

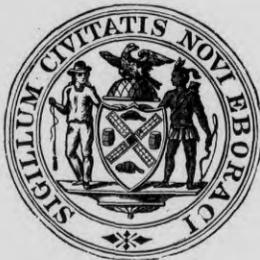
THE CITY RECORD.

OFFICIAL JOURNAL.

VOL. XVI.

NEW YORK, TUESDAY, MARCH 20, 1888.

NUMBER 4,513.



DEPARTMENT OF PUBLIC WORKS.

Report for the Quarter and Year ending December 31, 1887.

DEPARTMENT OF PUBLIC WORKS—COMMISSIONER'S OFFICE,
NO. 31 CHAMBERS STREET,
NEW YORK, January 13, 1888.

Hon. ABRAM S. HEWITT, Mayor:

SIR—In accordance with section 49 of the New York City Consolidation Act of 1882, I have the honor to submit herewith my report of the transactions of the Department of Public Works for the quarter ending December 31, 1887, with review of the operations of the Department for the past year and reports of the heads of bureaux, and other documents containing detailed information.

SUMMARY OF EXPENDITURES FOR THE QUARTER. (Being amount of requisitions drawn on the Comptroller.)

On account of appropriations raised by taxation	\$919,961 28
On account of Local Improvements	658,021 84
On account of Funded Debt, for improvement and extension of water supply	381,902 92
On account of Revenue Bonds in anticipation of collection of charges for water-meters	3,504 89
On account of Special Fund, for restoring pavements over street openings	11,641 74
On account of Gansevoort Market Building Fund	134,905 50
Total	\$2,109,938 17

SUMMARY STATEMENT OF CONTRACTS.

Contracts Entered Into during the Quarter.

15 sewer contracts, estimated cost	\$70,263 55
5 regulating and grading contracts, estimated cost	13,870 06
11 paving contracts, estimated cost	136,997 85
2 gas contracts, estimated cost	34,000 00
35 contracts, under \$1,000 each, estimated cost	15,005 45
3 miscellaneous contracts, estimated cost	7,101 00
71 contracts, total estimated cost	\$276,937 91

Contracts Completed during the Quarter.

20 sewer contracts, cost	\$115,910 94
21 regulating and grading contracts, cost	138,768 33
32 paving contracts, cost	1,069,834 32
3 contracts for relaying pavements, cost	14,506 58
2 water-pipe contracts, cost	12,157 83
2 gas contracts, cost	33,227 95
40 contracts, under \$1,000 each, cost	18,471 74
10 miscellaneous contracts, cost	59,955 48
130 contracts, total cost	\$1,462,893 17

BUREAU OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

The natural flow of the Croton river has been sufficient, during the past three months, to keep the Aqueduct supplied to its full capacity without any draughts on the storage reservoirs or lakes.

The following is a statement of the rain-fall at the several places where rain-gauges are kept by the Department:

LOCATIONS.	OCTOBER. INCHES.	NOVEMBER. INCHES.	DECEMBER. INCHES.	TOTAL. INCHES.
Boyd's Corners Reservoir	3.12	2.69	6.71	12.52
South East Reservoir	3.79	2.61	5.09	11.49
Kensico Reservoir	3.81	2.21	5.21	11.23
Croton Dam	3.77	2.17	4.99	10.93
Central Park Reservoir	3.28	2.51	4.09	9.88

For some time past there has been a leak in the Aqueduct on the Third Division where it passes through the Aspinwall property. This is the only leak of any consequence now existing on the aqueduct structure. The necessary measures are being devised to secure the stoppage of this leak.

During the quarter, 2,409 lineal feet of 12-inch pipe and 16,804 lineal feet of 6-inch pipe were laid to extend and improve the distribution of water, and in connection with this work, 27 additional stop-cocks and 44 fire-hydrants were placed. The city has been exceptionally fortunate during the past year, in the abundance and equality of distribution of the rain-fall, which enabled the Department to maintain the supply and distribution of water in such manner that, while the natural and legitimate consumption of water is increased in proportion to the large increase of the population and business of the city, there have been fewer complaints from consumers than in preceding years in respect to deficiency of supply and pressure of water.

BUREAU OF WATER PURVEYOR.

During the quarter, 116,830 square yards of pavement were laid on new streets in the upper part of the city, as follows:

Tenth avenue, between Seventy-fourth and One Hundred and Tenth streets.
Manhattan avenue, between One Hundred and Fifth and One Hundred and Sixth streets.
Madison avenue, between Eighty-sixth and Ninety-fourth streets.
Eighty-fifth street, between Eighth and Ninth avenues.
Eightieth street, between Ninth and Tenth avenues.
One Hundred and Thirty-fifth street, between Seventh and Eighth avenues.
One Hundred and Fourth street, between Ninth avenue and the Boulevard.
Seventy-fourth street, between Ninth and Tenth avenues.
Eighty-eighth street, between Ninth and Tenth avenues.
One Hundred and Thirty-seventh street, between Eighth and St. Nicholas avenues.
Eighty-first street, between Avenues A and B.
Ninety-ninth street, between Ninth and Tenth avenues.
Ninety-ninth street, between the Boulevard and Tenth avenue.
One Hundred and Thirty-fourth street, between Seventh and Eighth avenues.
One Hundred and Thirty-sixth street, between Eighth and St. Nicholas avenues.
Ninety-fourth street, between Ninth and Tenth avenues.
One Hundred and Thirty-second street, between Sixth and Seventh avenues.
Eighty-eighth street, between Ninth and Tenth avenues.
One Hundred and Fifteenth street, between Seventh and Eighth avenues.
Coenties Slip and South street, between Piers 6 and 8, East river.
In addition to this, Seventieth street, from Eleventh avenue to the Hudson River Railroad, and Seventy-fourth street, from Eleventh avenue to the Boulevard, were paved by the property-owners, under permit from this Department.

The repavement of the following streets has been completed:

Wooster street, between Canal and Bleecker streets.
One Hundred and Tenth street, between First and Fifth avenues.
Cherry street, between Catharine and Jefferson streets.
Hamilton street, between Market and Catharine streets.
Fifteenth street, from 225 feet east of First avenue to the East river.
Seventy-second street, between Fourth and Fifth avenues.
Gay street, from Waverley place to Christopher street.
Pitt street, between Stanton and Houston streets.
Tenth street, between Greenwich avenue and West street.
Sixteenth street, between Sixth and Tenth avenues.
Fifteenth street, between Ninth and Tenth avenues.
Twentieth street, between Sixth and Seventh avenues.
Twenty-sixth street, between Third and Lexington avenues.
Thirty-sixth street, between First avenue and East river.
Forty-first street, between Second avenue and Prospect place.
Washington street, between Bank and Clarkson streets.
Bedford street, between Houston and Christopher streets.
Hester street, between the Bowery and Clinton street.
These pavements cover an area of 83,916 square yards.

The repair gangs were employed upon the streets up to November 15, when the force was reduced to 57 men, with 5 carts. 60,252 square yards of pavement were relaid by this repair force. 47,631 square yards of pavement were relaid under contract made at public letting, and 13,066 square yards of pavement were relaid by private corporations and individuals upon orders from this Department.

The relaying and repairs of streets by contract will be largely increased in quantity in the next season, and the street repair gangs will be confined to work which could not be advantageously let out by contract.

OFFICE OF THE ENGINEER IN CHARGE OF SEWERS.

During the quarter 13,044 lineal feet of sewers, 363 lineal feet of culverts, and 10 receiving-basins were built.

23 contracts for new sewers and 2 contracts for receiving-basins have been completed. The following are the principal items of work done in repairing and cleaning sewers:

304 lineal feet of sewers rebuilt.
617 lineal feet of sewers repaired.
62 lineal feet of culverts rebuilt.
22 lineal feet of new culvert built.
113 lineal feet of spur-pipe laid.
10 new receiving-basins built.
94 receiving-basins repaired.
2 manholes rebuilt.
476 manholes repaired.
73 new basin-heads furnished and placed.
13 basin-heads reset.
20 new manhole-heads furnished and placed.
34 new manhole-covers furnished and placed.
290 lineal feet new curb-stone set.
1,546 square feet flagging relaid.
531 square yards pavement relaid.
1,544 cubic yards earth excavated and refilled.
692 receiving-basins and culverts cleaned.
23,338 lineal feet of sewers cleaned.
2,548 cart-loads sewer deposits removed.

BUREAU OF STREET IMPROVEMENTS.

During the quarter, 18 contracts for regulating and grading streets, 11 contracts for flagging sidewalks and 27 contracts for fencing vacant lots were completed.

The aggregate quantities of work done under the several contracts are as follows:

43,478 cubic yards earth excavated.
33,301 cubic yards rock excavated.
94,658 cubic yards filling placed in embankments.
28,438 lineal feet curb-stone set.
127,634 square feet flagging laid.
19,538 lineal feet picket-fence built.
3,788 cubic yards masonry built.
350 lineal feet drain-pipe laid.
920 shade trees planted.
1,264 square yards pavement laid.
1,076 square feet bridge-stone laid.

In the maintenance and repairs of sidewalks in front of City property, 659 lineal feet of curb-stone were reset, 249 square feet flagging laid and 8,533 square feet flagging relaid.

BUREAU OF STREETS AND ROADS.

The care of the macadam roadways and the unpaved streets and country roads in the upper part of the city, which are under the charge of this Bureau, have received due attention. The following are the principal items of work done on the macadam roadways during the quarter:

- 259,872 square yards of roadways and gutters cleaned.
- 26,419 square yards macadam roadway repaired.
- 67,878 square yards macadam roadway resurfaced.
- 576 shade trees trimmed.

In this work the following materials were used:

- 1,359 truck-loads of broken stone.
- 91 truck-loads of sand.
- 269 truck-loads of trap-rock screenings.
- 958 truck-loads of gravel.

In the sprinkling of the roadways 5,834,000 gallons of water were used.

Special repairs were made on 35 unpaved streets, in addition to the ordinary repairs and maintenance. In this work the following materials were used:

- 3,984 truck-loads of earth and stone.
- 298 truck-loads of broken stone and screenings.

BUREAU OF LAMPS AND GAS.

During the quarter 312 new gas-lamps and 151 new electric-lights were placed; 164 old gas-lamps were lighted, and 571 gas-lamps and 19 electric-lights were discontinued.

At the close of the quarter there were 24,719 gas-lamps, 831 electric-lights and 120 naphtha-lamps in use on the streets, parks, docks and bridges of the city.

On December 23, the proposals were received for supplying gas for the various public buildings and offices under the care of this Department. The contracts were awarded to the Consolidated Gas Company and the Equitable Gas-light Company, at the price of \$1.25 per 1,000 cubic feet of gas furnished.

BUREAU OF REPAIRS AND SUPPLIES.

The ordinary care and repairs of public buildings and offices have received prompt attention. The following are special items of repairs made during the quarter:

New Court-house.

Repairing the boilers and heating apparatus; repairing the gearing apparatus of the passenger elevator; repairing the roof and the marble tiling on the upper floor.

Brown-stone Building.

Cuttings have been made in the east wall to give proper ventilation and light to the boiler-room. The old wooden floor in the basement has been replaced by a concrete floor. A stairway has been constructed to connect the District Attorney's Office with the Library on the lower floor. The necessary furniture has been placed in the rooms now occupied by the Court of General Sessions, and recently vacated by the Receiver of Taxes.

City Hall.

The old wooden figure of Justice, on the dome of the building, having become insecure, has been replaced by a figure of electro-plated copper, and the structure of the dome has been thoroughly repaired and strengthened. The north front of the building, which is of brown stone, has been thoroughly renovated. A doorway has been cut for one of the rooms in the basement.

Civil and Police Courts.

Special repairs have been made on the roof, gutters and leaders of the Seventh District Court-house; additional heating apparatus has been placed, and a contract has been made for a new boiler, the old one being of insufficient capacity to heat the building.

Extensive alterations and improvements have been begun in the court-rooms located in the Tombs building.

Markets.

The roofs of the sheds surrounding Washington Market have been thoroughly repaired. The old gravel roof on Clinton Market has been replaced by a tin roof and the chimneys rebuilt.

The construction of the new Gasevoort Market buildings, which was begun in May last, is progressing satisfactorily.

Armories.

In the Seventh Regiment Armory improvements have been made in the rifle-range, in accordance with the views and to the satisfaction of the commandant. Two new portable boilers, with fittings and heating apparatus, have been placed in the Ninth Regiment Armory. In the Sixty-ninth Regiment Armory a new room has been partitioned off for the use of the Quartermaster, and the sewerage system has been improved.

A new dog-pound has been built, by contract, at the foot of One Hundred and Second street, East river.

A new building has been erected in the pipe-yard of the Department, foot of East Twenty-fourth street, to afford proper accommodation for the work and apparatus of testing water-meters and other mechanical work.

BUREAU OF INCUMBRANCES.

The work of the Bureau for the quarter is summarized as follows:

- 1,194 complaints of obstructions received and attended to.
- 278 seizures and removals of obstructions made.
- 1,459 permits issued to place building material on streets.
- 22 permits issued to cut down shade trees.
- 156 miscellaneous permits issued.
- 170 notices issued to repair defective sidewalks.
- 5 notices issued to repair defective vault-covers.
- 115 cart-loads of dirt, stone and other refuse material removed.
- 49 dead and dangerous shade trees removed.

The sum of \$355.14 was received for the redemption of articles seized and removed to the Corporation Yard, and the public auction sale of unredeemed articles realized \$292.68.

BUREAU OF WATER REGISTER.

The following is the amount of revenue from the water service collected and paid into the City Treasury during the quarter:

For water rents	\$351,001 85
For penalties on water rents	10,499 95
For permits to tap water-pipes	3,914 00
Total	\$365,415 80

MISCELLANEOUS REVENUE.

The following amounts were collected from various sources and paid into the City Treasury during the quarter:

For sewer permits	\$6,963 19
For vault permits	24,129 59
For redemption of articles seized as obstructions	349 14
For sales at auction	292 68
For use of sprinklers and road-rollers	274 00
Total	\$32,008 60

REVIEW OF THE OPERATIONS OF THE DEPARTMENT FOR THE YEAR 1887.

SUMMARY OF EXPENDITURES.

On Appropriation Account for 1887	\$2,411,851 81
On Fund for Local Improvements	1,592,233 72
On Croton Water Fund	514,584 37
On Revenue Bonds, for water-meters	15,301 35
On Special Fund for Restoring Pavements over Street Openings	32,729 73
On Gansevoort Market Building Fund	210,669 50
Estimated liabilities, including all outstanding accounts against appropriations for 1887	322,450 00
Total	\$5,099,820 18

SUMMARY STATEMENT OF CONTRACTS FOR THE YEAR 1887.

Contracts Entered Into.

58 sewer contracts, estimated cost	\$337,398 12
41 regulating and grading contracts, estimated cost	428,522 74
73 paving contracts, estimated cost	809,726 78
5 contracts for water-pipes, estimated cost	44,882 00
9 contracts for repairs of pavements, estimated cost	48,606 33
110 contracts, under \$1,000 each, estimated cost	47,915 93
24 miscellaneous contracts, estimated cost	752,199 99
320 contracts, estimated cost	\$2,469,250 99

Contracts Completed.

54 sewer contracts, cost	\$292,519 32
54 regulating and grading contracts, cost	352,352 45
73 paving contracts, cost	1,397,068 36
6 water-pipe contracts, cost	56,376 93
6 contracts for repairs of pavements, cost	28,415 60
107 contracts under \$1,000 each, cost	45,197 09
20 miscellaneous contracts, cost	156,449 80
320 contracts, actual cost	\$2,328,379 55

THE WATER SUPPLY.

The Croton Water-shed.

The rain-fall has been so abundant and so evenly distributed throughout the year that there were only thirty-five days when a surplus of water did not run over the dam, and only six days, in June, when water had to be drawn from the storage reservoir. The total quantity of water drawn from the storage reservoirs during the year is 160,000,000.

The rain-fall at Boyd's Corners Reservoir was 61.63 inches; at South East Reservoir, 56.93 inches; and at Croton Dam, 56.54 inches.

The two storage reservoirs and the lakes and ponds tributary to the City's water supply are at high water-mark.

Bronx River Supply.

The area of the Bronx river water-shed above the Kensico Reservoir, where the water is diverted from the river for the City's supply, is 13½ square miles. During the past year the City has received from this source 5,228,000,000 gallons of water, which is an average of 14,320,000 gallons per day, and an average of 1,074,000 gallons per day for each square mile of water-shed. At this rate, the Croton water-shed is capable of supplying 587,000,000 gallons per day, as its area is 361 square miles. The City is thus assured of an abundant supply of water from these two sources and from the Byram river into the distant future, when it provides sufficient storage and conduit capacity to collect the water and convey it to the city.

Progress on the construction of the Williamsbridge Receiving Reservoir has been very slow, and the work is now suspended for the winter. The Department will use all necessary and legal means to compel the contractors to make more rapid progress with this work. The speedy completion of the reservoir is urgently desired, because it is needed as a settling-basin for the water received through the Bronx river conduit, and to obviate the numerous complaints of impurities in the water now distributed directly from the Bronx river conduit.

The Croton Aqueduct.

With the exception of the leak in the Aqueduct on the Third Division, where it passes through the Aspinwall property, the structure has been in perfect operation during the year, delivering, according to the estimate of the Chief Engineer of the Croton Aqueduct, 96,000,000 gallons of water per day, which, he states, is about 3,000,000 gallons per day more than the Aqueduct delivered up to 1877. Without the work which has been done since 1877 in strengthening the structure, it could not have been put under the increased pressure of carrying this additional quantity of water. This work has been continued during the past year to the full extent which the appropriation would admit. The extra work done on the Aqueduct and Croton Lake, in addition to the ordinary care and maintenance, is as follows:

Clearing the shores of Croton Lake of brushwood and vegetation; strengthening the apron of the Croton Dam; building additional retaining-walls on the Second, Third and Sixth Divisions, and reinforcing the top arch and embankments on the Sixth Division; completing the stone stairway at the northerly end of High Bridge, leading from the Harlem river to the top of the hill.

Considerable more work requires to be done on the Sixth Division to strengthen the Aqueduct so as to render it safe.

The aggregate quantities of work done in the care, repairs and strengthening of the Aqueduct are:

- 6,298 cubic yards earth excavated.
- 5,550 cubic yards stone quarried.
- 5,730 cubic yards dry stone-wall built.
- 8,998 cubic yards masonry built.
- 27,172 lineal feet fence built.
- 35,043 lineal feet fence repaired.
- 1,889 lineal feet top-arch reinforced.
- 1,025 square yards of embankment sodded.
- 19,829 lineal feet of telephone cable laid.

Distribution of Water.

In extending and improving the distribution of water, 24,873 lineal feet of 12-inch pipe and 56,571 lineal feet of 6-inch pipe were laid, with 118 stop-cocks and 151 fire-hydrants.

The distributing system now comprises 619.88 miles of pipes, with 6,402 stop-cocks and 7,984 fire-hydrants.

A force of workmen has been employed during the year in laying new water-mains along the water-front, in place of mains which have become worn out by corrosion from contact with salt water. This has been done in portions of South, West, Morris, Rector, Carlisle, Albany, Wall and Front streets, and in Coenties Slip. As a special appropriation of \$50,000 has been made in the Final Estimate for 1888 for this purpose, the replacing of worn-out mains will be carried on much more extensively during the present year.

Waste of Water.

While a daily supply of 110,000,000 gallons of water has been received and distributed in the city, the increase in the consumption of water has been such as to decrease the pressure in the delivery of water throughout the city about four feet. The supply cannot be increased until the New Aqueduct is completed and in operation; and, in the meantime, the Department must provide for the needs of additional population and business, by suppressing or diminishing waste of water. The most effective means to accomplish this is the extension of the water-meter system. During the year 1,970 additional meters were placed, making 16,552 meters in use at the close of the year.

The average quantity of water per day supplied through meters was as follows:

	Gallons.
Hotels (358 meters).....	1,697,000
Breweries, etc. (350 meters).....	1,681,000
Charitable institutions (108 meters).....	412,000
Office buildings (1,952 meters).....	1,840,000
Factories (1,010 meters).....	2,420,000
Gas-works (44 meters).....	917,700
Railroads (216 meters).....	1,669,700
Stables (1,749 meters).....	1,146,000
Apartment-houses (165 meters).....	331,000
Docks (172 meters).....	1,682,500
Riverdale District (80 meters).....	80,300
Miscellaneous (9,878 meters).....	10,894,000
Total.....	24,771,200

The application of water-meters to buildings used in whole, or in part, for business purposes will be continued according to law.

STREET PAVEMENTS.

New Pavements to be Paid for by Assessments.

The extent of this work for the past year exceeds that of any preceding year. 53 contracts for new pavements were made, and, at the beginning of the year, there were 24 contracts in existence on which no work had yet been done, making a total of 77 contracts to be carried out during last year. Of these 64 have been completed, and 13 remain over to be performed early next season. The total length of new streets paved is 11.67 miles, and the area of pavement, 281,294 square yards, as against 22,486 square yards laid in 1886.

Under these circumstances it is not a matter of surprise that one-sixth of the work contracted for stands over to be performed next season. The demand for pavement material and for skilled pavers was so great that the contractors had much difficulty in obtaining them.

Repaving Streets.

The number of streets on which new stone-block pavements were laid in place of old and defective pavements is 28, having an aggregate length of 7.43 miles, and the area of pavements laid is 128,051 square yards. This is exclusive of Fifth avenue.

The contract for repaving Fifth avenue, from Ninth to Ninetieth street, was completed November 3, last. The portion of the avenue paved is over one and one-half miles in length, and the area of pavement is 50,810 square yards, laid in 1887. The total length of the avenue repaved under the contract is 3.81 miles.

Repairs of Pavements.

Prior to 1886, all the repairs on pavements were made by men employed by the Department, with a few exceptions, in which contracts were made for relaying pavements. In 1886, the pavements in seven streets were relaid, from curb to curb, by contract, and the result of this work, both in respect to quality and economy, induced me to apply this method of repairing pavements to a much larger extent last year. In accordance with this view 123,109 square yards of pavement were taken up and relaid, from curb to curb, under contract, on 51 different streets, or parts of streets, enumerated in the report of the Water Purveyor, hereto annexed.

The work done by the pavement repair gangs is summarized as follows:

- 225,559 square yards of pavement relaid.
- 1,110 crosswalks relaid.
- 23 new crosswalks laid.

The total area of pavements relaid in making repairs is 348,668 square yards—about 5 per cent. of the entire area of pavements in the city.

Street Openings.

The enormous extent to which the streets of the city have been torn up for placing private and public structures and conveniences on and under the streets is shown by the following summary:

- 99 miles of gas-mains laid.
- 25.58 miles of trench opened for electrical subways.
- 4,791 lineal feet of steam-pipes laid.
- 3,790 lineal feet of salt-water pipes laid.
- 10,500 lineal feet of double rail-tracks laid.
- 17,973 excavations made for house connections with sewers, water-mains, gas-mains, steam-pipes, electrical subways, etc.

To these are to be added the 15.42 miles of water-pipes laid and 7.12 miles of sewer built, and miles of excavations made for repairs of water-pipes and sewers.

The tearing-up of the streets to this extent could not be done without causing great annoyance and discomfort to the public and to individuals, and frequent interference with public travel. As a result complaints have been numerous and grievous.

The interference with public travel and convenience has been most serious in the lower part of the city, where the New York Steam Company made numerous excavations in crowded thoroughfares to repair its steam-pipes and make house connections, and on a large portion of the work done by the Standard Gas-light Company, which laid over 67 miles of gas-mains last year. The Department has endeavored to exercise its authority to the fullest extent to see that these works be carried on with the least possible obstruction to public travel and convenience, but the authority is, in some cases, or in fact in all cases, too limited. As an instance, I would state that when I refused to grant a permit to the New York Steam Company to open the new pavement on Fifth avenue, on the ground that it was an interference with the contractor's work while the contract was not yet completed, or accepted by the Department as completed, the Court, on the application of the company, ordered me to issue the permit.

It is a difficult matter, and one requiring much labor and care, to properly restore a pavement over an excavation so that it shall be firm and be on an even surface with the adjoining pavement. It is also difficult to make extensive constructions in the public streets without considerable obstruction to public travel and inconvenience to the public.

In order to control as far as practicable the operations of private corporations and individuals in opening the public streets, a force of inspectors under the charge of a competent and reliable engineer has been organized to have general supervision of the work; and, in the case of work done by corporations, an inspector is placed in each locality where work is carried on, whose services are paid for by the private corporation.

In my opinion it is impossible to maintain the streets in good order where rail-tracks are laid—or even in tolerable order where gas, steam and water mains and electric subways are allowed to underlie the carriageways.

The remedies in these cases, although difficult and costly, are manifest.

SEWERAGE AND DRAINAGE.

The total length of new sewers built during the year is 7.12 miles, with 1,102 lineal feet of culverts and 43 receiving-basins. The sewerage system in the Twenty-third and Twenty-fourth

Wards is under the charge of the Department of Public Parks. There are now 421.51 miles of sewers on Manhattan Island under the charge of this Department. The two most important improvements in the sewerage of the lower part of the city which have been completed during the year, are the outlet sewer at the foot of Roosevelt street, which discharges the sewage and drainage from an area of 85½ acres, and the outlet at the foot of Rector street, North river, which drains an area of 43 acres. These outlets have been extended to the ends of the piers, where the sewage is discharged into and carried off by the tidal currents, instead of being discharged into the still water in the slips, where it stagnated, polluted the water and the atmosphere, and settled at the bottom, lessening the depth of water in the slips so as to make frequent dredging necessary. Other important improvements in the sewerage system are: The sewers in Eleventh avenue, Fourteenth and Fifteenth streets, which connect with the outlet sewer at Seventeenth street and North river; the sewer in Eighth avenue, between One Hundred and Fifth and One Hundred and Tenth streets, and the outlet sewer in Eighth avenue, from One Hundred and Fifty-third street to the Harlem river. The greater portion of the new sewerage has been built in the section of the city north of Fifty-ninth street and west of Eighth avenue, in compliance with applications of property-owners. Very little has yet been done for the sewerage of the section of the city lying north of One Hundred and Fifty-fifth street. An outlet is needed in this section through One Hundred and Sixty-seventh street and High Bridge Park to the Harlem river. The Counsel to the Corporation has advised the Department that legislative action is necessary to authorize the City to build a sewer across High Bridge Park; a bill for that object, introduced in the last Legislature, failed to pass. It should be again introduced and urged to its final passage, as the sewer outlet is very much needed for a large area of property which is being rapidly improved.

A large proportion of the sewerage built last year is of earthenware pipe, and the Engineer in Charge of Sewers, in his report hereto annexed, expresses the view that, with proper construction, these pipe sewers are more effective for sewerage than brick sewers, while the cost of construction is considerably less.

The sewerage system is in fairly successful operation. The principal obstacles to its greater perfection exist along the river-fronts, where the land has been extended beyond the original shoreline by filling, and the grades are so flat that the discharge through the outlets is sluggish. A thorough examination of the entire system is being made by an engineer of acknowledged ability and experience for the purpose of ascertaining the defects in the sewerage and the means of remedying them.

One of the methods adopted by the Department for the improvement of old sewers is to relay the bottoms with tile; 4,158 lineal feet of sewers have been so treated during the year and the work will be continued during the present year as far as the appropriation will admit. It is also proposed to rebuild with brick the old and defective sewers in thirteen different streets, principally in the lower part of the city. The work of cleaning and repairing sewers has been effectively performed; 80,669 lineal feet of brick sewers and 47,066 lineal feet of pipe sewers were cleaned. A large part of the cleaning of brick sewer was done by contract, at an average cost of 23 cents per lineal foot of sewer. The average cost of cleaning pipe sewers was 4 cents per lineal foot, showing the advantage in respect to cost of maintenance of pipe sewers over brick sewers. The average cost of cleaning all classes of sewers and receiving-basins, by contract and by day's labor, was \$3 per cubic yard of sewer deposits removed.

REGULATING AND GRADING STREETS.

At the beginning of the year there were 43 contracts in progress for regulating and grading streets and flagging sidewalks. During the year 130 contracts were entered into. Of this whole number of 173 contracts, 138 have been completed, leaving 35 contracts unfinished at the close of the year.

Nearly all the regulating and grading work has been done west of the Western Boulevard and in the suburban section north of One Hundred and Fifty-fifth street. The following are the most important works now in progress:

Regulating and grading Fort Washington Ridge road. This work was begun in January, 1885, and to this date about 125,000 cubic yards of rock have been excavated. The work will probably be completed in July or August next.

Regulating and grading Kingsbridge road, from One Hundred and Ninetieth street to Harlem river. The contract for this work was made July 13, 1887, and satisfactory progress on it has since been made. As the Kingsbridge road is a continuation of Broadway and the Western Boulevard, the completion of this work will make a broad, central and continuous thoroughfare from the Battery to Kingsbridge, 13 miles in length.

Regulating and grading Coogan avenue, from One Hundred and Forty-first to One Hundred and Fifty-fifth street. This work is in progress under two separate contracts. The lower section will be completed early next spring. The upper section requires a very large amount of filling, and will require eight or nine months for its completion.

Other works to be mentioned are:

Regulating, grading, etc., Edgecomb avenue, from One Hundred and Forty-fifth street to St. Nicholas avenue.

Regulating, grading, etc., Hamilton place, from the Boulevard to Tenth avenue.

Regulating, paving, etc., Gansevoort street, as widened.

Retaining-wall in Forty-third street, between First avenue and Prospect place.

Retaining-wall in Forty-ninth street, between First avenue and Prospect place.

The aggregate quantities of work done under all the contracts are:

- 81,568 cubic yards earth excavated.
- 115,307 cubic yards rock excavated.
- 331,963 cubic yards filling placed in embankments.
- 81,583 lineal feet curb-stone set.
- 331,200 square feet flagging laid.
- 50,402 lineal feet picket-fence built.
- 8,464 cubic yards masonry built.
- 1,264 square yards pavement laid.
- 1,465 square feet bridge-stone laid.
- 920 shade trees planted.

MACADAM ROADWAYS.

The length of the macadam roadways under the charge of the Department is 23.10 miles, and the area, 840,070 square yards. The expenditure for the maintenance and repairs of these roadways for 1887 is over \$95,000, which is at the rate of 11.3 cents per square yard. Large as this expenditure is it was not sufficient to repair the damages to the roads caused by the insufficiency and inefficiency of the care given to the roadways in past years, mainly in consequence of inadequate appropriations. With the view of resurfacing all of these roads and placing them in a proper condition I increased my Departmental Estimate for 1888 to \$194,000, which is \$94,000 more than the appropriation for 1887. With this amount the roadways could have been put in such condition that an expenditure of \$50,000 per annum thereafter would be sufficient for their maintenance. In the Final Estimate, however, the appropriation was made the same as last year, \$100,000, and the extent of improvements of the roadways will be proportionately diminished.

Some of the streets which were paved with macadam pavement, from twelve to fourteen years ago, should never have been so paved, because, from their location and surroundings, they were certain to become channels for heavy business traffic, for which the macadam pavement is not adapted. Of these roadways, One Hundred and Tenth street, from First to Fifth avenue, and Seventy-second street, from Fourth to Fifth avenue, were repaved with stone-block pavement last year, and it is my intention to continue such repavements to the extent that the appropriation will admit.

The following is a summary of the work done and materials used in the care and repair of the macadam roadways:

Gravel, sand and broken stone were spread on 447,241 square yards of roadway.

The superstructure of broken stone and gravel was entirely renewed on 11,240 square yards of roadway.

- 57,704 square yards of roadway were resurfaced with gravel.
3,522 square feet of new crosswalks were laid.
165 sewer-basins were cleaned.
1,809 shade trees were trimmed.
2,434 truck-loads of broken stone used.
1,161 truck-loads of gravel used.
13,694 truck-loads of material were removed in cleaning the roadways, gutters, sewer-basins and culverts.

LIGHTING THE CITY.

In the report of the Superintendent of Lamps and Gas are enumerated 99 streets, or parts of streets, of the aggregate length of 13.87 miles, to which public lighting has been extended during the year.

About 99 miles of gas-mains were laid by the several gas companies, of which the Standard Gas-light Company laid over 67 miles, and the Equitable Gas-light Company over 15 miles.

The following resolution was adopted by the Board of Aldermen December 21, 1876, and approved by the Mayor December 23, 1876:

Resolved, That permission be and is hereby given to all incorporated gas-light companies to lay gas-mains and pipes in the streets, avenues and public places of this city, for the purpose of supplying gas to this city and its inhabitants, upon such conditions as may be prescribed and approved by his Honor the Mayor, the Comptroller and the Commissioner of Public Works, who are now by law authorized to make provision for lighting the streets of the city.

The first and only time when the officers named in the resolution had the opportunity to exercise the authority thus conferred was in December, 1882, when the Equitable Gas-light Company applied for permission to lay gas-mains and pipes in the streets. Among other conditions and restrictions imposed in the permit which was issued to the company, designed to protect the interests of the municipal corporation, as well as the interests of the general public, are: That the company supply gas for all public lamps on the lines of its mains at a price not exceeding \$12 per annum for each lamp; that it furnish gas for the public buildings, markets, armories and offices of the Corporation of the City, at a rate not exceeding \$1.50 per 1,000 cubic feet; and that it shall furnish gas to private consumers at a rate not exceeding \$1.75 per 1,000 cubic feet; and that it shall pay into the City Treasury 20 cents per lineal foot for all gas-mains laid.

None of the franchises previously granted to gas companies by acts of the Legislature, or by other authority, contain such restrictions.

By chapter 248 of the Laws of 1886 the Legislature conferred upon the Standard Gas-light Company the franchise of laying gas-mains through and under all the streets, avenues, squares and public places of the city. Among the conditions of the franchise are: That the company shall supply gas to public lamps at the rate not exceeding \$12.50 per annum for each lamp, and that it shall not charge its consumers more than \$1.50 per 1,000 cubic feet for gas.

The contrast in the two cases shows that the municipal authorities exercised greater judgment and care to protect the interests of the City and the general public than has been exercised by the Legislature.

The Superintendent of Lamps and Gas is required to report at an early date what lights, if any, throughout the city may be dispensed with.

STREET OBSTRUCTIONS.

The Courts have repeatedly decided that no authority is vested in any branch of the City Government, legislative or executive, to grant permission for the occupation of any portion of the public streets for private purposes. Under a strict construction of these decisions, everything extending or lying beyond the house-lines, including even such time-honored structures and conveniences as bay-windows, stoops, steps, area railings, cellar-doors, etc., have to be removed.

annum or less—it was the duty of the Department to exercise a careful discrimination so as to apply its means to the removal of the obstructions which were most objectionable and interfered most with public travel. As the appropriation for 1888 has been increased to \$22,000, the scope of the action of the Department is proportionately extended, and it is enabled to enforce the law in many cases which heretofore had to be passed over.

The actual cost of removals of redeemable obstructions for the past year was \$3,716.55, while the receipts for redemption and sales of articles were, as above stated, \$3,034.84, showing that this work is almost self-paying.

CITY REVENUE.

The revenue derived by the City from the water service for 1887 is as follows:

Table with 2 columns: Description of revenue items and Amount Collected. Total revenue collected and paid into the City Treasury is \$2,529,974.42.

The increase in the amount collected and paid into the City Treasury over that of the preceding year is \$171,853.31.

It is estimated that the water furnished to public buildings and institutions would, if furnished to private consumers, produce at the present rates an additional revenue of \$200,000.

According to statistics given in the reports of the Chief Engineer of the Croton Aqueduct, and the report of the Water Register, the total amount expended by the City for the construction of the water system, including storage reservoirs, the Croton Aqueduct, the Bronx river conduit, the City reservoirs, and the distributing system, up to the present date, is \$38,833,000, and the revenue received from the water service to date, is \$51,724,000.

Chapter 696 of the Laws of 1887, passed June 25, 1887, exempts hospitals, orphan asylums and other charitable institutions from the payment of water rates thereafter, and of the charges now standing on the books of the Department.

By chapter 559, Laws of 1887, all extra charges for water are thereafter to be included in the regular water rates and to be returned in arrears if not paid within the fiscal year; and the Commissioner of Public Works is authorized to prescribe a penalty not exceeding \$5 for each offense for waste of water.

The following documents, appended to this report, contain further detailed information of the transactions of the Department:

- Document A—Statement of appropriations and expenditures.
Document B—Detailed statement of expenditures.
Document C—Statement of contracts made and contracts completed.
Document D—Report of Chief Engineer of the Croton Aqueduct.
Document E—Report of the Water Purveyor.
Document F—Report of the Engineer in Charge of Sewers.
Document G—Report of the Superintendent of Street Improvements.
Document H—Report of the Superintendent of Streets.
Document I—Report of the Superintendent of Lamps and Gas.
Document K—Report of the Superintendent of Repairs and Supplies.
Document L—Report of the Superintendent of Incumbances.
Document M—Report of the Water Register.

Very respectfully,

JOHN NEWTON, Commissioner of Public Works.

Document "A."

Showing Titles of Appropriations; Balances of 1886 on October 1, 1887; Requisitions on 1886, in Fourth Quarter of 1887, together with Transfers; Balances of 1886 on December 31, 1887; Appropriations, including Transfers of 1887; Requisitions, First Nine Months of 1887; Requisitions, Fourth Quarter, 1887; Total Requisitions of 1887; Balances on December 31, 1887; and the Titles and Conditions of the Trust and Special Accounts.

Large table with 9 columns: Titles of Appropriations, Balances of 1886 on October 1, 1887, Transfers and Requisitions on 1886, Fourth Quarter, 1887, Balances of 1886 on December 31, 1887, Appropriations, including Transfers of 1887, Requisitions, First Nine Months, 1887, Requisitions, Fourth Quarter, 1887, Total Requisitions for 1887, Balances on December 31, 1887.

MEM—Expenditure on liability, "Public Buildings—Construction and Repairs" of 1883, \$60 25; on liability, "Laying Croton Pipes" of 1885, \$344.85. * Credited by transfer, \$26,900.

TITLES OF TRUST ACCOUNTS.	Balances from 1886, and Receipts, First Nine Months, 1887.	Receipts, Fourth Quarter, 1887.	Total Balances of 1886, and Receipts for 1887.	Requisitions, First Nine Months, 1887.	Requisitions, Fourth Quarter, 1887.	Total Requisitions for 1887.	Balances, December 31, 1887.
Croton Water Fund				\$132,681 45	\$381,902 92	\$514,584 37	
Fund for Local Improvements				934,211 88	658,021 84	1,592,233 72	
Restoring and Repairing—Special Fund—Department of Public Works	\$36,571 18*	\$8,254 00	\$45,025 12	21,087 99	11,541 74	38,759 73	\$12,265 39
Water-meter Fund, No. 2	31,755 34	2,118 68	33,844 02	11,796 10	3,594 89	15,391 05	18,544 97
Gansevoort Market Building Fund				75,764 00	134,905 50	210,669 50	

* Credit, additional balances of 1885, brought forward, \$1,564.48.

Statement of General Bookkeeper, Department of Public Works, showing all Revenues of the City received through the Department of Public Works during the First Nine Months of 1887, during the Fourth Quarter of 1887, and the Total for the Year.

SOURCE OF REVENUE.	FIRST NINE MONTHS, 1887.	FOURTH QUARTER, 1887.	TOTAL FOR 1887.	SOURCE OF REVENUE.	FIRST NINE MONTHS, 1887.	FOURTH QUARTER, 1887.	TOTAL FOR 1887.
Water rents	\$2,141,399 32	\$351,001 85	\$2,492,394 37	Water-meter Fund, No. 1			\$2 50
Water penalties	11,449 60	10,499 95	21,949 55				
Pipe tapping	11,710 50	3,014 00	15,630 50				
Sewer permits	27,328 64	6,053 19	34,288 83				
Vault permits	65,739 86	24,129 59	89,869 45				
Redemption of articles seized as obstructions	1,359 89	349 12	1,919 03				
Sales at auction	1,004 87	292 68	1,997 55				
Use of sprinkling wagons and road roller	116 00	274 00	390 00				
Work done and material furnished citizens	345 87		345 87				
Totals	\$2,460,648 75	\$397,424 40	\$2,658,073 15	Regular Croton water rents		\$125,805 00	
				Water by meter measurement		39,620 18	
				Meters and meter setting		2,220 67	
							\$107,645 25

C. T. McCLENACHAN, General Bookkeeper, D. P. W.

Document "B."

A Detailed Statement of Expenditures for which Requisitions were drawn on the Comptroller by the Commissioner of Public Works, during the Quarter ending December 31, 1887.

APPROPRIATIONS.

Aqueduct—Repairs, Maintenance and Strengthening—	
Asphalt steps at High Bridge	\$505 30
Blacksmithing	544 90
Brick, cement, etc.	3,213 10
Cable and wire	789 65
Coal and wood	3,242 18
Iron railing	735 00
Laying telephone cable	592 00
Lumber	403 13
Paint	83 40
Pay-rolls	46,166 04
Rent of office	106 25
Repairing roof	71 30
Stone	2,640 21
Stores and putting up	78 81
Supplies	1,721 80
Taxes	932 25
Traveling expenses	73 07
Valve springs, etc.	49 75
Total	\$61,945 26
Aqueduct—Repairs, Maintenance and Strengthening, 1886—	
Stone	\$9,060 75
Boring Examinations for Grading and Sewer Contracts—	
Lumber	\$24 00
Pay-rolls	1,152 50
Total	\$1,176 50
Boulevards, Roads and Avenues, Maintenance of—	
Coal	\$46 75
Horse-hire	180 00
Pay-rolls	20,036 47
Repairing rollers	95 57
sprinklers	55 75
Rolling pavement	120 00
Stone and screenings	11,941 71
Supplies	93 05
Telephone service	33 75
Total	\$32,609 05
Bronx River Works—Maintenance and Repairs—	
Paint	\$323 29
Pay-rolls	5,873 00
Taxes	297 34
Tools and supplies	204 60
Total	\$6,698 23
Contingencies—Department of Public Works—	
Horse-hire	\$270 00
Incidental expenses	200 00
Postage	314 00
Traveling expenses	188 25
Total	\$972 25
Repairs to Seventh Regiment Armory Building—	
Gas-fitting, etc.	\$262 07
Repairing rifle range	900 00
sidewalk	620 40
Window guards	7 00
Total	\$1,789 47
Free Floating Baths—	
Carpenter work	\$218 62
Coal and wood	30 75
Expressage	33 70
Horse-hire	100 00
Recovering anchors	160 00
Repairing pumps	13 22
tank	209 60
Supplies	245 59
Towing baths	495 00
Traveling expenses	22 32
Wharfage	154 00
Total	\$1,682 70
Lamps and Gas and Electric Lighting—	
Atlas maps	\$104 00
Brick foundation	50 52
Crossheads	136 00
Drawing materials	12 40

Lamps and Gas and Electric Lighting—

Expert services	\$500 00
Gas examinations	379 50
Granite base	65 00
Glass	26 50
Horse-hire	81 25
Lamps	1,991 25
Lamp brackets	25 00
globes	1,241 25
irons	260 00
Lamp-posts	2,349 36
Lamp tops	550 00
Lettering globes	144 60
Pay-rolls	582 00
Repairing lamp tops	86 25
Photometrical apparatus	289 00
supplies	50 00
Rent of rooms	240 00
Street signs	1,122 59
Lighting Armory, First Battery	41 75
Second Battery	90 00
Seventh Regiment	607 50
Eighth	139 13
Ninth	179 88
Eleventh	91 25
Twelfth	463 50
Twenty-second Regiment	582 00
Sixty-ninth	159 75
Seventy-first	259 75
Bath, Battery	3 63
Gouverneur Slip	14 24
Duane street	11 87
Horatio street	9 50
Rivington street	10 74
Nineteenth street	12 63
Twenty-seventh street	17 25
Thirty-seventh street	15 38
One Hundred and Twelfth street	13 36
One Hundred and Twelfth street	12 75
One Hundred and Thirty-eighth street	24 10
Brown-stone Building	79 13
City Hall	397 99
CITY RECORD Book Bindery	3 25
County Jail	274 75
Court, Civil, First District	1 63
Second	24 63
Fourth	9 50
Fifth	37 50
Sixth	4 00
Eighth	10 62
Ninth	11 25
Court, Police, First	270 89
Second	80 50
Third	29 25
Fourth	102 75
Fifth	8 86
Court of Special Sessions	43 99
Court-house, Third District (clock)	131 00
County	911 50
Department of Public Works	223 38
Taxes and Assessments	9 87
Engine-house, High Bridge	65 25
Ninety-eighth street	154 00
Market, Catharine	52 75
Centre	72 40
Clinton	127 25
Essex	25 25
Fullton	780 13
Jefferson	190 00
Tompkins	136 00
Union	8 37
Washington	791 87
Office, Corporation Attorney	45 01
Corporation Counsel	28 38
Photometrical	3 00
Receiver of Taxes	110 49
Register	58 75
Rivington Street Yard	3 63
Twenty-fourth Street Yard	4 37
Repair Shop, Thirtieth street	8 01
Eighty-third street	4 50
One Hundred and Twenty-ninth street	14 24
South Gate-house	65 88
Streets, Brush Electric Illuminating Co.	12,359 25
United States Illuminating Co.	22,214 38
Central Gas-light Co.	23,237 94
Consolidated Gas Co.	108,815 25
Equitable Gas-light Co.	8,021 96
New York Mutual Gas-light Co.	1,212 83
New York and New Jersey Globe Gas-light Co.	99 81
Northern Gas-light Co.	18,669 40
Yonkers Gas-light Co.	4,871 05
Total	\$218,862 92

Laying Croton Pipes—	
Altering gas-mains	\$196 34
Cast-iron pipe	32,015 79
Changing taps	975 50
Foundation for house for storage of coal	11,310 06
Horse-hire	477 00
Pay-rolls	3,572 49
Stop-cocks, hydrants, etc.	3,983 25
Traveling expenses	69 13
Convent, Ninth and Tenth avenues, etc.	4,584 01
Madison avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets	278 75
Mangan, One Hundred and Sixty-ninth, One Hundred and Forty-first, One Hundred and Twentieth streets, etc.	4,512 43
Manhattan avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets	179 00
Sixty-second street, between Tenth and Eleventh avenues	449 20
Eighty-ninth street, between Eighth and Ninth avenues	457 50
One Hundred and Twenty-second street, between Mount Morris and Sixth avenues	238 18
One Hundred and Twenty-sixth street, between First and Second avenues	343 80
One Hundred and Forty-second street, between Seventh and Eighth avenues	520 55
One Hundred and Fifty-sixth street, between Boulevard and Tenth avenue	245 00
Total	\$64,414 88

Laying Croton Pipes, 1886—	
Ninth, Eighth, St. Nicholas avenues, etc.	\$590 52
Mulberry street and Bowery	407 36
Total	\$997 88

Laying Croton Pipes, 1885—	
Repairing pavement	\$70 25
One Hundred and Thirty-fourth, Ninety-fourth, Seventy-second streets, etc.	274 60
Total	\$344 85

Public Buildings—Construction and Repairs—	
Armory, Second Battery	\$1,170 65
Eleventh Regiment	185 04
Twelfth	129 35
Sixty-ninth	889 56
Seventy-first	1,927 57
Brown-stone Building	8,380 56
Bureau Repairs and Supplies	520 61
City Hall	7,788 11
City Prison	611 74
Court, Civil, First District	2,169 93
" Third	82 01
" Fifth	30 27
" Sixth	144 64
" Tenth	617 19
" Police, First	4,858 25
" Third	6 12
Court-house, Third	107 26
" Seventh	1,836 14
" County	3,698 79
County Jail	1,105 87
Dog Pound	20 00
Hall of Records	240 08
Market, Catharine	469 14
" Centre	2,303 79
" Clinton	184 81
" Essex	254 40
" Fulton	415 09
" Tompkins	139 00
" Washington	1,829 53
Pay-rolls	1,076 25
Staats Zeitung Building	386 22
Stewart Building	204 90
No. 31 Chambers street	789 19
No. 49 Beekman street	29 43
Twenty-fourth Street Yard	7,189 00
Traveling expenses	160 40
Total	\$51,956 89

Public Buildings—Construction and Repairs, 1886—	
Brown-stone Building	\$299 49

Public Buildings—Construction and Repairs, 1883—	
City Hall	\$60 25

Public Drinking-hydrants—	
Repairing hydrants	\$436 96

Removing Obstructions in Streets and Avenues—	
Removing obstructions	\$1,307 00
trees	343 00
Pay-rolls	102 50
Total	\$1,752 50

Repairing and Renewal of Pipes, Stop-cocks, etc.—	
Atlas	\$25 00
Cast-iron pipe	6,001 97
Cement, lead, etc.	1,221 65
Changing taps	748 90
Excavating rock	950 40
Lumber	419 06
Pay-rolls	36,010 96
Placing meters	1,020 94
Repairing hydrants	1,197 64
Repairing meter	21 08
pump	142 27
lowering, etc., water-main	3,150 85
Resetting, etc., hydrants	117 65
curb	361 15
Scale	231 00
Stone	715 00
Stop-cocks, hydrants, etc.	4,050 21
Supplies	1,081 79
Tapping and waste cocks	491 50
Telephone service	170 00
Traveling expenses	80 80
Total	\$58,521 21

Repairs and Renewal of Pavements and Regrading—	
Horse-hire	\$567 00
Medical treatment of horse	40 00
Pay-rolls	61,705 87
Redressing granite blocks	185 20
Rent of yard	100 00
Repairing pavement	21,472 38
tools, etc.	397 80
Resetting stop-cock boxes	272 00
Sand	3,901 94
Stone	4,017 83
Tools and supplies	253 50
Traveling expenses	96 20
Total	\$93,009 72

Repairs and Renewal of Pavements and Regrading, 1886—	
Repairing pavement	\$211 32
Repairing Fifth Avenue, 1886—	
Pay-rolls	\$821 50
Work on contract	163,305 87
Total	\$164,127 37

Repaving Streets and Avenues—	
Bedford street, between Houston and Christopher streets	\$9,282 00
Cherry and Hamilton streets	14,368 39
Gay and Pitt streets	3,794 01
Wooster street, between Canal and Bleecker streets	17,637 19
Tenth street, between Greenwich avenue and West street	17,503 39
Fifteenth street, from 225 feet east of Avenue A to East river	17,646 15
Fifteenth street, between Ninth and Tenth avenues	4,540 52
Sixteenth street, between Sixth and Tenth avenues	25,771 37
Seventy-second street, between Fourth and Fifth avenues	11,087 80
One Hundred and Tenth street, between First and Fifth avenues	25,894 67
Surveying	215 00
Total	\$147,800 49

Roads, Streets and Avenues Unpaved, Maintenance of, etc.—	
Coal	\$12 00
Filling	\$10 00
Horse-hire	90 00
Lumber	127 72
Pay-rolls	7,346 59
Screenings	1,705 06
Supplies	83 70
Total	\$10,175 04

Sewers—Repairing and Cleaning—	
Basin-heads	\$3,328 00
Brick, cement, etc.	655 00
Excavating sewer trench	350 00
Horse hire	\$61 00
Lumber	106 00
Pay-rolls	23,635 61
Ram-gauge	10 00
Raising manholes	192 00
Receiving-basins	1,058 95
Removing basin-heads	39 00
Repairing and cleaning sewers	15,533 74
Repairing tools	47 80
Setting sewer-gauge	503 00
Sewer bleeders	33 00
gauges	92 80
pipe	697 00
Stone	47 25
Supplies	213 25
Traveling expenses	326 40
Total	\$47,369 80

Street Improvements—For Surveying, Monumenting, etc.—	
Pay-rolls	\$341 00
Resetting monuments	860 00
Total	\$1,201 00

Supplies for and Cleaning Public Offices—	
Armory, Second Battery	\$22 40
Brown-stone Building	10 24
Bureau of Repairs and Supplies	4,349 96
Court, Civil, First District	11 98
" Second	64 46
" Sixth	69 16
" Tenth	71 11
" Police, First	65 25
" Third	20 40
" Sixth	30 00
Court-house, Seventh District	103 12
" County	148 95
Court, General Sessions	441 54
" Special	11 25
" Supreme	182 80
Department of Finance	82 16
" Public Works	106 32
Office, Corporation Attorney	35 61
" Counsel	259 27
" County Clerk	69 59
" Mayor	126 31
" Recorder	68 20
" Sheriff	23 26
" Surrogate	1,390 18
Pay-rolls	17,475 50
Coal	8,787 29
Ice	865 11
Total	\$34,891 42

Water Supply for Twenty-fourth Ward—	
Laying water-mains	\$1,673 05
Supply of water	1,226 36
Total	\$2,899 41

RECAPITULATION OF APPROPRIATIONS.

Aqueduct—Repairs, Maintenance and Strengthening	\$61,945 26
Aqueduct—Repairs, Maintenance and Strengthening—Salaries	4,662 33
Aqueduct—Repairs, Maintenance and Strengthening, 1886	9,060 75
Boring Examinations for Grading and Sewer Contracts	1,176 50
Boulevards, Roads and Avenues, Maintenance of	32,609 05
Bronx River Works—Maintenance and Repairs	6,698 23
Bronx River Works—Maintenance and Repairs—Salaries	975 00
Contingencies—Department of Public Works	972 25
For Repairs to Seventh Regiment Armory Building	1,789 47
Free Floating Baths	1,682 70
Free Floating Baths—Salaries	2,542 50
Lamps and Gas and Electric Lighting	218,862 92
Lamps and Gas and Electric Lighting—Salaries	1,249 95
Laying Croton Pipes	64,414 88
Laying Croton Pipes—Salaries	3,723 48
Laying Croton Pipes, 1886	997 88
Laying Croton Pipes, 1885	344 85
Public Buildings—Construction and Repairs	51,956 89
Public Buildings—Construction and Repairs, 1886	299 49
Public Buildings—Construction and Repairs, 1883	60 25
Public Drinking-hydrants	436 96
Public Drinking-hydrants—Salaries	333 32
Removing Obstructions in Streets and Avenues	1,752 50
Removing Obstructions in Streets and Avenues—Salaries	174 19
Repairing and Renewal of Pipes, Stop-cocks, etc.	58,521 21

Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries.....	\$12,909 66
Repairs and Renewal of Pavements and Regrading.....	93,009 72
Repairs and Renewal of Pavements and Regrading—Salaries.....	3,956 64
Repairs and Renewal of Pavements and Regrading, 1886.....	211 32
Repaving Fifth Avenue, 1886.....	164,127 37
Repaving Streets and Avenues.....	147,800 49
Repaving Streets and Avenues—Salaries.....	3,748 00
Roads, Streets and Avenues Unpaved, Maintenance, etc.....	10,175 04
Salaries—Department of Public Works.....	30,437 49
Sewers—Repairing and Cleaning.....	47,369 80
Sewers—Repairing and Cleaning—Salaries.....	1,990 00
Sewerage System—Salaries.....	4,124 64
Street Improvements—For Surveying, Monumenting, etc.....	1,201 00
Supplies for and Cleaning Public Offices.....	34,861 42
Supplies for and Cleaning Public Offices—Salaries.....	5,105 68
Surveys, Maps, etc., for Street Openings—Salaries.....	1,575 00
Supplying Water to Shipping, etc.—Salaries.....	2,687 70
Water Supply for the Twenty-fourth Ward.....	2,809 41
Water Supply for the Twenty-fourth Ward—Salaries.....	200 00
Total.....	\$1,095,063 19

TRUST ACCOUNTS.

CROTON WATER FUND.

Clerical services.....	\$1,564 94
Horse-hire.....	375 50
Land.....	38,000 00
Legal expenses, etc.....	10,287 39
Pay-rolls.....	15,417 88
Printing testimony.....	634 55
Rent of offices.....	150 00
Rent of mill seat.....	300 00
Repairing instruments.....	7 50
Reservoir at Williamsbridge.....	14,508 00
Traveling expenses.....	655 16
Total.....	\$381,902 92

FUND FOR LOCAL IMPROVEMENTS.

Regulating, Grading, etc.—	
One Hundred and Fifty-fifth street, between Eighth avenue and McComb's Dam lane.....	\$168 60
One Hundred and Fifty-fifth street, between Eighth avenue and first new avenue west.....	89 75
Total.....	\$258 35
Sewers—	
Lexington avenue, between Eighty-third and Eighty-fifth streets.....	126 00
Total.....	\$384 35

LOCAL IMPROVEMENT FUND.

Regulating, Grading, etc.—	
Fort Washington Ridge road.....	\$2,898 00
Fourth avenue, between Ninety-seventh and One Hundred and Second streets.....	316 04
West End avenue, between Seventy-second street and Boulevard.....	2,273 50
Pay-rolls.....	156 00
Total.....	\$5,643 54
Sewers—	
Ninety-second street, between Avenue A and First avenue.....	175 80
Total.....	\$5,819 34

STREET IMPROVEMENT FUND.

Curbing, Flagging, etc.—	
Manhattan avenue, between One Hundred and Sixteenth and One Hundred and Twentieth streets.....	\$201 83
Manhattan avenue, east side, between One Hundred and Twentieth and One Hundred and Twenty-third streets.....	1,003 46
Second avenue, west side, between One Hundred and Twentieth and One Hundred and Twenty-first streets.....	417 76
Seventh avenue, east side, between One Hundred and Twenty-first and One Hundred and Twenty-second streets.....	116 11
Seventh avenue, between One Hundred and Twenty-eighth and One Hundred and Forty-fifth streets.....	916 83
Twelfth avenue, west side, between One Hundred and Twenty-ninth and One Hundred and Thirtieth streets.....	124 21
Fifth street, between Lewis street and East river.....	1,783 03
Sixty-second street, between Boulevard and Eighth avenue.....	91 00
Seventieth street, between Eighth and Ninth avenues.....	1,200 34
One Hundred and Tenth street, between Fourth and Madison avenues.....	294 92
One Hundred and Twenty-seventh street, north side, and One Hundred and Twenty-eighth street, south side, between Fourth and Lexington avenues.....	180 60
One Hundred and Thirty-fifth street, south side, between Eighth and St. Nicholas avenues.....	169 52
Surveying.....	453 57
Total.....	\$9,558 50

Fencing—	
Boulevard, west side, between One Hundred and Fourteenth and One Hundred and Sixteenth streets.....	\$209 33
Boulevard, east side, between One Hundred and Twenty-fourth and One Hundred and Twenty-sixth streets.....	169 37
Boulevard, west side, between One Hundred and Twenty-fourth and One Hundred and Twenty-sixth streets.....	266 50
Boulevard, west side, between Manhattan and One Hundred and Twenty-ninth streets.....	95 00
St. Nicholas avenue, east side, between One Hundred and Thirty-seventh and One Hundred and Forty-first streets.....	445 96
Northeast corner of Fourth avenue and One Hundred and Fourth street.....	102 96
Southeast corner of Madison avenue and One Hundred and Twelfth street.....	111 50
Fifty-sixth street, south side, between Ninth and Tenth avenues.....	87 50
Eighty-eighth and Eighty-ninth streets, Fourth and Madison avenues.....	421 29
Ninety-second and Ninety-third streets, Lexington and Fourth avenues.....	268 75
Ninety-fourth and Ninety-fifth streets, between Eighth and Ninth avenues.....	556 62
One Hundred and One Hundred and One Hundred and Second avenues.....	718 37
One Hundred and First and One Hundred and Second streets, First and Second avenues.....	438 50
One Hundred and Tenth and One Hundred and Eleventh streets, Madison and Fifth avenues.....	604 29
One Hundred and Tenth and One Hundred and Eleventh streets, Seventh and Eighth avenues.....	345 16
One Hundred and Thirteenth and One Hundred and Fourteenth streets, Fifth and Sixth avenues.....	532 75
One Hundred and Fourteenth and One Hundred and Fifteenth streets, Fifth and Sixth avenues.....	401 70
One Hundred and Fifteenth and One Hundred and Sixteenth streets, Seventh and Eighth avenues.....	367 87
One Hundred and Fifteenth street, between Boulevard and Riverside Drive.....	413 00
One Hundred and Twenty-fifth street, Manhattan street and Tenth avenue.....	449 79
One Hundred and Thirty-first and One Hundred and Thirty-second streets, Broadway and Tenth avenue.....	381 50

Fencing—	
One Hundred and Thirty-second and One Hundred and Thirty-third streets, Broadway and Tenth avenue.....	\$645 04
One Hundred and Thirty-fourth street, north side, between Fifth and Sixth avenues.....	220 08
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh street, Fifth and Sixth avenues.....	540 79
Surveying.....	1,228 93
Total.....	\$10,395 05

Paving—	
Coenties Slip and South street, between Piers 6 and 8, East river.....	\$3,794 40
Madison avenue, between Eighty-sixth and Ninety-fourth streets.....	13,209 00
Madison avenue, between One Hundred and Thirty-third and One Hundred and Thirty-seventh streets.....	13,791 50
Manhattan avenue, between One Hundred and Fifth and One Hundred and Sixth streets.....	2,639 39
Pleasant avenue, at One Hundred and Thirteenth street.....	23 20
Ninth avenue, between Seventy-seventh and One Hundredth streets.....	46,973 35
Tenth avenue, between Seventy-fourth and One Hundred and Tenth streets.....	126,163 80
West Fifty-fifth street, from present pavement west to North river.....	11 86
Sixty-sixth street, between Boulevard and Tenth avenue.....	192 80
Sixty-eighth street, between Eighth avenue and Boulevard.....	9,290 91
Seventieth street, between Avenue A and First avenue.....	208 20
Seventy-fourth street, between Ninth and Tenth avenues.....	6,932 50
Seventy-fourth street, between Boulevard and Eleventh avenue.....	4,547 34
Seventy-fifth street, between Boulevard and Tenth avenue.....	85 14
Eightieth street, between Ninth and Tenth avenues.....	6,358 18
Eighty-first street, between Avenues A and B.....	5,367 07
Eighty-fifth street, between Eighth and Ninth avenues.....	7,700 90
Eighty-sixth street, between Eighth and Riverside avenues.....	8,991 78
Eighty-eighth street, between First and Second avenues.....	219 90
Eighty-eighth street, between Ninth and Tenth avenues.....	6,273 59
Ninetieth street, between Eighth and Ninth avenues.....	1,886 50
Ninety-third street, between Ninth and Tenth avenues.....	301 60
Ninety-fourth street, between Ninth and Tenth avenues.....	7,149 10
Ninety-sixth street, between First and Third avenues.....	7,233 91
Ninety-ninth street, between Boulevard and Tenth avenue.....	2,883 74
Ninety-ninth street, between Ninth and Tenth avenues.....	6,217 22
One Hundred and First street, between Second and Third avenues.....	209 05
One Hundred and Fourth street, between Ninth avenue and Boulevard.....	9,161 62
One Hundred and Tenth street, between Sixth and Seventh avenues.....	6,531 45
One Hundred and Sixteenth street, between Seventh and Eighth avenues.....	3,494 33
One Hundred and Twenty-third street, between Ninth and Tenth avenues.....	5,242 15
One Hundred and Twenty-seventh street, between Eighth and St. Nicholas avenues.....	2,508 75
One Hundred and Thirty-second street, between Sixth and Seventh avenues.....	6,469 78
One Hundred and Thirty-fourth street, between Seventh and Eighth avenues.....	6,333 72
One Hundred and Thirty-fifth street, between Seventh and Eighth avenues.....	11,742 20
One Hundred and Thirty-sixth street, between Eighth and St. Nicholas avenues.....	2,862 55
One Hundred and Thirty-seventh street, between Eighth and St. Nicholas avenues.....	4,244 93
Pay-rolls.....	4,924 50
Surveying.....	8,529 25
Total.....	\$60,451 78

Planting Trees—	
West End avenue, between Seventy-second and One Hundred and Seventh streets.....	12,029 92

Regulating, Grading, etc.—	
Edgecomb avenue, between One Hundred and Thirty-seventh and One Hundred and Fortieth streets.....	\$4,500 82
Edgecomb avenue, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.....	14,248 73
Edgecomb avenue, between One Hundred and Forty-fifth street and St. Nicholas place.....	14,265 75
Fort George avenue, between Tenth and Eleventh avenues.....	8,876 69
Gansevoort street, between Washington and Thirtieth streets, etc.....	5,181 85
Hamilton place, between Boulevard and Tenth avenue.....	5,532 10
Kingsbridge road, between One Hundred and Ninetieth street and Harlem river.....	3,185 00
New avenue, between One Hundred and Forty-fifth and One Hundred and Fifty-fifth streets.....	5,922 00
Forty-third street, between First avenue and Prospect place.....	3,998 05
Forty-ninth street, between First avenue and Prospect place.....	1,052 73
Sixty-third street, between Tenth and Eleventh avenues.....	2,827 00
Sixty-fifth street, between First avenue and Avenue A.....	5,111 39
Sixty-ninth street, between Eighth and Ninth avenues.....	210 00
Seventy-seventh street, between Boulevard and Riverside Drive.....	9,527 99
Eighty-second street, between Boulevard and Riverside Drive.....	179 00
Ninetieth street, between First avenue and Avenue A.....	1,358 60
Ninetieth street, between Ninth and Tenth avenues.....	2,161 87
Ninetieth street, between Boulevard and Riverside Drive.....	5,311 57
Ninety-first street, between Tenth avenue and Riverside Drive.....	1,698 37
Ninety-first street, between Eighth and Ninth avenues.....	3,364 46
Ninety-first street, between Ninth and Tenth avenues.....	1,666 00
One Hundred and First street, between Eighth and Manhattan avenues.....	103 50
One Hundred and Second street, between Eighth and Ninth avenues.....	2,541 12
One Hundred and Third street, between Eighth and Ninth avenues.....	2,160 05
One Hundred and Second street, between Ninth avenue and Riverside Drive.....	5,687 50
One Hundred and Seventh street, between Eighth and Ninth avenues.....	1,130 50
One Hundred and Seventh street, between Boulevard and Tenth avenue.....	182 88
One Hundred and Eighth street, between Boulevard and Tenth avenue.....	203 00
One Hundred and Eighth street, between Eighth and Manhattan avenues.....	1,680 00
One Hundred and Thirteenth street, between Eighth and New avenues.....	3,129 53
One Hundred and Twenty-first street, between Seventh and St. Nicholas avenues.....	1,513 73
One Hundred and Thirtieth street, between Old Broadway and Boulevard.....	75 75
One Hundred and Thirty-seventh street, between Seventh and Eighth avenues.....	207 50
One Hundred and Thirty-seventh street, between Eighth and St. Nicholas avenues.....	124 00
One Hundred and Fortieth street, between Eighth and Edgecomb avenues.....	1,178 66
One Hundred and Thirty-eighth street, between Boulevard and Tenth avenue.....	2,856 00
One Hundred and Forty-second street, between Boulevard and Hamilton place.....	2,793 34
One Hundred and Forty-seventh street, between Eighth and New avenues.....	4,065 13
One Hundred and Forty-eighth street, between Seventh and Eighth avenues.....	2,123 80
One Hundred and Forty-ninth street, between Seventh and Eighth avenues.....	207 50
One Hundred and Fifty-fifth street, intersection of New avenue.....	2,061 92
One Hundred and Sixty-first street, between Tenth and Eleventh avenues.....	3,678 85
One Hundred and Sixty-fifth street, between Edgecomb and Tenth avenues.....	2,929 78
Altering gas-mains.....	12 87
Pay-rolls.....	5,027 00
Surveying.....	2,717 13
Total.....	148,546 01

Sewers—

Table listing sewer contracts with columns for location, amount, and date. Includes entries like Birmingham street, Bleeker street, East Gramercy place, etc.

Total \$651,818 15

RESTORING AND REPAVING—SPECIAL FUND.

Table listing restoration and repaving work with columns for item, amount, and date. Includes entries like Pay-rolls, Restoring pavements, Sand.

Total \$11,641 74

WATER-METER FUND, NO. 2.

Table listing water-meter fund items with columns for item, amount, and date. Includes entries like Setting meters, Water-meters.

Total \$3,504 89

GANSEVOORT MARKET BUILDING FUND.

Table listing Gansevoort Market Building Fund items with columns for item, amount, and date. Includes entries like Pay-rolls, Work on contract.

Total \$134,905 50

RECAPITULATION OF FUNDS.

Table summarizing various funds with columns for fund name, amount, and date. Includes entries like Croton Water Fund, Fund for Local Improvements, etc.

Total \$1,189,976 89

GENERAL SUMMARY.

Table summarizing appropriations and funds with columns for item, amount, and date. Includes entries like Appropriations, Funds.

Total \$2,285,040 88

Document "C."

STATEMENT OF CONTRACTS.

Contracts Entered Into During the Three Months ending December 31, 1887.

Main table of contracts with columns: Date of Contract, Nature and Location of Work, Contractor, Sureties, Estimated Cost. Includes sections for Sewer Contracts, Regulating and Grading Contracts, and Paving Contracts.

DATE.	NATURE.	LOCATION OF WORK.	TOTAL COST.
Nov. 1	Laying water-mains	In Mangin, One Hundred and Sixty-ninth, One Hundred and Forty-first, One Hundred and Twentieth, One Hundred and Eighteenth, One Hundred and Fourteenth, Ninety-seventh, Ninety-first, Seventieth and Sixty-fifth streets, and in Eleventh and Walton avenues	\$4,749 93
" 2	Regulating and grading	One Hundred and Fifty-first street, from Avenue St. Nicholas to Boulevard	3,095 47
" 4	Flagging corridors and passageways	In basement of City Hall	1,425 00
" 9	Paving	One Hundred and Fourth street, from Ninth avenue to Boulevard	10,028 27
" 11	Regulating and grading	One Hundred and Forty-seventh street, from Eighth avenue to first new avenue west	4,613 79
" 11	Paving	Fifth avenue, from Ninth to Ninetieth street	450,444 71
" 14	Sewer	In One Hundred and Second street, between Ninth and Manhattan avenues	3,036 10
" 14	Paving	Eighty-fifth street, from Eighth to Ninth avenue	8,373 38
" 14	"	Ninety-ninth street, from Ninth to Tenth avenue	6,757 83
" 14	"	Eightieth street, from Ninth to Tenth avenue	6,937 10
" 14	Sewer	In One Hundred and Fourth street, between West End and Riverside avenues	3,705 26
" 14	Regulating and grading	One Hundred and Forty-second street, from Boulevard to Hamilton place	3,301 84
" 17	Paving	Ninety-ninth street, from Boulevard to Tenth avenue	3,145 86
" 17	"	One Hundred and Thirty-fifth street, from Seventh to Eighth avenue	12,756 07
" 17	Setting curb-stones and flagging sidewalks	Both sides of Fifth street, from Lewis street to East River	2,082 47
" 17	Paving	West street, from Canal to Bleeker street	18,354 94
" 18	Sewer	In East Gramercy place, between Twentieth and Twenty-first streets	953 10
" 18	Fencing vacant lots	In block bounded by Ninety-ninth and One Hundredth streets, First and Second avenues	823 06
" 18	Regulating and grading	One Hundred and Thirteenth street, from Eighth to New avenue	5,544 28
" 22	"	One Hundred and Sixty-fifth street, from Edgecomb to Tenth avenue	3,399 39
" 22	"	Seventy-seventh street, from Boulevard to Riverside Drive	13,594 56
" 22	Fencing vacant lots	In block bounded by One Hundredth and One Hundred and First streets, First and Second avenues	503 12
" 22	Sewer	In Madison avenue, between One Hundred and Third and One Hundred and Fifth streets	1,303 17
" 23	Furnishing and delivering 2,000 cubic yards of Roa Hook gravel and 3,000 cubic yards of Roa Hook gravel bank screenings		9,805 77
" 25	Fencing vacant lots	In block bounded by Eighty-eighth and Eighty-ninth streets, Fourth and Madison avenues	474 07
" 26	Sewer	In Ninety-first street, between Avenue A and First avenue	6,111 09
" 29	Paving	One Hundred and Thirty-second street, from Sixth to Seventh avenue	7,042 21
" 30	Sewer	In One Hundred and Twenty-second street, between Ninth and Manhattan avenues	906 43
" 30	Paving	One Hundred and Thiry-fourth street, from Eighth to Tenth avenue	6,693 30
Dec. 2	Fencing vacant lot	On southeast corner of Madison avenue, between Third and Twelfth streets	127 51
" 3	Fencing vacant lots	Bounded by One Hundred and Twenty-fifth street, Manhattan street and Tenth avenue	435 86
" 3	"	Of One Hundred and Fifteenth street, between Riverside Drive and Madison avenue	516 97
" 3	"	On west side Western Boulevard, One Hundred and Twenty-fourth to One Hundred and Twenty-sixth streets	303 24
" 3	Alterations and repairs to sewer	In Ann street, between Nassau street and Park Row	3,097 20
" 5	Sewer	In One Hundred and Forty-eighth street, between Seventh and Eighth avenues	3,246 48
" 5	"	In Seventy-sixth street, between West End and Riverside avenues	6,426 96
" 7	Regulating and grading	One Hundred and Fifty-fifth street, from east line of first new avenue west of Eighth avenue to west line of first new avenue west of Eighth avenue	2,597 93
" 7	Alterations and improvements to sewers	In Eleventh avenue, between Fourteenth and Seventeenth streets, and in Fourteenth street, between Tenth and Thirteenth streets; and sewers in Eleventh avenue, between Fifteenth and Sixteenth streets, and in Fifteenth street, between Tenth and Eleventh avenues	27,676 46
" 7	Regulating and grading	Ninetieth street, between First avenue and Avenue A	1,867 31
" 7	Paving	Manhattan street, from One Hundred and Fifth to One Hundred and Sixth street	2,954 08
" 7	"	Tenth street, from Greenwich avenue to West street	18,270 69
" 7	Fencing vacant lots	Bounded by Ninety-fourth and Ninety-fifth streets, Eighth and Ninth avenues	634 73
" 7	Receiving-basin	Southeast corner of Fourteenth street and Fourth avenue	444 61
" 8	Paving	One Hundred and Thirty-seventh street, from Eighth to St. Nicholas avenue	4,919 33
" 9	Taking up and relaying pavement	In Thirty-second street, between Third and Lexington avenues; Thirty-fourth street, between Fourth and Lexington avenues; Thirty-eighth street, between Fourth and Madison avenues; Thirty-ninth street, between Fourth and Madison avenues; Forty-second street, between Third and Lexington avenues; and Forty-third street, between Third and Lexington avenues	5,574 56
" 10	Sewer	In Tenth avenue, west side, between One Hundred and Forty-first and One Hundred and Forty-second streets, and in One Hundred and Forty-second street, between Tenth avenue and Hamilton place, connecting with sewer in Hamilton place	4,780 07
" 10	"	In Birmingham street, between Henry and Madison streets	1,074 75
" 11	Paving	One Hundred and Thirty-sixth street, from St. Nicholas to Eighth avenue	3,280 43
" 12	"	Eighty-first street, from Avenue A to Avenue B	5,860 21
" 14	Flagging	North side of One Hundred and Twenty-seventh street and south side of One Hundred and Twenty-eighth street, between Fourth and Lexington avenues	202 80
" 14	Regulating and grading	One Hundred and Fortieth street, from Eighth to Tenth avenue	1,421 73
" 14	Sewer	In Pleasant avenue, between One Hundred and Sixteenth and One Hundred and Fifteenth streets, connecting with present sewer in One Hundred and Fifteenth street	1,572 41
" 14	Flagging	East side of Seventh avenue, between One Hundred and Twenty-first and One Hundred and Twenty-second streets	131 27
" 14	Paving	Ninety-fourth street, from Ninth to Tenth avenue	7,769 30
" 14	Regulating and grading	Edgecomb avenue, from One Hundred and Thirty-seventh to One Hundred and Fortieth street	11,181 09
" 15	Furnishing and setting steam-boiler	In Seventh District Court-house, East Fifty-seventh street	985 00
" 15	"	In Pine street, from William street to asphalt pavement; Twenty-fourth street, from Broadway to Sixth avenue; Forty-ninth street, from Sixth to Seventh avenue; Avenue A, from Fifty-fourth to Fifty-fifth street; and intersections Third and Ninety-sixth to Ninety-seventh street, and intersection of Ninety-seventh street	3,941 82
" 15	Fencing vacant lots	Bounded by One Hundred and Tenth and One Hundred and Eleventh streets, Seventh and Eighth avenues	612 01
" 15	Regulating and grading	Edgecomb avenue, from One Hundred and Forty-first to One Hundred and Forty-fifth street	24,562 88
" 16	Flagging	Both sides of One Hundred and Tenth street, from Fourth to Madison avenue	326 69
" 20	Regulating and grading	Fort George avenue, from Tenth to Eleventh avenue	21,753 15
" 21	Furnishing materials and performing work	Required for putting a tin roof on northeast end of Centre Market Building	1,950 00
" 22	Fencing vacant lots	Bounded by One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Fifth and Sixth avenues	624 82
" 22	"	Bounded by One Hundred and Thirty-third and One Hundred and Thirty-fourth streets, Broadway and Tenth avenue	731 35
" 22	"	Bounded by One Hundred and Thirty-first and One Hundred and Thirty-second streets, Broadway and Tenth avenue	425 69
" 22	Sewer	In Bleeker street, between Christopher and West Tenth streets	989 93
" 22	"	In Eighty-seventh street, between Eighth and Ninth avenues	3,151 46
" 22	Regulating and grading	Ninety-first street, from Eighth to Ninth avenue	5,771 44
" 22	Paving	Eighty-eighth street, from Ninth to Tenth avenue	6,075 17
" 22	"	Seventy-fourth street, from Ninth to Tenth avenue	7,473 48

DATE.	NATURE.	LOCATION OF WORK.	TOTAL COST.
Dec. 22	Flagging	South side, One Hundred and Thirty-fifth street, from Eighth to St. Nicholas avenue	\$187 04
" 23	Paving	Tenth avenue, from Seventy-fourth to One Hundred and Tenth street	162,758 65
" 23	Flagging	West side of Second avenue, from One Hundred and Twentieth to One Hundred and Twenty-first street, and in One Hundred and Twenty-first street for a distance of about one hundred feet west of Second avenue	443 20
" 23	Sewer	In Tenth avenue, west side, between Twenty-third and Twenty-second streets	1,279 02
" 23	Receiving-basin	On southwest corner Seventy-sixth street and Lexington avenue	364 37
" 23	Furnishing and delivering	Stop-cocks, hydrants, wooden hydrant boxes, and cast iron stop-cock boxes	5,452 50
" 23	Furnishing materials and performing work	In the erection of a two-story brick store-room and work-shop in pipe yard foot of Twenty-fourth street, East River	7,189 00
" 24	Sewer	In One Hundred and Thirty-third street, between Tenth avenue and Broadway, connecting with present sewer in Broadway	2,269 43
" 27	Paving	Madison avenue, from Eighty-sixth to Ninety-fourth street	21,959 11
" 29	Extension of sewer	At foot of Rector street, Hudson river, with alterations and improvements to existing sewer	9,160 93
" 29	Fencing vacant lots	East side St. Nicholas avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street, and north side One Hundred and Forty-first street, St. Nicholas to Edgecomb avenue	656 39
" 29	Laying water-mains	In corner of Ninth and Tenth avenues, and in Seventy-sixth, Seventy-seventh, One Hundredth, One Hundred and Thirteenth, One Hundred and Thirtieth, One Hundred and Forty-first, One Hundred and Forty-second, One Hundred and Forty-third, One Hundred and Forty-fourth, One Hundred and Seventy-fifth and One Hundred and Eighty-fifth streets; and in Potter place, Hamilton terrace and southern Boulevard	7,407 90
" 31	Alterations and repairs to sewer	In Eighth avenue, west side, between Eighty-third and Eighty-fifth streets	2,243 53
" 31	Fencing vacant lots	Bounded by One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Sixth and Seventh avenues	494 86
" 31	Taking up and relaying pavement	In Forty-sixth street, from Fifth to Seventh avenue; Fifty-sixth street, Third to Lexington avenue; Sixtieth street, from Second to Third avenue; Sixtieth street, from Third avenue to No. 158; Seventy-eighth street, Madison to Fifth avenue; Eighty-third street, from Third avenue to No. 151; Eighty-third street, from Third avenue to one hundred and fifty feet west	4,993 20
" 31	Flagging	West side Fourth avenue, from One Hundred and Sixteenth to One Hundred and Seventeenth street	284 47
" 31	Furnishing illuminating gas	For lighting the public markets, armories, buildings and offices in the City of New York, for the year 1887	23,657 83
" 31	"	For lighting the public markets, armories, buildings and offices in the City of New York, for the year 1887	9,570 13
Total			\$1,462,893 17

RECAPITULATION.

20 Sewer Contracts	\$115,910 94
21 Regulating and Grading Contracts	138,768 33
25 Paving Contracts	524,178 06
1 Paving Contract, under chapter 371, Laws of 1885	460,444 71
6 Paving Contracts, under chapter 321, New York City Consolidation Act of 1884	85,571 55
3 Taking Up and Relaying Pavement Contracts	14,506 58
10 Miscellaneous Contracts	59,955 48
2 Laying Water-main Contracts	12,157 83
40 Special Contracts	18,471 74
2 Gas Contracts	33,227 95
130 Contracts	\$1,462,893 17

Document "D."

REPORT OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

DEPARTMENT OF PUBLIC WORKS, OFFICE OF CHIEF ENGINEER, No. 31 CHAMBERS STREET, ROOM 10, NEW YORK, January 4, 1888.

Gen. JOHN NEWTON, Commissioner of Public Works:

DEAR SIR—I herewith submit report for the quarter ending December 31, 1887, and a summary for the year 1887:

EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1887.

Aqueduct—Repairs, Maintenance and Strengthening	\$71,006 01
Aqueduct—Repairs, Maintenance and Strengthening—Salaries	4,662 33
Bronx River Works—Maintenance and Repairs	6,698 23
Bronx River Works—Maintenance and Repairs—Salaries	975 00
Croton Water Fund	381,902 84
Laying Croton Pipes	65,757 61
Laying Croton Pipes—Salaries	3,723 48
Repairing and Renewal of Pipes, Stop-cocks, etc	29,877 14
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries	2,026 48
Water Supply—Twenty-fourth Ward	2,899 41
Water-meter Fund, No. 2	3,504 89
Total	\$573,933 42

SUMMARY OF EXPENDITURES FOR THE YEAR 1887.

Aqueduct—Repairs, Maintenance and Strengthening	\$239,140 90
Aqueduct—Repairs, Maintenance and Strengthening—Salaries	23,009 59
Bronx River Works—Maintenance and Repairs	21,226 39
Bronx River Works—Maintenance and Repairs—Salaries	3,900 00
Croton Water Fund	514,984 29
Contingencies—Department of Public Works	20 40
Iron Bridge over Fourth Avenue at Ninety-eighth Street	5,823 91
Laying Croton Pipes	167,807 29
Laying Croton Pipes—Salaries	13,999 92
Repairing and Renewal of Pipes, Stop-cocks, etc	70,873 72
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries	10,183 61
Repairing Water-main leading to North Brother Island	2,045 75
Water Supply—Twenty-fourth Ward	6,993 21
Water-meter Fund, No. 2	15,301 05
Total	\$1,095,400 03

WATER SUPPLY—NEW YORK CITY.

Amount Expended to December 31, 1887.

1836 to 1849—Aqueduct, reservoirs, etc	\$9,031,362 70
Water-pipes and laying	3,828,388 22

1849 to 1870—

Water-pipes and laying	\$3,165,785 59
New Reservoir, Central Park, Fourth avenue, 48-inch main, 90-inch pipe, High Bridge Improvement and 60-inch pipe across Manhattan Valley	2,991,182 89
4-foot pipe across Manhattan Valley	157,130 60
High-service Works and mains at High Bridge	589,154 90
Additional alteration, Aqueduct, Eighty-sixth to Ninety-second street	320,091 00
Storage reservoirs	423,502 95

1870 to January 1, 1888—

High-service Works and mains at High Bridge	165,986 61
Additional alteration, Aqueduct, Ninety-second to One Hundred and Thirteenth street	3,772,653 62
Additional alteration, Aqueduct, One Hundred and Eighteenth to One Hundred and Forty-second street	57,515 93
Water-pipes and laying	7,805,200 29
Storage reservoirs	2,078,365 64
Surveys, etc., for New Aqueduct	607,269 07
Bronx River Works	3,749,605 47

Total \$38,833,195 54

Contracts Made, Completed and Unfinished in 1887.

WORK.	CONTRACTOR.	DATE OF CONTRACT.	COST ESTIMATED.	DATE OF FINAL ESTIMATE.	AMOUNT OF FINAL ESTIMATE.	AMOUNT PAID, 1887.
Building reservoir at Williams-bridge	Sullivan & Moore	1884 June 6	\$457,775 00	1887		\$45,378 00
Building foot bridge and retaining-walls at Fourth avenue and Ninety-eighth street	Peter J. Masterson	1885 Nov. 24	18,362 92	April 12	\$19,043 61	5,651 47
Furnishing coal at Ninety-eighth street and High Bridge	George W. Winant	1886 Mar. 11	11,850 00	Jan. 6	12,824 82	4,660 49
Laying water-mains in Ninety-fifth street, etc.	John Cornwell, Jr.	1887 July 2	17,908 00	" 15	18,959 17	2,464 27
Laying water-mains in Broadway, etc.	Borstman & Cornwell	Nov. 9	7,748 00	May 26	7,121 34	6,765 27
Furnishing cast-iron water-pipes, etc.	Warren Foundry and Machine Co.	Dec. 2 1887	12,850 00	April 25	12,935 58	12,935 58
Laying water-mains in Sedgwick avenue, etc.	F. Thilemann, Jr.	Jan. 4	7,533 00	June 27	8,247 85	7,835 46
Furnishing cut stone at High Bridge	Bernard Mahon	" 20	20,560 00	"	"	14,287 50
Furnishing and delivering tapping-cocks	Guy C. Hotchkiss, Field & Co.	Feb. 26	3,505 00	Aug. 26	3,505 00	3,505 00
Furnishing and delivering stop-cocks, hydrants, etc.	Guy C. Hotchkiss, Field & Co.	April 4	14,370 00	Oct. 19	14,370 00	14,370 00
Laying water-mains in Tenth avenue, etc.	John Cornwell, Jr.	" 4	13,594 00	Sept. 22	12,593 84	11,964 15
Furnishing and delivering cast-iron water-pipes, etc.	John Fox	Mar. 22	73,462 00	"	"	56,552 08
Building foundations for house for storage of coal	Robert Hanna	June 7	24,007 10	"	"	19,617 40
Furnishing stop-cocks, hydrants, etc.	Guy C. Hotchkiss, Field & Co.	July 16	5,452 50	Dec. 23	5,452 50	5,452 50
Laying water-mains in Morris avenue, etc.	John Cornwell, Jr.	June 24	7,755 00	Sept. 8	5,544 75	5,267 51
Furnishing coal at Ninety-eighth street and High Bridge	William D. Bruns, Jr.	Aug. 8	15,520 00	"	"	6,483 78
Laying water-mains in Convent avenue, etc.	F. Thilemann, Jr.	" 3	10,277 00	Dec. 28	7,407 90	7,037 50
Furnishing cast-iron pipes, etc.	Mellert Foundry and Machine Co.	" 23	14,160 00	"	"	6,001 97
Laying water-mains in Mangin street, etc.	John Cornwell, Jr.	Sept. 24	5,723 00	Nov. 1	4,749 93	4,512 43

STORAGE RESERVOIRS.

The Croton river has furnished a full supply to the Aqueduct during the quarter. There have only been 35 days when there was no water flowing over Croton Dam. Water was only drawn from the storage reservoirs in the Croton Basin during six days in June. Water was drawn from the storage reservoirs in the Bronx river shed until December 10, 1887.

Storage Drawn.

	GALLONS, OCT. 1 TO DEC. 31.	GALLONS, TOTAL FOR YEAR.
Boyd's Corners Reservoir		110,000,000
South East Reservoir		50,000,000
Kensico Reservoir	510,000,000	1,010,000,000
Rye Ponds Reservoir	220,000,000	770,000,000
Total gallons	730,000,000	1,940,000,000

Rain-fall—Inches.

	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL FOR QUARTER.	TOTAL FOR YEAR.
Boyd's Corners Reservoir	3.12	2.69	6.71	12.52	61.63
South East Reservoir	3.79	2.61	5.09	11.49	56.93
Kensico Reservoir	3.81	2.21	5.21	11.23	49.60
Croton Dam	3.77	2.17	4.99	10.93	56.54
Central Park Reservoirs	3.28	2.51	4.09	9.88	46.21

BRONX RIVER SUPPLY.

The Commissioners appointed to appraise damages along the Bronx river, between Bronxville and Woodlawn, for the diversion of the water, have held regular meetings during the quarter.

The searches, maps, etc., necessary for the appraisal of damages along the Bronx river, between Woodlawn and Long Island Sound, are now being completed.

The work on the Williamsbridge Reservoir has been suspended for the winter.

The regular force has been employed cleaning ditches and repairing roads, etc., along the whole line and in excavating at Rye Ponds Reservoir.

The supply of water has been uninterrupted, except during five days in September when a succession of leaks and breaks occurred in that portion of the line between Bronxville and Scarsdale; all of which have been thoroughly repaired and the whole of the works are now in good order.

1,338,000,000 gallons have been supplied to the City during the quarter.

5,228,000,000 gallons have been supplied from the Bronx river during the year, and owing to the large rain-fall during the year the City is now receiving three millions per day more from this supply than at the same time last year.

Agreements have been made with the active mill-owners on the Byram river, in the State of Connecticut, for payments of damages for the diversion of the waters of the Byram river, in the State of New York, to the Bronx river. Negotiations for the land, etc., necessary to divert the waters of the Byram river into Kensico Reservoir have been commenced.

Lands Acquired and Damages Paid in 1887.

Voucher No.	Parcel No.	NAME OF OWNER.	DAMAGES.	AMOUNT PAID.	REMARKS.
29		Abby A. Purdy and others	For diversion of water	\$52 00	By Commission.
1, 2, 3, 4		Tilly Foster Iron Mine	For land and damages	10,117 40	By Commission, South East Reservoir.
634	71	Charles J. Quimby and others	For damages	750 00	By Commission.
635	72	Andrew Findley and others	"	25 00	"
636	74	Charles Butler and others	"	400 00	"
637	76	John L. Miller and others	"	50 00	"
638	77	"	"	25 00	"
639	78	The New York and Harlem Railroad Company and others	"	85 00	"
640	79	Margaret Beary and others	"	50 00	"
641	81	Catharine M. Hosier and others	"	40 00	"
642	82	Charles Butler and others	"	50 00	"
643	83	"	"	125 00	"
644	84	"	"	7,270 00	"
645	85	Sarah H. Popham and others	"	1,350 00	"
646	86	Thomas Nelson and others	"	500 00	"
647	87	Lewis C. Popham and others	"	1,470 00	"
648	88	Sarah H. Popham and others	"	3,700 00	"
649	89	David J. Garth and others	"	7,170 00	"
650	90	John Brennan and others	"	100 00	"
651	91	Maria L. Watson and others	"	40 00	"
652	92	Rebecca T. Matthews and others	"	150 00	"
653	93	Isaac B. Lent and others	"	350 00	"
654	94	John Burdette and others	"	350 00	"
655	95	Abraham Bernheimer and others	"	450 00	"
656	96	Sarah A. Reynolds and others	"	1,400 00	"
657	100	The Farmers' Loan and Trust Company and others	"	50 00	"
658	101	The New York and Harlem Railroad Company and others	"	150 00	"
659	102	The New York Quarry Co. and others	"	25 00	"
660	104	Edgar W. Whitney and others	"	15 00	"
661	105	Bridget Monaghan and others	"	40 00	"
662	106	Joseph Fitzsimmons and others	"	40 00	"
663	107	John Monaghan and others	"	60 00	"
664	108	William Hague and others	"	50 00	"
665	109	Thomas Veasey and others	"	150 00	"
666	110	Edgar W. Whitney and others	"	250 00	"
667	111	Josephine De F. Brower and others	"	250 00	"
668	112	James Dusenbury and others	"	900 00	"
669	114	Jane Burwell and others	"	550 00	"
670	115	Theo. Valentine and others	"	3,400 00	"
671	117	William H. Underhill and others	"	400 00	"
672	118	Cornelius Smith and others	"	125 00	"
673	119	Millard F. Smith and others	"	1,500 00	"
674	120	The U. S. Trust Co. and others	"	5 00	"
781	103	George F. Hodgman	For diversion of water	11,750 00	"
782	99	Matthew F. Merritt	"	1,400 00	"
872	98	Richard P. Merritt	"	75 00	"
915		William J. Tugue	For land and damages	122,000 00	By Commissioner of Public Works.
916		Russell, Burdall & Ward	"	110,000 00	By Commissioner of Public Works.
917		George E. Wilcox and Willis H. Wilcox	"	32,500 00	By Commissioner of Public Works.
918		Solomon Reynolds	For damages	18,500 00	By Commissioner of Public Works.
919		Ellen Graves	"	7,000 00	By Commissioner of Public Works.
928	80	Henry M. Brundage	"	40 00	By Commission.
929	69	Margaret A. Tibbits, or U. S. Trust Co.	"	58 82	"
930	69	Charles H. Tibbits, or U. S. Trust Co.	"	146 36	"
931	69	William E. Tibbits, or U. S. Trust Co.	"	146 36	"
932	69	Margaret Stryker, or U. S. Trust Co.	"	146 36	"
933	69	Sarah J. Belden, or U. S. Trust Co.	"	146 36	"
934	69	Emma T. Piper, or U. S. Trust Co.	"	48 79	"
935	69	Edith L. Stryker, or U. S. Trust Co.	"	48 79	"
936	69	Henry M. Belden, or U. S. Trust Co.	"	48 79	"
937	69	Edgar T. Belden, or U. S. Trust Co.	"	48 79	"
938	69	Francis E. Belden, or U. S. Trust Co.	"	48 79	"
939	69	Sarah Jane Belden, or U. S. Trust Co.	"	48 79	"

Amount Expended to December 31, 1887.

	TO DECEMBER 31, 1886.	IN 1887.	TOTALS.
Labor and materials	\$2,402,959 98	\$46,773 83	\$2,449,733 81
Land, damages and expenses	642,212 81	382,575 45	1,024,788 26
Engineering and inspection	252,466 00	22,617 40	275,083 40
Totals to date	\$3,297,638 79	\$451,966 68	\$3,749,605 47

NEW AQUEDUCT.

The following work has been done during the year in connection with the New Aqueduct: Necessary surveys, maps, etc., and modifications called for by the Aqueduct Commissioners for the new reservoir on the East Branch of the Croton river.

Examination and revision of plans, contracts and specifications for the New Aqueduct, below One Hundred and Thirty-fifth street in New York City, and for the dam and appurtenances for the reservoir on the East Branch of the Croton river.

Surveys and maps called for by the Commissioners appointed to appraise lands and damages on the Westchester Section of the New Aqueduct.
 Surveys and maps of lands required for the Muscoot Reservoir.
 Survey of the East Branch of the Croton river, from Croton Falls to the new reservoir on the East Branch of the Croton river.
 Surveys and maps of the reservoir near Jerome Park.

AQUEDUCT—REPAIRS, MAINTENANCE AND STRENGTHENING.

The Aqueduct has steadily carried a full supply of water during the quarter and during the year, being four million gallons per day more than was possible in 1877, showing the benefits derived from the large amount of work done in strengthening the same during the past ten years.

Work Done during the Quarter ending December 31, 1887.

DIVISIONS.	Earth Excavation.	Stone Quarried.	Dry Masonry.	FENCE.		Arching Aqueduct.	Filling and Grading.	Stone Masonry.	Cut-stone Masonry.	Brick Work.	Paving.	Sodding.	Cable Laid.
				Re-paired.	Built.								
	Cu. yds.	Cu. yds.	Cu. yds.	Lin. feet.	Lin. feet.	Lin. feet.	Cu. yds.	Cu. yds.	Cu. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Lin. feet.
First.....	.....	.....	.....	.....	1,196	.....	.....	.....	.....	.....	.....	.....	.....
Second.....	50	.....	321	500	2,025	.....	.....	.....	.....	.....	.....	.....	.....
Third.....	.....	50	284	.....	2,235	.....	.....	.....	.....	.....	.....	.....	.....
Fourth.....	.....	.....	.....	275	.....	200	.....	.....	.....	.....	.....	44	.....
Fifth.....	223	.....	152	800	500	.....	2,510	.....	.....	.....	341	481	6,609
Sixth.....	373	610	460	.....	592	.....	332	.....	.....	132	.....	.....	.....
Seventh.....	573	200	15	.....	.....	293	193	2,484	.....	.....	.....	.....	.....
Eighth.....	.....	.....	.....	4,000	200	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	1,218	860	1,232	5,575	6,156	598	3,003	575	2,484	132	341	525	6,609

Croton Aqueduct—Repairs, Maintenance and Strengthening for the Year 1887.

DIVISIONS.	Earth Excavation.	Stone Quarried.	Dry Masonry.	FENCE.		Arching Aqueduct.	Filling and Grading.	Stone Masonry.	Cut-stone Masonry.	Brick Work.	Paving.	Sodding.	Flagging.	Concrete.	Cable Laid.
				Re-paired.	Built.										
	Cu. yds.	Cu. yds.	Cu. yds.	Lin. feet.	Lin. feet.	Lin. feet.	Cu. yds.	Cu. yds.	Cu. feet.	Cu. yds.	Sq. yds.	Sq. yds.	Sq. feet.	Cu. yds.	Lin. feet.
First.....	.....	.....	.....	5,924	.....	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Second.....	350	128	1,254	11,596	5,719	.....	.....	.....	.....	.....	.....	350	.....	7,920	.....
Third.....	750	950	1,260	4,560	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth.....	30	.....	2,950	1,276	.....	775	.....	.....	.....	.....	44	.....	.....	.....	.....
Fifth.....	2,449	.....	572	3,800	4,300	3,335	501	.....	4	934	981	256	.....	11,909	.....
Sixth.....	1,383	3,212	2,545	6,047	3,807	1,889	.....	752	.....	379	.....	.....	.....	.....	.....
Seventh.....	1,336	1,260	90	100	54	1,550	687	6,658	.....	.....	.....	.....	100	.....	.....
Eighth.....	.....	.....	.....	5,550	1,532	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	6,998	5,350	5,730	35,043	27,472	1,889	6,666	2,340	6,658	383	934	1,025	606	100	19,829

The regular work of keeping the Aqueduct property in good condition, cutting grass, repairing fences, cleaning gates, stop-cocks, etc., has been steadily carried on.

On the First Division a large amount of filling has been done with stone at the apron of dam to prevent the undermining of the cribwork. The cutting away of brush from the borders of the lake has been continued and this winter will see the later work completed and shores of lake in good order.

On the Second Division walls have been built in the vicinity of Quaker Bridge, and the telephone cable laid from the keeper's house south about two miles through the village of Sing Sing, where we have had considerable trouble in times past with the crossing of wires.

On the Third Division the wall at Sampson's bank has been completed; and one at Arch bank is now in process of construction. The stone for both of these walls has been quarried by our own force of men. The Aspinwall leak continues about the same and requires daily attention.

All the masonry has been pointed up on the Fourth Division and beyond the regular maintenance no new work has been done, as the Aqueduct here is now in very good condition as to outside repairs. The Dobbs Ferry leak, which ran with great force for many years and was stopped about two years ago, still remains dry.

The wall in the "Glen" on the Fifth Division has been completed, the surface graded and gutters paved, which has put this portion of the line in a much needed state of repair. A number of smaller walls have also been built on this division, and a large space between new and old Aqueducts filled in at South Yonkers. Telephone cable has been laid from the residence of Engineer in charge to the Aqueduct Bridge across the Nepperhan river, and from Ashburton avenue to office.

On the Sixth Division, as last year, considerably more has been done than on any of the other divisions.

The work has been prosecuted with a large force of men, and much progress has been made towards getting this portion of the Aqueduct in a greatly improved condition; much care has to be exercised here in carrying on the work, as the structure has been found in a very weak condition, and a considerable amount of skill and caution is necessary in effecting its repair. The stone for all the masonry on this division has been quarried near the line of the Aqueduct by the employees of this Department. After the completion of the wall now in process of construction, all the necessary work of strengthening north of the keeper's house will have been finished. A portion of the line which has been a source of considerable trouble and uneasiness will then be in a comparatively good condition.

Seventh Division—In the early part of the year High Bridge steps were completed, with asphalt platforms and lamps, and opened to the public. The surface of ground then graded on each side.

Work on walls around reservoir has been progressing; east wall, from gate-house steps north, and north wall have been completed, and west wall all but about 50 feet. The stone for foundations and backing of these walls has been quarried on the west side of the reservoir. The various works at this point, bridge gate-house, pumping station, tower and reservoir have been kept in good condition.

On the Eighth Division none but the regular maintenance has been carried on. I regret to report the deaths of two of our Keepers during the past year, Isaac H. Minnerly, at Tarrytown, and M. F. Fitzgibbon, at Central Park; both have served long and faithfully.

It will be necessary to continue the strengthening of the Aqueduct on top; the leaks in the bottom of same can be controlled until the New Aqueduct is completed, when the old Aqueduct can be shut off the necessary time without decreasing the supply to the city.

The necessary retaining-walls, steps and railings around the reservoir, at High Bridge, should be completed next year.

The old gate-houses at One Hundred and Nineteenth and One Hundred and Thirty-fourth streets should be rebuilt on the land bought by the City in 1875.

The old reservoir in Central Park which was left with rock in a very irregular shape, so that it is impossible to clean same, should be excavated to some regular depth and shape, and the gate-houses and fixtures renewed and a coping and iron railing placed around same. All the balance of the Aqueduct and the structures connected therewith are in good order.

Laying Croton Pipes.

Contracts have been completed for laying mains in—
 Southern Boulevard, between Hull and Jerome avenues.
 Convent avenue, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.

Ninth avenue (east side), between One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.
 Tenth avenue (both sides), between One Hundred and Seventh and One Hundred and Ninth streets.

Seventy-sixth street, between Eighth and Ninth avenues.
 Seventy-seventh street, between Eighth and Ninth avenues.
 One Hundredth street, between Third and Fourth avenues.
 One Hundred and Thirtieth street, between Seventh and Eighth avenues.
 One Hundred and Thirty-third street, between Eighth and St. Nicholas avenues.
 One Hundred and Forty-first street, from St. Nicholas to Edgecomb avenue.
 One Hundred and Forty-fourth street, between Tenth avenue and Hamilton Terrace.
 One Hundred and Seventy-fifth street, between East Vanderbilt and Fordham avenues.
 One Hundred and Eighty-fifth street, between Tenth and Audubon avenues.
 Potter place, between Central avenue and Williamsbridge road.
 Mangin street, between Grand and Houston streets.
 One Hundred and Sixty-ninth street, between Gerard and Walton avenues.
 One Hundred and Forty-first street, between Tenth avenue and Hamilton place.
 One Hundred and Twentieth street, between Fifth and Madison avenues.
 One Hundred and Eighteenth street, between Fifth and Sixth avenues.
 One Hundred and Fourteenth street, between Fourth and Madison avenues.
 Ninety-seventh street, between Boulevard and Riverside Drive.
 Ninety-first street, between Eighth and Ninth avenues.
 Seventieth street, between West End avenue and Hudson river.
 Fifty-fifth street, between Tenth and Eleventh avenues.
 Eleventh avenue, between One Hundred and Seventy-fifth and One Hundred and Seventy-sixth streets.

Walton avenue, between One Hundred and Forty-ninth and One Hundred and Fiftieth streets.
 Manhattan avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets.

One Hundred and Twenty-sixth street, between First and Second avenues.
 One Hundred and Fifty-sixth street, from Eleventh avenue to 443 feet east.
 Eighty-ninth street, between Eighth and Ninth avenues.
 Melkham lane, from Betner's lane to 674 feet east.
 One Hundred and Forty-second street, between Seventh and Eighth avenues.
 One Hundred and Twenty-second street, between Lenox and Mt. Morris avenues.
 Sixty-second street, between Tenth and Eleventh avenues.
 Madison avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets.

One Hundred and Twenty-seventh street, from Second avenue to Harlem river.
 Sixty-fourth street, from First avenue to Avenue A.
 Seventy-third street, between Eleventh and Riverside avenues.
 Ninety-second street, between Ninth and Tenth avenues.

Two contracts for laying pipe, and one contract for stop-cocks, hydrants, etc., have been completed.

The foundations for the new house for storage of coal on lots belonging to the City of New York, situated on Ninety-sixth and Ninety-seventh streets, 100 feet west of Ninth avenue, have progressed favorably, and will be completed early in the spring. The work on same is now stopped on account of the weather.

The superstructure and inside fittings will be contracted for in 1888. Owing to the large amount of building in the High Service District, which is supplied from the Ninety-eighth street pumping station, it will be necessary, as soon as this coal-house is completed, to place another pumping plant in this station for the future supply of this district.

Amount of Pipe Laid.

	During Quarter.	During Year.
12-inch.....	2,409 lineal feet.	24,873 lineal feet.
6-inch.....	16,804 "	50,571 "
Totals.....	19,213 lineal feet=3.96 miles.	81,444 lineal feet=15.48 miles.

Stop-cocks Set.

	During Quarter.	During Year.
12-inch.....	.....	22
6-inch.....	27	96
Total.....	27	118

Hydrants Placed.

	During Quarter.	During Year.
"A".....	40	129
"B".....	.....	10
No. 1.....	4	12
Total.....	44	151

Summary, 1887.

Diameter of Pipe.	PIPES.			STOP-COCKS.			HYDRANTS.			
	Pipes Laid in Dec. 31, 1886, to Dec. 31, 1887, feet.	Pipes Laid in Dec. 31, 1887, to Dec. 31, 1887, feet.	Total Pipe Laid to Dec. 31, 1887, feet.	Stop-cocks Set to Dec. 31, 1886.	Stop-cocks Set in 1887.	Total Stop-cocks Set to Dec. 31, 1887.	Pattern.	Hydrants Placed to Dec. 31, 1886.	Hydrants Placed in 1887.	Total Hydrants Placed to Dec. 31, 1887.
48-inch.....	65,654	.....	65,654	16	.....	16	Nos. 1, 2 and 3.	3,467	12	3,479
36-inch.....	94,573	.....	94,573	40	.....	40	Victor.....	139	.....	139
30-inch.....	41,773	.....	41,773	29	.....	29	"A" hydrants.	2,517	120	2,636
24-inch.....	11,542	.....	11,542	13	.....	13	"B" hydrants.	1,710	10	1,720
20-inch.....	193,047	.....	193,047	180	.....	180	Totals.....	7,833	151	7,984
16-inch.....	17,130	.....	17,130	22	.....	22				
12-inch.....	779,719	24,873	804,592	1,481	22	1,503				
10-inch.....	6,629	.....	6,629	15	.....	15				
6-inch.....	1,948,631	56,571	2,005,202	4,369	96	4,465				
4-inch.....	32,867	.....	32,867	119	.....	119				
Total feet.....	3,191,565	81,444	3,273,009	6,284	118	6,402				
Miles.....	604.46	.....	619.88							

RELAYING MAINS AND REPLACING TAPS AND SERVICE PIPES ALONG THE WATER-FRONT.

The gang of men on this work continued until the cold weather. During the year new mains have been relaid and houses connected with same, as follows:
 In South street, between Roosevelt and Whitehall streets.
 In West street, between Battery place and Eleventh street.
 In Morris street, between West and Church streets.
 In Rector street, between West street and Broadway.
 In Carlisle street, between West and Greenwich streets.
 In Albany street, between West and Greenwich streets.
 In Wall street, between Pearl and South streets.
 In Counties Slip, between Pearl and South streets.
 In Front street, between Whitehall street and Counties Slip.
 A large number of small leaks were found. In three places the pipes were broken square off. The pressure along the docks has been increased about five feet by stopping this waste. This work should be continued until all of the pipes that are corroded from the action of salt and brackish water shall have been replaced and the houses connected with the new mains.

METERS.
Meters placed during the quarter ending December 31, 1887..... 408
Meters placed during the year ending December 31, 1887..... 1,970
Number of meters now in use..... 16,552

Water-meters in use December 31, 1887.

WHERE PLACED.	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	TOTAL.
Hotels.....	12	63	135	70	51	21	6	.....	358
Breweries, bottlers, etc.....	11	88	112	50	69	18	2	.....	350
Charitable institutions.....	.....	5	20	35	40	6	2	.....	108
Offices.....	27	752	759	291	82	28	13	.....	1,957
Manufacturing establishments.....	69	203	347	271	144	12	4	.....	1,051
Gas-works.....	1	3	11	3	3	12	11	.....	44
Railroads.....	6	94	55	7	10	10	23	2	216
Stables.....	241	971	448	66	25	7	1	.....	1,759
Apartment-houses.....	1	10	45	47	53	5	4	.....	165
Docks.....	16	11	16	9	36	50	34	.....	172
Riverdale.....	31	32	13	1	.....	1	2	.....	86
Miscellaneous.....	3,332	3,394	2,463	680	342	75	7	4	10,297
Total.....	3,747	5,626	4,424	1,530	855	255	109	6	16,552

STYLE OF METER.	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	TOTAL.
Gem.....	.....	.....	.....	1	3	13	6	.....	23
Crown.....	3,071	2,846	1,846	219	112	26	17	5	6,142
Worthington.....	459	2,538	2,460	1,310	740	216	86	1	7,730
Thomson.....	217	262	178	.....	.....	.....	.....	.....	657
Total.....	3,747	5,626	4,424	1,530	855	255	109	6	16,552

Average Number of Gallons used Per Day through Meters.

NUMBER OF METERS.	WHERE USED.	GALLONS.	NUMBER OF METERS.	WHERE USED.	GALLONS.
338	Hotels.....	1,697,000	1,749	Stables.....	1,146,000
350	Breweries, bottlers, etc.....	1,681,000	165	Apartment-houses.....	331,000
108	Charitable institutions.....	412,000	172	Docks.....	1,682,500
1,957	Offices.....	1,840,000	80	Riverdale.....	80,300
1,010	Manufacturing establishments.....	2,429,000	9,878	Miscellaneous.....	10,894,600
44	Gas-works.....	917,700	.....	Tot l.....	24,771,200
216	Railroads.....	1,669,700	16,682		

WASTE AND USE OF WATER.

The large rain-fall during the year, especially in the months of June, July and August, has enabled the Department to keep up the supply of water to 110,000,000 gallons per day, and with a decreased average pressure throughout the city of only four feet.

In order to provide for the new buildings that will be erected before a full supply will be obtained through the New Aqueduct, continuous measures will have to be carried on to stop the waste of water, as well as to preserve the supply and regulate the use of water hereafter.

About all of the places using a large supply of water that can be metered under section 352, New York City Consolidation Act, have had meters placed in same.

The proportion of waste in a large number of small stores, liquor-saloons, workshops, stables and business places which can be metered under the law is large, although the total amount used may be comparatively small in each place, especially where there are faulty plumbing and Hopper closets, and as it is impossible to judge what amount of water is used, by the Inspectors, I would recommend that meters be placed in all business places.

The placing of meters stops waste: First, by the parties knowing they have a constant watch on their use of water; Second, by the owners changing their old-fashioned plumbing, and, Third, by showing when there are any leaks on the premises.

A regular examination of houses, tenements and flats, both during the day and, by means of the sewers, at night, should be carried on.

The large amount of plumbing now placed in houses, all of which is liable to get out of order, demands a constant and regular supervision, either by means of Inspectors directly or by meters indirectly.

There are a large number of flats, apartment-houses, tenements, boarding-houses, and private houses where there is a large consumption of water in comparison with other houses, and per capita, which under the law cannot be metered at the expense of the owners, and now are only metered when taps larger than usual are requested for their supply.

As the time when a full supply of water through the New Aqueduct will be obtained is still several years hence, and to preserve this supply, when obtained, for the future increasing wants of new buildings, I would recommend that some regular amount be appropriated to obtain and place meters in these several buildings, so that the amount of water used can be regularly known and waste, if any, stopped, and if consumption is large, paid for by meter rates.

My experience has shown that at present meter rates the consumption in a large number of the above class of houses would make the bills for water from twice to three times their present charges.

The relaying of the mains along the water-front and replacing of taps and connections with the houses, and the relaying of mains in a few places in the city, where they are now over seven feet deep, will to a great extent provide for the weak places in the present system of distribution.

The placing of meters and examinations will show the weak places in the house plumbing, and I have no doubt that with the extra force called for on repairs the Department will be able to keep up with breaks or leaks that may occur when the New Aqueduct and Storage Reservoirs are completed.

The increased pressure will be gradual, depending largely on the amount of storage provided; the pressures throughout the city will be more equable than they are at present, as between day and night, or when the gates are opened for fire purposes, the present variation of twenty pounds pressure being very hard on pipe joints and taps.

NINETY-EIGHTH STREET, 1887.

Performance of High Service Pumping Engines at Ninety-eighth Street Engine-house.

NUMBER OF DAYS PUMPING.	NUMBER OF STROKES.	HEIGHT PUMPED, FEET.	NUMBER OF GALLONS PUMPED.	POUNDS OF COAL CONSUMED.	GALLONS OF OIL EXPENDED.	POUNDS OF WASTE EXPENDED.
365	28,278,152	60	3,084,271,708	3,614,889	420	375
Average per month.	2,356,512	60	257,022,642	301,240	.....	.....

Average duty, 42,759,400 pounds raised 1 foot with 100 pounds of coal.
Average amount pumped daily, 8,450,060 gallons.
Average cost of pumping 1,000,000 gallons 60 feet high, \$5.26.

HIGH BRIDGE, 1887.

Performance of High Service Pumping Engines at High Bridge.

NUMBER OF DAYS PUMPING.	NUMBER OF STROKES.	HEIGHT PUMPED, FEET.	NUMBER OF GALLONS PUMPED.	POUNDS OF COAL CONSUMED.	GALLONS OF OIL EXPENDED.	POUNDS OF WASTE EXPENDED.
365	30,234,820	100	2,117,472,700	3,757,350	551	365
Average per month.	2,519,568	100	176,456,058	313,112	.....	.....

Average duty, 47,477,700 pounds raised 1 foot with 100 pounds of coal.
Average amount pumped daily, 5,861,295 gallons.
Average cost of pumping 1,000,000 gallons 100 feet high, \$6.64.

PERMITS TO OPEN STREETS ISSUED IN 1887.

Equitable Gas-light Company.

- First avenue, between Twenty-third and Thirty-fourth streets.
- South Fifth avenue, between Canal and Third streets.
- Tenth avenue, between Fourteenth and Thirty-first streets.
- Third avenue, between Fourteenth and Thirty-eighth streets.
- Broome street, between Bowery and Pitt street.
- Delancey street, between Bowery and Pitt street.
- Rivington street, between Bowery and Pitt street.
- Stanton street, between Bowery and Pitt street.
- Division street, between Bowery and Rutgers street.
- Essex street, between Grand and Houston streets.
- Ludlow street, between Grand and Houston streets.
- Prince street, between Bowery and Macdougall street.
- Houston street, between Bowery and Hudson street.
- Spring street, between Bowery and Hudson street.
- Twenty-second street, between Eighth and Tenth avenues.
- Fifty-eighth street, between Avenue A and Eighth avenue.
- Twentieth street, between Broadway and Sixth avenue.
- Fourth avenue, between Bowery and Sixth street.
- Sixth avenue, between Third and Carmine streets.
- Carmine street, between Sixth avenue and Bleecker street.
- Eighteenth street, between Sixth and Seventh avenues.
- Ninth avenue, between Fifty-seventh and Seventy-second streets.
- Tenth avenue, between Fifty-eighth and Seventy-second streets.
- Fifty-ninth street, between Eighth and Tenth avenues.
- Sixtieth street, between Eighth and Tenth avenues.
- Sixty-first street, between Eighth and Tenth avenues.
- Sixty-second street, between Eighth and Tenth avenues.
- Sixty-third street, between Eighth and Tenth avenues.
- Sixty-fourth street, between Eighth and Tenth avenues.
- Second street, between Bowery and Avenue C.
- Fifth street, between Bowery and Avenue C.
- Seventh street, between Second avenue and Avenue A.
- Tenth street, between Third avenue and Avenue A.
- Avenue B, between Fourteenth and Seventeenth streets.
- Twenty-second street, between First and Third avenues.
- Fifty-third street, between First and Third avenues.
- Fifty-fourth street, between First and Third avenues.
- Mulberry street, between Broome and Bleecker streets.
- Charles street, between Greenwich avenue and West street.
- Tenth street, between Greenwich avenue and West street.
- West street, between Gansevoort and Canal streets.
- Gansevoort street, between Hudson and West streets.
- Washington street, between Little West Twelfth and Christopher streets.
- Jane street, between Greenwich and Thirteenth avenues.
- Eleventh street, between Second and Fourth avenues.
- Little West Twelfth street, between West and Hudson streets.
- Sixty-seventh street, between First and Third avenues.
- Forty-sixth street, between Third and Lexington avenues.
- Seventeenth street, between Ninth and Tenth avenues.
- Ninth avenue, between Fourteenth and Thirty-first streets.
- Ninth street, between First and Third avenues.
- Fifty-first street, between Ninth and Tenth avenues.
- Forty-third street, between Eighth and Tenth avenues.
- Forty-fifth street, between Eighth and Ninth avenues.
- Forty-sixth street, between Eighth and Ninth avenues.
- Fiftieth street, between Eighth and Tenth avenues.
- Fifty-second street, between Eighth and Ninth avenues.
- Fifty-fifth street, between Eighth and Ninth avenues.
- Fifty-sixth street, between Eighth and Ninth avenues.
- Fifty-seventh street, between Eighth and Ninth avenues.
- Thirtieth street, between First and Third avenues.
- Thirty-second street, between Second and Third avenues.
- Ninth street, between Avenue A and First avenue.
- Morton street, between Bleecker and Hudson streets.
- Stuyvesant street, between Third and Second avenues.
- Leroy street, between Bleecker and Hudson streets.
- Sixteenth street, between Irving place and Fourth avenue.
- Fifteenth street, between Seventh and Eighth avenues.
- Eighteenth street, between Eighth and Ninth avenues.
- Twenty-sixth street, between Eighth and Tenth avenues.
- Twenty-seventh street, between Eighth and Tenth avenues.
- Horatio street, between Greenwich avenue and West street.
- Twelfth street, between Greenwich avenue and West street.
- Sixteenth street, between First avenue and Irving place.
- Twenty-ninth street, between Broadway and Sixth avenue.
- Waverly place, between Sixth avenue and Broadway.
- Bedford street, between Houston and Christopher streets.
- Downing street, between Varick and Bleecker streets.
- Sixty-fifth street, between Eighth and Tenth avenues.
- Thirty-fourth street, between First and Third avenues.
- Eleventh street, between Hudson and West streets.
- Bank street, between Hudson and West streets.
- Perry street, between Hudson and West streets.
- Fifty-ninth street, between First and Eighth avenues.
- Madison avenue, between Twenty-third and Seventy-fourth streets.
- Park avenue, between Fifty-seventh and Seventy-fourth streets.
- Lexington avenue, between Twenty-third and Seventy-fourth streets.
- Sixteenth street, between Sixth and Ninth avenues.
- Twenty-first street, between Sixth and Ninth avenues.
- Twenty-second street, between Sixth and Eighth avenues.
- Boulevard, between Fifty-ninth and Sixty-fourth streets.
- Eighth avenue, between Fifty-eighth and Fifty-ninth streets.
- Forty-sixth street, between First and Third avenues.
- Fifty-sixth street, between First and Third avenues.
- South side Twentieth street, between Sixth and Ninth avenues.
- Forty-sixth street, between First and Third avenues.
- Fifty-sixth street, between First and Third avenues.
- Twentieth street, between Sixth and Ninth avenues.
- Thirty-eighth street, between Seventh and Eighth avenues.

Standard Gas-light Company.

- One Hundred and Twenty-ninth street, between Third and Fourth avenues.
- Eighty-sixth street, between First and Fourth avenues.
- Eighty-sixth street, between Second and Fourth avenues.
- Eighty-sixth street, between First avenue and Avenue B.
- One Hundred and Thirtieth street, between Third and Fourth avenues.
- One Hundred and Thirtieth street, between Fourth and Fifth avenues.
- Manhattan street, from One Hundred and Twenty-fifth street west to Twelfth avenue.
- Eighty-seventh street, between First avenue and Avenue B.
- Avenue A, between Eighty-sixth and Eighty-eighth streets.

Avenue B, between Eighty-sixth and Eighty-eighth streets.
Tenth avenue, between One Hundred and Twenty-third and One Hundred and Twenty-fifth streets.
Eighty-seventh street, between Second and Fourth avenues.
Eighty-eighth street, between Second and Fourth avenues.
Eighty-ninth street, between Second and Fourth avenues.
Ninetieth street, between Second and Fourth avenues.
Ninety-first street, between Second and Fourth avenues.
Pleasant avenue, between One Hundred and Fourteenth and One Hundred and Fifteenth streets.
Pleasant avenue, between One Hundred and Fifteenth and One Hundred and Twenty-fourth streets.
One Hundred and Fifteenth street, between East river and Pleasant avenue.
First avenue, between Eighty-sixth and One Hundred and Fifteenth streets.
Madison avenue, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Lexington avenue, between Eighty-sixth and Ninety-third streets.
Lexington avenue, between One Hundred and First and One Hundred and Tenth streets.
Fifth avenue, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
St. Nicholas avenue, between One Hundred and Thirteenth and One Hundred and Twenty-fourth streets.
Ninety-second street, between Second and Fourth avenues.
Ninety-third street, between Second and Fourth avenues.
One Hundred and First street, between Second and Fourth avenues.
One Hundred and Second street, between Second and Fourth avenues.
One Hundred and Third street, between East river and First avenue.
One Hundred and Third street, between First and Second avenues.
One Hundred and Third street, between Second and Fourth avenues.
One Hundred and Fourth street, between Second and Fourth avenues.
One Hundred and Fifth street, between Second and Fourth avenues.
One Hundred and Sixth street, between Second and Fourth avenues.
One Hundred and Seventh street, between Second and Fourth avenues.
One Hundred and Eighth street, between Second and Fourth avenues.
One Hundred and Ninth street, between Second and Fourth avenues.
One Hundred and Tenth street, between Second and Fourth avenues.
One Hundred and Eleventh street, between Second and Fourth avenues.
One Hundred and Twelfth street, between Second and Third avenues.
One Hundred and Thirteenth street, between Second and Third avenues.
One Hundred and Fourteenth street, between Pleasant and First avenues.
One Hundred and Fifteenth street, between First and Fourth avenues.
One Hundred and Sixteenth street, between First and Fourth avenues.
One Hundred and Seventeenth street, between East river and First avenue.
One Hundred and Seventeenth street, between Second and Fourth avenues.
One Hundred and Eighteenth street, between East river and Pleasant avenue.
One Hundred and Eighteenth street, between Pleasant and First avenues.
One Hundred and Eighteenth street, between Second and Fourth avenues.
One Hundred and Nineteenth street, between Second and Fourth avenues.
One Hundred and Nineteenth street, between East river and First avenue.
One Hundred and Twentieth street, between East river and First avenue.
One Hundred and Twenty-first street, between East river and Pleasant avenue.
One Hundred and Twenty-second street, between Pleasant and First avenue.
One Hundred and Twenty-third street, between Pleasant and First avenue.
One Hundred and Twenty-third street, between Mount Morris Park and First avenue.
One Hundred and Twenty-third street, between Mount Morris Park and St. Nicholas avenue.
One Hundred and Twenty-fourth street, between First and New avenues.
One Hundred and Twenty-sixth street, between First and Eighth avenues.
One Hundred and Twenty-seventh street, between Second and Fourth avenues.
One Hundred and Twenty-seventh street, between Second and Eighth avenues.
One Hundred and Twenty-eighth street, between Second and Fourth avenues.
One Hundred and Twenty-eighth street, between Fourth and Eighth avenues.
First avenue, west side, between One Hundred and Fifteenth and One Hundred and Twenty-fifth streets.
First avenue, east side, between One Hundred and Fifteenth and One Hundred and Twenty-fifth streets.
Second avenue, east side, between Eighty-sixth and One Hundred and Twenty-eighth streets.
Second avenue, west side, between Eighty-sixth and One Hundred and Twenty-eighth streets.
Third avenue, west side, between Eighty-sixth and One Hundred and Twenty-fifth streets.
Third avenue, east side, between Eighty-sixth and One Hundred and Twenty-fifth streets.
Third avenue, east side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Third avenue, west side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Seventh avenue, west side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Seventh avenue, east side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Eighth avenue, west side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Eighth avenue, east side, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Eighth avenue, west side, between One Hundred and Twenty-third streets.
Eighth avenue, east side, between One Hundred and Twenty-third streets.
One Hundred and Twenty-fifth street, between First and New avenues.
One Hundred and Twenty-fifth street, between First and New avenues.
Ninth avenue, between Fortieth and Sixty-fifth streets.
Sixth avenue, between Fourteenth and Fifteenth streets.
One Hundred and Thirtieth street, between First and Fourth avenues.
One Hundred and Fourteenth street, between First and Fourth avenues.
First avenue, between One Hundred and Fifteenth and Thirty-second streets.
First avenue, between Eighty-sixth and Fourteenth streets.
Second avenue, between Eighty-sixth and Fourteenth streets.
Third avenue, between Eighty-sixth and Fourteenth streets.
Lexington avenue, between Eighty-sixth and Twenty-first streets.
Irving place, between Twentieth and Fourteenth streets.
Fourth avenue, between Eighty-sixth and Fifty-seventh streets.
Fourth avenue, between Forty-second and Fourteenth streets.
Madison avenue, between Eighty-sixth and Twenty-third streets.
Madison avenue, between Fifty-seventh and Sixty-seventh streets.
Broadway, between Union Square and Thirty-fourth street.
Eighty-fourth street, between Avenue A and Fifth avenue.
Eighty-second street, between Second and Fourth avenues.
Eightieth street, between First and Madison avenues.
Seventy-eighth street, between First and Madison avenues.
Seventy-sixth street, between Avenue A and Fifth avenue.
Seventy-fifth street, between Avenue A and Fifth avenue.
Seventy-fourth street, between First and Fifth avenues.
Seventy-third street, between First and Fifth avenues.
Seventy-second street, between First and Fifth avenues.
Seventy-first street, between First and Fourth avenues.
Seventieth street, between First and Fifth avenues.
Sixty-ninth street, between First and Fifth avenues.
Sixty-eighth street, between First and Fifth avenues.
Sixty-seventh street, between Third and Madison avenues.
Sixty-sixth street, between First and Fifth avenues.
Sixty-fifth street, between First and Fifth avenues.
Sixty-fourth street, between First and Fifth avenues.
Sixty-third street, between Avenue A and Madison avenue.
Sixty-second street, between Avenue A and First avenue.
Sixty-first street, between First and Sixth avenues.
Sixty-eighth street, between Avenue A and First avenue.
Sixty-eighth street, between First and Sixth avenues.
Sixty-seventh street, between Avenue A and Madison avenue.
Sixty-fifth street, between Avenue A and Madison avenue.
Sixty-fourth street, between First and Fourth avenues.
Sixty-third street, between First and Sixth avenues.
Sixty-second street, between East river and Sixth avenue.
Sixty-first street, between East river and Sixth avenue.
Sixtieth street, between East river and First avenue.
Sixtieth street, between East river and First avenue.
Sixtieth street, between East river and First avenue.

Forty-ninth street, between East river and Sixth avenue.
Forty-eighth street, between East river and Lexington avenue.
Forty-eighth street, between Madison and Sixth avenues.
Forty-seventh street, between First and Lexington avenues.
Forty-seventh street, between Madison and Sixth avenues.
Forty-sixth street, between First and Lexington avenues.
Forty-sixth street, between Sixth and Madison avenues.
Forty-fifth street, between First and Lexington avenues.
Forty-fifth street, between Madison and Sixth avenues.
Forty-fourth street, between First and Lexington avenues.
Forty-fourth street, between Vanderbilt and Madison avenues.
Forty-third street, between Vanderbilt and Sixth avenues.
Fortieth street, between First and Sixth avenues.
Sixth avenue, between Fiftieth and Fifty-ninth streets.
One Hundred and Seventeenth street, between First and Second avenues.
One Hundred and Eighteenth street, between First and Second avenues.
One Hundred and Nineteenth street, between First and Second avenues.
One Hundred and Twentieth street, between First and Fourth avenues.
One Hundred and Twenty-first street, between First and Fourth avenues.
One Hundred and Twenty-second street, between First and Fourth avenues.
Lexington avenue, between One Hundred and Twenty-fifth and One Hundred and Thirtieth streets.
Second avenue, between Fourteenth and Fifty-seventh streets.
Avenue C, between Fourteenth and Eighteenth streets.
Avenue B, between Fourteenth and Twenty-first streets.
Avenue A, between Fourteenth and Twenty-third streets.
First avenue, between Fourteenth and Eighteenth streets.
East Livingston place, between Fifteenth and Seventeenth streets.
East Rutherford place, between Fifteenth and Seventeenth streets.
Second avenue, between Fourteenth and Eighty-sixth streets.
East Gramercy place, between Twentieth and Twenty-first streets.
West Gramercy place, between Twentieth and Twenty-first streets.
Fourth avenue, between Fourteenth and Fortieth streets.
Third avenue, between Fourteenth and Eighty-sixth streets.
Fourteenth street, between East river and Avenue D.
Fourteenth street, between Avenue C and Avenue D.
Fourteenth street, between Avenue C and First avenue.
Fourteenth street, between First and Sixth avenues.
Fifteenth street, between First and Fourth avenues.
Fifteenth street, between Broadway and Sixth avenue.
Sixteenth street, between East river and First avenue.
Sixteenth street, between First and Lexington avenues.
Sixteenth street, between Rutherford place and Fourth avenue.
Sixteenth street, between Broadway and Sixth avenue.
Seventeenth street, between East river and First avenue.
Seventeenth street, between First and Sixth avenues.
Eighteenth street, between Avenue C and storage tank.
Eighteenth street, between storage tank and First avenue.
Eighteenth street, between First and Sixth avenues.
Nineteenth street, between East river and First avenue.
Nineteenth street, between First and Sixth avenues.
One Hundred and Twenty-ninth street, between Fourth and Eighth avenues.
One Hundred and Eleventh street, between Third and Fourth avenues.
One Hundred and Twelfth street, between Third and Fourth avenues.
Fifth avenue, between One Hundred and Thirtieth and One Hundred and Thirty-fifth streets.
Sixth avenue, between One Hundred and Thirtieth and One Hundred and Thirty-fifth streets.
Seventh avenue, between One Hundred and Thirtieth and One Hundred and Thirty-fifth streets.
Eighth avenue, between One Hundred and Thirtieth and One Hundred and Thirty-fifth streets.
Madison avenue, between One Hundred and Thirtieth and One Hundred and Thirty-fifth streets.
Forty-second street, between First and Second avenues.
One Hundred and Thirty-first street, between Lexington and Eighth avenues.
One Hundred and Thirty-second street, between Lexington and Eighth avenues.
One Hundred and Thirty-third street, between Lexington and Eighth avenues.
One Hundred and Thirty-fourth street, between Lexington and Eighth avenues.
One Hundred and Thirty-fifth street, between Lexington and Eighth avenues.
Pleasant avenue, between One Hundred and Fourteenth and One Hundred and Fifteenth streets.
One Hundred and Fourteenth street, between Pleasant and First avenues.
Thirty-second street, between First avenue and storage tank.
Fifteenth street, between First avenue and East river.
One Hundred and Thirtieth street, between Fifth and Eighth avenues.
One Hundred and Sixteenth street, between First and Pleasant avenues.
One Hundred and Sixteenth street, between East river and Pleasant avenue.
Seventh avenue, from Greenwich avenue to Fifty-ninth street.
Thirty-first street, between Second and Third avenues.
Eighty-eighth street, Avenue B to First avenue.
St. Nicholas avenue, between One Hundred and Twenty-fourth and One Hundred and Twenty-fifth streets.
Thirty-fourth street, between East river and First avenue.
Thirty-fifth street, between First and Sixth avenues.
Thirty-sixth street, between First and Sixth avenues.
Thirty-seventh street, between First and Sixth avenues.
Thirty-eighth street, between East river and First avenue.
Seventy-seventh street, between First avenue and East river.
Thirty-ninth street, between First avenue and East river.
Twenty-sixth street, between First and Third avenues.
Twenty-sixth street, between Lexington and Sixth avenues.
Thirty-first street, between First and Second avenues.
Thirty-first street, between Third and Sixth avenues.
Thirty-second street, between Lexington and Sixth avenues.
Thirty-fourth street, between First and Lexington avenues.
Thirty-fourth street, between Fourth and Sixth avenues.
Thirty-eighth street, between First and Fourth avenues.
Thirty-eighth street, between Madison and Sixth avenues.
Thirty-ninth street, between First and Fourth avenues.
Fifty-seventh street, between Madison and Sixth avenues.
Fifty-seventh street, between Madison and Sixth avenues.
Sixty-third street, between Madison and Fifth avenues.
Sixty-seventh street, between Madison and Fifth avenues.
Seventy-seventh street, between First and Fourth avenues.
Seventy-seventh street, between Fourth and Fifth avenues.
Seventy-eighth street, between Avenue A and First avenue.
Eighty-second street, between First and Second avenues.
Fourth avenue, between Forty-ninth and Fifty-seventh streets.
Fourth avenue, between Fortieth and Forty-second streets.
Twentieth street, between East river and First avenue.
Twentieth street, between First and Sixth avenues.
Twenty-first street, between Avenue B and First avenue.
Twenty-first street, between First and Sixth avenues.
Twenty-second street, between East river and First avenue.
Twenty-second street, between First and Sixth avenues.
Twenty-third street, between East river and First avenue.
Twenty-third street, between First and Sixth avenues.
Twenty-fourth street, between East river and First avenue.
Twenty-fourth street, between First and Madison avenues.
Twenty-fourth street, between Fifth and Sixth avenues.
Twenty-fifth street, between East river and Sixth avenue.
Twenty-fifth street, between First and Madison avenues.
Twenty-fifth street, between Fifth and Sixth avenues.
Twenty-sixth street, between East river and First avenue.
Twenty-seventh street, between East river and First avenue.
Twenty-seventh street, between First and Sixth avenues.
Twenty-eighth street, between East river and Sixth avenue.
Twenty-eighth street, between First and Sixth avenues.
Twenty-ninth street, between First and Sixth avenues.
Twenty-ninth street, between East river and First avenue.
Thirtieth street, between First and Sixth avenues.
Thirtieth street, between East river and First avenue.
Thirty-first street, between East river and First avenue.

Thirty-second street, between storage tank and First avenue.
 Thirty-second street, between First and Third avenues.
 Thirty-third street, between East river and First avenue.
 Thirty-third street, between First and Sixth avenues.
 Second avenue, between Fifty-seventh and Eighty-sixth streets.
 Lexington avenue, between One Hundred and Tenth and One Hundred and Twenty-fifth streets.

Consolidated Gas-light Company.

Eleventh avenue, between Sixty-first and Sixty-seventh streets.
 Ninth avenue, between One Hundredth and One Hundred and First streets.
 Eightieth street, between Ninth and Riverside avenues.
 Sixty-first street, between Eleventh and Twelfth avenues.
 Eighty-second street, between Avenues A and B.
 Eleventh avenue, between Seventy-ninth and Eighty-sixth streets.
 Eighth avenue, between One Hundred and Sixteenth and One Hundred and Twenty-first streets.
 One Hundred and Seventeenth street, between Eighth and St. Nicholas avenues.
 One Hundred and First street, between Eighth and Ninth avenues.
 Sixty-second street, between Tenth and Eleventh avenues.
 St. Nicholas avenue, between One Hundred and Fifty-fifth and One Hundred and Sixty-first streets.
 Ninth avenue, between Seventy-ninth and One Hundred and Tenth streets.
 Ninety-fifth street, between Second and Third avenues.
 Both sides Ninety-sixth street, between Second and Third avenues.
 Boulevard, between One Hundred and Fifty-second and One Hundred and Fifty-fifth streets.
 Twenty-fifth street, between Eleventh avenue and North river.
 Thirteenth avenue, between Twenty-fifth and Twenty-sixth streets.
 Ninety-sixth street, between Ninth and Riverside avenues.
 Forty-ninth street, between First avenue and East river.
 One Hundred and Fourth street, between First avenue and East river.
 One Hundred and Eighty-fifth street, between Tenth avenue and Kingsbridge road.
 One Hundred and Fifteenth street, between Seventh and Eighth avenues.
 Lispenard street, between Broadway and West Broadway.
 Tenth avenue, between Eighty-ninth and Ninetieth streets.
 One Hundred and Thirteenth street, between Seventh and Eighth avenues.
 Ninth avenue, between One Hundred and Twenty-third and One Hundred and Twenty-fifth streets.
 Tenth avenue, between One Hundred and Twenty-fourth and One Hundred and Twenty-fifth streets.
 Edgcomb avenue, between One Hundred and Thirty-fifth and One Hundred and Thirty-seventh streets.
 One Hundred and Forty-second street, between Seventh and Eighth avenues.
 One Hundred and Thirty-seventh street, between Eighth and Edgcomb avenues.
 One Hundred and Forty-fourth street, between Seventh and Eighth avenues.
 One Hundred and Twentieth street, between Sixth and Seventh avenues.
 One Hundred and Seventh street, between Fourth and Madison avenues.
 First avenue, between Eighty-ninth and Ninetieth streets.
 Fifth avenue, between One Hundred and Twenty-fourth and One Hundred and Thirty-fifth streets.
 One Hundred and Twentieth street, between Fifth and Mount Morris avenues.
 Mount Morris avenue, between One Hundred and Twentieth and One Hundred and Twenty-fourth streets.
 One Hundred and Twenty-fourth street, between Mount Morris and Fifth avenues.
 One Hundred and Thirty-fifth street, between Fifth and Seventh avenues.
 One Hundred and Eleventh street, between First and Fifth avenues.
 Manhattan avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets.
 Eighty-third street, between Eighth and Ninth avenues.
 Fifth avenue, between One Hundred and Tenth and One Hundred and Twentieth streets.
 One Hundred and Tenth street, between Tenth and Eleventh avenues.
 Boulevard, between One Hundred and Thirty-eighth and One Hundred and Fifty-fifth streets.
 Eighty-sixth street, between Eighth and Ninth avenues.
 Madison avenue, between Eighty-first and Eighty-second streets.
 Seventieth street, between West End and Twelfth avenues.
 West End avenue, between Seventieth and Seventy-first streets.
 One Hundred and First street, between First and Second avenues.
 Sixty-eighth street, between Eighth and Ninth avenues.
 Eighty-sixth street, between Ninth and Tenth avenues.
 Seventy-seventh street, between Ninth and Tenth avenues.
 One Hundred and Twentieth street, between Seventh and Ninth avenues.
 One Hundred and Forty-fourth street, between Convent and Tenth avenues.
 Eighty-second street, between West End and Riverside avenues.
 Convent avenue, between One Hundred and Forty-third and One Hundred and Forty-fifth streets.
 Fourth avenue, between One Hundred and Sixteenth and One Hundred and Eighteenth streets.
 One Hundred and Seventeenth street, between Fourth and Madison avenues.
 One Hundred and Eighteenth street, between Fourth and Madison avenues.
 One Hundred and Twenty-fifth street, between Ninth and Tenth avenues.
 One Hundred and Seventh street, between First avenue and East river.
 Ninety-first street, between Eighth and Ninth avenues.
 Ninety-eighth street, between Ninth and Tenth avenues.
 One Hundred and Second street, from Tenth avenue westward.
 One Hundred and Twentieth street, between Fifth and Sixth avenues.
 One Hundred and Twentieth street, between Sixth and Mount Morris avenues.
 One Hundred and Twenty-first street, between Sixth and Mount Morris avenues.
 One Hundred and Twenty-second street, between Sixth and Mount Morris avenues.
 One Hundred and Twenty-sixth street, between Second avenue and East river.
 Eighty-fourth street, between Lexington avenue and East river.
 Ninety-fifth street, between Lexington and Fourth avenues.
 Avenue B, between Eighty-fifth and Eighty-sixth streets.
 Ninety-sixth street, between Third and Lexington avenues.
 Eighty-eighth street, between Boulevard and Riverside avenue.
 Ninetieth street, between Boulevard and Riverside avenue.
 Ninth avenue, between Ninety-first and Ninety-second streets.
 Eighty-ninth street, between Eighth and Ninth avenues.
 Ninetieth street, between Ninth and Tenth avenues.
 Ninety-first street, between Ninth and Tenth avenues.
 St. Nicholas avenue, between One Hundred and Twenty-seventh and One Hundred and Twenty-eighth streets.
 Eleventh avenue, between Thirty-first and Thirty-second streets.
 Theatre alley, south from Beekman street.
 St. Nicholas avenue, between One Hundred and Forty-sixth and One Hundred and Forty-seventh streets.
 One Hundred and First street, between Third and Lexington avenues.
 Eighty-fifth street, between Boulevard and Riverside Drive.
 Seventy-fourth street, between Avenue A and East river.
 First avenue, between One Hundred and Eleventh and One Hundred and Twelfth streets.
 Twenty-first street, between Tenth and Eleventh avenues.
 Hamilton place, between One Hundred and Thirty-eighth and One Hundred and Forty-fifth streets.
 One Hundred and Sixty-second street, east of Tenth avenue.
 One Hundred and Sixty-fifth street, east of Tenth avenue.
 First avenue, at Thirty-third street, and eastward in Thirty-third street, north side, 125 feet.
 Eighty-eighth street, between Avenue B and East river.
 Greene street, between Houston and Bleecker streets.
 Fourth avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets.
 Seventy-sixth street, between West End avenue and Riverside Drive.
 Eighty-eighth street, between Avenues A and B.
 Fifty-third street, between Tenth and Eleventh avenues.
 Tenth avenue, 75 feet south of Fifty-third street to Fifty-fourth street.
 Seventy-seventh street, between Eighth and Ninth avenues.
 Ninth avenue, between Eighty-eighth and Eighty-ninth streets.
 Madison avenue, between Eightieth and Eighty-first streets.
 Across Sixth avenue, at Nineteenth street, side of line of mains laid in Nineteenth street, north side, Nineteenth street to Sixth avenue, 150 feet.
 One Hundred and Twenty-eighth street, between First and Second avenues.
 One Hundred and Forty-first street, between Seventh and St. Nicholas avenues.
 Edgcomb avenue, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.
 Fourth avenue, between One Hundred and First and One Hundred and Second streets.

One Hundred and First street, between Lexington and Fourth avenues.
 One Hundred and Twenty-eighth street, between Eighth and St. Nicholas avenues.
 One Hundred and Thirty-third street, between Eighth and St. Nicholas avenues.
 One Hundred and Fifty-fifth street, between Eighth and St. Nicholas avenues.
 Seventy-sixth street, between Avenue A and East river.
 One Hundred and Forty-second street, Hamilton place to Boulevard.
 Eighty-eighth street, between Fourth and Fifth avenues.
 Manhattan avenue, between One Hundred and Twentieth and One Hundred and Twenty-second streets.
 Tenth avenue, between One Hundred and Fifty-seventh and One Hundred and Fifty-eighth streets.
 Prince street, between Marion and Mulberry streets.

The Consolidated Telegraph and Electrical Subway Company.

Fifty-eighth street, between Third and Eighth avenues.
 Broadway, between Fourteenth and Thirty-fourth streets.
 Spring street, between Crosby and West streets.
 Greene street, between Spring and Houston streets.
 Houston street, between Chrystie and Hancock streets.
 Grand streets, between Chrystie and Crosby streets.
 Twenty-third street, between Fifth and Sixth avenues.
 Twenty-fourth street, between Fifth and Sixth avenues.
 Twenty-fifth street, between Fifth and Sixth avenues.
 Twenty-sixth street, between Fifth and Sixth avenues.
 Eighteenth street, between Broadway and Sixth avenue.
 Nineteenth street, between Broadway and Sixth avenue.
 Twentieth street, between Broadway and Sixth avenue.
 Twenty-first street, between Broadway and Sixth avenue.
 Twenty-second street, between Broadway and Sixth avenue.
 Twenty-seventh street, between Fifth and Sixth avenues.
 College place, between Chambers and Murray streets.
 College place, between Barclay and Murray streets.
 Barclay street, between College place and Church street.
 Church street, between Barclay and Fulton streets.
 Church street, between Fulton street and Exchange place.
 Cortlandt street, between Broadway and Church street.
 Twenty-eighth street, between Fifth and Sixth avenues.
 Twenty-ninth street, between Fifth and Sixth avenues.
 Thirtieth street, between Broadway and Sixth avenue.
 Thirty-first street, between Fifth and Sixth avenues.
 Thirty-second street, between Fifth and Sixth avenues.
 Exchange place, between Church and Broad streets.
 Broad street, between Exchange place and Wall street.
 Sixth avenue, between Eighteenth and Forty-fifth streets.
 Twenty-third street, between Broadway and Fourth avenue.
 Twenty-sixth street, between Broadway and Fifth avenue.
 Twenty-seventh street, between Broadway and Fifth avenue.
 Twenty-eighth street, between Broadway and Fifth avenue.
 Twenty-ninth street, between Broadway and Fifth avenue.
 Thirtieth street, between Broadway and Fifth avenue.
 Thirty-first street, between Broadway and Fifth avenue.
 Thirty-second street, between Broadway and Fifth avenue.
 North side Forty-second street and south side Thirty-third street, between east sides Sixth and Seventh avenues.
 Sixth avenue, between Fourth and Twenty-first streets.
 Fourth street, between Fifth and Sixth avenues.
 South Fifth avenue, between Fourth and Canal streets.
 Seventh avenue, between Greenwich avenue and Fifty-ninth street.
 Broadway, between Thirty-fourth and Forty-second streets.
 Thirty-second street, between Broadway and Fifth avenue.
 Thirty-third street, between Broadway and Fifth avenue.
 Thirty-fourth street, between Broadway and Fifth avenue.
 Thirty-fifth street, between Broadway and Fifth avenue.
 Thirty-sixth street, between Broadway and Fifth avenue.
 Thirty-seventh street, between Broadway and Fifth avenue.
 Madison avenue, between Twenty-third and Thirty-fourth streets.
 Twenty-sixth street, between Madison and Fifth avenues.
 Twenty-seventh street, between Madison and Fifth avenues.
 Twenty-eighth street, between Madison and Fifth avenues.
 Twenty-ninth street, between Madison and Fifth avenues.
 Thirtieth street, between Madison and Fifth avenues.
 Thirty-first street, between Madison and Fifth avenues.
 Thirty-second street, between Madison and Fifth avenues.
 Thirty-third street, between Madison and Fifth avenues.
 Thirty-fourth street, between Madison and Fifth avenues.
 Thirty-fifth street, between Fifth and Sixth avenues.
 Thirty-sixth street, between Third and Fifth avenues.
 Madison avenue, between Thirty-fourth and Forty-fifth streets.
 Thirty-seventh street, between Fourth and Fifth avenues.
 Broadway, between Cortlandt street and Exchange place.
 Fortieth street, between Broadway and Fifth avenue.
 Forty-second street, between Broadway and Fifth avenue.
 Forty-third street, between Fourth and Fifth avenues.
 Forty-fourth street, between Fifth and Madison avenues.
 Forty-fifth street, between Fifth and Madison avenues.
 Fortieth street, between Fifth and Madison avenues.
 Forty-second street, between Fifth and Madison avenues.
 Forty-third street, between Fifth and Sixth avenues.
 Forty-fourth street, between Fifth and Sixth avenues.
 Forty-fifth street, between Fifth and Sixth avenues.
 Forty-sixth street, between Fifth and Sixth avenues.
 Forty-seventh street, between Fifth and Sixth avenues.
 Forty-eighth street, between Fifth and Sixth avenues.
 Forty-ninth street, between Fifth and Sixth avenues.
 Fifth avenue, between Forty-second and Fifty-ninth streets.
 Eighteenth street, between First and Seventh avenues.
 Thirty-eighth street, between Eighth and Lexington avenues.
 Fifty-third street, between Sixth and Seventh avenues.
 Greene street, between Houston and Bleecker streets.
 Fifty-third street, between Fifth and Eighth avenues.
 Forty-fifth street, between Sixth and Eighth avenues.
 Fifty-ninth street, between Broadway and Fifth avenue.
 Fifth avenue, at Eighteenth street, at Thirty-eighth street, and at Fifty-eighth street.
 Forty-eighth street, between Fifth and Eighth avenues.
 Forty-ninth street, between Fifth and Eighth avenues.
 Fiftieth street, between Fifth and Madison avenues.
 Fifty-first street, between Fifth and Seventh avenues.
 Fifty-second street, between Fifth and Eighth avenues.
 Battery place, between Broadway and Greenwich street.
 Whitehall street, between Bridge and Water streets.
 Seventh avenue, between Forty-fifth and Fifty-ninth streets.
 Dey street, between Broadway and 350 feet west.
 Fiftieth street, between Fifth and Sixth avenues.
 Exchange place, between Broad and William streets.
 St. Nicholas avenue, between One Hundred and Twenty-fourth and One Hundred and Twenty-fifth streets.
 Across Fifth avenue, at Twenty-seventh street.

New York Steam Company.

Reade street, between Broadway and West street.
 College place and Broadway, between Warren and Reade streets.
 Washington, south from Warren to No. 28 Washington street.

East sidewalk of Fifty-fourth street, between Fifth and Madison avenues.
Dey street, between Broadway and Greenwich street.
Fifty-eighth street, between Fifth and Madison avenues.
Sixty-fourth street, between Fifth and Madison avenues.
Sixty-sixth street, between Fourth and Madison avenues.
Sixty-second street, between Fourth and Madison avenues.

New York Fire Department.

Eighteenth street, between 50 feet west and 50 feet east of Sixth avenue.
One Hundred and Twenty-second street, between Sixth and Mount Morris avenues.

Edison Electric Illuminating Company.

Exchange place, between Broad and William streets.
Dey street, between Broadway and 350 feet west.

Joseph Doelger's Sons and John Kress Brewing Company.

Fifty-fourth street, between No. 211 and East river.

STREETS AND AVENUES IN WHICH WATER-MAINS HAVE BEEN LAID IN 1887.

Twelve-inch Pipe.

One Hundred and Forty-ninth street, between Seventh and Eighth avenues.
One Hundred and Forty-ninth street, between Third and Brook avenues.
Mangin street, between Grand and Houston streets.
Fourth avenue, east side, between Seventy-fifth and Seventy-seventh streets.
Fourth avenue, west side, between One Hundred and Sixteenth and One Hundred and Twentieth streets.
Sixth avenue, west side, between One Hundred and Sixteenth and One Hundred and Nineteenth streets.
Sixth avenue, west side, between One Hundred and Twenty-first and One Hundred and Twenty-second streets.
Seventh avenue, west side, between One Hundred and Thirty-fourth and One Hundred and Forty-ninth streets.
Eighth avenue, between Eighty-fourth and Ninetieth streets.
Ninth avenue, between One Hundred and First and One Hundred and Fourth streets.
Madison avenue, between Eighty-eighth and Ninety-first streets.
Madison avenue, between Ninety-second and Ninety-fourth streets.
Madison avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets.
Riverside avenue, between Ninety-sixth and One Hundred and First streets.
Riverside avenue, between One Hundred and Thirteenth and One Hundred and Twenty-fifth streets.
Broadway, between Riverdale avenue and Church street.
Southern Boulevard, between Division avenue and One Hundred and Forty-fifth street.
Southern Boulevard, between Hull and Jerome avenues.

Six-inch Pipe.

Sixty-second street, between Tenth and Eleventh avenues.
Sixty-fourth street, between First avenue and Avenue A.
Sixty-ninth street, between Eighth and Ninth avenues.
Seventy-third street, between Eleventh and Riverside avenues.
Seventy-fourth street, between Ninth and Tenth avenues.
Seventy-fifth street, between Avenue A and East river.
Seventy-sixth street, between Eighth and Ninth avenues.
Seventy-seventh street, between Eighth and Tenth avenues.
Eighty-eighth street, between Ninth and Tenth avenues.
Eighty-ninth street, between Eighth and Ninth avenues.
Ninety-first street, between Eighth and Ninth avenues.
Ninety-second street, between Ninth and Tenth avenues.
Ninety-sixth street, between Second and Third avenues.
Ninety-seventh street, between Boulevard and Riverside avenue.
One Hundred and First street, between Third and Fourth avenues.
One Hundred and Ninth street, between Fifth and Madison avenues.
One Hundred and Thirteenth street, between Seventh and Eighth avenues.
One Hundred and Thirteenth street, between Boulevard and Riverside avenue.
One Hundred and Fourteenth street, between Fourth and Madison avenues.
One Hundred and Fourteenth street, between Fifth and Sixth avenues.
One Hundred and Seventeenth street, between Fifth and Madison avenues.
One Hundred and Eighteenth street, between Fifth and Sixth avenues.
One Hundred and Twentieth street, between Fifth and Madison avenues.
One Hundred and Twenty-second street, between Lenox and Mount Morris avenues.
One Hundred and Twenty-sixth street, between First and Second avenues.
One Hundred and Twenty-seventh street, between Second avenue and Harlem river.
One Hundred and Thirty-third street, between Eighth and St. Nicholas avenues.
One Hundred and Fortieth street, between Willis and Brook avenues.
One Hundred and Forty-first street, between St. Nicholas and Edgecomb avenues.
One Hundred and Forty-first street, between Tenth avenue and Hamilton place.
One Hundred and Forty-second street, between Seventh and Eighth avenues.
One Hundred and Forty-fourth street, between Tenth avenue and Hamilton Terrace.
One Hundred and Forty-eighth street, between Brook and St. Ann's avenues.
One Hundred and Fifty-sixth street, from Eleventh avenue east 443 feet.
One Hundred and Sixty-first street, from Delmonico place to 100 feet west of Cauldwell avenue.
One Hundred and Sixty-fourth street, between Boston avenue and Delmonico place.
One Hundred and Sixty-ninth street, between Gerard and Walton avenues.
One Hundred and Seventy-fifth street, between East Vanderbilt and Fordham avenues.
One Hundred and Eighty-fourth street, between McComb's Dam road and Sedgwick avenue.
One Hundred and Eighty-fifth street, between Tenth and Audubon avenues.
Sixth avenue, east side, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.
Ninth avenue, east side, between One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.
Tenth avenue, east side, between Ninetieth and Ninety-fourth streets.
Tenth avenue, west side, between Ninety-third and Ninety-sixth streets.
Tenth avenue, both sides, between One Hundred and Seventh and One Hundred and Ninth streets.
Tenth avenue, east side, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.
Eleventh avenue, between Eighty-first and Eighty-third streets.
Eleventh avenue, between One Hundred and Seventy-fifth and One Hundred and Seventy-sixth streets.
Brook avenue, between One Hundred and Thirty-eighth and One Hundred and Forty-fifth streets.
Brook avenue, between One Hundred and Forty-seventh street and Westchester avenue.
Columbia avenue, between Monroe and Jackson avenues.
Convent avenue, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.
Manhattan avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets.
Morris avenue, between Gray and Jane streets.
Jackson avenue, between Columbia and Clay avenues.
Walton avenue, between One Hundred and Forty-ninth and One Hundred and Fiftieth streets.
Westchester avenue, between St. Ann's and Third avenues.
Sedgwick avenue, between Kingsbridge road and Boston avenue.
Meikelham lane, from Betner's lane easterly 674 feet.
Morrison's lane, from Riverdale avenue west 807 feet.
Potter place, between Central avenue and Williamsbridge road.
Washington place, from Independence avenue west 715 feet.

"B" Hydrants set in 1887.

Northeast corner Mangin and Grand streets.
West side Mangin street, between Grand and Broome streets.
Northeast corner Mangin and Broome streets.
West side Mangin street, between Broome and Delancey streets.
Northeast corner Mangin and Delancey streets.
Southeast corner Mangin and Rivington streets.
Northwest corner Mangin and Rivington streets.
Southwest corner Mangin and Stanton streets.

Northeast corner Mangin and Stanton streets.
Southeast corner Mangin and Houston streets.

"A" Hydrants set in 1887.

West side Ninth avenue, between One Hundred and Third and One Hundred and Fourth streets.
North side Sixty-ninth street, between Eighth and Ninth avenues.
Northwest corner Sixty-ninth street and Eighth avenue.
Northwest corner One Hundred and Sixty-first street and Cauldwell avenue.
Northwest corner Tenth avenue and Ninety-fourth street.
Northwest corner Tenth avenue and Ninety-fifth street.
Northeast corner Tenth avenue and Ninety-second street.
Northwest corner Sixth avenue and One Hundred and Seventeenth street.
Northeast corner Sixth avenue and One Hundred and Forty-sixth street.
Northeast corner Riverside avenue and One Hundred and Fifteenth street.
Northeast corner Riverside avenue and One Hundred and Nineteenth street.
Northeast corner Riverside avenue and One Hundred and Twenty-second street.
Southeast corner Riverside avenue and One Hundred and Twenty-fifth street.
North side One Hundred and Eighty-fourth street, between Sedgwick avenue and McComb's Dam road.
West side Sedgwick avenue, between Kingsbridge road and Boston avenue.
Northwest corner One Hundred and First street and Third avenue.
Northeast corner One Hundred and First street and Fourth avenue.
Northwest corner Eighty-eighth street and Ninth avenue.
East side Fourth avenue, between Seventy-sixth and Seventy-seventh streets.
Northwest corner Eighth avenue and Eighty-eighth street.
Northwest corner Eighth avenue and Eighty-ninth street.
Northwest corner One Hundred and Fortieth street and Brook avenue.
North side One Hundred and Fortieth street, between Brook and Willis avenues.
North side Seventy-fifth street, between Avenue A and East river.
Northwest corner Fourth avenue and One Hundred and Seventeenth street.
Northwest corner Fourth avenue and One Hundred and Eighteenth street.
Northwest corner Fourth avenue and One Hundred and Nineteenth street.
North side One Hundred and Sixty-fourth street, between Cauldwell avenue and Delmonico place.
North side One Hundred and Sixty-fourth street, between Boston and Cauldwell avenues.
West side Southern Boulevard, between One Hundred and Forty-first and One Hundred and Forty-second streets.
West side Southern Boulevard, between One Hundred and Forty-second and One Hundred and Forty-fourth streets.
East side Third avenue, between One Hundred and Fifty-fourth and One Hundred and Fifty-fifth streets.
East side Third avenue, between One Hundred and Fifty-fifth and One Hundred and Fifty-sixth streets.
Northeast corner Riverside avenue and Ninety-ninth street.
Southwest corner Brook avenue and One Hundred and Forty-second street.
Northeast corner Brook avenue and One Hundred and Forty-eighth street.
West side Brook avenue, between One Hundred and Forty-ninth street and Westchester avenue.
Northeast corner Brook and Westchester avenues.
Northwest corner One Hundred and Forty-eighth street and St. Ann's avenues.
Northeast corner One Hundred and Forty-ninth street and Third avenue.
North side One Hundred and Forty-ninth street, between Brook and Bergen avenues.
Northeast corner One Hundred and Forty-ninth street and Brook avenue.
North side Seventy-seventh street, between Ninth and Tenth avenues.
Northeast corner Seventy-seventh street and Tenth avenue.
Northeast corner Ninety-sixth street and Third avenue.
North side One Hundred and Thirteenth street, between Seventh and Eighth avenues.
East side Ninth avenue, between One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.
Northwest corner One Hundred and Fourteenth street and Fifth avenue.
North side One Hundred and Fourteenth street, between Fifth and Sixth avenues.
Northeast corner One Hundred and Fourteenth street and Sixth avenue.
Northwest corner One Hundred and Seventeenth street and Fifth avenue.
North side One Hundred and Seventeenth street, between Fifth and Sixth avenues.
North side One Hundred and Seventeenth street, between Sixth and Seventh avenues.
Northwest corner One Hundred and Seventeenth street and Avenue St. Nicholas.
Northeast corner One Hundred and Seventeenth street and Eighth avenue.
Northwest corner Seventh avenue and One Hundred and Thirty-sixth street.
Northwest corner Seventy-fourth street and Ninth avenue.
Northwest corner One Hundred and Ninth street and Madison avenue.
Northeast corner One Hundred and Ninth street and Fifth avenue.
North side Seventy-sixth street, between Eighth and Ninth avenues.
Southwest corner Seventy-seventh street and Eighth avenue.
South side Seventy-seventh street, between Eighth and Ninth avenues.
North side One Hundred and Thirteenth street, between Boulevard and Riverside avenue.
Northwest corner Tenth avenue and One Hundred and Seventh street.
Northeast corner Tenth avenue and One Hundred and Eighth street.
Northeast corner One Hundred and Thirty-third street and Avenue St. Nicholas.
West side Jackson avenue, between Columbia and Clay avenues.
Southwest corner Jackson and Clay avenues.
Northwest corner Jackson and Columbia avenues.
Northwest corner Morris avenue and Jane street.
Northwest corner Morris avenue and One Hundred and Seventy-third street.
Northeast corner Morris avenue and One Hundred and Seventy-fourth street.
West side Morris avenue, between One Hundred and Seventy-fourth and One Hundred and Seventy-fifth streets.
North side One Hundred and Forty-fourth street, between Seventh and Eighth avenues.
Northeast corner One Hundred and Forty-fourth street and Eighth avenue.
North side One Hundred and Forty-ninth street, between Seventh and Eighth avenues.
Northeast corner One Hundred and Forty-ninth street and Eighth avenue.
Northwest corner Sixty-fifth street and Tenth avenue.
Northeast corner One Hundred and Eighty-fifth street and Audubon avenue.
Northwest corner One Hundred and Eighteenth street and Fifth avenue.
North side One Hundred and Eighteenth street, between Fifth and Sixth avenues.
Southeast corner Eleventh avenue and One Hundred and Seventy-sixth street.
Northwest corner One Hundred and Forty-first street and Tenth avenue.
North side One Hundred and Forty-first street, between Tenth avenue and Hamilton place.
South side One Hundred and Twentieth street, between Madison and Fifth avenues.
North side Ninety-first street, between Eighth and Ninth avenues.
North side One Hundred and Sixty-ninth street, between Gerard and Walton avenues.
North side One Hundred and Sixty-ninth street, between Walton and Sheridan avenues.
East side Walton avenue, between One Hundred and Forty-ninth and One Hundred and Fifty-fifth streets.
North side Potter place, between Williams-bridge road and Anthony street.
North side One Hundred and Seventy-fifth street, between Washington avenue and Railroad avenue, East.
Northeast corner Manhattan avenue and One Hundred and Fifteenth street.
Northwest corner One Hundred and Twenty-sixth street and First avenue.
North side One Hundred and Twenty-sixth street, between First and Second avenues.
Northeast corner One Hundred and Twenty-sixth street and Second avenue.
North side Eighty-ninth street, between Eighth and Ninth avenues.
Northeast corner Eighty-ninth street and Ninth avenue.
Northwest corner Ninety-seventh street and Boulevard.
Northwest corner Ninety-seventh street and Eleventh avenue.
Northeast corner Ninety-seventh street and Riverside avenue.
Northeast corner One Hundred and Fourteenth street and Madison avenue.
North side Southern Boulevard, between Hull and Perry avenues.
Northwest corner Southern Boulevard and Bainbridge avenue.
Northeast corner Southern Boulevard and Anthony street.
Northwest corner Convent avenue and One Hundred and Forty-first street.
Northwest corner Convent avenue and One Hundred and Forty-third street.
West side Convent avenue, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.
North side One Hundred and Forty-second street, between Seventh and Eighth avenues.
Northeast corner One Hundred and Forty-second street and Eighth avenue.
North side One Hundred and Forty-fourth street, between Tenth and Convent avenues.
Northwest corner One Hundred and Twenty-second street and Mount Morris avenue.
Northeast corner One Hundred and Twenty-second street and Lenox avenue.
North side Sixty-second street, between Tenth and Eleventh avenues.
Northeast corner Sixty-second street and Eleventh avenue.

Northwest corner Madison avenue and One Hundred and Eighteenth street.....	1
Northeast corner One Hundred and Twenty-seventh street and Second avenue.....	1
North side Sixty-fourth street, between First avenue and Avenue A.....	1
Northwest corner Sixty-fourth street and Avenue A.....	1
Northwest corner One Hundredth street and Lexington avenue.....	1
Northeast corner One Hundredth street and Fourth avenue.....	1
North side Ninety-second street, between Ninth and Tenth avenues.....	1
Northeast corner Seventy-third street and Riverside avenue.....	1
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"No. 1" Hydrants set in 1887.

West side Broadway, between Riverdale avenue and Macomb street.....	1
West side Broadway, between Church and Macomb streets.....	3
Northwest corner Morrison's lane and Riverdale avenue.....	1
North side Morrison's lane, 750 feet west from Riverdale avenue.....	1
North side Washington place, 750 feet west from Independence avenue.....	1
North side Washington place, 700 feet west from Independence avenue.....	1
East side Meikelham lane, 300 feet east of Bettner's lane.....	1
Northwest corner One Hundred and Twenty-seventh street and First avenue.....	1
Northwest corner One Hundredth street and Third avenue.....	1
Southeast corner Fifty-first street and Eleventh avenue.....	1
	12

Respectfully submitted,
GEO. W. BIRDSALL, Chief Engineer Croton Aqueduct.

Document "E."

REPORT OF THE WATER PURVEYOR.

DEPARTMENT OF PUBLIC WORKS,
WATER PURVEYOR'S OFFICE, No. 31 CHAMBERS STREET, ROOM 1,
NEW YORK, January 5, 1888.

Gen. JOHN NEWTON, Commissioner of Public Works :

SIR—In compliance with your letter of instruction of the 5th ultimo, I have the honor to transmit my report of the transactions of the Water Purveyor's Bureau for the quarter and year ending December 31, 1887, together with the following brief review of the work accomplished during the year :

53 contracts for new pavements payable by assessment were entered into and completed, with few exceptions. The area of the new pavement completed is 286,850 square yards, including crosswalks.

Under the appropriation for "Repaving Streets and Avenues," 20 contracts were entered into, all of which, except one, were completed; and the area of the repavement completed is 129,575 square yards, including crosswalks.

The repair force, consisting of 45 gangs of men, was organized June 10, and kept steadily employed until the 15th of November, when the gangs were disbanded on account of the exhaustion of the appropriation. In addition to the repairs to pavements made by the men actually employed by the Department, a large area of pavement that was in too bad condition to be properly remedied by patching, was taken up and relaid from curb to curb, under contract.

The latter method has proved highly advantageous, inasmuch as, under competition, the prices paid were far lower than those at which the work could possibly have been done by men employed by the City. It has been possible, therefore, to not only repair a much larger area, but also, by close supervision, to obtain a grade of work second only to new.

The area repaired by the gangs, at an approximate cost of sixty-eight cents per square yard, was 225,550 square yards.

The area taken up and relaid by contract, at an average cost of forty cents per square yard, was 98,288 square yards.

While it is not practicable to repair dangerous places or do patchwork in the pavements by contract, I believe that the relaying of pavements in all streets or parts of streets, which can be benefited only by entire relaying, should be done by contract.

Report for the Quarter ending December 31, 1887.

For permits for the construction of vaults.....	\$24,129 59
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EXPENDITURES.

224 vouchers were transmitted during the quarter and charged to the following accounts :	
Public Drinking-hydrants.....	\$436 96
Public Drinking-hydrants—Salaries.....	249 99
Repaving Streets and Avenues.....	147,800 49
Repaving Streets and Avenues—Salaries.....	4,272 00
Repaving Fifth Avenue.....	146,597 31
Repairs and Renewal of Pavements and Regrading, 1886.....	211 32
Repairs and Renewal of Pavements and Regrading, 1887.....	93,009 72
Repairs and Renewal of Pavements and Regrading—Salaries.....	2,686 98
Repairing and Renewal of Pipes, Stop-cocks, etc.....	21,907 85
Contingencies—Department of Public Works.....	19 00
Restoring and Repaving—Special Fund—Department of Public Works.....	9,526 12
Street Improvement Fund.....	359,849 78
Total.....	\$786,567 52

PERMITS ISSUED.

- 73 permits were issued to construct vaults.
- 36 permits were issued to repair vaults.
- 87 permits were issued to set guy-posts.
- 83 permits were issued to light fires on the streets for roofing purposes.
- 44 permits were issued to citizens to repair pavements at their own expense.

REPAIRS AND RENEWAL OF PAVEMENTS AND REGRADING.

The average force employed during the quarter on repairs to pavements was as follows :

- In October, 433 men, 85 carts and 2 teams.
- In November (first two weeks), 433 men, 85 carts and 2 teams.
- In November (last two weeks), 57 men and 5 carts.
- In December, 33 men.

60,252 square yards of pavement were relaid during the quarter.

In consequence of the insufficiency of the appropriation, 40 of the repair gangs were discharged on November 15, and the 5 remaining on November 23, and this Bureau was thus deprived of the means of attending to many urgent and necessary repairs.

In addition to the above, 47,631 square yards of pavement were relaid under contracts made at public letting, and 12,622 square yards, including 444 square yards of asphalt, were relaid under orders, the expense under each order being less than \$1,000; making the total area of pavement relaid during the quarter 120,505 square yards.

REPAVING STREETS AND AVENUES.

Contracts for repaving the following-named streets were completed during the quarter; the total area repaved being 83,916 2/3 square yards :

- Wooster street, from Canal to Bleecker street.
- One Hundred and Tenth street, from First to Fifth avenue.
- Cherry street, from Catharine to Jefferson street; and Hamilton street, from Market to Catharine street.
- Fifteenth street, from 225 feet east of First avenue to East river.
- Seventy-second street, from Fourth to Fifth avenue.
- Gay street, from Waverly place to Christopher street; and Pitt street, from Stanton to Houston street.
- Tenth street, from Greenwich avenue to West street.
- Sixteenth street, from Sixth to Tenth avenue.
- Fifteenth street, from Ninth to Tenth avenue; and Twentieth street, from Sixth to Seventh avenue.
- Twenty-sixth street, from Third to Lexington avenue; Thirty-sixth street, from First avenue to East river; and Forty-first street, from Second avenue to Prospect place.
- Washington street, from Bank to Clarkson street.
- Bedford street, from Houston to Christopher street; and Hester street, from Bowery to Clinton street.

REPAVING FIFTH AVENUE.

This contract was completed November 3, 1887.
2,494 1/10 square yards of pavement were laid during the quarter.

NEW PAVEMENTS UNDER ASSESSMENT.

Contracts for laying new pavements in the following streets were completed during the quarter; the total area of new pavement completed being 116,830 2/3 square yards :

- Tenth avenue, from Seventy-fourth to One Hundred and Tenth street.
 - Manhattan avenue, from One Hundred and Fifth to One Hundred and Sixth street.
 - Madison avenue, from Eighty-sixth to Ninety-fourth street.
 - Eighty-fifth street, from Eighth to Ninth avenue.
 - Eightieth street, from Ninth to Tenth avenue.
 - One Hundred and Thirty-fifth street, from Seventh to Eighth avenue.
 - One Hundred and Fourth street, from Ninth avenue to the Boulevard.
 - Seventy-fourth street, from Ninth to Tenth avenue.
 - Eighty-eighth street, from Ninth to Tenth avenue.
 - One Hundred and Thirty-seventh street, from Eighth to St. Nicholas avenue.
 - Eighty-first street, from Avenue A to Avenue B.
 - Ninety-ninth street, from Ninth to Tenth avenue.
 - Ninety-ninth street, from Boulevard to Tenth avenue.
 - One Hundred and Thirty-fourth street, from Seventh to Eighth avenue.
 - One Hundred and Thirty-sixth street, from St. Nicholas to Eighth avenue.
 - Ninety-fourth street, from Ninth to Tenth avenue.
 - One Hundred and Thirty-second street, from Sixth to Seventh avenue.
 - Eighty-eighth street, from Ninth to Tenth avenue.
 - One Hundred and Fifteenth street, from Seventh to Eighth avenue.
 - Counties Slip and South street, between Piers 6 and 8, East river.
- In addition to the above, Seventieth street, from Eleventh avenue to the Hudson River Railroad, and Seventy-fourth street, from Tenth avenue to the Boulevard, were paved by property-owners under permits from this Department and on their giving bond to the City for the proper performance of the work. The area thus paved was 2,155 square yards, making the total area of new pavement completed during the quarter, 118,985 2/3 square yards.

REPAIRING AND RENEWAL OF PIPES, STOP-COCKS, ETC.

The average force employed in repairing pipes, stop-cocks, fire-hydrants, etc., under the direction of this Bureau, was as follows :

- In October, 101 men and 11 carts.
- In November, 100 men and 11 carts.
- In December, 100 men and 11 carts.
- 666 defects in pipes and stop-cocks were repaired.
- 217 taps were shut off on account of leaks in service-pipes.
- 1,117 repairs were made to fire-hydrants.
- 121 new fire-hydrants were substituted for old.
- 2 new fire-hydrants were erected.
- 450 defects in pavements were repaired.

PUBLIC DRINKING-HYDRANTS.

- 23 drinking-hydrants were repaired.
- 1 new drinking-hydrant was erected.

Summary of Work Done During the Year.

For permits for the construction of vaults.....	\$89,859 45
For labor and material furnished.....	185 28
Total.....	\$90,044 73

EXPENDITURES.

679 vouchers were transmitted during the year 1887 and charged to the following accounts :	
Public Drinking-hydrants, 1886.....	\$1,896 64
Public Drinking-hydrants, 1887.....	1,909 12
Public Drinking-hydrants—Salaries.....	999 96
Repairs and Renewal of Pavements and Regrading, 1886.....	11,663 55
Repairs and Renewal of Pavements and Regrading, 1887.....	231,231 56
Repairs and Renewal of Pavements and Regrading—Salaries.....	11,945 84
Repaving Streets and Avenues, 1886.....	30,548 48
Repaving Streets and Avenues, 1887.....	239,776 74
Repaving Streets and Avenues—Salaries.....	7,224 00
Wells and Pumps—Repairing and Cleaning, 1886.....	22 90
Wells and Pumps—Repairing and Cleaning, 1887.....	75 57
Repairing and Renewal of Pipes, Stop-cocks, etc., 1886.....	3,123 19
Repairing and Renewal of Pipes, Stop-cocks, etc., 1887.....	77,030 21
Restoring and Repaving—Special Fund—Department of Public Works.....	32,006 06
Street Improvement Fund.....	749,924 51
Contingencies—Department of Public Works.....	39 00
Repaving Fifth Avenue.....	279,708 68
Total.....	\$1,679,126 01

REPAIRS AND RENEWAL OF PAVEMENTS, ETC.

The amount of work done by the repair gangs during the year is as follows :

- 225,550 square yards of pavement were relaid.
- 1,110 old crosswalks were repaired.
- 23 new crosswalks were laid.
- 1,798 bad holes were repaired.

The following is a list of streets in which repairs were made :

Blocks Relaid from Curb to Curb.

Broadway, from Fifty-third to Fifty-eighth street.

Half Blocks Relaid from Curb to Crown.

Broadway, east side, from Fifty-first to Fifty-third street.

Avenues Repaired.

First avenue, between Thirteenth and Seventeenth streets, Twenty-eighth and Twenty-ninth streets, Fifty-sixth and Fifty-seventh streets, Sixty-fourth and Sixty-fifth streets, Seventy-fourth and Seventy-fifth streets, and Ninety-first and Ninety-second streets.

Second avenue, between Forty-first and Forty-second streets, Fifty-third and Fifty-fifth streets, Sixtieth and Sixty-second streets, Sixty-sixth and Seventy-fourth streets, Eighty-first and Eighty-third streets, Eighty-fourth and Eighty-fifth streets, One Hundred and Fourteenth and One Hundred and Fifteenth streets, and One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.

Fourth avenue, between Fifty-sixth and Seventy-first streets, Seventy-second and Seventy-third streets, and One Hundred and Fifteenth and One Hundred and Sixteenth streets.

Fifth avenue, between One Hundred and Thirtieth and One Hundred and Thirty-second streets.

Sixth avenue, between Eighteenth and Nineteenth streets, Twenty-first and Twenty-second streets, Twenty-fourth and Twenty-fifth streets, Forty-seventh and Forty-eighth streets, and Fifty-sixth and Fifty-seventh streets.

Seventh avenue, between Fifty-third and Fifty-ninth streets.

Eighth avenue, between Twenty-fifth and Twenty-sixth streets, Thirty-sixth and Thirty-seventh streets, Fifty-fifth and Fifty-eighth streets, Seventy-seventh and Eighty-first streets, Ninety-ninth and One Hundredth streets, One Hundred and Eighth and Ninth streets, One Hundred and Twentieth and One Hundred and Twenty-first streets, One Hundred and Twenty-second and One Hundred and Twenty-fourth streets, and One Hundred and Fortieth and One Hundred and Forty-second streets.

Ninth avenue, between Thirty-seventh and Thirty-eighth streets, Forty-second and Forty-third streets, Forty-ninth and Fiftieth streets, Fifty-eighth and Sixtieth streets, Sixty-first and Sixty-second streets, Sixty-third and Sixty-fourth streets, Sixty-ninth and Seventy-second streets, Seventy-third and Seventy-fifth streets, and Seventy-sixth and Seventy-seventh streets.

Tenth avenue, between Twenty-seventh and Twenty-eighth streets, Thirtieth and Thirty-first streets, Fifty-ninth and Sixty-fourth streets, and Seventy-third and Seventy-fourth streets.

Eleventh avenue, between Twenty-seventh and Thirtieth streets.

Thirteenth avenue, between Sixteenth and Seventeenth streets, Avenue D, between Third and Fourth streets.

South Fifth avenue, between Third and Bleecker streets.

Park avenue, between Fortieth and Forty-second streets.

Madison avenue, between Forty-second and Forty-third streets, Forty-sixth and Forty-seventh streets, Fifty-second and Fifty-third streets, Sixtieth and Sixty-first streets, Sixty-fifth and Sixty-sixth streets, Sixty-seventh and Sixty-eighth streets, Seventieth and Seventy-first streets, Seventy-second and Seventy-third streets, Seventy-fifth and Seventy-seventh streets, Eightieth and Eighty-first streets, and Eighty-third and Eighty-fourth streets.

Lexington avenue, between Twenty-first and Twenty-second streets, Thirty-sixth and Thirty-seventh streets, Forty-first and Forty-second streets, Forty-ninth and Fiftieth streets, Fifty-third and Fifty-fourth streets, Fifty-fifth and Fifty-sixth streets, Sixtieth and Sixty-first streets, Sixty-third and Sixty-fourth streets, Sixty-seventh and Sixty-eighth streets, Seventieth and Seventy-first streets, Seventy-second and Seventy-third streets, Seventy-seventh and Seventy-eighth streets, Eighty-first and Eighty-second streets, One Hundred and Fifth and One Hundred and Sixth streets, One Hundred and Eighteenth and One Hundred and Twentieth streets, and One Hundred and Twenty-second and One Hundred and Twenty-third streets.

Streets Repaired.

Broadway, between Seventeenth and Eighteenth streets, Thirtieth and Thirty-first streets, Fortieth and Forty-first streets, Forty-fourth and Forty-seventh streets, and Forty-eighth and Fifty-eighth streets.

Bowery, between Bayard and Canal streets.

Bank street, between Washington street and Thirteenth avenue.

Bethune street, between Greenwich and West streets.

Bleeker street, between Broadway and Bowery.

Clinton place, between Macdougall street and Sixth avenue.

Centre street, between White and Franklin streets.

Church street, between Liberty and Cortlandt streets.

Church street, between Walker and Lispenard streets.

College place, between Barclay and Warren streets.

Chambers street, between Broadway and West street.

Christie street, between Hester and Grand streets.

Corlears street, between Grand and South streets.

Catharine Slip, between South and Cherry streets.

Dover street, between Pearl and South streets.

Depew place, between Forty-second and Forty-third streets.

Dey street, between Broadway and Church street.

Elm street, between White and Franklin streets.

Elm street, between Broome and Grand streets.

Fulton street, between Broadway and West street.

Fulton street, between Water and Front streets.

Frankfort street, between Park Row and William street.

Greenwich street, between Battery place and Cedar street.

Greenwich street, between Barclay and Warren streets.

Greenwich street, between Beach and North Moore streets.

Goerck street, between Third and Houston streets.

Grove street, between Waverly place and Hudson street.

Hudson street, between Reade and Franklin streets.

Lafayette place, between Fourth street and Astor place.

Lispenard street, between Broadway and Church street.

Little West Twelfth street, between Ninth and Tenth avenues.

Lewis street, between Stanton and Houston streets.

Lewis street, between Grand and Broome streets.

Lawrence street, between Ninth and Tenth avenues.

Leonard street, between Elm and Centre streets.

James Slip, between Cherry and South streets.

Maiden Lane, between Broadway and South street.

Mott street, between Canal and Spring streets.

Mercer street, between Waverly and Clinton places.

New Chambers street, between Park Row and James Slip.

Norfolk street, between Stanton and Rivington streets.

Orchard street, from Hester to Houston street.

Old Slip, between Water and Pearl streets.

Peck Slip, from Pearl to Front street.

Perry street, from Hudson to Fourth street.

Ridge street, between Houston and Stanton streets.

Reade street, between Broadway and Church street.

Rutgers Slip, between Cherry and South streets.

South street, from Fulton street to Peck Slip.

South street, from Roosevelt street to James Slip.

South street, from Catharine to Pike street.

South street, from Whitehall street to Coenties Slip.

South street, from Wall street to Maiden Lane.

Stone street, from Broad to William street.

Stanton street, from Norfolk to Essex street.

Thompson street, from Bleeker to Fourth street.

Theatre alley, between Beekman and Ann streets.

Tompkins street, between Stanton and Rivington streets.

West street, from Battery place to Rector street.

West street, from Dey to Murray street.

West street, from Jay to Duane street.

West street, from Harrison to Franklin street.

West street, from Beach to Vestry street.

Whitehall street, from South to Stone street.

Worth street, from Church street to West Broadway.

Worth street, from Broadway to Church street.

Worth street, from Centre street to Mission place.

Warren street, from Church street to College place.

Water street, from Beekman to Fulton street.

Walker street, from Broadway to Church street.

Waverly place, from Christopher to Bank street.

Washington street, from Bethune to Twelfth street.

Washington street, from Fulton to Vesey street.

Washington street, from Spring to Charlton street.

Washington street, from Houston to Charles street.

Second street, from Bowery to Second avenue.

Fifth street, from Lewis street to East river.

Tenth street, from Avenue A to B.

Eleventh street, from Broadway to University place.

Twelfth street, from Broadway to Fourth avenue.

Thirteenth street, from Ninth to Tenth avenue.

Thirteenth street, from Ninth avenue to Gansevoort street.

Thirteenth street, from Third avenue to Avenue A.

Fifteenth street, from Broadway to Fifth avenue.

Sixteenth street, from Fifth to Sixth avenue.

Seventeenth street, from Tenth to Eleventh avenue.

Seventeenth street, from Ninth to Eleventh avenue.

Seventeenth street, from Broadway to Fourth avenue.

Eighteenth street, from Tenth to Thirteenth avenue.

Eighteenth street, from Second to Third avenue.

Nineteenth street, from Tenth to Eleventh avenue.

Nineteenth street, from Sixth to Seventh avenue.

Twenty-first street, from Third to Fourth avenue.

Twenty-first street, from Fifth to Sixth avenue.

Twenty-second street, from Broadway to Fourth avenue.

Twenty-second street, from First to Second avenue.

Twenty-third street, from Fourth to Lexington avenue.

Twenty-third street, from Sixth to Seventh avenue.

Twenty-fourth street, from Third to Lexington avenue.

Twenty-fifth street, from Broadway to Sixth avenue.

Twenty-fifth street, from Tenth to Eleventh avenue.

Twenty-sixth street, from Fifth avenue to Broadway.

Twenty-eighth street, from First avenue to East river.

Twenty-eighth street, from Ninth to Tenth avenue.

Twenty-ninth street, from Fifth to Madison avenue.

Twenty-ninth street, from Tenth to Eleventh avenue.

Thirty-second street, from Broadway to Fifth avenue.

Thirty-second street, from Second to Third avenue.

Thirty-third street, from Fifth to Sixth avenue.

Thirty-fourth street, from First avenue to East river.

Thirty-fourth street, from Third to Lexington avenue.

Thirty-fourth street, from Fifth to Madison avenue.

Thirty-seventh street, from Ninth to Tenth avenue.

Thirty-eighth street, from Second to Third avenue.

Thirty-eighth street, from Sixth to Seventh avenue.

Thirty-ninth street, from Fifth to Sixth avenue.

Fortieth street, from First to Second avenue.

Fortieth street, from Fifth to Sixth avenue.

Fortieth street, from Tenth to Eleventh avenue.

Forty-first street, from Lexington to Fourth avenue.

Forty-second street, from Ninth to Eleventh avenue.

Forty-second street, from Lexington to Fourth avenue.

Forty-second street, from First avenue to East river.

Forty-third street, from First avenue to East river.

Forty-third street, from Broadway to Sixth avenue.

Forty-fourth street, from Second to Third avenue.

Forty-fourth street, from Fifth to Sixth avenue.

Forty-fifth street, from Ninth to Eleventh avenue.

Forty-fifth street, from Fifth to Sixth avenue.

Forty-sixth street, from First avenue to East river.

Forty-sixth street, from Second to Third avenue.

Forty-sixth street, from Broadway to Eighth avenue.

Forty-seventh street, from Second to Third avenue.

Forty-seventh street, from Fifth to Sixth avenue.

Forty-seventh street, from Eighth to Ninth avenue.

Forty-eighth street, from Broadway to Ninth avenue.

Forty-eighth street, from Eleventh avenue to North river.

Forty-eighth street, from Fifth to Sixth avenue.

Forty-eighth street, from First to Second avenue.

Forty-ninth street, from Second avenue to East river.

Forty-ninth street, from Broadway to Tenth avenue.

Fiftieth street, from Sixth to Seventh avenue.

Fiftieth street, from Eighth to Ninth avenue.

Fiftieth street, from Madison to Fourth avenue.

Fifty-first street, from Madison to Fifth avenue.

Fifty-first street, from Second to Third avenue.

Fifty-second street, from Sixth to Seventh avenue.

Fifty-second street, from Ninth to Tenth avenue.

Fifty-second street, from Eleventh avenue to North river.

Fifty-third street, from Third avenue to East river.

Fifty-third street, from Sixth to Seventh avenue.

Fifty-third street, from Fourth to Fifth avenue.

Fifty-fifth street, from Third to Madison avenue.

Fifty-sixth street, from Broadway to Fourth avenue.

Fifty-sixth street, from First avenue to Eastern Boulevard.

Fifty-seventh street, from Seventh to Ninth avenue.

Fifty-seventh street, from Fifth to Madison avenue.

Fifty-seventh street, from Second avenue to Avenue A.

Fifty-seventh street, from Lexington to Fourth avenue.

Fifty-eighth street, from Fifth to Seventh avenue.

Fifty-eighth street, from Third to Lexington avenue.

Fifty-eighth street, from Eighth avenue to Broadway.

Fifty-ninth street, from Tenth avenue to North river.

Fifty-ninth street, from Fifth to Madison avenue.

Sixty-first street, from Third to Lexington avenue.

Sixty-second street, from Third to Lexington avenue.

Sixty-third street, from Third avenue to East river.

Sixty-third street, from Fourth to Fifth avenue.

Sixty-third street, from Ninth to Tenth avenue.

Sixty-fourth street, from Lexington to Second avenue.

Sixty-fourth street, from Ninth to Tenth avenue.

Sixty-fifth street, from Ninth to Tenth avenue.

Sixty-sixth street, from Second to Third avenue.

Sixty-sixth street, from First avenue to Avenue A.

Sixty-seventh street, from Third to Fifth avenue.

Sixty-ninth street, from First to Second avenue.

Sixty-ninth street, from Fourth to Madison avenue.

Sixty-ninth street, from Ninth to Tenth avenue.

Seventieth street, from Ninth avenue to Boulevard.

Seventieth street, from Fourth to Madison avenue.

Seventy-first street, from Eighth to Ninth avenue.

Seventy-first street, from First to Second avenue.

Seventy-third street, from Ninth to Tenth avenue.

Seventy-fourth street, from Madison to Fourth avenue.

Seventy-sixth street, from Ninth to Tenth avenue.

Seventy-sixth street, from Second to Third avenue.

Seventy-eighth street, from Ninth to Tenth avenue.

Seventy-eighth street, from Third to First avenue.

Seventy-eighth street, from Ninth to Tenth avenue.

Seventy-ninth street, from Fourth to Madison avenue.

Seventy-ninth street, from Tenth avenue to North river.

Eightieth street, from Avenue A to East river.

Eighty-first street, from Tenth avenue to Boulevard.

Eighty-first street, from First to Second avenue.

Eighty-second street, from Ninth to Tenth avenue.

Eighty-third street, from Ninth avenue to Boulevard.

Eighty-fourth street, from Fifth to Madison avenue.

Eighty-fourth street, from Boulevard to Riverside Drive.

Eighty-fifth street, from Second to Third avenue.

Eighty-seventh street, from First to Second avenue.

Eighty-ninth street, from Avenue A to East river.

Ninetieth street, from Third to Lexington avenue.

Ninetieth street, from Fourth to Madison avenue.

Ninety-second street, from Second avenue to East river.

Ninety-second street, from Fourth to Madison avenue.

Ninety-third street, from First to Second avenue.

Ninety-sixth street, from Boulevard to North river.

Ninety-ninth street, from First to Second avenue.

One Hundredth street, from Eighth to Manhattan avenue.

One Hundred and Fifth street, from Ninth avenue to Boulevard.

One Hundred and Fifth street, from Third to Lexington avenue.

One Hundred and Sixth street, from Fourth to Lexington avenue.

One Hundred and Eighth street, from Third to Lexington avenue.

One Hundred and Twelfth street, from Lexington to Fourth avenue.

One Hundred and Fifteenth street, from Third to Fourth avenue.

One Hundred and Nineteenth street, from Second to Pleasant avenue.

One Hundred and Twenty-second street, from First to Second avenue.

One Hundred and Twenty-second street, from Third to Lexington avenue.

One Hundred and Twenty-third street, from Second to Pleasant avenue.

One Hundred and Twenty-sixth street, from Fourth to Fifth avenue.

One Hundred and Thirtieth street, from Sixth to Seventh avenue.

One Hundred and Thirty-first street, from Fifth to Sixth avenue.

One Hundred and Thirty-eighth street, from Boulevard to North river.

In addition to the foregoing the pavement in the following streets was relaid from curb to curb by contract, the total area thus relaid being 98,288 square yards:

Liberty street, from Nassau street to 210 feet west.

Cortlandt street, from Broadway to Church street.

Frankfort street, from Pearl to Cliff street.

Murray street, from Broadway to Church street.

Warren street, from Broadway to West Broadway.

Leonard street, from Broadway to Church street.

Franklin street, from Broadway to Church street.

Twenty-second street, from Fifth to Sixth avenue.

Fiftieth street, from Sixth avenue to 289 feet east.

Fifty-fourth street, from Fifth to Sixth avenue.

Fifty-fifth street, from First to Second avenue.

Fifty-seventh street, from Fifth to Madison avenue.

Sixty-first street, from Fourth to Lexington avenue.

Seventy-ninth street, from Fourth to Lexington avenue.

Eighty-first street, from Second to Madison avenue.

One Hundred and Fourteenth street, from Lexington to Fourth avenue.

One Hundred and Seventeenth street, from First to Pleasant avenue.

Thirty-first street, from Second to Third avenue.

Thirty-second street, from Third to Lexington avenue.

Thirty-fourth street, from Fourth to Lexington avenue.

Thirty-eighth street, from Fourth to Madison avenue.
 Thirty-ninth street, from Fourth to Madison avenue.
 Forty-second street, from Third to Lexington avenue.
 Forty-third street, from Third to Lexington avenue.
 Lexington avenue, from Fifty-first to Fifty-second street.
 Lexington avenue, from Fifty-fourth to Fifty-seventh street.
 Lexington avenue, from Seventy-seventh to Seventy-eighth street.
 Lexington avenue, from Eighty-third to Eighty-fifth street.
 Lexington avenue, from Ninety-fourth to Ninety-fifth street.
 Sixty-second street, from Second to Third avenue.
 Sixty-second street, from Fourth to Lexington avenue.
 Sixty-second street, from Fifth to Madison avenue.
 Pine street, from William street to the asphalt pavement.
 Twenty-fourth street, from Broadway to Sixth avenue.
 Forty-ninth street, from Sixth to Seventh avenue.
 Avenue A, from Fifty-fourth to Fifty-fifth street.
 Third avenue, from Ninety-sixth to Ninety-seventh street.
 Forty-sixth street, from Fifth to Seventh avenue.
 Fifty-sixth street, from Third to Lexington avenue.
 Sixtieth street, from Second to Third avenue.
 Sixtieth street, from Third avenue to No. 158 East.
 Seventy-eighth street, from Madison to Fifth avenue.
 Eighty-third street, from Third avenue to No. 151 East.
 Eighty-third street, from Fourth avenue to 150 feet westerly.
 Fifty-fifth street, from Sixth to Seventh avenue.
 Fifty-seventh street, from Fifth to Sixth avenue.
 Eighty-fifth street, from Fourth avenue to No. 66 East.
 Ninety-second street, from First to Second avenue.
 Fifty-sixth street, from Fifth to Sixth avenue.
 Fifty-third street, from Eighth to Ninth avenue.
 Fifty-sixth street, from Ninth to Tenth avenue.

24,821 square yards of pavements, including 2,522 square yards of asphalt pavement, were laid under orders, the expense under each order being less than \$1,000; making the total area of pavement taken up and relaid during the year 1887, 348,668 square yards, or about 5 per cent. of the entire area of pavement in the city.

PERMITS ISSUED.

- 245 permits were issued to construct vaults.
- 147 permits were issued to repair vaults.
- 424 permits were issued to erect guy posts on the streets.
- 330 permits were issued to build fires on the streets for roofing purposes.
- 108 permits were issued to citizens to repair pavements at their own expense.
- 10 permits were issued to citizens to lay crosswalks at their own expense.
- 2 permits were issued to property-owners to pave streets at their own expense.

A permit was issued, under resolution of the Common Council, authorizing the laying of a metallic pavement in Beaver street, between New and Broad streets. This pavement has not proved a success, and is now in great need of repairs, and notice to that effect has been served on the promoters.

Permits were granted to the Mutual Life Insurance Company and to the Equitable Life Assurance Society to repave the following streets with asphalt pavement, viz.:
 Nassau street, from Cedar to Liberty street.
 Cedar street, from Nassau street to 110 feet east.
 Liberty street, from Nassau street to 120 feet east.
 Nassau street, from Pine to Cedar street.

STREET OPENINGS.

The following work was done during the year under the supervision of this Bureau:
 Number of openings made to repair all mains other than Croton water-mains, and make repairs and connections for gas, steam, water, sewer and electric lights and subways
 Notices sent from this office to corporations and others to repair bad pavement over their openings 17,973
 Had places in the city pavements repaired in compliance with the above notices 4,501
 Total miles of gas-mains laid 95.86
 Total miles of trench opened for subways and other electrical appliances 25.58
 Total lineal feet of steam-pipes laid 4,791
 Total lineal feet of salt-water mains laid 3,790
 Total lineal feet of double horse-car tracks laid 1,650
 Total lineal feet of cable track paved with trap-blocks and tar-joints 8,850
 Lineal feet of macadam pavement replaced over gas trenches 29,100

The Third Avenue Railroad Company have resurfaced the intersections of Fifth, Sixth and Seventh avenues, on One Hundred and Twenty-fifth street, with macadam pavement, and have also relaid a large amount of the block pavement on One Hundred and Twenty-fifth and Manhattan streets, between the East and North rivers.

From the foregoing it will be seen that the amount of trench work for gas-pipes, subways, etc., has in the past year more than trebled. The work seems to have been well done, and is now standing in a satisfactory manner; although much of the pavement relaid recently, since the advent of cold weather, is in need of repair, and the corporations will be urged to make the necessary repairs as soon as the weather shall permit.

REPAVING FIFTH AVENUE (CHAPTER 371, LAWS OF 1885).

This contract was completed November 3, 1887. The portion of the avenue paved during the year is between the following streets:

- Fifth avenue, from Ninth to Twenty-fifth street.
- Fifth avenue, from First to Seventy-fifth street.

The total area paved was 50,810.05 square yards, and the length 8,002 feet, or 1 ²²/₁₀₀ miles; making the total length of the avenue repaved under the contract 3 ¹/₁₀₀ miles.

A suitable plant has been purchased, consisting of tar kettles, gravel pan, pouring pails, steel wheelbarrows, etc., etc., to be used in repairing, and in keeping in proper repair, the new pavement in Fifth avenue. Where advisable, and when the weather is suitable, the work of repair to this pavement will be prosecuted during the winter season.

The repairs of openings by corporations are being made under the inspection of this Bureau, by Contractors Baird (who originally laid the pavement) and Cunningham, both of whom have the necessary appliances.

REPAVING STREETS AND AVENUES (CHAPTER 476, LAWS OF 1875).

Contracts for repaving the following-named streets were completed during the year, viz.:

STREET.	FROM	SQUARE YARDS OF PAVEMENT.	LENGTH IN FEET.
<i>Granite blocks.</i>			
Sixth street.....	Bowery to Avenue B.....	8,658	2,652.60
Tenth avenue.....	Sixty-fourth to Seventy-first street.....	10,989.6	1,706.40
Wooster street.....	Canal to Bleeker street.....	7,257.5	2,687.65
Twentieth street.....	Ninth to Tenth avenue.....	5,364.7	816.50
Thirty-first street.....	Ninth to Tenth avenue.....			817.20
Thirty-eighth street.....	Eighth to Tenth avenue.....	5,381.3	1,630.00
Fifteenth street.....	225 feet east of Avenue A to East river.....	7,118.7	2,196.80
Seventy-second street.....	Fourth to Fifth avenue.....	4,434	981.10
One Hundred and Tenth street.....	First to Fifth avenue.....	10,302	3,280.00
Cherry street.....	Catharine to Jefferson street.....	8,628.9	2,063.15
Hamilton street.....	Market to Catharine street.....			641.20
Bedford street.....	Houston to Christopher street.....	9,293.1	1,626.15
Hester street.....	Bowery to Clinton street.....			1,985.35
Wooster street.....	Bleeker to Fourth street.....	1,989	718.10
Tenth street.....	Greenwich avenue to West street.....	7,073	2,592.55
Sixteenth street.....	Sixth to Tenth avenue.....	10,783	3,260.83
Washington street.....	Bank to Clarkson street.....	6,854.7	2,042.90
Total.....		104,327.5	31,698.45

STREET.	FROM	SQUARE YARDS OF PAVEMENT.	LENGTH IN FEET.
<i>Trap blocks.</i>			
Bank street.....	Hudson to Washington street.....	3,673	636.80
Renwick street.....	Canal to Spring street.....			543.60
Congress street.....	King to Houston street.....		203.90
Pitt street.....	Stanton to Division street.....	4,098	1,475.80
William street.....	Duane to North William street.....	886	486.90
Ninth avenue.....	Gansevoort to Fourteenth street.....	3,805	599.00
Gay street.....	Waverly place to Christopher street.....	1,523.7	246.30
Pitt street.....	Stanton to Houston street.....			407.80
Fifteenth street.....	Ninth to Tenth avenue.....	5,492	815.20
Twentieth street.....	Sixth to Seventh avenue.....			817.30
Twenty-sixth street.....	Third to Lexington avenue.....		435.50
Thirty-sixth street.....	Avenue A to East river.....	4,269	341.00
Forty-first street.....	Second avenue to Prospect place.....			516.10
Total.....		23,723.7	7,531.20
RECAPITULATION.			
Granite blocks.....		104,327.5	31,698.45
Trap blocks.....		23,723.7	7,531.20
Total.....		128,051.2	39,229.65

Total length repaved, as above, 7 ¹/₁₀₀ miles.

NEW PAVEMENTS UNDER ASSESSMENT.

Contracts for laying new pavements in the following-named streets were completed during the year, viz.:

STREET.	FROM	SQUARE YARDS OF PAVEMENT.	LENGTH IN FEET.
<i>Granite blocks.</i>			
Ninth avenue.....	Seventy-seventh to One Hundred and Tenth street.....	55,965	8,442
Tenth avenue.....	Seventy-fourth to One Hundred and Tenth street.....	59,285	9,192.7
Eighty-third street.....	Boulevard to Riverside avenue.....	2,942	286
Eighty-eighth street.....	First to Second avenue.....	2,199	669
One Hundred and Second street.....	Lexington to Fifth avenue.....	4,685	1,339
One Hundred and Fifty-fifth street.....	Avenue St. Nicholas to St. Nicholas place.....	2,736	411
Washington street.....	Little West Twelfth to Fourteenth street.....	2,158	508
Seventy-third street.....	Avenue A to First avenue.....	2,123	638
Seventy-fifth street.....	Tenth avenue to Boulevard.....	851.4	266
Eighty-fifth street.....	Eighth to Ninth avenue.....	2,735	821.5
Ninety-third street.....	Ninth to Tenth avenue.....	3,016	905
One Hundred and Thirty-first street.....	Sixth to Seventh avenue.....	2,676	800
Ninety-first street.....	Fourth to Fifth avenue.....	3,076	930
One Hundred and Fifth street.....	First avenue to Harlem river.....	2,807.1	838
One Hundred and Thirty-fifth street.....	Eighth to St. Nicholas avenue.....	2,571.3	392
Eighty-seventh street.....	Madison to Park avenue.....	1,380	420
One Hundred and Twenty-first street.....	Sixth to Seventh avenue.....	2,635	809.5
Eighty-first street.....	Eighth to Ninth avenue.....	5,501	834
One Hundred and Seventh street.....	Lexington to Fourth avenue.....	1,362	415
One Hundred and Twenty-ninth street.....	Eighth to St. Nicholas avenue.....	853	257
Eighty-fifth street.....	Avenue A to Avenue B.....	2,242	677.6
One Hundred and Thirty-seventh street.....	Eighth to St. Nicholas avenue.....	1,613	487.3
One Hundred and Eighteenth street.....	Sixth to Seventh avenue.....	2,685	818
Ninety-fourth street.....	Ninth to Tenth avenue.....	2,709	815.2
Madison avenue.....	One Hundred and Thirty-third to One Hundred and Thirty-seventh street.....	4,910	1,086
One Hundred and Twenty-third street.....	Eighth to Tenth avenue.....	5,223	1,263
One Hundred and Thirty-sixth street.....	Eighth to St. Nicholas avenue.....	1,225.6	367.7
Manhattan avenue.....	One Hundred and Fifth to One Hundred and Sixth street.....	1,008	223
Total.....		183,192.4	35,885.5
<i>Trap blocks.</i>			
Sixty-sixth street.....	Boulevard to Tenth avenue.....	1,928	592
Sixty-seventh street.....	Second to Third avenue.....	2,075	628
Seventieth street.....	Avenue A to First avenue.....	2,082	611
Seventy-fourth street.....	Boulevard to Eleventh avenue.....	1,871	557
Ninety-sixth street.....	Third to Lexington avenue.....	2,946	449
Seventy-first street.....	Eastern Boulevard to East river.....	2,374.1	711.9
One Hundred and First street.....	Second to Third avenue.....	2,090.5	627
One Hundred and Thirty-second street.....	Madison to Fifth avenue.....	1,468.9	445.8
West Fifty-fifth street.....	Present pavement to North river.....	118.7	35.7
Sixty-eighth street.....	Eighth avenue to Boulevard.....	4,026.3	1,210.9
Eighty-fourth street.....	Avenue A to Avenue B.....	2,178.4	669
Ninety-fifth street.....	Ninth to Tenth avenue.....	2,710	815.3
Sixty-eighth street.....	Tenth to Eleventh avenue.....	2,720	816
Eightieth street.....	Ninth to Tenth avenue.....	2,713.8	816
One Hundred and Thirty-fifth street.....	Seventh to Eighth avenue.....	5,380	816
Ninety-fifth street.....	Second to Third avenue.....	2,096.4	628.9
Ninety-seventh street.....	Eighth to Ninth avenue.....	2,717	819.4
One Hundred and Fourth street.....	Ninth avenue to Boulevard.....	3,994	1,223
One Hundred and Twenty-second street.....	Seventh to St. Nicholas avenue.....	2,775.5	850

STREET.	FROM	SQUARE YARDS OF PAVEMENT.	LENGTH IN FEET.
Ninety-sixth street	First to Third avenue	8,419	1,294
Sixty-seventh street	Tenth to Eleventh avenue	2,695	816
One Hundred and Thirty-fourth street	Seventh to Eighth avenue	2,683	816.2
One Hundred and Sixteenth street	Seventh to Tenth avenue	5,181	787
One Hundred and Twenty-seventh street	Eighth to St. Nicholas avenue	1,125	337.5
Madison avenue	Eighty-sixth to Ninety-fourth street	8,311	1,866
One Hundred and Thirty-second street	Sixth to Seventh avenue	2,626	810.5
Ninety-ninth street	Ninth to Tenth avenue	2,718	815
Ninety-ninth street	Boulevard to Tenth avenue	1,166	362
Eighty-first street	Avenue A to Avenue B	2,232	681.6
Eighty-eighth street	Ninth to Tenth avenue	2,717.6	815.3
Seventy-fourth street	Ninth to Tenth avenue	2,751	820
One Hundred and Fifteenth street	Ninth to Eighth avenue	2,716	822
Counties Slip and South street	Between Piers 6 and 8, East river	2,369	665
<i>Work Done by Property-owners.</i>			
Seventieth street	Eleventh avenue to Hudson River Railroad	1,551	474.7
Seventy-fourth street	Tenth avenue to Boulevard	366	173.5
Total		98,102.2	25,708.2
RECAPITULATION.			
Granite blocks		183,192.4	35,885.5
Trap blocks		98,102.2	25,708.2
Total		281,294.6	61,593.7

Total length of new pavements laid, 11,100 miles.

In connection with the foregoing contracts for paving and repaving streets and avenues, and also under additional contracts, 80,422 square feet of crosswalk were laid.
The following is a list of the principal paving and repaving contracts which could not be completed in 1887 on account of the cold weather and other causes. Several of these works will be finished in January, 1888, and the others as early in the coming season as practicable:

PAVING.

- Edgecomb avenue, from One Hundred and Thirty-fifth to One Hundred and Thirty-seventh street.
- Ninetieth street, from Eighth to Ninth avenue.
- Eighty-sixth street, from Eighth avenue to Riverside Drive.
- Lexington avenue, from Ninety-fifth to Ninety-seventh street.
- Eighth avenue, from One Hundred and Forty-fifth to One Hundred and Fifty-ninth street.
- One Hundredth street, from Second to Third avenue.
- Seventy-first street, from Boulevard to West End avenue.
- Ninety-seventh street, from Third to Fourth avenue.

REPAVING.

- Crosby street, from Howard to Bleecker street.

REPAIRING AND RENEWAL OF PIPES, STOP-COCKS, ETC.

The amount of work by the repair force under the direction of this Bureau during the year is as follows:

- 2,110 defects in pipes were repaired.
- 724 taps were shut off on account of leaks in service-pipes.
- 4,255 repairs were made to fire-hydrants.
- 560 new fire-hydrants were substituted for old.
- 14 new fire-hydrants were erected.
- 1,735 defects in pavements were repaired.

WELLS AND PUMPS.

- 2 pumps were repaired.

PUBLIC DRINKING-HYDRANTS.

- 177 drinking-hydrants were repaired.
- 5 new drinking-hydrants were erected at the following locations:
Northeast corner of Eleventh avenue and Fifty-first street.
In front of No. 49 South street.
Northwest corner of Hudson and Leroy streets.
West side of Eighth avenue, 50 feet north of Sixty-third street.
In front of No. 441 First avenue.

The number of miles of paved streets in the city is as follows:

Macadam	26.43 miles.
Asphalt	.90 "
Granite-block	87.61 "
Trap-block	241.55 "
Cobble-stones	19.67 "
Total	376.16 miles.

Respectfully submitted,

A. G. CULVER, Water Purveyor.

Document "F."

REPORT OF ENGINEER IN CHARGE OF SEWERS.

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF ENGINEER IN CHARGE OF SEWERS,
NO. 31 CHAMBERS STREET, ROOM 9,
NEW YORK, December 31, 1887.

Gen. JOHN NEWTON, Commissioner of Public Works:

SIR—In compliance with your instructions, I hand you herewith my report of the transactions of this office for the quarter ending December 31, 1887, also a statement of the work done by laborers and mechanics and by contracts with this Department for the year ending same date. During the quarter 13,044 lineal feet of sewer, 363 lineal feet of culvert and 10 receiving-basins have been built, making the present total length of sewerage in the city 2,225,554 lineal feet of sewer (421 ¹/₁₀ miles), with 5,112 receiving-basins.
23 contracts for sewers and 2 contracts for receiving-basins have been completed, viz.:

Sewers.

- Sixty-fourth street, between Avenue A and East river.
- One Hundred and Third street, between Ninth and Manhattan avenues.
- Sixty-fourth street, between Avenue A and First avenue.
- Seventy-sixth street, between Avenue A and East river.
- Madison avenue, between One Hundred and Seventeenth and One Hundred and Nineteenth streets.
- Madison avenue, between One Hundred and Third and One Hundred and Fifth streets.

- One Hundred and Second street, between Ninth and Manhattan avenues.
- One Hundred and Fourth street, between West End and Riverside avenues.
- East Gramercy place, between Twentieth and Twenty-first streets.
- Ninety-first street, between Avenue A and First avenue.
- One Hundred and Twenty-second street, between Ninth and Manhattan avenues.
- One Hundred and Forty-eighth street, between Seventh and Eighth avenues.
- Seventy-sixth street, between West End and Riverside avenues, etc.
- Eleventh avenue, between Fourteenth and Seventeenth streets, etc.
- Birmingham street, between Henry and Delancey streets.
- Tenth avenue, north side, between One Hundred and Forty-first and One Hundred and Forty-second streets, etc.
- Pleasant avenue, between One Hundred and Sixteenth and One Hundred and Fifteenth streets, etc.
- Bleecker street, between Christopher and West Tenth streets.
- Eighty-seventh street, between Eighth and Ninth avenues.
- Tenth avenue, north side, between Twenty-third and Twenty-second streets.
- One Hundred and Thirty-third street, between Tenth avenue and Broadway, etc.
- Outlet at foot of Rector street, Hudson river, etc.
- Outlet at Pier 29, East river, foot of Roosevelt street.

Basins.

- Southeast corner Fourteenth street and Fourth avenue.
 - Southwest corner Seventy-sixth street and Lexington avenue.
- 33 contracts for sewers are now in progress of construction. Since September 30, 692 receiving-basins and 23,338 lineal feet of sewer have been cleaned.
There is a present balance of \$16,868.10 to credit of the appropriation for "Sewers—Repairing and Cleaning," but when the outstanding liabilities are settled, this balance will be reduced to a very small sum.

Respectfully,

HORACE LOOMIS, Engineer in Charge of Sewers.

REPORT OF THE TRANSACTIONS OF THE OFFICE OF THE ENGINEER IN CHARGE OF SEWERS FOR THE QUARTER ENDING DECEMBER 31, 1887.

Credits to General Fund—		
Amount received for 284 permits for sewer connections		\$6,963 19
Engineers' Fees—		
Amount of Engineers' fees assessed on property benefited, charged on assessment lists and credited to Street Improvement Fund		\$7,193 57
Sewers—Repairing and Cleaning—		
Balance on hand, September 30, 1887		\$58,045 28
Vouchers transmitted to the Commissioner of Public Works—		
Pay-rolls of Laborers, etc.	\$17,442 99	
Contracts for repairs	8,568 93	
Special repairs (under \$1,000)	9,141 56	
Materials and sundries	5,697 30	
Transportation expenses	326 40	
Balance on hand, December 31, 1887	16,868 10	
		\$58,045 28
Salaries—Sewers—Repairing and Cleaning—		
Balance on hand, September 30, 1887		\$2,020 00
Vouchers transmitted to the Commissioner of Public Works—		
Pay-rolls of Inspectors, etc.	\$1,990 00	
Balance on hand, December 31, 1887	30 00	
		2,020 00
Salaries—Sewerage System—		
Balance on hand, September 30, 1887		\$4,124 91
Vouchers transmitted to the Commissioner of Public Works—		
Pay-rolls of Engineers, etc.	\$4,124 64	
Balance on hand, December 31, 1887	27	
		4,124 91
Surveys, Maps, etc., for Street Openings, etc.—		
Balance on hand, September 30, 1887		\$4,698 80
Vouchers transmitted to the Commissioner of Public Works—		
Pay-rolls of Draughtsmen, etc.	\$1,575 00	
Balance on hand, December 31, 1887	3,123 80	
		4,698 80
Boring Examinations for Grading and Sewer Contracts—		
Balance on hand, September 30, 1887		\$1,635 37
Vouchers transmitted to the Commissioner of Public Works—		
Pay-rolls of Axemen, etc.	\$888 00	
Balance on hand, December 31, 1887	747 37	
		1,635 37
Restoring and Repaving—Special Fund—		
Amount received for 454 permits for street openings		\$5,167 00
Vouchers transmitted to the Commissioner of Public Works		\$107,314 47
Street Improvement Fund—		
Pay-rolls of Engineers, etc., October and November	\$9,837 44	
On contracts for sewers	96,650 98	
		\$106,488 42
Fund for Local Improvements—		
On contracts for sewers		650 25
Local Improvement Fund—		
On contract for sewer		175 80
		107,314 47
Work done by Laborers and Mechanics—		
692 receiving-basins and culverts cleaned.		
23,338 lineal feet of sewer cleaned.		
364 lineal feet of sewer rebuilt.		
617 lineal feet of sewer repaired.		
62 lineal feet of culvert rebuilt.		
22 lineal feet of new culvert built.		
113 lineal feet of spur-pipe laid.		
290 lineal feet of new curb set.		
17 lineal feet of curb reset.		
37 lineal feet of box sewer built.		
10 new receiving-basins built.		
94 receiving-basins repaired.		
1 receiving-basin rebuilt.		
73 new basin-heads put on.		
13 basin-heads reset.		
7 basin covers put on.		
2 manholes rebuilt.		
476 manholes repaired.		
20 new manhole heads and covers put on.		
14 new manhole covers put on.		
426 manhole-heads reset.		
1,546 square feet of flagging relaid.		
531 square yards of pavement relaid.		
1,544 cubic yards of earth excavated and refilled.		
23 cart-loads of earth filled in.		
2,548 cart-loads of dirt removed.		
Work done by contract—		
13,044 lineal feet of sewer built.		
363 lineal feet of culvert built.		
10 receiving-basins built.		
1,000 lineal feet of piles driven.		
Making the present total length of sewerage in the city 2,225,554 lineal feet (421 ¹ / ₁₀ miles), with 5,112 receiving-basins.		

REPORT OF THE TRANSACTIONS OF THE OFFICE OF THE ENGINEER IN CHARGE OF SEWERS FOR THE YEAR ENDING DECEMBER 31, 1887.

Work done by Laborers and Mechanics—

- 3,205 receiving-basins cleaned.
- 127,135 lineal feet of sewer cleaned.
- 42 lineal feet of sewer built.
- 976 lineal feet of sewer rebuilt.
- 2,921 lineal feet of sewer repaired.
- 85 lineal feet of culvert built.
- 47 lineal feet of culvert rebuilt.
- 392 lineal feet of spur-pipe laid.
- 820 lineal feet of new curb set.
- 79 lineal feet of curb reset.
- 69 lineal feet of box sewer built.
- 13 receiving-basins built.
- 309 receiving-basins repaired.
- 2 receiving-basins rebuilt.
- 215 new basin heads and covers put on.
- 34 basin-heads reset.
- 46 new basin covers put on.
- 8 new manholes built.
- 4 manholes rebuilt.
- 1,063 manholes repaired.
- 880 manhole heads reset.
- 140 new manhole heads and covers put on.
- 168 new manhole covers put on.
- 30 square feet of crosswalk laid.
- 4,689 square feet of flagging relaid.
- 2,048 square yards of pavement relaid.
- 4,405 cubic yards of earth excavated and refilled.
- 186 cart-loads of earth filled in.
- 11,590 cart-loads of dirt removed.

Work done by contract—

- 36,517 lineal feet of sewer built.
- 1,102 lineal feet of culvert built.
- 43 receiving-basins built.
- 17,271 lineal feet of piles driven.

Work done by property-owners—

- 791 lineal feet of sewer built.

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF ENGINEER IN CHARGE OF SEWERS,
NEW YORK, January 4, 1888.

Gen. JOHN NEWTON, Commissioner of Public Works:

DEAR SIR—Agreeable to your instructions, I submit herewith a report covering the operation of this office for the year 1887.

Of new sewers there have been built during the year 36,517 feet, or 7 $\frac{1}{10}$ miles, together with 1,102 feet of culvert and 43 receiving-basins, making the total mileage of sewers in the city, 421,700. The most important of these, although not the most expensive, are the wooden barrel outlet sewers at Pier 29, East river, at foot of Roosevelt street, and at Pier 8, North river, foot of Rector street. These carry the total discharge from Sewerage Districts Nos. 22 and 21, containing 85 $\frac{1}{2}$ and 43 acres, respectively. By discharging the sewage from these districts into deep water at the pier-head, instead of into the slip, a long-standing nuisance has been removed. These sewers are built of cross-cut pine, circular in shape and 4 feet and 3 feet in diameter, respectively. Another important work is the sewer in Eleventh avenue, Fourteenth and Fifteenth streets, discharging at Seventeenth street, North river; this has also been of great advantage to the neighborhood affected. The sewer in Eighth avenue, between One Hundred and Fifth and One Hundred and Fourteenth streets, is not entirely completed, but the portion between One Hundred and Fifth and One Hundred and Tenth streets, reaching the Cancer Hospital and enabling that institution to be opened, has been finished. The outlet sewer in Eighth avenue, between One Hundred and Fifty-third street and Harlem river, may also be ranked as a noticeable improvement. The great activity in real estate on the west side, north of Fifty-ninth street, has called for the construction of many branch sewers in that locality, and it will be seen by a glance at Schedule "A" that a majority of the sewerage works have been constructed in that section of the city.

Schedule "A" is a list of the sewers completed during the year, showing their length, the number of receiving-basins connected therewith, the number of feet of culvert, and that the total cost was \$283,391.92.

Schedule "B" gives the same data as to work now in progress, the estimated cost of which is \$432,385, while Schedule "C" shows sewers petitioned for, for which plans are in progress and which will be put under contract in the early spring.

Several works have been undertaken by the owners of adjacent property, under permit from this Department, which have been supervised by our Inspectors, and have and will become a part of the sewerage system. Certain owners of large tracts, the streets in which have not been legally opened, have undertaken to make all necessary improvements, intending in the future to dedicate the same to the City. In such cases permits have been given, on proper conditions, to connect with outlet sewers. The large district above One Hundred and Fifty-fifth street is still without improvement in the way of sewers, only two contracts having been let in this section during the year, viz.: Eleventh avenue, between One Hundred and Fifty-ninth and One Hundred and Sixty-first streets.

Avenue St. Nicholas, between One Hundred and Fifty-eighth and One Hundred and Sixty-second streets.

The work on these sewers is now in progress. In this connection I beg leave to call your attention to the matter of an outlet sewer, from Tenth avenue through One Hundred and Sixty-seventh street and across High Bridge Park to the Harlem river.

According to the view entertained by the Counsel to the Corporation, legislation was necessary to enable the City to build across High Bridge Park; and I am informed that a bill to that effect was introduced in the last Legislature, but failed to pass. I respectfully suggest that, in the interest of the improvement of that district, this bill should be pressed to a final passage at the coming session. I would also call your attention to recent opinions from the Law Department to the effect that in all streets or avenues more than one mile in length north of One Hundred and Fifty-fifth street, not more than one-half the cost of all sewers, of whatever length or size, can be assessed upon the property benefited.

It would appear, therefore, that in Tenth and Eleventh avenues, Kingsbridge road, Fort Washington Ridge road, etc., ultimately involving many miles of sewers, and costing many hundreds of thousands of dollars, the property benefited would escape by paying only one-half the cost. This law was passed in 1865, and I am satisfied that it was never the intention to include a purely local improvement, such as sewerage, in its provisions. I therefore suggest that its repeal or amendment be asked for.

A large number of pipe sewers have been built during the past year. There can be no doubt that, under proper conditions, vitrified stoneware is far better for sewerage work than brick. Those constructed during the past year have been built in the most substantial manner, with concrete bottom and sides, and compare favorably with other structures of the kind, while the first cost is much less. As to the sewerage system in general, it may be stated that it has operated with tolerable success during the past year. On all the high parts of the island the grades are such that the sewage runs off freely, but before it reaches the outfall at the river it must pass the marginal flats which have been built up beyond the original shore-line, where the grades are very slight, and in consequence the flow is sluggish and at the same time affected by tides. This is the only defect which seems to call for any extraordinary change in the system. As all the sewage of the city must pass through these channels to the adjacent water, the difficulty in making this portion self-cleansing is apparent.

At the present time the question is under consideration by Mr. Rudolph Herring, C. E., who has been employed as Consulting Engineer for the purpose of making an examination of the whole system, with a view of obtaining his opinion of its defects and his recommendation as to the proper means to remedy the same. His examination has not progressed far enough to enable him to report. It is therefore impossible to say what conclusion will be arrived at, and any statement on my part at present would be premature.

One contract has been vacated for delays and failure to comply with its conditions, and in four cases the bondsmen had to assume the work and carry it to completion. Cases like these cause great inconvenience to the Department and annoyance to property-holders. I am of the opinion that the contractors, in addition to furnishing approved security, should satisfy the Commissioner of Public Works of their knowledge of the kind of work to be done and their financial ability to complete the same as a condition precedent to being awarded the contract.

I will also suggest that an improvement might be made in the manner of letting contracts. The time consumed in printing the specifications for each separate contract, reading and correcting proofs and examination and approval by the Counsel to the Corporation is considerable, amounting sometimes to three or four weeks. As these specifications and forms of contract, in a majority of cases, are exactly alike, with the exception of title, date, quantities, etc., which belong to each

contract and which all told are not more than one hundred words, it occurs to me that all sewer specifications could be printed in bulk, leaving blanks for inserting date, quantities, etc., these to be filled when forms of contract are required for letting work. If this idea should meet the approval of the Counsel to the Corporation I am satisfied that it would materially shorten the time now required to put work under contract, as well as lessen the chance for errors.

The work of rebotomming with tile has been carried on during the present year, 4,158 lineal feet of tile bottom having been laid. So far as the appropriation will permit I propose, during the coming year, to continue this work with the following, viz.:

- Twentieth street, from Fourth avenue to Broadway.
- Twentieth street, between Ninth and Tenth avenues.
- One Hundred and Fifty-second street, at intersection at Tenth avenue, etc.
- Cherry street, from Roosevelt to Frankfort street.
- Fourth avenue, from One Hundred and Sixth to One Hundred and Eighth street, both sides.
- Fifth street, between Avenues A and C.

I also propose the following other works:

- Rebuild in brick—
- Eleventh street, between Second and Third avenues.
- Thirteenth street, between Third and Fourth avenues.
- Stanton street, between Bowery and East river.
- Fourteenth street, between University place and Broadway.
- Tenth avenue, between Seventy-eighth and Eighty-first streets.
- Third avenue, west side, between One Hundredth and One Hundred and Second streets.

- Repair in brick—
- Houston street, between Goerck and Mangin streets.
- Stanton street, between Bowery and East river.
- John street, from East river to Pearl street.
- Avenue C, from Fourth to Eighth street (twin sewers).
- First avenue, from One Hundredth to One Hundred and Fourth street.
- Battery place, from Greenwich street to Broadway.

- Repair pipe—
- Ninety-sixth street, between Eighth and Ninth avenues.
- Sixty-fifth street, between Eighth and Ninth avenues.
- Lawrence street, from Ninth to Tenth avenue.
- Eighth avenue, between Sixty-second and Sixty-sixth streets.
- Besides these, there are wooden box sewers which will have to be rebuilt, viz.:
- Fulton street, at North and East rivers.
- Battery place, from Washington street to North river.

The work of boring examinations for grading and sewer contracts has been carried on during the past year with an average force of 1 axeman, 4 laborers and 1 horse and wagon. There have been 23,000 lineal feet of streets bored for sewers.

REPAIRING AND CLEANING.

The work of maintenance of the sewer system has been performed by a force of 15 Foremen and Timekeepers, 5 Mechanics, 45 Laborers and 21 horses and carts. In addition to the service performed by this force a large amount of work has been given to private parties under orders. The amount of appropriation for this purpose was \$141,500, and this amount has been expended, as follows, viz.:

Pay-roll, Laborers, etc.	\$66,644 08
Material, etc.	16,579 01
Work done under orders	25,537 45
Work done under contract	15,871 36
Liabilities outstanding, estimated	16,767 11
Leaving a balance of	100 99
Total	\$141,500 00

Altogether there have been 127,135 lineal feet of sewer of all kinds and sizes cleaned and repaired; of this 47,066 feet were pipe and 80,069 feet were brick sewer.

The cleaning of the brick sewers, the most of which was done under orders on bids received, cost on an average about 23 cents per lineal foot. The cost per cubic yard of dirt removed was \$3.07. The pipe sewers have been cleaned at a cost of 4 cents per lineal foot. Considering the hours worked and the rate of wages it is believed that these prices compare favorably with rates for similar work paid in other cities. A large amount of work has been done in setting new basin-heads in place of the old ones of the six-piece pattern and repairing the basins, as well as minor repairs to the sewers. The larger repairs or rebuilding, which has been done or commenced, are shown in the following table:

- Ninth avenue, between Ninety-second and Ninety-sixth streets.
- Sixth avenue, between Fourteenth and Sixteenth streets, etc.
- First avenue, between Ninety-fifth and One Hundredth streets.
- Ninth street, between Avenues B and C, etc.
- Eighty-first street, between Eighth and Ninth avenues.
- Twentieth street, between Tenth and Eleventh avenues.
- Eighth avenue, between Eighty-third and Eighty-fifth streets.
- Ann street, between Nassau street and Park Row.
- Avenue B, between Nineteenth and Twentieth streets.
- Third avenue, One Hundred and First to One Hundred and Second street.

Of these repairs I might mention the one in First avenue, between Ninety-fifth and One Hundredth streets, as of special importance. The long intercepting sewer, of which this is a part, had settled to such an extent as to be practically useless. A flushing chamber to be built in connection with it will show the amount of cleaning which can be done in a large sewer by holding back the tide-water and suddenly releasing it.

Early in the season a party was started to examine all the sewers in the city. This work was carried on from the Battery to Eightieth street, which covered all the older sewers in the city, and from the information thus obtained I was able to undertake many needed jobs of cleaning and repairing which had not become manifest by a failure to operate.

The total mileage which required attention was five and one-half per cent. of the whole, showing that the bulk of the sewers are self-cleansing, and in fair condition, and a study of the locations where the work was done shows also that the tides in the low-lying sewers is the most potent cause of deposit in them.

- The most important works of cleaning were—
- Seventeenth street, between First and Second avenues.
- Carmine street, Varick street to Sixth avenue to Thirteenth street.
- Corlears street, from Grand street to East river.
- Little West Twelfth street, from Tenth avenue to North river.
- One Hundred and Eleventh street, between Fifth and Madison avenues.
- Chambers street, between Washington and West streets.
- Sixth street, between Avenues B and D.
- Eighty-first street, between Eighth and Ninth avenues, and in Eighth avenue, between Eighty-first and Eighty-fourth streets.
- Nineteenth street, between Tenth and Eleventh avenues.
- Elizabeth street, between Prince and Houston streets.
- One Hundred and Eighteenth street, from First to Pleasant avenue.
- South Fifth avenue, from Spring to Broome street.

- Among the most important works of repairing were—
- St. Nicholas avenue, between One Hundred and Thirty-seventh and One Hundred and Thirty-ninth streets.
- Forty-third street and North river outlet.
- Wall and South streets.
- Forty-sixth street and East river.

There have been 3,205 basins cleaned during the year. This work is a standing job, and I see no way of avoiding it, with the combined system of sewerage. Some of these basins will work for a year without cleaning, while others require it every month.

The following are the numbers of permits issued to connect buildings with the public sewers, and the number of permits issued to repair or relay old house connections. Also the amount of money received for connecting with sewers and for repaving over sewer openings for the year 1887:

Permits for new connections	1,375
Permits for repairing old connections	1,418
Number of buildings in the above	4,305
Amount of moneys received for sewer connections	\$34,288 83
Amount of moneys received for repaving	21,642 50
Total	\$55,931 33

The following is a statement of the work done in the matter of street openings, which by law is required to be done by this Department :

COMPLETED WORK.

Ninety-fourth street, between First and Second avenues. One Hundred and Seventeenth street, between Eighth and Ninth avenues. One Hundred and Eighteenth street, between Eighth and Ninth avenues. One Hundred and Twelfth street, between Tenth avenue and Boulevard. One Hundred and Nineteenth street, between Eighth and Ninth avenues. One Hundred and Twenty-first street, between Eighth and Ninth avenues. One Hundred and Thirtieth street, between Eighth avenue and Avenue St. Nicholas. One Hundred and Fortieth street, between Tenth avenue and Edgewood road. One Hundred and Fiftieth street, between Tenth avenue and Avenue St. Nicholas. One Hundred and Sixty-sixth street, between Tenth and Eleventh avenues. One Hundred and Sixty-seventh street, between Tenth and Eleventh avenues. A public place in the Twenty-second Ward of the City of New York. Closing Bogert street, between Thirteenth avenue and West street.

WORK IN PROGRESS.

Fifty-second street, between Eleventh avenue and Hudson river. Fifty-third street, between Eleventh avenue and Hudson river. Fifty-fourth street, between Tenth avenue and Hudson river. Elm street, widening and extension, between Maiden Lane and Ninth street. Lexington street, between Ninety-seventh and One Hundred and Second streets. Manhattan street extension, between Twelfth avenue and bulkhead, Hudson river. Proposed park at Mulberry, Baxter, Park and Bayard streets. Ninety-ninth street, between Third and Fourth avenues. Eighty-third street, between Avenues A and B. One Hundred and Nineteenth street, between Tenth and Morningside avenues. One Hundred and Twentieth street, between Tenth and Morningside avenues. One Hundred and Twentieth street, between Tenth avenue and Boulevard. One Hundred and Twenty-first street, between Tenth and Morningside avenues. One Hundred and Twenty-seventh street, between Second avenue and Harlem river. One Hundred and Thirty-second street, between Eighth avenue and Avenue St. Nicholas. One Hundred and Thirty-second street, between Boulevard and Hudson river. One Hundred and Thirty-first street, between Eighth avenue and Avenue St. Nicholas. One Hundred and Thirty-fourth street, between Boulevard and Tenth avenue. One Hundred and Thirty-eighth street and Hamlin avenue, between Avenue St. Nicholas and Tenth avenue. One Hundred and Thirty-eighth street, between Eighth avenue and Avenue St. Nicholas. One Hundred and Thirty-ninth street, between Eighth avenue and Avenue St. Nicholas. One Hundred and Fortieth street, between Avenue St. Nicholas and Convent avenue. One Hundred and Fiftieth street, between Sixth avenue and Hudson river. One Hundred and Forty-second street, between Eighth avenue and Edgewood road. One Hundred and Forty-third street, between Eighth avenue and Edgewood road. One Hundred and Fifty-fourth street, between Eighth avenue and Harlem river. New Convent avenue, between One Hundred and Thirty-fifth and One Hundred and Forty-fifth streets. Claremont avenue, between One Hundred and Twenty-second and One Hundred and Twenty-seventh streets. One Hundred and Sixty-third street, between Tenth avenue and Edgewood road. One Hundred and Seventieth street, between Tenth avenue and Kingsbridge road. One Hundred and Seventieth street, between Kingsbridge road and Fort Washington Ridge road. One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road. Audubon avenue, between One Hundred and Sixty-fifth and One Hundred and Seventy-fifth streets. Edgewood road, between One Hundred and Fifty-fifth and One Hundred and Seventy-fifth streets. One Hundred and Eighty-first street, between Eleventh avenue and Western Boulevard. One Hundred and Eighty-second street, between Tenth avenue and Kingsbridge road. One Hundred and Thirty-eighth street and Hamlin avenue, between Tenth avenue and Avenue St. Nicholas. One Hundred and Eleventh street, between Eighth and Manhattan avenues. One Hundred and Twenty-seventh street, between Boulevard and Manhattan street. Fort Washington Ridge road, between One Hundred and Ninety-third and One Hundred and Ninety-fifth streets.

Respectfully submitted,

HORACE LOOMIS, Engineer in Charge of Sewers.

SCHEDULE "A."

Sewers and Basins Completed during the Year 1887.

Table with columns: LOCATION OF WORK, SIZE, SEWER, LINEAR FEET, CULVERT, LINEAR FEET, BASINS, TOTAL COST. Lists completed sewer and basin projects with their respective costs.

Table with columns: LOCATION OF WORK, SIZE, SEWER, LINEAR FEET, CULVERT, LINEAR FEET, BASINS, TOTAL COST. Lists sewer and basin projects in progress with their respective costs.

SCHEDULE "B."

Sewers in Progress of Construction.

Table with columns: LOCATION OF WORK, SIZE, SEWER, LINEAR FEET, CULVERT, LINEAR FEET, BASINS, ESTIMATED COST. Lists sewer and basin projects in progress with their estimated costs.

LOCATION OF WORK.	SIZE.	SEWER, LINEAR FEET.	CULVERT, LINEAR FEET.	BASINS.	ESTIMATED COST.
Avenue St. Nicholas and Edgecomb road, between One Hundred and Thirty-third and One Hundred and Thirty-sixth streets	12"	650	....	..	3,745 00
Seventy-third street, between summit west of Boulevard and Boulevard	15"	300	....	..	1,263 00
One Hundred and Fifteenth street, between Madison and Fifth avenues	15"	390	....	....	2,225 00
Fourth avenue, east side, between One Hundred and Sixteenth and One Hundred and Seventeenth streets	12"	155	....	..	960 00
Ninety-second street, between Ninth avenue and Boulevard, etc.	3' 6" x 2'	1,380	20	1	16,380 00
One Hundred and Eighteenth street, between Fourth and Madison avenues, etc.	3' 6" x 2'	455	....	..	5,905 00
<i>Contracts for Sewers Executed on which no Work has been Done.</i>					
Tompkins street, between Rivington and Delancey streets.	15"	345	....	..	1,786 00
Thirty-first street, between First avenue and East river.	15"	333	....	..	2,234 00
One Hundred and Sixteenth street, south side, between Madison and Fourth avenues, etc.	3' 6" x 2'	415	....	..	5,217 00
One Hundred and Twenty-sixth street, between First and Second avenues	3' 6" x 2'	853	45	1	5,460 00
West street, between Murray and Jay streets, etc.	4' x 2'	260	....	..	30,108 00
	3' 6" x 2' 8"	395			
	2'	47			
		33,539	640	23	\$432,385 00

SCHEDULE "C."

Sewers Positioned for and for which Plans are in Progress, and which will be put under Contract in the Spring.

- Ninety-fourth street, between Second and Third avenues.
- Ninety-fifth street, between First avenue and East river.
- One Hundredth street, between West End and Riverside avenues.
- One Hundred and First street, between Lexington and Fourth avenues.
- One Hundred and Second street, between Ninth and Tenth avenues.
- One Hundred and Seventh street, between Eighth and Ninth avenues.
- One Hundred and Eighth street, between Eighth and Ninth avenues.
- One Hundred and Twelfth street, between Boulevard and Tenth avenue.
- One Hundred and Fifteenth street, between Eighth and Manhattan avenues.
- One Hundred and Seventeenth street, between Eighth and Ninth avenues.
- One Hundred and Eighteenth street, between Eighth and Ninth avenues.
- One Hundred and Twenty-first street, between Eighth and Ninth avenues.
- One Hundred and Forty-second street, between Boulevard and Hamilton place.
- One Hundred and Forty-ninth street, between Seventh and Eighth avenues.
- One Hundred and Fifty-third street, between Tenth avenue and Boulevard.
- One Hundred and Fifty-fifth street, between Harlem river and Coogan avenue.
- South street, between Peck Slip and Roosevelt street.
- Hamilton place, between One Hundred and Thirty-sixth and One Hundred and Forty-second streets.
- Lexington avenue, between Seventy-eighth and Seventy-ninth streets.
- Avenue B, between Eighty-third and Eighty-fourth streets.
- Eighth avenue, between Eighty-fourth and Eighty-fifth streets.
- Madison avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets.

SCHEDULE "D."

Sewers Constructed and in Process of Construction by Permits, during the Year.

- One Hundred and Forty-fifth street, between Tenth avenue and Avenue St. Nicholas. Completed.
- Eighty-third street, between Avenues A and B, etc. In progress.
- Sewers being constructed in streets laid out on property known as the Hamilton Grange, said streets not being legally opened, will not add to the length of sewerage in the city until this is done, viz.:
- One Hundred and Forty-second street, between Tenth and Convent avenues.
- One Hundred and Forty-third street, between Tenth and Convent avenues.
- One Hundred and Forty-fourth street, between Tenth and Convent avenues.
- One Hundred and Forty-fourth street, between Hamilton Terrace and 100 feet east of Convent avenue, etc.
- Convent avenue, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.

Document "G."

REPORT OF THE SUPERINTENDENT OF STREET IMPROVEMENTS.

DEPARTMENT OF PUBLIC WORKS,
BUREAU OF STREET IMPROVEMENTS, ROOM 5, NO. 31 CHAMBERS STREET,
NEW YORK, January 6, 1888.

Gen. JOHN NEWTON, Commissioner of Public Works:

SIR—In compliance with your instructions I have the honor to submit herewith my report of the operations of the Bureau of Street Improvements for the quarter ending December 31, 1887, and also my yearly report, exhibiting all the expenditures of this Bureau for the year ending December 31, 1887, together with a statement showing amount of work done, and also balances of appropriations on hand belonging to this Bureau.

On the commencement of the year 43 contracts were in existence, of which 33 have been completed during the year. One hundred and thirty (130) contracts were entered into during this year, of which 105 have also been completed, making a total of 138 contracts completed, at a cost of \$385,318.49, for which assessment lists have been transmitted to the Board of Assessors.

The most important of these completed contracts are, as follows:

- Regulating, grading, etc., Claremont avenue, from One Hundred and Sixteenth to One Hundred and Twenty-second street.
- Regulating, grading, etc., Edgecomb avenue, from One Hundred and Thirty-seventh to One Hundred and Fortieth street.
- Regulating, grading, etc., Edgecomb avenue, from One Hundred and Forty-first to One Hundred and Forty-fifth street.
- Regulating, grading, etc., Fort George avenue, from Tenth to Eleventh avenue.
- Regulating, grading, etc., Sixty-fifth street, from First avenue to Avenue A.
- Regulating, grading, etc., Sixty-ninth street, from Eighth to Ninth avenue.
- Regulating, grading, etc., Seventy-seventh street, from Boulevard to Riverside Drive.
- Regulating, grading, etc., Eighty-second street, from Boulevard to Riverside Drive.
- Regulating, grading, etc., Eighty-ninth street, from Boulevard to Riverside Drive.
- Regulating, grading, etc., Ninetieth street, from Boulevard to Riverside Drive.
- Regulating, grading, etc., Ninety-fourth street, from Boulevard to Riverside Drive.
- Regulating, grading, etc., One Hundred and Fourteenth street, from Fourth to Eighth avenue.
- Regulating, grading, etc., One Hundred and Fourteenth street, from Tenth avenue to Riverside Drive.
- Regulating One Hundred and Thirty-second street, from Tenth avenue to Broadway.
- Regulating One Hundred and Forty-second street, from Seventh to Eighth avenue.
- Regulating One Hundred and Forty-ninth street, from Seventh to Eighth avenue.

On December 31, 1887, 31 contracts remained unfinished, the most important of which are the following:

- Regulating and grading Fort Washington Ridge road—
Work on this road commenced January, 1885, and about 125,000 cubic yards of rock have so far been excavated. The work will, in all probability, be completed during July or August next.
- Tree planting, West End avenue, from Seventy-second to One Hundred and Seventh street—
This work consisted in the planting of about 1,048 maple trees. The same is about completed in a satisfactory manner, and the avenue will be greatly improved by it.
- Regulating, grading, etc., Kingsbridge road, from One Hundred and Ninetieth street to Harlem river—
This is a very large contract, the estimated cost being about \$205,000. Work has been begun, and progresses satisfactorily. It will take over a year to complete this work. Kingsbridge road is now graded, curbed and flagged to One Hundred and Ninetieth street, and the completion of this contract will open one of the finest avenues for public travel, and also greatly benefit the property adjoining.
- Regulating, grading, etc., first new avenue west of Eighth avenue, from One Hundred and Forty-first to One Hundred and Forty-fifth street—
Work is progressing well on this avenue and will be completed about the first of May next.
- Regulating, grading, etc., first new avenue west of Eighth avenue, from One Hundred and Forty-fifth to One Hundred and Fifty-fifth street—
The work on this avenue consists principally of filling about 100,000 cubic yards, and is now in active progress and will require about eight to nine months to complete it.
- Regulating, grading, etc., Edgecomb avenue, from One Hundred and Forty-fifth street to St. Nicholas avenue—
This is a very large contract, including earth and rock excavation, filling and masonry (about 8,700 yards of retaining-wall have so far been built). It will require about eight or nine months to complete this work.
- Regulating, grading, etc., Hamilton place, from Boulevard to Tenth avenue—
The contractor has progressed very rapidly with this work and the same would have been completed, but he was delayed by the lowering of water-mains, gas-mains, etc. The work will be finished in April.
- Regulating and widening of Gansevoort street, from Washington to Thirteenth street, etc.—
The widening of this street is about completed and this improvement will be of great benefit to the Farmers' Market and the new West Washington Market now in progress of erection on Gansevoort and West streets.
- Retaining-wall, Forty-third street, between First avenue and Prospect place—
This work is completed with the exception of the iron railing. The improvement will be a great benefit to the neighborhood.
- Retaining-wall, Forty-ninth street, between First avenue and Prospect place—
Work on this wall had to be suspended on account of the advanced season; it can easily be completed in a few months after the frost is out of the ground.
- Regulating and grading Sixty-third street, from Tenth to Eleventh avenue—
This work (mostly rock cutting) is progressing very rapidly and will be completed about June 1, next.
- Regulating, grading, etc., One Hundred and Thirty-eighth street, from Tenth avenue to Boulevard—
Work on this contract consists mostly of excavation of rock. Its completion may be expected during the summer.

APPROPRIATIONS.

Street Improvements—For Surveying, Monumenting and Numbering of Streets.

The amount appropriated for this purpose was \$3,000, of which sum about \$1,105.50 has been expended for numbering and renumbering of streets; \$1,800 for setting and resetting monument stones, leaving a balance of about \$94.50.

The numbering and renumbering of streets and avenues is beginning to assume a very important part in the work of this Bureau and requires considerable attention, keeping one Inspector constantly employed. 37 blocks have been renumbered, besides many complaints received have been attended to, which are mostly caused by the builders of new houses, who never ask for the proper numbers and have then to be corrected afterwards. The re-examination of the work of renumbering the district between Fifty-ninth and One Hundred and Tenth streets and west of Central Park, and also the rapid increase of new buildings, not only on the Island, but also in Twenty-third and Twenty-fourth Wards, keeps the Inspector constantly employed.

The setting of monument stones and resetting of same is also a very important matter, and should be continued during the coming year.

Flagging Sidewalks and Fencing Vacant Lots in front of City Property.

The appropriation for this purpose amounted to \$5,000; \$2,999.72 have been expended in necessary repairs, and the balance on hand is 28 cents.

Necessary repairs have been made to the sidewalks around Catharine Market, around the New York State Arsenal on Elm and White streets, and also in front of City property in Sixty-eighth street and Lexington avenue.

A picket fence has been erected at Sixty-eighth street and Lexington avenue, and a closed board fence at Fifty-ninth street and East river.

The business of the Bureau has been greatly increased in the past year; more contracts have been given out and more completed than in any previous year in the history of the Bureau. Many large contracts have been finished, principally in the upper section of the city, thereby enabling property-owners to go on with the improvement of their lots, and we have tried to assist them in every way possible by proceeding without any delay with the desired improvements by preparing the necessary surveys and giving out the contracts as fast as possible, and not a single complaint has been made against the Bureau in this regard; the city being also greatly benefited by an increased value of the adjoining property.

In order to fully carry out your instructions, lately received, in regard to defective sidewalks, in accordance with the provisions of section 321 of chapter 321 of the New York City Consolidation Act of 1882, as amended by chapter 569 of the Laws of 1887, I would respectfully suggest the appointment of a competent Inspector of Sidewalks; a man fully conversant with the quality of curb and flag stones, and also of the workmanship required. His services would be very valuable for the proper performance of this part of the work, judging not only from the many complaints this Bureau is receiving in regard to sidewalks which are dangerous to the safety, health and convenience of the public, but also from my own observations. These complaints take in the whole city, and it will be impossible for me to give it the proper attention desirable.

Respectfully submitted,

W. M. DEAN, Superintendent of Street Improvements.

STATEMENT OF THE AMOUNT OF WORK DONE DURING THE QUARTER ENDING DECEMBER 31, 1887.

Earth excavated	..... cubic yards.	43,478 ¹ / ₂
Rock excavated	..... "	33,301
Filling furnished	..... "	94,658
Curb-stones set	..... linear feet.	28,438 ⁸¹ / ₁₂
" reset	..... "	424 ⁹ / ₁₂
Flagging laid	..... square feet.	127,634 ⁸⁵ / ₁₀₀
" relaid	..... "	2,434
Picket fence built	..... linear feet.	19,538 ¹⁰ / ₁₂
Rubble range masonry	..... cubic yards.	3,771
Cut-stone masonry	..... "	17
Twelve-inch drain-pipe laid	..... linear feet.	350
Stone masonry excavation	..... cubic yards.	79
Maple trees planted	..... "	920
Trap-block pavement laid	..... square yards.	1,264
Bridge-stones laid	..... square feet.	1,076

WORK DONE IN FRONT OF CITY PROPERTY.

Curb-stones set	..... linear feet.	10 ⁶ / ₁₀
" reset	..... "	659
Flagging laid	..... square feet.	249 ³ / ₁₀
" relaid	..... "	8,533

WORK DONE ON ACCOUNT OF THE CITY.

Monument stones set and reset on Boulevard, from Fifty-ninth street to Kingsbridge road	40
Monument stones set and reset on Seventh avenue and One Hundred and Thirty-fourth street	1
Monument stones set and reset on Sixth avenue and One Hundred and Thirty-third street	1
Monument stones	42

AMOUNT OF VOUCHERS DRAWN.

On account of—	
Fund for Local Improvements	\$258 35
Local Improvement Fund	5,721 54
Street Improvement Fund	180,483 83
Street Improvements—For Surveying, Monumenting and Numbering of Streets	1,186 00
Contingencies of Department of Public Works	270 00
Repairs to Seventh Regiment Armory Building	620 40
Total	\$188,540 12

WORKS COMPLETED DURING THE QUARTER.

Regulating and Grading—

One Hundred and Fifty-fifth street, intersection of New avenue	\$2,527 03
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Regulating, Grading, Curb and Flagging—

Edgecomb avenue, One Hundred and Thirty-seventh to One Hundred and Fortieth street	\$11,181 09
Edgecomb avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street	24,562 88
Fort George avenue, Tenth to Eleventh avenue	21,753 15
Sixty-fifth street, First avenue to Avenue A	11,266 15
Seventy-seventh street, Boulevard to Riverside Drive	13,894 50
Ninetieth street, First avenue to Avenue A	1,867 31
Ninetieth street, Ninth to Tenth avenue	2,633 95
Ninetieth street, Boulevard to Riverside Drive	7,515 46
Ninety-first street, Eighth to Ninth avenue	5,721 44
One Hundred and Second street, Eighth to Ninth avenue	4,957 79
One Hundred and Third street, Eighth to Ninth avenue	5,279 72
One Hundred and Thirtieth street, Eighth to New avenue	5,224 28
One Hundred and Fortieth street, Eighth to Edgecomb avenue	1,421 73
One Hundred and Forty-second street, Boulevard to Hamilton place	3,301 84
One Hundred and Forty-seventh street, Eighth to New avenue	4,613 79
One Hundred and Sixty-fifth street, Edgecomb road to Tenth avenue	3,399 39

Curb and Flagging—

East side Manhattan avenue, One Hundred and Twentieth to One Hundred and Twenty-third street	\$1,315 75
West side Twelfth avenue, One Hundred and Twenty-ninth to One Hundred and Thirtieth street	151 32
Fifth street, Lewis street to bulkhead-line, East river	2,082 47

Flagging—

West side Second avenue, One Hundred and Twentieth to One Hundred and Twenty-first street	\$443 20
West side Fourth avenue, One Hundred and Sixteenth to One Hundred and Seventeenth street	284 47
East side Seventh avenue, One Hundred and Twenty-first to One Hundred and Twenty-second street	131 27
Seventieth street, Eighth to Ninth avenue	1,442 08
One Hundred and Tenth street, Fourth to Madison avenue	326 69
North side One Hundred and Twenty-seventh street and south side One Hundred and Twenty-eighth street, Fourth to Lexington avenue	202 80
South side One Hundred and Thirty-fifth street, Eighth to St. Nicholas avenue	187 04
One Hundred and Fifty-first street, St. Nicholas avenue to Boulevard	3,095 47

Fencing Vacant Lots—

Lexington and Fourth avenues, Ninety-second and Ninety-third streets	\$300 00
Eighty-eighth and Eighty-ninth streets, Fourth to Madison avenue	474 67
Ninety-fourth and Ninety-fifth streets, Eighth to Ninth avenue	634 73
Ninety-ninth and One Hundredth streets, First to Second avenue	823 08
One Hundredth and One Hundred and First streets, First to Second avenue	503 12
One Hundred and First and One Hundred and Second streets, First to Second avenue	681 84
One Hundred and Tenth and One Hundred and Eleventh streets, Madison to Fifth avenue	394 87
One Hundred and Tenth and One Hundred and Eleventh streets, Seventh to Eighth avenue	612 01
One Hundred and Thirteenth and One Hundred and Fourteenth streets, Fifth to Sixth avenue	454 03
One Hundred and Fourteenth and One Hundred and Fifteenth streets, Fifth to Sixth avenue	425 23
One Hundred and Fifteenth and One Hundred and Sixteenth streets, Seventh to Eighth avenue	469 19
One Hundred and Thirty-first and One Hundred and Thirty-second streets, Broadway to Tenth avenue	425 69
One Hundred and Thirty-second and One Hundred and Thirty-third streets, Broadway to Tenth avenue	731 25
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Fifth to Sixth avenue	624 82
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Sixth to Seventh avenue	494 86
One Hundred and Twenty-fifth street, Manhattan street and Tenth avenue	435 86
South side Fifty-sixth street, Ninth to Tenth avenue	101 00
One Hundred and Fifteenth street, Boulevard to Riverside Drive	516 97
North side One Hundred and Thirty-fourth street, Fifth to Sixth avenue	249 70
East side St. Nicholas avenue, One Hundred and Thirty-seventh to One Hundred and Forty-first street	510 46
East side St. Nicholas avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street, etc.	656 39
West side Western Boulevard, One Hundred and Fourteenth to One Hundred and Sixteenth street	248 28
East side Western Boulevard, One Hundred and Twenty-fourth to One Hundred and Twenty-sixth street	199 54
West side Western Boulevard, One Hundred and Twenty-fourth to One Hundred and Twenty-sixth street	303 24
East side Western Boulevard, Manhattan to One Hundred and Twenty-ninth street	111 58
Southeast corner Madison avenue and One Hundred and Eleventh street	127 51
Northeast corner Fourth avenue and One Hundred and Fourth street	121 15
Total	\$151,815 39

APPROPRIATIONS.

Flagging Sidewalks and Fencing Vacant Lots in Front of City Property	\$3,000 00
Amount of vouchers drawn during second quarter	\$2,643 41
Amount of vouchers drawn during third quarter	356 31
Balance	28
	3,000 00

Street Improvements—For Surveying, Monumenting and Numbering of Streets

Amount of vouchers drawn during first quarter	\$317 50
Amount of vouchers drawn during second quarter	231 00
Amount of vouchers drawn during third quarter	231 00
Amount of vouchers drawn during fourth quarter	1,186 00
Outstanding liabilities (estimated)	940 00
Balance (estimated)	94 50
	3,000 00

Contingencies of Department of Public Works—

Amount of vouchers drawn during first quarter	\$225 00
Amount of vouchers drawn during second quarter	255 00
Amount of vouchers drawn during third quarter	270 00
Amount of vouchers drawn during fourth quarter	270 00
	\$1,020 00

Repairs to Seventh Regiment Armory Building—

Amount of vouchers drawn during fourth quarter	\$620 40
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Repaving Streets and Avenues—

Amount of vouchers drawn during second quarter	\$113 88
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Repairs and Renewal of Pavements and Regrading—

Amount of vouchers drawn during third quarter	\$300 00
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AMOUNT OF VOUCHERS DRAWN, 1887.

ON ACCOUNT OF—	JANUARY 1 TO MARCH 31.	APRIL 1 TO JUNE 30.	JULY 1 TO SEPTEMBER 30.	OCTOBER 1 TO DECEMBER 31.	TOTAL.
Fund for Local Improvements	\$3,141 66	\$13,310 75	\$82 50	\$258 35	\$16,793 26
Local Improvement Fund	11,733 50	11,020 66	26,744 08	5,721 54	49,219 78
Street Improvement Fund	39,854 93	87,987 97	105,720 81	180,483 83	414,047 54
Street Improvements—For Surveying, etc., 1887	317 50	231 00	231 00	1,186 00	1,965 50
Street Improvements—For Surveying, etc., 1885			560 00		560 00
Flagging Sidewalks and Fencing Vacant Lots, etc.		2,643 41	356 31		2,999 72
Contingencies—Department of Public Works	285 00	255 00	270 00	270 00	1,080 00
Repaving Streets and Avenues		113 88			113 88
Repairs and Renewal of Pavements and Regrading			300 00		300 00
Repairs to Seventh Regiment Armory Building				620 40	620 40
Total	\$55,272 59	\$115,562 67	\$128,264 70	\$188,540 12	\$487,640 08

AMOUNT OF WORK DONE IN 1887.

NATURE OF WORK.	JANUARY 1 TO MARCH 31.	APRIL 1 TO JUNE 30.	JULY 1 TO SEPTEMBER 30.	OCTOBER 1 TO DECEMBER 31.	TOTAL.
Earth excavated, cubic yards	4,600	15,709	17,781	43,478½	81,568½
Rock excavated, cubic yards	23,653	26,735	31,618	33,301	115,307
Filling furnished, cubic yards	91,598	70,707	75,000	94,658	331,963
Curb-stones set, linear feet	2,903½	27,273½	22,968½	28,438½	81,583½
Curb-stones reset, linear feet			344	424½	768½
Flagging laid, square feet	10,925½	93,572½	99,068	127,634½	331,100½
Flagging relaid, square feet			689	2,434	3,123
Dry stone box culvert, linear feet	387	50			437
Picket fence, linear feet	3,495½	15,954½	11,474½	19,538½	50,463½
Rubble range masonry, cubic yards		800	3,850	3,771	8,421
Cut-stone masonry, cubic yards			6	17	23
Concrete masonry, cubic yards			20		20
12-inch drain-pipe, linear feet				350	350
Trap-block pavement, square yards				1,264	1,264
Bridge-stones, square feet		389		1,076	1,465
Maple trees planted				920	920
Stone masonry excavation, cubic yards			79		79

Work Done in front of City Property.

Curb-stones set, linear feet	511,800	10,000	521,800
Curb-stones reset, linear feet	223	191½	414½
Flagging laid, square feet	4,112,100	862	4,112,962
Flagging relaid, square feet	463	833½	1,296½
Bridge-stones laid, square feet	718		718

Monument Stones Set and Reset.

West End avenue, from Seventy-second street to Boulevard	28		28
Boulevard, from Fifty-ninth street to Kingsbridge road		40	40
Northeast corner Seventh avenue and One Hundred and Thirty-fourth street		2	2
Northeast corner Sixth avenue and One Hundred and Thirty-third street		1	1
Total	28	43	71

WORKS COMPLETED DURING 1887.

Regulating and Grading—	
Fourth avenue, Ninety-seventh to One Hundred and Second street.	\$1,854 32
One Hundred and Eighth street, Tenth avenue to Boulevard.	1,214 37
One Hundred and Fifty-fifth street, intersection of New avenue.	2,527 03
	\$5,595 72
Regulating, Grading, Curb and Flagging—	
Claremont avenue, One Hundred and Sixteenth to One Hundred and Twenty-second street.	\$16,316 68
West side Edgecomb avenue, One Hundred and Thirty-sixth to One Hundred and Thirty-seventh street.	719 83
Edgecomb avenue, One Hundred and Thirty-seventh to One Hundred and Fortieth street.	11,181 09
Edgecomb avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street.	24,562 88
Fort George avenue, Tenth to Eleventh avenue.	21,753 15
Sixty-fifth street, First avenue to Avenue A.	11,266 15
Sixty-fifth street, Tenth to Eleventh avenue.	3,091 95
Sixty-ninth street, Eighth to Ninth avenue.	13,719 74
Seventy-seventh street, Boulevard to Riverside Drive.	13,594 56
Eighty-first street, Avenue A to Avenue B.	2,924 40
Eighty-second street, Boulevard to Riverside Drive.	7,561 17
Eighty-seventh street, Boulevard to West End avenue.	720 08
Eighty-ninth street, Boulevard to Riverside Drive.	12,856 06
Ninetieth street, First avenue to Avenue A.	1,867 31
Ninetieth street, Ninth to Tenth avenue.	2,633 95
Ninetieth street, Boulevard to Riverside Drive.	7,515 40
Ninety-first street, Eighth to Ninth avenue.	5,721 44
Ninety-fourth street, Boulevard to Riverside Drive.	35,885 82
Ninety-fifth street, Eighth to Ninth avenue.	1,076 00
Ninety-ninth street, Eleventh avenue to Riverside Drive.	10,024 87
One Hundred and First street, Eighth to Manhattan avenue.	2,468 25
One Hundred and Second street, Eighth to Ninth avenue.	4,957 79
One Hundred and Third street, Eighth to Ninth avenue.	5,279 72
One Hundred and Seventh street, Boulevard to Tenth avenue.	3,053 77
One Hundred and Twelfth street, Eighth to New avenue.	5,825 66
One Hundred and Thirteenth street, Eighth to New avenue.	5,224 28
One Hundred and Fourteenth street, Fourth to Eighth avenue.	23,345 00
One Hundred and Fourteenth street, Tenth avenue to Riverside Drive.	13,059 21
One Hundred and Twenty-first street, Seventh to St. Nicholas avenue.	1,954 00
One Hundred and Twenty-eighth street, Eighth to St. Nicholas avenue.	603 00
One Hundred and Twenty-ninth street, Twelfth avenue to Hudson River Railroad track.	499 96
One Hundred and Thirty-second street, Tenth avenue to Broadway.	9,462 71
One Hundred and Thirty-seventh street, Seventh to Eighth avenue.	5,012 92
One Hundred and Thirty-seventh street, Eighth to St. Nicholas avenue.	2,299 43
One Hundred and Thirty-seventh street, Tenth to Convent avenue.	3,284 76
One Hundred and Fortieth street, Eighth to Edgecomb avenue.	1,421 73
One Hundred and Forty-second street, Seventh to Eighth avenue.	7,571 72
One Hundred and Forty-second street, Boulevard to Hamilton place.	3,301 84
One Hundred and Forty-third street, Seventh to Eighth avenue.	5,712 92
One Hundred and Forty-seventh street, Eighth to New avenue.	4,613 79
One Hundred and Forty-ninth street, Seventh to Eighth avenue.	8,975 73
One Hundred and Sixty-fifth street, Edgecomb road to Tenth avenue.	3,390 39
	326,912 97
Curb and Flagging—	
Coenties Slip, Front to South street.	\$1,936 48
Manhattan avenue, One Hundred and Sixteenth to One Hundred and Twentieth street.	2,507 72
East side Manhattan avenue, One Hundred and Twentieth to One Hundred and Twenty-third street.	1,315 75
West side Twelfth avenue, One Hundred and Twenty-ninth to One Hundred and Thirtieth street.	151 32
Fifth street, Lewis street to bulkhead-line, East river.	2,082 47
Sixty-second street, Boulevard to Eighth avenue.	1,239 98
Eighty-fifth street, Eighth to Ninth avenue.	787 58
Ninetieth street, Eighth to Ninth avenue.	1,863 00
One Hundred and Seventeenth street, Eighth to St. Nicholas avenue.	1,865 36
One Hundred and Twenty-second street, New to Sixth avenue.	1,300 04
	15,049 50
Flagging—	
East side Edgecomb avenue, One Hundred and Thirty-fifth to One Hundred and Thirty-sixth street.	\$287 70
West End avenue and Seventy-second street, etc.	1,391 56
West side Second avenue, One Hundred and Twentieth to One Hundred and Twenty-first street.	443 20
West side Fourth avenue, One Hundred and Sixteenth to One Hundred and Seventeenth street.	284 47
East side Fourth avenue, One Hundred and Twenty-seventh to One Hundred and Twenty-eighth street.	177 83
East side Seventh avenue, One Hundred and Twenty-first to One Hundred and Twenty-second street.	131 27
Fifty-ninth street, Madison to Fourth avenue.	262 00
Seventieth street, Eighth to Ninth avenue.	1,442 08
Seventieth street, Ninth to Tenth avenue.	493 23
One Hundred and Tenth street, Fourth to Madison avenue.	326 69
South side One Hundred and Twenty-second street, First avenue to Avenue A.	391 11
North side One Hundred and Twenty-seventh street and south side One Hundred and Twenty-eighth street, Fourth to Lexington avenue.	202 80
South side One Hundred and Thirtieth street, Fourth to Lexington avenue.	268 68
South side One Hundred and Thirty-fifth street, Eighth to St. Nicholas avenue.	187 04
One Hundred and Fifty-first street, St. Nicholas avenue to Boulevard.	3,095 47
	9,385 13
Fencing Vacant Lots—	
Avenues B and C, Eighteenth and Nineteenth streets.	\$420 78
Lexington and Fourth avenues, Ninety-second and Ninety-third streets.	309 00
Eighty-eighth and Eighty-ninth streets, Fourth to Madison avenue.	474 67
Ninety-fourth and Ninety-fifth streets, First to Second avenue.	843 78
Ninety-fourth and Ninety-fifth streets, Eighth to Ninth avenue.	634 73
Ninety-fifth and Ninety-sixth streets, Second to Third avenue.	271 08
Ninety-ninth and One Hundredth streets, First to Second avenue.	823 68
One Hundredth and One Hundred and First streets, First to Second avenue.	503 12
One Hundred and First and One Hundred and Second streets, First to Second avenue.	681 84
One Hundred and Sixth and One Hundred and Seventh streets, Fourth to Madison avenue.	686 72

Fencing Vacant Lots—	
One Hundred and Eighth and One Hundred and Ninth streets, First to Second avenue.	\$539 10
One Hundred and Ninth and One Hundred and Tenth streets, Madison to Fifth avenue.	453 34
One Hundred and Tenth and One Hundred and Eleventh streets, Madison to Fifth avenue.	394 87
One Hundred and Tenth and One Hundred and Eleventh streets, Seventh to Eighth avenue.	612 01
One Hundred and Eleventh and One Hundred and Twelfth streets, Madison to Fifth avenue.	352 97
One Hundred and Eleventh and One Hundred and Twelfth streets, Seventh to Eighth avenue.	971 37
One Hundred and Twelfth and One Hundred and Thirteenth streets, Madison to Fifth avenue.	720 48
One Hundred and Twelfth and One Hundred and Thirteenth streets, Fifth to Sixth avenue.	968 35
One Hundred and Twelfth and One Hundred and Thirteenth streets, Seventh to Eighth avenue.	1,096 01
One Hundred and Thirteenth and One Hundred and Fourteenth streets, Fourth to Madison avenue.	452 37
One Hundred and Thirteenth to One Hundred and Fourteenth streets, Fifth to Sixth avenue.	454 03
One Hundred and Fourteenth and One Hundred and Fifteenth streets, Fourth to Madison avenue.	274 58
One Hundred and Fourteenth and One Hundred and Fifteenth streets, Fifth to Sixth avenue.	425 23
One Hundred and Fifteenth and One Hundred and Sixteenth streets, Seventh to Eighth avenue.	469 19
One Hundred and Seventeenth and One Hundred and Eighteenth streets, Sixth to Seventh avenue.	575 90
One Hundred and Seventeenth and One Hundred and Eighteenth streets, St. Nicholas to Eighth avenue.	648 05
One Hundred and Eighteenth and One Hundred and Nineteenth streets, Sixth to Seventh avenue.	612 21
One Hundred and Eighteenth and One Hundred and Nineteenth streets, St. Nicholas to Eighth avenue.	627 88
One Hundred and Twenty-second and One Hundred and Twenty-third streets, St. Nicholas to Manhattan avenue.	428 78
One Hundred and Twenty-third and One Hundred and Twenty-fourth streets, Manhattan to Ninth avenue.	157 01
One Hundred and Twenty-fifth street, Manhattan street to Tenth avenue.	435 86
One Hundred and Thirty-first and One Hundred and Thirty-second streets, Fourth to Madison avenue.	672 47
One Hundred and Thirty-first and One Hundred and Thirty-second streets, Madison to Fifth avenue.	714 75
One Hundred and Thirty-first and One Hundred and Thirty-second streets, Broadway to Tenth avenue.	425 69
One Hundred and Thirty-second and One Hundred and Thirty-third streets, Broadway to Tenth avenue.	731 25
One Hundred and Thirty-fifth and One Hundred and Thirty-sixth streets, Seventh to Eighth avenue.	974 86
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Fifth to Sixth avenue.	624 82
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Sixth to Seventh avenue.	494 86
One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets, Seventh to Eighth avenue.	1,108 59
South side Fifty-sixth street, Ninth to Tenth avenue.	101 00
South side Ninety-sixth street, Second to Third avenue.	261 65
Ninety-ninth street, Ninth to Tenth avenue.	447 69
South side One Hundred and Fifth street, Fourth to Madison avenue.	69 20
North side One Hundred and Ninth street, 90 feet east of Madison avenue, etc.	40 33
South side One Hundred and Tenth street, Fourth to Madison avenue.	75 38
North side One Hundred and Tenth street, Madison to Fourth avenue.	27 50
One Hundred and Fifteenth street, Boulevard to Riverside Drive.	516 97
South side One Hundred and Twenty-second street, 100 feet west of Pleasant avenue, etc.	28 21
South side One Hundred and Twenty-second street, Seventh to Eighth avenue.	236 87
South side One Hundred and Twenty-eighth street, Seventh to Eighth avenue.	27 50
North side One Hundred and Thirty-fourth street, Fifth to Sixth avenue.	249 70
North side One Hundred and Thirty-seventh street, Eighth to Edgecomb avenue.	201 46
East side St. Nicholas avenue, One Hundred and Thirty-seventh to One Hundred and Forty-first street.	510 46
East side St. Nicholas avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street, etc.	656 39
West side Western Boulevard, One Hundred and Fourteenth to One Hundred and Sixteenth street.	248 28
East side Western Boulevard, One Hundred and Twenty-fourth to One Hundred and Twenty-sixth street.	199 54
West side Western Boulevard, One Hundred and Twenty-fourth to One Hundred and Twenty-sixth street.	303 24
East side Western Boulevard, Manhattan to One Hundred and Twenty-ninth street.	111 58
Southeast corner Madison avenue and One Hundred and Eleventh street.	72 41
Southeast corner Madison avenue and One Hundred and Twelfth street.	127 51
Southwest corner First avenue and One Hundred and Twenty-fourth street.	94 21
Northeast corner Fourth avenue and One Hundred and Fourth street.	121 15
Southeast corner Fourth avenue and One Hundred and Twenty-eighth street.	69 05
East side Seventh avenue, One Hundred and Twenty-first and One Hundred and Twenty-second streets.	38 62
Southeast corner Seventh avenue and One Hundred and Twenty-second street.	72 98
West side Seventh avenue, One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets.	209 36
Southwest corner Seventh avenue and One Hundred and Thirty-first street.	100 05
Northwest corner One Hundred and Ninth street and Fourth avenue.	91 20
	\$28,375 17
Total	\$385,318 49
RECAPITULATION.	
3 contracts for regulating and grading.	\$5,595 72
42 contracts for regulating, grading, curb and flagging.	326,912 97
10 contracts for curb and flagging.	15,049 50
15 contracts for flagging.	9,385 13
68 contracts for fencing vacant lots.	28,375 17
138 contracts completed, amounting to.	\$385,318 49

The following table shows the amount and class of work done on boulevards, roads and avenues during the quarter ending December 31, 1887:

Roadway and gutters cleaned	2,118,558	square feet.
Gutters cleaned	420,289	"
Macadam pavement repaired	237,770	"
Macadam pavement resurfaced	91,562	"
Roadway resurfaced with gravel	519,336	"
Gravel roadway repaired with trap-rock stone and screenings	105,089	"
Limestone screenings spread	10,443	"
Sand spread	48,262	"
Gravel-bank screenings spread	43,966	"
Roadway repaired with gravel	15,193	"
Trees trimmed	576	"
Trees cultivated	10	"
Basins cleaned	58	"

The following material was used in making repairs on macadamized streets:

Broken stone	1,359	truck-loads.
Sand	91	"
Trap-rock screenings	269	"
Gravel-bank screenings	219	"
Roa Hook gravel	739	"
Telford stone	12	"
Limestone screenings	20	"
Paving-blocks used	276	"

The following material was removed in cleaning the macadamized streets:

Dirt	3,240	truck-loads.
Stone	31	"
Basin dirt removed	177	"

32 sewer connections and 12 water connections have been paved during the quarter.

There were used in the above work:

Telford stone	249	cart-loads.
Broken stone	119	"
Screenings	30	"
Sand	28	"
Spalls	13	"
Dirt removed	178	"

All the macadamized streets and avenues have been sprinkled during the quarter. There were used for this purpose, 9,742 barrels or loads, equivalent to 5,834,787 gallons of water.

Repairs have been made with sweepings from macadamized roadways to 35 unpaved streets. There were used for this purpose, 2,085 truck-loads.

All repairs to sprinklers, hand-carts, snow-ploughs, etc., that were necessary have been made in the shops, One Hundred and Nineteenth street and Avenue St. Nicholas.

The following unpaved streets were repaired during the quarter—regulated, regraded and gutters opened:

- One Hundred and Sixty-fifth street, between Tenth and Eleventh avenues.
- One Hundred and Fifty-seventh street, between Tenth and St. Nicholas avenues.
- One Hundred and Thirty-third street, between Twelfth avenue and Boulevard.
- One Hundred and Eighty-fifth street, between Tenth avenue and Kingsbridge road.
- Boulevard, north of One Hundred and Fifty-eighth street.
- One Hundred and Fifty-second street, between Tenth avenue and Hudson river.
- Madison avenue, between One Hundred and Twentieth and One Hundred and Twenty first streets.
- Seventy-fourth street, between Tenth avenue and Western Boulevard.
- One Hundred and Forty-first street, between Tenth avenue and Boulevard.
- Eighty-seventh street, between Ninth avenue and Boulevard.
- Eleventh avenue, between One Hundred and Fifty-seventh and One Hundred and Seventy-fifth streets.
- Seventieth street, between Eighth and Ninth avenues.
- Ninety-sixth street, between Fourth and Madison avenues.
- Ninety-fifth street, between Fourth and Madison avenues.
- Ninety-sixth street, between Eighth avenue and Boulevard.
- One Hundred and Forty-first street, between Eighth and St. Nicholas avenues.
- One Hundred and Forty-second street, between Seventh and Eighth avenues.

Repairs were made to dangerous holes on the following streets:

- One Hundred and Seventy-third street, near Kingsbridge road.
- One Hundred and Twenty-ninth street, between Twelfth avenue and railroad.
- One Hundred and Thirtieth street, between Twelfth avenue and railroad.
- One Hundred and Seventeenth street, between Fifth and Sixth avenues.
- One Hundred and Eighteenth street, between Madison and Fifth avenues.
- Sixty-seventh street, between Eighth and Ninth avenues.
- Ninety-seventh street, between Madison and Fifth avenues.
- Ninety-fourth street and Second avenue.
- Madison avenue, between One Hundred and Fourth and One Hundred and Seventh streets.
- One Hundred and Sixth street, between Fourth and Madison avenues.
- One Hundred and First street, between Eighth and Ninth avenues.
- Kingsbridge road, between One Hundred and Eighty-eighth and One Hundred and Ninetieth streets.

- One Hundred and Fiftieth street, between Tenth and St. Nicholas avenues.
- Eleventh avenue, between One Hundred and Fifty-eighth and One Hundred and Sixty-first streets.

The following streets have been covered with limestone screenings:

	Area.
One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road	30,517 square feet.
One Hundred and Fifty-eighth street, between Eleventh avenue and Hudson river	17,088 "
One Hundred and Fifty-second street, between Boulevard and summit west	7,500 "
Total	55,105 square feet.

1,320 square feet flagging and 400 lineal feet of curb reset in One Hundred and Thirty-third street, between Twelfth avenue and Boulevard.

The following amount of material was used in repairing the unpaved streets:

Dirt	3,300	truck-loads.
Stone	684	"
Broken stone	97	"
Screenings	139	"
Gneiss stone for breaking for repairs	62	"

Surplus material has been removed from unpaved streets, as follows:

- Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Ninetieth streets.
- One Hundredth street, between Madison and Fifth avenues.
- Seventieth street, between Eighth and Ninth avenues.
- Ninety-fifth street, between Madison and Fourth avenues.

Material Removed.

- 183 truck-loads of dirt.
- 43 truck-loads of stone.
- Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Ninetieth streets, and One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road, have been sprinkled during the quarter.
- Bridge on the Boulevard north of One Hundred and Fifty-eighth street, back of the Deaf and Dumb Asylum, has been entirely rebuilt with new timbers.

The following statement shows the amount and class of work done on boulevards, roads and avenues during the year ending December 31, 1887:

Roadway and gutters cleaned	2,012,913	square yards.
Gutters cleaned	160,179	"
Macadam pavement repaired	65,927	"
Gravel roadway repaired with gravel	7,422	"
Gravel-bank screenings spread	254,973	"
Cow Bay sand spread	103,670	"

Trap-rock screenings spread	4,209	square yards.
Limestone screenings spread	11,240	"
Macadam roadway resurfaced	11,759	"
Gravel roadway repaired with trap-rock screenings	19,566	"
Gravel roadway resurfaced with gravel	57,704	"
Flagging relaid	474	"
Gutters repaved	96	"
Block pavement relaid	36	"
Sidewalks cleaned of dirt	420	"
Sand or gutter stuff spread	628	"
New crosswalks laid	3,522	square feet.
Old crosswalks relaid	392	"
Stone drain cleaned	2,420	lineal feet.
Sidewalk drain cleaned	692	"
Gutter-stones relaid	472	"
Curb-stones reset	127	"
New curb set	14	"
Stone drain built	286	"
Pipe drain cleaned and repaired	58	"
Drain-pipe laid	71	"
New gutter-stone laid	22	"
Basins cleaned	165	"
Trees trimmed	1,809	"
Trees cultivated and recultivated	2,450	"

The following material was used in making repairs to macadamized roadways during the year ending December 31, 1887:

Broken stone	2,326	truck-loads.
Gravel	203	"
Limestone screenings	108	"
Dirt	391	"
Trap-rock screenings	707	"
Sand	420	"
Paving-blocks	2,681	blocks.
Telford	31	truck-loads.
Building stone	12	"
Gravel-bank screenings	219	"
Roa Hook gravel	739	"
New gutter-stones laid	22	lineal feet.
New curb-stone	14	"
New drain-pipe	71	"

The following statement shows the material removed from macadamized streets during the year ending December 31, 1887:

Roadways, dirt	12,889	truck-loads.
Roadways, stone	44	"
Roadways, snow and ice	68	"
Sidewalks, dirt	98	"
Basins, dirt	341	"
Sewer connections, dirt	274	"

The following statement shows the number of sewer and water connections repaired and the amount of material used during the year ending December 31, 1887:

Sewer connections	65
Water connections	32

Material Used and Removed.

Broken stone	275	cart-loads.
Trap-rock screenings	91	"
Telford stone	370	"
Sand	29	"
Spalls	13	"
Dirt removed	190	"
Paving-stones	367	"

7,135 truck-loads of sweepings from the macadamized roadways have been used to regrade the roadway or fill dangerous holes, in 120 different places on unpaved streets. All of the macadamized roadways have been thoroughly sprinkled during the year. There were used for this purpose 84,959 barrels or loads, equivalent to 48,909,695 gallons of water.

All monitors, snow-ploughs, hand-carts, tool-carts, etc., have been painted, and as thoroughly repaired as their age will admit. In many cases it has been found necessary to rebuild the carriage part of the sprinkling wagons.

In addition to the above work a great deal of blacksmith work has been done, such as sharpening picks, re-ironing sprinklers, etc.

The plant connected with the Bureau, with the exception of the water-barrels of the monitors, is now in excellent condition.

UNPAVED STREETS.

The macadam pavement on the following unpaved streets has been repaired with gneiss rock, limestone screenings and sand, during the year ending December 31, 1887:

- One Hundred and Fifty-second street, between the Boulevard and summit west.
- One Hundred and Fifty-eighth street, between Eleventh avenue and Hudson River Railroad.
- Fort Washington depot road, between Kingsbridge road and Hudson River Railroad.
- One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road.
- Inwood lane, between Kingsbridge road and Hudson river.
- F street, between Bolton road and Inwood lane.

The carriage bridge on the Boulevard, north of One Hundred and Fifty-eighth street, has been entirely rebuilt. A stairway has been erected from St. Nicholas place to the low lands to the east to accommodate the people living on Washington Heights, and enable them to reach the station of the Elevated Railroad at One Hundred and Fifty-fifth street.

Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Eightieth streets, has been regraded and resurfaced, and between One Hundred and Eightieth and One Hundred and Ninetieth streets entirely resurfaced with new material.

The following statement shows the amount of macadamizing done on unpaved streets during the year ending December 31, 1887:

Macadam repaired with gneiss rock and screenings	9,170	square feet.
Limestone screenings spread	179,894	"
Gutters paved with cobble-stones	336	"

The following material has been used in repairing the unpaved streets:

Dirt	9,307	truck-loads.
Broken stone broken by employees of the Bureau	1,014	"
Stone for breaking and for building retaining-wall	900	"
Limestone screenings	644	"
Earth excavated	220	"
Sand	27	"
Retaining-wall built	70	lineal feet.
Curb reset	583	"
Flagging relaid	636	square feet.
Rock blasted and removed	22	cubic yards.
Planks	123	"
Sleepers	88	"

The following material has been removed from unpaved streets and used upon others in which it was requisite:

Dirt, etc.	509	truck-loads.
Stone	543	"

Repairs have been made to dangerous holes on 48 streets; some of the repairs being very extensive, requiring a great deal of material.

68 streets have been regulated and graded, gutters opened and roadways properly shaped.

The following streets have been sprinkled during the year:

- One Hundred and Seventy-fifth street, between Kingsbridge road and Tenth avenue.
- Kingsbridge road, between One Hundred and Ninetieth street and Spuyten Duyck.
- One Hundred and Fifty-fourth street, between Seventh avenue and McComb's Dam road.
- McComb's Dam road, between One Hundred and Fifty-fourth street and McComb's Dam Bridge.

The following is the amount of money received during the year, as rentals for the use of steam-rollers, horse-rollers, sprinklers and old material sold at public auction and deposited to the credit of the General Fund, \$390.

Table Showing Location and Extent of Macadamized Streets and Avenues in Charge of the Bureau of Streets and Roads as the same Existed December 31, 1887.

LOCATION.	LENGTH BY FEET.	LENGTH BY MILES.	WIDTH OF ROADWAY.	SQUARE FEET.	SQUARE FEET IN WINGS.	SQUARE YARDS.	ACRES.	REMARKS.
Avenue A, from north side of One Hundred and Nineteenth street to south side of One Hundred and Twenty-fourth street.	1,319.15	0.250	60.00	79,149.00	2,400.00	9,061.00	1.872	
Avenue A, from north side of Fifty-seventh street to south side of Eighty-sixth street.	7,470.07	1.415	60.00	448,204.20	6,905.00	50,867.68	10.447	
Fifth avenue, from north curb of One Hundred and Tenth street to south curb of One Hundred and Twentieth street.	2,628.30	0.497	42.00	110,338.60	3,000.00	12,598.73	2.803	
Sixth avenue, from north curb of One Hundred and Tenth street to south curb of One Hundred and Forty-fifth street.	1,566.00	0.287	40.00	62,640.00	2,150.00	7,200.00	1.437	
Seventh avenue, from north curb of One Hundred and Tenth street to north curb of One Hundred and Fifty-fourth street.	9,518.88	1.803	80.00	761,510.40	18,300.00	86,645.50	17.901	
First avenue, from south curb of One Hundred and Ninth street to north curb of One Hundred and Sixteenth street.	11,602.35	2.198	80.00	928,188.00	12,900.00	104,505.33	21.604	
Mount Morris avenue, from south curb of One Hundred and Twentieth street to 14 feet south of south curb of One Hundred and Twenty-fourth street.	1,048.32	0.199	60.00	62,899.20	450.00	7,038.80	1.434	
Avenue St. Nicholas, from west house-line of Sixth avenue to south house-line of One Hundred and Eleventh street.	85.00	.....	Triangular.	1,700.00	.....	188.88	0.039	
Avenue St. Nicholas, from south house-line of One Hundred and Eleventh street to east curb of Seventh avenue.	1,334.00	0.269	55.00	73,370.00	1,750.00	8,346.73	1.724	
Avenue St. Nicholas, from west curb of Seventh avenue to east curb of Eighth avenue.	1,544.10	0.292	55.00	84,925.50	1,584.15	9,612.21	1.935	
Avenue St. Nicholas, from west curb of Eighth avenue to 10 feet south of south curb of One Hundred and Twenty-fifth street.	1,036.75	0.196	55.00	57,021.55	794.20	6,413.97	1.325	
Avenue St. Nicholas, from north curb of One Hundred and Twenty-fifth street to 5 feet north of north curb of One Hundred and Fifty-fifth street.	8,149.70	1.544	55.00	448,233.50	8,730.95	50,773.82	10.490	
Ninth avenue, from north curb of One Hundred and Twenty-third street to south curb of One Hundred and Twenty-fifth street.	472.96	0.089	60.00	28,377.60	300.00	3,186.40	0.653	
Eleventh avenue, from north side of One Hundred and Twenty-fifth street to 12 feet north of south curb of One Hundred and Twenty-sixth street.	263.83	0.049	60.00	15,829.80	300.00	1,792.20	0.370	
Morningside avenue, East, from north curb of One Hundred and Tenth street to north line of One Hundred and Fourteenth street.	1,070.27	0.203	42.00	44,951.34	.....	5,994.59	1.031	
Morningside avenue, East, from north line of One Hundred and Fourteenth street to south line of One Hundred and Sixteenth street.	666.85	0.127	61.00	34,577.85	.....	3,841.98	0.793	
Morningside avenue, East, from south line of One Hundred and Sixteenth street to north line of One Hundred and Twenty-third street.	1,332.83	0.266	60.00	115,969.80	.....	12,885.53	2.662	
St. Nicholas place, from the east curb of Avenue St. Nicholas to south curb of One Hundred and Fifty-fifth street.	1,733.00	0.328	40.00	69,320.00	.....	7,702.22	1.597	
Tenth avenue, from south curb of One Hundred and Fifty-first street to south curb of One Hundred and Fifty-fifth street.	1,005.32	0.190	70.00	70,372.40	300.00	7,852.49	1.622	
Tenth avenue, from north curb of One Hundred and Fifty-fifth street to north side of One Hundred and Ninety-fourth street.	10,914.66	2.067	40.00	436,586.40	.....	48,509.60	10.022	
Western Boulevard, from circle at Fifty-ninth street to south curb of Manhattan street.	18,315.92	3.459	80.00	1,465,273.60	19,491.99	164,973.94	34.086	
Western Boulevard, from south curb of Manhattan street to north curb of One Hundred and Fifty-fifth street.	7,202.08	1.364	102.00	734,612.16	7,350.00	82,440.24	17.935	
Western Boulevard, between curbs at street intersections.	2,578.83	0.488	22.00	56,734.26	.....	6,303.81	1.302	
Seventy-second street, from west curb of Avenue A to east curb of Fourth avenue.	2,784.00	0.527	40.00	111,360.00	470.00	12,425.55	2.564	
One Hundred and Tenth street, from west line of Morningside avenue, West, to east curb of Riverside Drive.	2,024.00	0.396	40.00	83,760.00	600.00	9,395.55	1.939	
One Hundred and Sixteenth street, from Pleasant to Fourth avenue.	2,905.50	0.550	40.00	116,220.00	965.00	13,020.55	2.690	
One Hundred and Sixteenth street, from Fourth to Seventh avenue.	2,821.00	0.534	60.00	501.00	.....	18,862.22	3.898	
One Hundred and Twentieth street, from 5 feet east of east curb of Fifth avenue to west curb of Mount Morris avenue.	430.00	0.081	30.00	12,900.00	.....	1,433.33	0.296	
One Hundred and Twenty-third street, from east side of Eighth avenue to west side of Mount Morris avenue.	2,170.00	0.419	30.00	65,100.00	.....	7,233.33	1.494	
One Hundred and Twenty-fourth street, from west curb of Avenue A to 5 feet west of west curb of Fifth avenue.	3,859.00	0.731	30.00	115,770.00	1,324.00	13,010.44	2.688	
One Hundred and Twenty-fourth street, from west curb of Sixth avenue to east curb of Seventh avenue.	870.00	0.165	30.00	26,100.00	.....	2,900.00	0.599	
One Hundred and Forty-fifth street, from west curb of Sixth avenue to east curb of Boulevard.	4,243.58	0.804	60.00	254,614.80	950.00	23,396.08	5.866	
One Hundred and Fiftieth street, from St. Nicholas place to Avenue St. Nicholas.	78.00	0.015	15.50	1,209.00	.....	134.33	0.028	
One Hundred and Fifty-first street, from west curb of St. Nicholas place to east curb of Avenue St. Nicholas.	112.00	0.021	30.00	3,360.00	.....	373.33	0.077	
One Hundred and Fifty-second street, from west curb of Avenue St. Nicholas to east curb of Boulevard.	1,433.88	0.271	30.00	43,016.40	.....	4,770.60	0.987	
One Hundred and Fifty-fifth street, from west curb of Avenue St. Nicholas to east curb of Boulevard.	1,307.50	0.248	60.00	78,450.00	.....	8,716.66	1.800	
One Hundred and Fifty-fourth street, from west curb of Avenue St. Nicholas to east curb of Tenth avenue.	507.88	0.096	30.00	15,236.40	.....	1,692.93	0.349	
Manhattan street, from west curb of Avenue St. Nicholas to east curb of Ninth avenue.	439.00	0.083	70.00	30,730.00	.....	3,414.44	0.705	
Manhattan street, from west curb of Ninth avenue to One Hundred and Twenty-fifth street.	250.00	0.047	Triangular.	12,571.00	.....	1,407.88	0.290	
One Hundred and Fifty-second street, from west curb of St. Nicholas place to east curb of Avenue St. Nicholas.	168.00	0.032	30.00	5,040.00	.....	560.00	0.115	
One Hundred and Fifty-third street, from west curb of St. Nicholas place to east curb of Avenue St. Nicholas.	224.00	0.042	30.00	6,720.00	.....	746.66	0.154	
TOTALS.	121,989.32	23.109	.....	7,458,321.36	93,116.13	840,070.69	173.346	

Document "I."

REPORT OF THE SUPERINTENDENT OF LAMPS AND GAS.

DEPARTMENT OF PUBLIC WORKS—BUREAU OF LAMPS AND GAS, }
 NO. 31 CHAMBERS STREET, }
 NEW YORK, January 5, 1888.

Gen. JOHN NEWTON, Commissioner of Public Works:

SIR—In compliance with the directions contained in your circular letter of 5th ultimo, I herein submit a report of the transactions of the Bureau of Lamps and Gas for the quarter ending December 31, 1887, with a summary of the same for the whole year.

In Exhibit "A" will be found a statement showing the amounts expended for a supply of illuminating gas to the various public markets, armories, etc., and for the fitting up, lighting and maintenance of the public lamps for the first, second, third and fourth quarters, and the sums total for the entire year.

In Exhibit "B" is a summary of the appropriation for "Lamps and Gas and Electric Lighting," and this shows an expenditure during the fourth quarter of two hundred and sixty-nine thousand five hundred and two dollars and thirty-three cents (\$269,502.33), and for the year of six hundred and seventy-six thousand one hundred and seventy-four dollars and forty-two cents (\$676,174.42), leaving a surplus balance of fifty-five thousand eight hundred and twenty-five dollars and fifty-eight cents (\$55,825.58); of this surplus the sum of fifty-five thousand eight hundred dollars (\$55,800) has been transferred by the Board of Estimate and Apportionment to the several accounts shown in the exhibit. There are no outstanding claims against the bureau, as all bills have been audited and vouchers drawn.

Exhibit "C" is a summary of the appropriation for "Salaries—Lamps and Gas and Electric Lighting," and this shows an expenditure during the quarter of one thousand two hundred and forty-nine dollars and ninety-five cents (\$1,249.95), and for the year of five thousand seven hundred and twenty-six dollars and ninety-six cents (\$5,726.96), leaving a surplus balance of seventy-three dollars and four cents (\$73.04).

Exhibit "D" is a summary of the "Lamp Account," showing the number of new lamps lighted, old lamps relighted and lamps discontinued by each gas and electric-light company during the quarter and the year. Three hundred and twelve new gas-lamps and one hundred and fifty-one new electric-lamps have been lighted, one hundred and sixty-four gas-lamps relighted, five hundred and seventy-one gas-lamps and nineteen electric-lamps discontinued during the quarter; and ten hundred and seventeen new gas-lamps and one hundred and fifty-one new electric-lamps have been lighted, seven hundred and sixty-eight gas-lamps relighted, twelve hundred and sixty gas-lamps and thirty-one electric-lamps discontinued during the year. The total number of lamps lighted at the close of the year was twenty-four thousand seven hundred and nineteen gas, one hundred and twenty naphtha and eight hundred and thirty-one electric, making a total of twenty-five thousand six hundred and seventy lamps. The net increase during the year was five hundred and twenty-five gas and one hundred and twenty electric.

Exhibit "E" is a statement showing the lowest, highest and average illuminating power of the gases supplied to the city by such of the gas companies as connect with our two photometric stations during the quarter and the year.

Exhibit "F" is a copy of the contract adopted during the year for furnishing, operating and maintaining electric-lamps.

Exhibit "G" is a copy of the time-table for lighting and extinguishing the gas-lamps, and Exhibit "H" is a copy of the time-table for lighting and extinguishing electric-lamps.

The following statement will show the number of new gas-lamps fitted-up, lamp-posts removed, reset, straightened, etc., during the year:

BY WHAT GAS COMPANY.	NEW LAMPS FITTED UP.	LAMP-POSTS REMOVED.	LAMP-POSTS RESET.	LAMP-POSTS STRAIGHTENED.	COLUMNS REFITTED.	COLUMNS RELEASED.
Consolidated Gas Co., Branch 1	26	68	59	305	50	318
Consolidated Gas Co., Branch 2	14	59	24	106	13	63
Consolidated Gas Co., Branch 3	35	21	24	207	29	36
Consolidated Gas Co., Branch 4	199	50	51	115	35	56
Consolidated Gas Co., Branch 6	340	68	60	216	76	170
New York Mutual Gas-light Co.	1	5	5	15	.....	4
Equitable Gas-light Co.	5	6	6	103	8	46
Central Gas-light Co.	85	80	80	278	1	2
Northern Gas-light Co.	145	81	88	154	.....	2
Yonkers Gas-light Co.	91	.....	1	144	.....	.....
N.Y. & N.J. Globe Gas-light Co.	.....	.....	.....	8	.....	.....
TOTALS.	941	432	398	1,551	212	697

The following table will show the number of new lamps lighted by the several gas companies in each of the years from 1880 to 1887, both inclusive:

BY WHAT COMPANY.	NEW LAMPS LIGHTED IN—							
	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Consolidated Gas Co., Branch 1	30	26	31	17	18	23	19	26
Consolidated Gas Co., Branch 2	58	41	67	53	22	50	27	20
Consolidated Gas Co., Branch 3	.....	.....	.....	.....	.....	.....	11	44
Consolidated Gas Co., Branch 4	137	126	146	156	67	159	62	264
Consolidated Gas Co., Branch 6	138	99	219	255	308	312	312	332
New York Mutual Gas-light Co.	1	.....	3	.....	5	.....	.....	1
Equitable Gas-light Co.	.....	.....	.....	.....	.....	7	14	5

BY WHAT COMPANY.	NEW LAMPS LIGHTED IN—							
	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Central Gas-light Co.....	42	65	105	75	134	74	103	89
Northern Gas-light Co.....	....	67	102	124	109	178	72	145
Yonkers Gas-light Co.....	16	14	187	36	2	10	2	91
* N. Y. and N. J. Globe Gas-light Co.....	....	....	....	....	....	50	70	....
Totals.....	422	438	860	716	566	863	720	1,017
† Brush Electric Illuminating Co.....	23	....	32	....	292	....	1	30
† United States Illuminating Co.....	....	....	73	....	227	61	2	....
† Harlem Lighting Co.....	....	....	....	....	....	....	....	95
† North New York Lighting Co.....	....	....	....	....	....	....	....	26
Totals.....	23	....	105	....	519	61	3	151

* Naphtha-lamps. † Electric-lamps.

The following statement will show the average number of lamps lighted under the supervision of the Bureau of Lamps and Gas in each of the years from 1880 to 1887, both inclusive:

BY WHAT COMPANY.	AVERAGE NUMBER OF LAMPS LIGHTED IN—							
	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Consolidated Gas Co., Branch 1.....	3,560	3,565	3,461	3,369	3,046	3,450	3,865	3,863
Consolidated Gas Co., Branch 2.....	6,804	6,667	6,495	6,477	6,053	4,456	3,739	2,593
Consolidated Gas Co., Branch 3.....	....	....	....	....	....	....	1,122	3,152
Consolidated Gas Co., Branch 4.....	4,282	4,349	4,529	4,658	4,504	4,172	3,719	2,725
Consolidated Gas Co., Branch 6.....	4,682	4,774	4,950	5,157	5,422	5,767	5,727	5,640
New York Mutual Gas-light Co.....	1,037	986	826	768	591	316	216	202
Equitable Gas-light Co.....	....	....	....	....	....	1,411	1,586	1,853
Central Gas-light Co.....	1,834	1,874	1,938	2,007	2,072	2,205	2,256	2,350
Northern Gas-light Co.....	1,050	1,117	1,181	1,308	1,429	1,551	1,686	1,780
Yonkers Gas-light Co.....	76	91	207	295	325	351	337	373
N. Y. and N. J. Globe Gas-light Co.....	....	....	....	....	....	50	50	120
Brush Electric Illuminating Co.....	23	55	55	55	246	347	347	343
United States Illuminating Co.....	....	....	73	73	243	338	361	363
Harlem Lighting Co.....	....	....	....	....	....	....	....	88
North New York Lighting Co.....	....	....	....	....	....	....	....	26
Totals.....	23,388	23,478	23,715	24,167	23,031	24,394	24,611	25,471

	Feet.	In.
By Consolidated Gas Company.....	68,030	3
By New York Mutual Gas-light Company.....	....	....
By Equitable Gas-light Company.....	79,347	8
By Standard Gas-light Company.....	357,618	2
By Central Gas-light Company.....	8,723	..
By Northern Gas-light Company.....	12,600	..
By Yonkers Gas-light Company.....	11,429	..

Total laid in 1887, 1,023,888 miles, or 535,748

The Northern Gas-light Company has taken up 7,000 linear feet.

The total miles of gas-mains in the streets of this city on December 31, 1887, was as follows:

	Miles.	Feet.	In.
Consolidated Gas Company.....	738	2,158	9
New York Mutual Gas-light Company.....	122	1,173	..
Equitable Gas-light Company.....	92	3,405	6
Standard Gas-light Company.....	69	3,660	2
Central Gas-light Company.....	52	2,578	..
Northern Gas-light Company.....	30	3,780	..
Yonkers Gas-light Company.....	12	4,479	..
Total.....	1,119	702	5

Of these mains 1,023,888 miles are on Manhattan Island, and 96,877 are in the annexed territory north of Harlem river.

The Equitable Gas-light Company commenced the laying of gas-mains in the streets of this city in the month of May, 1883, and it now has of—

	Feet.	In.
Four-inch main.....	64,424	..
Six-inch main.....	230,314	5
Eight-inch main.....	62,307	9
Twelve-inch main.....	55,727	..
Sixteen-inch main.....	29,684	7
Twenty-inch main.....	26,996	9
Twenty-four-inch main.....	19,807	10
Total.....	489,262	4

And as it is compelled to pay into the City Treasury, by the conditions of its franchise as fixed by the Gas Commission, at the rate of twenty cents for each linear foot, it will be seen that the total sum at the close of the year amounted to \$97,852.40. This is the only gas company that makes compensation to the City Treasury for the privilege of laying mains. It is also compelled to light all the public street-lamps on the line of its mains at a rate not to exceed twelve dollars per year each.

The Standard Gas-light Company commenced the laying of gas-mains in November, 1886, and it now has of—

	Feet.	In.
Four-inch main.....	88,487	4
Six-inch main.....	83,697	4
Eight-inch main.....	103,595	4
Ten-inch main.....	64,357	2
Twenty-inch main.....	25,401	6
Twenty-four-inch main.....	2,441	2
Total.....	367,980	2

And its franchise requires that it shall light all the public lamps on the line of its mains at a rate not to exceed twelve dollars and fifty cents per year each.

Branch 1 of the Consolidated Gas Company (formerly the New York Gas-light Company) lights the public lamps and supplies gas to that part of the city lying south of the centre line of Houston street. Its gas-works are at Twenty-first street, East river; its manufacture is water-gas and its office is at the corner of Hester and Elizabeth streets.

Branch 2 (formerly the Manhattan Gas-light Company) lights the lamps and supplies gas to the public in that part of the city lying north of the centre line of Houston street and south of the centre line of Twenty-third street. It has two gas-works making coal-gas, one of which is at Fourteenth street, East river, and the other at Eighteenth street, North river, and its office is at No. 4 Irving place. The mains of this branch are connected with a main carrying water-gas, so that the illuminating power of the gas is increased when it reaches the consumer.

Branch 3 (formerly the Municipal Gas Company) lights the lamps and supplies gas to the public in that part of the city lying north of the centre line of Twenty-third street, south of the centre line of Seventy-ninth street and east of Fifth avenue, including both sides thereof, from Fifty-ninth to Seventy-ninth street. Its works are at Forty-fourth street, North river; the manufacture is water-gas and its office is at Fourth avenue and Twenty-sixth street.

Branch 4 (formerly the Metropolitan Gas Company) lights the public lamps and supplies gas to the public in that part of the city lying north of the centre line of Twenty-third street, west of the centre line of Fifth avenue to Fifty-ninth street, and west of the westerly line of Fifth avenue, from Fifty-ninth to Seventy-ninth street; through Transverse road No. 2 (Central Park) to Eighth avenue, and west of Eighth avenue to centre line of One Hundred and Tenth street and thence to North river, including both sides of the Transverse road and both sides of Eighth avenue. Its works are at Forty-second street, North river; the manufacture is coal-gas and its office is at Broadway and Forty-sixth street.

Branch 5 (formerly the Knickerbocker Gas Company) does not light any public lamps or do any commercial business. Its works are at Ninety-ninth street, East river; the manufacture is water-gas, which is supplied to Branch 6.

Branch 6 (formerly the Harlem Gas Company) lights the public lamps and supplies gas to that part of the city lying north of the centre line of Seventy-ninth street and Transverse road No. 2 to Eighth avenue; thence northerly along Eighth avenue to the centre line of One Hundred and Tenth street; thence westerly along the centre line of One Hundred and Tenth street to the North river, excluding both sides of the Transverse road and both sides of Eighth avenue south of One Hundred and Tenth street. It manufactures coal-gas at One Hundred and Eleventh street, East river, but the larger part of its send-out is obtained from Branch 5. Its office is at Third avenue and One Hundred and Fourteenth street.

The main office of the Consolidated Gas Company is at Irving place and Fifteenth street. Its capital is \$39,070,000, and the capacity of its several gas-works is 28,000,000 cubic feet per day.

The New York Mutual Gas-light Company has mains in various streets or parts of streets between Battery place and Sixty-fifth street, and lights a few of the public lamps between Thirty-fourth and Sixty-fifth streets. It manufactures water-gas at the works on Eleventh street, East river, and its office is at Fourth avenue and Sixteenth street. The capital is \$3,500,000, and the capacity of its gas-works is 4,000,000 cubic feet per day.

The Equitable Gas-light Company has mains in various streets or parts of streets between Division street and Seventy-fourth street, and lights the lamps on the lines of its mains which were laid prior to the execution of the present lamp contract, except on the streets lighted by electric-lights. Its works are at Forty-first street, East river; the manufacture is water-gas, and its office is at Third avenue and Twenty-fifth street. The capital is \$4,000,000, and capacity of its gas-works 6,000,000 cubic feet per day.

The Standard Gas-light Company obtained its franchise to lay mains in the streets of this city direct from the State Legislature, by chapter 248 of the Laws of 1886. It now has mains in various streets between Fourteenth street and One Hundred and Thirty-fifth street, and between Avenue C and Eighth avenue, and is completing gas-works at One Hundred and Fifteenth street, East river. Its office is at No. 2 Cortlandt street, and the manufacture is to be water-gas. The capital is \$10,000,000. It is expected that gas will be supplied by this company within the next three months.

The Central Gas-light Company supplies gas to the Twenty-third Ward (formerly Town of Morrisania), and lights all the public lamps therein, excepting the parts of two streets now lighted by electric-lights. It manufactures coal gas at the works at One Hundred and Thirty-eighth street, East river, and its office is at Alexander avenue and One Hundred and Forty-second street. The capital is \$450,000, and capacity of gas-works 400,000 cubic feet per day.

The Northern Gas-light Company supplies gas to that part of the Twenty-fourth Ward formerly Town of West Farms, and lights all the public lamps therein. It manufactures coal-gas at its works on the Bronx river, West Farms, and its office is at No. 1845 Fourth avenue, Tremont. The capital is \$125,000, and capacity of works 150,000 cubic feet per day.

The Yonkers Gas-light Company has mains in and supplies gas to a part of the Twenty-fourth Ward (formerly Town of Kingsbridge). Its gas-works and office are in the City of Yonkers, Westchester County, and the manufacture is water-gas, its business being principally confined to the City of Yonkers. This company has lately been leased to the United Gas Improvement Company.

The New York and New Jersey Globe Gas-light Company lights 120 lamps at the extreme northeastern section of the city, called Woodlawn Heights, which is beyond the reach of gas-mains. The lamps are lighted by means of naphtha contained in a reservoir or tank on each lamp.

The aggregate length of new streets lighted during the year 1887 was 133,888 miles.

The total length of streets of the city lighted on December 31, 1887, was 477,818 miles.

The total length of piers lighted was 1,828 miles.

The total length of bridges lighted was 1,828 miles.

The total area of parks lighted was 62 acres.

The total area of Gansevoort Market lighted was 2 3/4 acres.

New lamps have been erected and lighted in the following streets and places during the year:

- Arches under Harlem Railroad, One Hundred and Second to One Hundred and Eleventh street.
- Boulevard, west side, from One Hundred and Fifty-second to One Hundred and Fifty-third street.
- Bryant Park.
- Convent avenue, from One Hundred and Forty-third to One Hundred and Forty-fifth street.
- Central Park road to the Casino.
- Edgecomb avenue, from One Hundred and Thirty-fifth to One Hundred and Thirty-seventh street.
- Manhattan avenue, from One Hundred and Fifteenth to One Hundred and Seventeenth street.
- Manhattan street, from One Hundred and Twentieth to One Hundred and Twenty-third street.
- Manhattan street, from Avenue St. Nicholas to Ninth avenue.
- St. Nicholas avenue, west side, from One Hundred and Fifty-fifth to One Hundred and Sixty-first street.
- Striker's lane.
- West End avenue, from Seventieth to Eighty-third street.
- Suburban Railroad Bridge, approaches to.
- Fourth avenue, west side, from One Hundred and Sixteenth to One Hundred and Eighteenth street.
- Ninth avenue, from Ninety-ninth to One Hundred and Ninth street.
- Tenth avenue, west side, from One Hundred and Seventy-sixth to One Hundred and Ninetieth street.
- Thirteenth avenue, from Twenty-fifth to Twenty-sixth street.
- Twenty-fifth street, from Eleventh to Thirteenth avenue.
- Thirty-fifth street, north side, from Eleventh to near Twelfth avenue.
- Forty-ninth street, from First avenue to East river.
- Sixty-second street, from Eighth avenue to the Boulevard.
- Sixty-fourth street, from First avenue to the East river.
- Sixty-eighth street, from Eighth to Ninth avenue.
- Seventy-third street, from First avenue to Avenue A.
- Seventy-third street, from Boulevard to West End avenue.
- Seventy-fourth street, from Avenue A to East river.
- Seventy-fourth street, from Ninth avenue to the Boulevard.
- Seventy-fifth street, from Tenth avenue to the Boulevard.
- Seventy-sixth street, from Avenue A to East river.
- Seventy-seventh street, from Ninth to Tenth avenue.
- Eighty-first street, from Avenue A to Avenue B.
- Eighty-third street, from the Boulevard to Riverside Drive.
- Eighty-fifth street, from Eighth to Tenth avenue.
- Eighty-fifth street, from Boulevard to Riverside Drive.
- Eighty-sixth street, south side, from Ninth to Tenth avenue.
- Eighty-eighth street, from Avenue A to Avenue B.
- Eighty-eighth street, from Madison to Fifth avenue.
- Ninety-first street, from Eighth to Ninth avenue.
- Ninety-first street, from Boulevard to Riverside Drive.
- Ninety-first street, from Ninth avenue east one-half the block.
- Ninety-sixth street, from First to Second avenue.
- Ninety-sixth street, from Third to Lexington avenue.
- Ninety-sixth street, north side, from First to Third avenue.
- Ninety-seventh street, from First to Second avenue.
- Ninety-seventh street, from Ninth to Tenth avenue.
- One Hundredth street, from Second to Third avenue.
- One Hundred and First street, from Second to Third avenue.
- One Hundred and Third street, from Ninth to Tenth avenue.
- One Hundred and Fifth street, from Madison to Fourth avenue.
- One Hundred and Seventh street, from First avenue to East river.
- One Hundred and Seventh street, from Fourth to Madison avenue.

One Hundred and Ninth street, from Madison to Fifth avenue.
 One Hundred and Eleventh street, from Madison to Fifth avenue.
 One Hundred and Thirteenth street, from Seventh to Eighth avenue.
 One Hundred and Seventeenth street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Twentieth street, from Mount Morris to Seventh avenue.
 One Hundred and Twenty-first street, from Seventh to Eighth avenue.
 One Hundred and Twenty-second street, from Fourth to Madison avenue.
 One Hundred and Twenty-second street, from Mount Morris to Sixth avenue.
 One Hundred and Twenty-sixth street, from First to Second avenue.
 One Hundred and Twenty-eighth street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Twenty-ninth street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Thirty-third street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Thirty-sixth street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Thirty-seventh street, from Eighth avenue to Avenue St. Nicholas.
 One Hundred and Forty-first street, from Eighth to Edgecomb avenue.
 One Hundred and Forty-second street, from Seventh to Eighth avenue.
 One Hundred and Forty-fourth street, from Seventh to Edgecomb avenue.
 One Hundred and Forty-fifth street, from Convent to Tenth avenue.
 One Hundred and Fifty-fifth street, from Eighth to Coogan avenue.
 One Hundred and Fifty-eighth street, from Tenth avenue to Avenue St. Nicholas.
 One Hundred and Eighty-fifth street, from Tenth to Wadsworth avenue.

The following streets in Twenty-third Ward:
 Devoe street, from Ogden to Lind avenue.
 Lind avenue, from Devoe to Wolf street.
 Lincoln avenue, east side, from Southern Boulevard to Suburban Railroad bridge.
 Railroad avenue, west side, from One Hundred and Fifty-eighth to One Hundred and Sixty-first street.
 Suburban Railroad bridge, approach to.
 Teasdale place, from Delmonico place to Cauldwell avenue.
 Union street, from Lind to Ogden avenue.
 One Hundred and Forty-third street, from Brook to St. Ann's avenue.
 One Hundred and Forty-eighth street, from Brook to St. Ann's avenue.

The following streets in Twenty-fourth Ward:
 Ackerman street, from Port Morris Railroad to Webber's lane.
 Ash street, from Morris avenue to 100 feet east.
 Bathgate avenue, from One Hundred and Seventy-sixth street to 200 feet south.
 Broadway, from Tibbett's brook to Yonkers city line.
 Buckhout street, from Morris avenue to 100 feet east.
 High Bridge stairs—approach to High Bridge.
 Morris avenue, from Jane to One Hundred and Seventy-fourth street.
 Morris avenue, from One Hundred and Seventy-seventh to Bush street.
 McComb's Dam road, from Jerome avenue to Featherbed lane.
 Popham street, from Fleetwood avenue to near Jerome avenue.
 Topping street, from One Hundred and Seventy-third to Gray street.
 Weeks street, from One Hundred and Seventy-third to Gray street.
 One Hundred and Seventy-third street, from Harlem Railroad to Topping street.
 One Hundred and Seventy-fourth street, from Jerome avenue to McComb's Dam road.
 One Hundred and Seventy-sixth street, from Fleetwood to Jerome avenue.
 One Hundred and Eighty-fourth street, from Sedgwick avenue to McComb's Dam road.

Contracts for lighting the streets by gas for the year ending on April 30 next have been made, as shown in the following statement:

CONTRACTOR.	For Gas to and Lighting, Extending, with Lamp, per annum.		For each Lamp-post String/retired.		For each Column Re-laid.		For each Column Re-fitted.		For each Lamp-post Removed.		For each Lamp-post Reset.		For each New Lamp Fitted-up.	
Consolidated Gas Co.....	\$17 50	\$1 50	\$1 50	\$3 50	\$3 50	\$8 00	\$8 00							
New York Mutual Gas-light Co.....	17 50	1 50	1 50	3 50	3 50	8 00	8 00							
Equitable Gas-light Co.....	12 00	1 50	1 50	3 50	3 50	10 00	10 00							
Central Gas-light Co.....	28 00	1 50	1 50	3 50	3 50	8 00	8 00							
Northern Gas-light Co.....	29 00	1 50	1 50	3 00	3 50	8 00	8 00							
Yonkers Gas-light Co.....	20 00	1 00	1 00	1 00	1 50	8 00	8 00							
* New York and New Jersey Globe Gas-light Co.....	25 00	1 00	1 00	2 00	3 00	5 00	5 00							

* Naphtha lamps.

Contracts for electric-lighting have been made, as follows:
 With United States Illuminating Company ("United States System"), at 50 cents per night—
 For Bleeker street, from the Bowery to Canal street.
 For Broadway, from Battery place to Canal street.
 For Canal street, from the Bowery to North river.
 For Catharine street, from East Broadway to East river.
 For Chambers street, from Broadway to North river.
 For East Broadway, from Chatham Square to Grand street.
 For Fifth avenue, from Washington Square to Fourteenth street.
 For Fulton street, from North to East river.
 For South street, from Whitehall to Grand street.
 For West street, from Battery place to Eleventh street.
 For Battery Park.
 For City Hall Park.
 For Tompkins Park.
 For Gansevoort Market square.
 The above district was previously lighted by United States Company at 70 cents per night.

With United States Illuminating Company (Contract No. 2), at 40 cents per night—
 For Barclay street, from Broadway to West street.
 For Chambers street, from Broadway to East river.
 For Cortlandt street, from Broadway to West street.
 For Liberty street, from Broadway to West street.
 For Whitehall street, from Bowling Green to South Ferry.
 For Washington Park, at 24 cents per night (former price, 70 cents).

With Brush Electric Illuminating Company ("Brush System"), at 25 cents per night—
 For Broadway, from Fourteenth to Fifty-ninth street.
 For Fifth avenue, from Fourteenth to Fifty-ninth street.
 For Fourth avenue, from Fourteenth to Thirty-fourth street.
 For Park avenue, from Thirty-fourth to Forty-second street.
 For Seventh avenue, from Fourteenth to Fifty-ninth street.
 For Fourteenth street, from North to East river.
 For Twenty-third street, from North to East river.
 For Thirty-fourth street, from North to East river.
 For Forty-second street, from North to East river.
 For Fifty-ninth street, from Third to Ninth avenue.
 For Madison Park.
 For Union Park.
 The above district was previously lighted by the Brush Company at 70 cents per night.

With Brush Electric Illuminating Company (Contract No. 2)—
 For Avenue A, from Fourteenth to Twenty-fourth street.
 For Avenue B, from Fourteenth to Twenty-second street.
 For First avenue, from Fourteenth to Fifty-ninth street.
 For Grand street, from Broadway to Sullivan street.
 The above at 25 cents per night.
 For Fourth avenue, from Fourteenth to Seventeenth street.
 For Eighth street, from Third avenue to East river.
 For Irving place, from Fourteenth to Twentieth street.
 The above at 40 cents per night.

With the East River Electric-light Company ("Thomson-Houston System"), at 19 1/2 cents per night—
 For Broadway, from Canal to Fourteenth street.
 For Sixth avenue, from Carmine to Fifty-ninth street.
 For Eighth avenue, from Fourteenth to Fifty-ninth street.

For Grand street, from Broadway to East river.
 For Park Row, from Ann street to Bowery.
 For Bowery, from Park Row to Third avenue.
 For Third avenue, from Bowery to Eighty-sixth street.
 At 39 cents per night:
 For Avenue B, from Houston to Fourteenth street.
 For Avenue D, from Houston to Fourteenth street.
 For First avenue, from Houston to Fourteenth street.
 For Fourth avenue, from Bowery to Fourteenth street.
 For Centre street, from Brooklyn Bridge to Grand street.
 For Christopher street, from Sixth avenue to West street.
 For Desbrosses street, from West street to Canal street.
 For Eighth street, from Sixth avenue to Cooper Union.
 For Houston street, from North to East river.
 For Stuyvesant street, from Eighth to Tenth street.
 For Tenth street, from Second avenue to East river.
 For Tenth avenue, from Fourteenth to Fifty-ninth street.
 For West Broadway and South Fifth avenue, from Chambers street to Washington Square.

With the Mount Morris Electric-light Company ("Schuyler System"), at 40 cents per night—
 For Greenwich street, from Battery place to Warren street.

With the American Electric Manufacturing Company ("American System"), at 32 cents per night—
 For the Boulevard, from One Hundred and Tenth to One Hundred and Fifty-fifth street.
 For One Hundred and Tenth street, from the Boulevard to St. Nicholas avenue.
 For Sixth avenue, from One Hundred and Tenth to One Hundred and Thirty-sixth street.

With the Harlem Lighting Company ("Waterhouse System"), at 24 cents per night—
 For Third avenue, from Eighty-sixth to One Hundred and Thirtieth street.
 For Eighth avenue, from One Hundred and Twenty-first to One Hundred and Fifty-fifth street.
 For One Hundred and Twenty-fifth street, from East river to Manhattan street, and thence to North river.

At 50 cents per night:
 For Mount Morris Park.
 At 60 cents per night:
 For Harlem Bridge (Third avenue).

With The North New York Lighting Company ("Thomson-Houston System"), at 40 cents per night—
 For Third avenue, from Harlem Bridge to Willis avenue.
 For One Hundred and Thirty-eighth street, from Third avenue to Madison Avenue Bridge.

Contracts for a supply of illuminating gas to the various public markets, offices, court-rooms, armories of the National Guard, etc., for the year 1888, have been made as follows:
 With The Consolidated Gas Company, for gas of not less than 15 candle-power, at \$1.25 per 1,000 cubic feet.
 With The Equitable Gas-light Company, for gas of not less than 28 candle-power, at \$1.25 per 1,000 cubic feet.

The total aggregate length of streets now lighted by electric-lights is 34 1/2 miles, and the total area of public parks and Gansevoort Market is 62 1/2 acres. When all the streets mentioned in the electric-light contracts are lighted, the total electric-light mileage will be 67 1/4 miles.

The following statement will show the average amount of impurities found in the gases of such of the gas companies as have mains on the line of our photometric stations, as determined by the analysis made by Dr. E. G. Love, our Gas Examiner, in the laboratories of this Bureau:

OF WHAT COMPANY.	SULPHUR. (Grains in 100 cubic feet.)				AMMONIA. (Grains in 100 cubic feet.)				SUPERHEATED HYDROGEN.
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	
	Consolidated Gas Co., Branch 1.....	5.31	3.37	2.60	2.36	0.16	0.34	0.38		0.22
Consolidated Gas Co., Branch 2.....	13.74	11.85	8.86	8.59	4.15	12.53	6.15	13.55	
Consolidated Gas Co., Branch 3.....	2.78	4.48	3.55	3.63	0.13	0.54	0.51	0.24	
Consolidated Gas Co., Branch 4.....	17.72	29.46	18.70	17.12	1.83	5.28	5.06	4.79	
Consolidated Gas Co., Branch 6.....	2.94	2.74	5.54	6.84	0.40	0.78	1.27	0.71	
New York Mutual Gas-light Co.....	5.06	4.77	4.49	12.16	0.20	0.09	0.09	0.57	Traces.
Equitable Gas-light Co.....	4.12	5.69	6.17	6.67	0.16	0.30	0.20	0.17	

The following table will show the specific gravity of the gases:

OF WHAT COMPANY.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.
Consolidated Gas Co., Branch 1.....	.633	.664	.648	.651
Consolidated Gas Co., Branch 2.....	.477	.462	.431	.437
Consolidated Gas Co., Branch 3.....	.642	.668	.654	.653
Consolidated Gas Co., Branch 4.....	.497	.547	.535	.475
Consolidated Gas Co., Branch 6.....	.595	.637	.610	.628
New York Mutual Gas-light Co.....	.720	.748	.708	.729
Equitable Gas-light Co.....	.658	.715	.699	.725

The gases manufactured by the several companies are of the following kinds:
 Consolidated Gas Co., Branch 1, water-gas, "Tessie du Motay" process.
 Consolidated Gas Co., Branch 2, coal-gas mixed with water-gas.
 Consolidated Gas Co., Branch 3, water-gas, "Tessie du Motay" process.
 Consolidated Gas Co., Branch 4, coal-gas.
 Consolidated Gas Co., Branch 6, water-gas, "Tessie du Motay" process.
 New York Mutual Gas-light Co., water-gas, "Wilkinson's" process.
 Equitable Gas-light Co., water-gas, "Jerzmanowski" process.
 Central Gas-light Co., coal-gas.
 Northern Gas-light Co., coal-gas.
 Yonkers Gas-light Co., water-gas, "Saulsbury" process.

The following statement will show the average maximum and minimum pressures on the mains of such of the companies as connect with our photometric stations, as recorded on the pressure registers during the year; the average being made for the times during which the public lamps are required to be kept lighted:

OF WHAT COMPANY.	AVERAGE MAXIMUM.				AVERAGE MINIMUM.			
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Consolidated Gas Co., Branch 1.....	Inches. 2.04	Inches. 1.65	Inches. 1.48	Inches. 1.94	Inches. 1.62	Inches. 1.59	Inches. 1.45	Inches. 1.54
Consolidated Gas Co., Branch 2.....	2.48	2.62	2.04	2.32	1.54	1.54	1.42	1.32
Consolidated Gas Co., Branch 3.....	2.60	2.50	2.26	2.44	1.30	1.66	1.56	1.20
Consolidated Gas Co., Branch 4.....	1.79	1.82*	1.85	1.94	0.96	0.92*	0.93	0.95
Consolidated Gas Co., Branch 6.....	3.07	2.91*	2.51	2.64	1.44	1.37*	1.37	1.26
New York Mutual Gas-light Co.....	2.54	3.02	2.55	2.97	1.41	1.99	1.91	1.80
Equitable Gas-light Co.....	2.53	2.43	2.46	2.24	1.60	1.53	1.42	1.37

* For part of the quarter.

Since the introduction of the electric-light in this city for street-lighting purposes up to the month of May last, the contracts for electric-lighting were made on the same printed form as was used for gas-lighting contracts, the forms being adapted for any kind of artificial illumination. The Gas Commission then concluded that it would be advisable to adopt a form of contract, with specifications, prepared expressly for electric-lighting, and, with this view, the services of Lieutenant John Mills, of the Lighthouse Department, were secured as an electrical expert, and with his valuable assistance a form of contract was prepared which seems to be admirably adapted for electric-light contracts, and on these forms the new contracts have been executed. Applications have been made from the authorities of other cities requesting copies of the specifications, and doubtless requests for the same will be made in the future, hence a copy of the contract is attached to this report as Exhibit "F."

It will be seen in Specification 3 ("Luminous Intensity") that each electric-lamp must give a light equivalent to that of not less than one thousand standard sperm candles when tested at an angle of forty degrees with and below the horizontal plane. It has been the practice of all electric-light companies to designate the arc light as of 2,000 candle-power; while, as a matter of fact, none of the ordinary arc lights generally used for street illumination approach anywhere near these figures, even when tested under the most favorable conditions, with single lamps and a special dynamo. When the quantity of light given by one of these lamps has been questioned, then the answer has been that French measurement is meant when 2,000 candle-power is mentioned; that is to say, that the ascertained light should be multiplied by four because the light shows in four directions. Now, this is an absurdity, because the standard gas-burner or oil-lamp against which the arc light is tested also gives a light in four directions, and if the electric-light at one end of a photometer should be multiplied by four, then the testing lamp or burner at the other end should be served likewise. Thus, if the testing burner should be of 20 candle-power, and the observed electric-light should be 500 candle-power—multiplied by four to make 2,000—then the testing burner multiplied by four would be of 80 candle-power; hence the candle-power of the arc light, as compared with the gas-burner, would be but five hundred candles.

Testing apparatus has been obtained under the supervision of Dr. Love, our Gas Examiner, and Lieutenant Mills is arranging to make a series of tests of the electric-light.

The only new electric-lamps erected under the before-mentioned contracts are the substitution of 9 ordinary pole-lamps in Union Park and 14 ordinary in Madison Park by the Brush Company, in lieu of the high mast-lamps formerly on those parks, and 4 lamps on Fourth avenue, from Fourteenth to Seventeenth street, by same company; 45 lamps on Third avenue, from Eighty-sixth to One Hundred and Thirtieth street; 24 lamps on One Hundred and Twenty-fifth street, from Third to Eighth avenue; 19 lamps in Mount Morris Park and 7 lamps on Harlem Bridge by the Harlem Lighting Company; and 20 lamps on Third avenue, from Harlem Bridge to Willis avenue, and 6 lamps in One Hundred and Thirty-eighth street, from Third avenue to the Madison Avenue Bridge by the North New York Lighting Company.

The annual cost of lighting Union and Madison Parks by the former high mast-lights was \$6,132; the cost of lighting by the ordinary pole-lights will be \$2,098.75, while the general illumination of the parks is now very much better than that afforded by the mast-lights.

The delay in the erection of the new electric-lamps has been caused by the Board of Electrical Control (organized under chapter 716 of the Laws of 1887), which has lately given permission to the several electric-light companies to erect their lamp-posts but has refused consent to the erection of carrying poles. Of course if this resolution should be adhered to it will virtually prevent the companies from carrying out their contracts inasmuch as the lamp-posts are to be from 250 to 350 feet apart, and this distance is so great that the wires from lamp to lamp could not be maintained without the aid of a sustaining pole between each lamp-post. In giving the permission for the erection of lamp-posts the Board of Control has designated the kind of lamp-post to be used, and this consists of hollow cast-iron base, 1 1/2 feet in length, 4 feet of which shall be below the level of the sidewalk and 7 1/2 feet above the surface. In the top of this base, which has a tapering socket, is to be placed a column of yellow pine projecting 12 1/2 feet above the casting, this wooden column to have a 2-inch hole bored lengthwise through its centre and to have cast-iron steps bolted thereon to enable the trimmer to reach the lamp; the 2-inch hole being provided in order that the wire may be carried through the lamp-post when the conduits are constructed for the underground system. This lamp-post will bring the arc light about 21 feet above the surface of the street. The wooden column will naturally shrink somewhat as the wood becomes thoroughly seasoned, and hence the shaft will become loose in the socket and will gradually lean over from the perpendicular from the force of the winds upon the hood of the lamp and the weight of the wires attached thereto, and then the lamp-posts will present a very unsightly appearance.

At the request of the Commissioners of Public Parks and by direction of the Gas Commission, Bryant Park was thoroughly lighted by gas on the night of August 16, last. This park had not been lighted since April 16, 1872, at which time the lights were discontinued by the Department of Parks, which then had control of the lighting of parks and bridges.

In August last, the approaches to the Suburban Railroad Bridge, which has lately been erected over the Harlem river, from Second avenue, on the Manhattan Island side, to Lincoln avenue, on the Mott Haven side, were lighted by gas at the request of the Department of Parks, which stated that the railroad company had promised to light the bridge when the Department of Public Works commenced to light the approaches. This Department has done its part of the work, but the bridge proper, including the draw-span, is still in darkness, except what little light is afforded by small mineral-oil lamps.

On December 25, Mount Morris Park was first lighted by electric-lights. This park is located in Harlem; it consists of 20 1/2 acres, the central part of which is a high rocky hill, and it had never before been lighted in any manner.

On December 10, the Harlem Lighting Company commenced to light the Harlem (Third avenue) Bridge under the terms of its contract. In the early spring when the company lighted the bridge by way of experiment or exhibition, the illumination was found to be effectively done. During the past two weeks, however, frequent complaints have been made about the lighting of the bridge, and my attention has been called to the matter by the Department of Public Parks. Lieutenant Mills and myself visited the bridge about three weeks since, and we found but one lamp lighted on the draw-span, and this lamp not working properly. I again examined the lighting on several occasions, and found the draw-span, which is the most important and dangerous part of the bridge, in utter darkness, except what little light was afforded by hand-lanterns placed on the draw by the Department of Parks. Having called the attention of the lighting company to the then existing state of affairs, and no improvement in the lighting having been made, I have directed the company to discontinue their attempt to light the bridge until the work can be done properly and in accordance with the contract, and the defect or trouble is doubtless in the connection with the turn-table. It is evidently intact, and the defect or trouble is doubtless in the connection with the turn-table.

In accordance with a resolution of the Common Council gas-lamps have been fitted up and lighted under each of the arches beneath the Harlem Railroad at the crossings of each street, from One Hundred and Second to One Hundred and Eleventh street.

Two hundred and eighteen resolutions for the erection and lighting of new lamps, etc., have been introduced in the Board of Aldermen and thirty-two of these have been vetoed by the Mayor. All of which is respectfully submitted,

S. McCORMICK, Superintendent of Lamps and Gas.

EXHIBIT "A."

Statement showing the Amounts on Vouchers drawn for Gas to the various Public Markets, Offices, etc., and for Fitting-up, Repairing, Lighting, etc., the Public Lamps, for the First, Second, Third and Fourth Quarters of the Year 1887, with the Totals for the whole Year.

	FIRST QUARTER, ENDING MARCH 31.	SECOND QUARTER, ENDING JUNE 30.	THIRD QUARTER, ENDING SEPT. 30.	FOURTH QUARTER, ENDING DEC. 31.	TOTAL.
Washington Market.....	\$984 75	\$585 49	\$635 37	\$895 12	\$3,100 73
Catharine Country Market.....	26 74	22 26	22 00	30 37	101 37
Catharine Meat Market.....	22 13	20 62	22 37	23 63	88 75
Fulton Meat Market.....	334 75	226 87	252 87	351 37	1,165 86
Fulton Country Market.....	505 49	326 38	397 51	496 38	1,695 76
Essex Market.....	26 51	19 00	19 00	27 50	92 01
Centre Market.....	98 38	72 63	64 75	81 75	317 51
Clinton Market.....	165 00	123 25	104 87	145 87	539 99
Union Market.....	11 50	5 00	4 00	12 12	32 62
Tompkins Market.....	147 25	105 13	102 38	168 50	523 26
Jefferson Market.....	243 12	143 87	106 25	230 75	723 99
First District Police Court.....	313 63	283 25	230 26	292 39	1,119 53
Second District Police Court.....	145 26	86 26	45 37	114 25	391 14
Third District Police Court.....	40 61	28 12	18 63	38 25	125 61

	FIRST QUARTER, ENDING MARCH 31.	SECOND QUARTER, ENDING JUNE 30.	THIRD QUARTER, ENDING SEPT. 30.	FOURTH QUARTER, ENDING DEC. 31.	TOTAL.
Fourth District Police Court.....	\$124 26	\$90 00	\$70 75	\$125 50	\$410 51
Fifth District Police Court.....	26 75	15 38	2 49	19 49	64 11
First District Civil Court.....	6 13	2 25	75	3 38	12 51
Second District Civil Court.....	23 49	17 37	17 38	27 75	85 99
Fourth District Civil Court.....	12 87	9 50	5 75	10 75	38 87
Fifth District Civil Court.....	49 38	34 51	24 00	44 00	151 89
Sixth District Civil Court.....	3 50	3 12	3 00	4 00	13 62
Eighth District Civil Court.....	12 26	9 87	6 12	13 24	41 99
Ninth District Civil Court.....	12 62	11 75	6 13	15 00	45 50
Tenth District Civil Court.....	.....	.....	.....	3 01	3 01
Court-room, Brown-stone Building.....	127 75	83 63	56 87	95 87	364 12
New Court-house.....	1,301 87	1,042 74	712 99	1,050 26	4,107 86
City Hall.....	375 25	294 87	273 75	453 25	1,397 12
Corporation Counsel's Office.....	36 25	7 36	5 51	43 87	92 99
Corporation Attorney's Office.....	70 01	41 39	35 38	47 26	194 04
Receiver of Taxes' Office.....	342 11	220 99	86 75	124 49	774 34
Department of Public Works.....	330 01	202 88	141 50	277 25	951 65
Department of Taxes.....	15 25	9 50	7 12	11 12	42 99
Court of Special Sessions.....	33 63	18 88	15 25	61 24	129 00
CITY RECORD Book Bindery.....	2 50	3 12	2 13	4 37	12 12
Register's Office.....	56 12	45 25	29 25	86 51	217 13
County Jail.....	292 75	224 12	200 37	306 75	1,023 99
Pipe Yard, Rivington street.....	4 13	2 12	1 75	4 50	12 50
Pipe Yard, East Twenty-fourth street.....	3 62	2 76	2 87	5 12	14 37
Water Purveyor's Repair Shop, Thirtieth street.....	9 88	5 12	4 50	10 01	29 51
Water Purveyor's Repair Shop, Eighty-third street.....	4 37	4 13	4 00	4 75	17 25
Water Purveyor's Repair Shop, One Hundred and Twenty-ninth street.....	14 00	10 25	10 75	16 87	51 87
South Gate-house.....	73 62	52 62	54 00	62 63	242 87
Engine-house, High Bridge.....	82 38	59 64	56 26	79 37	277 65
Engine-house, Ninety-eighth street.....	148 12	118 63	119 87	167 50	554 12
Clock-tower, Third District Court-house.....	137 37	134 12	129 38	134 00	534 87
Photometrical Rooms, Grand street.....	17 63	16 51	2 50	22 50	59 14
Photometrical Rooms, Seventy-ninth street.....	9 13	3 62	50	4 74	17 99
Dog Pound, foot of East Sixteenth street.....	13	12	.....	1 00	1 25
Seventh Regiment Armory.....	1,226 87	502 37	134 25	584 35	2,507 84
Eighth Regiment Armory.....	254 88	173 26	88 38	180 51	667 03
Ninth Regiment Armory.....	323 87	233 12	75 62	237 38	869 99
Eleventh Regiment Armory.....	88 50	74 13	58 75	101 75	323 13
Twelfth Regiment Armory.....	343 50	531 76	250 75	630 38	1,756 39
Twenty-second Regiment Armory.....	870 25	622 62	293 75	800 50	2,587 12
Sixty-ninth Regiment Armory.....	229 51	194 50	126 00	335 75	785 76
Seventy-first Regiment Armory.....	231 12	197 76	134 50	330 50	895 88
First Battery Armory.....	50 49	27 13	25 62	46 25	149 49
Second Battery Armory.....	142 37	98 48	53 62	126 00	419 47
Public Bath, Battery.....	.....	1 75	12 88	75	15 38
Public Bath, Gouverneur Slip.....	.....	2 38	23 00	5 87	31 25
Public Bath, Duane street, North river.....	.....	38	16 50	4 87	21 75
Public Bath, Rivington street.....	.....	87	18 37	3 87	23 11
Public Bath, Horatio street.....	.....	2 12	23 88	2 50	28 50
Public Bath, Nineteenth street, East river.....	.....	1 63	31 99	3 13	36 75
Public Bath, Twenty-seventh street, North river.....	.....	2 37	29 88	6 62	38 87
Public Bath, Thirty-seventh street, East river.....	.....	1 87	26 51	2 63	31 01
Public Bath, Fifty-first street, North river.....	.....	1 88	25 62	4 63	32 13
Public Bath, One Hundred and Twelfth street, East river.....	.....	.....	23 37	4 13	27 50
Public Bath, One Hundred and Thirty-eighth street, East river.....	.....	.....	24 16	2 56	26 72
Traveling expenses.....	.....	34 15	.....	77 20	111 35
Gas examinations.....	361 50	374 50	373 50	379 50	1,489 00
Electric-light examinations.....	.....	.....	.....	500 00	500 00
Lighting Public Markets, etc. (pay-rolls).....	510 00	516 00	516 00	567 00	2,109 00
Cleaning Photometrical Rooms (pay-rolls).....	15 00	15 00	15 00	15 00	60 00
New lamp-posts.....	680 22	630 00	2,773 74	2,374 36	6,458 32
New lamp-posts, Twenty-third and Twenty-fourth Wards.....	.....	1,260 00	826 12	.....	2,086 12
New street-lamps.....	1,005 60	1,546 75	562 50	2,063 25	5,178 10
New street-lamps, Twenty-third and Twenty-fourth Wards.....	336 25	.....	500 00	.....	836 25
New boulevard lamps.....	955 00	1,520 00	1,200 30	2,277 50	5,952 80
New boulevard lamps, Twenty-third and Twenty-fourth Wards.....	.....	.....	141 00	.....	141 00
New cast-iron fenders.....	.....	60 25	.....	.....	60 25
New crossheads.....	260 00	.....	272 00	136 00	668 00
New lamp-irons.....	.....	341 25	.....	260 00	601 25
New lamp-irons, Twenty-third and Twenty-fourth Wards.....	.....	.....	182 00	.....	182 00
Street signs (glass).....	365 00	.....	239 25	376 66	1,180 91
Street signs (glass), Twenty-third and Twenty-fourth Wards.....	.....	.....	94 17	94 17	188 34
Metal street signs.....	.....	.....	412 50	412 50	825 00
Glass.....	.....	.....	26 50	26 50	53 00
Lamp maps.....	.....	.....	25 00	73 00	98 00
Lettering boulevard globes.....	.....	75 00	91 80	144 60	311 40
Supplies for Photometrical Rooms.....	.....	.....	87 81	50 00	137 81
Photometrical apparatus.....	.....	.....	152 75	289 00	441 75
Drawing materials.....	.....	.....	12 40	12 40	24 80
Cartages.....	.....	.....	81 25	81 25	162 50

	FIRST QUARTER ENDING MARCH 31.	SECOND QUARTER ENDING JUNE 30.	THIRD QUARTER ENDING SEPT. 30.	FOURTH QUARTER ENDING DEC. 31.	TOTAL.
Granite base				\$115 52	\$115 52
Photometrical Rooms, Grand street (rent)	\$150 00	\$150 00	\$150 00	150 00	600 00
Photometrical Rooms, Seventy-ninth street (rent)	90 00	90 00	90 00	90 00	360 00
Fitting-up new lamps	248 00	472 00	1,642 00	2,500 00	4,862 00
Fitting-up new lamps, Twenty-third and Twenty-fourth Wards	16 00	56 00	584 00	1,912 00	2,568 00
Resetting and repairing lamp-posts	433 00	920 00	1,800 00	2,846 00	5,999 00
Resetting and repairing lamp-posts, Twenty-third and Twenty-fourth Wards	83 00	107 50	390 50	2,148 50	2,729 50
Lighting public lamps	56,246 84	56,368 80	85,079 93	142,560 97	340,256 54
Lighting public lamps, Twenty-third and Twenty-fourth Wards	21,125 86	21,138 14	31,463 81	54,621 04	128,348 85
Lighting electric-lamps	29,200 50	30,237 90	23,869 12	41,538 26	124,845 78
Lighting naphtha-lamps	493 55	500 00	750 00	1,248 61	2,992 16
Total	\$123,361 44	\$123,989 87	\$159,320 78	\$269,502 33	\$676,174 42

RECAPITULATION.

Gas to public offices, etc	\$10,586 12	\$7,576 63	\$5,542 68	\$9,555 54	\$33,260 94
Supplies to public lamps, etc	4,592 32	5,352 90	6,549 68	10,477 24	26,972 14
Supplies to public lamps, etc., Twenty-third and Twenty-fourth Wards	336 25	1,260 00	1,649 12	94 17	3,339 54
Fitting-up new lamps	248 00	472 00	1,642 00	2,500 00	4,862 00
Fitting-up new lamps, Twenty-third and Twenty-fourth Wards	16 00	56 00	584 00	1,912 00	2,568 00
Resetting and repairing lamp-posts	433 00	920 00	1,800 00	2,846 00	5,999 00
Resetting and repairing lamp-posts, Twenty-third and Twenty-fourth Wards	83 00	107 50	390 50	2,148 50	2,729 50
Lighting public lamps	56,246 84	56,368 80	85,079 93	142,560 97	340,256 54
Lighting public lamps, Twenty-third and Twenty-fourth Wards	21,125 86	21,138 14	31,463 81	54,621 04	128,348 85
Lighting electric-lamps	29,200 50	30,237 90	23,869 12	41,538 26	124,845 78
Lighting naphtha-lamps	493 55	500 00	750 00	1,248 61	2,992 16
Totals	\$123,361 44	\$123,989 87	\$159,320 78	\$269,502 33	\$676,174 42

EXHIBIT "B."

Summary of the Appropriation for "Lamps and Gas and Electric Lighting," for 1887, showing the Amounts Expended during each of the Quarters of the Year, with the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Lamps and Gas and Electric Lighting," 1887	\$732,000 00
Vouchers drawn in first quarter, ending March 31	\$123,361 44
Vouchers drawn in second quarter, ending June 30	123,989 87
Vouchers drawn in third quarter, ending September 30	159,320 78
Vouchers drawn in fourth quarter, ending December 31	269,502 33
Total amount expended during the year	676,174 42
Balance	\$55,825 58
Of which there has been transferred by the Board of Estimate and Apportionment, as follows:	
To account of "Reparing Fifth Avenue"	\$25,000 00
To account of "Repairs and Renewal of Pavements"	20,000 00
To account of "Rents for Finance Department"	1,200 00
To account of "Supplies for and Cleaning Public Offices"	8,000 00
To account of "Rents for Finance Department"	1,600 00
	55,800 00
Surplus balance	\$25 58

EXHIBIT "C."

Summary of the Appropriation for "Salaries—Lamps and Gas and Electric Lighting," for 1887, showing the Amounts Expended during the Quarter and the Year, with the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Salaries—Lamps and Gas and Electric Lighting," 1887	\$5,800 00
Amount of vouchers drawn in first quarter, ending March 31	\$1,227 11
Amount of vouchers drawn in second quarter, ending June 30	1,624 95
Amount of vouchers drawn in third quarter, ending September 30	1,624 95
Amount of vouchers drawn in fourth quarter, ending December 31	1,249 95
Total amount expended during the year	5,726 96
Surplus balance	\$73 04

EXHIBIT "D."

Summary of the "Lamp Account," showing the Number of New Lamps Lighted, Old Lamps Relighted and Lamps Discontinued by each Gas and Electric-light Company during the Quarter ending December 31, 1887; also a Statement for the Year.

CONSOLIDATED GAS COMPANY, BRANCH 1.				
Number of lamps lighted September 30, 1887			3,847	
Number of new lamps lighted during the quarter			7	
Number of old lamps relighted during the quarter			7	
Less lamps discontinued during the quarter				3,861
Number of lamps lighted December 31, 1887				3,851
CONSOLIDATED GAS COMPANY, BRANCH 2.				
Number of lamps lighted September 30, 1887			2,432	
Number of new lamps lighted during the quarter			13	
Number of old lamps relighted during the quarter			11	
Less lamps discontinued during the quarter				2,456
Number of lamps lighted December 31, 1887				2,450

CONSOLIDATED GAS COMPANY, BRANCH 3.				
Number of lamps lighted September 30, 1887			2,584	
Number of new lamps lighted during the quarter			15	
Number of old lamps relighted during the quarter			4	
Less lamps discontinued during the quarter				2,603
Less lamps transferred to Equitable Gas-light Company			47	
			3	50
Number of lamps lighted December 31, 1887				2,553
CONSOLIDATED GAS COMPANY, BRANCH 4.				
Number of lamps lighted September 30, 1887			3,251	
Number of new lamps lighted during the quarter			89	
Number of old lamps relighted during the quarter			32	
Less lamps discontinued during the quarter				3,372
Less lamps transferred to Equitable Gas-light Company			5	
			46	51
Number of lamps lighted December 31, 1887				3,321
CONSOLIDATED GAS COMPANY, BRANCH 6.				
Number of lamps lighted September 30, 1887			5,726	
Number of new lamps lighted during the quarter			108	
Number of old lamps relighted during the quarter			26	
Less lamps discontinued during the quarter				5,860
				317
Number of lamps lighted December 31, 1887				5,543
Total number of lamps lighted by Consolidated Gas Company, December 31, 1887				17,718
NEW YORK MUTUAL GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			190	
Number of new lamps lighted during the quarter			1	
Number of new lamps relighted during the quarter			0	
Less lamps discontinued during the quarter				191
				0
Number of lamps lighted December 31, 1887				191
EQUITABLE GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			2,167	
Number of new lamps lighted during the quarter			2	
Number of old lamps relighted during the quarter			1	
Number of lamps transferred from Consolidated Gas Company			49	
Less lamps discontinued during the quarter				2,219
				1
Number of lamps lighted December 31, 1887				2,218
CENTRAL GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			2,376	
Number of new lamps lighted during the quarter			33	
Number of old lamps relighted during the quarter			18	
Less lamps discontinued during the quarter				2,427
				136
Number of lamps lighted December 31, 1887				2,291
NORTHERN GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			1,819	
Number of new lamps lighted during the quarter			38	
Number of old lamps relighted during the quarter			16	
Less lamps discontinued during the quarter				1,873
				0
Number of lamps lighted December 31, 1887				1,873
YONKERS GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			422	
Number of new lamps lighted during the quarter			6	
Number of old lamps relighted during the quarter			0	
Less lamps discontinued during the quarter				428
				0
Number of lamps lighted December 31, 1887				428
Total number of gas-lamps lighted December 31, 1887				24,719
NAPHTHA-LAMPS.				
NEW YORK AND NEW JERSEY GLOBE GAS-LIGHT COMPANY.				
Number of lamps lighted September 30, 1887			120	
Number of new lamps lighted during the quarter			0	
Number of old lamps relighted during the quarter			0	
Less lamps discontinued during the quarter				120
				0
Total number of naphtha-lamps lighted December 31, 1887				120
ELECTRIC-LAMPS.				
BRUSH ELECTRIC ILLUMINATING COMPANY.				
Number of lamps lighted September 30, 1887			336	
Number of new lamps lighted during the quarter			30	
Number of old lamps relighted during the quarter			0	
Less lamps discontinued during the quarter				366
				12
Number of lamps lighted December 31, 1887				354
UNITED STATES ILLUMINATING COMPANY.				
Number of lamps lighted September 30, 1887			363	
Number of new lamps lighted during the quarter			0	
Number of old lamps relighted during the quarter			0	
Less lamps discontinued during the quarter				363
				0
Number of lamps lighted December 31, 1887				363

HARLEM LIGHTING COMPANY.		
Number of lamps lighted September 30, 1887	0	
Number of new lamps lighted during the quarter	95	
Number of old lamps relighted during the quarter	0	
Less lamps discontinued during the quarter	7	95
Number of lamps lighted December 31, 1887		88
NORTH NEW YORK LIGHTING COMPANY.		
Number of lamps lighted September 30, 1887	0	
Number of new lamps lighted during the quarter	26	
Number of old lamps relighted during the quarter	0	
Less lamps discontinued during the quarter	0	26
Number of lamps lighted December 31, 1887		26
Total number of electric-lamps lighted December 31, 1887		831
RECAPITULATION FOR QUARTER.		
Number of gas-lamps lighted September 30, 1887	24,814	
Number of naphtha-lamps lighted September 30, 1887	120	
Number of electric-lamps lighted September 30, 1887	699	
Number of new gas-lamps lighted during the quarter	312	25,633
Number of new naphtha-lamps lighted during the quarter	0	
Number of new electric-lamps lighted during the quarter	151	463
Number of gas-lamps relighted during the quarter	164	
Number of naphtha-lamps relighted during the quarter	0	
Number of electric-lamps relighted during the quarter	0	
Less gas-lamps discontinued during the quarter	571	164
Less naphtha-lamps discontinued during the quarter	0	
Less electric-lamps discontinued during the quarter	19	26,260
Less lamps transferred to Equitable Gas-light Company		590
Total number of lamps lighted December 31, 1887		25,670

Summary of the "Lamp Account" for the Year 1887.

CONSOLIDATED GAS COMPANY, BRANCH 1.		
Number of lamps lighted December 31, 1886	3,872	
Number of new lamps lighted during the year	26	
Number of old lamps relighted during the year	24	
Less lamps discontinued during the year	40	3,922
Less lamps transferred to Equitable Gas-light Company	31	71
Number of lamps lighted December 31, 1887		3,851
CONSOLIDATED GAS COMPANY, BRANCH 2.		
Number of lamps lighted December 31, 1886	2,661	
Number of new lamps lighted during the year	20	
Number of old lamps relighted during the year	29	
Less lamps discontinued during the year	23	2,710
Less lamps transferred to Equitable Gas light Company	237	260
Number of lamps lighted December 31, 1887		2,450
CONSOLIDATED GAS COMPANY, BRANCH 3.		
Number of lamps lighted December 31, 1886	2,698	
Number of new lamps lighted during the year	44	
Number of old lamps relighted during the year	11	
Less lamps discontinued during the year	66	2,753
Less lamps transferred to Equitable Gas-light Company	134	200
Number of lamps lighted December 31, 1887		2,553
CONSOLIDATED GAS COMPANY, BRANCH 4.		
Number of lamps lighted December 31, 1886	3,154	
Number of new lamps lighted during the year	264	
Number of old lamps relighted during the year	55	
Less lamps discontinued during the year	83	3,473
Less lamps transferred to Equitable Gas-light Company	69	152
Number of lamps lighted December 31, 1887		3,321
CONSOLIDATED GAS COMPANY, BRANCH 6.		
Number of lamps lighted December 31, 1886	5,527	
Number of new lamps lighted during the year	332	
Number of old lamps relighted during the year	52	
Less lamps discontinued during the year	5,911	368
Number of lamps lighted December 31, 1887		5,543
Total number of lamps lighted by Consolidated Gas Company December 31, 1887		17,718
NEW YORK MUTUAL GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	208	
Number of new lamps lighted during the year	1	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year	1	209
Less lamps transferred to Equitable Gas-light Company	17	18
Number of lamps lighted December 31, 1887		191

EQUITABLE GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	1,677	
Number of new lamps lighted during the year	5	
Number of old lamps relighted during the year	1	
Number of lamps transferred from Consolidated Gas Company	520	
Number of lamps transferred from New York Mutual Gas Company	17	
Less lamps discontinued during the quarter		2,220
Number of lamps lighted December 31, 1887		2,218
CENTRAL GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	2,334	
Number of new lamps lighted during the year	89	
Number of old lamps relighted during the year	42	
Less lamps discontinued during the year		2,465
Number of lamps lighted December 31, 1887		174
Number of lamps lighted December 31, 1887		2,291
NORTHERN GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	1,726	
Number of new lamps lighted during the year	145	
Number of old lamps relighted during the year	17	
Less lamps discontinued during the year		1,888
Number of lamps lighted December 31, 1887		15
Number of lamps lighted December 31, 1887		1,873
YONKERS GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	337	
Number of new lamps lighted during the year	91	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		428
Number of lamps lighted December 31, 1887		0
Number of lamps lighted December 31, 1887		428
Total number of gas-lamps lighted December 31, 1887		24,719
NAPHTHA LAMPS.		
NEW YORK AND NEW JERSEY GLOBE GAS-LIGHT COMPANY.		
Number of lamps lighted December 31, 1886	120	
Number of new lamps lighted during the year	0	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		120
Number of lamps lighted December 31, 1887		0
Number of lamps lighted December 31, 1887		120
ELECTRIC LAMPS.		
BRUSH ELECTRIC ILLUMINATING COMPANY.		
Number of lamps lighted December 31, 1886	348	
Number of new lamps lighted during the year	30	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		378
Number of lamps lighted December 31, 1887		24
Number of lamps lighted December 31, 1887		354
UNITED STATES ILLUMINATING COMPANY.		
Number of lamps lighted December 31, 1886	363	
Number of new lamps lighted during the year	0	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		363
Number of lamps lighted December 31, 1887		0
Number of lamps lighted December 31, 1887		363
HARLEM LIGHTING COMPANY.		
Number of lamps lighted December 31, 1886	0	
Number of new lamps lighted during the year	95	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		95
Number of lamps lighted December 31, 1887		7
Number of lamps lighted December 31, 1887		88
NORTH NEW YORK LIGHTING COMPANY.		
Number of lamps lighted December 31, 1886	0	
Number of new lamps lighted during the year	26	
Number of old lamps relighted during the year	0	
Less lamps discontinued during the year		26
Number of lamps lighted December 31, 1887		0
Number of lamps lighted December 31, 1887		26
Total number of electric-lamps lighted December 31, 1887		831
RECAPITULATION FOR YEAR.		
Number of gas-lamps lighted December 31, 1886	24,194	
Number of naphtha-lamps lighted December 31, 1886	120	
Number of electric-lamps lighted December 31, 1886	711	
Number of new gas-lamps lighted during the year	1,017	25,025
Number of new naphtha-lamps lighted during the year	0	
Number of new electric-lamps lighted during the year	151	
Number of gas-lamps relighted during the year	768	
Number of naphtha-lamps relighted during the year	0	
Number of electric-lamps relighted during the year	0	
Less gas-lamps discontinued during the year	1,260	768
Less naphtha lamps discontinued during the year	0	
Less electric-lamps discontinued during the year	31	26,961
Number of lamps lighted December 31, 1887		1,291
Total number of lamps lighted December 31, 1887		25,670

EXHIBIT "E."

Statement showing the Illuminating Power in candles of the Gas supplied to the City by the several Gas-light Companies during the Quarter ending December 31, 1887, as shown by the Daily Observations at the Photometrical Rooms of the Department of Public Works, with the Average for the Year.

Table with 8 main columns for different gas companies and 21 sub-columns for lowest, highest, and average illuminating power in candles for each week ending from Oct 1 to Dec 31, 1887, plus a final average row.

Average for the Year.

Table with 8 main columns for different gas companies and 21 sub-columns for lowest, highest, and average illuminating power in candles for each month from January to December, plus a final totals row.

Table with 8 main columns for different gas companies and 3 sub-columns for distance from gas-works, testing burner, and gas type.

EXHIBIT "F."

Agreement.

This agreement, made and entered into this ... in the year one thousand eight hundred and eighty ... by and between the Mayor, Aldermen and Commonalty of the City of New York, parties of the first part, by the Commissioner of Public Works of said city, acting in conjunction with the Mayor and Comptroller thereof, and

party of the second part:

A. Witnesseth, that the said party of the second part hereto has agreed and by these presents does agree with the said parties of the first part, for the consideration hereinafter mentioned, and under the penalty expressed in a bond bearing even date with these presents and hereunto annexed, to furnish electric lamps and accessories to, and to operate and maintain the lamps in the portions of the City of New York bounded and described as follows, to wit:

for and during the term commencing within thirty days or sixty days after the execution of the contract, as the Mayor, Comptroller and Commissioner of Public Works may decide, and ending on the 30th day of April, A. D. 1888, inclusive. And during the same period to repair and paint the lamp-posts, hoods and supports of such lamps, and to clean and properly attend such lamps; and to fit up, operate and maintain such new lamps as may be required by the said parties of the first part in said portion of said city, and to repair, paint, clean, attend and replace such new lamps and the appurtenances thereof.

B. And it is further agreed that, subject to the provisions of subdivision 5 of section 86 of the New York City Consolidation Act of 1882, the said party of the second part will, upon being

required so to do by the said parties of the first part, extend their conductors and erect new lamps in and along all the streets, avenues and public places within the limits aforesaid or adjacent thereto.

C. All the lamps, materials and apparatus furnished, and all the work and labor done by the party of the second part hereto, shall be of the kinds and qualities, and furnished and done in all respects in strict conformity to the terms, conditions and requirements of the hereinafter contained specifications.

D. If the estimate or bid of the party hereto of the second part included any lamps with which the conductors of said party of the second part were not connected at the time of the making such estimate or bid, thirty days from the date of the execution of this agreement, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner of Public Works, will be allowed the party of the second part in which to connect such pipes or conductors with such lamps, and all such connections shall be made by the party of the second part without expense to the City. Provided, the said party of the second part have or shall procure a grant or franchise from the Mayor, Aldermen and Commonalty, authorizing the erection of poles and the stringing or laying of conductors in the streets or parts of streets in which the said lamps are located.

E. No payment will be made on account of any lamp except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

F. Should there be any doubt as to the meaning of these specifications or discrepancy or any obscurity in the wording of them, the Superintendent of Lamps and Gas shall explain them, and such explanation shall be final and binding upon the contractor, who will not make any charge or claim for extra work or damage in consequence of such explanation, but will execute the work in accordance therewith.

Specifications.

1. Lamps—The lamps furnished are to be of the kind or system known as "arc" electric lamps.

2. Lighting—The lamps are to be operated continuously each and every night during the continuance of this contract. They are to be started thirty minutes after sunset and kept in operation until thirty minutes before sunrise, the time for lighting and extinguishing to be determined by tables to be furnished by the Commissioner of Public Works. Also, the Department of Public Works may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times during the continuance of this contract; and the said party of the second part shall and will light the same, and continue them burning, in accordance with any and every direction of the Department of Public Works to that effect. Provided that, if in compliance with the direction of the Department of Public Works, the

whole number of hours during which the said lamps, or a portion of them, are kept burning, shall exceed the number of hours specified in the time-table to be furnished by the Commissioner of Public Works, which time-table shall aggregate a total of 3,950 hours per year, then, in that case, the said party of the second part shall be entitled to claim and receive, for such additional number of hours during which the lamps, or such portion of them, in the district aforesaid are kept burning in accordance with such direction of the said Department of Public Works, an additional compensation, equivalent to a pro rata increase of the compensation hereinafter allowed, proportioned to the increased number of hours beyond the said number, and the number of lamps so kept burning. And also provided, that if, in compliance with the direction of the said Department of Public Works, the number of hours during which the said lamps, or any portion of them, are kept burning shall be less than the aforesaid number of 3,950 per year, then, in that case, there shall be deducted an amount equivalent to a pro rata decrease of the compensation hereinafter allowed, proportioned to the decrease of the number of hours below the said number, and to the decrease of the number of lamps so kept burning. And also provided, that said Department of Public Works shall have the right at any time to increase or diminish the number of lamps and to require such changes as may be found expedient in the location of any lamp or lamps awarded to be lighted by the party of the second part under this contract.

3. Luminous Intensity—Each lamp must give a light equivalent to that of not less than one thousand standard sperm candles, weighing one-sixth of a pound each, and burning, as near as possible, at the rate of one hundred and twenty grains of spermacet per hour. Measurement of the electric lamp shall be made by comparison with a standard gas, oil or other lamp of at least twenty candle-power, using the Bunsen photometer. The candle-power of the standard lamp shall be determined by direct comparison with standard candles. The electric lamp shall be measured in a direction making an angle of 40 degrees with and below the horizontal plane, the axis of the lamp being vertical. After each observation the electric lamp shall be revolved 90 degrees about its vertical axis, in one direction only, and the mean of ten such observations shall be taken in determining the candle-power. The measurements shall be made with the globe removed from the lamp and with the light of the "arc" unobstructed.

Each lamp must be operated at not less than four hundred and seventy-five Watts in the arc, to be determined by electrical measurements of the current and difference of potential between the carbons, using approved instruments properly tested and calibrated. An expert, to be designated by the Commissioner of Public Works, shall determine whether the lights are in accordance with and fulfill the specifications, and his determination shall be final and conclusive.

It is also provided that in order that the party of the first part may have proper facilities for testing the candle-power of the lamps, the party of the second part will, at their own expense, extend a conductor or wire from a street-lamp circuit into a building on the line of such circuit to be designated by the Superintendent of Lamps and Gas, and will also furnish for such testing, lamps and carbons such as are used for lighting the streets under this agreement.

And it is further provided, that in case the candle-power of any lamp or lamps shall be less than the one thousand candle-power specified in this agreement, then payment will only be made for the candle-power as determined by the photometric tests above mentioned; the amount so to be paid to be based pro rata upon the amount which should be paid providing the candle-power should be that of one thousand candles.

4. Carbons—The carbons used in the lamps must be of the best quality and of the size best adapted to the current used, and must burn uniformly and give a clear and steady light.

5. Globes—The globes of the lamps will be of clear glass, unless otherwise specified, and they must be of uniform thickness and proper shape to avoid casting rings or streaks of light and shadow. All globes that may become broken must be replaced by sound ones each day before starting the lights. The clear globes used must not absorb or obstruct more than ten per cent. of the light of the lamp.

6. Cleaning—Dirt and carbon dust must be removed from the globes and the globes cleaned inside and outside each day before starting the lights.

7. Repairing Lamp-posts—Whenever the Department of Public Works shall require that any lamp-post or posts shall be straightened, or that any lamp-post or posts be repaired in any other manner in this contract specified, the same shall be done within twenty-four hours after said Department shall notify said party of the second part of such requirement.

8. Painting—All poles, hoods and lamp supports must be painted two coats of paint in such colors as may be directed, and such painting shall be done within thirty days after the poles and lamp supports shall have been erected.

9. Removing Lamp-posts—All lamp-posts to be taken down which the Department of Public Works may require to be removed for any purpose.

10. Safety Apparatus—All switches, cut-outs and other apparatus which may be necessary to prevent danger from fire or injury of any kind to persons or property, or which may be required for the safe and proper operation of the lamps, will be furnished and applied by the party of the second part at his own cost and expense.

11. Lamp and Wire Supports—All the requirements of these specifications concerning the erecting, painting, repairing, removing and maintaining of lamp-posts, shall also apply to any other form of lamp support that may be adopted, as well as to poles, brackets or other supports that may be erected for the conducting wires.

12. Locations of Lamps—The position, height above the pavement and number of lamps for any particular locality, shall conform to such regulations as may be made by the Commissioner of Public Works.

13. Apparatus—The lamp-posts, poles, wires, conductors, lamps, globes, carbons and each and every other article or apparatus which may be necessary for electric-lighting, are to be furnished and maintained by the party of the second part at its own cost and expense; and the lamps, wires and other conductors shall be thoroughly insulated and shall be placed in such locations and in such manner as will prevent them from being tampered with or handled by any unauthorized person or persons, and the Corporation of the City of New York shall not be held responsible for any injury or accident which may be occasioned by the conductors or electric current. And in case clear or plain glass globes should be used on the lamps, and such globes should be deemed objectionable, then the Commissioner of Public Works shall have the right to direct that such clear globes be removed and ground glass or opal globes substituted therefor.

14. Claims for Infringement of Patent—The party of the second part shall indemnify and hold harmless the party of the first part against any and all claims which may be made by reason of any infringement of any patent right in the use of the lamps, dynamos, or any other article, apparatus, or process which may be used in operating or maintaining the lamps under this agreement.

15. Whenever in these specifications or in this agreement of which they form part, the words "party of the second part," or pronouns in place thereof, are used, such words and pronouns are to be understood as meaning and referring to the party or parties (as the case may be) of the second part of this agreement.

G. The prices fixed for the various services herein provided to be performed by the party of the second part are, as follows:

For furnishing and erecting the aforesaid electric-lamps, together with all poles, supports, conductors, insulators and appliances of every kind, and for operating, maintaining, painting, cleaning and attending the same for the afore-mentioned period, the sum of _____ for each lamp for each night.

H. United States Revenue Tax—And it is hereby agreed, by and between the parties to these presents, that the parties of the first part shall not be called upon to pay to the said party of the second part any amount for any tax which the Government of the United States may assess upon the illuminating material consumed by the public lamps within the district aforesaid.

I. And it is further agreed, that the said party of the second part shall have the right to lay, subject to the provisions of subdivision 5 of section 86 of the New York City Consolidation Act, pipes or conductors at any time between September 1, 1887, and April 30, 1888, upon giving forty-eight hours' written notice to the Department of Public Works, subject, however, to the approval of the Commissioner of Public Works, of its intention to break up or open any street, avenue, or public place, or part thereof, or to remove any part of the pavement thereof, for the purpose of laying, subject to the last before mentioned provisions of statute, or repairing the pipes or conductors. And the party of the second part shall, whenever it shall break up or open any street, avenue, or public place, replace the earth which may be removed in so doing, before sunset of the day on which such opening shall be made (the earth to be thoroughly tamped as the same is thrown into the trench or excavation), and replace the pavement, and repave and repair the same, in such reasonable time and manner as the Department of Public Works may direct, and in as good and firm a manner as such street, avenue, or public place, or part thereof, was in before being broken up for the purpose aforesaid, and shall, from time to time, as required by the Department of Public Works, readjust and fill and finish the same as long as in the opinion of the Department of Public Works may be necessary on account of the settling of the earth or pavement caused by the opening. Also, all such repairs as shall at any time become necessary to said pavement, by reason of laying the said pipe or conductors, shall be made and done by said party of the second part, at its own cost and expense. And it is also agreed that the party of the second part shall furnish to the Commissioner of Public Works a report weekly, stating therein the location of each and every opening made in the pavements during the preceding week. And no street, avenue, or public place, or part thereof, shall or will be broken up or opened, or the pavement thereof removed, or be again filled up or repaired, except under the direction and supervision of a competent person, to be appointed by the Commissioner of Public Works; but the party of the first part shall not be called upon to pay any sum, to any party or parties, for the inspection of any

pavement which may have been removed and repaved by the party of the second part, but the expense of such inspection shall be paid by the party of the second part when required by the Commissioner of Public Works. And it is further agreed, that the said party of the second part shall and will in all things be governed by such reasonable rules and regulations as the said Department of Public Works may from time to time establish or direct, relative to the opening of such streets, avenues, or public places, or parts thereof, and laying down the pipes and conductors, and for lighting, cleaning and protecting the lamps aforesaid. And it is further agreed, that, in order that the Commissioner of Public Works and his assistants may determine whether the lamps are lighted and extinguished in accordance with this contract, the party of the second part shall furnish to the Superintendent of Lamps and Gas a map or maps showing the line or lines of each electric-lamp circuit and the locations of the lamps on such circuit.

J. And it is hereby further agreed, that in case the said party hereto of the second part shall fail or neglect to keep the covenants herein contained, or any of them, or neglect to operate, repair, paint, clean, or fit up the lamps as before mentioned, or any of them, it shall be lawful for the Commissioner of Public Works to cause such work to be performed by other parties, and to deduct the expense thereof from any moneys which may be due or may become due to the party of the second part, and to hold the party of the second part and its sureties liable for the amount thereof which may be in excess of the prices stipulated in this agreement.

K. And it is further agreed, that for each and every electric-lamp which shall be extinguished or not lighted during any portion of the night, the party of the first part shall deduct from the bills of the party of the second part the full amount which the party of the second part would be entitled to receive if such lamp or lamps had been lighted during the whole night; and for each and every electric-lamp which shall be extinguished or not lighted the whole night, the party of the first part shall deduct twice the amount which the party of the second part would be entitled to receive if such lamp or lamps had been lighted the whole night. Which deductions are hereby agreed upon, fixed and determined as the liquidated damages which the party of the first part will suffer by reason of such lamps being extinguished as aforesaid, and not by way of penalty.

L. And it is further provided, and these presents are upon the express condition, that if the said party of the second part, or its successors, shall not well and truly observe, perform, fulfill and keep all and singular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case it shall and may be lawful for the Commissioner of Public Works, on the part of the said parties of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

M. And it is further agreed, that on or after the first day of each and every month from the month of June, 1887, to the month of May, 1888, both months inclusive, the party of the second part shall furnish proof, to the satisfaction of the Commissioner of Public Works, that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid during the preceding month, and particularly that it has operated and maintained the lamps at the candle-power hereinbefore specified, and that all the lamps have been kept clean and properly attended during all the time that the lamps were required to be kept lighted. Upon so doing, the Commissioner shall certify the fact, and in his certificate state the amount to which the party of the second part shall be entitled for all the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the party of the second part therefor the sum to which it shall be so entitled; and without such proof, to the satisfaction of the Commissioner of Public Works, he shall not make any certificate nor requisition on the Comptroller; and the party of the second part shall also furnish proof to the satisfaction of the Comptroller that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid, and without such proof the said party of the second part shall not be or become entitled to any payment in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of the City, he shall, within twenty days thereafter, pay to the party of the second part the amount thereof in lawful money.

N. And it is further agreed by and between the parties hereto, that if, at any time before or within thirty days after the whole work herein agreed to be performed has been completed and accepted by the parties of the first part, any person or persons claiming to have performed any labor or furnished any materials towards the performance or completion of this contract shall file with the said Commissioner of Public Works, Mayor and Comptroller, or with the Bureau having charge of said work, and with the head of the Finance Department of the said City of New York, any such notice as is described in the act of the Legislature of the State of New York, passed May 22, 1878, entitled "An act to secure the payment of laborers, mechanics, merchants, traders and persons furnishing materials towards the performing of any public work in the cities of the State of New York," then and in every such case the said parties of the first part shall retain, anything herein contained to the contrary thereof notwithstanding, from the moneys under their control and due or to grow due under this agreement, so much of such moneys as shall be sufficient to pay off, satisfy and discharge the amount in such notice alleged or claimed to be due to the person or persons filing such notice, together with the reasonable costs of any action or actions brought to enforce such claim or the lien created by the filing of such notice. The moneys so retained shall be retained by the said parties of the first part until the lien thereon created by the said act and the filing of the said notice shall be discharged pursuant to the provisions of the said act.

And the said party of the second part hereby further agrees that it will furnish the said Commissioner of Public Works, Mayor and Comptroller with satisfactory evidence that all persons who have done work or furnished materials under this agreement, and who may have given written notice to the said Commissioner of Public Works, Mayor and Comptroller before or within ten days after the final completion and acceptance of the whole work under this contract, that any balance for such work or material is due and unpaid, have been fully paid or satisfactorily secured. And in case such evidence be not furnished as aforesaid, such amount as may be necessary to meet the claims of the persons aforesaid shall be retained from the moneys due the said party of the second part under this agreement, until the liabilities aforesaid shall be fully discharged or such notice withdrawn.

O. And it is hereby expressly agreed and understood by and between the parties hereto that the said parties of the first part, their successors and assigns, shall not, nor shall any department or officer of the City of New York be precluded or estopped by any return or certificate made or given by the Engineer, Inspector or other officer, agent, or appointee of said Department of Public Works or said parties of the first part, under or in pursuance of anything in this agreement contained, from at any time showing the true and correct amount and character of the work which shall have been done and materials which shall have been furnished by the said party of the second part, or any other person or persons under this agreement.

P. It is further provided that should the Board of Electrical Control in and for the City of New York, organized under the provisions of chapter 716 of the Laws of 1887, or their successors, at any time within the period provided for in this agreement, require or cause to be removed from the surface of any or all of the streets, avenues, piers, parks and places mentioned in this agreement, and to be placed, maintained and operated under ground, any or all of the electrical wires or cables used or to be used by the said party of the second part in any or all of such streets, avenues, piers, parks and places, under the terms of this agreement, then and in such case the said party of the second part will be and hereby is relieved from all obligation under this agreement to furnish any light in any or all of such streets, avenues, piers, parks and places from the surface of which the said Board of Commissioners, or their successors, may require the removal and the placing, maintaining and operating under ground of any or all of the electrical wires or cables used or to be used therein under the terms of this agreement (but only as to such streets, avenues, piers, parks and places), until such requirement shall be complied with; and in like manner until such requirement is complied with and light furnished thereunder (unless light is in the meantime furnished by the said party of the second part in conformity with the specifications contained in this agreement), the parties of the first part will be, and hereby are, relieved from all obligation under this agreement to pay any moneys to the said party of the second part for furnishing any light in any or all of such streets, avenues, piers, parks and places last aforesaid. Neither party to this agreement shall have or make any claims thereunder against the other (including the bondsmen of the party of the second part on the bond given in connection with this agreement) for any damages arising, directly or indirectly, by reason of any requirement or act of the said Board of Commissioners, or their successors, as aforesaid. Nothing in this paragraph or in this agreement contained shall be taken in any way to bind the said party of the second part to comply with any requirement of the said Board of Commissioners, or their successors; neither shall anything in this paragraph or in this agreement contained be taken in any way to exempt the said party of the second part from any requirement of the said Board of Commissioners, or their successors.

Q. And the parties hereto declare that this contract is made with reference to the proposals hereto annexed, which are to be taken as part and parcel of these presents.

In witness whereof, the said Mayor, Comptroller and Commissioner of Public Works have hereunto set their hands and seals, on behalf of the said parties of the first part, and the said party of the second part has caused its corporate seal to be hereunto affixed, and its President and Secretary hereto to set their hands, and said parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner of Public Works, one other to be filed with the Comptroller of the City of New York, and the third to be delivered to the said party hereto of the second part, the day and date herein first above written.

Witness:

S. MCCORMICK.

ABRAM S. HEWITT, Mayor of the City of New York.
E. V. LOEW, Comptroller of the City of New York.
JOHN NEWTON, Commissioner of Public Works.

EXHIBIT "G."

Time Table for Lighting and Extinguishing the Public Gas Lamps, for the year from May 1, 1887, to April 30, 1888.

Table with columns for Months, Begin to Light, and Begin to Extinguish, showing lamp schedules from May 1, 1887, to April 30, 1888.

Total number of hours, 4,000. All the lamps to be lighted within one hour from the time of beginning.

INSTRUCTIONS TO LAMP-LIGHTERS.

- I.—The lamps must be lighted and extinguished strictly in accordance with the time specified in this time-table... II.—The lamps must be kept clean and in good condition... III.—The glass street signs and house numbers must be kept in their proper positions.

- IV.—Advertising signs on the lamp-posts or lantern, or colored or ground glass in the lantern are a violation of a corporation ordinance... V.—If a lighter on extinguishing a lamp should find a glass broken, he must replace the same before lighting time of the same day... VI.—The burners must be kept in good condition to burn with a full, clear, steady flame... VII.—If a lighter, when lighting, finds that a lamp will not burn, he will leave such lamp and finish his route... VIII.—Lamp-lighters will not be permitted to climb the lamp-posts... IX.—In case a lamp-post should be found broken or taken down, or requiring repairs... X.—Lighters must not break the lamp bottoms, nor the street-sign slots... XI.—Ladders must not be left tied to the lamp-posts.

S. McCORMICK, Superintendent of Lamps and Gas.

CORPORATION ORDINANCES RELATING TO THE PUBLIC LAMPS.

- Sec. 68. Any person breaking, mutilating, or obstructing any of the public lamps in the City of New York shall be liable to a penalty of five dollars for each offense... Sec. 69. Any person who shall break, misplace or carry away any of the glass street-signs now or hereafter to be placed in any of the public lamps... Sec. 70. No person, without permission of the Commissioner of Public Works, shall take up, remove or carry away any public lamp-post in the City of New York... Sec. 71. No person shall remove, or cause or permit to be removed, any public lamp-post now or hereafter to be placed in front of their premises for the purpose of constructing a vault or otherwise... Sec. 226. No person shall attach, place, or paste, or caused to be attached, placed, or pasted, any sign or advertisement, or other matter upon any public lamp-post, now erected in the City of New York... Sec. 227. The violation of any of the provisions of the preceding section shall be punishable by a fine of not less than one dollar, or more than ten dollars... Sec. 412. It shall not be lawful to erect any telegraph-post within a distance of ten feet of any public street-lamp... Sec. 1053 of the New York City Consolidation Act of 1882. If any person shall willfully break, take down, or carry away any glass lamp hung or fixed in any of the streets of the City of New York, or extinguish the lights therein, or by aiding or abetting in the same, shall be subject to a fine of twenty-five dollars, and in default of payment of such fine the offender shall be committed to the penitentiary for the term of two months.

Time Table for Lighting and Extinguishing the Electric Lamps in the City of New York, showing the Number of Hours Burning each Night and Month of the Year. (For Leap Year.)

Large table with columns for months (January to December) and rows for nights (1 to 31), showing lighting and extinguishing times and burning hours for electric lamps.

Total hours per year, 3,950.

Document "K."

REPORT OF THE SUPERINTENDENT OF REPAIRS AND SUPPLIES.

CITY OF NEW YORK—DEPARTMENT OF PUBLIC WORKS,
BUREAU OF REPAIRS AND SUPPLIES,
SUPERINTENDENT'S OFFICE, NO. 31 CHAMBERS STREET, ROOM 15,
NEW YORK, January 4, 1888.

Gen. JOHN NEWTON, *Commissioner of Public Works:*

SIR—In compliance with your instructions I have the honor to submit the following report of the transactions of this Bureau for the three months ending December 31, 1888.

Among the principal items of work were the following:

THE NEW COURT-HOUSE.

The old worn-out tubes of one of the boilers have been taken out and replaced with new heavy lap-welded tubes; the braces have been repaired and new ones put in where needed; a cast-iron back lining has been put in, to replace the old one in the furnace door; the steam-pipes in the boiler-room have been covered with asbestos hair felt, and canvas cylinder packing has been applied to steam-pumps. In the elevator the shaft bearings have been rebabbitted, and the sheave hangers relined; a valve rope put in. An iron shutter in the Surrogate's Court repaired; immediate and needed repairs have been made to portion of the roof, the flashings secured, and some repairs made to ventilators; some repairs have been made to the marble tiling on the upper floor; the step-plank, standards and metal work of the main entrance have been painted.

THE BROWN-STONE BUILDING.

For the purpose of ventilating and giving light to the boiler-room on the east side of the above building cuttings have been made, gaining the desired result. The old flooring has been removed, in compliance with sanitary requirement, and a concrete floor laid instead. Alterations have been made and a new stairway constructed connecting the District Attorney's office with library in the basement of the building. Iron window guards have been placed on windows of General Sessions. The water-pipes on the west side of the building have been covered with mineral wool; the soil cleaned away, and the earth refilled and rammed. Repairs made and roofs painted on two extensions, west side of building. Part III., and judges' room of General Sessions have been painted, and glass in prison pen pounced. The newly created Court, Part III., General Sessions, has been furnished with carpet and linoleum. The windows on the outside have been repainted and the sash painted. The windows have been furnished with weather-strips. Wire railing has been put up in the office of General Sessions.

CITY HALL.

In the vestibule, the east and west corridors, the walls and ceilings have been thoroughly washed off, the ceilings calcimined and the walls painted. A black walnut partition and closet have been put up in the City Court. Repairs have been made to the roof and galvanized leaders. From portion of the brown-stone front of the building the loose scale has been removed; the face thus made has been cleaned off, prepared and finished with Portland cement and sand. Window sashes on the exterior of the building have been repaired and painted and new halyards reeved. The tower clock has been cleaned and necessary repairs made. A doorway has been cut in basement of room occupied by the repair gang. Stone steps have been set and a new area built. The marble work in the vestibule has been cleaned and restored. The old wooden figure of Justice on the tower has been taken down, it having been pronounced insecure, and in its place has been erected a copper figure, securely braced and properly supported.

The dome and cornices have been covered with electro-plated copper, and such repairs made as were needed.

NO. 31 CHAMBERS STREET.

The walls and ceilings in the draughting-room have been washed, repaired, and the ceilings and walls calcimined and painted. The steam and water pipes have been covered with asbestos, felt and canvas in the engine-room and on the exhaust pipe on roof.

HALL OF RECORDS.

The furnaces have been repaired and new hot-air registers put in.

RECEIVER OF TAXES, STEWART BUILDING.

Carpet and linoleum have been laid in the above offices.

THIRD DISTRICT COURT-HOUSE.

The plastering has been repaired, the ceiling washed off and calcimined, the walls and wood-work painted and varnished in the Third District Civil Court.

FIFTH DISTRICT COURT-HOUSE.

The roof has been repaired and galvanized-iron chimney-top put on.

SEVENTH DISTRICT COURT-HOUSE.

In this building the leaders, skylight and portions of the roof have been repaired. The old boiler used for heating the building being worn out and unable to perform the work properly, a contract was entered into to replace it with a new horizontal tubular boiler of greater dimensions, and having all the necessary valves, pipes and connections. Some new radiators were put in, and the steam-heating system in the building thoroughly overhauled and repaired.

SIXTH DISTRICT CIVIL COURT.

Pigeon-hole case has been put for the security of court documents.

TENTH DISTRICT CIVIL COURT.

The court-room has been remodeled, a platform built for use of the Judge, additional accommodation afforded and partition and new cases put up. The court-room has been supplied with office furniture.

FIRST DISTRICT POLICE COURT.

The Board of Charities and Correction having given up possession of the rooms over the court, steps were immediately taken to remodel the court-room; plans and specifications were made, and the work proceeded with as rapidly as the circumstances would permit.

The cells in the upper rooms were removed and a new truss roof with ventilating skylight put on. A new paneled ceiling put up, the plastering repaired, the walls, ceiling and woodwork painted, calcimined and grained. The old platforms, benches and flooring removed, a new Georgia pine floor laid, new benches put in, iron railings and gas-fixtures put up and the prison-pen rebuilt. The rooms over the Judge's and clerks' rooms have been lathed and plastered and fitted for the storage of documents, and a circular iron stairway put up to connect with clerks' room; linoleum, carpet and matting have been laid and new stoves furnished. The sanitary condition of the court-room is all that can be desired and the lighting and ventilation improved.

COUNTY JAIL.

The roof has been repaired, the tiling in the corridors has been repaired; in the kitchen new hearth-stones and pine flooring have been laid, the yard has been regraded and paved, new drains and sewer connections have been put in.

WASHINGTON MARKET.

The roofs of sheds surrounding market have been repaired, and repairs have been made to several portions of the market and wire guards placed on windows.

CLINTON MARKET.

New skylight has been put on, and wire guards put on several of the old ones.

CENTRE MARKET.

The old gravel roof has been removed, a tin roof put on, and the chimneys rebuilt.

CATHARINE MARKET.

The doors and windows have been repaired and new flooring laid in several stands.

ESSEX MARKET.

Wire guards have been placed on windows on Market place.

GANSEVOORT MARKET.

The Legislature of 1884 authorized the Commissioner of Public Works to erect a new market on the above site; plans and specifications were made, and the work commenced on May, 1887; at present the work is fully half completed, and its entire completion will be a subject for subsequent report.

TWELFTH REGIMENT ARMORY.

A new fence has been put up in the rear of the building.

SECOND BATTERY.

The walls and ceilings of the armory have been washed off, cleaned, painted and calcimined.

SEVENTH REGIMENT ARMORY.

The rifle range has been remodeled, the butts repaired and mantelets constructed; the range as it now exists affords entire security and greatly increases its usefulness; the Commandant of the Regiment with whom I acted in making the changes is pleased with present condition of the range.

NINTH REGIMENT ARMORY.

Two new portable boilers, with necessary connections, valves, fittings, etc., have been put in on second story of the building for heating purposes and some additional radiators furnished.

SIXTY-NINTH REGIMENT ARMORY.

A partition has been put up to enclose a room for the Quartermaster, the vestibule on Seventh street side has been repaired and new storm-doors put up, new closets put in, the system of sewer connections overhauled and improved and new flooring laid.

SEVENTY-FIRST REGIMENT ARMORY.

Lockers in some of the company rooms have been repaired and altered, storm-doors and coal-bunkers have been constructed, panel partition put up for use of the Adjutant, new stoves have been put up in several companies' rooms.

DOG POUND.

A new Dog Pound has been built by contract at the foot of One Hundred and Second street, East river; the work is now completed, with the exception of the introduction of water and gas.

FREE FLOATING BATHS.

The bathing season closed in October, and the eleven baths were towed to Gowanus and safely beached.

PIPE YARD, TWENTY-FOURTH STREET, EAST RIVER.

For the uses of the Chief Engineer of the Croton Aqueduct a new building has been erected. The building, as it now exists, meets all the requirements of the Chief Engineer for the purpose of testing water-meters and performing other work connected with the Bureau. The work has been accepted and declared satisfactory.

In addition to the foregoing, the keeping in repair of the furniture, plumbing, steam and gas fitting, and the glazing of the various buildings and offices in care of the Department, the furnishing of law books, fuel and office supplies, form a very considerable portion of the work of the Bureau.

Very respectfully,

W. G. BERGEN, Superintendent

Document "L."

REPORT OF THE SUPERINTENDENT OF INCUMBRANCES.

DEPARTMENT OF PUBLIC WORKS—BUREAU OF INCUMBRANCES,
NO. 31 CHAMBERS STREET,
NEW YORK, January 3, 1888.

Gen. JOHN NEWTON, *Commissioner of Public Works:*

DEAR SIR—I submit herewith the following report of the operations of this Bureau for the quarter ending December 31, 1887 (months of October, November and December, 1887), together with a condensed statement of the entire business transacted during the year 1887:

- 1,194 complaints of obstructions, etc., received and attended to.
- 278 seizures and removals of obstructions made.
- 1,459 building permits issued.
- 22 permits issued to cut down shade trees.
- 156 miscellaneous permits issued.
- 170 notices issued to repair defective sidewalks.
- 5 notices issued to repair defective vault covers.

Expense of seizing and removing 278 articles, including 115 loads of dirt, refuse, stone, etc., and 49 dead and dangerous trees from various parts of the city..... \$1,284 80

Total expenses for the quarter..... \$1,458 99

Received from owners for the redemption of seized articles..... \$355 14

Received from public sale of unredeemed goods, etc., November 10, 1887..... 292 68

Total..... \$647 82

All of which was duly paid over to the City Chamberlain.

Salary account appropriation..... \$3,116 00

Expended up to December 31, 1887..... 3,115 30

Balance..... \$0 70

Appropriation for removal of obstructions in streets and avenues..... \$6,884 00

Amount expended up to December 31, 1887..... 6,882 65

Balance..... \$1 35

During the year 1887, the total number of complaints received and attended to regarding obstructions, etc., was 4,610.

- Removals to the Corporation Yards..... 1,318
- Removals of loads of dirt, stone, refuse, etc..... 637
- Removals of dead and dangerous trees..... 488
- Number of builders' permits issued..... 7,921
- Number of special permits issued..... 1,034
- Number of permits issued to cut down shade trees..... 55
- Number of notices issued to repair and reflag defective sidewalks..... 577
- Number of notices issued to repair and replace dangerous and defective vault covers..... 12

Total expenditure for the year..... \$9,997 95

- As follows:
- Labor at the different Corporation Yards..... \$354 50
 - Transportation expenses..... 276 75
 - Removals of redeemable obstructions..... 3,716 55
 - Removals of building materials, refuse, etc..... 826 85
 - Removals of dead and dangerous trees..... 1,708 00
 - Salaries for Inspectors and Keeper of Corporation Yards..... 3,115 30

Total..... 9,997 95

Actual cost of removals of redeemable obstructions..... \$3,716 55

Amount received from owners and public sales for the same..... 3,034 84

Difference..... \$681 71

Receipts for articles redeemed by owners..... \$1,016 17

Receipts from public sale of unredeemed articles, etc., at the Corporation Yards..... 1,118 67

Receipts from public sale of property on the lines of streets..... 178 88

Total..... \$3,213 72

Very respectfully,

JOHN RICHARDSON, Superintendent of Incumbrances.

Document "M."
REPORT OF THE WATER REGISTER.

BUREAU OF WATER REGISTER, No. 31 CHAMBERS STREET,
NEW YORK, December 31, 1887.

Hon. JOHN NEWTON, Commissioner of Public Works:

SIR—I herewith transmit statement of moneys received for water rents, penalties and taps, for the quarter ending December 31, 1887:

Table with 4 columns: Month, Principal, Penalties, Taps. Rows for October, November, December, and Total.

Deposit to the credit of "Water-meter Fund, No. 1"—
December \$2 50

Deposit to the credit of "Water-meter Fund, No. 2"—
October \$105 64
November 1,284 10
December 728 94
Total \$2,118 68

"Special Fund—Repairing Streets"—
October \$1,004 00
November 1,362 00
December 821 00
Total \$3,187 00

I have the honor to also submit a statement of moneys received for the year ending December 31, 1887, and placed to the credit of their respective accounts with the City Chamberlain:

TOTAL RECEIPTS. Table with 2 columns: Description, Amount. Rows include Regular water rates and penalties, Water by meter measurement, Permits for water for building purposes, etc.

Restoring pavements \$11,669 00
Collections for Meter and Meter Settings—
Special Meter Stock, No. 1 \$2 50

Water-meter Fund, No. 2 \$8,016 25
Amount returned to Bureau of Arrears for Meters and Meter Settings... 2,220 07
Total \$10,236 32

Croton water supplied to shipping for the year is as follows, viz.:
652 permits issued for shipping, amounting to \$22,537 86
For water supplied to shipping, measured by meter \$1,885 27
51 permits for engines on wharves, etc 1,523 00
Total \$105,946 13

1,366 permits were issued for building purposes during the year.
70 permits were issued for extra boilers during the year.
3,677 permits were issued for taps during the year.

The following table shows the work performed by the Inspectors of Waste of Water for the year ending December 31, 1887:

Table with 6 columns: Whole Number of Buildings Examined, Whole Number where Plumbing was Defective, Faucets (Leak, Waste), Hydrants (Leak, Waste), Urinals (Leak, Waste), Pipes (Burst), Ball-Cocks Wanted.

The amount received during the year for restoring pavements of \$11,669 is reserved for repairing openings in streets made for the purpose of connecting water-pipes with buildings, etc., etc.

The special meter fund account of \$10,238.82 is reserved and set apart to reimburse the City for advances made for meters and meter settings.

The receipts for water rates and penalties, including water by meter measurement and building purposes and for tapping water-pipes, show an increase over the last year (1886) amounting to the sum of \$71,853.31. In addition to this large and annually increasing revenue, and independent of the facilities for the extinguishment of fires, the City derives great incidental advantages in the full supply of water to the various charitable and corrective institutions on Blackwell's and Randall's Islands, and the numerous public schools, engine-houses, as well as all other buildings throughout the city which are used for public purposes.

The value of this supply, if estimated upon the rates charged to private consumers, would be upwards of \$200,000 per annum.

The provisions of chapter 606, Laws of 1887, exempting hospitals, orphan asylums and houses for the aged from the payment of water rents have not yet been fully complied with. The act was passed June 25, 1887, and as the water records were made up for the current year on the 1st of May, no canceling of charges has been made, excepting in one or two instances, the delay having been deemed necessary for this Department to obtain the legal opinion of the Counsel to the Corporation as to which institutions, under the law, are entitled to exemption.

The provisions of said act, by which the Commissioner of Public Works is authorized and empowered to cancel all charges for extra water standing on the books of the Department of Public Works, and which shall have stood thereon for six years and upward, is gradually being carried out. In regard to the rules and regulations of the Department for the prevention of waste, the following have been adopted, prescribing the penalty for each case of violation:

No owner or tenant will be allowed to supply water to another person or persons.
All persons taking water from the City must keep their own service pipes, street tap and all fixtures connected therewith in good repair, protected from frost, at their own risk and expense and shall prevent all waste of water.

The use of hose to wash coaches, omnibuses, wagons, railway cars, or other vehicles, or horses, cannot be permitted.

No horse-troughs or horse watering fixtures will be permitted in the street or on the sidewalk, except upon a license or permit taken out for that purpose. All licenses or permits must be annually renewed on the 1st of May. Such fixtures must be kept in good order, and the water not allowed to drip or waste by overflowing the sidewalk or street, or to become dangerous in winter by freezing in and about such troughs or fixtures.

No hydrant will be permitted on the sidewalk or in the front area, and any hydrant standing in a yard or alley, attached to any dwelling or building, must not be left running when not in actual use; and if the drip or waste from such hydrant freezes and becomes dangerous in winter, the supply will be shut off in addition to the penalty of five dollars imposed.

Taps at wash-basins, water-closets, baths and urinals, must not be left running, under the penalty of five dollars for each offense, which will be strictly enforced. Fountains or jets in hotels, porter-houses, eating-saloons, confectioneries or other buildings, are strictly prohibited. The use of hose for washing sidewalks, stoops, areas, house-fronts, yards, courtyards, gardens and about

stables, is prohibited. Where premises are provided with wells, special permits will be issued for the use of hose, in order that the police or inspectors of this Department may understand that the permission is not for the use of Croton water.

Opening fire-hydrants to fill hand sprinklers or other vessels will not be allowed.
The penalty for a violation of any of the preceding rules and regulations will be five dollars for each offense, and if not paid when imposed will become a lien on the premises in like manner as all other charges for unpaid water rates.

WASTE OF WATER.

In many instances no restraint seems to be exercised by householders, and no effort on the part of this Department seems to be of any avail in checking a degree of waste within the doors of private houses; the waste outside of buildings has been in some degree diminished, but within the dwelling-houses our citizens must be left almost to their own sense of right to put a stop to the unwarrantable daily waste.

REVENUE.

THE FOLLOWING TABLE EXHIBITS THE YEARLY REVENUES DERIVED FROM CROTON WATER, FROM ITS INTRODUCTION INTO THE CITY IN THE YEAR 1842 TO JANUARY 1, 1888.

Large table with 4 columns: From (Month/Year), To (Month/Year), Revenue, Total Revenue. Rows list monthly revenue from Oct 1842 to May 1888.

As the water year commences on the 1st day of May in each year, the annual receipts referred to in the foregoing include necessarily a certain portion of the water rents of each preceding year, respectively. This however, does not affect the comparative results, as the proportionate collections between the 1st of January and the final closing of the books of the preceding water year, are about the same in each fiscal year. Upon the closing of the books, all unpaid water rents are, in pursuance of law, returned to the Clerk of Arrears, and until paid remain as a lien upon the property on which they may be due, and are collectible at the time, and in the manner provided for the collection of the annual taxes. These amounts are added to the annual collections of this Department, in determining the actual revenue derived by the City from the supply and distribution of water.

If it were possible to graduate the charges for water to each consumer, precisely in proportion to the quantity used by him, no one could doubt the perfect fairness of the principle, and universal assent and satisfaction would follow its adoption; but it is not now, and perhaps may never be possible to reach such precision. We can only, by careful attention to the collection of data, and by judicious revisions of the rates upon the basis of such data from time to time, make a nearer approach to it. At the instance of the Department, the Legislature has recently enacted several laws to regulate and adjudicate charges for water rents, standing upon the books of this Bureau. The intention and tendency of these acts are to reduce the taxation for the water supply, so far as such reduction is consistent with the necessary safeguards against waste of water. I believe that it has never been the policy of the State government, which to a large extent controls our municipal affairs, or of the municipal government, to keep the water rates on any scale higher than is necessary to secure restriction of waste, and a fair return to the City for its outlay in the construction and maintenance of the water system. At the present rates the revenue exceeds the interest on the cost of construction, and the cost of maintenance to such an extent that I deem it proper to recommend such revision and reduction in the scale of water rents as will give an adequate revenue to the City, and at the same time contain the necessary safeguards against waste of water.

All of which is submitted,
J. H. CHAMBERS, Water Register.

BOARD OF STREET OPENING AND IMPROVEMENT.

The Board of Street Opening and Improvement met at the Mayor's Office, on Friday, March 16, 1888, at 1 o'clock, P. M., pursuant to the following notice:

OFFICE OF THE BOARD OF STREET OPENING AND IMPROVEMENT,
MAYOR'S OFFICE, NEW YORK, March 15, 1888.

SIR—You are respectfully requested to attend a meeting of the Board of Street Opening and Improvement, to be held at the office of the Mayor, on Friday, March 16, 1888, at 1 o'clock, P. M., to take into consideration unfinished business and such other matters as may be brought before the Board.

Yours respectfully,
WM. V. I. MERCER, Secretary.

Present—Abram S. Hewitt, Mayor; John Newton, Commissioner of Public Works; George H. Forster, President of the Board of Aldermen.
The reading of the minutes of March 8, the last meeting, were dispensed with.

The Secretary presented and read the following communication from the Mayor's Secretary:

MAYOR'S OFFICE,
NEW YORK, March 3, 1888.

Mr. W. V. I. MERCER, Esq., Secretary Board of Street Opening and Improvement:

SIR—I enclose herewith a resolution which should be offered at the next meeting of your Board, directing the President of the Department of Public Parks to cause maps to be prepared of a proposed park bounded by Eighty-sixth street, Avenue B and the East river.

Yours respectfully,
ARTHUR BERRY, Secretary.

Resolved, That the President of the Department of Public Parks be and he hereby is requested to cause two maps to be prepared, in the manner provided by section 2 of chapter 320 of the Laws of 1887, showing the location and boundaries of a proposed park to be bounded southerly by Eighty-sixth street, westerly by Avenue B, and easterly and northerly by the water-front as the same extends to the intersection therewith of the southerly line of Avenue B. The plan should exhibit Eighty-seventh, Eighty-eighth and Eighty-ninth streets as closed.

Which was adopted by the following vote:
Affirmative—The Mayor, the Commissioner of Public Works, the President of the Board of Aldermen—3.

The Secretary presented the following petition of N. P. Bailey, which was directed to be referred to the Department of Public Parks:

To the Honorable the Board of Street Opening and Improvement:

GENTLEMEN—The undersigned, the owner of all the lands shown on the diagram hereto annexed, respectfully requests your Honorable Board to lay out the same so that Bailey avenue now opened and constructed may be made to connect with the street already laid out, called on the diagram, Commerce avenue. Streets colored yellow are those already laid out by public authority. Bailey avenue and other public highways now in use are colored blue. The streets asked to be laid out will be necessary in order to obtain proper access to the water-front of your petitioner.

And your petitioner will ever pray.
N. P. BAILEY.

Dated New York, March 15, 1888.
MOVIUS & STEELE,
Attorneys for Petitioner,
No. 16 Exchange Place,
New York City.

The Deputy Comptroller informed the Chairman that the sub-committee on the Mulberry Street Park was not ready to hand in their report and the matter was laid over until it was completed, and then the Secretary was to give notice for a meeting for its consideration.
The Board then adjourned.

WM. V. I. MERCER, Secretary.

DEPARTMENT OF DOCKS.

At an executive meeting of the Board of Docks, held March 2, 1888.
Present—Commissioners Stark and Matthews; absent, Commissioner Marshall.

The minutes of the meeting held March 1, 1888, were read and approved.
The report of the Engineer-in-Chief on Secretary's Order No. 7510, in reference to the application of the Central Railroad Company of New Jersey, for permission to increase the width of Pier 13, North river, was:

On motion, laid on the table, and the Secretary directed to request the President of said Company to call on the Commissioners.

The following communications were received, read and:
On motion, ordered to be placed on file, action being taken where necessary, as stated, to wit:
From Kane & Wright—Requesting the use of bulkhead foot of East Forty-second street, East river, for receiving manure during the rebuilding of the Pier foot of East Forty-sixth street, East river.
On motion, the said application was denied.

From Engineer-in-Chief:
1st. Reporting non-commencement of dredging at east side of Third Avenue Bridge, Harlem river.

On motion, Secretary's Order No. 4117, issued on the 24th of January, 1885, was revoked, and the Engineer-in-Chief directed to examine and report the dredging required thereat.

2d. Reporting damage to propeller wheel of the tug "Manhattan," and recommending that the said wheel be balanced immediately, and a new one made and put on as soon as possible.
On motion, the report was received and recommendation adopted.

3d. Report on Secretary's Order No. 7441, enclosing report of cement tested for E. W. Fisher.
The Secretary directed to send him copy of said test.
The following preambles and resolutions were,
On motion, adopted:

Whereas, By the resolutions of the Commissioners of the Sinking Fund, adopted July 9, 1885, and September 17, 1886, the Comptroller was authorized and directed to prepare and issue from time to time, Dock bonds to meet the requirements of the Department of Docks to the amount of two millions of dollars to raise money for the uses and purposes of the Department of Docks as stated in said resolutions; and

Whereas, The Comptroller has issued only \$1,200,000 of said bonds, and there is still vested in him authority to issue the remaining \$800,000 as provided for in said resolutions; and
Whereas, The moneys realized from the sale of the said bonds as aforesaid are now nearly exhausted and there is pressing and immediate necessity that sufficient funds should be placed to the credit of this Department to enable it to prosecute its work; therefore, be it

Resolved, That the said Comptroller be and he is hereby requested to prepare and issue the said remaining \$800,000 Dock bonds as authorized and directed by the Commissioners of the Sinking Fund as aforesaid, and that he the said Comptroller place the avails thereof to the credit of the Department of Docks, as provided by law.

On motion, the time to receive estimates for removing all that part of Pier, old 36, at the foot of North Moore street, North river, with the shed thereon, which lies westerly of a line about fifty feet westerly of the new bulkhead line, except the crib-work below low water-mark, and preparing for and building a new wooden pier along the northerly side of the site of said Pier, old 36, to be known as Pier, new 25, North river, was postponed from March 6, 1888, until otherwise ordered by the Board, and the Secretary directed to withdraw said notice from publication in the CITY RECORD.

The following resolution was adopted:
Resolved, That the Engineer-in-Chief be and hereby is directed to build a temporary approach to Pier, old 36, North river, to extend from the existing crib-bulkhead about ninety feet outside of the established bulkhead line.
On motion, the appointments of Edgar B. Gosling, Assistant Engineer; John C. Wood, Engineer tug "Manhattan," William H. Reilly, Sounder, and Andrew McC. Parker, Assistant Engineer, were, in accordance with Regulation 36 of the Civil Service Regulations, made permanent.

On motion, Marcus Cane, Janitor, of West Fifty-seventh street Yard, was discharged.
On motion, the following appointments were made:

Walter Hillis, Frederick Eckstein,
Thomas Love, Dock Builders.

Laborers.

Marcus Cane,
William Doyle,
James Dunning,
Michael Carney,
Michael Zeigler,
Bartholomew Murphy,
Thomas Murphy,
William Woodbridge,
Edwin S. Phillips,
Martin Flanagan.

On motion, the Board adjourned.

G. KEMBLE, Secretary.

At a meeting of the Board of Docks, held March 8, 1888.
Present—Commissioners Stark and Matthews; absent, Commissioner Marshall.
The minutes of the executive meeting held March 2, 1888, were read and approved.
The following communications were received, read, and,
On motion, laid on the table to await action, as stated to wit:
From Kane & Wright—Requesting use of Pier at East Forty-eighth street, East river, during the rebuilding of Pier at East Forty-sixth street, East river.
From Engineer-in-Chief:

1st. Reporting that he had directed that Laborer and Acting Watchman John J. Dawson be not again assigned to duty as Acting Watchman. Referred to Executive Session.

2d. Report on Secretary's Order No. 7517, in reference to the application of the Staten Island Rapid Transit Railroad Company for permission to alter ferry premises, foot of Whitehall street, East river.
The following communications were received, read and

On motion, ordered to be placed on file, action being taken where necessary, as stated, to wit:
From Counsel to the Corporation:
1st. Enclosing copy of order in the case of Joseph L. Liscomb against the Department, and requesting information in relation thereto. The action of the President in sending the desired information was approved.

2d. Suggesting that the Board, in sending communications, will hereafter send separate letters on every particular topic or piece of property that may be referred to.

3d. Requesting itemized statement of the cost of repairs to tug "Manhattan" damaged by collision with the ferry-boat "Flushing." The action of the President in replying thereto was approved.

4th. Approving contract for building pier and bulkhead foot of East Forty-sixth street, East river.
From Theodore W. Myers, Comptroller:

1st. Requesting an interview with the Commissioners respecting the issue of Dock bonds. The action of the President in conferring with the Comptroller was approved.

2d. Requesting diagram of ferry premises foot of Roosevelt street, East river. The action of the President in directing the Engineer-in-Chief to prepare said diagram was approved.

From Hanson & Crombie—Requesting use of bulkhead foot of Ninety-third street, East river. Referred to the Dock Master to examine and report.

From William Duryea, for himself and other owners—Requesting permit to put a backing-log on the bulkhead between Piers 52 and 53, East river. Permit granted under usual conditions.

From Friendship Boat Club—Requesting a permit to drive ten piles between Lexington and Fourth avenues, at or near One Hundred and Thirty-second street, Harlem river. The action of the President in issuing a permit (the piles to be removed whenever ordered by the Board of Docks) was approved.

From Pennsylvania Railroad Company—Requesting permit to plank over the space in front of the newly filled-in ground in front of Pier, new 27, North river. The action of Commissioner Matthews in issuing a permit, under the usual conditions, was approved.

From Thomas F. White—Requesting permission to erect a temporary office for the use of police telegraph, and also a board fence on portion of Pier foot of West Thirty-seventh street, North river, assigned to the Health Department. Referred to the Engineer-in-Chief to examine and report.

The President reported that he had directed the Engineer-in-Chief to examine and report on the following applications:
From J. A. Bostwick—For permission to erect platform in front of bulkhead property on either side of Pier 45, East river, in accordance with plans and specifications submitted.

From West Shore Railroad—For permission to lay railroad tracks in the rear of the bulkhead between Thirty-sixth and Thirty-seventh streets, North river, as shown on map submitted.

From Gas Engine and Power Company—For permission to erect a platform at Morris Dock Station, Harlem River, in accordance with plans and specifications.
On motion his action was approved.

From Engineer-in-Chief:
1st. Reporting assignment of employees to special duty.

2d. Reporting the amount of work done during the week ending March 3, 1888.

3d. Reporting non-commencement of dredging south of One Hundred and Fifty-first street, Harlem river, and recommending that the permit for doing said work be revoked.
On motion, the report was received and recommendation adopted.

4th. Reporting non-commencement of dredging in slip adjoining north side of Pier at One Hundred and Twenty-ninth street, North river, as ordered.

On motion, the order to dredge thereat, Secretary's Order No. 6049, dated February 27, 1886, was revoked.

5th. Reporting that extensive filling-in is going on in the vicinity of One Hundred and Thirty-third street and east side of Fourth avenue. The action of the Secretary in directing the Dock Master to stop said filling-in was approved.

6th. Reporting repairs required to Pier at One Hundred and Fifty-second street, North river. The action of the President in notifying John A. Bouker, lessee, to repair, was approved.

7th. Reporting ownership of the undivided one-half of Pier 26, East river.

8th. Report on Secretary's Order No. 7504, repairs required to cluster of piles on outer and lower side of Pier 48, East river. The action of the President in directing the Engineer-in-Chief to repair was approved.

9th. Report on Secretary's Order No. 7505, repairs required to bulkhead between Piers 47 and 48, East river. The action of the President in directing the alleged owners to repair was approved.

10th. Report on Secretary's Order No. 7512, in reference to the application of the Department of Street Cleaning, for use of bulkhead at Fifty-fourth street, East river, during the rebuilding of Pier at Forty-sixth street, East river. The Engineer-in-Chief directed to examine and report as to the feasibility of erecting a temporary dumping-board at the foot of East Forty-eighth street, East river, for the use of the Department of Street Cleaning during the rebuilding of Pier foot of East Forty-sixth street, East river.

11th. Report on Secretary's Order No. 7526, in reference to the application of J. A. Bostwick, for permission to erect platform at bulkhead adjoining Pier 45, East river. Referred back to the Engineer-in-Chief and J. A. Bostwick requested to call on him to have said plans amended as agreed upon.

12th. Report on Secretary's Order No. 6563, that he had superintended altering and repairing ferry structure at Barclay street, North river.

13th. Report on Secretary's Order No. 7452, that the piles referred to by the Dock Master as being displaced, foot of West Fifty-fourth street, North river, have been removed.

14th. Report on Secretary's Order No. 7313, that he had repaired deck of approach to Pier, new 46, North river.

15th. Report on Secretary's Order No. 7465, that he had directed and superintended the driving of piles for cable boxes on north side of Fourth Avenue Railroad Bridge abutment, Harlem river.

16th. Report on Secretary's Order No. 7493, that he had directed and superintended driving piles in front of bulkhead between Jackson and Corlears streets, East river.

17th. Report on Secretary's Order No. 7313, that he had superintended and directed the erection of a stable on the south side of East Thirty-eighth street, East river.

18th. Report on Secretary's Orders Nos. 3008 and 3665, that he had supervised the erection of platform on piles and filling-in south of One Hundred and Fiftieth street, east side of Harlem river.

19th. Report on Secretary's Order No. 7078, that he had superintended laying plank walks from ferry-house at new-made land foot of Chambers street, North river, to crosswalk on West street.

20th. Report on Secretary's Order No. 5066, that the altering, rebuilding and extension of Pier, old 29, North river, was substantially made in accordance with resolution of the Board.

From Charles Hutchinson, Dock Master—Reporting repairs required to Piers at foot of Twenty-eighth, Thirtieth and Forty-second streets, East river. The action of the President in directing the Engineer-in-Chief to repair was approved.

From J. B. Erwin, Dock Master—Reporting that dredging is required on both sides of Pier, foot of Fifty-fifth street, North river. The action of the President in directing the Engineer-in-Chief to examine and report was approved.

From John J. Ryan, Dock Master—Respecting the dropping of stones into the river at Pier and bulkhead foot of West Seventy-ninth street.

From George A. Dearborn, Dock Master—In reference to the repairs ordered to the short bulkhead north of East Eighty-sixth street, East river, and stating that G. F. & E. C. Swift state that they are not the owners of the said premises. The Engineer-in-Chief directed to repair said bulkhead, if City property.

From John Callan, Dock Master—Reporting that he had stopped filling-in at Fourth avenue and One Hundred and Thirty-third street, Harlem river.
The report of the Engineer-in-Chief on Secretary's Order No. 7529, respecting the application of the West Shore Railroad to lay railroad tracks in the rear of the bulkhead between Thirty-sixth and Thirty-seventh streets, North river, was,
On motion, ordered to be placed on file and the following resolution was adopted:

Resolved, That permission be and hereby is granted to the West Shore Railroad to keep and maintain the railroad tracks that are laid across Twelfth avenue and the bulkhead or wharf property outside of Twelfth avenue, between Thirty-sixth and Thirty-seventh streets, North river, it being expressly agreed and understood that the said railroad tracks are to be and remain thereat only during the pleasure of the Board of Docks, and are to be removed whenever ordered by the said Board; provided the West Shore Railroad shall within five days from date hereof file in this Office an agreement in writing to remove the said railroad tracks whenever ordered to do so by this Department.

The communication from the Engineer-in-Chief reporting the completion of Pier foot of West Thirty-seventh street, North river, under Contract No. 252, was, On motion, ordered to be placed on file and the time for the completion of the work under said contract was extended from the 24th of February to and including March 3, 1888.

The communication from the Counsel to the Corporation respecting the occupation of land under water at the foot of Ninety-fourth street, East river, was, On motion, ordered to be placed on file, and the following resolution was adopted:

Resolved, That the Counsel to the Corporation be and hereby is requested to commence such actions or proceedings against Hencken & Co. as may be necessary and proper to protect and enforce the right, title and interest of the City of New York in and to the premises at or near the foot of East Ninety-fourth street, East river, occupied by the said Hencken & Co., for the recovery and placing the City in possession thereof, and for the recovery of damages for detaining or using or occupying the same.

The auditing committee presented an audit of one bill or claim amounting to \$6,863.22, which was approved and audited, and the Secretary directed to enter in full on the minutes as follows:

Table with columns: Audit No., Amount, and description of bills/claims. Total amount: \$6,863.22.

Respectfully submitted, L. J. N. STARK, JAMES MATTHEWS, Auditing Committee.

On motion, the President was authorized to transmit the said bill, with requisition for the amount, to the Finance Department for payment.

The Auditing Committee presented an audit amounting to \$4,094.05, which was approved and ordered to be spread in full on the minutes as follows:

Table with columns: Audit No., Amount, and description of bills/claims. Total amount: \$4,094.05.

Respectfully submitted, JAMES MATTHEWS, L. J. N. STARK, Auditing Committee.

On motion, the President was authorized to transmit said claim, with requisition for the amount, to the Finance Department for payment.

The Treasurer, Commissioner Matthews, submitted his report of the receipts for the week ending March 7, 1888, amounting to \$32,430.01, which was received and ordered to be spread in full on the minutes, as follows:

Large table with columns: DATE, FROM WHOM, FOR WHAT, AMOUNT, TOTAL, DATE DEPOSITED. Lists various receipts from 1888, totaling \$32,430.01.

Respectfully submitted, JAMES MATTHEWS, Treasurer.

On motion, the Board adjourned. G. KEMBLE, Secretary.

At a special meeting of the Board of Docks, held March 9, 1888. Present—Commissioners Stark and Matthews; absent, Commissioner Marshall. The Board met for the purpose of receiving estimates for removing the existing pier known as Pier 60, at the foot of Rivington street, East river, and for preparing for and building a new wooden pier on the site of said Pier, and for repairing the existing crib-bulkhead thereat, advertised to be opened this day at 12 o'clock M. A representative of the Comptroller was present. Nine estimates were received, as follows:

Table with columns: No., FROM, CLASS No. 1, CLASS No. 2, TOTAL. Lists estimates for repairs to the bulkhead and pier, totaling \$18,800.00.

On motion, the Secretary was directed to transmit to the Comptroller the security deposit received from said bidders and accompanying their estimates.

The following resolution was, On motion, adopted:

Resolved, That the contract opened this day for removing the existing pier known as Pier 60, at the foot of Rivington street, East river, and for preparing for and building a new wooden pier on the site of said pier, and for repairing the existing crib-bulkhead thereat, be and hereby is awarded to Duncan A. Gillies, he being the lowest bidder, upon the approval of the sureties by the Comptroller of the City.

On motion, the Board adjourned.

G. KEMBLE, Secretary.

EXECUTIVE DEPARTMENT.

MAYOR'S OFFICE, NEW YORK, February 10, 1888. I, Abram S. Hewitt, Mayor of the City of New York, pursuant to the provisions of chapter 10 of the Laws of 1888, do hereby designate the Sun, Herald, Times, World, Star, Tribune, Journal, Press, Evening Post, Commercial Advertiser, Graphic, Telegram, Evening Sun, Evening World, Mail and Express, Staats Zeitung, New Yorker Zeitung and Daily News as the newspapers in which the advertisements provided for in said act may be printed. (Signed), ABRAM S. HEWITT, Mayor.

CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS.

CITY OF NEW YORK—CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS, SECRETARY'S OFFICE, ROOM 11, CITY HALL, NEW YORK, June 3, 1887. THOMAS COSTIGAN, Esq., Supervisor City Record:

DEAR SIR—The following amendment to Regulation 16 of the New York City Civil Service Regulations has been made:

If the appointing officer shall notify the Secretary of more than one vacancy at any one time, the Secretary shall certify to the appointing officer for appointment, the names of as many persons as there are vacancies to be filled, with the addition of two names for the first vacancy and one name for every two vacancies in addition to the first.

Yours respectfully, LEE PHILLIPS, Secretary and Executive Officer.

CITY OF NEW YORK—CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS, SECRETARY'S OFFICE, ROOM 11, CITY HALL, NEW YORK, May 31, 1887. THOMAS COSTIGAN, Esq., Supervisor:

DEAR SIR—The following resolution was passed by the Supervisory Board at their meeting, held May 27, 1887:

Resolved, That in view of the inadequate space in the Secretary's office and in order to enable him more readily to discharge the business of the same, the Secretary is authorized to arrange the business of the office so that the same shall be open for personal interviews with applicants and the public during a part of the day only.

Pursuant to the above action, I hereby designate the two hours between 2 and 4 o'clock in afternoon as the time for which the offices shall be open for personal interviews with applicants and the public.

Very respectfully, LEE PHILLIPS, Secretary and Executive Officer.

OFFICIAL DIRECTORY.

STATEMENT OF THE HOURS DURING WHICH all the Public Offices in the City are open for business, and at which each Court regularly opens and adjourns, as well as of the places where such offices are kept and such Courts are held; together with the heads of Departments and Courts.

EXECUTIVE DEPARTMENT. Mayor's Office. No. 6 City Hall, 10 A. M. to 3 P. M. ABRAM S. HEWITT, Mayor; ANTHONY BERRY Secretary and Chief Clerk.

Mayor's Marshal's Office. No. 1 City Hall, 9 A. M. to 4 P. M. THOMAS W. BYRNES, First Marshal; GEORGE W. BROWN, Jr., Second Marshal.

COMMISSIONERS OF ACCOUNTS. Rooms 114 and 115, Stewart Building, 9 A. M. to 4 P. M. WM. PITT SHEARMAN, J. B. ABANSON.

AQUEDUCT COMMISSIONERS. Room 209, Stewart Building, 5th floor, 9 A. M. to 5 P. M. JAMES C. SPENCER, President; JOHN C. SHEEHAN, Secretary; BENJAMIN S. CHURCH, Chief Engineer; J. C. LULLY, Auditor.

BOARD OF ARMORY COMMISSIONERS. THE MAYOR, Chairman; PRESIDENT OF DEPARTMENT OF TAXES AND ASSESSMENTS, Secretary. Address: M. COLEMAN, Staats Zeitung Building, Tryon Row, Office hours, 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

LEGISLATIVE DEPARTMENT. Office of Clerk of Common Council. No. 8 City Hall, 10 A. M. to 4 P. M. GEORGE H. FORSTER, President Board of Aldermen; FRANCIS J. TWOMEY, Clerk Common Council. City Library. No. 12 City Hall, 10 A. M. to 4 P. M. D. N. CARVALHO, City Librarian.

DEPARTMENT OF PUBLIC WORKS. Commissioner's Office. No. 31 Chambers street, 9 A. M. to 4 P. M. JOHN NEWTON, Commissioner; D. LOWBER SMITH, Deputy Commissioner.

Bureau of Chief Engineer. No. 31 Chambers street, 9 A. M. to 4 P. M. GEORGE W. BIRDSALL, Chief Engineer.

Bureau of Water Register. No. 31 Chambers street, 9 A. M. to 4 P. M. JOHN H. CHAMBERS, Register.

Bureau of Street Improvements. No. 31 Chambers street, 9 A. M. to 4 P. M. WM. M. DEAN, Superintendent.

Engineer-in-Charge of Sewers. No. 31 Chambers street, 9 A. M. to 4 P. M. HORACE LOOMIS, Engineer-in-Charge.

Bureau of Repairs and Supplies. No. 31 Chambers street, 9 A. M. to 4 P. M. WILLIAM G. BERGEN, Superintendent.

Bureau of Water Purveyor. No. 31 Chambers street, 9 A. M. to 4 P. M. ALSTON CULVER, Water Purveyor.

Bureau of Lamps and Gas. No. 31 Chambers street, 9 A. M. to 4 P. M. STEPHEN MCCORMICK, Superintendent.

Bureau of Streets. No. 31 Chambers street, 9 A. M. to 4 P. M. GEO. E. BABCOCK, Superintendent.

Bureau of Incumbrances. No. 31 Chambers street, 9 A. M. to 4 P. M. JOHN RICHARDSON, Superintendent.

Keeper of Buildings in City Hall Park. MARTIN J. KEES, City Hall.

FINANCE DEPARTMENT. Comptroller's Office. No. 15 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. THEODORE W. MYERS, Comptroller; RICHARD A. STORRS, Deputy Comptroller.

Auditing Bureau. Nos. 29, 27, 23 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. WILLIAM J. LYON, First Auditor. DAVID E. AUSTEN, Second Auditor.

Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents. Nos. 31, 33, 35, 37, 39 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. ARTEMAS S. CADY, Collector of Assessments and Clerk of Arrears.

Bureau for the Collection of City Revenue and of Markets. Nos. 1 and 3 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. JAMES J. KESLO, Collector of the City Revenue and Superintendent of Markets. GRAHAM MCADAM, Chief Clerk.

Bureau of the City Chamberlain. No. 57 Chambers street and No. 35 Reade street, Stewart Building. GEORGE W. MCLEAN, Receiver of Taxes; ALFRED VREDENBURGH, Deputy Receiver of Taxes.

Bureau of the City Chamberlain. Nos. 25, 27 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. WM. M. IVINS, City Chamberlain.

Office of the City Paymaster. No. 33 Reade street, Stewart Building. JOHN H. TIMMERMAN, City Paymaster.

LAW DEPARTMENT. Office of the Counsel to the Corporation. Staats Zeitung Building, third floor, 9 A. M. to 5 P. M. Saturdays, 9 A. M. to 4 P. M. HENRY K. BERKMAN, Counsel to the Corporation. ANDREW T. CAMPBELL, Chief Clerk.

Office of the Public Administrator. No. 43 Beekman street, 9 A. M. to 4 P. M.

RICHARD J. MORRISON, Public Administrator. Office of the Corporation Attorney. No. 45 Beekman street, 9 A. M. to 4 P. M.

POLICE DEPARTMENT.

Central Office. No. 300 Mulberry street, 9 A. M. to 4 P. M. STEPHEN B. FRENCH, President; WILLIAM H. KIPP, Chief Clerk; JOHN J. O'BRIEN, Chief Bureau of Elections.

DEPARTMENT OF CHARITIES AND CORRECTION.

Central Office. No. 66 Third Avenue, corner Eleventh street, 9 A. M. to 4 P. M. CHARLES E. SIMMONS, President; GEORGE F. BRITTON, Secretary. Purchasing Agent, FREDERICK A. CUSHMAN. Office hours, 9 A. M. to 4 P. M. Closed Saturdays, 12 M.

FIRE DEPARTMENT.

Office hours for all except where otherwise noted from 9 A. M. to 4 P. M. Saturdays, 12 M.

Headquarters.

Nos. 157 and 159 East Sixty-seventh street. HENRY D. PURROY, President; CARL JUSSEN, Secretary.

Bureau of Chief of Department.

CHARLES O. SHAY, Chief of Department. Bureau of Inspector of Combustibles. PETER SERRY, Inspector of Combustibles.

Bureau of Fire Marshal.

GEORGE H. SHELDON, Fire Marshal. Bureau of Inspection of Buildings. ALBERT F. D'ONCH, Superintendent of Buildings.

Attorney to Department.

WM. L. FINDLEY. Fire Alarm Telegraph. J. ELLIOT SMITH, Superintendent. Central Office open at all hours.

Repair Shops.

Nos. 128 and 130 West Third street. JOHN CASTLES, Foreman-in-Charge, 9 A. M. to 5 P. M.

Hospital Stables.

Ninety-ninth street, between Ninth and Tenth avenues. JOSEPH SHEA, Foreman-in-Charge. Open at all hours.

HEALTH DEPARTMENT.

No. 301 Mott street, 9 A. M. to 4 P. M. JAMES C. BAYLES, President; EMMONS CLARK, Secretary.

DEPARTMENT OF PUBLIC PARKS.

Emigrant Industrial Savings Bank Building, Nos. 49 and 51 Chambers street, 9 A. M. to 4 P. M. M. C. D. BORDEN, President; CHARLES DE F. BURNS, Secretary.

Civil and Topographical Office.

Arsenal, Sixty-fourth street and Fifth avenue, 9 A. M. to 5 P. M.

Office of Superintendent of 23d and 24th Wards.

One Hundred and Forty-sixth street and Third avenue, 9 A. M. to 5 P. M.

DEPARTMENT OF DOCKS.

Battery, Pier A, North River, 9 A. M. to 4 P. M. L. J. N. STARK, President; G. KEMBLE, Secretary. Office hours from 9 A. M. to 4 P. M. daily, except Saturdays; on Saturdays as follows: from October 1 to June 1, from 9 A. M. to 3 P. M.; from June 1 to September 30, from 9 A. M. to 12 M.

DEPARTMENT OF TAXES AND ASSESSMENTS.

Staats Zeitung Building, Tryon Row, 9 A. M. to 4 P. M. Saturdays, 12 M. MICHAEL COLEMAN, President; FLOYD T. SMITH, Secretary.

Office Bureau Collection of Arrears of Personal Taxes.

Brown-stone Building, City Hall Park, 9 A. M. to 4 P. M. CHARLES S. BEARDSLEY, Attorney; WILLIAM COMBERFORD, Clerk.

DEPARTMENT OF STREET CLEANING.

49 and 51 Chambers street. Office hours, 9 A. M. to 4 P. M. JAMES S. COLEMAN, Commissioner; JACOB SEABOLD, Deputy Commissioner; R. W. HORNES, Chief Clerk.

CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS.

Cooper Union. EVERETT P. WHEELER, Chairman of the Supervisory Board; LEE PHILLIPS, Secretary and Executive Officer.

BOARD OF ESTIMATE AND APPORTIONMENT.

Office of Clerk, Staats Zeitung Building Room 5. The Mayor, Chairman; CHARLES V. ADEE, Clerk.

REGISTER'S OFFICE.

East side City Hall Park, 9 A. M. to 4 P. M. JAMES J. SLEVIN, Register; JAMES J. MARTIN, Deputy Register.

COMMISSIONER OF JURORS.

Room 127, Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M. CHARLES REILY, Commissioner; JAMES E. CONNER, Deputy Commissioner.

COUNTY CLERK'S OFFICE.

Nos. 7 and 8 New County Court-house, 9 A. M. to 4 P. M. JAMES A. FLACK, County Clerk; THOMAS F. GILROY, Deputy County Clerk.

DISTRICT ATTORNEY'S OFFICE.

Second floor, Brown-stone Building, City Hall Park, 9 A. M. to 4 P. M. JOHN E. FELLOWS, District Attorney; JAMES McCABE, Chief Clerk.

THE CITY RECORD OFFICE.

And Bureau of Printing, Stationery, and Blank Books. No. 2 City Hall, 9 A. M. to 5 P. M., except Saturdays, on which days 9 A. M. to 3 P. M. THOMAS COSTIGAN, Supervisor; R. P. H. ABELL, Book-keeper.

BOARD OF ASSESSORS.

Office City Hall, Room No. 11 1/2, 9 A. M. to 4 P. M. EDWARD GILON, Chairman; WM. H. JASPER, Secretary.

BOARD OF EXCISE.

No. 44 Bond street, 9 A. M. to 4 P. M. CHARLES H. WOODMAN, President; DAVID S. WHITE, Secretary and Chief Clerk.

SHERIFF'S OFFICE.

Nos. 3 and 4 New County Court-house, 9 A. M. to 4 P. M. HUGH J. GRANT, Sheriff; JOHN B. SIXTON, Under Sheriff; BERNARD F. MARTIN, Order Arrest Clerk.

CORONERS' OFFICE.

Nos. 13 and 13 Chatham street, 8 A. M. to 5 P. M. Sundays and holidays, 8 A. to 12.30 P. M. MICHAEL J. B. MESSEMER, Ferdinand Levy, Ferdinand Eidman, John R. Nugent, Coroners; JOHN T. TOAL, Clerk of the Board of Coroners.

SUPREME COURT.

Second floor, New County Court-house, opens at 10.30 A. M. CHARLES H. VAN BRUNT, Presiding Justice; JAMES A. FLACK, Clerk; THOMAS F. GILROY, Deputy County Clerk.

General Term, Room No. 9, WILLIAM LAMB, Jr., Clerk, Special Term, Part I, Room No. 10, HUGH DONNELLY, Clerk.

Special Term, Part II, Room No. 18, WILLIAM J. HILL, Clerk. Chambers, Room No. 11, WALTER BRADY, Clerk.

Circuit, Part I, Room No. 12, SAMUEL BARSKY, Clerk, Circuit, Part II, Room No. 14, JOHN B. MCGOLDRICK, Clerk.

Circuit, Part III, Room No. 13, GEORGE F. LYON, Clerk. Circuit, Part IV, Room No. 15, J. LEWIS LYON, Clerk. Judges' Private Chambers, Rooms Nos. 19 and 20, EDWARD J. KNIGHT, Librarian.

SUPERIOR COURT.

Third floor, New County Court-house, 11 A. M. General Term, Room No. 35. Special Term, Room No. 33. Chambers, Room No. 33, 10 A. M. Part I, Room No. 34. Part II, Room No. 35.

Part III, Room No. 36. Judges' Private Chambers, Room No. 39. Naturalization Bureau, Room No. 32. Clerk's Office, Room No. 31, 9 A. M. to 4 P. M. CLARENCE STEWICK, Chief Judge; THOMAS BOESE, Chief Clerk.

COURT OF COMMON PLEAS.

Third floor, New County Court-house, 11 A. M. Assignment Bureau, Room No. 23, 9 A. M. to 4 P. M. General Term, Room No. 24, 11 o'clock A. M. to adjournment. Special Term, Room No. 21, 11 o'clock A. M. to adjournment.

Chambers, Room No. 21, 10.30 o'clock A. M. to adjournment. Part I, Room No. 25, 11 o'clock A. M. to adjournment. Part II, Room No. 26, 11 o'clock A. M. to adjournment.

Part III, Room No. 27, 11 o'clock A. M. to adjournment. Naturalization Bureau, Room No. 23, 9 A. M. to 4 P. M. RICHARD L. LARREMORE, Chief Justice; NATHANIEL JARVIS, Jr., Chief Clerk.

COURT OF GENERAL SESSIONS.

No. 32 Chambers street. Parts I and II. Court opens at 11 o'clock A. M. FREDERICK SMYTH, Recorder; HENRY A. GILDER-SLEVEE and RUPUS B. CRANDALL, Judges of the said Court. Terms, first Monday each month. JOHN SPARKS, Clerk. Office, Room No. 11 10 A. M. till 4 P. M.

CITY COURT.

City Hall. General Term, Room No. 20. Special Term, Part I, Room No. 20. Part II, Room No. 19. Part III, Room No. 15.

Special Term, Chambers, Room No. 21, 10 A. M. to 4 P. M. Clerk's Office, Room No. 10, City Hall, 9 A. M. to 4 P. M. DAVID McADAM, Chief Justice; MICHAEL T. DALY, Clerk.

OYER AND TERMINER COURT.

New County Court-house, second floor, southeast corner. Stable on the ground opens at 10.50 o'clock A. M. Clerk's Office, Brown-stone Building, City Hall Park, second floor, northwest corner, Room No. 11, 10 A. M. till 4 P. M.

COURT OF SPECIAL SESSIONS.

At Tombs, corner Franklin and Centre streets, daily at 10.30 A. M., excepting Saturday. Clerk's Office, Tombs.

POLICE DEPARTMENT.

POLICE DEPARTMENT OF THE CITY OF NEW YORK, No. 300 MULBERRY STREET.

TO CONTRACTORS.

PROPOSALS FOR ESTIMATES.

SEALED ESTIMATES FOR BUILDING A Stable on the ground and premises, situated in the City of New York, on the west side of Bathgate avenue, will be received at the Central Office of the Department of Police in the City of New York, until ten o'clock A. M. of Tuesday, the third day of April, 1888.

The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed "Estimate for Building a Stable," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the estimates received will be publicly opened by the head of said Department.

For particulars of the nature and extent of the work to be done, reference must be made to the plans and specifications on file in the office of the Chief Clerk of the said Department.

Bidders will state in writing, and also in figures, a price for the work complete. The price is to cover the furnishing of all the materials and labor and the performance of all the work called for by the specifications, plans, drawings and form of agreement.

No estimate will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The entire work is to be completed within four months from the date of the contract.

The person or persons to whom the contract may be awarded will be required to give security, for the performance of the contract in the manner prescribed by law, in the sum of Five thousand Dollars.

Each estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; also that it is made without

any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is required that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residences, to the effect that if the contract be awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting. The amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract and hereinafter mentioned, and that he is not indebted to the Corporation, and over and above his liabilities, as bail, surety and otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

Should the contractor, after the contract has been awarded, neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract, or if they offer the proper security, he or they shall be considered as having abandoned it, and as in default to the Corporation; and the contract will be re-advertised and relet, as provided by law.

No estimate will be received or considered unless accompanied by either a certified check upon one of the National or State Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box; and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Plans may be examined and specifications and blank estimates, upon application to the undersigned, at his office in the Central Department.

By order of the Board. WILLIAM H. KIPP, Chief Clerk.

NEW YORK, March 20, 1888. POLICE DEPARTMENT—CITY OF NEW YORK, OFFICE OF THE PROPERTY CLERK (Room No. 9), No. 300 MULBERRY STREET, NEW YORK, 1887.

OWNERS WANTED BY THE PROPERTY CLERK of the Police Department of the City of New York, No. 300 Mulberry street, Room No. 9, for the following property, to wit: without collation, iron, iron, lead, male and female clothing, boots, shoes, wire, blankets, diamonds, canned goods, liquors, etc., and small amount money taken from prisoners and found by patrolman JOHN F. HARRIOT, Property Clerk.

THE COLLEGE OF THE CITY OF NEW YORK.

A STATED MEETING OF THE BOARD OF Trustees of the City of New York will be held at the Hall of the Board of Education, No. 146 Grand street, on Tuesday, March 20, 1888, at 4 o'clock P. M.

J. EDWARD SIMMONS, Chairman. ARTHUR McMULLAN, Secretary. Dated New York, March 12, 1888.

DEPARTMENT OF TAXES AND ASSESSMENTS.

DEPARTMENT OF TAXES AND ASSESSMENTS, STAATS ZEITUNG BUILDING, NEW YORK.

IN COMPLIANCE WITH SECTION 817 OF THE City Consolidation Act of 1884, it is hereby advertised that the books of "The Annual Record of the Assessed Valuations of Real and Personal Estate" of the City and County of New York, for the year 1888, will be open for examination and correction from the second Monday of January, 1888, until the first day of May 1888.

All persons believing themselves aggrieved must make application to the Commissioners of Taxes and Assessments, at this office, during the period said books are open, in order to obtain the relief provided by law.

Applications for correction of assessed valuations on personal estate must be made by the persons assessed, to said Commissioners, between the hours of 10 A. M. and 2 P. M. at this office, during the same period.

MICHAEL COLEMAN, EDWARD C. DONNELLY, THOMAS L. FEITNER, Commissioners of Taxes and Assessments.

FIRE DEPARTMENT.

HEADQUARTERS FIRE DEPARTMENT, 157 AND 159 EAST SIXTY-SEVENTH STREET, NEW YORK, MARCH 15, 1888.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING TEN thousand (10,000) feet of 2 1/2-inch balanced woven cotton netting, with standard couplings attached, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10 o'clock A. M., Wednesday, March 28, 1888, at which time and place they will be publicly opened by the head of said Department and read.

Special attention is directed to the text of the hose by the Fire Department and the guarantee of the hose by the contractor, required by the specifications.

No estimate will be received or considered after the hour named.

For information as to the description of the hose, bidders are referred to the specifications, which form part of these proposals.

The form of the agreement, with specifications, and showing the manner of payment for the work, may be seen at the office of the Board of Commissioners.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired, are fixed and liquidated at fifteen (15) dollars per day.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope, to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the work to which it relates.

The Fire Department reserves the right to decline any and all bids or estimates if deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or estimate shall contain and state the name

and forms of proposals may be obtained at the office of the Department.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

The hose is to be delivered at the Repair Shops of the Fire Department (Nos. 130 and 132 West Third street) on or before the thirtieth (30th) day after the execution of the contract.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired, are, by a clause in the contract, fixed and liquidated at twenty (20) dollars per day.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope, to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the supply to which it relates.

The Fire Department reserves the right to decline any and all bids or estimates if deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is required that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, upon its being so awarded, become bound as sureties for its faithful performance in the sum of five thousand (5,000) dollars; and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, and stated in the proposals, over and above all his debts of every nature and over and above his liabilities as bail, surety or otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered to be approved by the Comptroller of the City of New York before the award is made and prior to the signing of the contract.

No estimate will be considered unless accompanied by either a certified check upon one of the National or State Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of two hundred and fifty dollars (\$250). Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by him and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the contractor, after the contract has been awarded, neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract, or if they offer the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be re-advertised and relet as provided by law.

Plans may be examined and specifications and blank estimates, upon application to the undersigned, at his office in the Central Department.

By order of the Board. WILLIAM H. KIPP, Chief Clerk.

NEW YORK, March 20, 1888. POLICE DEPARTMENT—CITY OF NEW YORK, OFFICE OF THE PROPERTY CLERK (Room No. 9), No. 300 MULBERRY STREET, NEW YORK, 1887.

OWNERS WANTED BY THE PROPERTY CLERK of the Police Department of the City of New York, No. 300 Mulberry street, Room No. 9, for the following property, to wit: without collation, iron, iron, lead, male and female clothing, boots, shoes, wire, blankets, diamonds, canned goods, liquors, etc., and small amount money taken from prisoners and found by patrolman JOHN F. HARRIOT, Property Clerk.

A STATED MEETING OF THE BOARD OF Trustees of the City of New York will be held at the Hall of the Board of Education, No. 146 Grand street, on Tuesday, March 20, 1888, at 4 o'clock P. M.

J. EDWARD SIMMONS, Chairman. ARTHUR McMULLAN, Secretary. Dated New York, March 12, 1888.

DEPARTMENT OF TAXES AND ASSESSMENTS.

DEPARTMENT OF TAXES AND ASSESSMENTS, STAATS ZEITUNG BUILDING, NEW YORK.

IN COMPLIANCE WITH SECTION 817 OF THE City Consolidation Act of 1884, it is hereby advertised that the books of "The Annual Record of the Assessed Valuations of Real and Personal Estate" of the City and County of New York, for the year 1888, will be open for examination and correction from the second Monday of January, 1888, until the first day of May 1888.

All persons believing themselves aggrieved must make application to the Commissioners of Taxes and Assessments, at this office, during the period said books are open, in order to obtain the relief provided by law.

Applications for correction of assessed valuations on personal estate must be made by the persons assessed, to said Commissioners, between the hours of 10 A. M. and 2 P. M. at this office, during the same period.

MICHAEL COLEMAN, EDWARD C. DONNELLY, THOMAS L. FEITNER, Commissioners of Taxes and Assessments.

FIRE DEPARTMENT.

HEADQUARTERS FIRE DEPARTMENT, 157 AND 159 EAST SIXTY-SEVENTH STREET, NEW YORK, MARCH 15, 1888.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING TEN thousand (10,000) feet of 2 1/2-inch balanced woven cotton netting, with standard couplings attached, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10 o'clock A. M., Wednesday, March 28, 1888, at which time and place they will be publicly opened by the head of said Department and read.

Special attention is directed to the text of the hose by the Fire Department and the guarantee of the hose by the contractor, required by the specifications.

No estimate will be received or considered after the hour named.

For information as to the description of the hose, bidders are referred to the specifications, which form part of these proposals.

The form of the agreement, with specifications, and showing the manner of payment for the work, may be seen at the office of the Board of Commissioners.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired, are fixed and liquidated at fifteen (15) dollars per day.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope, to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the work to which it relates.

and Kingsbridge road, in Road or Public Drive and Eleventh avenue, east side between One Hundred and Fifty-sixth and One Hundred and Fifty-seventh streets, and in One Hundred and Fifty-sixth street, between Tenth avenue and Road or Public Drive.

The limits embraced by such assessment include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Blocks bounded by One Hundred and Fifty-fifth and One Hundred and Fifty-sixth streets, Avenue St. Nicholas and Hudson river.

All persons whose interests are affected by the above-named assessments, and who are opposed to the same, or either of them, are requested to present their objections in writing to the Chairman of the Board of Assessors, at their office, No. 11 1/2 City Hall, within thirty days from the date of this notice.

The above-described lists will be transmitted, as provided by law, to the Board of Revision and Correction of Assessments for confirmation, on the 10th day of April, 1888.

EDWARD GILON, Chairman, PATRICK M. HAVERLY, CHAS. E. WENDT, EDWARD CAHILL, Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS, No. 11 1/2 City Hall, New York, March 15, 1888.

PUBLIC NOTICE IS HEREBY GIVEN TO THE owner or owners, occupant or occupants of all houses and lots, improved or unimproved lands affected thereby, that the following assessments have been completed and are lodged in the office of the Board of Assessors, for examination by all persons interested in—

List 2551, No. 1. Sewer in Irving place, between Fifteenth and Sixteenth streets.

List 2552, No. 2. Sewers in Lexington avenue, between Eighty-ninth and Ninety-first streets, and between Ninety-third and Ninety-fourth streets.

List 2553, No. 3. Paving with trap-block pavement Sixty-eighth street, from Tenth to Eleventh avenue.

List 2554, No. 4. Paving with granite-block pavement and curbing One Hundred and Twenty-ninth street, from Eighth to St. Nicholas avenue.

List 2555, No. 5. Paving with trap-block pavement Ninety-fifth street, from Second to Third avenue.

List 2556, No. 6. Sewer in Attorney street, between Broome and Delancey streets.

List 2557, No. 7. Sewers in Avenue B, between Fifteenth and Sixteenth streets, and between Seventeenth and Eighteenth streets.

List 2558, No. 8. Regulating, grading, setting curbs-stones and flagging Claremont avenue, from One Hundred and Sixteenth to One Hundred and Twenty-second street.

List 2559, No. 9. Regulating, grading, setting curbs-stones and flagging One Hundred and Twenty-first street, from Seventh avenue to Avenue St. Nicholas.

List 2560, No. 10. Regulating, grading, setting curbs-stones and flagging Ninety-seventh street, from Eighth to Ninth avenue.

List 2561, No. 11. Regulating, setting curbs-stones and flagging Ninetieth street, from Ninth to Tenth avenue.

List 2562, No. 12. Regulating, setting curbs-stones and flagging One Hundred and Third street, from Eighth to Ninth avenue.

The limits embraced by such assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Irving place, between Fifteenth and Sixteenth streets.

No. 2. Both sides of Lexington avenue, between Eighty-ninth and Ninetieth streets, north side of Eighty-ninth street, between Lexington and Fourth avenues; east side of Fourth avenue, between Eighty-ninth and Ninetieth streets; both sides of Lexington avenue, between Ninetieth and Ninety-first streets, and both sides of Lexington avenue, between Ninety-third and Ninety-fourth streets.

No. 3. Both sides of Sixty-eighth street, between Tenth and Eleventh avenues, and to the extent of half the block at the intersecting avenues.

No. 4. Both sides of One Hundred and Twenty-ninth street, between Eighth and St. Nicholas avenues, and to the extent of half the block at the intersecting avenues.

No. 5. Both sides of Ninety-fifth street, between Second and Third avenues, and to the extent of half the block at the intersecting avenues.

No. 6. Both sides of Attorney street, between Broome and Delancey streets.

No. 7. Both sides of Avenue B, between Fifteenth and Sixteenth streets, and between Seventeenth and Eighteenth streets.

No. 8. Both sides of Claremont avenue, between One Hundred and Sixteenth and One Hundred and Twenty-second streets, and to the extent of half the block at the intersecting streets.

No. 9. Both sides of One Hundred and Twenty-first street, between Seventh avenue and Avenue St. Nicholas, and to the extent of half the block at the intersecting avenues.

No. 10. Both sides of Ninety-seventh street, between Eighth and Ninth avenues, and to the extent of half the block at the intersecting avenues.

No. 11. Both sides of Ninetieth street, between Ninth and Tenth avenues, and to the extent of half the block at the intersecting avenues.

No. 12. Both sides of One Hundred and Third street, between Eighth and Ninth avenues, and to the extent of half the block at the intersecting avenues.

All persons whose interests are affected by the above-named assessments, and who are opposed to the same, or either of them, are requested to present their objections in writing to the Chairman of the Board of Assessors, at their office, No. 11 1/2 City Hall, within thirty days from the date of this notice.

The above-described lists will be transmitted, as provided by law, to the Board of Revision and Correction of Assessments for confirmation, on the 5th day of April, 1888.

EDWARD GILON, Chairman, PATRICK M. HAVERLY, CHAS. E. WENDT, EDWARD CAHILL, Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS, No. 11 1/2 City Hall, New York, March 8, 1888.

DEPARTMENT OF DOCKS.

(Work of construction under new plan.)

DEPARTMENT OF DOCKS, PIER "A," NORTH RIVER.

TO CONTRACTORS.

(No. 272.)

PROPOSALS FOR ESTIMATES FOR REMOVING ALL THAT PART OF THE OLD PIER AT THE FOOT OF WEST FIFTY-FIRST STREET, NORTH RIVER, WHICH LIES WESTERLY OF A LINE 50 FEET WEST OF THE NEW PIER HEAD-LINE, AND PREPARING FOR AND BUILDING A NEW WOODEN PIER AT THE FOOT OF WEST FIFTY-FIRST STREET, NORTH RIVER.

ESTIMATES FOR REMOVING A PART OF THE Pier at the foot of West Fifty-first street, North river, and for building a new Wooden Pier at the foot of West Fifty-first street, North river, will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, on Pier "A," foot of Battery place, North river, in the City of New York, until 12 o'clock M.

WEDNESDAY, MARCH 28, 1888.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed by ordinance, in the sum of Seven Thousand Two Hundred Dollars.

The Engineer's estimate of the nature, quantities and extent of the work, is as follows:

Table with 2 columns: Item description and Quantity/Value. Includes Yellow Pine Timber, Spruce Timber, White Oak Timber, etc.

Total 366,968

NOTE—This yellow pine timber is to be furnished by the Department of Docks to the contractor, free of charge, in the water or on a pier or bulkhead at one or more points on the North river, water-front, south of West Eightieth street, as hereinafter specified, and the contractor is to raft it, care for it and transport it to the site of the new pier at his own expense and risk.

Table with 2 columns: Item description and Quantity/Value. Includes Spruce Timber, White Oak Timber, etc.

Total 113,204

Feet B. M., measured in the work.

work, and that it is in all respects fair and without collusion or fraud; and also, that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, in all respects true, and that no person is interested in the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true, and that no person is interested in the profits thereof. It is requisite that the verification be made and subscribed to by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, each of the persons signatory to the same, will be a holder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts existing on the date of the deposit of his bid, and that he has offered himself as surety in good faith and with the intention to execute the bond required by law. The adequacy of the security offered will be subject to the approval of the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the person making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded, to execute the same, he shall be liable for the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and provide such proper security, as has been heretofore stated to be required, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be re-advertised and relet as provided by law.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

BIDDERS ARE INFORMED THAT NO DEVIATION FROM THE SPECIFICATIONS WILL BE ALLOWED, UNLESS UNDER THE WRITTEN INSTRUCTIONS OF THE COMMISSIONERS OF PUBLIC CHARITIES AND CORRECTION.

The form of the agreement, including specifications, and showing the manner in which the same can be obtained at the office of the Department, where the plans will be on exhibition for the information of bidders.

Dated New York, March 15, 1888.

CHARLES E. SIMMONS, President. HENRY H. PORTER, Commissioner. THOMAS S. BEAMAN, Commissioner. Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION, No. 66 THIRD AVENUE.

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DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION, No. 66 THIRD AVENUE.

amount of work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise; and that he has offered himself as surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, 1880, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of this security shall, in addition to the justification and acknowledgment, be approved by the Comptroller of the City of New York.

No bid estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded, to execute the same, he shall be liable for the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and provide such proper security, as has been heretofore stated to be required, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be re-advertised and relet as provided by law.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

BIDDERS ARE INFORMED THAT NO DEVIATION FROM THE SPECIFICATIONS WILL BE ALLOWED, UNLESS UNDER THE WRITTEN INSTRUCTIONS OF THE COMMISSIONERS OF PUBLIC CHARITIES AND CORRECTION.

The form of the agreement, including specifications, and showing the manner in which the same can be obtained at the office of the Department, where the plans will be on exhibition for the information of bidders.

Dated New York, March 15, 1888.

CHARLES E. SIMMONS, President. HENRY H. PORTER, Commissioner. THOMAS S. BEAMAN, Commissioner. Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION, No. 66 THIRD AVENUE.

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DEPARTMENT OF PUBLIC CHARITIES AND CORRE

Delivery will be required to be made from time to time, and in such quantities as may be directed by the said Commissioners.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect; and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the penal amount of fifty (50) per cent of the ESTIMATED amount of the contract.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; so that if said bid or estimate is accepted, and if any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits or emolument of the contract.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residences, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound by his sureties for its faithful performance; and that if he shall omit or refuse to execute the same, they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded.

The amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affidavit of every one of the persons so signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and that he has his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered to be approved by the Commissioners, or may be referred to a Justice of the Peace, who shall be considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the order of the clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of bonds, shall be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract and give the proper security, he or they shall be considered as having abandoned the contract, and the contract will be re-awarded and let as provided by law.

The quality of the articles, supplies, goods, wares, and merchandise must conform in every respect to the samples of the same submitted to the City of New York. Bidders are cautioned to examine the specifications for particulars of the articles, etc., required, before making their estimates.

Bidders will state the price for each article, by which the bids will be tested, and the amount of their estimate in addition to inserting the same in figures. Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract, from time to time, as the Commissioners may determine.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instruction of the Commissioners of Public Charities and Correction. The form of the agreement, including specifications, and showing the manner of payment, can be obtained at the office of the Department.

Dated New York, March 12, 1888.

CHARLES E. SIMMONS, President.

HENRY H. PORTER, Commissioner.

THOMAS S. BRENNAN, Commissioner.

Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION, No. 66 THIRD AVENUE, NEW YORK, March 7, 1888.

IN ACCORDANCE WITH AN ORDINANCE OF THE Common Council. "In relation to the burial of strangers or unknown persons who may die in any of the public institutions of the City of New York," the Commissioners of Public Charities and Correction report as follows:

At Morgue, Bellevue Hospital, from One Hundred and Fifty-eighth street and Edgecomb avenue—Unknown man, colored, aged 25 years; 5 feet 9 inches high; dark hair and eyes. Had on dark frock coat and pants, blue chinchilla vest, white shirt, red flannel undershirt and drawers, red socks, laced shoes, rubber overshoes.

Unknown man, from Mount Morris Park, aged about 30 years; 5 feet 5 inches high; light brown hair, gray eyes, light brown moustache and imperial. Had on dark ribbed overcoat, gray mixed coat, dark ribbed vest, dark pants, white shirt, white crocheted undershirt, white-bleached muslin shirt, white merino drawers, white socks, garters, high silk opera hat, two white linen handkerchiefs with letters M. B. worked in, gaiters, rubber overshoes, pair of eye-glasses, revolver, coral pin, gold ring, card case, pocket-book; 10 cents found on his person.

Unknown woman from Chambers Street Hospital, aged about 35 years, 5 feet high, dark brown hair, gray eyes. Had on dark waist and dress, brown petticoat, white muslin chemise, white cotton stockings, buttoned shoes, blue striped ticking drawers and imperials.

At Workhouse, Blackwell's Island—Catherine O'Neill, aged 45 years. Committed February 15, 1888. At Homeopathic Hospital, Ward's Island—Margaret Nugent, aged 42 years; 5 feet 6 inches high; brown hair and eyes. Had on when admitted black alpaca dress, gray shawl, buttoned gaiters, black crape bonnet.

Michael Cronin, aged 50 years; gray hair; brown eyes; 5 feet 7 inches high. Had on when admitted black coat, pants and vest, gaiters.

Wenzel Kunderer, aged 58 years; 5 feet 5 inches high; gray hair; brown eyes. Had on when admitted black overcoat, black diagonal vest, black pants, brown derby hat.

Kate Lyons, aged 39 years; 5 feet 4 inches high; blue eyes; brown hair. Had on when admitted black merino skirt, blue spotted waist, buttoned gaiters, black straw bonnet.

Nothing known of their friends or relatives.

By order, G. F. BRITTON, Secretary.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION, No. 66 THIRD AVENUE, NEW YORK, March 12, 1888.

IN ACCORDANCE WITH AN ORDINANCE OF THE Common Council. "In relation to the burial of strangers or unknown persons who may die in any of the public institutions of the City of New York," the Commissioners of Public Charities and Correction report as follows:

At Morgue, Bellevue Hospital, from No. 29 Allen street—Unknown man, aged about 45 years; 5 feet 8 inches high; sandy hair and moustache; blue eyes. Had on light coat and vest, dark brown pants, gray socks, gaiters.

Unknown man, from Second avenue and Twenty-fifth street; aged about 30 years; 5 feet 6 inches high; dark hair and moustache; blue eyes. Had on brown plaid coat, brown diagonal coat, pepper and salt mixed vest and pants, calico shirt, white knit undershirt, white canvas flannel drawers, brown socks, gaiters, black f. i. hat.

Unknown man, from Elevated Railroad station, Hanover Square, aged about 25 years; 5 feet 7 inches high; sandy hair, brown eyes. Had on overcoat, blue and black blue coat and vest, dark pants, white shirt, white muslin drawers, brown socks, gaiters.

At Workhouse, Blackwell's Island—John Mullen, aged 57 years. Committed February 21, 1888.

At Lunatic Asylum, Blackwell's Island—Catherine Flynn, aged 40 years; 5 feet high; brown hair, gray eyes. Transferred from Workhouse, February 22, 1888.

At Homeopathic Hospital, Ward's Island—Lizzie Meyers, aged 28 years; 5 feet 2 inches high; blue eyes, light hair. Had on when admitted black fur-trimmed saque, brown waist and skirt, buttoned shoes, black felt hat.

Mary Horner, aged 40 years; 5 feet high; brown eyes, auburn hair. Had on when admitted black cloak, dark waist, blue skirt, laced shoes, black straw bonnet.

Nothing known of their friends or relatives.

By order, G. F. BRITTON, Secretary.

SUPREME COURT.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of EAST ONE HUNDRED AND FORTY-SIXTH STREET, (although not yet named by proper authority) extending from Railroad avenue, East, to St. Ann's avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, the Mayor, Aldermen and Commonalty of the City of New York hereby give notice that the Counsel to the Corporation will apply to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Chambers thereof, in the County Court-house, in the City of New York, on the 29th day of March, 1888, at the opening of the court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of a Commissioner of Estimate and Assessment in the above-entitled matter. The nature and extent of the improvement hereby intended is the acquisition of title, in the name and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to all the lands and premises, with the buildings thereon and the appurtenances thereto belonging, required for the opening of a certain street or avenue known as East One Hundred and Forty-sixth street, extending from Jerome avenue to Vanderbilt avenue, in the Twenty-fourth Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks, being the following-described lots, pieces or parcels of land, viz.:

- 1st. Thence northwesterly on a line forming an angle of 90° 18' 45" with the northern prolongation of Webster avenue, for 75 feet.
2d. Thence northerly, curving to the right, on the arc of a circle, tangent to the preceding course, whose radius is 75 feet, for 128 1/2 feet.
3d. Thence northerly, on a line tangent to the preceding course, for 60 feet.
4th. Thence northerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 128 1/2 feet, for 128 1/2 feet.
5th. Thence northerly, on a line forming an angle of 85° 32' 47" to the west, with the radius drawn through the western extremity of the preceding course, for 60 1/2 feet.
6th. Thence northwesterly, deflecting to the left 0° 27' 07", for 71 1/2 feet.
7th. Thence westerly, deflecting to the left 2° 51' 20", for 129 1/2 feet to the eastern line of Jerome avenue.
8th. Thence southerly along the eastern line of Jerome avenue, for 60 feet.
9th. Thence easterly, deflecting 93° 33' 30" to the left, for 128 1/2 feet.
10th. Thence southeasterly, deflecting 2° 51' 20" to the right, for 71 1/2 feet.
11th. Thence easterly, deflecting 0° 11' 45" to the right, for 60 1/2 feet.
12th. Thence southerly, curving to the right, on the arc of a circle, whose radius drawn through the eastern extremity of the preceding course forms an angle of 85° 47' 53" with said course, and is 68 1/2 feet for 100 1/2 feet.
13th. Thence southeasterly, on a line tangent to the preceding course, for 104 1/2 feet.
14th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
15th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

Beginning at the corner formed by the intersection of the easterly line of Jackson street with the southerly line of Cherry street, running thence easterly and along the southerly side of Cherry street 575 feet to the corner formed by the intersection of said side of Cherry street with the westerly side of Corlears street; thence southerly along said westerly side of Corlears street, crossing Water, Front, and a portion of South streets, 630 feet, more or less, to a line parallel with and distant 100 feet northerly from the bulkhead or water front established by the Board of Park Commissioners of the City of New York, under and pursuant to the provisions of section 6, chapter 574 of the Laws of 1871; thence westerly and along said line, so distant, 100 feet northerly from said water front 575 feet to a point thereon formed by the intersection therewith of the easterly side of Jackson street, extend 1 in a southerly direction to said point of intersection; thence northerly and along said easterly side of Jackson street, crossing a portion of South, Front and Water streets, 630 feet, more or less, to the corner formed by the intersection therewith of the said southerly side of Cherry street at the point or place of beginning.

Beginning at the corner formed by the intersection of the easterly line of Jackson street with the southerly line of Cherry street, running thence easterly and along the southerly side of Cherry street 575 feet to the corner formed by the intersection of said side of Cherry street with the westerly side of Corlears street; thence southerly along said westerly side of Corlears street, crossing Water, Front, and a portion of South streets, 630 feet, more or less, to a line parallel with and distant 100 feet northerly from the bulkhead or water front established by the Board of Park Commissioners of the City of New York, under and pursuant to the provisions of section 6, chapter 574 of the Laws of 1871; thence westerly and along said line, so distant, 100 feet northerly from said water front 575 feet to a point thereon formed by the intersection therewith of the easterly side of Jackson street, extend 1 in a southerly direction to said point of intersection; thence northerly and along said easterly side of Jackson street, crossing a portion of South, Front and Water streets, 630 feet, more or less, to the corner formed by the intersection therewith of the said southerly side of Cherry street at the point or place of beginning.

Beginning at the corner formed by the intersection of the easterly line of Jackson street with the southerly line of Cherry street, running thence easterly and along the southerly side of Cherry street 575 feet to the corner formed by the intersection of said side of Cherry street with the westerly side of Corlears street; thence southerly along said westerly side of Corlears street, crossing Water, Front, and a portion of South streets, 630 feet, more or less, to a line parallel with and distant 100 feet northerly from the bulkhead or water front established by the Board of Park Commissioners of the City of New York, under and pursuant to the provisions of section 6, chapter 574 of the Laws of 1871; thence westerly and along said line, so distant, 100 feet northerly from said water front 575 feet to a point thereon formed by the intersection therewith of the easterly side of Jackson street, extend 1 in a southerly direction to said point of intersection; thence northerly and along said easterly side of Jackson street, crossing a portion of South, Front and Water streets, 630 feet, more or less, to the corner formed by the intersection therewith of the said southerly side of Cherry street at the point or place of beginning.

Beginning at the corner formed by the intersection of the easterly line of Jackson street with the southerly line of Cherry street, running thence easterly and along the southerly side of Cherry street 575 feet to the corner formed by the intersection of said side of Cherry street with the westerly side of Corlears street; thence southerly along said westerly side of Corlears street, crossing Water, Front, and a portion of South streets, 630 feet, more or less, to a line parallel with and distant 100 feet northerly from the bulkhead or water front established by the Board of Park Commissioners of the City of New York, under and pursuant to the provisions of section 6, chapter 574 of the Laws of 1871; thence westerly and along said line, so distant, 100 feet northerly from said water front 575 feet to a point thereon formed by the intersection therewith of the easterly side of Jackson street, extend 1 in a southerly direction to said point of intersection; thence northerly and along said easterly side of Jackson street, crossing a portion of South, Front and Water streets, 630 feet, more or less, to the corner formed by the intersection therewith of the said southerly side of Cherry street at the point or place of beginning.

Dated, New York, February 25, 1888.

HENRY R. BEEKMAN, Counsel to the Corporation, No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of COURTLAND AVENUE (although not yet named by proper authority) extending from the southerly side of East One Hundred and Forty-eighth street to the northerly side of East One Hundred and Sixty-third street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Chambers thereof, in the County Court-house, in the City of New York, on the 22d day of March, 1888, at the opening of court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of a Commissioner of Estimate and Assessment in the above-entitled matter. The nature and extent of the improvement hereby intended is the acquisition of title, in the name and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to all the lands and premises, with the buildings thereon and the appurtenances thereto belonging, required for the opening of a certain street or avenue, known as One Hundred and Eleventh street, from Eighth avenue to Manhattan avenue, in the Twelfth Ward of the City of New York, being the following-described lots, pieces or parcels of land, viz.:

Beginning at a point in the westerly line of Eighth avenue, distant 221 feet 10 inches northerly from the northerly line of One Hundred and Tenth street; thence westerly and parallel with said street 370 feet, to the easterly line of Manhattan avenue; thence northerly along said line 60 feet; thence westerly 370 feet to the easterly line of Eighth avenue; thence southerly along said line 60 feet to the point or place of beginning.

Said street to be 60 feet wide between the lines of Eighth and Manhattan avenues.

Dated, New York, February 15, 1888.

HENRY R. BEEKMAN, Counsel to the Corporation, No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of EAST ONE HUNDRED AND EIGHTY-FOURTH STREET (although not yet named by proper authority) extending from Jerome avenue to Vanderbilt avenue West, in the Twenty-fourth Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Chambers thereof, in the County Court-house, in the City of New York, on Thursday, the 29th day of March, 1888, at the opening of the court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate and Assessment in the above-entitled matter. The nature and extent of the improvement hereby intended is the acquisition of title, in the name and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to all the lands and premises, with the buildings thereon and the appurtenances thereto belonging, required for the opening of a certain street or avenue known as East One Hundred and Eighty-fourth street, extending from Jerome avenue to Vanderbilt avenue, in the Twenty-fourth Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks, being the following-described lots, pieces or parcels of land, viz.:

- 1. Beginning at the intersection of the western line of Webster avenue with the northern line of East One Hundred and Eighty-fourth street, as designated on the proceedings for opening Webster avenue, from East One Hundred and Sixty-third street to East One Hundred and Eighty-fourth street, confirmed November 24, 1882.
1st. Thence northwesterly on a line forming an angle of 90° 18' 45" with the northern prolongation of Webster avenue, for 75 feet.
2d. Thence northerly, curving to the right, on the arc of a circle, tangent to the preceding course, whose radius is 75 feet, for 128 1/2 feet.
3d. Thence northerly, on a line tangent to the preceding course, for 60 feet.
4th. Thence northerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 128 1/2 feet, for 128 1/2 feet.
5th. Thence northerly, on a line forming an angle of 85° 32' 47" to the west, with the radius drawn through the western extremity of the preceding course, for 60 1/2 feet.
6th. Thence northwesterly, deflecting to the left 0° 27' 07", for 71 1/2 feet.
7th. Thence westerly, deflecting to the left 2° 51' 20", for 129 1/2 feet to the eastern line of Jerome avenue.
8th. Thence southerly along the eastern line of Jerome avenue, for 60 feet.
9th. Thence easterly, deflecting 93° 33' 30" to the left, for 128 1/2 feet.
10th. Thence southeasterly, deflecting 2° 51' 20" to the right, for 71 1/2 feet.
11th. Thence easterly, deflecting 0° 11' 45" to the right, for 60 1/2 feet.
12th. Thence southerly, curving to the right, on the arc of a circle, whose radius drawn through the eastern extremity of the preceding course forms an angle of 85° 47' 53" with said course, and is 68 1/2 feet for 100 1/2 feet.
13th. Thence southeasterly, on a line tangent to the preceding course, for 104 1/2 feet.
14th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
15th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

Beginning at the intersection of the western line of Webster avenue with the northern line of East One Hundred and Eighty-fourth street, as designated on the proceedings for opening Webster avenue, from East One Hundred and Sixty-third street to East One Hundred and Eighty-fourth street, confirmed November 24, 1882.
1st. Thence northwesterly on a line forming an angle of 90° 18' 45" with the northern prolongation of Webster avenue, for 75 feet.
2d. Thence northerly, curving to the right, on the arc of a circle, whose radius drawn through the eastern extremity of the preceding course forms an angle of 85° 47' 53" with said course, and is 68 1/2 feet for 100 1/2 feet.
3d. Thence southeasterly, on a line tangent to the preceding course, for 104 1/2 feet.
4th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
5th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

Beginning at the intersection of the western line of Webster avenue with the northern line of East One Hundred and Eighty-fourth street, as designated on the proceedings for opening Webster avenue, from East One Hundred and Sixty-third street to East One Hundred and Eighty-fourth street, confirmed November 24, 1882.
1st. Thence northwesterly on a line forming an angle of 90° 18' 45" with the northern prolongation of Webster avenue, for 75 feet.
2d. Thence northerly, curving to the right, on the arc of a circle, whose radius drawn through the eastern extremity of the preceding course forms an angle of 85° 47' 53" with said course, and is 68 1/2 feet for 100 1/2 feet.
3d. Thence southeasterly, on a line tangent to the preceding course, for 104 1/2 feet.
4th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
5th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

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4th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
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2d. Thence northerly, curving to the right, on the arc of a circle, whose radius drawn through the eastern extremity of the preceding course forms an angle of 85° 47' 53" with said course, and is 68 1/2 feet for 100 1/2 feet.
3d. Thence southeasterly, on a line tangent to the preceding course, for 104 1/2 feet.
4th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
5th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

Beginning at the intersection of the western line of Webster avenue with the northern line of East One Hundred and Eighty-fourth street, as designated on the proceedings for opening Webster avenue, from East One Hundred and Sixty-third street to East One Hundred and Eighty-fourth street, confirmed November 24, 1882.
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4th. Thence southerly, curving to the left, on the arc of a circle, tangent to the preceding course, whose radius is 125 feet, for 128 1/2 feet.
5th. Thence southerly, on a line tangent to the preceding course, for 74 1/2 feet, to the western line of Webster avenue.

used by us in making our report, have been deposited in the office of the Department of Public Works, in the City of New York, there to remain until the twenty-ninth day of March, 1888.

Third—That the limits embraced by the assessment aforesaid are as follows, to wit: All those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by an irregular line commencing at a point in the southerly side of East One Hundred and Forty-eighth street, about 400 feet westerly from the westerly side of Courtland avenue, and running northerly, easterly and westerly to its intersection with the prolongation westerly from Courtland avenue of the northerly side of East One Hundred and Sixty-third street, the prolongation westerly from the westerly side of Courtland avenue of the northerly side of East One Hundred and Sixty-third street for about 145 feet and the northerly side of East One Hundred and Sixty-third street; easterly by the westerly side of Melrose avenue, an irregular line commencing at East One Hundred and Forty-ninth street and Melrose avenue and running to a point in the westerly side of Third avenue, distant about 120 feet northerly from the north-east corner of Third avenue and Courtland avenue and the westerly side of Third avenue; southerly by said last-mentioned irregular line, the westerly side of Third avenue and the northerly side of East One Hundred and Forty-sixth street, and westerly by a line parallel, for nearly 50, with and distant about 400 feet westerly from the westerly side of Courtland avenue, and running northerly from the northerly side of East One Hundred and Forty-sixth street to the southerly side of East One Hundred and Fifty-eighth street and running northerly, easterly and westerly to its intersection with the prolongation westerly from Courtland avenue of the northerly side of East One Hundred and Sixty-third street; easterly by the westerly side of Melrose avenue, an irregular line commencing at East One Hundred and Forty-ninth street and Melrose avenue and running to a point in the westerly side of Third avenue, distant about 120 feet northerly from the north-east corner of Third avenue and Courtland avenue and the westerly side of Third avenue; southerly by said last-mentioned irregular line, the westerly side of Third avenue and the northerly side of East One Hundred and Forty-sixth street, and westerly by a line parallel, for nearly 50, with and distant about 400 feet westerly from the westerly side of Courtland avenue, and running northerly from the northerly side of East One Hundred and Forty-sixth street to the southerly side of East One Hundred and Fifty-eighth street and running northerly, easterly and westerly to its intersection with the prolongation westerly from Courtland avenue of the northerly side of East One Hundred and Sixty-third street; easterly by the westerly side of Melrose avenue, an irregular line commencing at East One Hundred and Forty-ninth street and Melrose avenue and running to a point in the westerly side of Third avenue, distant about 120 feet northerly from the north-east corner of Third avenue and Courtland avenue and the westerly side of Third avenue; southerly by said last-mentioned irregular

ward, distant 100 feet to inches northward from the north line of the Hundred and Twenty-sixth street; thence easterly and parallel with said street 270 feet 2 1/2 inches to the westerly line of Manhattan street, thence northward along said line 230 feet and one-half of an inch; thence westerly 264 feet 3 inches to the easterly line of the Boulevard; thence easterly along said line 60 feet to the point or place of beginning.

Said street to be 60 feet wide between the lines of the Boulevard and Manhattan street.

Dated, New York, February 15, 1888.
HENRY R. BEEKMAN,
Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, whereto the same has not been heretofore acquired, to that portion of LIND AVENUE (although not yet named by proper authority extending from Wolf street to Devoe street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Works.

WE, THE UNDERSIGNED, COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in these proceedings, or in any of the lands affected thereby, and who may be opposed to the same, do present their objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the sixteenth day of March, 1888, at 12 o'clock noon.

Second—That the abstract of the said estimate and assessment, together with our maps, and also the affidavits, estimates and other documents which were used by us in making our report, have been deposited in the office of the Department of Public Works, in the City of New York, there to remain until the sixteenth day of March, 1888.

Third—That the limits embraced by the assessment aforesaid are as follows, to wit: All those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by the southerly side of Wolf street, easterly by a line parallel or nearly so with and distant about one hundred feet easterly from the easterly side of Lind avenue and extending from the southerly side of Wolf street to the southerly side of Devoe street, southerly by the northerly side of Devoe street, and westerly by a line parallel or nearly so with and distant about one hundred feet westerly from the westerly side of Lind avenue and extending from the northerly side of Devoe street to the southerly side of Wolf street; excepting from said area all the streets and avenues heretofore opened and all the unimproved land included within the lines of streets, public squares, public places or places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Works, pursuant to the provisions of chapter 604 of the Laws of 1874, and all the streets and avenues shown on chapter 40 of the Laws of 1882, as such area is specified upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the City and County of New York, at the Special Term thereof, to be held at the Chambers thereof, in the County Court-house, at the City Hall, in the City of New York, on the thirtieth day of March, 1888, at the opening of the Court on that day, and that, if the said report is not thereupon approved by the Court, a motion will be made that the said report be confirmed.

Dated, New York, January 26, 1888.
MICHAEL J. KELLY,
JOHN H. KITCHEN,
THOMAS J. MILLER,
Commissioners.

CARROLL BERRY, Clerk.

HEALTH DEPARTMENT.

HEALTH DEPARTMENT, No. 301 MOTT STREET, NEW YORK, January 31, 1888.

AT A MEETING OF THE BOARD OF HEALTH of the Health Department of the City of New York, held at its office, No. 301 Mott street, January 27, 1888, the following resolution was adopted:

Resolved, That section 13 of the Sanitary Code be and is hereby amended so to read as follows:

Sec. 13. That no owner or lessee of any building, or any part thereof, shall lease, or let, or hire out the same or any portion thereof, to be occupied by any person, or allow the same to be occupied, as a place in which, or for any one, to dwell or lodge, except when said buildings or such parts thereof are sufficiently lighted, ventilated, provided and accommodated, and are in all respects in that condition of cleanliness and wholesomeness, for which this Code or any law of this State provides, or in which they or either of them require any such premises to be kept. Nor shall any such person rent, let, hire out, or allow, having power to prevent the same to be used as a place for sleeping or residence, any portion or apartment of any building, which apartment or portion has not at least one foot of height and space above the level of every part of the sidewalk and curbstone of any adjacent street, nor of which the floor is damp by reason of water from the ground, or which is impregnated or penetrated by any offensive gas, smell, or exhalation prejudicial to health. But this section shall not prevent the leasing, renting, or occupancy of cellars or rooms less elevated than aforesaid, and as a part of any building rented or let, when they are not let or intended to be occupied or used by any person as a sleeping apartment, or as a principal or sole dwelling apartment.

JAMES C. BAYLES, President.
EMMONS CLARK, Secretary.

DEPARTMENT OF PUBLIC WORKS.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, ROOM 6, No. 31 CHAMBERS STREET, NEW YORK, March 14, 1888.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A SEALED envelope, with the title of the work and the name of the bidder inclosed thereon, also the number of the work as in the advertisement, will be received at this office, until 12 o'clock M., Wednesday March 28, 1888, at which place and hour they will be publicly opened by the head of the Department.

- No. 1. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF SEVENTY-THIRD STREET, from the Boulevard to West End avenue.
- No. 2. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF SEVENTY-FIFTH STREET, from the Boulevard to West End avenue.
- No. 3. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF SEVENTY-SIXTH STREET, from Avenue A to Avenue B.

No. 4. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF NINETEENTH STREET, from Second to Third avenue.

No. 5. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND THIRD STREET, from Ninth to Tenth avenue.

No. 6. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF MADISON AVENUE, from One Hundred and Third to One Hundred and Fifth street.

No. 7. FOR REGULATING AND PAVING WITH TRAP-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND TWELFTH STREET, from Eighth to New avenue (now Manhattan avenue).

No. 8. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND TWENTY-SECOND STREET, from Fourth to Madison avenue.

No. 9. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND THIRTY-SECOND STREET, from Fourth to Madison avenue.

No. 10. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND FORTY-FIRST STREET, from Avenue St. Nicholas to Tenth avenue.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested in the same, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law. No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 1, No. 31 Chambers street.

D. LOWBER SMITH, Deputy and Acting Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, ROOM 6, No. 31 CHAMBERS ST., NEW YORK, March 8, 1888.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A SEALED envelope, with the title of the work and the name of the bidder inclosed thereon, also the number of the work as in the advertisement, will be received at this office, until 12 o'clock M., Wednesday, March 21, 1888, at which place and hour they will be publicly opened by the head of the Department.

- No. 1. FOR SEWER IN SEVENTY-THIRD STREET, between West End and Riverside avenues.
- No. 2. FOR REGULATING AND GRADING NINETY-SEVENTH STREET, from the Boulevard to Riverside Drive, and SETTING CURB AND GUTTER-STONES AND FLAGGING SIDEWALKS THEREIN.
- No. 3. FOR REGULATING AND GRADING ONE HUNDRED AND NINTH STREET, from Eighth to Manhattan avenue, and SETTING CURB-STONES AND FLAGGING SIDEWALKS THEREIN.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied

by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Rooms 9 and 5, No. 31 Chambers street.

D. LOWBER SMITH, Deputy and Acting Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, ROOM 6, No. 31 CHAMBERS ST., NEW YORK, March 8, 1888.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A SEALED envelope, with the title of the work and the name of the bidder inclosed thereon, also the number of the work as in the advertisement, will be received at this office, until 12 o'clock M., Wednesday, March 21, 1888, at which place and hour they will be publicly opened by the head of the Department.

FOR PAVING, FILLING AND DRAINING CITY PROPERTY ON BLOCK BOUNDED BY ONE HUNDRED AND FIFTY-FOURTH AND ONE HUNDRED AND FIFTY-FIFTH STREETS AND EIGHTH AVENUE.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 5, No. 31 Chambers street.

D. LOWBER SMITH, Deputy and Acting Commissioner of Public Works.

REGULATIONS ESTABLISHING A SCALE OF WATER RENTS AND RULES GOVERNING THE USE OF WATER, FOR THE CITY OF NEW YORK, BY ORDER OF JOHN NEWTON, COMMISSIONER OF PUBLIC WORKS.

UNDER CHAPTER 416, LAWS 1882, SECTIONS 350, 351, 352 and 353, and as amended by chapter 559, Laws 1887, as follows:

The commissioner of public works shall, from time to time, establish scales of rents for the supplying of water, which rents shall be collected in the manner provided by law, and which shall be apportioned to different classes of buildings in said city in reference to their dimensions, values, exposure to fires, ordinary uses for dwellings, stores, shops, private stables and other common purposes, number of families or occupants, or consumption of water, as near as may be practicable, and modify, alter, amend and increase such scale from time to time, and extend it to other descriptions of buildings and establishments. All extra charges for water shall be deemed to be included in the regular rents, and shall become a charge and lien upon the buildings upon which such charges are levied, and shall be returned as arrears to the clerk of arrears.

Such regular rents, including the extra charges above mentioned, shall be collected from the owners or occupants of such buildings respectively, who shall be situated upon lots adjoining any street or avenue in said city in which the distributing water-pipes are or may be

laid, and from which they can be supplied with water. Said rents, including the extra charges aforesaid, shall become a charge and lien upon such houses and lots, respectively, as herein provided, but no charge whatever shall be made against any building in which a water-meter may have been, or shall be placed as provided in this act. In all such cases the charge for water shall be determined only by the quantity of water actually used as shown by said meters.

The said commissioner of public works is hereby authorized to prescribe a penalty not exceeding the sum of five dollars for each offense, for permitting water to be wasted, and for any violation of such reasonable rules as he may, from time to time, prescribe for the prevention of the waste of water; such fines shall be added to the regular water rents.

The regular annual rents to be collected by the Department of Public Works shall be as follows, to wit:

Table with 6 columns: FRONT WIDTH, Story, 2 Stories, 3 Stories, 4 Stories, 5 Stories. Rows show rates for front widths from 16 feet and under to 37 1/2 to 50 feet.

The rent of all tenements which shall exceed in width fifty feet shall be the subject of special contract with the Commissioner of Public Works.

The apportionment of the regular rents upon dwellings-houses are on the basis that but one family is to occupy the same, and for each additional family, one dollar per year shall be charged.

METERS will be placed on all houses where waste of water is feared, and they will be charged at rates fixed by the Department for all the water passing through them.

The extra and miscellaneous rates shall be as follows to wit:

BAKERYES.—For the average daily use of flour, for each barrel, three dollars per annum.
BARBERS SHOPS shall be charged from five to twenty dollars per annum each in the discretion of the Commissioner of Public Works; an additional charge of five dollars per annum shall be made for each bath-tub therein.

BATHING TUBS in private houses, beyond one, shall be charged at three dollars per annum each, and five dollars per annum each in public houses, boarding-houses, and bathing establishments. Combination stationary wash-tubs, having a movable division in the center and capable of use for bathing, shall be charged the same as bathing tubs.

BUILDING PURPOSES.—For each one thousand bricks laid, or for stone-work—to be measured as bricks—ten cents per thousand. For plastering, forty cents per hundred yards.

COWS.—For each and every cow, one dollar per annum.
DINING SALOONS shall be charged an annual rate of from five to twenty dollars, at the discretion of the Commissioner of Public Works.

FISH STANDS (retail) shall be charged five dollars per annum each.
For all stands not metered, the rates shall be as follows:

HORSES, PRIVATE.—For two horses there shall be charged six dollars per annum; and for each additional horse, two dollars.

HORSES, LIVERY.—For each horse up to and not exceeding thirty in number, one dollar and fifty cents each per annum; and for each additional horse, one dollar.

HORSES, OMNIBUS AND CART.—For each horse, one dollar per annum.
HORSE TROUGHS.—For each trough, and for each half barrel or tub on sidewalk or street, twenty dollars per annum; each trough is to be fitted with a proper check and prevent valve.

HOTELS AND BOARDING HOUSES shall, in addition to the regular rate for private families, be charged for each lodging room, at the discretion of the Commissioner of Public Works.

LAUNDRIES shall be charged from eight to twenty dollars per annum, in the discretion of the Commissioner of Public Works.

LIQUOR AND BEER SALOONS shall be charged an annual rate of ten dollars each. An additional charge of five dollars per annum shall be made for each tap or wash-box.

PHOTOGRAPH GALLERIES shall be charged an annual rate of from five to twenty dollars, in the discretion of the Commissioner of Public Works.

PRINTING OFFICES, when not metered, shall be charged at such rates as may be determined by the Commissioner of Public Works.

SODA, MINERAL WATER AND ROOT BEER FOUNTAINS shall be charged five dollars per annum each.

STREAM ENGINES, when not metered, shall be charged by the horse-power, as follows: For each horse-power up to and not exceeding ten, the sum of ten dollars per annum; for each exceeding ten, and not over fifteen, the sum of seven dollars and fifty cents; and for each horse-power over fifteen, the sum of five dollars.

WATER-CLOSETS AND URINALS.—To each building on a lot one water-closet having sewer connection is allowed without charge. Each additional water-closet or urinal will be charged as hereinafter stated. All closets connected in any manner with sewer shall be charged two dollars for each seat per annum, whether in a building or in any other place where water can be drawn by holding up the handle, per year, each, five dollars.

WATER-CLOSET RATES.—For hoppers of any form, when water is supplied direct from the Croton supply, through any form of the so-called single or double valves, hopper-cocks, stop-cocks, self-closing cocks, or any valve or cock of any description attached to the closet, each year, twenty dollars.

For any pan closet, or any of the forms of valve, plunger, or other water-closet not before mentioned, supplied with water as above described, per year, ten dollars.

For any form of hopper or water-closet, supplied from the ordinary style of cistern filled with ball-cock, and overflow pipe that communicates with the pipe to the water-closet, so that overflow will run into the hopper or water-closet, when ball-cock is defective, or from which an unlimited amount of water can be drawn by holding up the handle, per year, each, five dollars.

For any form of hopper or water-closet, supplied from any of the forms of waste-preventing cisterns, that are approved by the Engineer of the Croton Aqueduct, which are so constructed that not more than three gallons of water can be drawn at each lift of the pan cock, or depression of the seat, if such cisterns are provided with an overflow pipe, such overflow pipe must not connect with the water-closet, but be carried like a safe-waste, as provided by the Board of Health regulations, per year, two dollars.

Cistern answering this description can be seen at this Department.

METERS.

Under the provisions of section 352, Consolidated Act 1882, water-meters, of approved pattern, shall be hereafter placed on the pipes supplying all stores, work-shops, hotels, manufactories, public edifices, at wharves, ferries, houses, stables, and in all places where water is furnished for business consumption, except private dwellings.

It is provided by section 352, Laws of 1882, that "all expenses of meters, their connections and setting, water rates and other lawful charges for the supply of Croton water, shall be a lien upon the premises where such water is supplied, as now provided by law."

All manufacturing and other business requiring a large supply of water will be fitted with a meter.

Water measured by meter, ten cents per one hundred cubic feet.

Rate Without Meters.

Table with 3 columns: PER DAY, GALLONS; PER 100 GALLONS, RATE; PER ANNUM, AMOUNT.

The rate charged for steam-vessels taking water daily or belonging to daily lines, is one-half cent, per ton (Custom House measurement) for each time they take water.

Steamers taking water other than daily, one cent per ton (Custom House measurement).

Water supplied to sailing vessels and put on board, twenty-five cents per hundred gallons.

All matters not hereinbefore embraced are reserved for special contract by and with the Commissioner of Public Works.

HYDRANTS, HOSE, TROUGHS, FOUNTAINS, ETC., ETC.

No owner or tenant will be allowed to supply water to another person or persons.

All persons taking water from the City must keep their own service-pipes, street taps, and all fixtures connected therewith, in good repair, protected from frost, at their own risk and expense, and shall prevent all waste of water.

The use of hose to wash coaches, omnibuses, wagons, railway cars or other vehicles or horses, cannot be permitted.

No horse-troughs or horse-watering fixtures will be permitted in the street or on the sidewalk, except upon a license or permit taken out for that purpose.

No hydrant will be permitted on the sidewalk or in the front area, and any hydrant standing in a yard or alley, attached to any building, must not be left running when not in actual use, and if the drip or waste from such hydrant freezes and becomes dangerous in winter, the supply will be shut off in addition to the penalty of five dollars imposed.

Taps at wash-basins, water-closets, baths and urinals must not be left running, under the penalty of five dollars for each offense, which will be strictly enforced.

Fountains or jets in hotels, porter-houses, eating-saloons, confectioneries or other buildings are strictly prohibited.

The use of hose for washing sidewalks, stoops, arcades, house-fronts, yards, courts, gardens, and about stables, is prohibited. Where premises are provided with wells, special permits will be issued for the use of hose, in order that the police or inspectors of this department may understand that the permission is not for the use of Croton water.

Opening fire-hydrants to fill hand sprinklers or other vessels will not be allowed.

The penalty for a violation of any of the preceding rules and regulations will be five dollars for each offense, and if not paid when imposed will become a lien on the premises in like manner as all other charges for unpaid water rates.

By order, JOHN NEWTON, Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, No. 31 CHAMBERS STREET, NEW YORK, JUNE 21, 1887.

PUBLIC NOTICE AS TO WATER RATES

PUBLIC NOTICE IS HEREBY GIVEN THAT in compliance with the provisions of chapter 559, Laws of 1887, amending sections 350 and 927 of the New York City Consolidation Act of 1862, passed June 9, 1887, the following changes are made in charging and collecting water rates:

1st. All extra charges for water incurred from and after June 9, 1887, shall be treated, collected and returned in arrears in the same manner as regular rents have heretofore been treated.

2d. In every building where a water meter or meters are now, or shall hereafter be in use, the charge for water by meter measurement shall be the only charge against such building, or such part thereof as is supplied through meter.

3d. The returns of arrears of water rents, including the year 1887, shall be made heretofore on the confirmation of the law by the Board of Aldermen, and shall include all charges and penalties of every nature.

4th. A penalty of five dollars (\$5) is hereby established, and will be imposed in each and every case where the rules and regulations of the Department prohibiting the use of water through hose, or in any other wasteful manner, are violated, and such penalties will be entered on the books of the Bureau against the respective buildings or property, and, if not collected, be returned in arrears in like manner as other charges for water.

5th. Charges for so-called extra water rents of every nature, imposed or incurred prior to June 9, 1887, will be collected of record on the books of the Department.

D. LOWBER SMITH, Deputy and Acting Commissioner of Public Works

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, No. 31 CHAMBERS STREET, NEW YORK, NOVEMBER 10, 1886.

NOTICE TO CROTON WATER CONSUMERS.

NUMEROUS APPLICATIONS HAVE BEEN made to this Department by citizens claiming reductions or reliefs on bills for water supplied through meters, on the alleged ground of leakage caused by defective plumbing and worn-out service pipes, or by willful

waste of water by tenants allowing the faucets to be turned on in full force in water-closets, sinks, etc., without the knowledge or consent of the owners of the premises.

The main object of the use of water meters is to enable this Department to detect and check the wasteful and unwarrantable waste of an element so valuable and essential to the health and comfort of all the citizens, and this object can only be accomplished by enforcing payment for the water wasted.

Under the law all charges for water supplied through meters are a lien against the respective premises, and the law therefore holds the owner of the premises responsible for the amount of water used or wasted.

Notice is therefore given to all householders that, in all further applications for reduction of water rents, no allowance will be made on account of waste of water occurring through leaks, from defective service pipes or plumbing, or wasteful use of water by tenants or occupants of buildings, though such leakage or waste may have occurred without the knowledge or consent of the owners of the buildings.

House-owners are further notified that whenever their premises become vacant, and are likely to remain vacant, they must notify this Department in writing, and that unless this requirement is complied with no deductions in extra water rents will be allowed for any portion of one year.

JOHN NEWTON, Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, No. 31 CHAMBERS STREET, NEW YORK, SEPTEMBER 29, 1886.

PUBLIC NOTICE.

PERSONS HAVING ANY BUSINESS IN THIS Department which is not assigned to or transferred by the several Bureaus in the Department, and which should come under the immediate notice of the Commissioner of Public Works, are requested to communicate directly in person, or by letter, with the Commissioner.

JOHN NEWTON, Commissioner of Public Works.

ARMORY BOARD.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAAVS ZEITUNG BUILDING, TRYON ROW, NEW YORK, MARCH 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING IRON WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing Iron Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, will be received by the Armory Board at the Mayor's office, No. 61 Chambers street, until 2 P. M. of the 29th day of March, 1888, at which time and place they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Iron Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Masonry Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves, by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work. The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be re-advertised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimate their names and places of residence; the names of all persons interested with them therein; and if no other person is so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person in making an estimate for the same work, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true.

Where more than one person is interested, it is required that the verification be made and subscribed by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, on its being awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum which said person or persons would be entitled to on its completion, and that which said Corporation or Armory Board may be obliged to pay to the person to whom the contract may be awarded

at any subsequent letting; the amount in each case to be ascertained upon the estimated amount of the work to be done by which the bids are tested; the consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons named in the verification, and of the freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract and stated in the proposals, over and above all his debts of every nature, and above his liabilities as bail, surety and otherwise; and that he has offered himself as surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered and approved by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of one thousand dollars (\$1,000). Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same, within five days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment to be made, can be seen upon application at the office of the architect, Mr. G. B. Post, No. 15 Cortlandt street.

The Board reserves the right to reject any or all estimates not deemed to be for the public interest.

Plans may be examined, and specifications and blank forms for bids or estimates obtained, by application to the architect, at his office, No. 15 Cortlandt street, New York City.

ABRAM S. HEWITT, Mayor; MICHAEL COLEMAN, Pres't Com'r Dept. Taxes and Assessments; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAAVS ZEITUNG BUILDING, TRYON ROW, NEW YORK CITY, MARCH 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING PLUMBING AND GAS-FITTING WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing Plumbing and Gas-fitting Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, will be received by the Armory Board at the Mayor's office, No. 61 Chambers street, until 2 P. M. of the 29th day of March, 1888, at which time and place they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Plumbing and Gas-fitting Work in the erection of an Armory Building for the Twenty-second Regiment, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Masonry Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves, by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be re-advertised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimates their names and places of residence; the names of all persons interested with them therein; and if no other person is so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person in making an estimate for the same work, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true.

Where more than one person is interested, it is required that the verification be made and subscribed by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded

to the person or persons making the estimate, they will, on its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum which said person or persons would be entitled to on its completion, and that which said Corporation or the Armory Board may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons named in the verification, and of the freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, as stated in the proposals, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of one hundred and fifty dollars (\$150). Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk, and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect within five days after notice that the contract has been awarded to him to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be seen upon application at the office of the architect, G. B. Post, No. 15 Cortlandt street.

The Board reserves the right to reject any or all estimates not deemed beneficial to or for the public interest.

Plans may be examined, and specifications and blank forms for bids or estimates obtained, by application to the architect, at his office, No. 15 Cortlandt street, New York City.

ABRAM S. HEWITT, Mayor; MICHAEL COLEMAN, Pres't Com'r Dept. Taxes and Assessments; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAAVS ZEITUNG BUILDING, TRYON ROW, NEW YORK, MARCH 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING MASONRY WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing Masonry Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, will be received by the Armory Board at the Mayor's office, No. 61 Chambers street, until 2 P. M. of the 29th day of March, 1888, at which time and place they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Masonry Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Masonry Work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, City and County of New York, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves, by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation; and the contract will be re-advertised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimates their names and places of residence; the names of all persons interested with them therein; and if no other person is so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects

true. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract is awarded to the person or persons making the estimate, they will, on its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled on its completion and that which said Corporation or the Armory Board may be obliged to pay to the person whose contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done, by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, and stated in the proposals, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of fifteen hundred dollars (\$1,500). Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-book, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be seen upon application at the office of the architect, G. B. Post, No. 15 Cortlandt street, New York City.

ABRAM S. HEWITT, Mayor; MICHAEL COLEMAN, Pres't Com'r's Dept. Taxes and Assessments; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAATS-ZEITUNG BUILDING, TRYON ROW, NEW YORK, March 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING THE WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing the work for the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, County and City of New York, will be received by the Armory Board, at the Mayor's Office, No. 61 Chambers street, until 2 o'clock of the 29th day of March, 1888, at which time they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing the Whole Work in the Erection of an Armory Building for the Twenty-second Regiment, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any bidder for this contract must be known to be engaged in and well prepared for the business and must have satisfactory testimonials to that effect; and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties in the amount of eighty thousand dollars (\$80,000).

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the performance of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, at 10 o'clock on the day within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimate their names and places of residence, the names of all persons interested with them therein, and if no other persons so interested the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair and without collu-

sion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy clerk, or other officer of the Corporation, or any person, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract is awarded to the person or persons making the estimate, they will, on its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled on its completion, and that which said Corporation or the Armory Board may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done, by which the bids are tested; the consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, and stated in the proposals, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of fifteen hundred dollars (\$1,500). Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-book, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be seen upon application at the office of the architect, G. B. Post, No. 15 Cortlandt street.

ABRAM S. HEWITT, Mayor; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, MICHAEL COLEMAN, Pres't Com'r's Dept. Taxes and Assessments; Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAATS-ZEITUNG BUILDING, TRYON ROW, NEW YORK, March 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING THE STEAM-HEATING AND VENTILATING WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing work for steam-heating and ventilating work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, County and City of New York, will be received by the Armory Board, at the Mayor's Office, No. 61 Chambers street, until 2 o'clock P. M. of the 29th day of March, 1888, at which time they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Work for Steam-heating and Ventilating in the Erection of an Armory Building for the Twenty-second Regiment, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect; and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the amount of four thousand dollars (\$4,000).

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the performance of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice

to that effect; and in case of failure or neglect so to do he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimate their names and places of residence, the names of all persons interested with them therein; and if no other persons so interested the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy clerk, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract is awarded to the person or persons making the estimate, they will, on its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled on its completion, and that which said Corporation or the Armory Board may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested; the consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, and stated in the proposals, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of fifteen hundred dollars (\$1,500). Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-book, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be seen upon application at the office of the architect, G. B. Post, No. 15 Cortlandt street.

ABRAM S. HEWITT, Mayor; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, MICHAEL COLEMAN, Pres't Com'r's Dept. Taxes and Assessments; Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAATS-ZEITUNG BUILDING, TRYON ROW, NEW YORK, March 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING CARPENTER WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing carpenter work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, County and City of New York, will be received by the Armory Board, at the Mayor's Office, No. 61 Chambers street, until 2 P. M. of the 29th day of March, 1888, at which time and place they will be publicly opened by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Carpenter Work in the Erection of an Armory Building for the Twenty-second Regiment, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the amount of twenty-five thousand dollars (\$25,000).

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in

or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work. The person or persons to whom this contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvised and relet, and so on until it is accepted and executed.

Bidders are required to state in their estimate their names and places of residence, the names of all persons interested with them therein; and if no other person so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair, and without collusion or fraud; and also that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy Clerk, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, and stated in the proposals over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of \$1,500. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Board who has charge of the Estimate-book, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk, and found to be correct. All such deposits, except that of the successful bidder, will be returned by the Comptroller to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him by the Comptroller.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Bidders are requested, in making their bids or estimates, to use a blank prepared for that purpose by the Board, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be seen upon application at the office of the architect, G. B. Post, No. 15 Cortlandt street.

ABRAM S. HEWITT, Mayor; MICHAEL COLEMAN, Pres't Com'r's Dept. Taxes and Assessments; JOHN NEWTON, Commissioner Public Works Department; BRIG.-GEN. LOUIS FITZGERALD, COLONEL EMMONS CLARK, Commissioners.

ARMORY BOARD—OFFICE OF THE SECRETARY, STAATS-ZEITUNG BUILDING, TRYON ROW, NEW YORK, March 12, 1888.

PROPOSALS FOR ESTIMATES FOR FURNISHING MATERIALS AND PERFORMING CARPENTER WORK IN THE ERECTION OF AN ARMORY BUILDING ON THE BLOCK BOUNDED BY THE BOULEVARD, NINTH AVENUE, SIXTY-SEVENTH AND SIXTY-EIGHTH STREETS, NEW YORK CITY.

PROPOSALS FOR ESTIMATES FOR FURNISHING materials and performing carpenter work in the erection of an Armory Building on the block bounded by the Boulevard, Ninth Avenue, Sixty-seventh and Sixty-eighth streets, County and City of New York, will be received by the Armory Board, at the Mayor's Office, No. 61 Chambers street, until 2 o'clock P. M. of the 29th day of March, 1888, at which time they will be publicly opened and read by said Board.

Any person making an estimate for the above work shall furnish the same in a sealed envelope to the President of said Armory Board, indorsed "Estimate for Furnishing Materials and Performing Carpenter Work in the Erection of an Armory Building for the Twenty-second Regiment, N. G. S. N. Y.," and also with the name of the person or persons presenting the same, and the date of its presentation.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the amount of twenty-five thousand dollars (\$25,000).

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the estimate, and shall not at any time after the submission of an estimate, dispute or complain of the statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Armory Board, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation beyond the amount payable for the work before mentioned, which shall be actually performed, at the prices therefor to be specified by the lowest bidder, shall be due or payable for the entire work.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of contract and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in

JURORS.

NOTICE IN RELATION TO JURORS FOR STATE COURTS.

OFFICE OF THE COMMISSIONER OF JURORS, ROOM 127, STRAUB BUILDING, CHAMBERS STREET AND BROADWAY, NEW YORK, June 2, 1887.

APPLICATIONS FOR EXEMPTIONS WILL BE heard here, from 9 to 4 daily, from all persons hitherto liable or recently serving who have become exempt, and all needed information will be given.

Those who have not answered as to their liability, or proved permanent exemption will receive a "jury enrollment notice," requiring them to appear before me this year. Whether liable or not, such notices must be answered (in person, if possible, and at this office only) under severe penalties. If exempt, the party must bring proof of exemption; if liable, he must also answer in person, giving full and correct name, residence, etc., etc. No attention paid to letters.

Persons "enrolled" as liable must serve when called or pay their fines. No mere excuse will be allowed or interference permitted. The fines if unpaid will be entered as judgments upon the property of the delinquents.

All good citizens will aid the course of justice, and secure reliable and respectable juries, and equalize their duty by serving promptly when summoned, allowing their clerks or subordinates to serve, reporting to me any attempt at bribery or evasion, and suggesting names for enrollment. Persons between sixty and seventy years of age, summer absentees, persons temporarily ill, and United States Jurors are not exempt.

Every man must attend to his own notice. It is a misdemeanor to give any jury paper to another to answer. It is also punishable by fine or imprisonment to give or receive any present or bribe, directly or indirectly, in relation to a jury service, or to withhold any paper or make any false statement, and every case will be fully prosecuted.

CHARLES REILLY, Commissioner of Jurors.

THE CITY RECORD.

THE CITY RECORD IS PUBLISHED DAILY, Sundays and legal holidays excepted, at No. 2 City Hall, New York City. Price, single copy, 3 cents annual subscription, by mail, \$9.25.

THOMAS COSTIGAN, Supervisor