels or vessels, and unmixed with ashes. Some of the garbage which is fit for the purpose is used as manure by the truckers. Ashes are generally taken by those desiring to make soap.

Dead animals.—The carcasses of all the larger animals dying within the city are required to be removed by the owners, when they are able to do it; otherwise the city does it. The carcasses of small animals, as cats, dogs, etc., are removed by the city.

Liquid household wastes.—Almost all the liquid household wastes of the city are run into the sewers. None are allowed in the street-gutters, and but little passes into cesspools. When such cesspools do exist they are nominally water-tight. In some localities it is noticeable that drinking-water has been contaminated by the overflowing or the underground escape of the contents of cesspools and privy-vaults; hence these are now required to be built above ground and cleaned out in the winter or early spring, whenever the health officer thinks it necessary.

Human excreta.—Only a small proportion of the houses of the city have water-closets, some have privy-vaults, and many use boxes above ground. About two-thirds of the water-closets deliver into the sewers, and the remainder into cesspools. As yet the earth-closet is but little used, but the dry-earth system is thought to be growing in favor. Night-soil is removed beyond the city limits, where it is taken by truck-farmers and used as manure; but such use is not permitted within the gathering-ground of the public water-supply.

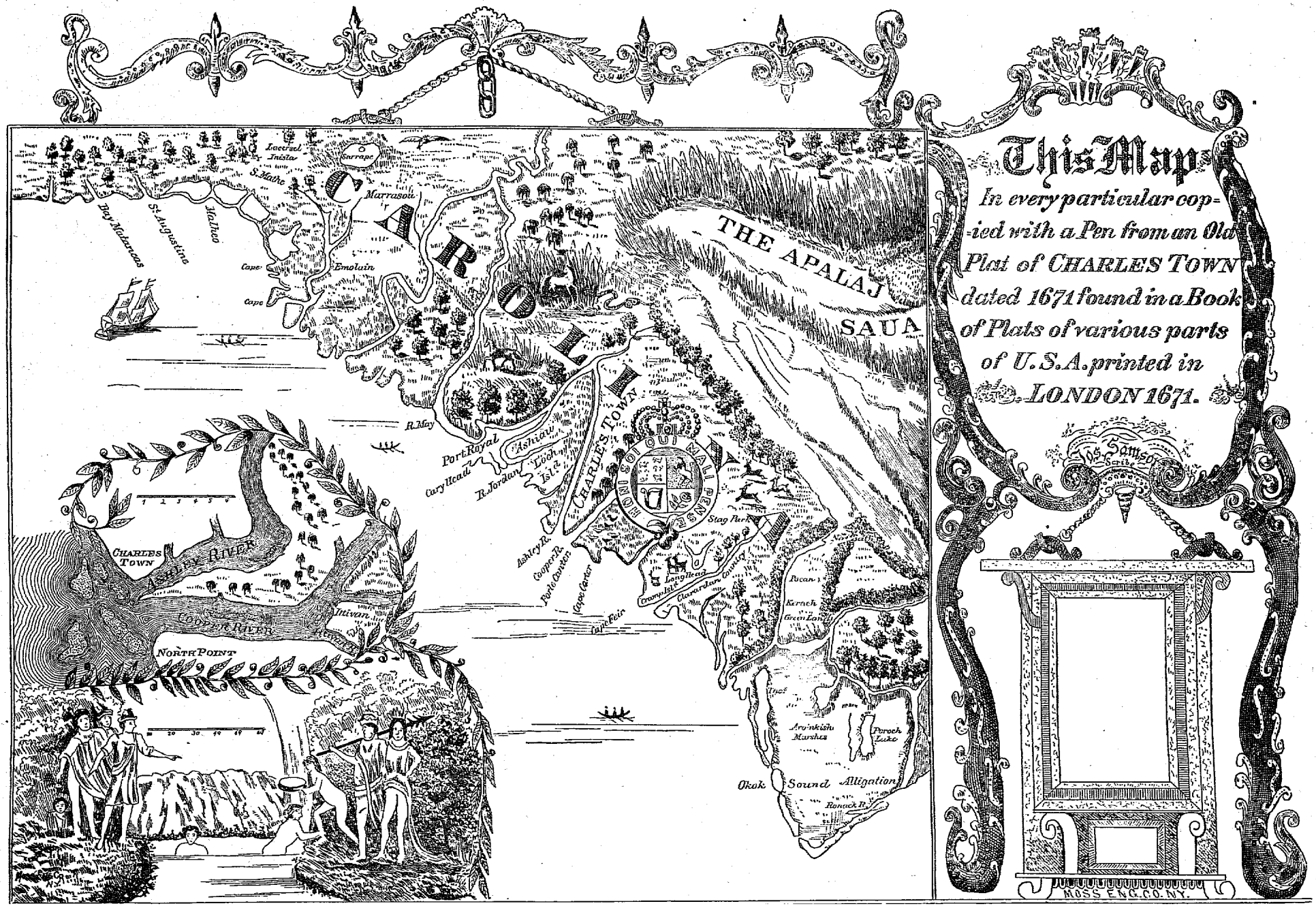
Manufacturing wastes are run into the public sewers.

COMMERCE AND NAVIGATION.

[From the reports of the Bureau of Statistics for the fiscal years ending June 30.]

Customs district of Wilmington, North Carolina.	1879.	1880.
Total value of imports	$73,832	$100,657
Total value of exports:		
Domestic	$4,748,931	$3,040,228
Foreign	None.	$1,437
Total number of immigrants	None.	None.

Customs district of Wilmington, North Carolina.	1879.		1880.	
	Number.	Tons.	Number.	Tons.
Vessels in foreign trade:				
Entered	313	100,538	215	67,757
Cleared	338	104,337	310	95,099
Vessels in coast trade and fisheries:				
Entered	154	75,596	None.	None.
Cleared	130	78,794	None.	None.
Vessels registered, enrolled, and licensed in district	77	5,929	78	6,171
Vessels built during the year	2	56	1	83


This Map
In every particular copied with a Pen from an Old Plat of CHARLES TOWN dated 1671 found in a Book of Plats of various parts of U.S.A. printed in LONDON 1671.
Wm. Samson Scribe
CAROLI
THE APALAJ
SAUA
Bay Matanzas
St. Augustine
Matheo
Cape
Emolain
Marrasou
Lactral Insta
S. Mathe
Carrape
R. May
Port Royal
Caryllead
R. Jordan
Ashley
Loch Isle
CHARLES TOWN
HONI SOIT QUI MAL Y PENSE
Stag Park
Ashley R.
Cooper R.
Port Cartar
Cape Cartar
Cape Feir
Langhead
Crown Isle
Clavarlan Country
Pocan
Kerach
Green Land
Aroinkish Marshes
Poroch Lake
Okak Sound
Alligation
Ronack R.
CHARLES TOWN
ASHLEY RIVER
COOPER RIVER
Ittivan
NORTH POINT
MOSS ENG. CO. NY.

SOUTH CAROLINA.

CHARLESTON,

CHARLESTON COUNTY, SOUTH CAROLINA.

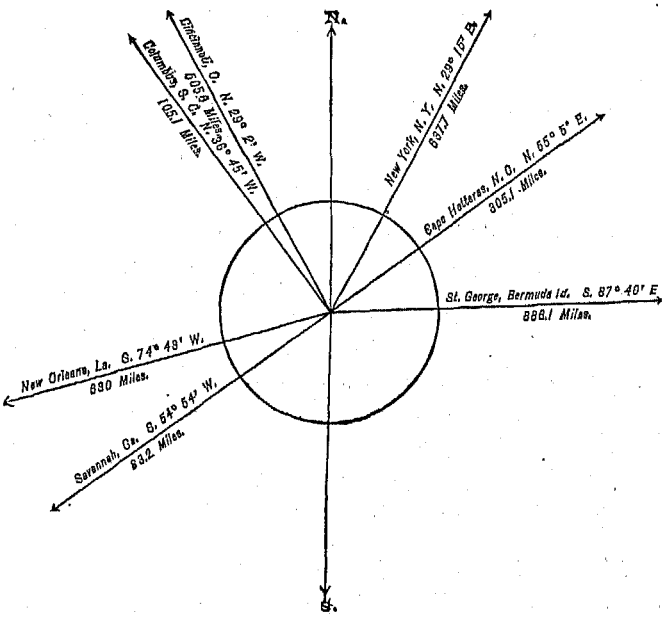
POPULATION

IN THE

AGGREGATE,

1790-1880.

	Inhab.
1790	16,359
1800	18,924
1810	24,711
1820	24,780
1830	30,289
1840	29,261
1850	42,985
1860	40,519
1870	48,956
1880	49,984



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	22,585
Female	27,399
Native	46,034
Foreign-born	3,950
White	22,699
Colored	*27,285

*Including 9 Chinese.

Latitude: 32° 47′ North; Longitude: 79° 56′ (west from Greenwich); **Altitude: 8 to 15 feet.**

FINANCIAL CONDITION:

Total Valuation: $22,543,423; per capita: $451 00. Net Indebtedness: $4,129,102; per capita: $82 61. Tax per $100: $3 10.

HISTORICAL SKETCH.

The first attempt of the English lords proprietors to establish settlements in Carolina was made at Port Royal. This name, given by Ribault, about 1562, was remembered by the English, and thither William Sayle, with a number of colonists, directed his course in 1670. They reached this their desired port and laid the foundation of a town. They continued, however, only some months at Port Royal, and then removed to the western bank of Ashley river. Several reasons led to this change. Port Royal was too near the Spanish settlements and too accessible from the

sea, Spain being then a great maritime power. The new site on Ashley river was also more convenient for pasturage and tillage. Here a new town was begun and named "Charles-town". Sayle died within the year. The colonists elected as his successor Joseph West. Upon Sayle's death becoming known in England, Sir John Geamans was appointed governor, and was commissioned December 26, 1671.

Lands were soon taken up on the east side of the Ashley river, and settlements were formed in other parts of the neighborhood. The first popular election known of in South Carolina was in April, 1672, under a proclamation from the grand council requiring all of the freeholders "to elect a new parliament". From this body five counsellors were chosen, who, with the governor and the deputies of the lords proprietors, formed the grand council. Arrangements were now made for the improvement of Charles-town. It was laid out and divided into lots. The settlers then surrendered to the grand council, July 22, 1672, the lots they had previously occupied, and received others according to the new arrangement. The town was fortified, and additional works of defense were erected in 1674.

It soon began to appear that the site was ill-adapted to the growing commerce and prosperity of the town. As early as 1672 settlements had been made on the neck of land opposite the town and called "Oyster Point". Some of the land had been taken up by Henry Hughes and John Corning. They offered to give up one-half, "to be employed in and toward enlarging of a town and commons of pasture, then intended to be erected". From this it would seem that there was an early design to found a town upon the spot. Mr. Hughes' offer was accepted, and his land was retained by the grand council for the purpose indicated. The settlement continuing to increase, it was known in 1677 as "Oyster Point town". The neck of land on which this town was begun was formed by the confluence of the two rivers, originally Kiawah and Etiwan, but named, in compliment to Lord Shaftesbury, "Ashley" and "Cooper". The superior advantages of this situation led gradually to a removal from the original site on the western bank of the Ashley. This last could not be reached by large vessels at low water. In 1679 it was ordered to remove the public offices, and in that and the following year the order was executed. In 1680 we find the town called in some official papers "New Charles-town", and in 1682 "Charles-town".

The town as originally laid out was of small extent, bounded by Meeting street on the west, Market street on the north, Water street on the south, and the bay on the east. It was surrounded by a line of fortifications. The settlers consisted both of Cavaliers and of Puritans. Old strifes and divisions reappeared and marred the harmony which might have been expected among a people having the same hardships to encounter, the same enemies to fear, and a common object to promote, viz, the prosperity of the colony. To these troubles must be added another of very serious character—wars with the surrounding Indians. One occurred in 1712, another in 1715. Both were savage and destructive. In the last, all the tribes from the Cape Fear river to Florida joined.

For the first thirty years the exports consisted chiefly of staves, furs, lumber, and peltry. Rice began to be exported about 1700. It had been introduced about 1693 by Landgrave Smith, who obtained a small bag from the captain of a vessel from Madagascar, and planted it in his garden, near what is now known as Longitude lane. By the year 1720 it was exported in considerable quantity. According to Ramsey the historian, the exports of rice in 1740 amounted to 91,110 barrels. At the beginning of the Revolution, 1776, the average annual export was about 142,000 barrels. According to Dayton (*View of South Carolina*) cotton was noticed as an article of export about the middle of the century, but it was not exported largely till after the Revolution. Indigo was planted first about 1741-'42. In 1747 there were sent to England about 200,000 pounds. In 1754, 216,924 pounds were sent, and just before the Revolution 1,107,660 pounds. Near the close of the century it gave place to cotton. From the valuable compilation of Drs. Dawson and De Saussure, published in 1849, the following statement is taken:

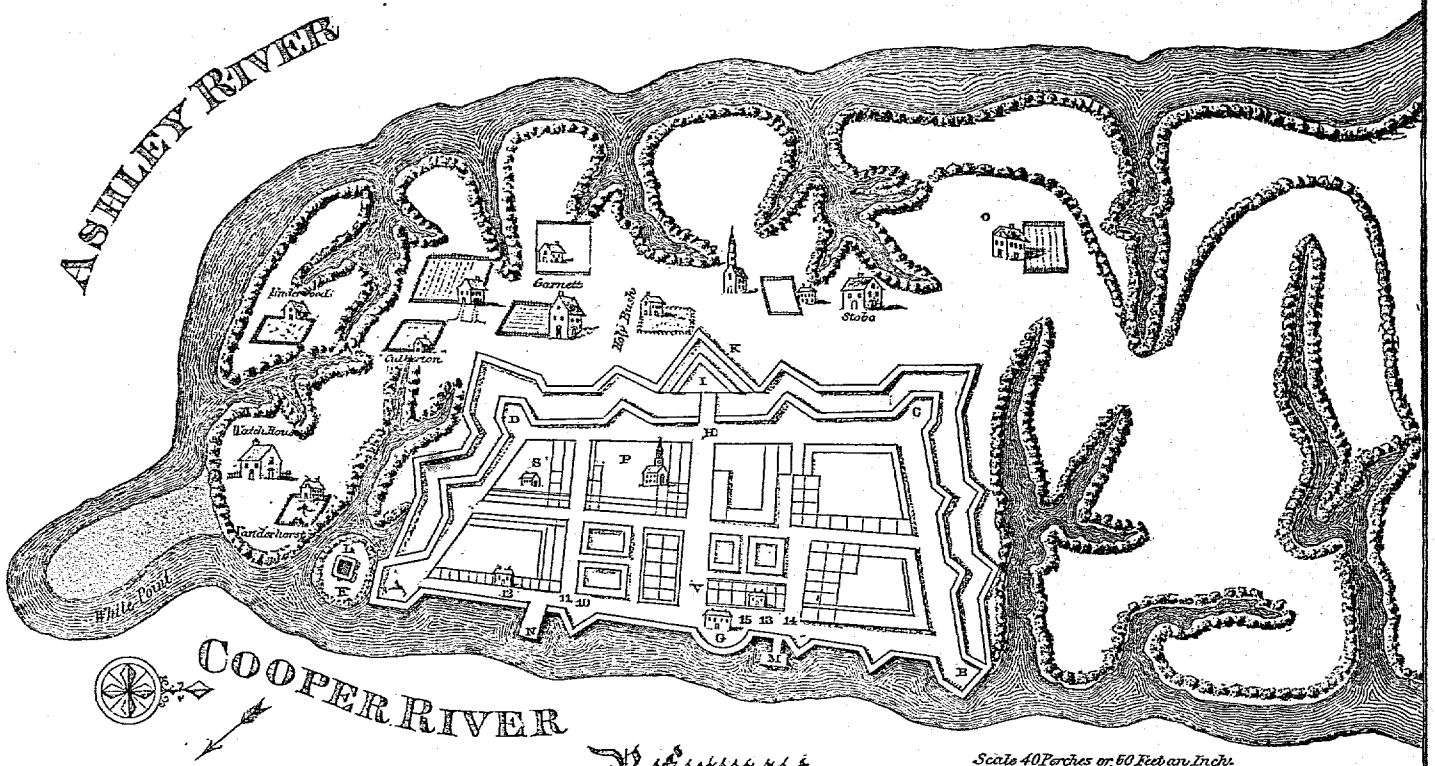
Year.	FOR SOUTH CAROLINA.		FOR THE OTHER COLONIES.	
	Exports.	Imports.	Exports.	Imports.
1725	£91,942	£39,182	£323,708	£510,511
1750	191,607	134,037	623,159	1,180,046
1774	432,302	378,116	941,544	2,212,321
1775	579,349	6,245	1,341,701	189,917

Early Indian wars have already been mentioned. In 1728 a hurricane threatened the entire destruction of the town. The streets were inundated, and 23 ships were driven ashore, most of which were destroyed. The storm was followed by yellow fever, which swept off multitudes. A fire in 1740 laid half the town in ashes; 300 buildings were consumed. Parliament voted £20,000 for the relief of the sufferers. In 1765 the population is stated as about 6,000 whites and from 7,000 to 8,000 colored.

The courts were all held in Charles-town. During the colonial period there does not appear to have been any organization entitled to the name, strictly speaking, of a municipal government. At an early date, 1704, an act of assembly was passed "to settle a patroll" and regulate a town-watch. Each captain of the town companies was required to mark off a certain number of men for the patrol service, to appoint one of these as commander, and to give notice what night every commander, with the men belonging to his list of the watch, was to take his turn.

A Plan of Charles Town from a Survey of Edwd. Crisp, Esqr. in 1704.

Fac-simile of drawing.



References.

A	Granville Bastion	H	Draw Bridge in the Line	P	English Church	1	Pasquero Garretts House	9	Starling House
B	Craven Do.	I	Johnson's covered half Moon	Q	French Do.	2	Landsacks Do.	10	M. Boone Do.
C	Carleset Do.	K	Draw Bridge in " "	R	Indpendent Do.	3	Jno. Crosskeys Do.	11	Tradd Do.
D	Colleton Do.	L	Palisades	S	Ana Baptist	4	Chevliers Do.	12	Langdon Smith Do.
E	Ashley Do.	M	Lt. Col. Rhetts Bridge	T	Quaker Meeting House	5	Geo. Logan Do.	13	Col. Rhett Do.
F	Blake Do.	N	Rea. L. Smiths Do.	V	Court of Guard	6	Poinsett Do.	14	Beni. Spanking Do.
G	Half Moon	O	Ministers' House	W	First Rice Patch	7	Elliott Do.	15	Lindery Do.

The management and regulation of town institutions appear to have been in the hands of commissioners, appointed by act of assembly. There were commissioners of the streets, of the markets, of the work-house, of pilotage, etc.; also there was a board of fire-masters. The charge and relief of the poor belonged to parish vestries, who had power to make assessments on the taxable inhabitants for the purpose, and to call on them for returns to be made to the assessor. The administration of this fund constituted a large portion of the business of each vestry. Abundant evidence of this may be found in the old journals of vestries. Shelter, food, clothing, and medical attendance were provided. Children received education. The poor were divided into two classes, viz, the parish poor and the transient poor. Lists of these, made out from time to time, may be seen in the journals of the vestries as late as 1783.

Education had received early attention. Contributions were made by the royal government, and liberal bequests by individuals. In 1711 a school was established by the English society for the propagation of the gospel. The success of this school led to the passage of an act the next year ordering a free school, which act applied not only to Charles-town, but to all the parishes.

The following particulars regarding the laying out of the town are extracted from Dalcho's *Church History:*

It is asserted by Rousseau (*Confessions*, tome II, p. 80) that his uncle superintended the building of Charles-town, of which he had given the plan. This is a mistake. Rousseau was born in 1712, and speaks of residing with his uncle in Switzerland after he was twelve years of age; consequently his uncle could not have come to Carolina before 1724. The map of Charles-town prefixed to the second volume of Ramsey's *South Carolina* is from a survey taken in 1704. The model of the town was sent out by the lords proprietors in May, 1671; and we have seen a warrant for laying out "one town at the Oyster point, observing the rules established in reference to the building of a town there". This was dated April 21, 1677. We find by act of general assembly "for the repairing the old and building of new fortifications", etc., passed in 1736, that Gabriel Bernard was then appointed chief engineer: "SECTION 10. And be it further enacted * * * that Mr. Gabriel Bernard shall be and he is hereby appointed chief engineer, who shall constantly attend, direct, and inspect the raising and repairing such fortifications as the said commissioners shall think fit, and shall be allowed at and after the rate of £700 per annum, nevertheless subjected to be displaced and the said salary taken away by vote or order of the general assembly." This person probably was Rousseau's uncle.

Toward the close of the colonial period, Charles-town was second to no city in North America in prosperity and social comfort, and even in luxury. European fashions and manners prevailed, and, as the historian Hewit tells us, "the people were not only blessed with plenty, but with a disposition to share it among friends and neighbors". Hewit adds, further:

Many will bear me witness when I say that travelers could scarcely go into any city where they could meet with a society of people more agreeable, intelligent, and hospitable than at Charles-town. In point of industry the town is like a beehive, and there are none that reap not advantage more or less from the flourishing trade and commerce.

The following extract from the journal of Josiah Quincy, who, in the year 1773, visited Charles-town, describes the place at that period:

This town (Charles-town) makes the most beautiful appearance as you come up to it, and in many respects a magnificent. * * * I can only say in general that in grandeur, splendeur of buildings, decorations, equipages, numbers, commerce, shipping, and indeed almost everything, it far surpasses all I ever saw or ever expect to see in America. * * * All seems at present to be trade, riches, magnificence, and great state in everything; much gaiety and dissipation. * * * State and magnificence, the natural attendant on great riches, are conspicuous among this people. * * * There being but one chief place of trade, its increase is amazingly rapid. The stories you are everywhere told of the rise in the value of lands seems romantic; but I was assured that they were facts.

The part taken by Charles-town in the Revolutionary war and the progress of events within her territory during the present century are so much matters of history that a detailed account of them is not deemed necessary here. In 1783 the city was incorporated by an act of the legislature under the name of "Charleston", and divided into thirteen wards. In 1809 the former division into thirteen wards was abolished and the number was reduced to four, which number in 1849 was increased to eight, and so remains.

The city on several occasions has suffered severely from fires. One, in 1740, has already been mentioned. In 1778 another occurred, which burned more than 250 buildings, besides stores and outbuildings. Among the buildings destroyed was the house, with the greater portion of its contents, in which were deposited the books, apparatus, etc., of the Charleston Library Society. Again, in 1796, a large portion of the town was laid in ruins. "Five hundred chimneys were counted from which the buildings had been burnt, and it is believed that 150,000 pounds sterling would be far short of the value of these buildings." The French Protestant church was burnt, and the Saint Philip's (the oldest Episcopal church) was on fire, but was saved by the exertions of a brave negro, who climbed to the top of the belfry and tore away the shingles. For this service the negro received his freedom. In 1810 some 200 houses were burnt. In 1835 another terrible conflagration occurred, which is memorable because of the destruction of the venerable Saint Philip's church, finished in 1723. The interior of this church, of imposing architecture, was filled with monuments of citizens prominent both in church and in state, the date beginning as early as 1722. But of all these destructive fires the most destructive was that of 1861. Beginning at the eastern extremity of Hasel street, it burned diagonally through the city to its southwestern end, consuming a large number of fine dwellings, some noted for historical associations and some for their splendor. Of late years, however, a large portion of the area laid waste has been rebuilt. In addition to these fires, others, not so disastrous in their effect, occurred in 1800, 1819, 1838, 1875, and 1876.

Slight shocks of earthquake were felt in the years 1811 and 1812. The vibratory motion was east and west, but so slight that no damage ensued. Shocks were also felt in 1754, 1799, 1843, and 1857. Besides the hurricane of 1728, previously mentioned, Charleston suffered more or less from others in 1713, 1752, 1764, 1797, 1800, 1804, 1810, 1811, 1813, 1822, 1854, and 1873.

The early settlers, English, Irish, Scotch, French, and German, were never supplanted, and are represented by their descendants to the present time. They shared the fortunes and the hardships of those among whom they came.

CHARLESTON IN 1880.

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

LOCATION.

The city is situated in the middle of the low country and center of the sea-coast of the state, and is distant about 7 miles from the Atlantic ocean. It is built on a neck of land formed by the junction of the Ashley and Cooper rivers, is surrounded on two sides by the Sea islands, and, when approached by water, it appears to rise from the sea. The strip of land on which it is situated widens northward into a broad and extended plane, the surface of which is occupied by fruit, vegetable, and floral farms, dotted with farm-houses, manufactories, orchards, and patches of woodland, covered with a growth of timber of nearly every variety known in the state. The level of its streets is from 8 to 15 feet above the mark of the highest tides.

HARBOR AND WATER-COURSES.

The city lies upon navigable water; it has a tidal harbor, spacious and convenient, occupying a basin-like space 15 miles square. The harbor is land-locked, the city being on a peninsula, the east side facing Cooper river and the west side facing Ashley river, the point looking out upon the bay. There is no safer harbor to enter, as the bed of the ocean is here an inclined plane, gradually shallowing on its approach to the bar, the tide rising and falling 5.1 feet. The current formed by the outlet of the two rivers is obstructed by a sand-bar, and is approached by the main or ship channel, opposite to and distant about 2 miles from Morris Island beach on the south side of the entrance to the harbor, and by Moffit's channel, running parallel to Sullivan's island; also by the direct or middle channel. The draught of water on the bar at high tide is 17½ feet, with a depth inside of the channel of 23 to 50 feet. The capacity of the harbor is sufficient to afford shelter for the navy of the strongest maritime nation on the globe, with good anchorage up the rivers on either side of the city. The United States government is now constructing jetties to increase the depth of water on the bar, and Pumpkin Hill channel, now being used, will be deepened to give 25 feet when the works are completed. The channel capacity is good, being considered sufficient for all purposes, except just at the bar, which is measurably circumscribed in width and in depth. The river or tidal current is very slight, not exceeding 2 miles an hour, and very steady, unless interrupted by heavy rains or storms, and is seldom materially affected by these unless they come from the east.

RAILROAD COMMUNICATIONS.

Three railroads give Charleston communication with all parts of the United States. They are as follows:

The South Carolina railroad, to Augusta, Georgia, 138 miles, with the Columbia branch, 68 miles, connecting with the railroad to Spartansburg and Hurdum, North Carolina, also with the Columbia and Charlotte railroad and the Camden branch, 37 miles; at Augusta this road connects with the Georgia railroad.

The North Eastern railroad, to Florence, 102 miles, connects with the Wilmington, Augusta, and Columbia railroad, the Cheraw and Darlington railroad, and the Wadesborough railroad.

The Charleston and Savannah railroad, to Savannah, 104 miles, connects with the Port Royal railroad from Beaufort to Augusta.

TRIBUTARY COUNTRY.

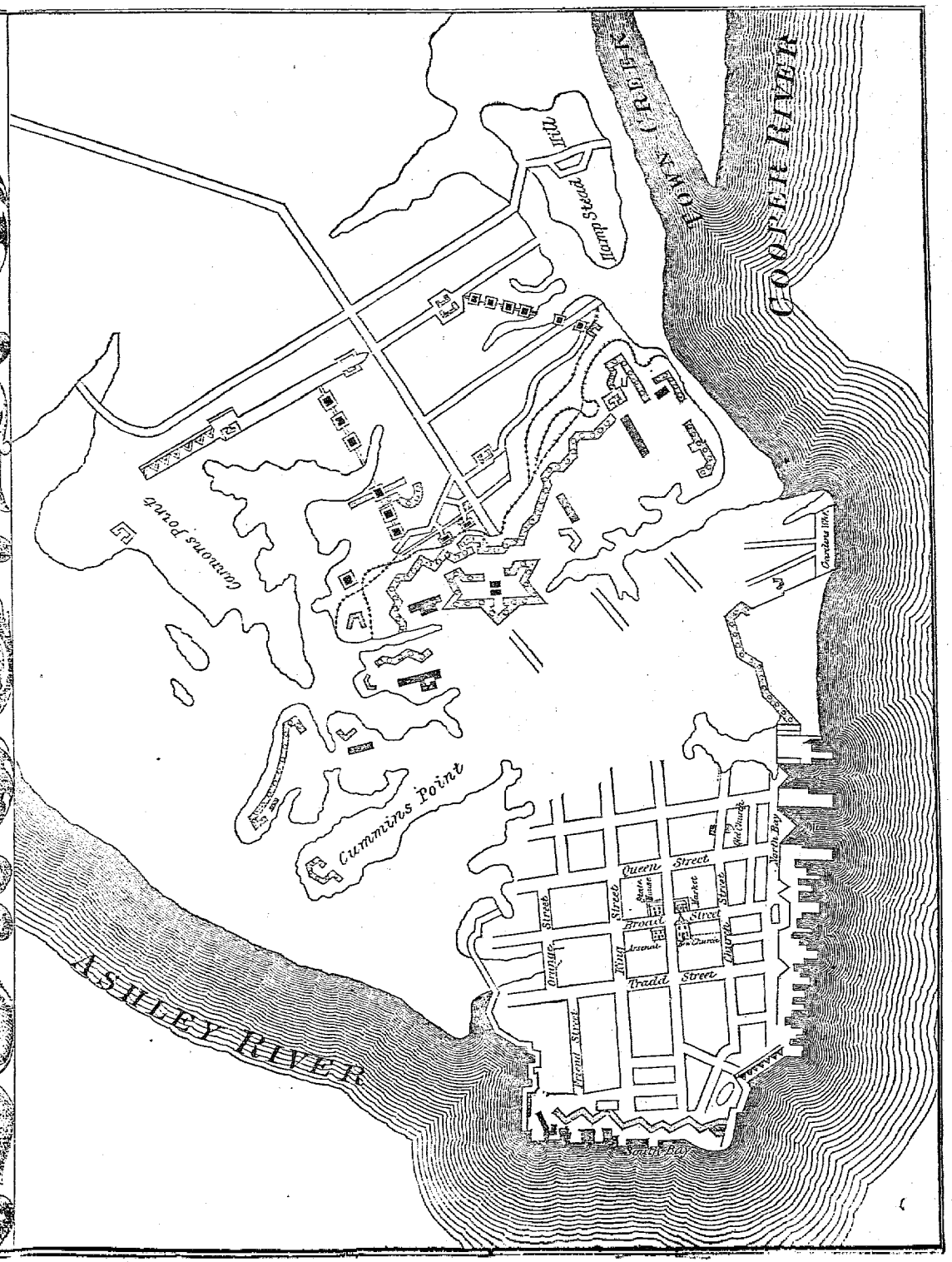
Charleston is the center of supply for the rice- and cotton-fields of South Carolina, northern Georgia, and the coast islands. The principal trade is in rice and sea-island cotton, the latter pertaining exclusively to this region. The trade with the surrounding country is chiefly supplies for plantations, etc. Small fruits and vegetables are largely raised and sent to the city for shipment. A large and growing trade is springing up in naval stores, lumber, and phosphates. Concerning the last-named industry, which is of recent creation, there were in 1875 five phosphate companies in active operation in Charleston, their works being located on the Ashley and Cooper rivers, within 5 miles of the city.

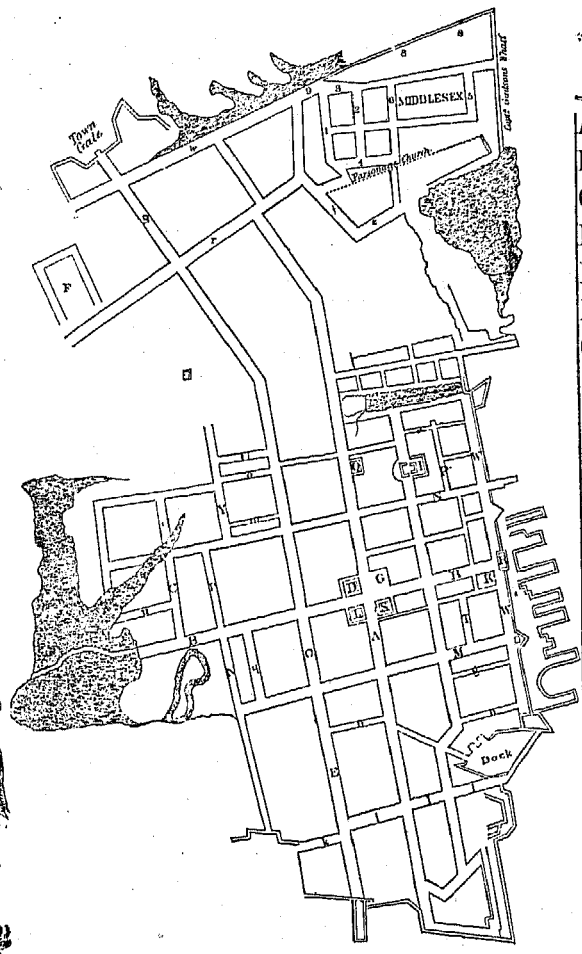
The Plan of Charles Town

With its Entrenchments and those made during the Siege by the English 1780.

The Night of the 1st April the Trenches were opened, 10th April the Town was summoned, 13th the first Parallel & 2d Battery were finished & a Cannonade Commenced, 18th the Second parallel was finished, 24th the Besieged made a Sortie upon the Extremity of the 3d Parallel. 8th May the Summoned a Second time. The 3d Parallel finished & they began to Batter in breach, 11th May they pushed by power near the Salient angle of the advanced Battery of the left & made the passage of the first ditch which had been previously drained. off 13th the Town Capitulated. The Entrenchments of Charles Town were formed by Redans & broken Curtains. The parapets were 7 ft high 15 ft thick. The ditch 14 ft deep & 20 ft in width, it was double Palisaded with 3 rows of holes & a strong Abbatis the front attached was covered by a ditch of 30 ft filled with Water. the Entrenchment were made in haste in less than 4 Weeks in 1779 & saved the Town from the Invasion under Gen. Prevost, when the English Embarked upon John's Isl. There was not in the Town a Garrison of 2000 Men, nor one Cannon Mounted, and the Abbatis which had been burnt during the Winter were not replaced when the English opened their Trenches, the Garrison consisted of 2300 Men, the Militia & Sailors have done nothing during the Siege, the defence of the whole rested upon the Continental Troops, who were Extended from one River to the other, the English threw during the Siege 10000 Bombs, 15000 Balls & 450 Carcasses, the Besieged were Obliged to live upon Rice & Molasses for 4 Days before the Town Capitulated, the Garrison Amounted to 1900 Men, Including Sick, Wounded & Servants. The English were at the reduction of the Town 13,000 Men Strong, they Completely invested the Town by Sea & by Land and were able to attempt with success a debarkment in the Town, two thirds of which were scarcely guarded.

Facsimile of an old drawing.





REFERENCES

A	Old Church Street	z	Centurion Street
B	Broad do	a	Chambers Alley
C	Mazicks do	b	Beresford do
D	State House	c	Union Street
E	Johnston do	d	Amen do
F	New Barracks	e	Unity Alley
G	Beef Market	f	Elliots Street
H	Church do	g	Longitude Lane
I	St. Philips Church	h	Stalls Alley
K	Gadsden Alley	i	Linches Lane
L	Armoury	k	Lambulls Street
M	Tradd do	l	Smiths Lane
N	Queen do	m	Bottle Alley
O	King do	n	Prices do
P	Union (Continued) do	o	Clifford Street
Q	Presbiterian Meeting	p	Allen do
R	Exchange	q	Orange do
S	St. Michael Church and Church Yard	r	George do
T	Bedons Alley	s	Squirrel do
U	Beresford do	t	Anson do
W	Bay do	u	Short do
X	Friend do	v	West do
Y	Archdale do	w	Boundary do

Fac-simile of the original.

TOPOGRAPHY.

The site of the city originally contained 1,800 acres, and was intersected by ten large and several smaller creeks, besides ponds and lowlands. It was divided into a number of peninsulas by these creeks and marshes, which indented it on three sides so as to leave but little unbroken high land in the middle, and as the first buildings extended along East Bay street, they had a marsh along their entire front. Zanderhort's creek occupied the foundation of Water street, and another creek ran westwardly nearly parallel to East bay. From McLord's lots, the same kind of low ground ran up Queen street (then Dock street), and the north end of Union street (now State street) was planted with rice until the middle of the eighteenth century. It required time and perseverance, with much labor and expense, to change this quagmire into high, dry, and solid land; but it was finally accomplished.

The soil of the site is diversified, varying from the richest vegetable mold to the poorest yellow sand. Under this is a calcareous bed which rests upon rock of Cretaceous formation. The drainage is bad, and heavy rains saturate the soil to a depth of 18 feet. The surrounding country is low, and for the most part either marsh- or wood-land or sea-coast; it is all under cultivation. The Sea islands surrounding Charleston are composed of slight ridges of yellow sand, and in appearance resemble the ground swells of the ocean.

CLIMATE.

Highest recorded summer temperature, 102°; highest summer temperature in average years, 90°. Lowest recorded winter temperature, 18°; lowest winter temperature in average years, 28°. The seasons here are very equally divided between heat and cold, the former beginning about the last of April and ending with September, while the latter follows from the last of October to the end of March. Frosts never occur before October, and seldom, if ever, after April. The winters are not uniformly cold, but are marked by alternate spells of warm and cold weather from three to five days in duration. The changes, though more frequent than in colder climes, are seldom so sudden or severe. In summer the usual range of the thermometer during the day is from 84° to 90°, and at night from 60° to 78°. The heat is moderated by daily sea-breezes, which spring up about noon and continue till night. Cases of sunstroke are reported as extremely rare in Charleston. The marshes near the city are covered at each high tide, so no bad influences from them are perceptible. The only disagreeable wind is from the east; all others are pleasant and salubrious.

STREETS.

Total length of streets, 53½ miles, paved as follows: Cobble-stones, 9.25 miles; stone blocks, 1.60 mile; wood, 5.25 miles; and shell, 1.40 mile. The remainder, 36 miles, are of dirt. The cost per square yard, as near as may be estimated, is, for stone blocks, $1 65. The cost of the other kinds of pavement was not given. In point of quality and permanent economy stone blocks are considered best, and cobble-stones next. The sidewalks are of flagstone, brick, shell, and earth. The gutters are laid with stone, brick, and wood. Shade-trees are planted all over the city. The property-owners place them in front of their residences, on the curb-line, and the city plants in the parks.

The annual cost of construction and repairs is $80,000, the new work being done by contract and the repairs by day labor. The city authorities express a preference for day labor on the street work, as it is more easily controlled, is much cheaper in the end, and by it the public interests are much better served. A steam-roller and a steam stone-crusher have been tried, but as it has been decided to pave with stone blocks, the crusher is no longer used.

There are 20½ miles of horse-railroads in the city, using 57 cars and 125 horses, and giving employment to 89 men. The total number of passengers carried during the year is 1,516,428, and the rate of fare is 5 cents. The omnibus lines have 10 vehicles and 20 horses, and give employment to 10 men. They carry annually 75,000 passengers, at rates of fare varying from 50 to 75 cents.

WATER-WORKS.

The water-works are owned by a private corporation. The water is taken from artesian wells, and pumped either into a stand-pipe or into a reservoir of 3,200,000 gallons capacity, or direct into the mains. The pressure in the pumps varies from 54 pounds to the square inch when the stand-pipe is used, to 185 pounds to the square inch when pumping direct into the mains. The yearly cost of maintenance is $3,500. The yearly income from water-rates was not stated. Water-meters are not used. There are now completed 12 miles of mains. There are 165 fire-hydrants, and many others for private use. The wells, from which the water-supply is obtained, vary in depth from 1,230 to 1,965 feet. The stand-pipe gives sufficient head to force the water over any building in the city.

GAS.

The gas-works are owned by a private company. The daily average production is 50,000 cubic feet. The charge per 1,000 feet is $3 09 net. The city pays annually $19 50 for each street-lamp, 1,136 in number.

PUBLIC BUILDINGS.

The city owns and occupies for municipal purposes, wholly or in part, 1 city hall, 1 almshouse, 1 orphan house, 1 house of correction, 13 engine-houses, 2 markets, and 2 powder-magazines. Their total cost was not given.

PUBLIC PARKS AND PLEASURE-GROUNDS.

The city owns and has in use about 33 acres of public grounds, and 20 acres more, within the populous limits, available in the future.

White Point Garden, or "the Battery", area 10 acres, is situated at the eastern end of the city, facing the harbor, and is the general place of resort. It is laid out in walks, with trees, and provided with seats. Neither the total cost nor the annual cost of maintenance for any of the parks was given.

PLACES OF AMUSEMENT.

There is one theater in Charleston, the Academy of Music, seating 900, and the following halls, used for concerts, lectures, etc.: South Carolina hall, Freundschafts-Bund hall, Hibernia hall, Bruederlicher Bund hall, and Harmony Circle hall, with a total seating capacity of 2,300. Besides these there are 8 halls used by military companies, Free Masons, etc., with a total capacity of 3,700. There are no concert- or beer-gardens in the city.

DRAINAGE.

The sewers of Charleston drain into a system of tidal drains, built in 1856–'57, about 5½ miles in length, laid level, and at an elevation of 20 inches above mean tide. They extend across the city, and usually connect at both ends. They consist of a semi-circular arch 3 feet in diameter, resting on solid walls 3 feet high, supported on a platform of plank forming a flat bottom. Connecting with these are laterals, usually of the same shape but smaller in size, and laid at a slight inclination according to the grade of the streets.

Drainage from yards and slops from houses reach the street-drains sometimes by covered drains or pipes and sometimes by open gutters. Owing to defective foundations the tidal drains have gone out of shape in many places, and having been laid in level lines they are not self-cleansing in any part. In the years 1879–'80 there were 14,156 loads of sediment removed from them. The entire expenditure for this purpose in 15 years has been $93,106.

The street-drains are but little better. The health officer in his report of 1880, page 37, says:

> The street-drains are open to several objections. Built from time to time, varying in form according to the constantly changing administrations, wanting in uniformity of grade and connection, not a harmonious whole, but a series of disjointed sections, they represent an aggregate outlay of money which, if applied under the direction of an intelligent engineer officer, would have long since developed into a complete whole. As an illustration of this, the Franklin Street drain recently cleaned is 18 inches below the level of the Broad Street drain into which it should discharge; and, at the intersection of State and Market streets, also recently opened, a net-work of drains were found of all sizes and shapes intersecting each other in different directions, and some drains actually under the others, are badly planned, and, of course, very filthy. * * * As regards the system of yard-drains, while there may be exceptions, as a whole they are as defective in operation as such constructions can well be. No attempt seems to have been made to secure uniformity in form, size, or material, in depth, level, inclination, or other necessary requisites, and the consequence is that a large proportion of these so-called yard-drains are mere shams choked up to the top, forming stench-traps, where malarial gases are contributed every hour to the atmosphere we breathe.

The superintendent of streets, in his report of the same date, page 168, says: "The following drains have been opened and cleaned; they were found for the most part filled to the crown of the arch." He then gives a list of nine streets, many of which are in the best part of the city. Water-closets are not much used, but the old-fashioned privy may be found in almost every back yard.

CEMETERIES.

The following cemeteries, graveyards, and burying-grounds are connected with Charleston, namely:

First Presbyterian, southwest corner of Tradd and Meeting streets; area, 1½ acre.

Saint Michael's, Episcopal, southeast corner of Meeting and Broad streets; area, 1½ acre.

First Baptist, west side of Church street, opposite Longitude lane; area, 1 acre.

Saint Peter's, Episcopal, east side of Logan street, between Broad and Tradd streets; area, 1 acre.

Huguenot, southeast corner of Church and Green streets; area, ¼ acre.

Saint Philip's, Episcopal, east side of Church street, between Queen and Cumberland streets; area, 2½ acres.

Circular Presbyterian, independent, Meeting street, east side, between Queen and Cumberland streets; area, 1½ acre.

Saint John, Lutheran, southeast corner of Clifford and Archdale streets; area, 2 acres.

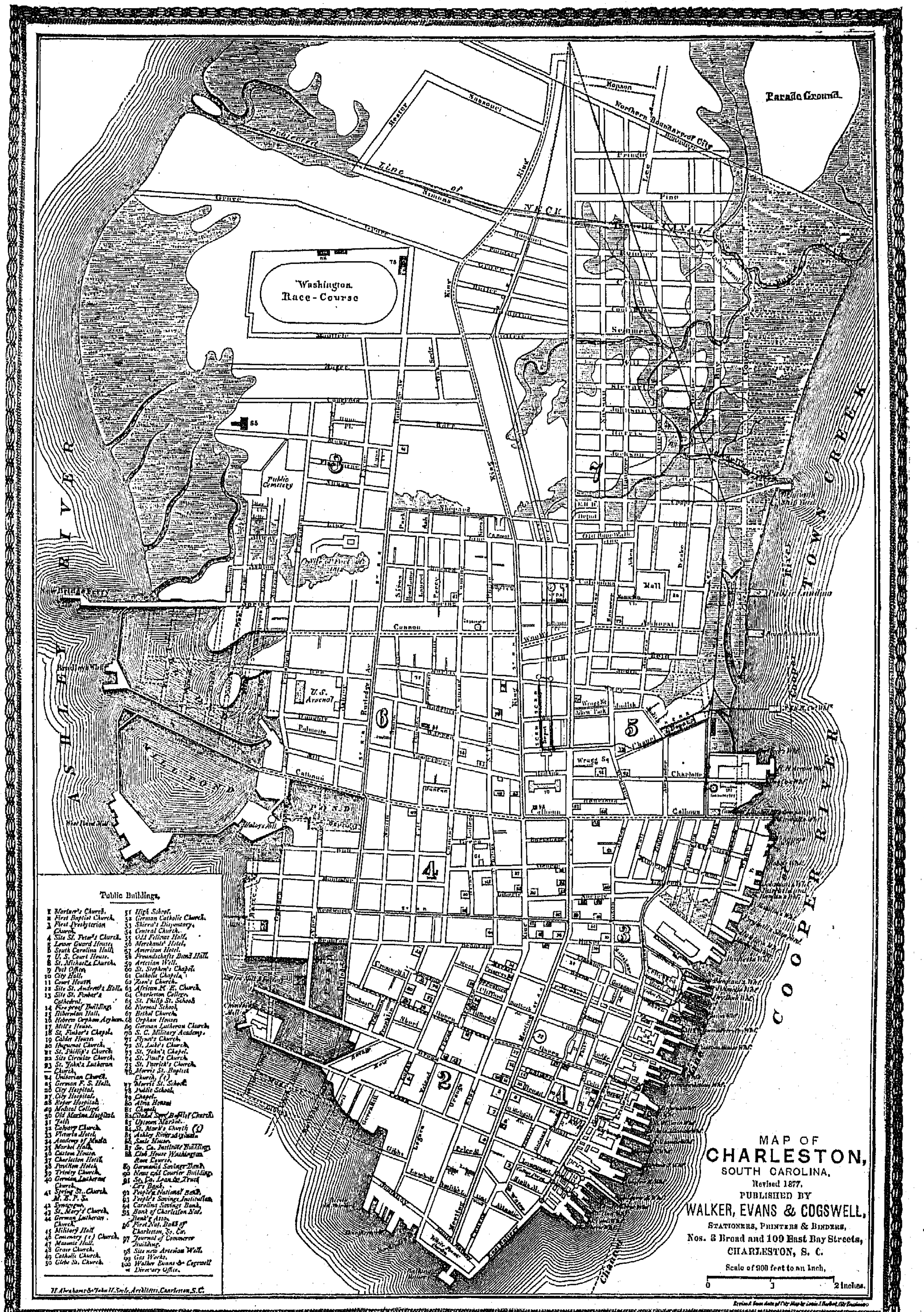
Unitarian, Archdale street, east side, next south of Saint John.

Saint Mary, Catholic, south side of Hasel street, between King and Meeting streets; area, 1½ acre.

Bethel, Methodist, southwest corner of Calhoun and Pitt streets; area, 2 acres.

Flynn Church, Presbyterian, on Mogg square; area, about 3 acres.

Saint John Chapel, Methodist, corner of Amherst and Hanover streets; area, 1 acre.


MAP OF
CHARLESTON,
SOUTH CAROLINA.
Revised 1877.
PUBLISHED BY
WALKER, EVANS & COGSWELL,
STATIONERS, PRINTERS & BINDERS,
Nos. 3 Broad and 100 East Bay Streets,
CHARLESTON, S. C.
Scale of 900 feet to an Inch,
0
1
2 Inches.
Parade Ground
Washington Race-Course
Public Cemetery
U.S. Arsenal
ASHLEY RIVER
COOPER RIVER
TOWN CREEK
Calhoun
Cannon
Palmetto
Wragg Sq.
Charlotte
Public Buildings.
1 Mariner's Church.
2 First Baptist Church.
3 First Presbyterian Church.
4 Site St. Peter's Church.
5 Lower Guard House.
6 South Carolina Hall.
7 U. S. Court House.
8 St. Michael's Church.
9 Post Office.
10 City Hall.
11 Court House.
12 Site St. Andrew's Hall.
13 Site St. Finbar's Cathedral.
14 Fire proof Building.
15 Hibernian Hall.
16 Hebrew Orphan Asylum.
17 Mill's House.
18 St. Finbar's Chapel.
19 Calder House.
20 Huguenot Church.
21 St. Phillip's Church.
22 Site Circular Church.
23 St. John's Lutheran Church.
24 Unitarian Church.
25 German F. S. Hall.
26 City Hospital.
27 City Hospital.
28 Roper Hospital.
29 Medical College.
30 Old Marine Hospital.
31 Jail.
32 Calvary Church.
33 Victoria Hotel.
34 Academy of Music.
35 Market Hall.
36 Custom House.
37 Charleston Hotel.
38 Pavilion Hotel.
39 Trinity Church.
40 German Lutheran Church.
41 Spring St. Church M. E. P. So.
42 Synagogue.
43 St. Mary's Church.
44 German Lutheran Church.
45 Military Hall
46 Centenary (c) Church.
47 Masonic Hall.
48 Grace Church.
49 Catholic Church.
50 Glebe St. Church.
51 High School.
52 German Catholic Church.
53 Shirra's Dispensary.
54 Central Church.
55 Odd Fellows Hall.
56 Merchants' Hotel.
57 American Hotel.
58 Freundschafts Bund Hall.
59 Artesian Well.
60 St. Stephen's Chapel.
61 Catholic Chapel.
62 Zion's Church.
63 African M. E. Church.
64 Charleston College.
65 St. Philip St. School.
66 Normal School.
67 Bethel Church.
68 Orphan House.
69 German Lutheran Church.
70 S. C. Military Academy.
71 Flynn's Church.
72 St. Luke's Church.
73 St. John's Chapel.
74 St. Paul's Church.
75 St. Patrick's Church.
76 Morris St. Baptist Church, (c)
77 Morris St. School.
78 Public School.
79 Chapel.
80 Alms House.
81 Chapel.
82 Citadel Sq. Baptist Church.
83 Uptown Market.
84 St. Mark's Church (c)
85 Ashley River Asylum.
86 Scale House.
87 So. Ca. Institute Building.
88 Club House Washington Race Course.
89 Germania Savings Bank.
90 News and Courier Building.
91 So. Ca. Loan & Trust Co's Bank.
92 People's National Bank.
93 People's Savings Institution.
94 Carolina Savings Bank.
95 Bank of Charleston Nat. Bank'g Asso.
96 First Nat. Bank of Charleston, So. Ca.
97 Journal of Commerce Building.
98 Site new Artesian Well.
99 Gas Works.
100 Walker Evans & Cogswell Directory Office.
H. Abrahams & John H. Seyle, Architects, Charleston, S.C.

Saint Paul's, Episcopal, northeast corner of Vanderhorst and Corning streets; area, 2½ acres.

Saint Patrick, Catholic, northeast corner of Saint Philip and Radcliff streets; area, 2 acres.

Central, Presbyterian, northwest corner of West and Archdale streets; area, 1 acre (closed).

German Burying-ground, Protestant, south side of Amherst, next to corner of Hanover street; area, 2 acres (closed).

Hebrew, southeast corner of Amherst and Hanover streets; area, ¼ acre (closed).

These 18 are for white persons, and the following 15 are for colored persons:

Circular Burying-ground, Methodist, south side of Calhoun street, between Pitt and Smith streets; area, 1½ acre.

Bethel, Methodist, west side of Pitt, next to corner of Calhoun street; area, 1 acre.

Methodist Episcopal, east side of South street; area, ¼ acre.

McPhelin, Episcopal, east side of Pitt street, between Bull and Calhoun streets; area, ½ acre.

Brown Fellowship, Episcopal, Pitt street, next to above, south; area, ½ acre.

Baptist Burying-ground, north side of Line street, between Corning street and Rutledge avenue; area, ¼ acre (closed).

Mariners' Colored, general, adjoining the preceding (closed).

Saint John's, Catholic, southwest corner of Shepard and Corning streets; area, 1½ acre.

Lutheran Colored, northwest corner of Columbia and Aiken streets; area, ½ acre.

Calvary, Episcopal, north side of Line street, between Corning street and Rutledge avenue; area, 1¼ acre.

Field of Rest, Methodist, east side of Hanover street, between Hampton court and Amherst street; area, 2 acres (closed).

Scotch Colored Presbyterian, north side of Amherst street, between Hanover and America streets; area, 1 acre.

Beersheba, Presbyterian, northeast corner of Reid and Hanover streets; area, ¾ acre.

Zion Hill, Methodist, northeast corner of Hanover and Columbus streets; area, ½ acre (closed).

Methodist, west side of Pitt street, between Bull and Calhoun streets (closed).

In addition to the 33 cemeteries and burying-grounds just enumerated, there are the following just beyond the northern boundary of the city: *Magnolia Cemetery*, *Saint Lawrence Cemetery*, *German Cemetery*, *Hebrew Cemetery*, and 2 others for white persons, and 2, one on either side of the *Hebrew Cemetery*, for colored persons.

Owing to the imperfections in many of the records, the total number of interments can not be given. Burial permits are issued by the board of health on certificates of death signed by the attending physician, and graves may not be less than 6 feet in depth. A committee of the board of health has general supervision over all the burial-grounds in the city.

About 30 years ago extra-mural cemeteries were strongly advocated from hygienic motives, and very generally concurred in, Magnolia (Protestant), Saint Lawrence (Roman Catholic), Bethany (German Protestant), and Hebrew cemeteries being established. Most of the white interments are now made in these cemeteries, though a number of the old families owning lots in the burial-grounds attached to the churches in the city still bury there. No new burial-ground is allowed to be opened in the city, and no one is allowed to be buried in any city burial-ground, except the church-yards, and then only an owner or pew-holder. The colored people are also purchasing convenient tracts of land near the city for the burial of their dead.

MARKETS.

There are two public markets in Charleston, one in ward 6, corner of Vanderhorst and Saint Philips streets, known as the *Upper Market*, and the other in ward 3, on Market street, from Meeting street to Cooper river, known as the *Lower Market*. The former contains 28 and the latter 112 stalls, the rental per week for each class being as follows: Beef stalls, $1 10 each; vegetable stalls, 50 cents each; fish stalls, $1 50 each; and fruit stalls, 50 cents each. The total rental for the two markets during the past year was $10,474 44; amount expended, $4,793 73; and net receipts, $5,680 69. The markets are opened daily, except Sunday, from sunrise to 11 a. m., and on Saturdays, all day from the first Saturday in October to the first Saturday in June. The markets are built on a wide area, and, in the case of the lower market, the adjoining streets are occasionally used for the sale of hogs, calves, and sheep, and for standing-room for farmers' and hucksters' wagons. The lower market was established about 75 years ago, and the upper market some 30 years ago.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief health organization of Charleston is the board of health, composed of the president of the Medical Society of South Carolina, and the physician of the city orphan house, with 1 physician and 8 citizens appointed by the mayor, and the city registrar, also a physician, a member *ex officio*. The board is entirely an independent body, and its action is not controlled when inside the law. In ordinary times the annual expenses of the board are $28,335, for salaries, medicine, disinfectants, coffins, ambulance, stationery, printing, city hospital, etc. During an epidemic the board may increase its expenses to any amount necessary, but no limit is specified. In the absence of any declared epidemic the board has full authority to do all things needful for the sanitary condition of the

city, and during an epidemic to take all measures necessary to check and control the same. The chief executive officer of the board is the city registrar, with a salary of $1,000 per annum. His duties are to see that all health regulations and ordinances are enforced, and to execute all orders coming from the board. There are 7 health physicians, 4 sanitary inspectors, and 1 health detective employed. They have power sufficient to carry out the instructions of the board and to make arrests. The board transacts its business as a deliberative body. The regular meetings are weekly, and the office hours are from 9 a. m. to 8 p. m., the registrar being required to attend from 12 to 2 daily.

Inspections are made regularly in all parts of the city, from house to house and from yard to yard. When nuisances are discovered, the owner of the property if private, or the city inspector if public, are notified to have the same corrected within a specified time, and if this is not done, the board has the necessary labor performed, charging the cost to the property on which the nuisance existed. When defective house-drainage exists, owners are notified to remedy the same. Privy-vaults are cleaned and disinfected and cesspools are ordered abated. There is no inspection of the water-supply. The artesian-well water is examined from time to time. Defective sewerage is, on being discovered, at once remedied, either by private parties, or, if in street-drains, by the superintendent of streets. The conservation and removal of garbage are controlled by the board, and the sanitary inspectors have supervision over the same. All matters pertaining to the burial of the dead are regulated by the board, and a standing committee on burial-grounds, sextons, and hearses is always appointed. The pollution of streams and harbors is prohibited, and the removal of excrement is under the control of the board.

INFECTIOUS DISEASES.

Small-pox patients are isolated by being sent to the pest-house, the board promptly providing one in case of need. Scarlet-fever patients are not isolated. The board takes cognizance of the breaking out of contagious diseases in public and private schools, but has no control over the treatment. Vaccination is not compulsory, but is done at the public expense for the poor, when requested.

The registration of marriages, births, diseases, and deaths is systematically done by the clerk of the board.

REPORTS.

The board of health reports annually to the city council, through the city registrar, and the report is published with the regular city documents.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned at the expense of the city and with its regular force. The work is done wholly by hand, no sweeping-machines being used. The paved streets are cleaned about once a month, and the unpaved ones three or four times a year, while certain low spots receive attention weekly. The efficiency of the work is reported as being "medium". The annual cost of this work is $3,000. Some of the sweepings are sold to farmers, and the remainder are used for filling in new streets in the marsh. The system is not entirely satisfactory, on account of the looseness of the surface and the difficulty of drainage.

Removal of garbage and ashes.—All garbage and ashes are removed at the expense of the city with its own force. While awaiting removal, garbage is kept in boxes and barrels and set out on the street each day. It is allowed to keep ashes and garbage in the same vessels, and their final disposition is similar to that of street-sweepings. The annual cost of this removal is $12,000. The system is said to work well. The garbage is removed every morning, and there are no complaints.

Dead animals.—The carcasses of all horses, mules, and cows dying within the limits of the city are taken by the neighboring farmers and used as manure. The carcasses of small animals are removed by the city and dumped in the marsh-lands with the garbage. The cost of this service is included in that for the removal of garbage and ashes. The system is reported as "good".

Liquid household wastes.—Chamber-slops go into drains or are thrown into privy-vaults, while laundry wastes and kitchen-slops are run into drains or street-gutters, or thrown into cesspools. These cesspools are built with brick sides and open bottoms, receive the wastes of water-closets, and must be cleaned out at least once a year, or oftener if so ordered by the board of health. Street-gutters are cleansed daily. It is reported that nearly five-sixths of the drinking-water from wells is more or less contaminated by privy-vaults or drains, and that the whole system of disposal of liquid wastes is defective, and is now undergoing examination by the municipal authorities and the board of health.

Human excreta.—About 500 houses in the city have water-closets, and it has been estimated that there are nearly 7,000 privy-vaults. The water-closets deliver either into the drains, cesspools, or privy-vaults. The ordinances provide that all privy-vaults must be built at least 10 feet from any street, alley, or lane, and so constructed that their contents can not escape or overflow. It is reported that none of them are water-tight. They are cleaned once a year, or oftener if necessary, by the odorless-excavator process, the whole matter being under the control of the board of health. The work used to be done at night, but is now done in the day-time. The night-soil

is taken out of the city, and is not used in the vicinity of the public water-supply. Mayor Courtenay reports: "The system of night-soil cleaning is defective and prejudicial to health. The subject of reform is now before the council and board of health."

POLICE.

The police force of Charleston is appointed by the chief of police, subject to confirmation by the mayor, and is governed by him. In addition to the government of the force the chief of police is required to maintain the peace and order of the city. His salary is $1,800 per annum. The force consists of:

	Salary, each.
2 first lieutenants	$950
2 second lieutenants	900
10 sergeants	600
3 detectives	600
80 privates	576
6 turnkeys	480
4 hostlers	480
5 steeplemen	480
3 day-men	300

The uniform consists in winter of a dark-blue military frock coat, with brass buttons stamped with the city crest and the words, "Charleston police", and black helmet hat, and in summer of a blue flannel suit, sack coat, and Panama hat. White gloves are worn while on duty. The winter suit costs $38, and the summer suit $16, and each man is required to provide his own uniform. Each patrolman is equipped with a rosewood baton, a revolver, a five-pointed star, and a Winchester rifle in reserve. The tours of duty are 4 hours day and 6 hours night, and all the streets of the city are patrolled by the force.

During the past year 3,452 arrests were made by the force, the principal causes being for disorderly conduct, drunkenness, larceny, and violation of the city ordinances. Their final disposition was by fine and imprisonment. In the same period the total value of lost or stolen property recovered by the police and returned to the owners was $23,402 73. The total number of station-house lodgers for the year was 445, as against 564 in 1879. No free meals are furnished to lodgers. The force is required to keep order at fires and protect property from theft; to report and arrest for violations of the health ordinances, and to report all violations of the building ordinances. Special policemen are appointed by the mayor for times of emergency, elections, etc., and as private watchmen. They are under the command of the chief of police and the rules and regulations of the police department. The yearly cost of the police force (1880) is $68,602 03.

FIRE DEPARTMENT.

The annual report of the chief of the fire department for the year ending December 31, 1880, states:

During the year there were 19 fires and 10 chimney and other alarms. The total amount of losses paid by insurance agencies located in this city this year is $151,842 48. The largest amount paid was $120,260 60. This was the fire that occurred on the 17th of October at Commercial wharves, which destroyed several thousand bales of cotton, also a number of buildings, and damaging wharf property and shipping in its course. The force numbers 14 steamers and 3 truck companies. The steamers are required by ordinance to have each 800 feet of good serviceable hose, making the total amount of hose 11,200 feet. The amount appropriated for the support of the department was $26,000. The fire-alarm telegraph, as small as it is, has worked quite satisfactorily. The introduction of water has been the means of facilitating the management of fires, as well as affording the fire department such relief and advantages as to enable them to control sudden fires much quicker than before its introduction.

PUBLIC SCHOOLS.

The following regarding the public schools of Charleston is taken from the last annual message (1880) of Mayor Courtenay:

The number of pupils registered at the five city public schools is as follows: Bennett school, 1,179—754 boys and 425 girls; Memminger school, 617, all girls; Meeting Street school, 275—109 boys and 166 girls; Morris Street school (colored), 1,403—646 boys and 757 girls; and Shaw Memorial school (colored), 318 boys and 348 girls. Grand total, 4,140—1,827 boys and 2,313 girls. These schools give employment to 91 teachers, 6 males and 85 females. Each school is divided into three departments—primary, intermediate, and grammar—and the minimum age for the admission of pupils is 6 years, and the maximum 16 years.

COMMERCE AND NAVIGATION.

[From the reports of the Bureau of Statistics for the fiscal years ending June 30.]

Customs district of Charleston, South Carolina.	1879.	1880.
Total value of imports	$181,185	$202,790
Total value of exports:		
Domestic	$19,607,897	$19,590,627
Foreign	None.	$500
Total number of immigrants	None.	4

COMMERCE AND NAVIGATION—continued.

Customs district of Charleston, South Carolina.	1879.		1880.	
	Number.	Tons.	Number.	Tons.
Vessels in foreign trade:				
Entered	320	160, 669	255	116, 283
Cleared	325	170, 143	282	148, 218
Vessels in coast trade and fisheries:				
Entered	383	300, 395	424	375, 819
Cleared	252	158, 301	311	213, 320
Vessels registered, enrolled, and licensed in district	178	12, 587	182	9, 712
Vessels built during the year	8	117	11	153

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Charleston for 1880, being taken from tables prepared for the Tenth Census by B. R. Stuart, 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	194	$1, 718, 300	1, 788	150	208	$639, 030	$1, 468, 375	$2, 732, 590
Blacksmithing (see also Wheelwrighting)	6	10, 050	10	.....	5	6, 058	3, 855	13, 727
Boots and shoes, including custom work and repairing	9	1, 120	11	.....	2	4, 256	4, 100	13, 191
Bread and other bakery products	10	59, 850	65	.....	16	28, 695	120, 860	172, 185
Carpentering	14	31, 050	448	.....	15	97, 738	130, 998	268, 565
Clothing, men's	6	40, 100	35	4	4	11, 500	25, 700	47, 300
Confectionery	4	2, 500	4	.....	3	1, 630	6, 750	11, 240
Cotton compressing	4	530, 000	230	.....	.....	62, 900	65, 000	198, 000
Dentistry, mechanical	7	2, 800	.....	.....	.....	.....	3, 785	9, 800
Flouring- and grist-mill products	5	61, 000	27	.....	.....	12, 070	141, 300	167, 750
Foundery and machine-shop products	5	111, 700	177	.....	28	59, 150	96, 100	174, 900
Lock- and gun-smithing	7	2, 330	5	.....	3	2, 768	2, 100	11, 418
Lumber, planed	6	82, 000	107	.....	34	35, 450	121, 950	189, 000
Lumber, sawed	4	115, 000	37	.....	12	21, 420	139, 509	254, 550
Marble and stone work	5	14, 700	16	.....	4	10, 900	17, 000	34, 000
Mineral and soda water	3	4, 500	13	.....	.....	4, 059	7, 800	20, 250
Painting and paperhanging	7	5, 550	44	.....	.....	9, 629	10, 228	25, 450
Photographing	3	4, 800	4	.....	.....	1, 800	1, 500	8, 100
Plumbing and gasfitting	6	3, 900	10	.....	8	9, 086	10, 050	33, 176
Printing and publishing	10	116, 700	144	33	9	88, 772	80, 150	249, 320
Saddlery and harness	6	5, 150	19	.....	4	9, 030	27, 001	43, 050
Shipbuilding	11	44, 350	85	.....	.....	52, 810	53, 350	138, 650
Tinware, copperware, and sheet-iron ware	10	7, 300	35	.....	3	9, 296	16, 576	36, 176
Tobacco, cigars and cigarettes	8	8, 600	33	.....	1	13, 411	9, 240	30, 520
Upholstering	4	13, 400	11	4	.....	6, 000	30, 420	49, 600
Watch and clock repairing	8	4, 700	11	.....	3	9, 996	2, 030	16, 900
Wheelwrighting (see also Blacksmithing)	8	18, 050	26	.....	22	14, 388	7, 685	31, 066
All other industries (a)	18	417, 100	121	109	32	56, 278	324, 338	484, 106

a Embracing axle-grease; bagging, flax, hemp, and jute; bags, other than paper; baskets, rattan and willow ware; carriages and wagons; cars, railroad, street, and repairs; coppersmithing; cotton-ties; fertilizers; furnishing goods, men's; furniture; liquors, malt; soap and candles; and stencils and brands.

From the foregoing table it appears that the average capital of all establishments is $8,857 22; that the average wages of all hands employed is $297 78 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $11,394 35.

COLUMBIA,

RICHLAND COUNTY, SOUTH CAROLINA.

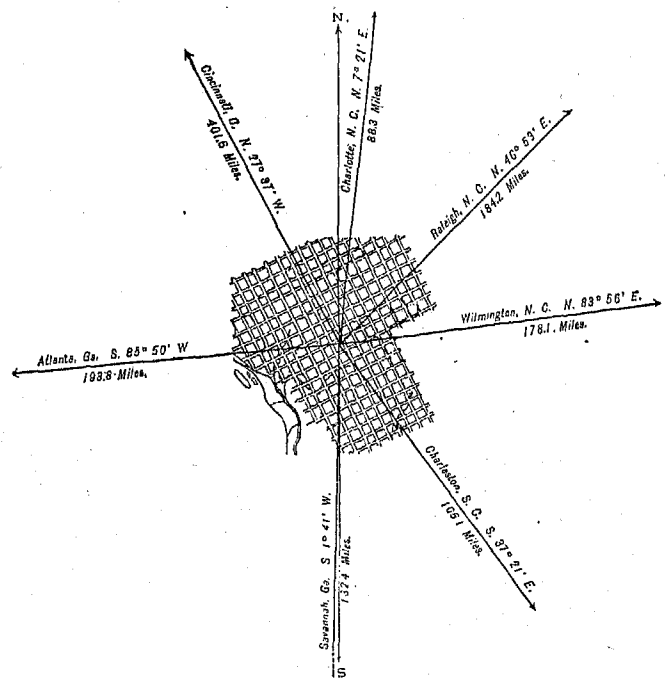
POPULATION

IN THE

AGGREGATE,

1830-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	3,310
1840	4,340
1850	6,060
1860	8,052
1870	9,298
1880	10,036



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	4,639
Female	5,397
Native	9,698
Foreign-born	338
White	4,338
Colored	5,698

Latitude: 34° 2′ North; Longitude: 80° 57′ (west from Greenwich); **Altitude: 250 to 360 feet.**

FINANCIAL CONDITION:

Total Valuation: $2,600,000; per capita: $259 00. Net Indebtedness: $854,850; per capita: $85 18. Tax per $100: $2 42.

HISTORICAL SKETCH.

The demands of the people of South Carolina for a centrally located capital occasioned the founding of Columbia, and commissioners were appointed to select a site for the proposed city. By an act of the general assembly, ratified March 22, 1786, these commissioners were authorized "to lay off a tract of land 2 miles square near Friday's ferry, on the Congaree river, * * * into lots of half an acre each, and the streets shall be of such dimensions, not less than 60 feet wide, as they shall think convenient and necessary, with two principal streets running through the center of the town, at right angles, of 150 feet wide". They were also fairly to reimburse the proprietors of this land, and, after reserving one or more squares for the use of the public buildings, to sell one-fifth of the remainder of the lots to the highest bidder at a price not less than £20 each. The proceeds of this sale

were to be applied to the construction of a state-house, executive mansion, and other necessary public buildings. The purchasers of these lots were required to erect upon each of them a house, not less than 30 by 18 feet in dimensions, within 3 years of the time of purchase, or, failing to comply with these conditions, to pay a forfeit of 5 per cent. per annum upon the purchase money until they did comply with them. Three years after the passage of the act the public records were removed to Columbia from Charleston, and 12 months later, exactly 120 years after the first European settlement in Carolina, the legislature convened here for the first time. However, not to make too sudden a change, the business of the state treasurer, secretary, and surveyor-general was for a time conducted both in Charleston and in Columbia.

The situation selected for the new capital was a good one. Columbia is very nearly in the center of the state, on the Congaree river; is pleasantly situated on a high and commanding plain in a productive and healthful region, and has very many of the inherent essentials of a prosperous and healthy growth. These qualities were effective, and up to the beginning of the civil war Columbia steadily fulfilled the just expectations of her people.

The educational facilities of Columbia are exceptionally good. Here, in 1804, was founded the South Carolina college, called since 1865 South Carolina university, on which $200,000 were expended in the original purchase of the site and the erection of the buildings. The university consists of 10 distinct schools, and has a fine library of about 30,000 volumes. It possesses, also, all the apparatus necessary for the illustration of philosophical, astronomical, chemical, and other studies, including that of medicine. The theological seminary of the synod of South Carolina and Georgia is also located within the city limits. This institution originated in a project set on foot as early as 1824. Its seat was originally at Lexington, Georgia, being removed hither in 1830. The doors of the seminary are open to students of all denominations who are church-members. Here, also, are the Ursuline Institute of the Immaculate Conception, located at Valle Crucis, about 2 miles from the city, and the Columbia male academy, founded in 1785 and under the control of a board of five trustees. The land was the gift of a citizen; the cost of the building was defrayed by subscriptions.

In 1821 the Columbia canal was constructed, to avoid the falls of the river, and originally ran from about half a mile above the city to Gravely, about 2 miles below. This canal, with the aid of a dam at its head creating considerable back-water, enabled produce, principally cotton, to be brought down in small boats from the northern or "Saluda" country. The canal was subsequently extended upward nearly 2 miles. In 1868 it was sold to the A. & W. Sprague Manufacturing Company, and was to be so improved as to form a fine water power, but it is still undeveloped. In 1830 a serious fire destroyed about $100,000 worth of property. From the financial panics of 1825 and 1857 Columbia recovered rapidly. In 1852 the new state-house was begun, and in 1854 Columbia was incorporated as a city.

The civil war fell with a very heavy hand on Columbia, inflicting a blow from which it has not yet recovered. On February 17, 1865, it was abandoned by the confederate forces and occupied by General Sherman's army, and during these operations a very large portion of the city was destroyed by fire. Columbia was completely prostrated, and only now may be said to have reached her *ante bellum* point in municipal growth. Being the capital of the state, the city has secured considerable state aid in the way of new buildings, and being the shire-town of Richland county has also been in its favor. Within its limits are the state lunatic asylum and the state penitentiary, the United States court-house, and a public market-house. It has also the usual modern lighting facilities and water-supply. The manufactories of the city are fair in number and importance, those of building-lumber and iron, perhaps, leading.

COLUMBIA IN 1880.

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

LOCATION.

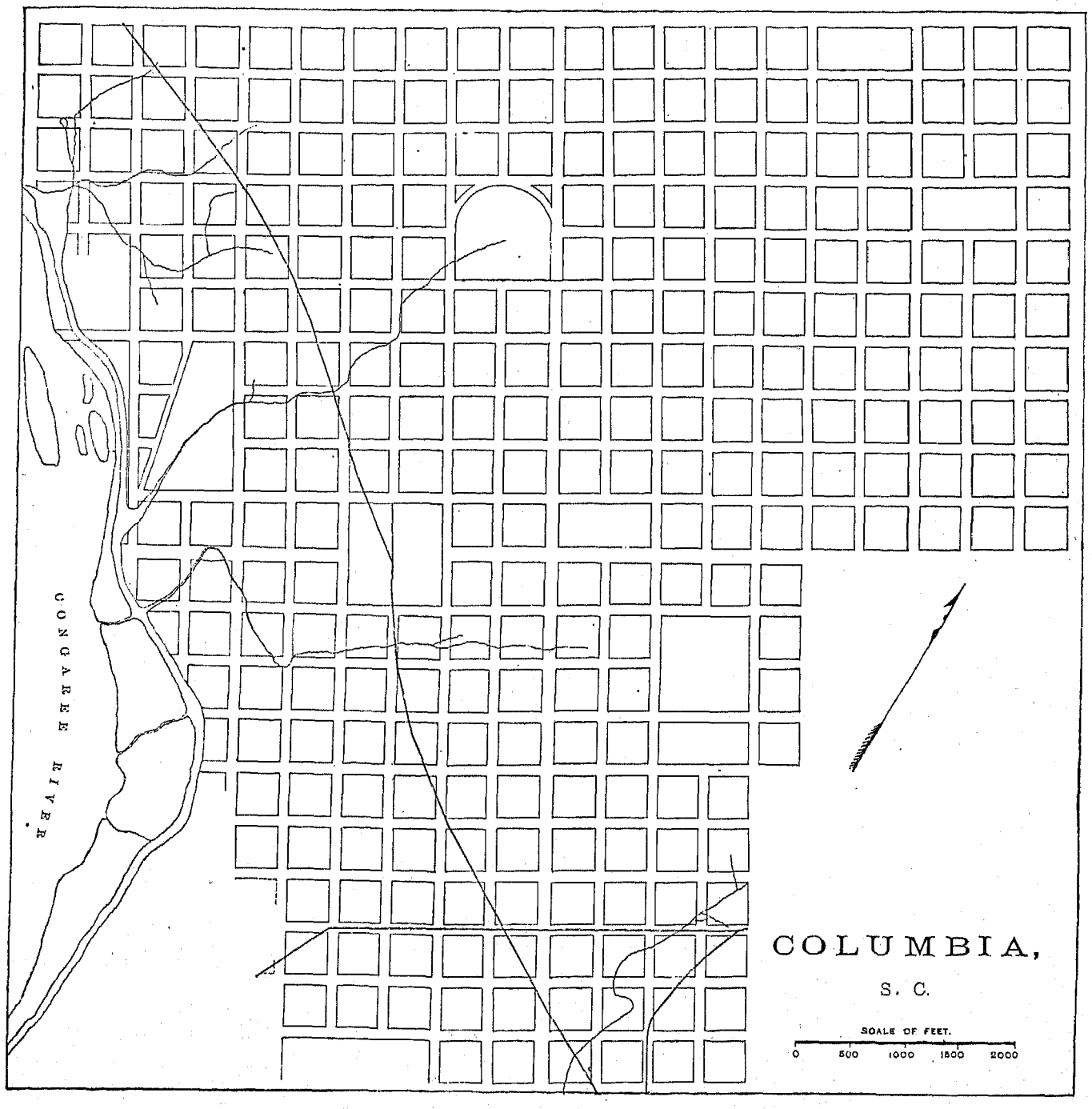
Columbia lies in latitude 34° 2′ north, longitude 80° 57′ west from Greenwich, on the east bank of the Congaree river, just below the confluence of the Saluda and Broad rivers, which unite to form it. The altitudes of the city above mean sea-level are: Lowest point, 250 feet; highest point, Taylor's hill, 360 feet, and the city hall, 331 feet. The Congaree river is navigable for steamboats to this point, or very near it. Vessels used to ply between here and Charleston, but the much shorter distance made by land-routes has led to the almost total disuse of the river for such travel, the extent of which is now slight.

RAILROAD COMMUNICATIONS.

Columbia is touched by the following railroads:

The South Carolina railroad, to Charleston.

The Wilmington, Columbia, and Augusta railroad, running from Wilmington, North Carolina, on the north, to Augusta, Georgia, on the south.


CONGAREE RIVER
COLUMBIA,
S. C.
SCALE OF FEET.
0
500
1000
1500
2000

The Charlotte, Columbia, and Augusta railroad, with Charlotte, North Carolina, as the northern, and Augusta, Georgia, as the southern terminus.

The Greenville and Columbia railroad, running to Greenville, South Carolina.

TRIBUTARY COUNTRY.

The country surrounding and tributary to the city is fertile and agricultural.

TOPOGRAPHY.

The soil of the site is sandy in the east and southeast, elsewhere it is clayey and loamy. The underlying rock is chiefly a first-class granite. The site is elevated, with considerable differences in level. The natural drainage is good. The surrounding country is very hilly, with considerable wood, which is fast disappearing. There are no near ponds or marshes.

CLIMATE.

Highest recorded summer temperature (July 12, 1879), 102°; highest summer temperature in average years, 95°. Lowest recorded winter temperature (January 4, 1879), 18°; lowest winter temperature in average years, 46°.

STREETS.

Columbia's streets cover a length of 68 miles, of which about 10 miles are paved with gravel and macadam. The annual cost of repairs is $4,000. This is not enough to keep them all in repair, and scarcely one-half of the streets can be considered in good order. The streets are all 100 feet wide, except the four boundary and two center intersecting streets, which are 150 feet wide, and all run at right angles to the streets crossing them. Sidewalks are paved with brick, tiles, flags, some artificial flags, and a little cast iron; but the major portion of the walks are unpaved. About half the street-gutters are paved with brick or granite; another portion, about 2 miles, is paved only with gravel and sand mixed and rammed hard. Nearly all the streets have shade-trees along their sides, and many of them have trees also planted in their centers. All street repairs are made by day work, which is considered by the authorities to be cheaper and better than by contract. No steam stone-crusher or roller is used in street work. There are no horse-railroads in the city at present, but a company has been chartered, and the stock partly raised, for the purpose. There are no regular omnibus lines, but conveyances run between the depots and hotels, etc.

WATER-WORKS.

The water-works are owned by the city, and cost $40,000. The water is pumped by steam- and water-power, and the pressure is 30 pounds to the square inch. The average amount pumped per diem is 300,000 gallons. The yearly cost of maintenance is $3,750, and the yearly income from water-rates is $8,000. Water-meters are not used.

GAS.

The gas-works are owned by a private company. The daily average production is 20,000 cubic feet. The charge per 1,000 feet is $4 50. The city pays $2 50 a month each for street-lamps, 33 in number.

PUBLIC BUILDINGS.

The city owns or occupies for municipal uses, wholly or in part, the city hall, mayor's court, council-chamber, and clerk's and treasurer's office; also that part of the county jail known as the police-station. The city hall (not quite finished) cost $100,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Columbia has one public park, called *Sidney Park*. Its area is 25 acres, and its total cost is $50,000. There is annually spent on its maintenance $300. The annual visitors to it on foot number about 100,000; in carriages about 15,000, and on horseback about 2,000. The park is controlled by the city. A gardener is appointed, who acts as keeper, assisted by the police.

PLACES OF AMUSEMENT.

There is one opera-house in the city, fitted up as a theater, and seating 800; Parker's hall, seating 600, is also fitted with stage and scenery; Carolina hall, seating 400, and one or two smaller halls but little used. Theaters do not, but entertainments do, pay a license to the city of from $10 to $25 per day, amounting annually to about $300. There are no concert- or beer-gardens in the place.

DRAINAGE.

Columbia is entirely without sewers. Storm-water is carried off by surface drains in the streets.

CEMETERIES.

Columbia has 3 public and 7 private cemeteries and burying-grounds connected with it. The 3 public cemeteries are located on the corporation line; the others belong to churches. Up to the present year, 1880, burials in new lots were not prohibited, but now the opening of any new lot for interments within the city limits has been interdicted. There has been no system of registration which would make it possible to give the total number of interments in the cemeteries and graveyards. When interments are made a certificate of the cause of death, etc., in each case, is furnished to the sexton of the burial-ground. The annual number of deaths is stated to be about 200.

MARKETS.

Columbia has a good market-house, about 150 by 50 feet in size, the cost of which was $4,000. There are also connected with it outside grounds upon which hucksters or farmers may sell, after taking out the required license therefor. The stalls rent for $100 each, and the total rental of the market is $3,000 per annum. The market is open daily from 5 to 9 a. m., except Saturdays, when it is open from 5 a. m. to 10 p. m. The gross amount of the annual sales from within the market is not given.

SANITARY AUTHORITY—BOARD OF HEALTH.

The chief sanitary organization of the city is the board of health, which is composed of 12 members, 3 from each ward, 2 of whom at present are physicians. The board is elected and controlled by the city council. The board incurs no direct expense, its present powers being only advisory and the execution of its recommendations devolving upon the mayor. The chief of police, by the mayor's direction, executes the orders of the board and abates nuisances. The business of the board is transacted at meetings held twice a month between May 1 and November 1; a physician is selected as chairman of the board, and the city clerk acts as secretary, and transmits all orders to the chief of police. The chief directs the policemen to act as inspectors and report all nuisances, or pertinent matters, to the chairman. Inspections are not made regularly, but are made upon report or suspicion of a nuisance, either by members of the board or by policemen. When reported and found to exist, nuisances are abated by the chief of police. The scope of the board's work extends also to the inspection and correction of defective house-drainage, privy-vaults, cesspools, sources of drinking-water, etc. Under the direction of the board the chief of police superintends the removal of garbage. There is said to exist no pollution of streams. Excrement must be removed when it becomes offensive.

INFECTIOUS DISEASES.

Small-pox patients are removed to the pest-house, situated in the extreme limits of the city, remote from habitations. The care and regulation of cases of scarlet fever are left to the attending physician. At present the board does not take cognizance of the breaking out of contagious diseases in public or private schools. Vaccination is not compulsory, nor is it done at the public expense.

There is no system of registration of births, diseases, and deaths.

REPORTS.

At present the board reports to no one. A bill is about to be presented to the legislature regulating more thoroughly the whole subject of sanitary authority and its systematic working.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets of Columbia, which are not paved, are cleaned by the city's own force, and by hand. This work is largely confined to the cleansing of the open surface-drains, which take the place of storm-water sewers. Some of them require daily or weekly sweeping and washing out. This cleaning is efficiently done, except on certain streets which require the most attention. The sweepings are deposited outside of the city. The annual cost of the work, including the removal of garbage, is $5,000.

Removal of garbage and ashes.—Garbage is removed daily by the city in its street-carts, though some is destroyed on the premises by fire. Householders are required to place their garbage in suitable vessels and, between certain hours, upon the street, when it is removed. No disinfectants are used upon garbage, and garbage and ashes may be kept in the same vessel. Both are disposed of by being dumped upon some vacant field. It is reported that garbage is frequently allowed to become a nuisance, and that more carts could with advantage be used in this work.

Dead animals.—The carcasses of larger animals, as horses and cows, are removed by their owners. Those of smaller size, as dogs, cats, etc., are removed by the city carts, and the cost thereof is included in the sum expended for street-cleaning. The number of such animals annually removed is from 75 to 100. The manner of disposal of the larger animals is very offensive, for they "are always carried outside of the city and deposited near the road leading to the same, to the annoyance, etc., of travelers".

Liquid household wastes.—Owing to the lack of a system of sewerage each householder is required to dispose of all the liquid wastes of the house upon the premises, either by pouring them into dry wells or cesspools or by throwing them upon the surface of their yards and gardens, the running them into the street-gutters or drains not being permitted. About 2 per cent. of the houses have no cesspools. The cesspools are porous, as the desire is to dig deep enough to reach the sand underlying the red clay. They are not provided legitimately with overflows, but when these occur they run into the surface-drains, creating a nuisance along the streets. When street-gutters become foul from any cause they are flushed at the request of the board of health. Cesspools receive the wastes of such water-closets as are used in the city. Though no direct case of contamination of drinking-water by the escape of the contents of cesspools and privy-vaults is reported, the opinion is expressed that it does occur. It is the policy of the board of health to dissuade people from using for drinking purposes the water from wells in the more thickly settled parts of the city, or those near stables or cesspools. There are no regulations for the cleaning of cesspools.

Human excreta.—Two per cent. of the houses in the city have water-closets. The remainder depend either upon privy-vaults or upon privies without vaults—in which case the deposits fall on the surface of the ground—or upon the use of the dry-earth system. As a rule, privy-vaults are not tight. There are no regulations as to the construction and emptying of privy-vaults, except that they must not become a nuisance. Most of the night-soil is carried away by farmers and used for manure, none of it being allowed on land within the gathering-ground of the public water supply.

Manufacturing wastes.—The disposal of solid and liquid manufacturing wastes is not regulated.

POLICE.

The police force of the city is appointed and governed by the city council. The chief of police is the chief executive officer, has direct control of the force, and sees that all laws and ordinances are properly enforced; his salary is $900 per annum. The remainder of the force consists of 2 sergeants at $40 a month each, and 15 patrolmen at $35 a month each. The uniform in summer is a blue sack coat and trousers, and black felt hat with wreath and number, and in winter a frock coat, overcoat, and rubber "reliable." The uniforms are furnished by the city at an annual cost of $50 per man. The patrolmen are equipped with 20-inch hickory club, belt, pistol, and "duplex call". They serve 12 hours per day, and patrol in all 20 miles of streets.

The arrests during the year numbered 1,300, the chief causes being drunkenness, disorderly conduct, and profanity. Their final disposition was not stated. During the year property to the amount of $1,000 was reported to the police as lost or stolen, and about one-half of this was recovered and returned to the owners. The station-house lodgers for the same period numbered about 50, and some free meals were furnished to these at a trifling cost. In 1879 the number of station-house lodgers was about the same. The force is required to co-operate with and assist the fire department at fires by protecting property and preserving order, and with the health department by inspecting, reporting, and removing nuisances. Special policemen are appointed by the mayor on public occasions, as at elections, holidays, and when there are large concourses of people. Their duties and pay are the same as those of the regular force. The yearly cost of the police force (1880) is $10,000.

KENTUCKY.

COVINGTON,

KENTON COUNTY, KENTUCKY.

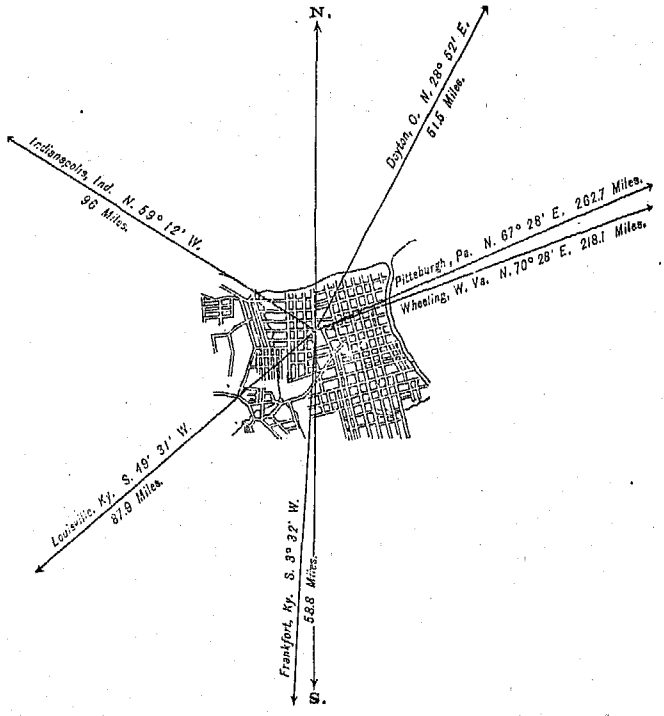
POPULATION

IN THE

AGGREGATE,

1830-1880.

	Inhab.
1790	.....
1800	.....
1810	.....
1820	.....
1830	743
1840	2,026
1850	9,408
1860	16,471
1870	24,505
1880	29,720



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	14,192
Female	15,528
Native	23,233
Foreign-born	6,487
White	27,928
Colored	* 1,792

* Including 2 Chinese.

Latitude: 39° 5′ North; Longitude: 84° 36′ (west from Greenwich); **Altitude: 440 to 545 feet.**

FINANCIAL CONDITION:

Total Valuation: $14,521,725; per capita: $489 00. Net Indebtedness: $1,030,000; per capita: $34 66. Tax per $100: $2 17.

HISTORICAL SKETCH.

Information regarding the first settlement of Covington is of a somewhat traditional character. As early as 1771 Simon Kenton with others arrived and explored the country around the junction of the Licking with the Ohio river. About the year 1788 Thomas Kennedy built the first store house. In 1815 Covington was incorporated as a town, the streets and lots being laid out by Mr. A. R. Powell, and the boundaries were made to include about 150 acres. The next year the town contained 6 buildings. In 1820, when it had about 25 buildings, a log school-

house was built. A bank (Leather's Bank) had been created, and in 1829 a factory for making cotton yarn was erected; while in the following year the first iron-works—a rolling-mill—was started. At this date (1830) the inhabitants numbered 743, and the taxable valuation of the town's property was $170,220. In 1832 the first church (Methodist) was built. The next year a turnpike leading to Lexington was begun. In 1834 the town had so materially increased that it was given a city charter, and its boundaries were so extended as to include about 176 acres. In 1836 street-paving was begun. In 1839 appeared the first brewery, and 1840 found Covington with a population of more than 2,000, with property assessed at $634,805. Extensions of the city's limits took place again in 1841, 1850, 1860, and 1873. After the last-mentioned year the area of the city covered about 1,350 acres.

About the year 1847, in which another rolling-mill was added to the industries of the city, the beginning of a rapid advance, both in population and in the price of real estate, was noticeable. The valuation of property within the city rose from $170,220 in 1830 to $14,521,725 in 1880. The rate of taxation per $100 of valuation has risen from 40 cents in 1834, to $2 in 1876.

From 1818 to 1826 Covington suffered from a lack of money. The little specie in circulation was "cut money", or coins cut into pieces. Notes of the Commercial Bank were good for face value for the payment of town taxes, but in other transactions were accepted only at a discount of 50 per cent. From 1836 to 1842 was another period of financial depression, also from 1858 to 1862, and again the late depression caused by the panic of 1873. The first settlers of the place were from Virginia and Pennsylvania, and although the population has been somewhat increased by foreign immigration, at the present time the large majority of the inhabitants are native-born.

Covington's first railroad, the Kentucky Central, was begun in 1852. The erection of a suspension bridge across the Ohio river, to connect with Cincinnati, was begun in 1856 and completed in 1866; while one across the Licking river, to connect with Newport, was built in 1854 and rebuilt in 1855. Besides manufactures of iron, stoves, wood-work, tobacco, etc., Covington has glass-works, and a factory for the making of retorts, for gas-generation, out of fire-clay. The place is lighted with gas, and in 1871 it constructed water-works. The material growth of the city, up to the last depression at least, has been continuous. It has also been fortunate enough to escape any serious fires.

COVINGTON IN 1880.

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

LOCATION.

Covington is situated on the Ohio river, opposite Cincinnati, and just below the mouth of the Licking river, which separates it from Newport, in latitude 39° 5′ north, longitude 84° 36′ west from Greenwich. It occupies a nearly level site, the altitudes above ocean-level being, lowest point, at the Ohio river, 440 feet; highest point, 545 feet; and average, about 520 feet. Its position, on the left bank of the Ohio river, gives it ample communication by water with all cities and points on the Ohio and Mississippi rivers and their navigable tributaries. The channel capacity of the river varies greatly. The minimum stage of water is stated to be 4 feet 2 inches, while the mean of the lowest stages, between 1858 and 1878, is nearly 4 feet. The highest stage was recorded in 1832 as 62 feet 11½ inches, while the mean of the highest stages, between 1832 and 1878, is about 50 feet. Licking river is also navigable for steamboats near its mouth when its water is backed up by high stages of the Ohio.

RAILROAD COMMUNICATIONS.

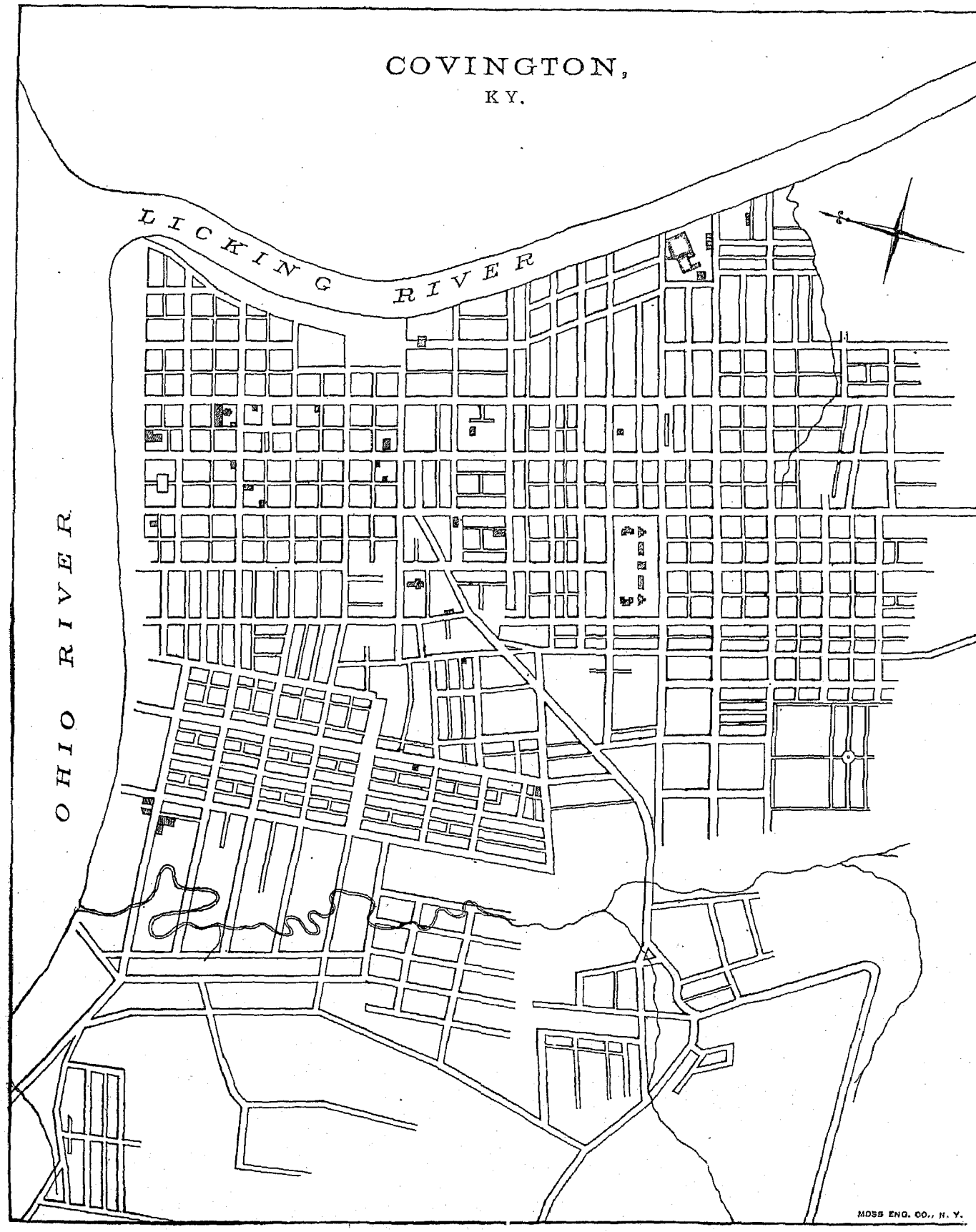
Covington is touched by the following railroads:
The Kentucky Central railroad, termini Covington, Lexington, and Paris.
The Cincinnati Southern railroad, termini Cincinnati, and Chattanooga, Tennessee.
The Louisville, Cincinnati, and Lexington railroad, from Cincinnati to Louisville.

TRIBUTARY COUNTRY.

The surrounding country, especially the valley portion, is largely engaged in raising garden-produce for Cincinnati, Covington, and the suburbs around these cities, while the hilly part is used, besides extensive fruit-culture, for common farming and dairying, considerable land being in pasture. Much of the product of this territory finds a sale or exchange for domestic supplies in the cities and suburbs centering around Cincinnati.

TOPOGRAPHY.

The underlying rock of the site of Covington is the blue limestone of the Cincinnati group of the Silurian. These rocks support the alluvium, forming the gently undulating site of the city. Its altitude above the low-water mark of the Ohio is about 80 feet. The Ohio and Licking rivers receive the creeks which drain the gradually rising


COVINGTON,
KY.
LICKING RIVER
OHIO RIVER
MOSS ENG. CO., N. Y.

hills outside the city proper. Near the top of these are some ponds of clear water. Most of the surrounding timber has been cut off for its own value and to make the highly fertile land available for agricultural use. The soil, except the alluvium, is a derivation of the Silurian rocks; hence it is of excellent quality, fertile, easy to work, and very fit for the famous bluegrass pasturage. Professor John R. Proctor, who superintended the collection of the above information, adds the following:

I am satisfied that the terrace of the river-valley on which Cincinnati and Covington and Louisville are built is the loess or bluff formation, and is synchronous with the same formation in the valley of the Mississippi. The gravel at the base (sometimes wanting) corresponds to the Paducah gravel of western Kentucky, partaking, however, in its composition, more of the character of the rocks of the Ohio valley, with many pebbles brought into the Ohio drainage by the swollen floods at the close of the last glacial era. The rocks under this terrace and above belong to the Cincinnati group of the Lower Silurian.

The gravel extends above high-water mark, and was deposited when the river was at a high level.

CLIMATE.

Highest recorded summer temperature, 102°; highest summer temperature in average years, 98°. Lowest recorded winter temperature, —20°; lowest winter temperature in average years, —6°. The climatic influence of the adjacent waters is not thought to be great, and there are no contiguous marshes. The adjacent hills shelter the city against winds. The prevailing winds are the southwest, generally bringing rain, and the west and northwest, sometimes strong and very cold.

STREETS.

The total length is 48.3 miles, paved as follows: Cobble-stones, 1,600 feet; broken stone, only 960 feet; broken stone and curbed, 29½ miles; wood (locust), 1.2 mile; and the remainder unpaved. The cost of each sort of paving, per square yard, as nearly as may be estimated, is: For cobble-stones, $1; for broken stone, 70 cents; and for wood, $1 25. The macadamized streets are the most difficult to keep clean, while the durability and economy of the wooden pavement used in Covington far surpasses that of any other material used. For suburban streets the broken stone is regarded as the best. Sidewalks are paved principally with hard-burned bricks, some with freestone, and some with artificial stone made of cement and sand; gutters are largely paved with stone. Shade-trees are planted on the curb-line of the streets, between the gutters and the sidewalks. The construction and repair of streets is usually done by contract, under the daily supervision of the superintendent of public works and the city engineer. No steam-roller is used, but one of 6,000 pounds' weight, and drawn by horses, is used for macadamizing streets. There are 6½ miles of street-railroads, with 32 cars and 152 horses, giving employment to 61 men. During the year, 1,070,000 passengers were carried, the rate of fare being 4 cents per mile. The omnibus lines have 5 vehicles and 10 horses, and employ 6 men. Passengers are carried at rates of fare varying from 25 to 50 cents.

WATER-WORKS.

The water-works are owned by the city, and their total cost is $427,253 21. The Holly system is used. The pressure is kept at the works at about 78 pounds per square inch, about 28 pounds of this being required to lift the water from the river; hence about 50 pounds is the pressure in the main pipe at the works. In 1878 the amount of water pumped per diem, in gallons, was, average, 1,377,083; greatest, 1,475,000; least, 1,200,000. For the same year the average cost of raising 1,000,000 gallons 1 foot high was 16 cents; yearly cost of maintenance, aside from cost of pumping, was $3,696 12; and the annual income from water-rates, $20,510 48. Water-meters are not used.

GAS.

The gas-works are owned privately. The daily average production is 75,000 cubic feet, and 25,000 of this goes to Newport. The charge per 1,000 cubic feet is, to the city, $1 25, to private persons, $2 25. There are 435 street-lamps, for the gas used in which the city pays its special rates.

PUBLIC BUILDINGS.

The city owns and occupies for municipal purposes, wholly or in part, the city hall or court-house, the city jail, and 4 engine-houses. The total cost of the city buildings is $95,000. The cost of the city hall is estimated at $4,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Covington has no parks, but has a small grass-plot and walk now in course of construction, the probable cost of which will be $3,500.

PLACES OF AMUSEMENT.

There are here no theaters, but of halls there are Odd Fellows' hall, with 2 rooms, one seating 500 and the other 200; Drexler's hall, used frequently for public meetings, balls, etc., and Green hall. Concerts pay a license to the city of $10 for each performance. There are no concert- and beer-gardens in the city.

DRAINAGE.

The sewerage works of Covington are of recent date, and embrace only about 2½ miles of sewers, built principally of brick, with circular cross-sections. No comprehensive plan has been adopted providing for the whole city, but sewers are built according to the requirements in each case. In general features and in most details of construction the sewers of Covington are like those of Cincinnati, Ohio. The natural drainage is very good, as the city is situated between two streams—the Licking river on one side, next to Newport, and Wilson run on the west—with the Ohio river in front. The general surface is level, being what is known as the "second bottom", and is high enough above the river to secure ample fall for sewers by increasing somewhat the depth of cuttings toward the outlet. The cost of sewers built so far has been paid, one-half by the city and one-half by assessment upon abutting property, laid on the basis of frontage.

The following statement shows the character and cost of sewers built in 1880 by contract, each sewer being contracted for separately:

	Per linear foot.
4 feet diameter, brick	$4 60
3 feet diameter, brick	3 00
18 inches diameter vitrified pipe	1 60
12 inches diameter vitrified pipe	1 00

Average cost of catch-basins, $35 each.
Average cost of manholes, of average depth, $15 each.

CEMETERIES.

Covington has 4 cemeteries, public and private, as follows:

Highland Cemetery contains 114$\frac{17}{160}$ acres, is about 3½ miles west of the city, has existed since 1863, and is now the one most used.

Adjoining it is the Catholic *Saint Mary's Cemetery*, now the most used of the cemeteries belonging to that church.

Mother of God Cemetery, Catholic, contains about 8 acres.

Saint John's Cemetery, Catholic, contains 42 acres, only 10 of which are now used, is about 3½ miles southwest of the city, and has a vault for temporary use, also a chapel for services.

The number of interments in the several cemeteries since 1869, and including the present year, are, Highland cemetery, 1,898; Saint John's cemetery, 279; Saint Mary's cemetery, 1,130, and Mother of God cemetery, about 50 annually. For burials a permit must be obtained, and between April 1 and November 1 only four days may elapse between death and burial, but during winter, if the body is deposited in a vault, an indefinite time is allowed. Graves must be dug from 5 to 6 feet deep. Lots sold must, in all the cemeteries, be kept in nice order. Improvements are continually going on, and, as a general thing, all the incomes are spent in this way. In Saint John's cemetery lots 15 feet square sell for from $30 to $50.

MARKETS.

Covington has 3 market-houses, each about 250 by 40 feet in dimensions, arranged as follows:

Seventh Street market, 15 butcher-stalls, 20 huckster-stands, and about 2,000 feet in length outside for wagons.

Eleventh Street market, 8 butcher-stalls, 35 huckster-stands, and about 4,000 feet in length outside for wagons.

Sixth Street market, 8 butcher-stalls, 35 huckster-stands, and about 4,000 feet in length outside for wagons.

Butcher-stalls, 9 feet in width, rent for $18 per annum; the other stands are sold at auction, and bring from $5 to $36 yearly. The total rental of all the markets for 1880 was $2,000. The markets are open daily from daylight to 10 or 11 o'clock a. m. The gross annual sales from each stall will average about $2,000. Nearly 75 per cent. of the retail supply of meats, poultry, fish, and vegetables for the city is sold in these markets. The market-houses are brick piers, covered with roofs. The wholesale distribution of meats is done early in the morning. Beef is killed the previous evening or during the night, put on ice, and kept there till sold. There is no meat-inspector at the slaughter-houses. Some of the meat is brought from Cincinnati. Some vegetables, etc., are sold by peddlers.

SANITARY AUTHORITY—BOARD OF HEALTH.

The title of the chief health organization of Covington is the "board of health", which consists of 5 members of the city council, appointed by that body, none of whom need be physicians. The board is controlled by the city council. In ordinary times the board incurs no expense, and during an epidemic the expenses are regulated by the council. In the absence of an epidemic the board has authority only to direct the street commissioners to keep the streets clean and to have the garbage collected. During epidemics its authority is limited to the directions of the city council. The chief executive officer of the board is the health officer, whose duties are to carry out and enforce all sanitary laws and the orders of the board; to serve notices for the abatement of nuisances, and, in addition, to report all contagious diseases. His salary is $60 per month. He has all the powers of a policeman, and, in addition, power to act as overseer of the poor. The street commissioner acts as a sanitary inspector to a certain extent, as do all the policemen, but beyond these no assistant health officers or inspectors are employed. The

mode of transacting the business of the board is very informal; ordinarily they come together at rare intervals in committee, during summer only, on call of the chairman. Inspections are not made regularly. When nuisances are reported they are ordered to be abated, and if this is not done the parties responsible are prosecuted in the mayor's court. In cases of defective house-drainage, privy-vaults, cesspools, or sources of drinking-water, if the evil is flagrant, the sanitary policeman reports the same to the board and mayor and corrective action is taken.

INFECTIOUS DISEASES.

If possible, small-pox patients are removed to the pest-house belonging to the city, situated 3 miles distant on the poor-house farm, or the house is blockaded and intercourse with the inmates is interdicted. Scarlet-fever patients are not isolated. In case of the breaking out of contagious diseases either in public or in private schools the board takes cognizance of the fact, but exercises no control. Should circumstances seem to require it, the school board would close the schools. Vaccination is compulsory, and in the case of the indigent is done at the public expense by the district physicians. The city is divided into 4 sanitary districts, each having a physician who attends to the calls of the poor, and who receives a small salary from the city.

There is no system for the registration of births, diseases, and deaths.

REPORTS.

The board reports to the city council, but there has rarely been any need for a report.

MUNICIPAL CLEANSING.

Street-cleaning.—Streets are cleaned wholly by hand by the city's own force, under direction of the street commissioner. This cleaning is done irregularly as it seems to be needed, and is done reasonably well. The annual cost of the work to the city is $8,000, and the sweepings are used as filling for low places.

Removal of garbage and ashes.—Garbage is removed by the city, the work being done under contract. There are no regulations concerning the conservancy of garbage while awaiting removal, but it is usually put in barrels or other vessels, and must be kept separate from the ashes. Garbage and ashes are taken outside of the city limits and dumped in the places assigned for them. The removal cost the city during 1879, $4,095 61. No nuisance or injury to health is known to be caused by the improper handling or disposal of the garbage.

Dead animals.—Dogs and cats are usually buried on the premises; hogs, cattle, and horses are sold to a fertilizing company. A city ordinance requires that dead animals left by their owners unremoved for a longer period than five hours shall be forfeited to the city. The possession of these carcasses falls to the garbage contractor, but as they represent a certain value, the owners generally remove them before the five hours expire.

Liquid household wastes.—In the case of houses connected with the public sewers the wastes are disposed of through the sewers; but most of the wastes, including chamber-slops, are deposited in privy-vaults on the premises, though kitchen and laundry wastes usually run into the gutters. No dry wells or cesspools to speak of are in use in Covington. Street-gutters receive no artificial flushing. Wells for drinking-water are not used, the supply for this purpose being obtained either from the water-works or from rain-water cisterns.

Human excreta.—Only a small portion of the houses in the city have water-closets, the greater number depending on privy-vaults. Very few of the water-closets deliver into sewers, most of them running into privy-vaults, none of which are water-tight. There are no regulations as to the construction of privy-vaults; in some cases it is aimed to dig them so deep as to strike a substratum of gravel. In case of a vault becoming dangerously full its emptying would be ordered by the health officer. A city ordinance requires the cleaning of privies and vaults by licensed persons alone during May, June, July, August, and September, only between the hours of 11 p. m. and 4 a. m., and during the balance of the year between the hours of 10 p. m. and 5 a. m. Night-soil is not allowed to be deposited within the city limits except in the Ohio river below Ferry street, and none is allowed on land within the gathering-ground of the public water-supply. The dry-earth system is not used.

Manufacturing wastes.—Liquid and solid manufacturing wastes are either run into sewers or some ravine, or thrown into the Ohio river.

POLICE.

No report on this subject was received.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Covington for 1880, being taken from tables prepared for the Tenth Census by J. M. Blackburn, 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	181	$3,182,141	2,251	223	451	$1,033,463	$3,935,727	$5,864,530
Blacksmithing	8	14,700	27	.....	.....	10,878	6,500	24,200
Boots and shoes, including custom work and repairing	11	19,650	28	4	.....	8,120	8,450	23,100
Boxes, wooden packing	4	2,350	9	.....	2	3,372	7,172	14,350
Bread and other bakery products	20	39,050	24	7	3	9,176	52,458	88,840
Brick and tile	9	6,200	73	.....	21	14,650	15,100	40,705
Carpentering	8	12,750	29	.....	.....	14,486	66,400	93,600
Carriages and wagons	4	40,700	39	.....	.....	18,156	22,200	51,500
Cooperage	6	2,600	35	.....	.....	10,265	18,340	34,070
Flouring- and grist-mill products	5	73,000	33	.....	.....	12,433	223,224	246,312
Furniture, chairs	4	1,850	6	.....	1	2,500	3,450	7,600
Iron and steel	3	730,000	533	.....	32	281,925	663,705	1,012,004
Iron railing, wrought	3	7,500	26	.....	.....	8,200	10,500	25,480
Leather, tanned	3	37,000	39	.....	.....	15,900	301,106	330,150
Liquors, distilled	3	255,000	91	.....	1	38,775	425,500	635,000
Liquors, malt	4	310,129	94	.....	.....	43,912	188,395	313,650
Marble and stone work	7	12,500	33	.....	.....	15,417	28,600	67,330
Saddlery and harness	4	13,500	20	.....	1	7,600	14,700	27,421
Slaughtering and meat-packing, not including retail butchering	3	30,500	10	.....	.....	5,384	98,000	111,000
Tinware, copperware, and sheet-iron ware	5	16,700	15	1	.....	5,223	8,921	17,558
Tobacco, chewing, smoking, and snuff (see also Tobacco, cigars and cigarettes).	13	581,500	279	88	161	150,202	1,057,330	1,395,533
Tobacco, cigars and cigarettes (see also Tobacco, chewing, smoking, and snuff).	15	40,627	57	1	21	22,453	56,650	100,422
All other industries (a)	39	925,275	751	122	208	334,436	658,048	1,204,600

a Embracing agricultural implements; brooms and brushes; carpets, rag; clothing, men's; coffee and spices, roasted and ground; cordage and twine; foundery and machine-shop products; furniture; glass; grease and tallow; hardware; iron nails and spikes, cut and wrought; iron work, architectural and ornamental; leather, curried; lumber, planed; lumber, sawed; mineral and soda waters; painting and paperhanging; patent medicines and compounds; pickles, preserves, and sauces; pumps; shipbuilding; sporting goods; stationery goods; upholstering; vinegar; wirework; wood, turned and carved; and woolen goods.

From the foregoing table it appears that the average capital of all establishments is $17,580 89; that the average wages of all hands employed is $353 32 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $28,508 94.

LEXINGTON,

FAYETTE COUNTY, KENTUCKY.

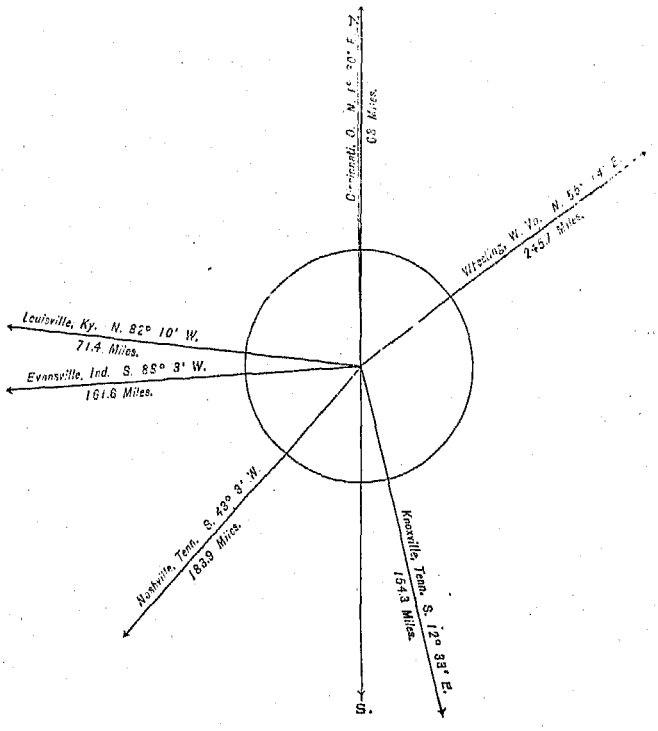
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	1,795
1810	4,326
1820	5,279
1830	6,026
1840	6,997
1850	.....
1860	9,321
1870	14,801
1880	16,656



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	7,721
Female	8,935
Native	15,575
Foreign-born	1,081
White	9,073
Colored	7,583

Latitude: 38° 7′ North; Longitude: 84° 32′ (west from Greenwich); **Altitude: 906 to 1,025 feet.**

FINANCIAL CONDITION:

Total Valuation: $4,964,005; per capita: $298 00. Net Indebtedness: $112,000; per capita: $6 72. Tax per $100: $1 63.

HISTORICAL SKETCH.

In May, 1775, a party of hunters, encamped on the Town fork of the Elkhorn river, Kentucky, were startled and shocked by the news of the battle of Lexington, Massachusetts. So much impressed by the news were they that they gave the name "Lexington" to the place of their encampment, and when, four years later, a regular settlement was begun there, the name thus given was retained. Lexington was settled by a party of Virginians, and in its beginning was sufficiently humble. The future city then contained only a block-house and three rows of cabins. It was incorporated in 1782 by the legislature of Virginia, and after an interval of bitter warfare with the Indians entered upon a period of steady and uninterrupted growth, which lasted until 1810, when the population had increased to about 3,000. The location of the town in the center of the richest and fairest part of Kentucky,

and the business enterprise of its citizens, promised to make Lexington not only the capital of Kentucky, but also the metropolis of the state, and in 1810 it was the most important town in the state, and the business center of a district which included the now far greater cities of Cincinnati and Louisville.

Only a year after the settlement the Transylvania seminary was founded, and the basis was thus laid of the reputation for educational facilities which the city still retains. In 1798 the seminary was united with the Kentucky academy to form the Transylvania university, the oldest of the western colleges. In the same year a Mr. West is claimed to have succeeded in propelling a boat by steam in the river at Lexington, thus antedating the voyage of the "Clermont" by nine years.

Whether or not the honor of inventing the steamboat belongs to Lexington, the introduction of steam navigation on the western rivers influenced its future greatly. The inland situation of the town prevented it from reaping the advantages which accrued to Louisville and Cincinnati from the introduction of steamboats. Its trade was drawn away, and a period of great depression followed. Since 1820 the growth has been slow, and in the sixty years which have intervened since then the population has only little more than tripled, a rate of increase which, however satisfactory in itself, is far below that of most of the western cities.

A little more than a mile from Lexington, at his beautiful home, Ashland, lived Henry Clay, the great son of Kentucky.

The manufactures of Lexington began in 1801, with the establishment of a cut-nail factory; and in 1810 this small beginning had already been followed by great results. There were 3 nail factories, 4 paper-mills, 4 cabinet-shops, 6 powder-mills, 7 brick-yards, 5 hat factories, 13 ropewalks, 7 distilleries, 5 bagging factories, and many other prosperous manufacturing establishments. In 1831 Lexington was incorporated as a city. Two years later it suffered severely from a visitation of cholera, which for a time put a stop to all trade and communication; and yet more severely in 1849, when the same plague again fell upon the city. These have been the only great misfortunes of Lexington, which has escaped almost entirely from losses by fire and flood. The building of the Lexington and Ohio railroad from Lexington via Frankfort to Louisville, and another somewhat later to Covington, increased the importance of the city, and in some degree compensated for its lack of direct water communication with the Mississippi valley. In 1865 the Kentucky state university was moved from Harrodsburg, where it had been founded in 1858, to Lexington, and Transylvania university was consolidated with it. This university in 1872 had a library of 20,000 volumes, a corps of 20 professors, and 6 other officers, while the names of 579 students were enrolled on its books. The schools of Lexington maintain their early excellence. Its churches are numerous, its charities are large. There are several newspapers, daily, semi-weekly, and weekly, published in the city.

LEXINGTON IN 1880.

The following statistical accounts, collected by the Census Office, indicate the present condition of Lexington.

LOCATION.

Lexington, the fourth city in size of Kentucky, and once the capital of the state, is situated in latitude 38° 7′ north, longitude 84° 32′ west from Greenwich, on the Town fork of the Elkhorn river. The lowest point is 906 feet, the highest 1,025 feet, above the level of the sea. The city is not on navigable water.

RAILROAD COMMUNICATIONS.

The Louisville, Cincinnati, and Lexington railroad connects the city with Cincinnati and Louisville; the Kentucky Central with Covington; the Lexington and Big Sandy with Mount Sterling; and the Cincinnati Southern with Cincinnati, and Chattanooga, Tennessee.

TRIBUTARY COUNTRY.

Lexington is situated in the so-called "blue-grass region" of Kentucky, a region celebrated for its fertility. The surrounding country is devoted almost exclusively to agriculture. The principal crop is hemp; corn is extensively cultivated, and wheat and oats are raised in a smaller degree. Fruit is neglected. The pasture-lands are very fine, and stock-raising is a well-established industry. The manufacturing interests are small, and principally devoted to preparing the raw product for finished manufacture elsewhere.

TOPOGRAPHY.

Lexington is situated on the axis of the so-called Cincinnati anticlinal, which in this region is comparatively unbroken, though rolling enough to give a good natural drainage. The rock—blue limestone—furnishes a rich red soil, and, being somewhat cavernous, makes the streams small and the living springs few. The land slopes to a

lawn-level in the country to the east and west. Marshes are rarely found, and there are no lakes, though artificial ponds are numerous. The country is wooded in places where the old forests have been left standing, but in general is open.

CLIMATE.

No authentic record of the temperature has been kept. The highest summer temperature in average years is about 98° F., while the lowest winter temperature in such years rarely falls below —8°. The prevailing wind in summer comes from the southwest, while the winter winds are changeable, bringing frequent sudden changes. The city is higher than the surrounding country within a radius of about 100 miles, and is therefore unprotected by elevated lands in its vicinity.

STREETS.

The total length of the streets of Lexington is 31 miles, and of this distance only 18.7 miles are paved. The cost of this pavement (macadam) is 35 cents per square yard. A few short alleys are paved in the middle with stone blocks, to allow the flow of drainage through them. The cost of repairs on the streets in 1879 was $7,289 27. Turnpike companies kept 5½ miles of road in repair, and this expense is not included in the above amount. The sidewalks are almost exclusively of brick laid in coal-ashes, and rendered uneven by constant wear and the growth of tree-roots underneath them. The gutters are mostly square drains with curbs on both sides; some are flat slabs of limestone, laid at an angle to the curbstone, while newly laid gutters are made of blocks forming a concave drain. All are open, except at street-crossings. Trees, largely white maple, are planted along the streets. There are no horse-railroads. The omnibus lines have 6 omnibuses, 3 baggage-wagons, and 18 horses, and employ 13 men. The fare for a single passenger is 25 cents; if he has a trunk the fare is 40 cents. These lines run from the railway depot to various parts of the city.

WATER-WORKS.

The city has no public water-supply.

GAS.

Lexington is supplied with gas by a private corporation. The average daily production is 14,000 cubic feet; the charge per 1,000 feet is $3. The city pays $35 a year for each of its 218 gas street-lamps.

PUBLIC BUILDINGS.

The city owns a city hall, valued at $20,000. No information in regard to other municipal buildings belonging to the city was furnished.

PUBLIC PARKS AND PLEASURE-GROUNDS.

No information on this subject was furnished.

PLACES OF AMUSEMENT.

Lexington has but one theater, the Opera House, capable of seating 800 persons. No license is paid by theaters. There is one hall used for lecture and concert purposes. There are no concert- and beer-gardens.

DRAINAGE.

The drainage is naturally into the Elkhorn river, a branch of which flows through the city. For a distance of one or two squares on either side of the branch the lots are drained by an irregular system of sewers emptying into the branch. The rest of the city has no sewers. Such sewers as exist are about 18 inches square, are built of limestone, and follow no regular plan of construction. The gutters on the streets are simply open drains, and deliver direct into the sewers at the crossings. There are no manholes. No sewers have been built for a number of years. The mouths of the sewers are exposed; they empty direct into the branch, and the deposits formed at the mouths are washed away only whenever the branch gets high enough. The mouths are scraped once a month to keep the outlet open. No artificial flushing is resorted to. The cost of the scraping is about $12 per month, and the entire cost of construction and maintenance is paid by the city.

CEMETERIES.

There are 2 cemeteries now in use, and 5 in which interments are no longer made.

Lexington Cemetery, area 60 acres, is situated at the city limits, about 1 mile from the center, on the Lexington and Leestown turnpike. It is the property of a corporation, and is divided into lots, which are sold at an average price of $100. There have been 7,347 interments in this cemetery.

New Catholic Cemetery, area 20 acres, is situated near Lexington cemetery, and, like that, is beautifully laid out. It is owned and controlled by the Catholic church. It was opened in 1875, and since then 524 interments have been made within it.

The following burial grounds are no longer in use, and no statement of the number of interments within them can be made:

Old Episcopal Grave-yard, area 1 acre, situated on Winchester street, on the eastern edge of the city.

The *Catholic Cemetery*, area 2 acres, adjoining Episcopal.

Presbyterian, on Mulberry street near the city limits, and near the two preceding grounds.

Baptist Church-yard, area about 1 acre, situated on Main and Short streets near the city center.

The *Old City Grave-yard*, area 1 acre, situated in the southwestern part of the city.

All these are very old. Many of the bodies have been removed to the other cemeteries.

Graves in all the cemeteries must be 6 feet deep. There is no limit of time after death within which burials must be made; bodies will be kept twenty-one days during the summer in a public vault, and during the winter for an unlimited time. No burial permits are necessary.

MARKETS.

There is but one public market. This occupies the entire lower story of the city-hall building, is about 300 feet long and 50 feet wide, and contains 54 stalls. It is situated near the center of the city between Upper, Vine, Limestone, and Water streets. The space along Water and Vine streets on either side of the building is occupied by wagons. Meat-stalls rent at $40 per annum, vegetable-stalls at $30. The total rental averages about $1,500 per annum. It is open Tuesdays, Thursdays, and Saturdays; in the winter from 9 a. m. until noon; in the summer from 4 a. m. to 9 a. m. The gross amount of the annual sales can not be ascertained. About one-third of the retail supply of meat, poultry, fish, and vegetables is obtained from the market.

SANITARY AUTHORITY.

The chief sanitary authority of the city is a committee on health, one of the regular standing committees of the city council. Its authority is such as the council gives it from time to time, and its expenses are whatever the council allows. The chief officer is the chairman of the committee; he receives no salary, and his powers are only to preside at meetings of the committee and to report to the city council. No regular time for the meetings is established. A health officer is employed by the committee, who has police powers, and makes regular inspections throughout the city. The ordinances of the city empower the council to appoint a regular board of health, but it has never done so.

NUISANCES.

Nuisances are inspected by the health officer, and orders are issued to the owner or occupant of the premises to remove or abate them. If this order is disregarded, a fine is incurred for each day of delay. Defective house-drainage, privy-vaults, cesspools, and sources of drinking-water are treated as nuisances. The health officer sees that the streets are kept clean. The city ordinances do not prohibit casting filth into the stream which flows through the city, but compel the persons living on the banks to remove any obstructions in it and keep it clean.

BURIAL OF THE DEAD.

No interment is allowed to be made in any place except the burial-grounds authorized by the mayor and council. Graves must be at least 6 feet deep. No other regulations exist.

INFECTIOUS DISEASES.

Small-pox patients are removed to a small-pox hospital, unless proper arrangements can be made for caring for them at home. Scarlet-fever patients are neither isolated nor quarantined in any way. Any person who knows of the existence of any case of small-pox, yellow fever, or other dangerous, contagious, or infectious disease in the city is required to give notice of it to the mayor. The city has at present no pest-house, a former building for the purpose having been destroyed by fire. Vaccination, under the city ordinances, is compulsory whenever the city council thinks it necessary; and no pupil is admitted to the public schools until he has been successfully vaccinated. Vaccination is done at public expense for those unable to pay for it.

REPORTS.

The committee reports to the city council from time to time, and the health officer reports each month.

The law requires that physicians shall make an annual report of births, diseases, and deaths to the county clerk, to be transmitted to the secretary of the state board of health; but this law is not fully complied with.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are cleaned by the property-owners, and the dirt is then removed by a contractor paid by the city. The work is done wholly by hand, and whenever ordered by the chief of police. The cleaning is done only at long intervals and very poorly. The sweepings are used in grading out lots.

Removal of garbage and ashes.—Garbage and ashes are removed by the householders and dumped outside the city. No regulations govern the conservancy of garbage, which may be kept in the same vessel with ashes. The city authorities claim that no injury to the public health is known to have resulted under this system.

Dead animals are removed by the owners to the potter's field and there buried. No record of the number so disposed of is kept.

Liquid household wastes.—Only a small part of the liquid household wastes of the city passes into the public sewers; considerable is run directly into the street-gutters, and the rest goes into cesspools which are porous, and, if provided with overflows, deliver into the street-gutters and sewers. The gutters are flushed by the rain. In some cases the cesspools receive the wastes of water-closets. A number of wells have been contaminated by the overflow and soakage from cesspools, but no particular attention is paid to it. The contents of the cesspools, in cleaning them, are emptied into a fresh hole dug close by the pool, and the hole is then filled in with clay. The system is confessedly poor.

Human excreta.—There are only a few water-closets in the city, nearly all the houses depending on privy-vaults, which by the city ordinances must be at least 5 feet deep, unless resting on solid rock, in which case they must be 4 feet deep. The vaults must be walled up with stone, brick, or wood. They must be well limed in May and June, and again in August and September. Some of the water-closets, chiefly those in the business portion of the city, deliver into the public sewers. The dry-earth system is used to a small extent.

Manufacturing wastes.—There are very little of these to dispose of.

POLICE.

The police force of Lexington is sometimes appointed by the city council, sometimes elected by the people, the determination of the method resting with the council, and is governed by the council. The chief executive officer is the chief of police and city marshal, who acts also as captain of the day police; his salary is $25 per month and fees. The rest of the force consists of a captain of night police, salary $60 per month; a lieutenant, salary $52 50; and 14 patrolmen, salary $52 50 each. Of the patrolmen there are 3 privates from each of the 4 wards, and 2 extra men. The uniform is of dark blue cloth, and provided by the men, the suits costing $30 each. The men are armed with revolver and club, furnished by the men, and are on duty 12 hours each day, patrolling about 6 miles of streets. No record has been kept of the number of arrests, the amount of property lost or stolen and reported to the police, or the number of station-house lodgers. The force co-operates with the fire department at fires. Special policemen are appointed by the mayor on election days, and have the same position as members of the regular force. During 1880 one member of the force was killed. No record of the cost of the police force in 1880 could be obtained. The expense in 1879 was $11,080 76.

LOUISVILLE,

JEFFERSON COUNTY, KENTUCKY.

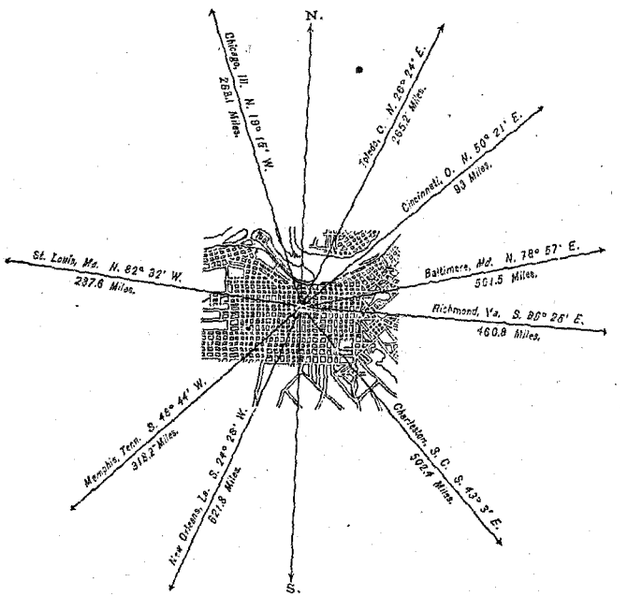
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	359
1810	1,357
1820	4,012
1830	10,341
1840	21,210
1850	43,194
1860	68,033
1870	100,753
1880	123,758



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	58,982
Female	64,776
Native	100,602
Foreign-born	23,156
White	102,847
Colored	*20,911

* Including 5 Chinese and 1 Indian.

Latitude: 38° 15′ North; Longitude: 85° 50′ (west from Greenwich); **Average altitude: *456.5 feet.***

FINANCIAL CONDITION:

Total Valuation: $65,609,000; per capita: $532 00. Net Indebtedness: $4,849,935; per capita: $39 19. Tax per $100: $2 28.

HISTORICAL SKETCH.

The site of Louisville was occupied as early as 1773 by a surveying party under Captain Thomas Bullitt. The first settlement of Louisville was made by 13 families who accompanied Colonel George R. Clarke on his expedition down the Ohio in 1778. The situation was so exposed to Indian attacks that the settlers first established themselves on Corn island, an island at the head of the falls near the Kentucky shore, which has since disappeared. On the reception of the news of the capture of Vincennes by Colonel Clarke's forces, the colony removed to the mainland and built a station. In 1780 the town was laid out and called Louisville, in honor of Louis XVI of France, whose troops were then aiding the Americans in their struggle for independence. It was incorporated as a city in 1828, when its population was about 10,000. Its growth since then has been generally steady, even rapid. In 1822 the

place suffered from an epidemic of fever, being almost depopulated thereby. The recovery took several years, and business suffered severely, as it did also 10 years later after the flood of 1832. The city suffered more or less from the general panic in business from 1837 to 1840, and the great fire in the latter year, by which 30 stores and factories were destroyed (loss $300,000), augmented and prolonged its effect.

The first settlers were Pennsylvanians and Virginians. The Virginia or southern element has always been in the ascendency, at first owing to the facts of its settlement, and, since emancipation, owing to the intimate relations which have sprung up with the South by reason of the location and the railroad connections of the city. The German element has recently exerted large influence in forming the character of the city. The German language is taught in public schools.

LOUISVILLE IN 1880.

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

LOCATION.

Louisville, the chief city of Kentucky and the capital of Jefferson county, lies on the south side of the Ohio river at the upper end of the "falls of the Ohio", where Bear Grass creek enters the river, in latitude 38° 15′ north, longitude 85° 50′ west. The city has about 8 miles of water-front. Except in extremely dry seasons, when boats can not pass even the canal, navigation is always open. In high stages of the river the falls almost disappear, and steamboats pass over them; but when the water is low the whole width of the river has the appearance of a great many broken cascades of foam making their way over the rapids. To obviate the obstruction to navigation caused by these falls, a canal 2½ miles long was cut around them on the Kentucky side to Shipping Port, now included in Louisville. This was a work of vast labor, the canal, for the greater part of its course, being cut through the solid rock, and cost nearly $100,000. Louisville has thus communication by water with the great cities of Cincinnati, Pittsburgh, etc., above, and with all the river towns of the Mississippi and Ohio below.

RAILROAD COMMUNICATIONS.

Louisville has ample railroad facilities, as is shown by the following list of her roads:

The Ohio and Mississippi railroad, from Cincinnati to Saint Louis, connecting with Louisville by a branch from North Vernon, Indiana.

The Jeffersonville, Madison, and Indianapolis railroad, from Louisville to Indianapolis (operated by the Pennsylvania Railroad Company).

The Louisville, New Albany, and Chicago railroad, from Louisville to Michigan City.

The Louisville and Nashville railroad, one line of which runs from Louisville to Memphis, one to New Orleans, one to Saint Louis, and several minor branches to different points in the South.

The Louisville, Cincinnati, and Lexington railroad, to the cities named.

TRIBUTARY COUNTRY.

In the country tributary to Louisville, corn, wheat, rye, oats, hay, tobacco, hemp, and barley are largely raised, finding here a market. Much whisky is manufactured in the district, and large quantities of lumber from the interior of the state are shipped to and from here. As a matter of fact, much of the famed blue-grass region of the state may be considered as tributary to its chief city.

TOPOGRAPHY.

The city is situated on an alluvial plain, in a bend of the river, above which it is not greatly elevated. A few feet from the surface is found a deposit of sand and gravel sometimes 30 feet in thickness. Near the east and southern limits the land rises, and for miles away is undulating uplands. At the base of the hills, and in the bed of the river at low water, a fine limestone crops out, and is largely quarried for local building use and for making cement. At one time many ponds existed, to which were ascribed the existence of malarial fevers, but these have since been drained. In the immediate vicinity the soil is very fertile and has been mostly cleared of its original growth of trees; enough of these are left, however, on spots reserved for pasturage and around the farm-houses to make a pleasing landscape.

CLIMATE.

From records extending from 1874 to 1879, inclusive, the following figures are obtained: Highest summer temperature (July and August, 1874), 102°; highest mean summer temperature (1879), 82.5°. Lowest winter temperature (January, 1875 and 1879), −10°; lowest mean winter temperature (1876), 30.8°. Highest mean temperature of any year (1874), 58°. The prevailing winds are from the south. These moderate the temperature in winter, and cause frequent rains in summer; hence excessive droughts, as well as long cold periods, are rare.

STREETS.

The paved streets of Louisville are of a total length of 130.18 miles, and her alleys are about 25 miles in length. The streets are paved with the following materials: Cobble-stones, 13.55 miles; stone blocks (1 square), 0.1 mile; asphalt or other composition (2 squares), 0.2 mile; broken stone, 106.03 miles; wood, 7.64 miles; gravel, 2.76 miles.

The cost per square yard of most of this, which may be estimated, is: Cobble-stones, $1 15; broken stone, $0 63. No late contracts have been made for wooden paving. That first laid was by the Nicholson system, but repairs to it are made by the Wyckoff method, and, being laid on the original foundation, cost $0 45 per square yard. Street-making is done by contract.

The total cost of street repairs in 1879 was $26,501 16, and was divided among the different sorts of pavement thus: Broken stone, $12,303 50; cobble-stones, $2,017 88; wooden pavement, $2,887 06; gutters and alleys, $8,392 72, the work being performed by contract.

As to the relative facility with which each is kept clean it is stated that "wood pavement, until it begins to wear out, is most easily kept clean. Bowlders (cobble-stone) rank next. Broken stone always dirty". Street-cleaning costs annually about $40,000.

Concerning quality and permanent economy of each it is stated:

> Experience here has been in favor of macadam for economy, though the tendency is now to change to bowlder and wood, as the street-cleaning bill (a constant outlay) is much less.

Sidewalks are laid with brick, and vary in width from 8 to 20 feet, while gutters are paved with stone blocks. The planting of trees is practiced upon the outer edge of the sidewalks. On residence streets these occur at intervals of not more than 20 or 30 feet, and often less. In the street work a steam stone-crusher and a roller are used, it is stated, with the following good effect:

> [It] saves 33 per cent. of repairs on macadam streets; drainage is largely facilitated, sanitation, in consequence, advanced, and transportation economized, by securing more speed and less wear and tear.

From a report on "Street pavements", made by R. T. Scowden, city engineer, to the mayor, dated May 1, 1880, the following extract is taken:

> I desire to call attention to two grievous abuses to which our thoroughfares are subjected: One is excessive street-sprinkling and the other excessive loading. Instead of dampening the streets to lay the dust, they are literally flooded with water. Neither bowlder nor wooden pavements can withstand the injurious effects of such treatment, and our broken-stone repairs are so softened by saturation that they are resolved into mud almost as soon as made.
>
> The destructive effects of heavy hauling can be better appreciated when it is known that, upon our saturated streets, it is not uncommon for wagons with narrow tires to carry as much freight as an ordinary railroad-car. Granite would soon succumb to such heavy burdens.
>
> The ordinance regulating the loads of vehicles used in hauling merchandise, with a view to the protection of street pavements, very prudently fixed the maximum loads for four-wheeled wagons with tires of 6 inches at not to exceed 8,000 pounds, or 4 tons, and 3,500 pounds, or 1¾ tons, for tires of 2½ inches in width. Drays and carts, or two-wheeled vehicles, are limited to 5,000 pounds, or 2½ tons, for 6-inch tires, and 2,500 pounds, or 1¼ tons, for 2½-inch tires. No ordinance is more persistently violated than this one. Wagons with loads exceeding 12,000 pounds, or 6 tons, upon 2½- and 3-inch tires, and drays with 3-inch tires, having loads exceeding 4,000 pounds, or 2 tons, daily traverse Main street and cut it into ruts, depressions, and ruptures. And there are frequent instances where blocks of marble weighing 12 and 16 tons, or 24,000 and 32,000 pounds, are hauled over the streets.
>
> Economy to the business man in transportation is a heavy drain upon the tax-payer for street repairs. Iron rails have been found too weak to withstand such severe traffic. Bowlder pavements, therefore, which are the most difficult streets to keep in repair, are continually broken up from the injurious effects of excessive loading. If the ordinance regulating loading is correct, it should be enforced, or if the business interests would suffer from its enforcement, the ordinance should be changed. One fact, however, must be remembered, and that is that cheap transportation obtained from excessive loading is at the constant and increased cost of street repairs. No street yet invented has been able to resist such heavy burdens; and no city in Europe or America permits one-half the weight, upon narrow tires, to be hauled over their streets to which ours are subjected.

HORSE-RAILROADS, ETC.

The horse-railroads of Louisville lack but 383 yards of being 50 miles in length. They employ 173 cars, 726 horses and mules, and 323 men. The fare charged is 5 cents, and during a year about 8,000,000 passengers are carried.

There are no regular omnibus lines in the city, but vehicles to the number of 20 ply between the railroad stations and the hotels and all parts of the city. These employ 40 men and 50 horses, carry during a year about 110,000 passengers, and charge a fare of 50 cents with baggage and of 25 cents without.

WATER-WORKS.

The water-works are owned by the Louisville Water Company. The water is taken from the Ohio river, and is pumped into 2 reservoirs and a stand-pipe. The pressure is from 43 to 60 pounds. The average amount pumped per diem is 5,000,000 gallons, the greatest 7,500,000, and the least 4,000,000 gallons. The average cost of raising 1,000,000 gallons 1 foot high is 5.35 cents. The total yearly expenses (except interest, $54,000) is $23,500. The

yearly income from water-rates is $175,000. Many double-piston and a few rotary water-meters are used; 3.4 per cent. of the water-takers use them, while 27 per cent. of the volume of water distributed is metered. Waste of water is undoubtedly restrained thereby. The total cost of the works has been $3,500,000.

GAS.

The gas-works are owned by a private company. The daily average production is 462,825 cubic feet. The charge per 1,000 feet is $2 35. The city pays for each street-lamp, exclusive of lighting and maintenance, $19 03; there are 2,500 of these lamps. The income from meter-rents is $1,249 35; from the total sales of gas, $316,871 41.

PUBLIC BUILDINGS.

The city owns the city hall and a number of station-houses. The former cost about $500,000.

PUBLIC PARKS AND PLEASURE-GROUNDS.

Louisville has no large public parks. *Central Park*, area 4 acres, and *Floral Park*, area 2 acres, both near the center of the city, are pleasant spots and are largely resorted to during the hot weather of summer. An entrance fee is charged at these grounds. The streets of the city, being wide (from 50 to 200 feet), are very liberally planted with shade-trees, and the lots in the resident localities being large—minimum size 6,000 square feet—the want of parks has not been very severely felt. A zoological garden is about being started, the grounds to have an area of 166 acres. Buildings have already been erected thereon at a cost of $58,000. These grounds are easy of access and are distant from the business center. The water-works company is also improving its grounds of about 100 acres as a park.

PLACES OF AMUSEMENT.

The following is a list of the theaters, with their seating capacities: Macauley's, 1,500 to 2,000; Opera house (public library), 1,500; Knickerbocker (variety), 1,200; Metropolitan (variety), 1,300, and the Masonic temple, 1,200.

Of concert-halls and lecture-rooms there are: Liederkranz hall, Young Men's Christian Association hall, Eclipse hall, Avenue hall, and Exposition building.

Of concert- and beer-gardens there are three: Woodlawn garden, Phœnix hill, and National garden. These are patronized largely on Sundays. Concerts are given in the evening. They are situated in the suburbs of the city, and the grounds of each are ample for the accommodation of thousands. The better class attend these places only on special occasions, when the grounds are exclusively secured by contract with the proprietors.

DRAINAGE.

The ground on which Louisville is built is like the bottom-lands all along the Ohio river. Its surface is quite even and about 50 feet above the ordinary level of the river. The natural soil is a light loam over a hard stiff clay, in all about 15 feet deep, resting on a stratum of sand and gravel extending to a depth of from 40 to 60 feet. Water is found at various depths, according to the level of the water in the river, and affords an ample supply to numerous wells, both public and private. The stratum of sand and gravel is also made to serve another purpose, both useful and convenient. If cellars are damp or hold water, a small well or pipe sunk through the clay to the sand will usually afford relief. Sometimes in grading streets the natural surface drainage is interrupted and ponds of water accumulate in low lots. By driving a tube-well into the sand the pool soon disappears, and the low ground is relieved for a time, until the well gets filled with mud. Cesspools and vaults are also sunk into the gravel, or abandoned wells are converted to the same use, and will dispose of house-drainage for many years, with danger to the water-supply of those who depend on wells.

Beneath the sand and gravel is a layer of stiff blue clay, supposed to extend under the whole city, and usually found to be about 15 feet thick. This rests on a foundation of coarse gravel and cobbles very different from the upper sand and gravel, being much coarser and more compact, and probably composed of an ancient deposit, into which the present bed of the river has been worn, and which is often found in the upper terraces, sometimes, as at Cincinnati, being 100 feet above the present bottom of the river and extending to an unknown depth. Most of the public wells at the street-corners are now supplied with water from the lower stratum by driving a tube from 80 to 100 feet or more below the surface of the stream. Distilleries get their supply of water from the same source, and an ice-manufacturing company has been pumping a constant stream for several years from a 4-inch pipe without any apparent diminution of the supply. The water is used both for condensing purposes and for freezing into blocks of clear ice.

A number of natural water-courses traverse the bottom-lands; some take their rise within the city limits and flow away toward the south and west. The principal stream, known as Bear Grass creek, flows along the foot of the bluffs in the easterly part of the city till it comes within half a mile of the Ohio river, whence it discharges through an artificial channel to the river, nearly 2 miles above the public landing. The natural course of this stream was quite different, as it made a sharp turn at the place where the cut-off was made, and flowed almost

back upon its course, running about midway between Main street and the river-shore, and discharged into the Ohio near the present location of the public landing at the foot of Fourth street. Its former outlet at this place is described by writers as making a large, safe, and commodious harbor for river-boats just above the falls. This outlet has been closed, a sewer has been built along the course of the stream, and the gradual filling in of the bed of the old creek to a height of from 20 to 30 feet forms an important feature of the geological structure of that part of the city.

The sewerage works of Louisville consist of 40½ miles of sewers, of which those 18 inches or less in diameter are of vitrified clay pipes, and those of larger size are of brick masonry. There are no stone sewers in use, except perhaps a short length of old drains in a few places, but not to any considerable extent. Brick sewers are laid in the hydraulic cement manufactured in the city and vicinity, some of which is of excellent quality. No stone inverts have been found necessary, as the flow of water is not remarkably rapid, but perhaps chiefly for the reason that sewage contains but little sand or gravel to wear away the masonry; the adjacent soil, being clay, loam, and mud, is carried along by the current or deposited quietly in the bottom, without much tendency to scour or wear out the brick-work.

Information relative to the size, cross-section, and rates of sewers may be found in the annual reports of the department of public works, which are unusually explicit and complete. The usual cross-section of pipe-sewers is circular, and Y-branches are laid at the time of construction in all situations where house-drain connections are at all likely to be wanted. Brick sewers are circular in cross-section where the flow of water is likely to be large, but in situations where the constant flow is small and the sewers are required to carry much water only at rare intervals, they are built egg-shaped, the distinction being made according to the judgment of the chief engineer, and not in accordance with any fixed rule.

The size of sewers constructed within recent years has been regulated according to the areas to be drained and the inclination of the sewers by the use of Adams' formula, assuming a rainfall of 1 inch per hour, of which one-half only would reach the sewer within the hour. The surface of the city is very nearly level, and from 45 to 55 feet above the river. The length of its sewers is generally not great, so that ample fall can be secured by increasing the depth of cutting on approaching the outfall. That part of the city lying between Walnut street and the river is usually drained directly into the Ohio by a sewer in each street. The uniformity of this rule, however, is interrupted above Third street, where the sewers, instead of flowing directly to the river, are discharged into an intercepting sewer along the shore in the old channel of Bear Grass creek and discharged to one outlet nearly opposite the city gas-works on Preston street. Those sewers which discharge into the Ohio have their outfalls so near the entrance to the canal that their contents are probably almost wholly drawn into and through the canal and locks. The drainage of that part of the city below Twelfth street would naturally go into the canal, and sewers have been constructed in Seventeenth, Twenty-first, and Twenty-sixth streets, discharging into it; but the authorities of the United States have forbidden the construction of any more outfall sewers into the canal, so that it will be necessary for the city to build an intercepting sewer to receive the contents of the sewers in all that part of the city and conduct and discharge it below the locks. The drainage of all the lower portion of the city below Twelfth street is now very incomplete.

The drainage of the western part of the city below Third street and south of Walnut has been provided for by a large trunk-sewer, in Broadway extension and other streets. This is circular in cross-section, made of brick, and is intended as the outlet for a large area of the city. The principal tributaries to it at present are a brick sewer in Twentieth street from Main, one in Fifteenth street from Grayson on the north and from Ormsby street on the south. Tributaries of less extent have also been built in Thirteenth from Chestnut, Ninth from Walnut, Seventh from Magazine, and Fifth from Chestnut street. These afford all the drainage there is in this part of the city up to the present time, but the natural water-courses have been taken into the sewer wherever they come to it, and a large area of suburban and rural district has been tile-drained, discharging into the sewer, thus greatly improving its condition and value for agricultural and building purposes. The part of the city beyond the Louisville and Nashville Railroad shops and in the vicinity of the Louisville Bridge works is sparsely settled, and many streets are not opened or improved. That part of the city lying south of Walnut and east of Fifth street is now drained into the stream, already mentioned, known as Bear Grass creek.

There are two principal outfalls, one for the main sewer in Kentucky street and the other at the crossing of Broadway. Other sewers of less extent discharge into the creek below Broadway, the principal one being in Green street, but of short extent only. These main sewers and their branches have been as carefully examined as they could be in the limited time devoted to the subject. The one in Broadway is at a higher level, and has a better flow at this time than the one in Kentucky street. Broadway is carried across the stream on a cut-stone arch with curved wing-walls to support the banks on each side. The water from the gutters reaches the creek by four separate culverts, each passing through the masonry in a square opening. The sewer is circular and made of brick, and its course is deflected and brought to the creek just at the lower edge of the bridge masonry. The outfall was about half submerged and inaccessible at the time the examination was made, but the sewer was examined in several places along its course and the flow of water was seen to be rapid and strong. There was more water than usual in both the main and branches when the examination was made—January 26, 1882—as it

was raining slightly at the time, and had rained at intervals during the past forty-eight hours, but not enough to cause much addition to the usual flow. The sewers appeared to be clear, and in no case obstructed, with the single exception of a pipe sewer 15 inches in diameter in Floyd street near Gray, where some street-dirt had formed a slight obstruction at a manhole. The main sewer in Kentucky street is built at a lower level than any of the other main outlets, and was, on January 26, 1882, about half full of water for nearly half a mile from its outfall. It also contains a considerable deposit of clay and mud, which will probably be removed when the flood in the river subsides so that this sewer can be entered.

These two sewers last described drain a part of the city quite thickly populated.

CEMETERIES.

No information was furnished upon this subject.

MARKETS.

There are no public or corporation markets in Louisville, and no information as to the city's food-supply and the system of distributing it was given.

SANITARY AUTHORITY—BOARD OF HEALTH.

The official sanitary organization of the city is the board of health. This is a board of 12 members—9 of them being physicians—appointed by the general council, and responsible to it. The expenses of the board for 1879 were $3,900, of which $1,700 was used for quarantine purposes and the remainder for salaries and incidental purposes, including the registration of vital statistics. The board is limited in its expenditures to the appropriation made by the council; the amount is annually about $4,000. The board has power at all times to enforce such measures as may be necessary to protect the city from danger without in the way of infection, and to maintain within a healthful and cleanly condition. The chief executive is the health officer; his salary is $100 per month, and his chief duty is to attend to the abatement of nuisances.

The police act as sanitary inspectors, making and reporting inspections regularly, these covering all parts of the city. Inspections are also made as nuisances are reported. In all cases of nuisances the health officer orders the same abated; if this is not done within the time given, he procures a warrant against the offender, and proceeds to enforce his order. The nuisances under the surveillance of the board may relate to defective house-drainage, privy-vaults, cesspools, or sources of drinking-water; but defective sewerage, street-cleaning, etc., are under the control of the sewer and street-cleaning departments. Over the conservation and removal of garbage the board has authority "only to see that no nuisance is committed". Before burials are permitted the board requires its permit therefor to be obtained, and this is granted only upon the presentation of a certificate properly filled and signed by the physician and the undertaker. The board has thus far taken cognizance of the breaking out of contagious diseases in schools only in the case of small-pox. Small-pox patients are either isolated at their homes, upon which warning flags are placed, or they are removed to Saint John's eruptive hospital, which is located one-half mile outside and southeast of the city limits. Scarlet-fever patients are not isolated. Vaccination is compulsory, and is done at the public expense in the case of indigent persons. A registry of deaths is kept by the board, embracing in each case the name, sex, color, age, cause, duration of illness, physician, birthplace, residence, cemetery, and officiating undertaker.

The board of health meets once a month, or oftener upon call. It makes yearly reports to the general council, which are published with the other municipal reports.

The following table shows the nuisances reported to the health office and ordered abated during the year 1880, with comparative figures for 1879:

Nature of nuisance.	1880.	1879.	Nature of nuisance.	1880.	1879.
Foul cellars	101	131	Filthy slaughter-houses	20	15
Filthy cisterns	49	53	Filthy alleys, streets, and gutters	175	193
Filthy yards	200	217	Filthy ponds	25	78
Foul privy-vaults	76	75	Filthy dry wells	9	6
Foul and full privy-vaults	1,116	1,347	Dangerous flues	5	2
Dangerous privy-vaults	51	63	Dangerous houses	3	1
Hog- and cow-pens	82	93	Foul water-closets	29	5
Filthy stables	25	44	Totals	2,080	2,450
Filthy premises	95	103			
Filthy houses and sheds	19	29			

The following extract from the report of the health officer for 1880 upon the subject of the wells of Louisville is suggestive:

There is no subject of more importance than our water-supply. The formation of our soil is as follows: From 4 to 5 feet, sand and gravel; 30 to 50, blue clay; compact and water-proof, 8 to 15 feet; and then a coarse gravel and sand. Our wells now are from 30 to 45 feet deep, and the bottoms are located in the first sand and gravel. The custom in sinking is to stop as soon as a sufficient

quantity of water is secured, regardless of quality. It is the universal custom to dig privy-vaults 30 to 40 feet deep, in order to get a free and ready drainage of the deposit to save cleaning, regardless of an ordinance that they shall not be deeper than 24 feet. So, you see, our wells, as they are now, are subject to pollution, first, from sipage from catch-basins and sewers; second, from surface overflow, for they are invariably located on the edge of the street-gutters; third, from subsoil drainage, the rule being that each well drains a circular area with a radius equal to twice the depth of the well; fourth, from privy-vaults dug in our porous soil to a depth where an almost uninterrupted drainage takes place, or, worse, directly into the water-seam that supplies our wells with drinking-water for more than three-fourths of our inhabitants.

The custom has been, when a well gets so foul as to attract the attention of its patrons, to have it cleaned. Many of them have to be cleaned several times a year. So long as the cause remains, the cost of cleaning is that much money thrown away. The amount that these wells cost for cleaning, as shown by the city engineer, must be immense, which might be pardonable if it furnished us with pure water, which is impossible while the cause of pollution is constantly going on. Even before the *pump doctor* gets his pump in working order, the well, to some extent, is polluted—in fact the water is impure before it enters the well. There is no filter, however perfect, but in time will become so foul that it is worse than none. To get pure water we will have to go through the bed of clay by a method which will not allow of sipage of the subsoil or the present water-supply, or abandon our corner-well system altogether. So I would recommend that where a well is found unfit for use that it be condemned, and a pipe-well be sunk to a depth of not less than 75 feet.

MUNICIPAL CLEANSING.

Street-cleaning.—From the annual report of the street-cleaning department the following items are culled:

The ordinance creating and putting under the control of the mayor the street-cleaning department was approved May 31, 1873. During 1880 there were removed 45,712 loads of street-dirt and 21,132 loads of ashes, or 66,844 loads in all, at a total cost of $39,044 79. This cost was really reduced, from the sale of 4,690 loads of scrapings, by $403 90, and by the amount paid on garbage contracts by $3,400, which makes the actual cost of the service $35,644 79, or a little more than 53 cents per load.

The present administration introduced the separation of ashes and garbage, the former to fill the various cesspools and sand-pits, the latter hauled beyond the city limits, which has abated the old cry of decomposition in the many fills in and around the city.

POLICE.

The following information was obtained from the annual report of the chief of police for 1880:

As at present constituted, the force consists of 141 men, divided as follows: 1 chief, 4 first lieutenants, 4 detectives, 12 sergeants, 1 clerk, 1 officer detailed for court and police-telegraph duty, 11 station-keepers, 96 patrolmen, and 11 supernumeraries. The employment of 147 men is authorized by ordinance, leaving 6 vacancies.

The total number of arrests made during the year was 4,712, for which the chief causes were: Drunk and disorderly, 2,161; on misdemeanor warrants, 628; grand larceny, 274; felony, 240; cutting with intent to kill, 161; assault and battery, 125; on peace warrants, 120; petit larceny, 115; suspected felony, 111.

In his annual message for 1880, Mayor Baxter says:

While public opinion has been somewhat against the police force, it is not backed up by facts, and the complaints are not well founded. I am glad to say that it makes a better showing for the year 1880 for the work done than for many years previous, and that is the only guide we have to judge of the efficiency of any department. The total expenses are $92,249 25. I herewith append a table showing the number of arrests and the average number to each policeman for the years 1875 to 1880, inclusive, which shows that there were more persons arrested in the years 1879 and 1880, and at very much less cost, although we had 44 less policemen for those two years, than there were in 1875, 1876, 1877, 1878:

Years.	Number of arrests.	Cost.	Number of policemen.	Average.
1880..	4,712	$92,249 25	135	35
1879..	4,567	.....	135	34
1878..	4,776	148,059 03	179	27
1877..	6,034	.....	179	34
1876..	5,514	.....	179	31
1875..	4,562	.....	179	26

The cost for maintaining the police force for the year 1878 was $148,059 03; the cost for maintaining the police force for the year 1880 was $92,249 25, showing a difference in favor of the year 1880 of the large sum of $65,809 78. This shows that the police force for 1880 made more arrests with 135 policemen than the force of 1878 with 179 policemen, and at a less expense to the city of $65,809 78, a very great difference in favor of our present police force. This makes a very deserving showing for the police force for the year 1880, and the difference is very manifest. It cost the city per capita for each arrest $19 55 in 1880, and $31 in 1878.

I would renew my suggestion in my message in 1879, and that was that the mayor should be relieved from having any thing to do with appointing the police. In my opinion the police should be appointed by some other authority outside of the mayor and general council, and should be kept on duty during good behavior, and when retired on account of age they should have a small pension allotted them by the city during their life. They ought not to be allowed to interfere with politics or any thing else, but attend strictly to police duty.

FIRE DEPARTMENT.

The department consists of 10 steam-engine companies with a force of 6 men each, 2 hook-and-ladder companies of 7 men each, and 1 chemical-engine company; also a fully equipped fire-alarm telegraph department. There are 367 public fire-cisterns and 16 fire-plugs.

Section 3 of "an ordinance to provide for the establishment and maintenance of a fire department", approved July 1, 1878, reads:

He [the chief-engineer] is hereby clothed with full police authority in all matters relating to the department; and should an occasion occur that those belonging to the department are not sufficient to check the progress of the fire, protect surrounding property, and maintain order, he may for the time being employ an additional force, and report the names of all persons thus employed to the general council, to whom compensation may be allowed for such service.

In his message for 1880 the mayor says:

The actual cost for maintaining this department for the year 1880 was	$93,288 37
Purchasing engines, hose, etc	15,172 32
Total	108,460 69

In the last eighteen months the city purchased five new steam-engines and about 16,000 feet of first-class gum hose. Two of the engines are not completed as yet, but we expect to receive them in the next few weeks. When they arrive we will have as well an equipped fire department as any city of our size in the country. We also erected two new first-class engine-houses and sold the old ones. The changes were, in my opinion, a great benefit to the city, as the property in the old locations has advanced by the removal of the old engine-houses, and the present locations are better for the public good. The number of alarms during the year were 289, and the amount of loss, $191,668 63; excess of loss, $77,345. Our firemen, as they always have been, are active and fearless in the discharge of their duties. The fire department under the present chief is well managed. There has been a demand, and, I suppose well founded, of late, to have a new engine in the extreme eastern and western portions of the city, and I would be pleased to co-operate with our citizens in their request if it was possible for the city at this time to make the desired purchases; but it will be impossible for us this year to build any more new engine-houses or purchase any more new engines, as our finances will not admit of it.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Louisville for 1880, being taken from tables prepared for the Tenth Census by C. K. Caron, 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	1,108	$21,767,013	13,480	2,829	1,139	$5,835,545	$21,207,110	$35,423,203
Agricultural implements	6	1,915,100	678	16	10	261,661	640,600	1,220,700
Baskets, rattan and willow ware	7	2,800	6	.....	1	1,016	1,755	7,820
Blacksmithing (see also Wheelwrighting)	49	45,110	80	.....	.....	38,528	36,875	129,315
Bookbinding and blank-book making	3	49,400	32	22	.....	20,140	53,150	95,800
Boots and shoes, including custom work and repairing	115	284,000	465	127	25	218,019	393,225	774,262
Boot and shoe uppers	5	14,050	23	11	.....	18,857	69,600	102,980
Boxes, wooden packing	4	58,072	56	.....	3	27,400	55,400	107,000
Brass castings	6	69,000	52	.....	9	20,020	80,020	114,276
Bread and other bakery products	69	192,000	193	21	6	69,431	377,311	592,925
Brick and tile	16	127,350	299	.....	16	68,140	45,080	151,175
Brooms and brushes	8	15,900	58	8	2	24,810	35,600	75,980
Carpentering	44	168,900	369	.....	5	163,897	385,050	718,600
Carriages and wagons (see also Wheelwrighting)	30	338,250	376	2	14	156,422	390,540	717,575
Clothing, men's	35	701,800	782	763	4	300,511	724,536	1,303,718
Clothing, women's	3	45,000	2	220	25	53,300	275,600	388,000
Coffee and spices, roasted and ground	3	39,500	21	.....	8	20,500	159,000	209,200
Coffins, burial cases, and undertakers' goods	3	110,300	68	3	.....	29,100	41,700	120,800
Confectionery	17	170,900	90	17	5	38,814	151,749	263,430
Cooperage	22	272,200	537	.....	7	254,931	368,660	762,800
Cutlery and edge tools (see also Hardware)	5	54,600	73	.....	1	31,979	28,600	75,350
Dentistry, mechanical	10	32,500	8	.....	.....	6,075	14,700	49,500
Drugs and chemicals (see also Patent medicines and compounds)	4	23,000	13	.....	.....	5,400	22,300	46,000
Dyeing and cleaning	3	11,500	4	3	.....	2,300	1,700	9,170
Flouring- and grist-mill products	8	260,000	94	.....	.....	35,350	837,165	951,850
Foundery and machine-shop products (see also Iron work, architectural and ornamental).	32	2,044,750	1,533	.....	95	612,155	1,312,881	2,343,039
Furniture (see also Mattresses and spring beds; Upholstering)	18	421,600	543	4	32	220,000	359,705	797,400
Furniture, chairs	7	130,900	184	10	40	85,676	117,845	244,670
Glass	3	295,000	132	1	36	32,917	37,079	123,075
Hairwork	6	8,400	.....	8	.....	2,431	10,265	25,600
Hardware (see also Cutlery and edge tools)	3	10,500	14	.....	.....	6,850	6,500	21,800

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.			
Ink	3	$9,500	9	2	.....	$3,008	$5,600	$11,800
Instruments, professional and scientific	3	11,500	6	.....	.....	3,820	1,800	11,000
Iron and steel	3	392,000	468	.....	2	149,187	305,784	514,023
Iron work, architectural and ornamental (see also Foundery and machine-shop products).	4	33,500	31	.....	.....	12,004	19,940	48,493
Jewelry	7	25,099	31	2	1	14,794	28,384	53,703
Leather, curried	5	94,000	43	.....	.....	11,825	228,090	275,400
Leather, tanned	13	1,610,000	374	1	10	160,653	1,261,931	1,855,590
Liquors, distilled	15	1,049,000	218	.....	1	89,855	953,900	1,382,500
Liquors, malt	20	712,000	275	1	2	134,291	575,533	959,221
Lithographing (see also Printing and publishing)	4	26,200	43	12	10	22,324	22,526	59,270
Lock- and gun-smithing	3	2,100	10	.....	.....	4,458	11,500	19,400
Looking-glass and picture frames	4	3,162	6	.....	.....	2,130	4,510	12,040
Lumber, planed (see also Wood, turned and carved)	9	268,768	285	.....	2	106,475	336,997	611,204
Lumber, sawed	3	300,000	70	.....	7	25,582	126,375	212,500
Marble and stone work	17	140,375	167	.....	.....	80,714	133,846	319,500
Masonry, brick and stone	4	50,650	78	.....	7	35,674	53,300	113,150
Mattresses and spring beds (see also Furniture)	10	15,450	35	6	.....	15,573	40,280	75,800
Millinery and lace goods	7	61,000	3	79	5	20,240	96,600	149,900
Mineral and soda waters	7	19,900	15	.....	4	7,872	10,100	30,592
Mixed textiles (see also Woolen goods)	3	410,000	79	154	112	100,862	446,570	654,329
Musical instruments, pianos and materials	5	40,700	26	.....	.....	12,833	13,800	42,200
Painting and paperhanging	23	26,850	111	.....	5	43,248	37,550	116,727
Patent medicines and compounds (see also Drugs and chemicals)	9	119,500	33	10	5	14,186	166,000	352,800
Photographing	11	27,900	32	4	1	18,306	27,650	68,685
Plumbing and gasfitting	17	35,650	81	.....	3	34,560	54,421	123,975
Printing and publishing (see also Lithographing)	36	1,333,500	668	104	65	416,551	433,164	1,188,667
Pumps, not including steam-pumps	5	22,250	24	.....	2	11,160	12,010	33,789
Roofing and roofing materials	8	16,300	26	.....	2	11,687	32,700	58,350
Saddlery and harness	35	396,150	398	19	23	159,571	520,525	882,542
Shirts	8	64,300	9	100	.....	19,594	30,774	65,315
Show-cases	3	2,100	6	.....	2	1,950	2,050	6,900
Slaughtering and meat-packing, not including retail butchering	23	2,144,500	358	.....	8	141,092	3,438,459	4,287,158
Stone- and earthen-ware	4	10,900	23	.....	4	8,900	4,950	18,400
Tinware, copperware, and sheet-iron ware	45	178,900	151	.....	5	73,548	228,395	419,030
Tobacco, chewing, smoking and snuff (see also Tobacco, cigars and cigarettes).	9	460,000	742	436	203	188,517	1,162,891	2,312,802
Tobacco, cigars and cigarettes (see also Tobacco, chewing, smoking, and snuff).	54	248,237	336	67	111	141,148	245,863	684,842
Trunks and valises	7	59,800	98	.....	17	44,101	72,300	164,100
Upholstering (see also Furniture)	4	13,100	13	3	.....	5,000	22,900	38,200
Vinegar	3	42,500	15	.....	.....	5,210	64,805	89,000
Watch and clock repairing	9	5,200	5	.....	.....	3,300	1,885	15,050
Wheelwrighting (see also Blacksmithing; Carriages and wagons)	16	26,750	35	.....	.....	17,534	19,250	64,500
Wood, turned and carved (see also Lumber, planed)	6	93,000	62	.....	36	36,299	50,756	114,767
Woolen goods (see also Mixed textiles)	4	425,000	92	154	114	102,212	451,970	669,079
All other industries (*a*)	76	2,826,140	1,155	445	86	495,267	2,412,485	3,686,539

a Embracing artificial limbs; awnings and tents; axle-grease; bagging, flax, hemp, and jute; baking and yeast powders; bells; belting and hose, leather; bluing; boxes, cigar; boxes, fancy and paper; bridges; buttons; carriage and wagon materials; carriages and sleds, children's; cars, railroad, street, and repairs; cement; coppersmithing; cordage and twine; cork cutting; cotton goods; drain and sewer pipe; dyeing and finishing textiles; electrical apparatus and supplies; electroplating; files; glass, cut, stained, and ornamented; grease and tallow; handles, wooden; hats and caps; iron bolts, nuts, washers, and rivets; iron forgings; labels and tags; lapidary work; lightning rods; malt; models and patterns; musical instruments, organs and materials; nets and seines; oil, linseed; oleomargarine; paints; paper; pickles, preserves, and sauces; refrigerators; sash, doors, and blinds; saws; scales and balances; shipbuilding; soap and candles; sporting goods; stencils and brands; stereotyping and electrotyping; toys and games; umbrellas and canes; and wirework.

From the foregoing table it appears that the average capital of all establishments is $19,645 32; that the average wages of all hands employed is $334 45 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $25,585 45.

NEWPORT,

CAMPBELL COUNTY, KENTUCKY.

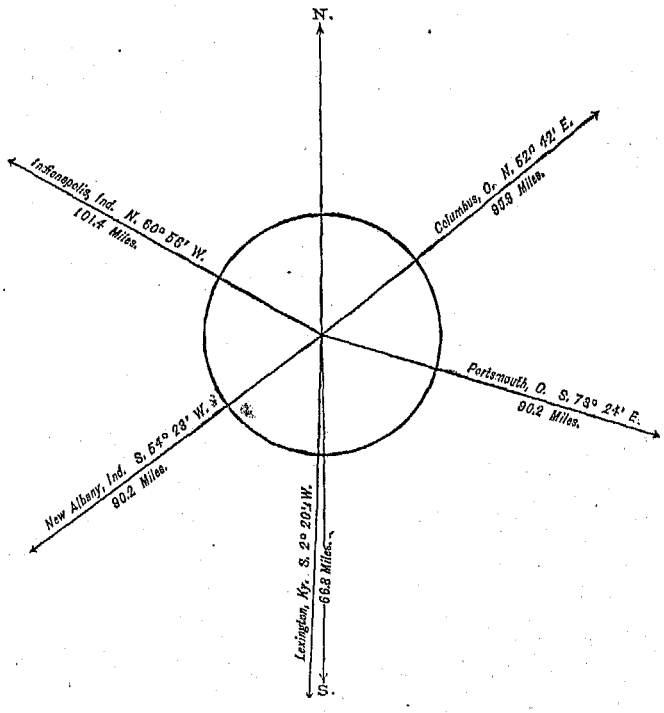
POPULATION

IN THE

AGGREGATE,

1800-1880.

	Inhab.
1790	.....
1800	106
1810	413
1820	.....
1830	715
1840	.....
1850	5,895
1860	10,046
1870	15,087
1880	20,433



POPULATION

BY

SEX, NATIVITY, AND RACE,

AT

CENSUS OF 1880.

Male	9,925
Female	10,508
Native	15,422
Foreign-born	5,011
White	20,116
Colored	*317

*Including 2 Chinese.

Latitude: 39° 6' North; Longitude: 84° 29' (west from Greenwich).

FINANCIAL CONDITION:

Total Valuation: $6,588,653; per capita: $322 00. Net Indebtedness: $966,618; per capita: $47 31. Tax per $100: $2 36.

HISTORICAL SKETCH.

Newport was settled in 1791, but the spot had been visited before that time by various persons. In 1771 Simon Kenton came to the mouth of the Licking river, and he is thought to be the first white man who ever came to the spot, which had long been a favorite station for the Indians when on the war-path. It was the scene of a bloody encounter with the whites in 1779, in which nearly all the latter were killed. In the year 1780 it was visited by Hubbard Taylor, who located lands here for his father, Colonel James Taylor, of Virginia, who thus became proprietor of the land on which the city of Newport now stands. He again visited the place in 1791, accompanying thus far the Kentucky troops, who were on their way to join General St. Clair's expedition, and laid out a regular village, to which he gave the name of Newport, in honor of Captain Lord Newport, one of those who came in the first ship to old Jamestown.

In 1792, when Kentucky was made a state, Newport was only a little cluster of rude cabins. It was incorporated as a town in 1795, and in the next year was made the county-seat of Campbell county in the place of Wilmington,

an honor it now shares with Alexandria, the courts being held alternately in the two places. Only three years after the incorporation of the town its citizens manifested their interest in the cause of education by procuring from the general assembly of Kentucky the incorporation of the Newport academy, and a year later a school-board was organized. In the year 1803 the United States purchased lands from General James Taylor, and in the next year completed the Newport barracks, which has since been a regular station of the United States army, with the exception of a short period in 1875–'76, when the troops were removed and stationed at Columbus, Ohio. It was an important post during the wars with the Indians, and the war of 1812 with Great Britain.

In 1830 Newport was made a city, and in the few following years received many additions to its population. It owes its prosperity and importance to its proximity to Cincinnati, which is situated just across the Ohio river. Newport is connected with Cincinnati by an iron railroad bridge, with foot- and carriage-ways, completed in 1872. A wire suspension bridge across the Licking connects the city with Covington. This bridge was built in 1854, but had hardly been opened to travel before it fell; it was rebuilt at once. The first railroad meeting was held in 1836, but the plan then projected of a railroad from Newport to Lexington, to form part of the Charleston and Cincinnati railroad, was not carried out. The Cincinnati Southern railroad of to-day very nearly realizes this plan of 1836.

Newport is now the third city of Kentucky in size. Its beautiful situation and its nearness to Cincinnati render it a favorite place of residence for business men. Its manufacturing interests are quite important, the iron and steel industries taking the lead.

NEWPORT IN 1880.

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

LOCATION.

Newport is situated in latitude 39° 6′ north, longitude 84° 29′ west from Greenwich, on the east bank of the Licking river at its junction with the Ohio. It is separated by the former river from the city of Covington, and by the latter from Cincinnati, of which it practically is a suburb. Both rivers are navigable at this point, and an account of the draught of water, harbor capacity, and river current may be found under "Cincinnati, Ohio".

RAILROAD COMMUNICATIONS.

The Louisville, Cincinnati, and Lexington railroad connects Newport with Louisville and Lexington. This is the only railroad passing through the city, but is not the only means of railroad communication, as the vast system centering in Cincinnati is easily reached from Newport.

TRIBUTARY COUNTRY; TOPOGRAPHY; CLIMATE.

See, for these subjects, "Covington, Kentucky."

STREETS.

The total length of the city streets could not be obtained. Sixteen and four-tenths miles are paved with limestone set on edge, and $3\frac{3}{10}$ miles with broken stone; the other streets are unpaved. The limestone paving costs about 65 cents per square yard, but is now no longer used, as it is regarded as a very unsatisfactory pavement. The broken stone costs about 45 cents per square yard. The total cost of the streets, exclusive of the cost of cleaning, was $12,577 33 in 1880. Construction is done by contract, repairing by day labor. The sidewalks, when paved, are made of bricks or limestone; and an inspection made during the present year disclosed the fact that a large number were in very bad condition. On all the old streets the gutters were made of limestone set on edge; but along the recently improved streets they are of Indiana limestone flags, 12 inches wide and 3 or 4 feet long. Trees are planted at the edge of the sidewalks next the curbstones along most of the streets. A $5\frac{1}{2}$-ton roller is used on the streets and gives excellent results. It requires from 6 to 8 horses to haul it.

The Newport Street Railway Company has 24 cars and 100 horses. It carries passengers across the Licking to Covington, and thence via the suspension bridge over the Ohio to Cincinnati. The fares are 5 and 10 cents, according to distance. There are no omnibus lines.

WATER-WORKS.

The total cost of the public water-works was about $700,000. They are owned by the city. Water is pumped to a reservoir, and from this distributes itself through the city, yielding a pressure, varying with the locality, from 56 to 76 pounds to the square inch.

The average amount pumped daily is 475,000 gallons, and the average cost of raising one million gallons one foot high is $9\frac{7}{10}$ cents. The yearly cost of maintenance, aside from pumping, in 1880 was about $8,000. The income from water-rates was $16,063 11, and the total expenditure was $14,514 77. There are 16 water-meters in use.

GAS.

The city is supplied with gas by the Covington Gas Light Company, which charges $2 50 per 1,000 feet to private persons and $1 50 to the city. There are 227 gas street-lamps used.

PUBLIC BUILDINGS.

The buildings owned by the city, and used for municipal purposes only, are a court-house, a clerk's office, and a jail, together valued at $20,000. No other buildings are reported by the mayor.

PUBLIC PARKS AND PLEASURE-GROUNDS.

There are no public parks in the city.

PLACES OF AMUSEMENT.

There is no theater, and but one concert-hall, in the city. This hall has a seating capacity of 400. The city ordinances require a payment of an annual license of $50 by all halls that are let for the purpose of holding therein concerts, panoramas, theatrical or other shows; and each concert, circus, theatrical or other exhibition, and each menagerie, held in other places than a licensed hall, must pay a license of $5 for concerts and theatrical exhibitions, and $50 for the others, for every day of 24 hours or less.

DRAINAGE.

There is no system of sewerage in the city. All storm-water and most of the liquid household wastes run through the street-gutters into the rivers.

CEMETERIES.

No information on this subject was furnished.

MARKETS.

The city has a public market, a brick building, situated at the corner of Bellevue and Columbia streets. The building is 90 by 20 feet in area, and contains a number of meat-stalls, which rent at from $25 to $40 per annum. The Columbia Street front is taken up by hucksters' stands, and along both this and Bellevue street are wagon-stands for hucksters and farmers. The hucksters pay from $10 to $25 per annum for their stands, the farmers from 50 to 75 cents per month.

The total rental of the market is $1,150. It is open Tuesdays, Thursdays, and Saturdays from 4 to 10 a. m., and on Saturday afternoons from 4 to 9 o'clock. Only a small part of the retail supply of meat, fish, and vegetables is obtained from the market, private stores supplying most of the city. Every person carrying on a business in fresh meats in any other place than the market is compelled to obtain a license, costing $30 per annum, from the city. Hucksters peddling with wagons through the streets pay a license of $10 a year. The income from the licenses to meat-stores in 1880 was $780.

SANITARY AUTHORITY.

The charter of the city of Newport provides that the mayor and council shall have power and authority to appoint one or more health officers, to establish regulations necessary and proper to prevent the introduction of any disease, and to eradicate the same when it shall have made its appearance in said town; but no board of health has ever been appointed. The annual reports mention four "district physicians", but these do not seem to make any reports, nor are their duties defined by any ordinance.

When nuisances are reported to the mayor and council, as they become cognizant of them in any way, the owner or agent of the premises on which the nuisance exists is required to abate or remove it. If this order is disregarded the cost of making the abatement is estimated by the city engineer, and if it does not exceed 25 per cent. of the value of the entire property the removal is made by the city and the expense is charged upon the estate. If the cost of abatement exceeds 25 per cent. of the value, the owner or agent is liable to a fine for every day of delay after the time set in the notification has expired. Small-pox patients are isolated at home; the sidewalk is closed, and a large placard is placed upon the house to warn persons of their danger. Vaccination is not compulsory, nor is it done at public expense. There is no system of registration of births, diseases, and deaths, although the ordinances compel physicians to report all cases of small-pox to the mayor.

MUNICIPAL CLEANSING.

Street-cleaning.—The streets are supposed to be cleaned at the expense of the city by contractors, who receive $3,500 and are required to clean the streets thoroughly. The following, from the report of Mr. B. R. Morton, city engineer, for 1880, shows how the work is done:

Apparently the time has arrived when a change should be made in the present crude and unsatisfactory method of cleaning the streets. At present the only way of disposing of garbage, ashes, and other refuse which is constantly accumulating at every residence and business house is to dump the same in the streets or alleys, where, in the course of time, after being rooted by hogs in search of dainties, and spread by passing wheels, piles are formed, sometimes two or more feet in height, detracting from the appearance of streets

already bad enough, and requiring considerable skill in driving along the winding way to prevent overturning. Twice each year the street-cleaning contractors are supposed to remove these piles and give the streets a thorough scraping and sweeping. The effect, however, even when well done, is not lasting, and within a short time, especially after the fall cleaning, the appearance is as bad as ever. The sweepings when removed are dumped on the river-bank and carried away by the rise of the river, or are deposited on vacant lots.

Removal of garbage and ashes.—No system for the removal of garbage and ashes has been formed. The account just quoted from the city engineer shows the practical methods resorted to in disposing of them.

Dead animals are removed and buried at the expense of the city; 300 dead animals are removed annually.

Liquid household wastes.—All the liquid household wastes run into the street-gutters, which are flushed occasionally.

Human excreta.—All the houses of the city depend upon privy-vaults. The construction of these is not regulated by law; they must be cleansed when the contents reach within 11 inches of the top, and the contents removed by licensed scavengers in water-tight carts. They are ultimately disposed of by being dumped into the Ohio river.

Manufacturing wastes are run into the Ohio and Licking rivers.

POLICE.

The police force of Newport is appointed and governed by a board of three police commissioners, the latter appointed by the city council. The chief executive officer is a chief of police, whose salary is $800 a year, and whose duty is the general supervision of his department. In addition to his salary he receives fees which amount to about $400 annually. The rest of the force consists of a lieutenant and 9 patrolmen, each of whom receives $2 per day. The uniform is of blue cloth with brass buttons, and a black felt hat with cord and metal wreath; each man supplies his own. The men are armed with a club and a revolver; they are on duty 12 hours and patrol 18 miles of streets. During 1880 the police made 486 arrests, (*a*) the principal causes being drunkenness and breaches of the peace.

Property valued at $4,000 was lost or stolen during the year and reported to the police; of this, $700 was recovered and returned to the owners. One hundred and ninety-three station-house lodgers were accommodated during 1880, as against 311 in 1879. No free meals are given to these.

Special police are appointed by the mayor for cases of emergency, and are treated as regular members of the force while on duty. The total cost of the department in 1880 was $8,236 50.

MANUFACTURES.

The following is a summary of the statistics of the manufactures of Newport for 1880, being taken from tables prepared for the Tenth Census by John H. Bodley, 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	94	$1,700,715	1,608	35	105	$711,019	$2,526,036	$3,996,995
Boots and shoes, including custom work and repairing	8	20,300	29	8	6	15,330	19,800	43,875
Bread and other bakery products	14	17,500	19	.....	4	7,611	8,925	19,600
Carpentering	11	45,300	46	.....	4	16,335	47,236	103,836
Carriages and wagons (see also Wheelwrighting)	3	31,000	25	.....	.....	11,120	18,500	45,000
Foundery and machine-shop products	3	117,500	280	.....	3	89,011	309,707	471,349
Iron and steel	3	640,000	760	.....	.....	305,500	1,359,900	2,033,950
Marble and stone work	3	5,500	16	.....	.....	7,500	5,000	17,000
Tinware, copperware, and sheet-iron ware	4	5,500	12	.....	1	3,700	8,500	9,400
Tobacco, cigars and cigarettes	23	16,800	51	.....	13	17,600	22,360	49,000
Wheelwrighting (see also Carriages and wagons)	4	2,300	11	.....	.....	3,503	2,200	7,550
All other industries (*a*)	18	799,015	359	27	74	233,809	729,718	1,196,435

a Embracing agricultural implements; awnings and tents; boxes, cigar; brick and tile; clothing, men's; confectionery; flouring- and grist-mill products; gold and silver leaf and foil; liquors, malt; lumber, planed; lumber, sawed; mineral and soda waters; printing and publishing; saddlery and harness; watch cases; and wheelbarrows.

From the foregoing table it appears that the average capital of all establishments is $18,092 71; that the average wages of all hands employed is $406 76 per annum; that the average outlay in wages, in materials, and in interest (at 6 per cent.) on capital employed is $35,531 89.

a This does not include arrests made by constables on warrants.