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DEPARTMENT OF PUBLIC WORKS.

Report for the Quarter ending December 31, 1885.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE, NO. 31 CHAMBERS STREET,
NEW YORK, January 23, 1886.

Hon. WILLIAM R. GRACE, Mayor :

SIR—In compliance with section 49 of the New York City Consolidation Act of 1882, I have the honor to present herewith a report of the transactions of the Department of Public Works for the quarter ending December 31, 1885, and a review of its operations for the past year.

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

On account of appropriations raised by taxation.....	\$681,614 88
On account of "Fund for Local Improvements"	155,161 64
On account of Funded Debt, for improvement and extension of water supply.....	113,712 99
On account of Revenue Bonds, in anticipation of collection of charges for water-meters	3,466 39
On account of Special Fund for Restoring Pavement over Street Openings.....	11,530 83
Total	\$965,486 73

SUMMARY STATEMENT OF CONTRACTS. Contracts entered into during the Quarter.

2 contracts for laying water-pipes, estimated cost	\$28,204 00
2 contracts for furnishing water-pipes, stop-cocks, hydrants, etc., estimated cost....	44,435 00
2 contracts for furnishing gas for public buildings, offices, etc., estimated cost....	38,000 00
1 contract for bridge across Fourth avenue, at Ninety-eighth street, estimated cost..	18,369 92
1 contract for coal, estimated cost.....	3,016 00
Total, 8 contracts, estimated cost.....	\$132,024 92

Contracts completed during the Quarter.

13 repaving contracts, total cost	\$144,457 61
3 regulating and grading contracts, total cost.....	43,274 74
4 contracts for work and materials on Croton Aqueduct and reservoirs, total cost..	22,239 72
2 contracts for work and materials on macadam roadways, total cost.....	21,725 87
2 contracts for coal, total cost.....	16,466 95
1 contract for laying water-pipes, cost.....	10,821 48
Total, 25 contracts, cost	\$258,986 37

BUREAU OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

At the beginning of the quarter, October 1, 1885, the natural flow of the Croton river was not sufficient to supply the Aqueduct with the quantity of water required for daily consumption, and the deficiency had to be made up by drawing water from the storage reservoirs and lakes. This continued until October 22, during which time 1,005,000,000 gallons of stored water was drawn, being an average of over 45,000,000 gallons per day.

The rain-fall for the quarter at the several stations where rain-gauges are kept by the Department was as follows :

LOCATION.	OCTOBER. INCHES.	NOVEMBER. INCHES.	DECEMBER. INCHES.	TOTAL INCHES.
At Boyd's Corner Reservoir, Croton Basin.....	5.19	5.99	3.48	15.02
At South East Reservoir, Croton Basin	4.70	5.76	3.35	13.81
At Croton Dam, Croton Basin	5.96	6.43	2.78	15.17
At Kensico, on Bronx river.....	6.02	4.53	3.31	13.86
At Central Park Reservoir.....	5.79	4.86	2.26	12.91

Since the 22d of October, the rain-fall has been sufficient to supply the Aqueduct to its full capacity, and to refill the reservoirs and lakes in the Croton basin. In the Bronx river water-shed, however, the drafts on stored water during the summer and autumn were so large that the Rye Ponds Reservoir and the Kensico Reservoir are not yet quite refilled.

No unusual leaks or breaks have been developed in the Croton Aqueduct. At the beginning of the quarter the appropriation for maintaining and strengthening the Aqueduct was so nearly exhausted that all work on reinforcement of the structure had to be suspended, except to place in safe condition for the winter season the works at High Bridge, at the Glen, in Yonkers, and at Widow's Bank.

The high-service pumping works at High Bridge and at Ninth avenue and Ninety-eighth street have been in steady operation during the quarter. The average quantity of water pumped each day was 12,334,000 gallons.

Additional water-pipes to extend the water service were laid in forty different streets in the upper part of the city. The aggregate length of pipes laid is 7 36-100, with 60 stop-cocks and 82 fire-hydrants.

On October 1, there were 13,119 water-meters in use in the city; 561 additional meters were placed during the quarter, making 13,680 meters in use at the close of the quarter. The average daily quantity of water supplied through meters is 22,177,700 gallons.

Owing to the inadequacy of the appropriation for the salaries of persons employed in examination of plumbing in houses, the inspection and reading of meters and in other measures to detect and suppress waste of water, this work had to be confined to the supervision of the meter system. As less than one-eighth of all the houses in the city are supplied with meters, the other seven-eighths are without supervision or restriction as to the use and waste of water, and the occupants will probably soon relapse into the old habits of careless and reckless use of water.

The appropriation for work and supplies for the repairs and renewals of pipes, stop-cocks and fire-hydrants has been equally inadequate. In fact, there were no means whatever for renewals of worn-out pipes, and the work was entirely confined to the repairs of leaks and local defects discovered from time to time, and requiring immediate attention to prevent the destruction to public and private property, and such loss of water as would involve local and temporary stoppage of the water supply.

The entire subject of the water supply is more fully treated in the review of the operations of the Department for the year 1885, included in this report.

BUREAU OF WATER PURVEYOR.

Pavements.

An average force of 539 mechanics and laborers and 91 carts was employed in the repairs of pavements throughout the city until November 4, when the appropriation for pavement repairs was nearly exhausted, and it became necessary to disband the regular repair force. A small force consisting of about 20 mechanics and laborers has been retained since that time to attend to repairs of dangerous places in the streetways requiring immediate attention.

In the repavement of streets, 83,731 square yards of new pavement were laid, in place of old and worn-out pavements, as follows :

Essex street, from Houston to Division street.
Fourth street, from Broadway to Bowery.
Hester street, from Centre to Elizabeth street.
Forty-fourth street, from Tenth to Eleventh avenue.
Thirty-fifth street, from Broadway to Seventh avenue.
Fifth street, from Bowery to Lewis street.
Ninth street, from Avenue A to First avenue.
Thirty-sixth street, from Third to Lexington avenue.
Forty-seventh street, from Tenth to Eleventh avenue.
Sullivan street, from Third to Canal street.
Leonard street, from Elm to Baxter street.
Doyer street, from Pell to Chatham street.
Baxter street, from Leonard to Walker street.
Pell street, from Bowery to Mott street.
Thames street, from Broadway to Greenwich street.
Jersey street, from Crosby to Mulberry street.
Essex Market place, from Essex to Ludlow street.
Duane street, from William to Rose street.
Batavia street, from Roosevelt to James street.
Chestnut street, from Madison to Oak street.
Albany street, from Greenwich to Washington street.
Eleventh street, from Avenue B to Avenue D.
Monroe street, from Catharine street to Clinton street.
Fourth street, from Bowery to Avenue B.
Tenth avenue, from Fifty-ninth to Sixty-fourth street.

An average force of 78 mechanics and laborers and 9 carts was employed under the direction of the Water Purveyor on the repairs of pipes, stop-cocks and fire-hydrants, which performed the following work :

1,210 repairs to fire-hydrants.
103 new fire-hydrants substituted for old ones.
7 additional fire-hydrants placed.
413 defects in pipes and stop-cocks repaired.
139 water-taps shut off on account of leakage in service-pipes.
402 defects in pavements repaired.

BUREAU OF SEWERS.

Owing to the operation of the constitutional amendment, adopted in 1884, limiting or restricting the issue of City bonds for public improvements, no contracts for new sewers, to be paid for by assessment on the property benefited, have been entered into during the year 1885; and all the contracts in progress at the beginning of the year have been finished except two, which are now very near completion. The total amount of work done during the quarter on these two contracts is as follows :

2,025 lineal feet of sewers built.
90 lineal feet of culverts built.
90 receiving-basins built.

Further on in this report the effect upon public and private interests resulting from the stoppage of local improvements under the direction of this Department will be presented and discussed.

The following are the principal items of work done in the repairs and cleaning of sewers and receiving-basins :

367 lineal feet of sewers rebuilt.
454 lineal feet of sewers repaired.
91 lineal feet of culverts rebuilt.
111 lineal feet of spur-pipe laid.
45 receiving-basins repaired.
5 new manholes built.
192 manholes repaired.
6 new granite basin-heads furnished and set.
353 new manhole covers furnished and placed.
11 new basin covers furnished and placed.
94 new manhole-heads furnished and set.
31 manhole-heads reset.
1,720 cubic yards earth excavated and refilled.
378 cubic yards new filling furnished.
645 receiving-basins and culverts cleaned.
8,804 lineal feet of sewers cleaned.
2,211 cart-loads of sewer deposits removed.

BUREAU OF STREET IMPROVEMENTS.

The following regulating and grading works were completed during the quarter :
 One Hundred and Twenty-sixth street, between Tenth avenue and the Boulevard.
 One Hundred and Twelfth street, between Seventh and Eighth avenues.
 Sixty-sixth street, between Eighth avenue and the Boulevard.
 Ninety-ninth street, between Eleventh avenue and Riverside Drive.

12 regulating and grading contracts are still in progress and unfinished, and on three of these work has been suspended for the winter season.

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

27,100 cubic yards earth excavated.
 52,125 cubic yards rock excavated.
 26,944 cubic yards filling placed in embankments.
 26,974 lineal feet curb-stones set.
 112,140 square feet flagging laid.
 666 lineal feet culverts built.

BUREAU OF STREETS AND ROADS.

The care of the macadam roadways and of the unpaved streets in the upper part of the city, under the charge of this Bureau, has received proper attention, so far as the means at the disposal of the Department would admit. The contract for resurfacing the Western Boulevard, from Fifty-ninth street to Seventy-sixth street, was completed early in December, the total cost of the work being \$18,048. It is a fact which has been stated in nearly every quarterly and annual report of the Department for the past seven years, that the appropriations for the maintenance of the macadam roadways have been inadequate, and that as a natural consequence the condition of the roadways has constantly deteriorated. A continuance of this mistaken policy of economy will ultimately, and at no distant period, result in very large expense for the entire reconstruction of the roadways, or in their abandonment and the substitution of stone blocks or other pavement better calculated to withstand the immense and growing business traffic which passes over them. Of the unpaved streets, the following have been regraded to the proper level :

Ninety-sixth street, between Second and Third avenues, and between Fifth and Lexington avenues.

Eighty-third street, between First avenue and Avenue B.

Eighty-fourth street, between First avenue and Avenue B.

Ninety-seventh street, between Third and Fifth avenues.

Extensive repairs have been made on Kingsbridge road, which extends from Tenth avenue, at One Hundred and Sixty-fifth street, to Kingsbridge. The roadway of F street, from Inwood street to Bolton road, has been macadamized, and the roadway of One Hundred and Fifty-second street, from the Boulevard to the Hudson river, has been resurfaced with limestone screenings.

BUREAU OF LAMPS AND GAS.

On September 30, 1885, the following public lamps were in use on the streets, avenues, public parks, bridges, and docks, viz. :

23,308 gas-lamps.
 708 electric-lights.
 50 naphtha-lamps.

Total, 24,066 public lamps.

During the quarter 241 additional gas-lamps were erected and lighted ; 78 old gas-lamps were relighted, and 72 gas-lamps were discontinued, leaving a total of 23,555 gas-lamps ; 708 electric-lights, and 50 naphtha-lamps in use at the close of the quarter. On the 18th of December, 1885, contracts were made for furnishing gas to the public buildings and offices under charge of this Department, as follows :

New York Consolidated Gas Company, \$1.50 per 1,000 cubic feet.

The Equitable Gas-light Company, \$1.40 per 1,000 cubic feet.

The estimated cost of the contract of the New York Consolidated Gas Company is \$26,000, and that of the Equitable Gas-light Company, \$12,000.

BUREAU OF REPAIRS AND SUPPLIES.

The following are the principal repairs made in the public buildings and offices during the quarter :

Repairing and enlarging the steam-heating apparatus in the New Court-house.
 Furnishing new window shades in the rooms of the Supreme Court and of the Superior Court.
 Repairing the heating apparatus and the passenger elevator in the Brown-stone Court-house.
 Repairing the heating apparatus, windows, closets, and urinals in the Hall of Records.
 Furnishing additional gas fixtures, carpets, desks, etc., in the offices of the Department of Finance, in the Stewart Building, and in the offices of the Law Department.

Making repairs in the rooms occupied by the First, Second and Sixth District Police Courts, and the Court of Special Sessions.
 Repairing the heating apparatus and gas-fixtures in the Sixty-ninth Regiment Armory.

A large expenditure is incurred each year at the beginning of the winter season to reset and refit stoves and other heating apparatus in the various public offices.

BUREAU OF INCUMBRANCES.

The following is a summary of the operations of the Bureau for the quarter :

1,028 complaints of obstructions received and attended to.
 367 seizures of obstructions made, and the articles removed to the Corporation yard.
 715 cart-loads of dirt, stone and other refuse material removed from the streets.
 14 decayed and dangerous shade trees removed.
 824 notices issued to repair defective sidewalks.
 2 notices to repair defective vault covers.
 1,600 permits issued to place building material on streets.
 39 permits issued to cut down shade trees.
 155 miscellaneous permits issued.

The Bureau collected \$277.38 for the redemption of articles seized as obstructions, and \$532 from public sale of articles in the Corporation yard.

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..... \$324,698 62
 For penalties on water rents..... 6,237 08
 For permits to tap water-pipes..... 3,859 00

Total..... \$334,795 42

MISCELLANEOUS REVENUE.

The following amounts were collected from various sources :

For vault permits.....	\$12,893 41
For sewer permits.....	9,388 34
Redemption of articles seized as obstructions.....	296 05
For articles sold at auction.....	478 80
For rent of steam rollers.....	539 01
For work and materials furnished to citizens.....	27 04
Total.....	\$23,622 65

REVIEW OF THE OPERATIONS OF THE DEPARTMENT FOR THE YEAR 1885.

SUMMARY OF EXPENDITURES.

On Appropriation account for 1885.....	\$2,188,309 17
On account of Local Improvement Fund.....	885,480 49
On Funded Debt account for Water Supply.....	444,519 79
On Revenue Bonds, for water-meters.....	19,234 55
On Special Fund for Restoring Pavements over Street Openings.....	42,644 10
Estimated liabilities, including all outstanding accounts against appropriations for 1885.....	211,100 00
Total.....	\$3,791,288 10

Expenditures for the past Fifteen Years.

For the year 1871.....	\$8,727,085 97
" 1872.....	5,826,113 67
" 1873.....	7,754,454 88
" 1874.....	7,534,590 22
" 1875.....	5,929,814 49
" 1876.....	4,374,860 73
" 1877.....	3,113,789 43
" 1878.....	2,835,068 23
" 1879.....	2,347,577 64
" 1880.....	3,028,848 39
" 1881.....	3,647,947 11
" 1882.....	5,014,999 91
" 1883.....	4,725,143 90
" 1884.....	4,643,546 29
" 1885.....	3,791,288 10

Recapitulation of Expenditures for the past Eight Years, on Moneys raised by Direct Taxation, by the Issue of Bonds, and from Special Funds.

YEAR.	From Assessment or Local Improvement Fund for New Works, paid entirely by Property benefited by the Works.	From Long Bonds for Additional Water Supply.	From Special Fund for Water-meters and for Restoring Pavements for which the City is reimbursed.	From Annual Appropriations made by the Board of Estimate and Apportionment.	TOTALS.
1878.....	\$606,514 14	\$600,027 75	\$6,754 15	\$1,601,772 69	\$2,835,068 23
1879.....	364,559 25	296,011 38	4,699 04	1,682,307 77	2,347,577 64
1880.....	461,568 83	484,672 82	35,243 93	2,047,362 81	3,028,848 39
1881.....	628,201 23	481,261 65	72,354 07	2,466,130 16	3,647,947 11
1882.....	1,404,512 65	999,998 30	38,107 49	2,572,181 47	5,014,999 91
1883.....	1,115,874 51	969,974 10	50,152 77	2,189,122 49	4,725,143 90
1884.....	956,823 91	918,610 31	53,275 77	2,714,836 30	4,643,546 29
1885.....	885,480 49	444,519 79	61,878 65	2,329,409 17	3,791,288 10

SUMMARY STATEMENT OF CONTRACTS FOR THE YEAR 1885.

Contracts Entered Into.

20 paving contracts, estimated cost.....	\$196,579 62
4 sewer contracts, estimated cost.....	8,746 40
2 regulating and grading contracts, estimated cost.....	8,144 00
10 contracts for water-pipes, etc., estimated cost.....	160,487 50
8 gas and electric light contracts, estimated cost.....	634,100 00
15 miscellaneous contracts, estimated cost.....	86,005 94
59 contracts, estimated cost.....	\$1,094,063 46

Contracts Completed.

33 paving contracts, actual cost.....	\$336,037 74
24 sewer contracts, actual cost.....	145,888 85
23 regulating and grading contracts, actual cost.....	623,888 36
7 contracts for water-pipes, etc., actual cost.....	76,708 89
10 gas and electric-light contracts, actual cost.....	622,890 13
23 miscellaneous contracts, actual cost.....	606,235 16
120 contracts, total cost.....	\$2,411,649 13

THE WATER SUPPLY.

The Croton Water-shed.

In the report of the Chief Engineer of the Croton Aqueduct, Document D, will be found a table showing the rain fall at the Boyd's Corner storage reservoir, in Putnam County, for each month and year, from 1866 to 1885, inclusive.

There are three stations in the Croton basin where the Department keeps rain-gauges, and where the rain-fall for 1885 was as follows :

At Boyd's Corner Reservoir.....	45.99 inches.
At South East Reservoir.....	42.12 "
At Croton Dam.....	50.65 "

The average annual rain-fall for the past twenty years is 46.76 inches ; the highest rain-fall was in 1882—55.20 inches, and the lowest in 1876—40.68 inches.

The rain-fall for the four months of March, April, May and June was less than for the same period in any of the preceding eighteen years, and another extended period of dry weather occurred in August and September. There were 127 days when the natural flow of the Croton river was less than the quantity required for daily consumption in the city, and water had to be drawn

from the storage reservoirs and lakes to supply the deficiency. The total quantity of stored water drawn was:

	Gallons.
From the two storage reservoirs.....	4,590,000,000
From natural lakes.....	1,130,000,000
Total.....	5,720,000,000

Bronx River Water-shed.

The rain-fall at the Kensico Reservoir, on the Bronx river, was 39.75 inches, which is 6.22 inches less than at Boyd's Corners, in the Croton Valley, and 10.90 inches less than at Croton Dam. The drafts on stored water to keep up the supply through the Bronx river conduit were much larger, comparatively, than from the Croton water-shed, amounting to 1,425,000,000 gallons, supplied by the Rye Ponds Reservoir and the Kensico Reservoir.

Fifty-six awards of damages made by Commissioners of Appraisal to owners of lands and water-rights along the Bronx river for the diversion of the water by the City, to the aggregate amount of \$21,384, were paid by the City in 1885.

Byram River.

In 1879 the Department of Public Works began the construction of works to collect and bring to the City an additional supply of water from the Bronx river and from the Byram river. The works from the Bronx river to the City have been completed and in operation for more than a year, but the City has not yet acquired the rights to draw off the waters of the Byram river, which are located in the State of Connecticut, and is receiving the water of the Bronx river only, although at least \$1,100,000 was expended on the works, with the view of using the waters of the Byram river. It is not necessary at this time to inquire into the wisdom of making this expenditure without first acquiring the necessary rights to use the water, but it certainly became the duty of this Department, since the expenditure had been incurred, to use every endeavor to acquire the rights as speedily as possible. With this view, on April 29, 1885, I appointed Mr. Jason A. Lodwick as agent on behalf of the Department and the City, to negotiate with the several owners for the acquisition of the necessary rights and privileges. In November last Mr. Lodwick submitted the report of his negotiations, showing that he had effected preliminary agreements by which the City would acquire all the necessary rights, for the aggregate sum of \$326,706. The surveys, plans and estimates for the entire works, including both the Bronx river and Byram river supplies, were completed under the direction of Commissioner Allan Campbell, in 1879, and his estimate of the cost of the rights and lands on the Byram river was \$373,883, and offers were then made to the several owners in accordance with such estimate. These offers were rejected, and the owners demanded payments amounting in the aggregate to over \$600,000. The subsequent estimate made by the Engineers of the Department of Public Works placed the value of the lands and water-rights at \$586,000. In view of this reduction of \$57,177 from the very low estimate made in 1879, and \$259,294 from the subsequent estimate of the Engineers, the labors of Mr. Lodwick must be regarded as in the highest degree successful and commendable. By an act passed at the last session of the Legislature, chapter 542, the approval of the Comptroller is necessary to any agreement for the acquisition of any real estate rights or privileges for the City. On November 30, I transmitted to the Comptroller a copy of Mr. Lodwick's report, embodying all the preliminary agreements, requesting his approval of the same, and calling his attention to the fact that one of the conditions of the preliminary agreements was, that the final agreements and purchases should be effected on or before January 1, 1886. On December 4, 1885, I again addressed the Comptroller, calling attention to the advantageous terms of the agreements and urging speedy action. As no apparent progress had been made in the matter, I again addressed the Comptroller on December 15, 1885, calling attention to the delay that had already occurred, and to the fact that only fifteen days remained of the period within which the City could avail itself of the advantageous terms of the agreements, and requesting the Comptroller to appoint a place and time for consultation between himself, the Counsel to the Corporation, Mr. H. T. Dykman, who had for several years been employed by the Law Department in the examination of titles to riparian rights and property on the Bronx and Byram rivers, the Chief Engineer of the Croton Aqueduct, Mr. J. A. Lodwick and the Commissioner of Public Works, in order to arrive at a speedy conclusion of the matter. I have since learned from the Comptroller that he will take no action at all until he has been able to proceed to the Byram river himself and examine the several mill rights, and until the whole subject has been examined into and reported upon by experts employed by himself, and in whom he has confidence. The labor of several of the most competent and experienced engineers of the Department of Public Works has been employed from time to time, for the past seven years, in making searches and examinations to arrive at a proper estimate of the extent and value of the water-rights, and Mr. J. A. Lodwick has labored most faithfully and diligently for more than six months to bring about the highly advantageous and satisfactory agreements now awaiting the approval of the Comptroller. There can be no doubt whatever, that the failure to ratify these agreements will result in largely increased demands from the mill-owners, and largely increased cost to the City in the ultimate acquisition of the rights, if they are ever acquired. If they are not acquired, the City will be at the loss of the more than \$1,100,000 expended for works to conduct the water to this city, and will be without the much-needed additional supply to be obtained from the Byram river. The wisdom of the act of 1885, which places in the hands of the Comptroller the power to render nugatory the labors of the Department of Public Works, which has the organization, experience and information necessary to successfully conduct the affairs connected with the acquisition of rights for additional water supply, and the co-operative labor of the Law Department in searching and examining titles, may well be doubted.

The Croton Aqueduct.

Two very large leaks or breaks in the Aqueduct occurred during the year—one at Dobbs' Ferry and the other at South Yonkers. In order to repair the latter, the water had to be shut off from September 11 to 15, during which time the city's supply was entirely drawn from the city reservoirs and the Bronx river conduit. Both leaks were thoroughly repaired, and while the water was shut off, the interior of the structure was thoroughly examined from Croton Dam to High Bridge, and many minor leaks and defects were repaired.

The principal improvements made on the Aqueduct during the year are: The construction of a water channel at Sing Sing, building a waste-weir at Yonkers, completing the waste-weir at Kingsbridge, rebuilding retaining-walls over Quaker Bridge, at Sing Sing, at Hastings, at South Yonkers, and at several other points, reinforcing the top arch in several locations where the Aqueduct is built on embankments.

Considerable work had to be done to protect the Croton Dam, gate-house and Aqueduct in that vicinity from danger, arising from the proximity of the work on the New Aqueduct.

Distribution of Water.

In extending the water-service into new streets, the following water-pipes were laid:

54,919 lineal feet of 6-inch pipes.
34,666 lineal feet of 12-inch pipes.
250 lineal feet of 4-inch pipes.
38 lineal feet of 20-inch pipes.

Total, 89,873 lineal feet, or 17.02 miles of pipes.

On the lines of these pipes, 139 stop-cocks and 181 fire-hydrants were placed.

The distributing system now comprises 579.93 miles of pipes, with 6,099 stop-cocks and 7,581 fire-hydrants.

The high-service pumping works at High Bridge, and at Ninth avenue and Ninety-eighth street, have been in operation without interruption; at the High Bridge station, 2,893,650 pounds of coal were consumed in pumping 1,672,911,702 gallons of water, an average of 4,583,319 gallons per day; at the Ninth avenue station 3,456,525 pounds of coal were consumed in pumping 2,828,782,826 gallons of water, an average of 7,751,000 gallons per day.

Repairs and Renewals of Water-pipes, Stop-cocks and Fire-hydrants.

The departmental estimate for 1885, made by my predecessor, called for an appropriation of \$226,527 for labor and materials necessary in the repairs of the then existing 560 miles of pipes, with 5,960 stop-cocks and 7,400 fire-hydrants. In the Final Estimate \$131,500 was appropriated; my departmental estimate for 1886 called for \$203,100 for this purpose, and in the Final Estimate \$131,500 is appropriated, while the extent of the distributing system is increased to 579.93 miles of pipes. In both of these departmental estimates, as well as in previous ones, and in successive quarterly and annual reports of the Department, the fact has been most urgently presented, that there are many miles of pipes contiguous to the water-front which by contact with salt water which percolates the soil, have become so corroded that they are absolutely unsafe, and that beyond doubt a large proportion of the water supply is lost through leakage from these mains, and from the house service-pipes connected with them. The Chief Engineer of the Croton Aqueduct states that there are 25 miles of 6-inch and 12-inch mains in this condition; as the water which leaks from them percolates through the soil into tide water, there are no surface indications of the leaks, and the extent of the leakage can only be surmised; but enough is known from the condition of pipes which are uncovered from time to time in the progress of ordinary repairs, and of excavations made for various purposes, to furnish ample proof that the leakage is enormous. The risk of sudden and large breaks in these pipes, and consequent damage to public and private property is imminent, and such breaks would have occurred before now if the pressure of water in these mains had not of late years been so much reduced that the water barely rises to the surface of the streets. The appropriations for the past year, and for 1886, barely cover the ordinary repairs and care of pipes, stop-cocks and hydrants, leaving no margin whatever for the most necessary and important work of replacing the worn-out pipes. If through acquisition of additional water supply, or through more effective suppression of waste of water, the Department should be enabled to increase the pressures in the distributing mains, the additional pressure so much needed in all parts of the city would have to be excluded from the mains and from the buildings and fire-hydrants supplied through them. This is, certainly, a most unfortunate state of affairs, the responsibility for which must certainly be placed outside of this Department.

For the proper supervision and care of the pipes, stop-cocks and hydrants, the distributing system is divided into four districts, each under the charge of a competent and experienced foreman, and the necessary force of mechanics, laborers and carts. The work of this force for the year is summarized as follows:

1,600 defects in pipes and stop-cocks repaired.
4,104 fire-hydrants repaired.
478 new fire-hydrants substituted for old ones.
15 additional fire-hydrants placed.
741 taps shut off on account of leaks in service-pipes.

WASTE OF WATER.

The estimates of the Department for 1885 and 1886 for the salaries of Engineers, Inspectors and others employed in the supervision of the distributing system, the care and inspection of water-meters, and the accounts connected therewith, and in the inspection of houses and house drains, to detect and prevent waste of water, have been treated in the same manner as the estimates for labor and supplies for the repairs of pipes, etc. For the year 1884 the sum of \$73,250 was appropriated for these salaries, and my predecessor organized an adequate force of inspectors. In 1885 he requested an appropriation of \$73,250, but in the Final Estimate it was reduced to \$43,500. My estimate of \$71,900 for 1886 was also reduced to \$43,500 in the Final Estimate. On January 1, 1884, there were 9,012 water-meters in use. During 1884 the number was increased to 11,625, and during 1885 to 13,680. With a decrease of over 40 per cent. in the appropriation, the labor of supervision of the meter system was increased more than 50 per cent. through increase in the number of meters. The consequence was that the house inspections, and the night inspections of sewers and house drains, to detect and prevent waste of water had to be abandoned, and the only measure remaining in operation for suppression of waste is the meter system. The inevitable result will be a relapse on the part of consumers into the old habits of reckless use of water and neglect of keeping plumbing arrangements and fixtures in proper order. Every intelligent person who has any knowledge of the present condition of our water supply, knows that until the completion of the New Aqueduct our only reliance for an adequate distribution of water throughout the city is the suppression of waste. Experiments made in the past two years in this city, and reported in previous reports of this Department, have demonstrated the fact that an enormous waste of water prevails in dwellings, as well as in the buildings which are subject to the compulsory use of meters. This fact is further demonstrated by the experience of other large cities, where the authorities had the liberality and wisdom of providing adequate means to control the consumption of water, and where, through these means, the per capita consumption of water has been reduced from thirty to fifty per cent. below that of this city, and by a corresponding increase in the pressures, the safety, health and comfort of the people have been enhanced. Again, the responsibility for the denial of these benefits to the people of New York rests outside of this Department. The Courts have compelled the City to pay about \$1,500,000 for water-meters which now lie idle and rust away in the pipe-yard for the want of an appropriation of about \$50,000 to put them in order and place them on buildings where millions of gallons of water are now daily wasted, and which could be saved by the use of these meters. With the view of utilizing these meters, and of applying a stop-valve and pressure gauge to each service-pipe in dwelling-houses, whereby the amount of water consumed can be ascertained and controlled, I requested an appropriation of \$100,000 for these purposes, but no allowance for it was made in the Final Estimate. The stop-valve and pressure gauge have been thoroughly tested in other cities, where they have been in use for many months and are effective and of immense value in preventing waste of water.

The meters now in use, and the consumption of water through them, are distributed as follows:

	No. of Meters.	Gallons per Diem
Hotels.....	347	1,694,000
Breweries, bottlers, etc.....	324	1,628,000
Charitable institutions.....	97	406,000
Office buildings.....	1,830	1,731,000
Factories.....	762	2,165,000
Gas-works.....	40	781,600
Railroads.....	201	1,311,800
Stables.....	1,624	1,129,000
Apartment-houses.....	133	291,000
Docks.....	116	1,543,000
Miscellaneous.....	7,450	9,497,300
Total.....	12,924	22,177,700

The above does not include 756 meters which have only recently been placed, and on which no readings have yet been taken or recorded.

SURVEYS FOR THE NEW AQUEDUCT.

During the year the Engineers of the Department made the necessary surveys and plans for the Aqueduct from the northerly side of the Harlem river to One Hundred and Thirty-fifth street, and the maps of lands required for the New Aqueduct on Manhattan Island. The surveys, plans and specifications for the work required in the distribution of the water which will be obtained through the New Aqueduct below One Hundred and Thirty-fifth street are in progress. The maps of the lands required for reservoir purposes on the Croton river, between Quaker Bridge and Croton Dam, have been completed and submitted to the Aqueduct Commissioners. Surveys are in progress of lands required for a reservoir on the Croton river, north of the Croton Dam, and on the east branch of the river at Sodom.

STREET PAVEMENTS.

The report of the Water Purveyor, Document D, hereto annexed, presents in detail the work done in the repairs of pavements during the year. The area of pavements repaired or relaid is estimated at 206,735 square yards. The energy and intelligence exercised by the Water Purveyor and the inspectors under his charge, in the supervision of the work done by private corporations and individuals in the public streets, deserve special commendation. During the year 15,217 excavations were made in the streets for connections with gas and water mains and for repairs of mains. 21 miles of gas, steam and salt water pipes were laid; 9.13 miles of double track surface railways were constructed, and 10.45 miles of underground telegraph and telephone conduits were laid. The surface railroads constructed during the year include the following:

Broadway, from the Battery to Fourteenth street.
Chambers street, from the North river to the East river.
Duane street, from the North river to Broadway.
The Boulevard, Manhattan street and West Eighty-sixth street.
East Eighty-sixth street, from Madison avenue to Second avenue.
Madison avenue, from Eighty-sixth street to the Harlem river.

New granite and trap-block pavements were laid in place of worn-out pavements in thirty-six streets, the aggregate length of which is 6.84 miles and the area 109,171 square yards. Pavements were laid on fourteen streets in the upper part of the city, covering an area of 64,448 square yards.

SEWERAGE AND DRAINAGE.

During the year 18,663 lineal feet of new sewers, 603 lineal feet of culverts, and 28 receiving-basins were built, and the present extent of the sewerage system on Manhattan Island is 410.36 miles of sewers, and 5,035 receiving-basins. In the repairs of sewers 2,395 lineal feet of sewers were rebuilt, 474 lineal feet of culverts rebuilt, 9 new manholes built, 14 manholes rebuilt, 713 manholes repaired, 45 receiving-basins rebuilt, 171 receiving-basins repaired, 86 granite basin-heads furnished and placed, 1,048 perforated manhole covers placed. In several cases, including the sewer outlet at the foot of Canal street, the sewer in Sixty-third street, between Fourth and Madison avenues; in Ninety-eighth street, between Second and Third avenues, and in One Hundred and First street, between First and Second avenues, the work was practically an entire reconstruction of the sewers. Systematic examinations of the old sewers, which are continually carried on, have resulted in the discovery of many defects in sewers which were believed to be in perfect condition. Sewer deposits are found in large quantity, and in numerous places, where the sewers should be self-cleansing, and the removal of such deposits is very expensive. One of the greatest defects in the old sewers is the disproportion in size to the amount of sewage and drainage passing through the sewer. In most cases the old sewers have broad, flat bottoms, and the sewage stagnates, becomes solidified, and has to be removed by hand. In all cases where it is practicable, this defect is remedied by building a new invert bottom of the proper shape and size to secure the necessary velocity in the flow of the sewage to prevent obstructions. The Engineer in Charge of Sewers presents in his report two plans or cross sections of old sewers, showing the condition before and after the repairs above described.

REGULATING AND GRADING STREETS.

During the year twenty-three contracts for regulating and grading streets were completed, and two new contracts were made.

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

112,705 cubic yards earth excavated.
243,051 cubic yards rock excavated.
93,125 cubic yards filling placed in embankments.
71,235 lineal feet curb-stones set.
292,782 square feet flagging laid.
666 lineal feet culverts built.

MACADAM ROADWAYS.

As before stated in this report, the appropriations for the care and repairs of the macadam roadways for a number of years past have been inadequate to keep the road surfaces in proper condition. The roads were built for light traffic, but in the course of the fifteen or sixteen years of their existence, the character of the traffic has undergone a great change. Tables contained in the report of the Superintendent of Streets, Document H, hereto annexed, show that on the Western Boulevard, at Seventy-ninth street, an average of 2,928 vehicles passed each day during one week in November last, and an average of 8,523 vehicles passed each day over Seventh avenue at One Hundred and Twenty-fifth street. More than four-fifths of this consisted of heavy business traffic. The designers of the macadam roadway system never contemplated that the roads would be subjected to such traffic, and unless the necessary means are appropriated to renew and replace the superstructure as rapidly as it is worn out and ground into dust, the roads will in a few years be destroyed, and will have to be entirely repaved at an expense of nearly two million dollars. At no distant day such repavement will become an absolute necessity, and no amount of care and expense in the maintenance of the roads can prevent it.

The length of the macadam roads on Manhattan Island is 27.71 miles, and the area 958,638 square yards.

The Department also has under its care forty-five miles of unpaved streets, and four miles of country roadways in the upper part of the city, which have to be maintained in proper condition for local travel. The repairs of damage to these roads and streets from ordinary wear and tear and from rain-storms, have received prompt attention.

FUTURE LOCAL IMPROVEMENTS.

The operation of the constitutional amendment, adopted in 1884, limiting the indebtedness of the City to 10 per cent. on the assessed value of all the taxable property, under the interpretation which the amendment has so far received by the courts, stops all further works on local improvements to be paid for by local assessments, except contracts in existence at the time when it went into effect, January 1, 1885. As already stated in this report, no contracts whatever were entered into during 1885 for sewers, regulating and grading works, or pavements to be paid for by assessments. The four sewer contracts mentioned in the report were for reconstruction of old sewers, and paid for out of an appropriation for repairs. In whatever light it may be viewed, this condition of affairs in respect to local improvements must be regarded as most unfortunate. Ordinances have been passed by the Common Council for the paving of twenty different streets or parts of streets enumerated in the report of the Water Purveyor (Document E), and for regulating, grading, curb and flagging thirty-two different streets and parts of streets enumerated in the report of the Superintendent of Street Improvements (Document G). The report of the Engineer in Charge of Sewers (Document F), enumerates sixty-nine streets in which new sewers are required, and eight locations where additional receiving-basins are needed. In nearly all of these cases, the lots fronting on the streets are wholly or partly built upon, and in a few other cases the property-owners are anxious to build, but cannot do so until the streets are graded, sewered and paved. The suspension of all new

sewer work involves not only local sewerage and drainage and property interests, but to a very large extent the public health. Each of the sewers mentioned as being necessary, is an integral part of the entire sewerage system, and of the particular sewerage district in which it is located, and is therefore necessary to the completion and perfection of the sewerage in the respective districts, and of the entire system.

An act of the Legislature, passed in 1885, is intended to give some relief from the operations of the constitutional amendment in reference to the City debt, by creating a "Local Improvement Fund," to consist of the balance then to the credit of the Street Improvement Fund, all moneys thereafter collected by the City on account of assessments for local improvements, and such sums as might be raised by taxation. The latter portion of the fund was to be determined by the Board of Estimate and Apportionment, in making the Final Estimate for the expenses of the City Government. The Board has appropriated for 1886, the sum of \$250,000 for assessment works carried on under the direction of this Department, but in view of the fact that the Comptroller has to this date approved no new contracts for assessment works, it must be assumed that even with this appropriation, there is no money available in the fund for local improvements over and above the amounts due and to become due on existing contracts.

PUBLIC LAMPS.

At the close of the year there were 23,555 gas-lamps, 708 electric-lights and 50 naphtha-lamps in use on the streets, parks, docks and bridges in the city. 813 new gas-lamps, 61 electric-lights and 50 naphtha-lamps were erected during the year. The total length of streets lighted by public lamps is 455 miles, of which 12½ miles were provided with lamps during the year. The City also provides light for 38 acres of public parks, 1¼ miles of piers and docks, and 1½ miles of bridges. Twenty-four miles of additional gas-mains were laid during the year by the several gas companies, making a total of 977½ miles of gas-mains now under the streets of the city.

Under the conditions of its franchise, the Equitable Gas-light Company is required to pay the City 20 cents per lineal foot for gas-mains laid. The amount so paid to December 31, 1885, is \$56,930.33.

PUBLIC BUILDINGS.

The public buildings under the care of the Department are in good condition, excepting the old structures, dignified by the names of Clinton Market and West Washington Market. Clinton Market is a mere conglomeration of dilapidated brick structures and sheds. As I stated in my departmental estimate for 1886, the market should either be abolished or rebuilt, but the Board of Estimate and Apportionment refused to make an appropriation for a new building. The sum of \$5,000 was set apart for 1886 to repair the building, but any repairs which can be made will merely serve to postpone for a brief period its ultimate removal. It would also be for the interest of the City to abandon the present West Washington Market, and to provide proper and more suitable accommodation for the business now carried on there on the City property, known as Fort Gansevoort Market. The City expended \$380,483 for the acquisition and improvement of this property, of which \$161,680 has been assessed on adjacent property. This expenditure will be of little or no benefit to the public or to the property assessed until suitable market buildings are erected. The area and water frontage occupied by West Washington Market are too valuable and too much needed for the City's commerce to be longer occupied as a public market.

STREET OBSTRUCTIONS.

During the past year I have used every effort within the means and power of the Department to effectively discharge the duty imposed upon me by law of removing obstructions on streets and sidewalks, but when it is considered that there are over 400 miles of streets and sidewalks to be kept clear of obstructions, and that the entire appropriation for the performance of this work for 1885 was \$10,000, it will readily be conceded that the progress in this direction is necessarily slow and gradual. The following is a summary of the work of the Bureau of Incumbrances for the year:

3,947 complaints of obstructions received and attended to.
1,374 seizures made and the articles removed to the Corporation yard.
2,814 cart-loads of dirt and refuse material removed from the streets.
420 decayed shade trees removed.
67 permits issued for the removal of shade trees.
1,836 permits issued to repair defective sidewalks.
28 notices issued to repair defective vault covers.
8,260 permits issued to place building material on streets.
704 miscellaneous permits issued.

CITY REVENUE.

The following is the amount of revenue collected by the Department and paid into the City Treasury during the year 1885.

For water rents	\$2,108,030 18
For penalties on water rents	14,381 65
For permits to tap water-pipes	12,264 00
Total revenue from water service	\$2,134,675 83
For sewer permits	32,367 57
For vault permits	64,710 09
For redemption of articles seized as obstructions	1,071 29
From articles sold at auction	1,891 85
From rent of steam rollers	852 30
For work and materials furnished to citizens	640 95
Grand total	\$2,236,209 88

The unpaid water rents returned to the Clerk of Arrears for collection amount to \$164,689.55. These charges are liens against the respective property, and will ultimately be collected, making total revenue from the water service for the year \$2,299,365.38. The increase in the collection of revenue from the water service over that of the preceding year is \$147,276.01.

As I have already stated in this report, a reinspection of all the houses in the city has been made to ascertain whether they were charged with the proper and full amount of water rents due, and these inspections have resulted in the discovery that about \$204,000 is due for the year beginning May 1, 1885, which has not heretofore been charged on the books. The result will appear in a very large increase in the collections for the ensuing year.

The following documents appended to this report contain further details of the operations 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 the 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 Incumbrances.
Document M—Report of the Water Register.

Very respectfully,

ROLLIN M. SQUIRE, Commissioner of Public Works.

Document "A."

Showing Titles of Appropriations; Balances of 1884 on October 1, 1885; Requisitions on 1884 on Fourth Quarter, 1885; Balances of 1884 on December 31, 1885; Appropriations, including Transfer, of 1885; Requisitions, First Nine Months of 1885; Requisitions, Fourth Quarter, 1885; Total Requisitions on 1885; Balances on December 31, 1885; and the Titles and Conditions of the Trust and Special Accounts.

TITLES OF APPROPRIATIONS.	Balances of 1884, on October 1, 1885.	Transfers and Requisitions on 1884, Fourth Quarter, 1885.	Balances of 1884, on December 31, 1885.	Appropriations, including Transfers, of 1885.	Requisitions, First Nine Months, 1885.	Requisitions, Fourth Quarter of 1885.	Total Requisitions for 1885.	Balances on December 31, 1885, crediting Vouchers returned.
Aqueduct—Repairs, Maintenance and Strengthening.....	\$4,362 15	\$3,985 73	\$376 42	\$227,000 00	\$149,005 74	\$71,744 59	\$220,750 33	* \$6,356 16
Aqueduct—Repairs, Maintenance and Strengthening—Salaries.....	128 01	128 00		23,000 00	5,150 27	22,999 99	22,999 99	10
Boulevards, Roads and Avenues, Maintenance of.....	32	32		75,000 00	41,462 99	39,803 57	72,266 56	5 00
Boulevards, Roads and Avenues, Maintenance of—Salaries.....	475 00	475 00		2,000 00	1,545 00	450 00	1,995 00	2 73 44
Bronx River Works—Maintenance and Repairing.....				10,000 00	5,978 99	3,673 34	9,652 33	347 67
Bronx River Works—Maintenance and Repairing—Salaries.....				2,000 00	800 00	300 00	1,100 00	900 00
Contingencies—Department of Public Works.....	2,091 88	2,091 88		4,000 00	1,499 41	595 20	2,094 61	1,905 39
Flagging Sidewalks and Fencing Vacant Lots, etc.....	01	01		1,200 00	353 98	832 80	1,186 78	13 22
For an Iron Awning around Jefferson Market Building.....				2,457 00	2,457 00		2,457 00	43 00
For Repairs and Alterations on Essex Market Court-house.....				4,500 00	4,440 93		4,440 93	159 07
For Repairs on Essex Market Building.....				4,500 00	4,413 36		4,413 36	86 64
Free Floating Baths.....	182 23	182 23		15,500 00	11,966 06	2,073 06	14,039 12	1,400 88
Free Floating Baths—Salaries.....				20,000 00	13,178 50	6,820 50	19,999 00	1 00
Iron Bridge over Fourth Avenue at Ninety-eighth Street.....				35,000 00	382 00	714 10	1,096 10	33,903 90
Lamps and Gas and Electric Lighting.....	10 72	10 72		700,700 00	462,819 87	179,042 95	641,862 82	58,837 18
Lamps and Gas and Electric Lighting—Salaries.....	32 78	32 78		6,300 00	4,533 32	1,449 96	5,983 28	316 72
Laying Croton Pipes.....	11,141 22	952 34	10,188 88	186,000 00	73,443 66	26,723 01	100,166 67	83,832 43
Laying Croton Pipes—Salaries.....	5 24	5 21		14,000 00	8,769 00	4,118 16	12,887 16	1,113 84
Public Buildings—Construction and Repairs.....	3,205 30	2,922 27	283 03	50,000 00	37,954 42	7,908 27	45,862 69	4,077 31
Public Drinking-hydrants.....	15	15		5,000 00	823 71	2,537 61	3,361 32	2,638 68
Removing Obstructions in Streets and Avenues.....				6,884 00	4,797 70	1,701 45	6,499 15	384 85
Removing Obstructions in Streets and Avenues—Salaries.....	44 17	44 17		3,116 00	2,435 86	680 06	3,115 92	08
Repairing and Renewal of Pipes, Stop-cocks, etc.....	258 53	238 53	20 00	143,500 00	109,120 10	31,075 59	140,195 69	3,304 30
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries.....	334 40	334 40		43,500 00	34,777 45	8,254 15	43,031 60	468 41
Repairs and Renewal of Pavements and Regrading.....	298 82	298 82		102,500 00	133,816 63	57,747 79	191,564 42	935 65
Repairs and Renewal of Pavements and Regrading—Salaries.....	76 02	76 02		8,600 00	5,377 49	3,109 50	8,486 99	113 01
Repaving Streets and Avenues.....	1,352 54	1,352 54		203,000 00	50,519 74	130,909 30	181,429 04	15,576 96
Repaving Streets and Avenues—Salaries.....	626 05	626 05		6,000 00	2,526 00	3,474 00	4,999 00	2,010 00
Repaving Fifth Avenue, chapter 371, Laws of 1885.....				150,000 00				150,000 00
Roads, Streets and Avenues.....	146 65	146 65		25,000 00	16,869 89	7,800 22	24,670 11	239 89
Salaries—Department of Public Works.....	695 47	695 47		85,000 00	63,567 81	21,405 63	84,973 44	26 56
Sewers—Repairing and Cleaning.....	44 07	44 07		110,000 00	87,500 03	21,816 75	109,316 78	7 93 44
Sewers—Repairing and Cleaning—Salaries.....	37	37		9,000 00	6,924 00	2,074 48	8,998 48	1 52
Sewerage System—Salaries.....	29	29		15,000 00	10,655 51	4,344 03	14,999 54	46
Steam Heating of the City Hall.....	2,391 60	2,391 60						
Street Improvements—For Surveying, Monumenting, etc.....	2,084 00	1,284 00	800 00	2,000 00	732 00	303 00	1,035 00	965 00
Supplies for and Cleaning Public Offices—Salaries.....	8,178 19	7,774 26	403 93	131,000 00	93,765 17	26,123 01	119,888 18	11,111 82
Supplies for and Cleaning Public Offices—Salaries.....	42 09	42 09		28,400 00	20,998 19	6,617 23	27,615 42	1,484 58
Surveys, Maps, etc., for Street Openings and New Streets.....	3,729 56	3,729 56		14,500 00	10,500 65	3,999 29	14,499 94	06
Supplying Water to Shipping and for Building, etc.—Salaries.....	50	50		9,000 00	6,982 00	2,017 50	8,999 50	50
Washington Market—Alterations and Rebuilding.....	164 89	164 89						
Washington Market—Alterations and Rebuilding—Salaries.....	127 00	127 00						
Water Meter Fund, No. 2.....								
Water Supply for the Twenty-fourth Ward.....	1,400 70	1,200 80	199 90	5,000 00	2,308 75	1,783 68	4,092 43	907 57
Wells and Pumps—Repairing and Cleaning.....	445 38	445 38		250 00	25 75		25 75	224 25
Totals.....	\$44,883 55	\$32,611 69	\$12,271 86	\$2,578,450 00	\$1,507,144 29	\$681,164 88	\$2,188,309 17	\$390,363 54

MEM.—Requisition drawn against Foot Bridge, Fourth avenue and Forty-first street, of 1882, \$2,915. Requisition drawn against Roads, Streets and Avenues, Unpaved, etc., of 1883, \$584.28.

* Taxes of Greenburgh charged 1884, and credited 1885, \$106.49.

† Credit requisition 15966, in favor New York Mutual Gas-light Company, returned by Finance Department unpaid, \$116.22.

TITLES OF TRUST ACCOUNTS.	Balances from 1884, and Receipts, First Nine Months, 1885.	Receipts, Fourth Quarter, 1885.	Total Balances, 1884, and Receipts for 1885.	Requisitions, First Nine Months, 1885.	Requisitions, Fourth Quarter, 1885.	Total Requisitions for 1885.	Balances, December 31, 1885.
Croton Water Fund.....				\$330,806 80	\$113,712 99	\$444,519 79	
Fund for Local Improvements.....				730,318 85	155,101 64	885,420 49	
Restoring and Repairing—Special Fund—Department of Public Works.....	\$45,200 26	\$9,931 00	\$55,131 26	31,113 27	21,530 83	42,644 10	\$12,487 16
Water Meter Fund, No. 2.....	29,808 55	2,222 65	32,031 20	15,768 16	3,466 39	19,234 55	12,797 65

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 1885, and the Total for the Year.

SOURCE OF REVENUE.	FIRST NINE MONTHS, 1885.	FOURTH QUARTER, 1885.	TOTAL FOR 1885.	SOURCE OF REVENUE.	FIRST NINE MONTHS, 1885.	FOURTH QUARTER, 1885.	TOTAL FOR 1885.
Water rents.....	\$1,783,331 56	\$324,698 62	\$2,108,030 18	Work and material furnished citizens by city.....	\$613 91	\$27 04	\$640 95
Water penalties.....	8,143 85	6,237 80	14,381 65	Total.....	\$1,877,791 81	\$358,418 07	\$2,236,209 88
Pipe tapping.....	8,405 00	3,859 00	12,264 00	Receipts from old accounts.....			\$276 88
Sewer permits.....	22,979 23	9,388 34	32,367 57	Meter stock deposit.....			18 95
Vault permits.....	51,816 68	12,893 41	64,710 09				
Redemption and sale of street obstructions.....	775 24	296 05	1,071 29				
Sales by auction.....	1,413 05	478 80	1,891 85				
Rent of steam rollers, etc.....	313 29	539 01	852 30				

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

Document "B."

A Detailed Statement, alphabetically arranged by Appropriations and Funds, of the Expenditures for which Requisitions were made by the Department of Public Works on the Department of Finance, during the Quarter ending December 31, 1885.

APPROPRIATIONS.

Aqueduct—Repairs, Maintenance and Strengthening, for 1885—	
Brick.....	\$476 00
Cement.....	2,609 98
Cleaning vault.....	36 00
Coal and wood.....	7,807 22
Curb and flagging.....	2,980 14
Flagging.....	74 90
Horse-keeping.....	104 67
Horse-hire.....	339 50
Inspecting and weighing coal.....	148 00
Iron fence.....	519 25
Lumber.....	6 00
Office rent.....	106 25
Oil, etc.....	208 40
Pay-roll.....	39,653 77
Plumbing.....	54 16
Plungers.....	30 70
Protecting trucks.....	276 01
Repairing boilers.....	60 00
“ boiler-house.....	957 82
“ roof.....	13 13
“ tools.....	799 81
Sand.....	1,128 10
Sawdust.....	51 50
Stone.....	5,165 93
Stone coping.....	255 00
Supplies.....	562 14
Taxes.....	759 40
Tools.....	60 25
Traveling expenses.....	227 93
Waste-weir at Yonkers.....	6,272 63
Total.....	\$71,744 59
Aqueduct—Repairs, Maintenance and Strengthening, for 1884—	
Taxes.....	\$3 26

Boulevard, Roads and Avenues, Maintenance, etc.—

Bridge-stone.....	\$87 00
Coal.....	10 00
Horse-hire.....	270 00
Horse-rolls.....	12,364 86
Repairing sprinklers.....	13 55
Resurfacing.....	18,048 00
Supplies.....	10 16
Total.....	\$30,803 57
Bronx River Works—Maintenance and Repairs—	
Pay rolls.....	\$3,410 00
Taxes.....	263 34
Total.....	\$3,673 34
Contingencies—Department of Public Works—	
Horse-hire.....	\$60 00
Incidentals.....	310 20
Postage stamps.....	225 00
Total.....	\$595 20
Flagging Sidewalks and Fencing Vacant Lots—	
Corporation Yard, Gansevoort street.....	\$43 50
“ Rivington street.....	48 55
Market, Centre.....	50 57
“ Tompkins.....	603 68
Thirty-seventh street and East river.....	26 50
Total.....	\$832 80
Foot Bridge at Fourth Avenue and Forty-first Street, for 1882—	
Construction.....	\$2,915 00
Free Floating Baths—	
Carpenter work.....	\$284 39
Horse-hire.....	158 14
Painting roof.....	46 56
Plumbing, etc.....	14 28
Supplies.....	47 27

Free Floating Baths—	
Towing baths.....	\$635 00
Wharfage.....	887 42
Total.....	\$2,073 06

Iron Bridge over Fourth Avenue, at Ninety-eighth Street—	
Pay-rolls.....	\$714 10

Lamps and Gas and Electric Lighting—	
Base stone.....	\$60 00
Brick foundation.....	34 60
Chemicals.....	97 71
Flange bolts.....	137 50
Gas examinations.....	362 00
Glass street-signs.....	479 75
Lamp brackets.....	48 71
“ globes.....	950 00
“ irons.....	190 00
“ posts.....	2,426 25
Lamps.....	1,402 50
“ repairing.....	131 75
Lettering globes.....	57 00
Pay-rolls.....	534 00
Rent of offices.....	240 00
Supplies.....	16 96
Lighting Armory, First Battery.....	36 00
“ “ Second Battery.....	94 35
“ “ Seventh Regiment.....	872 85
“ “ Eighth.....	214 80
“ “ Ninth.....	300 00
“ “ Eleventh.....	116 25
“ “ Twelfth.....	227 40
“ “ Twenty-second Regiment.....	446 74
“ “ Sixty-ninth.....	180 74
“ “ Seventy-first.....	173 32
Bath, Battery.....	15 90
“ Gouverneur Slip.....	11 85
“ Duane street.....	9 60
“ Horatio street.....	16 80
“ Fifth street.....	12 75
“ Nineteenth street.....	13 50
“ Twenty-seventh street.....	17 70
“ “ Thirty-seventh street.....	14 55
“ “ Fifty-first street.....	15 00
“ “ One Hundred and Twelfth street.....	10 65
“ “ One Hundred and Thirty-eighth street.....	30 80
“ Brown-stone Building.....	97 05
“ City Hall.....	415 35
“ City Record Bindery.....	4 65
“ County Jail.....	373 20
“ Court, Civil, First District.....	4 65
“ “ Second.....	25 50
“ “ Fourth.....	7 84
“ “ Fifth.....	33 45
“ “ Sixth.....	5 18
“ “ Eighth.....	9 75
“ “ Ninth.....	6 45
“ Court, Police, First.....	223 50
“ “ Second.....	132 15
“ “ Third.....	38 08
“ “ Fourth.....	98 42
“ “ Fifth.....	36 30
“ Court, Special Sessions.....	5 70
“ Court-house, Third District.....	187 32
“ “ County.....	1,146 00
“ Department of Taxes and Assessments.....	9 90
“ “ Public Works.....	263 25
“ Engine-house, High Bridge.....	75 00
“ “ Ninety-eighth street.....	145 35
“ Market, Catharine.....	58 35
“ “ Centre.....	75 00
“ “ Clinton.....	168 45
“ “ Essex.....	30 80
“ “ Fulton.....	852 90
“ “ Jefferson.....	217 42
“ “ Tompkins.....	96 46
“ “ Union.....	8 85
“ “ Washington.....	682 80
“ Office Assessment Commission.....	5 40
“ “ Corporation Attorney.....	65 55
“ “ Corporation Counsel.....	17 85
“ “ Photometrical.....	7 89
“ “ Receiver of Taxes.....	646 46
“ Rivington Street Yard.....	75
“ Repair Shop, Thirtieth street.....	10 05
“ “ Eighty-third street.....	5 70
“ “ One Hundred and Twenty-ninth street.....	13 05
“ South Gate-house.....	76 65
“ Streets, Brush Electric Illuminating Co.....	22,054 20
“ “ United States Electric Illuminating Co.....	22,889 30
“ “ Central Gas-light Co.....	16,260 68
“ “ Consolidated.....	79,722 75
“ “ Equitable.....	4,424 96
“ “ New York Mutual Gas-light Co.....	1,036 86
“ “ New York and New Jersey Globe Gas-light Co.....	312 51
“ “ Northern Gas-light Co.....	13,433 54
“ “ Yonkers.....	2,527 50
Total.....	\$179,642 95

Laying Croton Pipes—	
Changing taps.....	\$182 08
Horse-hire.....	390 00
Hydrant boxes.....	404 00
Laying pipe, Avenue A, between Eighty-third and Eighty-fourth streets.....	124 90
Laying pipe, Sixth avenue, between One Hundred and Twenty-second and One Hundred and Twenty-fourth streets.....	367 00
Laying pipe, Ninth avenue, between One Hundred and Twenty-sixth and One Hundred and Twenty-seventh streets.....	123 30
Laying pipe, Fordham, Pelham, etc., avenues.....	1,347 01
Laying pipe, Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Ninetieth streets.....	6,042 15
Laying pipe, Kingsbridge road, between Hoffman street and Columbia avenue.....	263 15
Laying pipe in Tiebout, Girard, Hall, etc., streets.....	6,165 60
Laying pipe, Seventy-second street, between Tenth and Eleventh avenues.....	400 65
Laying pipe, Ninety-ninth street, between Boulevard and West End avenue.....	173 25
Laying pipe, One Hundred and Sixteenth street, between Sixth and Seventh avenues.....	395 75
Laying pipe, One Hundred and Sixteenth street, between Eighth and Ninth avenues.....	430 05
Laying pipe, One Hundred and Twentieth street, between Eighth and Ninth avenues.....	428 65
Laying pipe, One Hundred and Twenty-third street, between Ninth and New avenues.....	217 20
Laying pipe, One Hundred and Twenty-third street, between Eighth and New avenues.....	243 05
Pay-rolls.....	4,182 25
Repairing gauges.....	12 00

Laying Croton Pipes—	
Stop-cocks, etc.....	
Traveling expenses.....	\$6,741 65
Total.....	\$89 62
Total.....	\$28,723 91

Laying Croton Pipes, for 1884—	
West and South streets.....	\$952 34

Public Buildings—Construction and Repairs—	
Armory, Eleventh Regiment.....	
“ “ Sixty-ninth Regiment.....	\$50 44
Brown-stone Building.....	402 53
Bureau Repairs and Supplies.....	817 17
City Hall.....	394 82
City Prison.....	279 30
Court, Civil, First District.....	38 95
“ “ Second.....	28 25
“ “ Sixth.....	2 87
“ “ Police, First.....	5 53
“ “ Third.....	144 07
“ “ Fifth.....	84 07
“ Superior.....	53 87
Court-house, New.....	865 93
“ “ Third District.....	1,915 60
“ “ Seventh.....	85 72
County Jail.....	83 81
Ganndoot Street Yard.....	112 04
Hall of Records.....	115 94
Market, Centre.....	85 08
“ “ Clinton.....	385 53
“ “ Essex.....	12 23
“ “ Fulton.....	55 14
“ “ Tompkins.....	300 45
“ “ Washington.....	26 54
No. 31 Chambers street.....	578 24
No. 49 Beekman street.....	230 07
Office Corporation Counsel.....	42 47
Pay-rolls.....	204 31
Stewart Building.....	551 25
Total.....	16 05
Total.....	\$7,968 27

Removing Obstructions in Streets and Avenues—	
Cleaning yard.....	
Removing obstructions.....	\$26 00
“ trees.....	1,426 00
Traveling expenses.....	157 50
Total.....	91 95
Total.....	\$1,701 45

Public Drinking-hydrants—	
Repairing hydrants.....	\$2,537 61

Repairing and Renewal of Pipes, Stop-cocks, etc.—	
Boiler, etc.....	
Bolt ends.....	\$39 12
Cement.....	140 42
Coal.....	24 00
Coke.....	74 50
Couplings.....	35 00
Hydrant boxes.....	61 30
“ plugs.....	378 00
Hydrants.....	97 50
Lowering pipe.....	520 00
Lumber.....	499 14
Packing.....	82 11
Pay-rolls.....	24 00
Repairing hydrants.....	27,862 38
Salt.....	633 79
Setting curb.....	28 00
Stop-cock boxes, etc.....	185 75
Traveling expenses.....	120 00
Waste valves.....	40 90
Wood.....	122 18
Total.....	97 50
Total.....	\$31,075 59

Repairs and Renewal of Pavements and Regrading—	
Bridge-stone.....	\$975 00
Horse-keeping.....	200 00
Pay-rolls.....	50,748 17
“ tools.....	1,124 64
“ wagon.....	424 35
Sand.....	16 04
Supplies.....	3,677 87
Tools.....	58 85
Traveling hydrants.....	31 00
Trucking stone.....	48 70
Total.....	442 50
Total.....	\$57,747 72

Repaving Streets and Avenues—	
Essex street, between Houston and Division streets.....	\$14,384 03
Leonard, Doyer, Baxter and Pearl streets.....	4,433 40
Monroe street, between Catharine and Clinton streets.....	12,965 23
Sullivan street, between Third and Canal streets.....	6,684 80
Thomas, Jersey, Duane, etc., streets.....	5,393 10
Fourth and Hester streets.....	3,177 20
Fourth street, between Bowery and Avenue B.....	14,938 88
Fifth street, between Bowery and Lewis street.....	24,725 97
Ninth and Thirty-sixth streets.....	6,044 50
Eleventh street, between Avenues B and D.....	5,932 95
Twelfth street, between Second avenue and Avenue A.....	1,845 12
Thirty-fifth and Forty-fourth streets.....	6,911 43
Forty-seventh street, between Tenth and Eleventh avenues.....	4,714 25
Tenth avenue, between Fifty-ninth and Sixty-fourth streets.....	16,123 28
Surveying.....	2,635 16
Total.....	\$130,909 30

Repaving Streets and Avenues, for 1884—	
Stone street, between Broadway and Broad street.....	\$98 23

Roads, Streets and Avenues, Unpaved—Maintenance, etc.—	
Lumber.....	\$63 27
Pay-rolls.....	7,233 47
Screenings.....	203 35
Stone.....	300 13
Total.....	\$7,800 22

Roads, Streets and Avenues, Unpaved—Maintenance, etc., for 1883—	
Payment on judgment.....	\$584 48

Sewers—Repairing and Cleaning—

Basin covers.....	\$125 00
Basin-heads.....	170 00
Brick and cement.....	269 40
Horse-keeping.....	111 00
Manhole covers.....	335 41
Pay-rolls.....	16,363 12
Repairing basins.....	182 36
" manholes.....	1,215 70
" sewers.....	2,409 05
Sewer-pipe.....	213 75
Sounding rods.....	106 34
Tools.....	78 95
Traveling expenses.....	236 67
Total.....	\$21,816 75

Street Improvements—For Surveying, Monumenting and Numbering Streets—

Pay-roll.....	\$303 00
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Supplies for and Cleaning Public Offices—

Armory, First Battery.....	\$39 46
" Second ".....	11 00
" Eighth Regiment.....	11 00
" Ninth ".....	10 25
" Eleventh ".....	59 43
" Twelfth ".....	11 00
" Twenty-second Regiment.....	126 00
" Seventy-first ".....	32 02
Brown-stone Building.....	472 54
Bureau Repairs and Supplies.....	4,203 10
City Hall.....	264 54
City Prison.....	97 03
Court, Civil, First District.....	36 00
" Second ".....	22 00
" Fifth ".....	22 00
" Sixth ".....	60 75
" Eighth ".....	28 09
" Ninth ".....	26 01
" Police, First ".....	25 88
" Second ".....	32 95
" Third ".....	17 53
" Fifth ".....	45 80
" Sixth ".....	39 27
" Special Sessions.....	21 50
" Superior.....	1,753 68
" Supreme.....	790 87
Court-house, New.....	1,967 25
" Fifth District.....	11 00
" Sixth District.....	30 00
Department of Finance.....	700 98
" Public Works.....	193 80
" Taxes and Assessments.....	6 00
Gansevoort Street Yard.....	37 04
Hall of Records.....	19 46
Market, Tompkins.....	60 00
Office, Assessment Commission.....	35 34
" Corporation Attorney.....	67 96
" Corporation Counsel.....	211 25
" County Clerk.....	30 00
" Mayor.....	4 50
" Public Administrator.....	21 37
" Surrogate.....	34 75
Pay-rolls.....	14,303 50
Rivington Street Yard.....	24 51
Twenty-fourth Street Yard.....	5 00
Total.....	\$26,123 01

Surveys, Maps, etc., for Board of Street Openings—

Pay-rolls.....	\$3,999 29
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Water Supply for the Twenty-fourth Ward—

Laying pipe.....	\$662 60
Supplying water.....	1,121 08
Total.....	\$1,783 68

RECAPITULATION OF APPROPRIATIONS.

Aqueduct—Repairs, Maintenance and Strengthening.....	\$71,744 59
Aqueduct—Repairs, Maintenance and Strengthening, for 1884.....	3 26
Aqueduct—Repairs, Maintenance and Strengthening—Salaries.....	5,190 27
Boulevard, Roads and Avenues, Maintenance of.....	30,803 57
Boulevard, Roads and Avenues, Maintenance of—Salaries.....	450 00
Bronx River Works—Maintenance and Repairs.....	3,073 34
Bronx River Works—Maintenance and Repairs—Salaries.....	300 00
Contingencies—Department of Public Works.....	595 20
Flagging Sidewalks and Fencing Vacant Lots.....	832 80
Foot Bridge at Fourth Avenue and Forty-first Street, for 1882.....	2,915 00
Free Floating Baths.....	2,073 06
Free Floating Baths—Salaries.....	6,820 50
Iron Bridge over Fourth Avenue, at Ninety-eighth Street.....	714 10
Lamps and Gas and Electric Lighting.....	179,042 95
Lamps and Gas and Electric Lighting—Salaries.....	1,449 96
Laying Croton Pipes.....	28,723 91
Laying Croton Pipes, for 1884.....	952 34
Laying Croton Pipes—Salaries.....	4,118 16
Public Buildings—Construction and Repairs.....	7,968 27
Public Drinking Hydrants.....	2,537 01
Removing Obstructions in Streets and Avenues.....	1,701 45
Removing Obstructions in Streets and Avenues—Salaries.....	680 00
Repairing and Renewal of Pipes, Stop-cocks, etc.....	31,075 59
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries.....	8,254 15
Repairs and Renewal of Pavements and Regrading.....	57,747 72
Repairs and Renewal of Pavements and Regrading—Salaries.....	3,100 50
Repaving Streets and Avenues.....	130,900 30
Repaving Streets and Avenues, for 1884.....	98 23
Repaving Streets and Avenues—Salaries.....	2,364 00
Roads, Streets and Avenues, Unpaved—Maintenance, etc.....	7,800 22
Roads, Streets and Avenues, Unpaved—Maintenance, etc., for 1883.....	584 28
Salaries—Department of Public Works.....	21,405 63
Sewers—Repairing and Cleaning.....	21,816 75
Sewers—Repairing and Cleaning—Salaries.....	2,074 48
Sewerage System—Salaries.....	4,344 03
Street Improvements—For Surveying, Monumenting and Numbering Streets.....	303 00
Supplies for and Cleaning Public Offices.....	26,123 01
Supplies for and Cleaning Public Offices—Salaries.....	6,617 23
Surveys, Maps, etc., for Board of Street Openings.....	3,999 29
Supplying Water to Shipping and for Building Purposes—Salaries.....	2,017 50
Water Supply for the Twenty-fourth Ward.....	1,783 68
Total.....	\$685,717 99

FUNDS AND TRUST ACCOUNTS.

CROTON WATER FUND.

Coal.....	\$110 25
Damage to trees.....	225 50
Drawing implements.....	93 16
Horse-hire.....	168 25
Horse-keeping.....	65 00
Land.....	1,215 21
Laying pipes.....	24,552 26
Lumber.....	306 95
Negotiating claims.....	920 00
Pay-rolls.....	32,971 77
Printing, etc.....	1,200 37
Professional services.....	898 98
Rent of mill seat.....	300 00
Rent of offices.....	440 00
Repairing instruments.....	50 10
Repairing pipe.....	67 75
Reservoir, Williamsbridge.....	48,915 00
Sodding.....	476 75
Teaming.....	27 00
Traveling expenses.....	786 84
Deduct Requisition for Land, canceled.....	113,791 14
Total.....	\$113,712 99

FUND FOR LOCAL IMPROVEMENTS.

Paving—	
First avenue, between Ninety-second and One Hundred and Ninth streets.....	\$21,618 75
Eighty-eighth street, between Second and Third avenues.....	208 90
Eighty-ninth street, between Avenue A and First avenue.....	209 40
Ninety-third street, between Avenue A and First avenue.....	211 90
Total.....	\$22,248 95
Receiving-basins—	
Ninth avenue, at intersection of Seventy-eighth, Seventy-ninth and Eightieth streets.....	\$79 80
Regulating, Grading, etc.—	
Eleventh avenue, between Kingsbridge road and Dyckman street.....	\$11,200 35
West End avenue, between Seventy-second street and Boulevard.....	15,400 00
Fort Washington Ridge road, between Eleventh avenue and Kingsbridge road.....	15,991 50
Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Ninetieth streets.....	6,979 88
Sixty-fourth street, between Sixth avenue and East river.....	288 25
Eighty-fifth street, between Tenth avenue and Riverside Drive.....	363 85
Eighty-eighth street, between Tenth avenue and Riverside Drive.....	379 50
Ninety-third street, between West End avenue and Riverside Drive.....	5,418 00
Ninety-fourth street, between Boulevard and Riverside Drive.....	1,540 00
Ninety-fifth street, between Tenth avenue and Riverside Drive.....	34,130 22
Ninety-eighth street, between Fourth and Fifth avenues.....	221 75
Ninety-ninth street, between Eleventh avenue and Riverside Drive.....	1,205 40
One Hundredth street, between Fourth and Fifth avenues.....	225 75
One Hundred and Third street, between Ninth and Tenth avenues.....	210 00
One Hundred and Twelfth street, between Seventh and Eighth avenues.....	4,267 65
One Hundred and Eighteenth street, between Fourth and Sixth avenues.....	2,291 80
One Hundred and Twentieth street, between Eighth and Ninth avenues.....	211 25
One Hundred and Twenty-sixth street, between Tenth avenue and Boulevard.....	3,934 61
One Hundred and Forty-first street, between Tenth and Diagonal avenues.....	69 13
One Hundred and Forty-fourth street, between Seventh and New avenues.....	277 75
One Hundred and Fifty-first street, between Boulevard and St. Nicholas avenue.....	374 75
One Hundred and Fifty-third street, between Seventh and New avenues.....	3,632 30
One Hundred and Fifty-seventh street, between Tenth avenue and Boulevard.....	201 25
One Hundred and Fifty-eighth street, between Kingsbridge road and Public Drive.....	320 83
One Hundred and Sixty-fifth street, between Tenth and Eleventh avenues.....	205 00
One Hundred and Eighty-fifth street, between Tenth avenue and Kingsbridge road.....	4,064 55
Total.....	\$113,405 32

Sewers—

Lexington avenue, between Ninety-fifth and Ninety-seventh streets.....	\$2,334 96
Fourth avenue, between Fifty-seventh and Fifty-eighth streets.....	45 15
Tenth avenue, between Fifty-sixth and Fifty-seventh streets.....	59 10
Tenth avenue, between One Hundred and Sixty-second and One Hundred and Seventieth streets.....	7,433 39
Fifty-ninth street, between Eighth avenue and summit east.....	144 39
Eighty-third street, between Boulevard and West End avenue.....	64 80
Eighty-eighth, Eighty-ninth and Ninetieth streets, between Ninth and Tenth avenues.....	2,307 20
One Hundred and Forty-first street, between Tenth and St. Nicholas avenues.....	1,246 00
One Hundred and Forty-first street, between Boulevard and Diagonal avenue.....	98 55
One Hundred and Forty-sixth street, between Tenth and St. Nicholas avenues.....	225 00
Total.....	\$13,958 36

Pay-rolls, Engineers, etc., Sewers

" Inspectors, Sewers.....	\$2,695 66
" Inspectors, Regulating, Grading, etc.....	816 00
City Surveyors' fees.....	1,656 00
Total.....	301 55

RESTORING AND REPAVING—SPECIAL.

Pay-rolls.....	\$2,495 62
Restoring pavement, etc.....	8,593 00
Sand.....	403 31
Traveling expenses.....	38 90
Total.....	\$11,530 83

WATER-METER FUND.

Setting meters.....	\$953 39
Water-meters.....	2,513 00
Total.....	\$3,466 39

RECAPITULATION OF FUNDS.

Croton Water Fund.....	\$113,712 99
Fund for Local Improvements—	
Paving.....	\$22,248 95
Receiving-basins.....	79 80
Regulating, grading, etc.....	113,405 32
Sewers.....	13,958 36
Pay-rolls, Engineers, Sewers.....	2,695 66
" Inspectors, Sewers.....	816 00
" Inspectors, Regulating, Grading, etc.....	1,656 00
City Surveyors.....	301 55
Restoring and Repaving (Special Fund).....	155,161 64
Water-meter Fund, No. 2.....	11,530 83
Total.....	\$283,871 85

GENERAL SUMMARY.

GENERAL SUMMARY.	
Appropriations.....	\$685,717 99
Funds, etc.....	283,871 85
Total.....	<u>\$969,589 84</u>

RECAPITULATION.

2	Laying Water-main Contracts	\$28,024 00
4	Miscellaneous Contracts	65,820 92
2	Gas Contracts	38,000 00
8	Contracts	\$132,024 92

Document "C."

Contracts made during the Three Months ending December 31, 1885.

DATE OF CONTRACT.	NATURE AND LOCATION OF WORK.	CONTRACTOR.	SURETIES.	ESTIMATED COST.
1885.	<i>Laying Water-main Contracts.</i>			
Oct. 1	Laying water-mains in Fordham, Pelham, Madison, Riverdale, Eagle, Walton, Ninth, Seventh, Bailey and St. Ann's avenues, and in Kingsbridge road, etc.	John Cornwell, Jr., 529 East 161st street.	Morris Rosendorff, 52 Eldridge street ... Solomon Jacobs, 195 E. Broadway ...	\$20,498
Nov. 7	Laying water-mains in One Hundred and Thirty-fourth, Ninety-fourth, Seventy-second, Eighty-first, One Hundred and First, Ninety-third, One Hundred and Sixty-fourth, One Hundred and Sixty-fifth, One Hundred and Fifty-sixth, Worth, Ash, Clinton and Gray streets, and in Eleventh, Anthony, Monroe and Sheridan avenues....	Hayden & Berkowitz, City Hall place	Paul Gautert, 215 E. 36th street ... Bernhard Hellring, 145 Bleeker street..	7,705 00 \$28,204 00
	<i>Miscellanous Contracts.</i>			
Oct. 12	Furnishing and delivering stop-cocks, stop-cock boxes, covers and hydrants	Charles C. Field, 83 South 10th street, Brooklyn, N. Y.	Charles H. Field, 927 Madison ave.... Maurice B. Flynn, 543 Madison ave....	\$6,660 00
" 13	Furnishing cast-iron water-pipes, branch pipes and special castings.	Theodore Sturges, 133 Henry street, Brooklyn, N. Y.	Percy R. Pyne, 25 E. 22d street ... Samuel Sloan, 7 E. 38th street	37,775 00
Nov. 24	Building foot bridge and retaining-walls, and grading Fourth avenue at Ninety-eighth street	Peter J. Mastersen, 137 1/2 Lawrence street	Thomas Woods, 274 W. 125th street ... Patrick Sheehy, 146 E. 57th street ...	18,369 92
Dec. 5	Furnishing the Department of Public Works with 600 gross tons of 2240 pounds to a ton, of Lehigh and Wilkesbarre Company's best Lehigh and Wilkesbarre coal	Communipau Coal Co., Hoboken, N. J.	Wm. H. Tillinghast, 160 Broadway	3,016 00
			Charles Runyon, 111 Broadway	\$65,820 92
	<i>Gas Contracts.</i>			
Dec. 18	Furnishing illuminating gas for lighting the public markets, armories, etc., of the City of New York, for the period from January 1 to December 31, 1886, both days inclusive	Consolidated Gas Co., 4 Irving place	Percy R. Pyne, 25 E. 22d street.... R. G. Sloan, 327 W. 73d street....	\$26,000 00
" 18	Furnishing illuminating gas for lighting the public markets, armories, etc., of the City of New York, for the period from January 1 to December 31, 1886, both days inclusive	Equitable Gas-light Co., 340 Third avenue ...	John D. Crimmins, 40 E. 68th street ... John Fox, 160 Broadway	12,000 00 \$38,000 00

Contracts Completed during the Three Months ending December 31, 1885.

DATE.	NATURE AND LOCATION OF WORK.	COST.
1885.		
Oct. 15	Regulating and grading, etc., One Hundred and Twenty-sixth street, between Tenth avenue and Grand Boulevard	\$7,557 03
Nov. 20	Regulating and grading, etc., One Hundred and Twelfth street, from Seventh to Eighth avenue	18,839 10
Dec. 17	Regulating and grading, etc., Sixty-sixth street, from Eighth avenue to Boulevard	22,728 55
Oct. 14	Paving Twelfth street, from Second avenue to Avenue A, with trap-block pavement	6,604 32
" 14	Paving Leonard street, from Elm to Baxter street; Doyer street, from Pell to Chatham street; Baxter street, from Leonard to Walker street, and Pell street, from Bowery to Mott street, with trap-block pavement	8,238 40
" 15	Furnishing and delivering 2000 cubic yards of Lehigh and Wilkesbarre Company's best Wilkesbarre coal	3,221 43
" 15	Furnishing and delivering 400 barrels Rosendale cement	3,480 00
" 21	Paving Ninth street, from Avenue A to First avenue, and Thirty-sixth street, from Third to Lexington avenue, with trap-block pavement	6,386 90
" 31	Paving Forty-fourth street, from Houston to Division street, with granite-block pavement	7,422 63
" 31	Broadway to Seventh avenue, with trap-block pavement	6,492 03
" 31	Paving Sullivan street, from Third to Canal street, with trap-block pavement	10,293 10
Nov. 10	Paving Eleventh street, from Avenue B to D, with trap-block pavement	6,382 15
" 23	Furnishing and delivering 8000 cubic yards sand	3,677 87
" 23	Laying a 36-inch waste-weir in the City of Yonkers, through the property late of Samuel J. Tilden, from Croton Aqueduct to Hudson river	7,571 45
Dec. 5	Paving Tenth avenue, from Fifty-ninth to Sixty-fourth street, with granite-block pavement	16,067 98
" 5	Paving Essex street, from Houston to Division street, with granite-block pavement	15,247 13
" 7	Resetting curb and relaying flagging around Forty-second Street Reservoir	2,980 14
" 11	Paving Monroe street, from Catharine to Clinton street, with granite-block pavement	13,596 60
" 15	Paving Thomas street, from Broadway to Greenwich street; Jersey street, from Crosby to Mulberry street; Essex Market place, from Essex to Ludlow street; Duane street, from William to Rose street; Batavia street, from Roosevelt to James street; Chestnut street, from Madison to Oak street, and Albany street, from Greenwich to Washington street, with trap-block pavement	57,605 60
" 15	Paving Fourth street, from Avenue B to Avenue D, with trap-block pavement	15,785 60
" 15	Paving Forty-seventh street, from Tenth to Eleventh avenue, with granite-block pavement	4,986 75
" 17	Resurfacing with broken trap rock, lime rock screenings and gravel, on Boulevard, from circle at Fifty-ninth street to Seventy-sixth street	18,604 00
" 17	Furnishing and delivering 1000 tons of Lehigh and Wilkesbarre Company's best Wilkesbarre coal	5,799 62
" 21	Furnishing and delivering 2,000 tons of Lehigh and Wilkesbarre Company's best Wilkesbarre coal	10,667 33
" 22	Laying waste-mat in the Hill, Anthony, Fleewood and Morris avenues, One Hundred and Seventy-sixth, One Hundred and Thirtieth, One Hundred and Thirty-first, One Hundredth, Ninety-fifth, Sixty-sixth, Summit, Anthony and Rockfield streets and in Kingsbridge road, Southern Boulevard and Washington place	10,231 48
" 22	Paving Fifth street, from Bowery to Lewis street, with granite-block pavement	24,745 97
		\$259,986 37

RECAPITULATION

13	Repairing Contracts (under chapter 476, Laws of 1875)	\$144,457	61
3	Regulating and Grading Contracts	43,274	74
2	Laying Water-main Contracts	18,392	93
7	Miscellaneous Contracts	52,861	09
25	Contracts	\$258,086	37

Document "D."

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF CHIEF ENGINEER, NO. 31 CHAMBERS STREET, ROOM 10,
NEW YORK, January 9, 1886.

Hon. ROLLIN M. SQUIRE, *Commissioner of Public Works:*

SIR—In accordance with your instructions, I herewith submit report for the quarter ending December 31, 1885, and a summary for the year 1885:

EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1885.

Aqueduct—Repairs, Maintenance and Strengthening	\$71,641	60
Aqueduct—Repairs, Maintenance and Strengthening—Salaries	5,190	27
Bronx River Works—Maintenance and Repairs	3,673	34
Bronx River Works—Maintenance and Repairs—Salaries	300	00
Croton Water Fund	89,263	31
Contingencies—Department of Public Works	193	20
Iron Bridge, Fourth avenue and Ninety-eighth street	332	10
Iron Bridge, Fourth avenue and Forty-first street	2,910	00
Laying Croton Pipes—Salaries	36,126	88
Laying Croton Pipes—Salaries	4	118
Repairing and Renewal of Pipes, Stop-cocks, etc	3,213	21
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries	9,126	50
Shifting and Building—Salaries	2,017	50
Water-meter Fund, No. 2	3,466	39
Water Supply—Twenty-fourth Ward	1,783	68
Total for quarter	\$233,561	14

SUMMARY OF EXPENDITURES FOR THE YEAR 1885.

Aqueduct—Repairs, Maintenance and Strengthening.....	\$241,767	49
Aqueduct—Repairs, Maintenance and Strengthening—Salaries.....	22,999	90
Bronx River Works—Maintenance and Repairs.....	9,652	33
Bronx River Works—Maintenance and Repairs—Salaries.....	1,100	00
Croton Water Fund.....	442,177	66
Contingencies—Department of Public Works.....	1,110	78
Furnishing Pipe to North Brother Island.....	3,135	25
Forty-second Street Reservoir—Reconnections.....	3,916	35
Iron Bridge at Fourth avenue and Ninety-eighth street.....	1,096	10
Iron Bridge at Fourth avenue and Forty-first street.....	2,915	05
Laying Croton Pipes.....	153,226	96
Laying Croton Pipes—Salaries.....	12,887	19
Repairing and Renewal of Pipes, Stop-cocks, etc.....	30,607	40
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries.....	36,536	07
Shipping and Building—Salaries.....	8,999	50
Water-meter Fund, No. 2.....	17,022	55
Water Supply—Twenty-fourth Ward.....	7,890	60
Total for year.....	\$997,040	68

Contracts Made, Completed and Unfinished, 1885.

WORK.	CONTRACTOR.	DATE OF CONTRACT.	COST, ESTIMATED.	DATE OF FINAL ESTIMATE.	AMOUNT OF FINAL ESTIMATE.	AMOUNT PAID 1885.
Building reservoir at Kensico.....	George W. Flower.....	Oct. 31, 1880.....	\$199,568 00.....	June 27, 1885.....	\$297,715 69.....	\$39,875 94.....
Building reservoir at Kye Woods.....	L. S. Hendrick.....	Oct. 28, 1882.....	35,914 40.....	Jan. 1, 1886.....	40,107 03.....	5,793 73.....
Furnishing and laying 6-inch and 36-inch conduit pipe, Woodlawn to Williamsbridge.....	James Baird.....	Jan. 6, 1883.....	267,999 00.....	Feb. 14, 1885.....	327,880 32.....	32,472 30.....
Furnishing cast-iron pipe, etc.....	Fox & Drummond.....	March 26, 1884.....	68,240 00.....	Jan. 23, ".....	69,630 57.....	17,633 74.....
".....	M. J. Drummond.....	Aug. 5, ".....	16,856 62.....	Dec. 24, 1884.....	15,915 37.....	4,727 10.....
".....	Warren Foundry and Machine Co.....	Sept. 9, ".....	10,428 00.....	Jan. 31, 1885.....	10,784 96.....	3,457 38.....
Laying water-main in Marion avenue, etc.....	George D. Lord.....	March 31, ".....	27,510 50.....	Jan. 31, 1885.....	29,400 74.....	8,600 71.....
Furnishing coal at Ninety-eighth street and High Bridge.....	Joseph K. Wells.....	April 17, ".....	17,255 00.....	March 1, 1885.....	19,255 75.....	7,537 59.....
Furnishing stop-cocks, hydrants, etc.....	Charles C. Field.....	Aug. 29, ".....	7,661 00.....	Jan. 31, ".....	7,661 00.....	1,745 97.....
".....	James A. Branegan.....	Oct. 14, ".....	4,590 00.....	" 15, ".....	4,557 35.....	858 03.....
Building reservoir at Williamsbridge.....	Sullivan & Moore.....	June 6, ".....	457,775 00.....	".....	".....	130,233 00.....
Laying mains in Riverdale.....	Cornwell & Bortman.....	July 15, ".....	3,816 51.....	Feb. 13, 1885.....	3,998 07.....	3,770 17.....
Building gate and keeper's house at Kensico.....	Wheeler H. Britton.....	Sept. 10, ".....	10,240 00.....	Sept. 10, ".....	10,240 00.....	2,350 00.....
Laying mains in One Hundred and Forty-sixth street, etc.....	Morton & Fay.....	Oct. 13, ".....	10,340 00.....	July 31, ".....	8,013 38.....	6,792 38.....
Laying 36-inch waste-weir at Van Courtlandt.....	Bernard Mahon.....	" 15, ".....	8,565 80.....	June 25, ".....	5,335 34.....	5,068 57.....
Laying 30-inch waste-weir in the City of Yonkers.....	Richard Feore.....	Feb. 24, 1885.....	5,800 00.....	Nov. 30, ".....	7,571 43.....	7,192 97.....
Furnishing the Department of Public Works with hardware, etc., for Aqueduct.....	Fox & Drummond.....	" 26, ".....	1,319 00.....	Aug. 11, ".....	1,319 00.....	1,319 00.....
Furnishing cast-iron water pipe, etc.....	Camden Iron Works.....	March 30, ".....	48,842 75.....	".....	46,527 93.....	46,527 93.....
Furnishing the Department of Public Works with coal at Ninety-eighth street and High Bridge.....	Winant & Terhune.....	" 10, ".....	13,408 00.....	Dec. 19, ".....	10,667 33.....	10,667 33.....
Furnishing the Department of Public Works with stone at High Bridge.....	Bernard Mahon.....	" 24, ".....	8,000 00.....	Oct. 13, ".....	8,200 13.....	8,200 13.....
Furnishing composition tapping-cocks, plugs, etc.....	Charles C. Field.....	April 14, ".....	1,745 50.....	July 13, ".....	1,745 50.....	1,745 50.....
Furnishing the Department of Public Works with lumber.....	".....	" 14, ".....	2,041 00.....	Oct. 31, ".....	2,041 00.....	2,041 00.....
Furnishing and delivering Rosendale cement.....	Thos. R. Keator.....	" 20, ".....	3,480 00.....	Oct. 13, ".....	3,480 00.....	3,480 00.....
Furnishing and delivering stop-cocks, stop-cock boxes and hydrants.....	Charles C. Field.....	June 29, ".....	3,036 50.....	Aug. 17, ".....	3,036 50.....	3,036 50.....
Furnishing and delivering stop-cocks, hydrants and stop-cock boxes and covers.....	".....	" 29, ".....	5,211 25.....	Sept. 16, ".....	4,607 50.....	4,607 50.....
Laying mains in Kingsbridge road.....	Allen & O'Maley.....	July 21, ".....	11,348 00.....	".....	".....	".....
Laying mains in Delmont avenue, etc.....	James J. Conor.....	Sept. 17, ".....	13,600 00.....	Dec. 19, 1885.....	".....	".....
Furnishing the Department of Public Works with lumber.....	W. S. Lawrence.....	Sept. 17, ".....	40,772 12.....	".....	40,772 12.....	10,280 41.....
Laying mains in Fordham avenue, etc.....	John Cornwell, Jr.....	Oct. 1, ".....	20,498 00.....	".....	".....	7,495 74.....
Furnishing cast-iron pipe, etc.....	Thos. Sturges.....	" 12, ".....	37,775 00.....	".....	".....	".....
Furnishing and delivering stop-cocks, stop-cock boxes, hydrants, etc.....	Charles C. Field.....	" 12, ".....	6,660 00.....	".....	".....	5,855 44.....
Furnishing and delivering the necessary materials and resurfacing and flagging around the Forty-second street Reservoir.....	Bernard Mahon.....	Sept. 28, ".....	2,480 00.....	Dec. 7, 1885.....	2,980 14.....	2,980 14.....
Laying mains in One Hundred and Thirty-fourth street, etc.....	Thos. Hayden and Louis Berkowitz.....	Nov. 7, ".....	7,706 00.....	".....	".....	".....
Building foot-bridge and retaining-walls and grading Fourth avenue at Ninety-eighth street.....	Peter J. Masterson.....	" 24, ".....	28,362 92.....	".....	".....	".....

STORAGE RESERVOIRS.

Water was drawn from the storage reservoirs from October 1 to October 22, 1885. Since that date the reservoirs and lakes have nearly refilled, except at Kensico and Rye Ponds Reservoirs.

Storage Drawn.

	Gallons During Quarter.	Gallons During Year.
Boyd's Corners Reservoir.....	380,000,000	2,380,000,000
South East Reservoir.....	280,000,000	2,210,000,000
Lake Mahopac.....	130,000,000	300,000,000
Lake Kirk.....	80,000,000	510,000,000
Lake Gilend.....	30,000,000	80,000,000
Lake Gleneida.....	45,000,000	30,000,000
Barrett Pond.....	60,000,000	210,000,000
Kensico Reservoir.....	45,000,000	585,000,000
Rye Ponds Reservoir.....	60,000,000	840,000,000
Total gallons.....	1,005,000,000	7,145,000,000

Rain-fall—Inches.

	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL FOR QUARTER.	TOTAL FOR YEAR.
Boyd's Corners Reservoir.....	5.19	5.99	3.84	15.02	45.99
South East Reservoir.....	4.70	5.76	3.35	13.81	42.12
Kensico Reservoir.....	6.02	4.53	3.31	13.86	39.75
Croton Dam.....	5.96	6.43	2.78	15.17	50.65
Central Park Reservoir.....	5.79	4.86	2.26	12.91	39.35

Rain-fall at Storage Reservoir, Boyd's Corners, Putnam County, N. Y., including Melted Snow.

MONTH.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
January.....	3.33	2.11	2.90	3.79	4.51	3.80	1.44	5.66	6.96	2.74	1.42	2.68	4.49	2.52	4.00	4.19	4.41	2.80	5.07	5.59
February.....	3.60	3.00	1.38	3.64	6.40	3.81	1.22	3.09	2.78	3.47	4.91	0.80	3.65	2.85	2.92	5.28	5.96	5.21	6.31	4.66
March.....	3.33	1.49	2.55	5.48	3.80	4.27	2.59	3.08	1.57	4.99	6.33	7.66	3.10	4.96	4.51	6.14	4.58	1.67	4.82	1.29
April.....	3.79	3.74	3.87	2.11	5.45	3.01	3.04	3.77	6.31	3.04	4.43	2.35	2.85	5.10	3.99	1.67	1.36	3.94	2.96	2.09
May.....	5.62	6.86	8.79	4.52	2.30	3.45	3.69	2.91	1.99	1.08	3.99	0.85	4.97	2.45	1.17	3.74	6.30	2.86	4.33	2.44
June.....	4.45	5.28	4.53	3.59	2.06	5.73	4.00	0.71	3.57	3.02	2.52	4.95	4.65	5.29	1.28	5.72	3.04	5.64	2.04	1.19
July.....	4.01	5.25	2.13	2.26	3.43	5.07	4.34	2.21	5.98	3.10	3.42	4.65	4.28	5.95	5.65	2.45	3.63	4.26	6.54	5.27
August.....	6.56	10.04	6.98	1.92	5.10	5.24	5.99	5.73	2.75	10.33	1.20	2.54	2.66	5.83	3.60	1.71	3.92	2.09	4.50	7.35
September.....	4.92	3.62	9.33	3.20	2.85	1.44	3.69	3.73	3.36	2.11	5.21	1.49	6.61	3.43	2.69	0.75	14.33	2.45	1.69	1.09
October.....	5.09	3.66	0.87	9.46	4.73	6.18	2.15	5.13	2.40	3.61	1.50	8.38	3.78	0.95	3.25	3.65	3.33	6.99	3.74	5.19
November.....	3.80	3.10	4.65	2.43	2.51	4.35	4.91	3.72	2.72	4.61	3.40	8.16	4.36	2.49	2.97	4.50	1.66	1.79	4.37	5.99
December.....	3.27	2.62	2.35	5.96	1.49	2.59	3.68	4.13	1.78	1.56	2.35	1.52	8.74	4.26	2.49	6.53	2.68	3.45	7.34	3.84
Totals.....	51.77	50.77	50.33	48.36	44.63	48.94	40.74	43.87	42.37	43.66	40.68	46.03	54.14	46.08	38.52	46.33	55.20	43.15	53.71	45.99

BRONX RIVER SUPPLY.

The Commissioners appointed to appraise damages along the Bronx river and along roads at Williamsbridge Reservoir have held regular meetings during the quarter.

All contracts have been completed, except that of the Williamsbridge Reservoir, which has been prosecuted as fast as was deemed best for the security of the work.

All work has been suspended for the winter. A force have been employed in cleaning out ditches, clearing around reservoirs, repairing roads and other necessary work during the year.

Nine million gallons per day has been supplied during the quarter.

3,958,000,000 gallons has been supplied from the Bronx river in the year 1885.

Lands Acquired and Damages Paid in 1885.

PARCEL NO.	NAME OF OWNER.	DAMAGES.	AMOUNT PAID.	REMARKS.
1	George Forrester and others.....	For diversion of water.....	\$925 00	By Commission.
2	Maria E. Arrowsmith and others.....	"	212 00	"
3	Margaret S. See and others.....	"	1,507 00	"
4	Sarah Miller and others.....	"	491 00	"
6	George W. Sutton and others.....	"	514 00	"
7	Moses F. Fowler and others.....	"	905 00	"
8	Levi Hunt and others.....	"	430 00	"
9	James Costello and others.....	"	1,120 00	"
10	Sarah Strang and others.....	"	197 00	"
11	Lewis M. Fisher and others.....	"	779 00	"
14	William S. Heath and others.....	"	185 00	"
15	The White Plains Rural Cemetery and others.....	"	398 00	"
19	Francis A. Albro and others.....	"	534 00	"
20	Hester A. Pullen and others.....	"	779 00	"
22	Delia McNicholas and others.....	"	190 00	"
23	Margaret Fahey and others.....	"	220 00	"
24	Thomas Burns and others.....	"	157 00	"
25	Ann Kitchen and others.....	"	215 00	"
27	Michael Conroy and others.....	"	215 00	"
28	Thomas N. Cooke and others.....	"	210 00	"
31	Henry O'Keefe and others.....	"	235 00	"
32 and 33	Charles Mahoney and others.....	"	207 00	"
34	John McAreale and others.....	"	157 00	"
36	Jacob Conrad and others.....	"	182 00	"
37	John W. Young and others.....	"	157 00	"
38	Margaret Barrett and others.....	"	157 00	"
39	Michael Marran and others.....	"	157 00	"
40	Thomas Magraw and others.....	"	157 00	"
41	Frank Forhanback and others.....	"	1,130 00	"
42	Margaret Fahey and others.....	"	215 00	"
43 and 44	Monmouth G. Hart and others.....	"	237 00	"
48	Sarah E. Howitt and others.....	"	52 00	"
49	Christiana Glockner and others.....	"	75 00	"
50 and 51	Charles Wiegand and others.....	"	624 00	"
52	Margaret A. Mills and others.....	"	765 00	"
54	Grace P. Brant and others.....	"	2,050 00	"
55	Margaret A. Mills and others.....	"	185 00	"
56	"	"	50 00	"
57	Charles Ferris and others.....	"	420 00	"
58	Joanna McCarty and others.....	"	157 00	"
59	John B. Lyon and others.....	"	25 00	"
60	Caroline Fisher and others.....	"	420 00	"
64	William Horton and others.....	"	380 00	"
65	William N. Armstrong and others.....	"	52 00	"
66	Charles E. Fogg and others.....	"	52 00	"
67	Bartholomew Smith and others.....	"	852 00	"
12 and 13	James S. Shute and others.....	"	134 00	"
21 and 22	James D. McCabe and others.....	"	132 00	"
23	Peter U. Fowler and others.....	"	725 00	"
26	Isaac M. Hunt and others.....	"	157 00	"
..	James Costello.....	For land.....	134 05	By Commission- er of Public Works.
..	James L. Shute and others.....	"	69 00	By Commission- er of Public Works.
16	Samuel H. Sutton and others.....	For diversion of water.....	163 03	By Commission.
17	Edward Wells and others.....	"	102 03	"
21	Edward C. Wilson and others.....	"	365 00	"
45	Thomas Fahey.....	"	147 00	"

Amount Expended to December 31, 1885.

	TO DECEMBER 31, 1884.	IN 1885.	TOTALS.
Land and materials.....	\$20,102 34	\$238,962 52	\$259,064 86
Lands, damages and expenses.....	564,136 15	55,464 92	619,601 07
Engineering and inspection.....	188,200 00	40,000 00	228,200 00
Totals to date.....	\$2,803,363 49	\$334,427 57	\$3,137,791 06

BYRAM RIVER SUPPLY.

Surveys and searches of titles of the lands along the Byram river and Bronx river, to be affected by the diversion and use of the waters of the Byram river in New York and Connecticut, have been continued. Offers of settlement for the damages to the mills now in operation on the Byram river, in the State of Connecticut, from the diversion of the water, have been made after a long negotiation, and are less than the amounts offered by this Department in 1879, and are just and reasonable. Under chapter 542, Laws of 1885, these offers are in the hands of the Comptroller for his assent, as required under the law.

This should be attended to at once so that the lands necessary to carry out the diversion of the water can be obtained, maps of which were filed in 1881, and the work necessary be let. The plans, specifications, etc., for same are now ready.

SURVEYS, ETC., FOR THE NEW AQUEDUCT.

During the year 1885, surveys and plans for the New Aqueduct, from the north side of the Harlem river to One Hundred and Thirty-fifth street, have been made, and plans and specifications submitted to the Aqueduct Commissioners.

Surveys for lands necessary for the New Aqueduct on Manhattan Island have been made, and six maps of same submitted to the Aqueduct Commissioners.

Surveys, plans and specifications are being made and prepared for the distribution of the water to be furnished through the New Aqueduct below One Hundred and Thirty-fifth street.

Surveys for lands necessary for reservoir purposes on Croton river, between Quaker Bridge and Croton Dam, have been completed, and maps of same submitted to the Aqueduct Commissioners.

Surveys are now in progress of lands necessary for reservoir purposes on Croton river, between Croton Dam and Croton Falls.

Plans, calculations and surveys are now being made for reservoir on the east branch of the Croton river at Sodom, Putnam County, New York.

The necessary surveys, maps, etc., for the use of the Land Commissioners appointed to appraise the lands taken for the New Aqueduct in Westchester County, have been made and furnished as called for under instructions of the Corporation Counsel.

AQUEDUCT—REPAIRS, MAINTENANCE AND STRENGTHENING.

The appropriation being nearly exhausted, all new work was stopped early in October and the force reduced.

The regular work of maintaining drains, watching and treating leaks, the care of gate-houses, machinery, etc., was carried on.

The work at the Glen, Yonkers; at Widow's bank and on steps at High Bridge were continued so as to be left in good shape for the winter.

During the year 1885 the following work was done:

Summary of Work on Croton Aqueduct for Year 1885.

DIVI- SION.	Earth Excavation.	Loose Rock Excavation.	Stone Quarried.	Stone Hammer Dressed.	Stone Cutting.	Cut Stone Masonry.	Rubble Masonry.	Dry Masonry.	Brick Masonry.	Aqueduct Arching.	Fence Built.	Fence Rebuilt.	Paving.	Soiling.	Masonry Vanted.	Drain-pipe Laid.	Grading.
	Cubic Yds.	Cubic Yds.	Cu. Yds.	Cu. Ft.	Cu. Feet.	Cubic Yds.	Cubic Yds.	Cu. Yds.	Lin. Ft.	Lineal Feet.	Lineal Feet.	Sq. Feet.	Sq. Yds.	Sq. Ft.	Lin. Ft.	Cu. Yds.	
1st.....	50	....	..	..	....	....	40	..	..	500	900	....	1,200	225	..	..
2d.....	1,000	900	....	..	400	2,180	....	2,030	22	..	750	1,500	200	....	..	295	
3d.....	5,460	200	562	..	337	460	810	190	122	730	3,322	900	1,675	1,900	..	955	50
4th.....	5,337	....	....	..	..	160	740	724	138	700	365	1,950	....	703	50	..	450
5th.....	6,769	500	....	100	....	958	1,052	97	450	3,680	3,920	920	930	400	40	918	..
6th.....	3,540	327	1,405	..	..	150	369	1,667	85	319	1,400	1,602	....	200	..	25	200
7th.....	450	10	....	..	400	2,025	....	10	18	..	400	160	....	1,600	..	90	..
8th.....	100	....	....	..	..	....	....	..	..	3,005	2,175	....	....	300	..	..	..
Totals.	22,556	1,887	1,967	100	1,137	4,975	2,877	5,773	482	2,189	13,822	13,107	2,795	5,930	975	1,10	1,913

Besides the necessary maintenance, general repairs have been made, and weak parts strengthened along the line of the Aqueduct.

The most important work has been: Building waste-channel at Sing Sing, connecting Aqueduct and water-bay at Tarrytown, stopping the great Dobb's Ferry leak, building waste-weir at Yonkers, stopping a very bad leak near South Yonkers, for which the water had to be shut off on the night of September 11, the completion of waste-weir at Kingsbridge, and connecting Aqueduct at that place with the water-bay, the continuance of the work on High Bridge steps.

During the time the water was shut off (September 11 to 15) a great deal of inside work was accomplished, many leaks were repaired and the Aqueduct cleaned.

The work on the several divisions may be summarized as follows:

First Division.

Upon the First Division no new work has been done, all the banks needing it having been re-arched in former years. Little else has been attempted than the general maintenance of the Aqueduct, protecting the dam, gate-house and vicinity from the dangers inevitable during the construction of the New Aqueduct and its appurtenances, patrolling the lake and keeping it free from contaminating influences, patrolling the line of the Aqueduct, keeping the grass cut and leaves gathered, watching and attending leaks, building new and repairing old fences and bridge at dam.

This has all been satisfactorily accomplished and with a small force, considering the extent of the territory included within the jurisdiction of the keeper of the First Division.

Second Division.

The rebuilding of dry-wall near Quaker Bridge, the rebuilding of high wall north of Sing Sing—this was a very important work, and by far the most dangerous place upon the division, a bad leak having given trouble there for many years; the building of a channel and connecting the same with waste-pipe at Sing Sing Kill, making it possible to use the waste at that point, it having been considered dangerous to our own and adjoining property to allow a free discharge from the pipe as it was formerly arranged.

Patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; building new and repairing old fences.

Third Division.

Finishing walls and setting coping around waste weir, gate-house and waste lot; quarrying rock in and cleaning up the latter; building barn and store-house for the use of the division; completion of arching on Penny Bridge bank; building manhole and laying about 1,000 feet of 15-inch pipe at Tarrytown to carry off storm water which had been a constant source of expense to the city and adjoining owners; re-arching "Arch bank"; making connection between water-bay and Aqueduct at Tarrytown waste-weir; patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; building new and repairing old fences.

Fourth Division.

Rebuilding retaining-wall at Mintum's, near Hastings; completion of retaining-wall at Geisner's, in Dobb's Ferry; re-arching Strang's bank; re-arching Barney's bank; stopping the Dobb's Ferry leak which has been running for many years; patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; building new and repairing old fences.

Fifth Division.

Building retaining-wall below South Yonkers; building retaining-wall and re-arching at Horton's Meadow bank; building retaining-walls in the Glen at Yonkers; building extension to keeper's house; building waste-weir at Yonkers; patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; building new and repairing old fences.

Sixth Division.

The completion of retaining-wall at O'Brien's bank, and extending the culvert; extension to keeper's house; re-arching "Snake Lot" bank; building wall and re-arching "Widow's bank"; stopping leak on latter bank while Aqueduct was empty (September 11 to 15); completion of gate-house and appurtenances; patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; rebuilding new and repairing old fences.

Seventh Division.

The principal work on the Seventh Division has been the continuance of the work on the High Bridge pipes; the care of the High Bridge, engine-house, reservoir and vicinity; grading around High Bridge depot; setting curve monuments on New York Island; patrolling line of the Aqueduct; keeping grass cut and leaves gathered; watching and attending leaks; building new and repairing old fences.

Eighth Division.

The care of Forty-second street and Central Park reservoirs, gate-houses, engine-houses, large street-mains and stop-cocks; building fences, pointing masonry and flagging around Forty-second Street Reservoir; keeping grass cut and leaves gathered; building new and repairing old fences.

HIGH BRIDGE, 1885.

Performance of High Service Pumping Engines at High Bridge for the Year 1885.

NUMBER OF DAYS PUMPING.	NUMBER OF STROKES.	HEIGHT PUMPED, FEET.	NUMBER OF GALLONS PUMPED.	POUNDS OF COAL CONSUMED.	POUNDS OF OIL EXPENDED.	POUNDS OF WASTE EXPENDED.
365	23,729,244	100	1,672,911,702	2,893,650	553	264
Average per month..	1,977,438	100	138,129,475	241,137	....	....

Average cost of pumping 1,000,000 gallons 100 feet high, \$7.32.

Average duty, 48,114,200 pounds raised 1 foot with 100 pounds of coal.

Average amount pumped daily, 4,583,319 gallons.

NINETY-EIGHTH STREET, 1885.

Performance of High Service Pumping Engines at Ninety-eighth Street Engine-house for the Year 1885.

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	25,959,136	74	2,828,782,826	3,456,523	473	186
Average per month..	2,162,678	74	235,731,902	288,044	....	....

Average cost of pumping 1,000,000 gallons 74 feet high, \$4.68.

Average duty, 50,556,300 pounds raised 1 foot with 100 pounds of coal.

Average amount pumped daily, 7,751,000 gallons.

Laying Croton-pipes.

Contracts for laying mains in—

Tiebout avenue, between Highbridge road and Clarke street.
Gerard avenue, between Jerome avenue and One Hundred and Sixty-first street.
Hull avenue, between Southern Boulevard and Suburban street.
Anthony avenue, between One Hundred and Seventy-seventh and Gray streets.
Fleetwood avenue, between Washington place and One Hundred and Seventy-sixth street.
Morris avenue, between Washington place and One Hundred and Seventy-sixth street.
One Hundred and Seventy-sixth street, between Fleetwood and Morris avenues.
One Hundred and Seventieth street, between Third and Railroad avenues.
One Hundred and Thirty-sixth street, between Sixth and Seventh avenues.
One Hundred and Thirty-first street, between Sixth and Seventh avenues.
One Hundredth street, between Boulevard and Riverside Drive.
Ninety-fifth street, between Ninth and Tenth avenues.
Sixty-sixth street, between Eighth and Ninth avenues.
Summit street, between Anthony street and Williamsbridge road.
Rockfield street, between Anthony street and Williamsbridge road.
Anthony street, between Summit and Rockfield streets.
Kingsbridge road, between Williamsbridge road and Highbridge road.
Southern Boulevard, between Lincoln and St. Ann's avenues.
Washington place, between Anthony and Fleetwood avenues.
Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Ninetieth streets.
Avenue A (east side), between Eighty-third and Eighty-fourth streets.
One Hundred and Twentieth street, between Eighth and Ninth avenues.
Warren street, between Independence and Westchester avenues.
One Hundred and Sixteenth street, between Eighth and Ninth avenues.
Ninety-ninth street, between Boulevard and Eleventh avenue.
Seventy-second street, between Boulevard and Eleventh avenue.
One Hundred and Twenty-third street, between Eighth and Ninth avenues.
One Hundred and Fifty-sixth street, between Railroad and College avenues.
One Hundred and Sixteenth street (south side), between Sixth and Seventh avenues.

Sixth avenue (west side), between One Hundred and Twenty-second and One Hundred and Twenty-fourth streets.
Kingsbridge road, between Hoffman street and Columbia avenue.
Ninth avenue, between One Hundred and Twenty-sixth and One Hundred and Twenty-seventh streets.
Forty-second street, between Prospect place and 150 feet east.
Eighty-ninth street, between First and Second avenues.
Eighth avenue, between Ninetieth and Ninety-second streets.
Thirty-first street, between First avenue and East river.
Avenue A (west side), between Seventy-ninth and Eightieth streets.
One Hundred and Forty-first street, between Seventh and Eighth avenues.
Eighty-fifth street, between Ninth and Tenth avenues.
Eleventh avenue, between Seventy-third and Seventy-fifth streets.
—have been completed.

Contracts for pipes, branches, stop-cocks and hydrants, and laying pipe have been entered into

Amount of Pipe Laid.

	During Quarter.	During Year.
20-inch.....	38 lineal feet.	38 lineal feet.
12-inch.....	16,583	33,549
6-inch.....	23,186	53,408
4-inch.....	97	135
Totals.....	39,904=7 ³ / ₁₀₀ miles.	87,130=16 ¹ / ₁₀₀ miles.

Stop-cocks Set.

	During Quarter.	During Year.
12-inch.....	14	26
6-inch.....	41	100
4-inch.....	5	9
Total.....	60	135

Hydrants Placed.

	During Quarter.	During Year.
"A".....	72	106
No. 1.....	10	12
Total.....	82	178

Summary, 1885.

Diameter of Pipes.	Pipe Laid to Dec. 31, 1884, feet.	Pipe Laid, Dec. 31, 1884, to Dec. 31, 1885, feet.	Total Pipe Laid to Dec. 31, 1885, feet.	Stop-cocks Set to Dec. 31, 1884.	Stop-cocks Set in 1885.	Total Stop-cocks Set to Dec. 31, 1885.	Hydrants, Pattern.	Hydrants Placed to Dec. 31, 1885.	Hydrants Placed in 1885.	Total Hydrants Placed to Dec. 31, 1885.
48-inch.....	65,654	.....	65,654	16	.....	16	Nos. 1, 2 and 3	3,427	16	3,443
36-inch.....	94,573	.....	94,573	40	.....	40	Victor.....	139	.....	139
30-inch.....	41,773	.....	41,773	29	.....	29	"A" hydrants	2,171	165	2,336
24-inch.....	11,542	.....	11,542	13	.....	13	"B" hydrants	1,663	.....	1,663
20-inch.....	193,009	38	193,047	180	.....	180	Totals.....	7,400	121	7,521
16-inch.....	17,130	.....	17,130	22	.....	22				
12-inch.....	693,955	34,666	728,621	1,412	28	1,440				
10-inch.....	6,629	.....	6,629	15	.....	15				
6-inch.....	1,815,312	54,919	1,870,231	4,174	101	4,275				
4-inch.....	31,617	250	32,867	109	10	119				
Total feet.....	2,979,194	89,873	3,069,067	5,950	133	6,083				
Miles.....	562.91	17.02	579.93							

STREETS AND AVENUES IN WHICH WATER-MAINS HAVE BEEN LAID IN 1885.

Twenty-inch Pipe.

One Hundred and Seventy-third street, crossing Kingsbridge road.

Twelve-inch Pipe.

Riverside Drive, between One Hundred and Third and One Hundred and Thirteenth streets.
First avenue, between Ninety-sixth and One Hundred and Ninth streets.
Tenth avenue, between One Hundred and Seventy-third and One Hundred and Ninetieth streets.

Lexington avenue, between One Hundred and Seventeenth and One Hundred and Eighteenth streets.

Ninety-fourth street, between Second and Third avenues.

Sedgwick avenue, between Jerome avenue and Wolf street.

Eight avenue, between One Hundred and Tenth and One Hundred and Sixteenth streets.

Seventh avenue, west side, between One Hundred and Thirty-third and One Hundred and Thirty-fourth streets.

Kingsbridge road, between Eleventh avenue and One Hundred and Seventy-third street.

Southern Boulevard, between Lincoln and St. Ann's avenues.

One Hundredth street, between Boulevard and Riverside Drive.

Gerard avenue, between Jerome avenue and One Hundred and Sixty-first street.

Ninth avenue, between Sixty-eighth and Sixty-ninth streets.

Ninth avenue, between Seventy-seventh and Eighty-first streets.

Seventh avenue, between One Hundred and Tenth and One Hundred and Sixteenth streets.

St. Ann's avenue, between Southern Boulevard and Third avenue.

Sixth avenue, between One Hundred and Twenty-second and One Hundred and Twenty-fourth streets.

Fordham and Pelham avenues, between Hoffman street and Washington place.

Six-inch Pipe.

Anderson avenue, between Orchard and Bridge streets.

Marcher avenue, between Bridge street and 300 feet north of Devoe street.

Bridge street, between Marcher and Claremont avenue.

Claremont avenue, between Bridge and Devoe streets.

Ninety-third street, between Boulevard and Tenth avenue.

One Hundred and Second street, between Fourth and Lexington avenues.

One Hundred and Fifty-ninth street, between Tenth and Eleventh avenues.

One Hundred and Fifty-seventh street, between Tenth and St. Nicholas avenues.

Sixty-eighth street, between Avenue A and East river.

College avenue, between One Hundred and Forty-first and One Hundred and Forty-fourth streets.

Lind avenue, between Devoe and Wolf streets.

One Hundred and Forty-sixth street, between Tenth and Eleventh avenues.

Sixth avenue, between One Hundred and Thirty-sixth and One Hundred and Fortieth streets.

Seventy-fourth street, between Boulevard and Eleventh avenue.

Avenue A, east side, between Eighty-fourth and Eighty-sixth streets.

Seventy-fifth street, between First and Second avenues.

Seventh avenue, between Boulevard and Eleventh avenue.

Union avenue, between One Hundred and Sixty-ninth street and Boston avenue.

One Hundred and Fortieth street, between Fifth and Sixth avenues.

One Hundred and Thirty-fourth street, between Eighth and St. Nicholas avenues.

Ninth avenue, between Ninety-third and Ninety-fourth streets.

Anthony avenue, between One Hundred and Seventy-seventh and Gray streets.
Washington place, between Anthony and Fleetwood avenues.
Fleetwood avenue, between Washington place and One Hundred and Seventy-sixth street.
One Hundred and Seventy-sixth street, between Fleetwood and Morris avenues.
Morris avenue, between Washington place and One Hundred and Seventy-sixth street.
Summit street, between Williamsbridge road and Anthony street.
Rockfield street, between Williamsbridge road and Anthony street.
Anthony street, between Summit and Rockfield streets.
Hull avenue, between Southern Boulevard and Suburban street.
Tiebout avenue, between Highbridge road and Clark street.
Kingsbridge road, between Highbridge road and Williamsbridge road.
Tenth avenue, between Ninety-fifth and Ninety-sixth streets.
St. Nicholas place, between One Hundred and Forty-eighth and One Hundred and Fiftieth streets.

Avenue A, east side, between Eighty-third and Eighty-fourth streets.
Sixty-sixth street, between Eighth and Ninth avenues.
One Hundred and Seventieth street, between Washington and Railroad avenues.
One Hundred and Twentieth street, between Eighth and Ninth avenues.
Sixty-eighth street, between Eighth and Ninth avenues.
One Hundred and Sixteenth street, between Eighth and Ninth avenues.
Ninety-ninth street, between Boulevard and Eleventh avenue.
One Hundred and Fiftieth street, between Walton and River avenues.
Seventy-second street, between Boulevard and Eleventh avenue.
One Hundred and Twenty-third street, between Eighth and Ninth avenues.
Warren street, between Independence and Westchester avenues.
One Hundred and Sixteenth street, between Sixth and Seventh avenues.
One Hundred and Thirty-fourth street, between Seventh and Eighth avenues.
One Hundred and Fifty-first street, between St. Nicholas avenue and Boulevard.
Ninety-third street, between Ninth and Tenth avenues.
Ninety-fourth street, between Eighth and Tenth avenues.
Kingsbridge road, between Hoffman street and Columbia avenue.
Ninth avenue, between One Hundred and Twenty-sixth and One Hundred and Twenty-seventh streets.

Forty-second street, between Prospect place and 150 feet east.
Eighty-ninth street, between First and Second avenues.
Eighth avenue, between Ninetieth and Ninety-second streets.
Madison avenue, between Talmadge street and Kingsbridge road.
Creston avenue, between Highbridge road and One Hundred and Eighty-fourth street.
Thirty-first street, between First avenue and East river.
Eighty-fifth street, between Ninth and Tenth avenues.
Avenue A, west side, between Seventy-ninth and Eightieth streets.
One Hundred and Forty-first street, between Seventh and Eighth avenues.
Eleventh avenue, between Seventy-third and Seventy-fifth streets.
One Hundred and Seventy-sixth street, between Washington and Railroad avenues.
Ninety-fifth street, between Ninth and Tenth avenues.

"No. 1" Hydrants Set in 1885.

Northeast corner Kingsbridge road and One Hundred and Sixty-fourth street..... 1
Northwest corner Kingsbridge road and One Hundred and Sixty-fifth street..... 1
Southeast corner Kingsbridge road and One Hundred and Sixty-sixth street..... 1
Southeast corner Kingsbridge road and Boulevard..... 1
East side of Kingsbridge road, between One Hundred and Sixty-eighth and One Hundred and Seventieth streets..... 1
West side of Kingsbridge road, 240 feet south of One Hundred and Seventy-third street..... 1
Northwest corner Kingsbridge road and One Hundred and Seventy-third street..... 1
West side of Kingsbridge road, between One Hundred and Seventy-eighth and One Hundred and Eighty-first streets..... 2
Northwest corner Kingsbridge road and One Hundred and Eighty-fifth street..... 1
Northwest corner Riverdale avenue and Warren street..... 1
North side of Warren street, 340 feet east of Riverdale avenue..... 1

"A" Hydrants Set in 1885.

Northeast corner One Hundred and Sixth street and Riverside Drive..... 1
West side First avenue, between One Hundred and One Hundred and First streets..... 1
West side First avenue, between One Hundred and Second and One Hundred and Third streets..... 1
West side First avenue, between One Hundred and Fifth and One Hundred and Sixth streets..... 1
West side First avenue, between One Hundred and Sixth and One Hundred and Seventh streets..... 1
West side First avenue, between One Hundred and Eighth and One Hundred and Ninth streets..... 1
Northwest corner First avenue and One Hundred and Eighth street..... 1
West side Anderson avenue, between Orchard and Bridge streets..... 1
West side Marcher avenue, between Bridge and Devoe streets..... 1
West side Marcher avenue, 290 feet north of Devoe street..... 1
Northeast corner Ninety-third street and Boulevard..... 1
Northwest corner Ninety-third street and Tenth avenue..... 1
Northeast corner One Hundred and Second street and Fourth avenue..... 1
North side of One Hundred and Second street, 80 feet west of Lexington avenue..... 1
West side of Claremont avenue, between Bridge and Devoe streets..... 1
Southwest corner Claremont avenue and Devoe street..... 1
West side of College avenue, between One Hundred and Forty-second and One Hundred and Forty-third streets..... 1
West side of College avenue, between One Hundred and Forty-third and One Hundred and Forty-fourth streets..... 1
Northeast corner One Hundred and Fifty-ninth street and Boulevard..... 1
Northwest corner Sixty-eighth street and Avenue A..... 1
North side Sixty-eighth street, at East river..... 1
Northwest corner One Hundred and Fifty-seventh street and St. Nicholas avenue..... 1
Northwest corner Lexington avenue and One Hundred and Eighteenth street..... 1
Northwest corner Tenth avenue and One Hundred and Seventy-eighth street..... 1
Northwest corner Tenth avenue and One Hundred and Eighty-first street..... 1
Northeast corner Tenth avenue and One Hundred and Eighty-third street..... 1
Northeast corner Tenth avenue and One Hundred and Eighty-fifth street..... 1
Northeast corner Tenth avenue and One Hundred and Ninety-eighth street..... 1
Northeast corner One Hundred and Forty-sixth street and Boulevard..... 1
North side One Hundred and Forty-sixth street, between Boulevard and Tenth avenue..... 1
Northeast corner Ninety-fourth street and Third avenue..... 1
North side Ninety-fourth street, between Second and Third avenues..... 1
Northeast corner Sixth avenue and One Hundred and Thirty-seventh street..... 1
Northeast corner Sixth avenue and One Hundred and Fortieth street..... 1
North side One Hundred and Fortieth street, 500 feet east of Sixth avenue..... 1
Northwest corner Eighth avenue and One Hundred and Eleventh street..... 1
Southwest corner Eighth avenue and One Hundred and Thirteenth street..... 1
Northwest corner Eighth avenue and One Hundred and Fourteenth street..... 1
West side of Sedgwick avenue, 450 feet north of Jerome avenue..... 1
West side of Sedgwick avenue, 100 feet south of Devoe street..... 1
West side of Sedgwick avenue, 700 feet north of Devoe street..... 1
West side of Sedgwick avenue, 700 feet south of Wolf street..... 1
Northeast corner Seventy-fifth street and Boulevard..... 1
Northeast corner Seventy-fifth street and Eleventh avenue..... 1
Northwest corner Seventh avenue and One Hundred and Thirty-fourth street..... 1
West side of Union avenue, between One Hundred and Sixty-ninth street and Boston avenue..... 2
Northeast corner One Hundred and Thirty-fourth street and St. Nicholas avenue..... 1
Northeast corner Ninth avenue and Ninety-fourth street..... 1
Northeast corner One Hundred and Thirteenth street and Madison avenue..... 1
Northeast corner One Hundred and Thirty-sixth street and Seventh avenue..... 1
Northwest corner One Hundred and Thirty-sixth street and Sixth avenue..... 1
Northeast corner One Hundred and Thirty-first street and Seventh avenue..... 1
North side of One Hundred and Thirty-first street, between Sixth and Seventh avenues..... 1
Northwest corner Anthony avenue and One Hundred and Seventy-sixth street..... 1
Northwest corner Anthony avenue and Gray street..... 1
Northwest corner Washington place and Anthony avenue..... 1
North side of Washington place, 170 feet east of Morris avenue..... 1
North side of Washington place, 200 feet west of Morris avenue..... 1
North side of One Hundred and Seventy-sixth street, 90 feet west of Morris avenue..... 1
Northeast corner One Hundred and Seventy-sixth street and Fleetwood avenue..... 1
West side of Lind avenue, between Devoe and Wolf streets..... 3
Northeast corner Seventy-fourth street and Eleventh avenue..... 1
Southeast corner Avenue A and Eighty-fourth street..... 1
East side of Kingsbridge road, between One Hundred and Fifty-seventh and One Hundred and Fifty-eighth streets..... 1

Southeast corner Kingsbridge road and One Hundred and Seventy-third street..... 1
North side of Summit street, between Williamsbridge road and Anthony street..... 2
North side of Rockfield street, between Williamsbridge road and Anthony street..... 2
Southwest corner Hull avenue and Suburban street..... 1
Northwest corner Hull avenue and Southern Boulevard..... 1
North side of One Hundred and Seventy-sixth street, between Washington and Railroad avenues..... 1
West side of Tiebout avenue, between Highbridge road and Clarke street..... 2
Northwest corner Southern Boulevard and St. Ann's avenue..... 1
Northwest corner Southern Boulevard and Brook avenue..... 1
North side of Southern Boulevard, between Willis avenue and Brown place..... 1
North side of Southern Boulevard, between Alexander and Willis avenues..... 1
North side of Southern Boulevard, between Alexander and Lincoln avenues..... 1
West side of Kingsbridge road, between Highbridge and Williamsbridge roads..... 1
Northwest corner Sixty-sixth street and Eighth avenue..... 1
Northeast corner Sixty-sixth street and Ninth avenue..... 1
North side of Ninety-fifth street, between Ninth and Tenth avenues..... 2
Northwest corner One Hundredth street and Boulevard..... 1
Northeast corner One Hundredth street and Eleventh avenue..... 1
North side of One Hundredth street, between Riverside Drive and Eleventh avenue..... 1
Northeast corner One Hundredth street and Riverside Drive..... 1
Southeast corner St. Nicholas place and One Hundred and Forty-eighth street..... 1
Northeast corner St. Nicholas place and One Hundred and Fiftieth street..... 1
West side of Gerard avenue, between Jerome avenue and One Hundred and Sixty-seventh street..... 1
Southwest corner Gerard avenue and One Hundred and Sixty-seventh street..... 1
Northeast corner Gerard avenue and One Hundred and Sixty-fifth street..... 1
West side of Gerard avenue, between One Hundred and Sixty-first and One Hundred and Sixty-fifth streets..... 2
North side of One Hundred and Seventieth street, between Railroad and Washington avenues..... 1
North side of One Hundred and Twentieth street, between Eighth and New avenues..... 1
North side of One Hundred and Twentieth street, between Ninth and New avenues..... 1
Northwest corner Sixty-eighth street and Eighth avenue..... 1
North side of Sixty-eighth street, between Eighth and Ninth avenues..... 1
Northeast corner Sixty-eighth street and Ninth avenue..... 1
Northwest corner Ninth avenue and Seventy-seventh street..... 1
Northwest corner Ninth avenue and Eightieth street..... 1
North side of One Hundred and Sixteenth street, between Eighth and New avenues..... 1
North side of One Hundred and Sixteenth street, between Ninth and New avenues..... 1
Northwest corner Seventh avenue and One Hundred and Eleventh street..... 1
Northwest corner Seventh avenue and One Hundred and Twelfth street..... 1
Northwest corner Seventh avenue and One Hundred and Thirteenth street..... 1
Southeast corner Riverside Drive and One Hundred and Fifteenth street..... 1
Northeast corner Riverside Drive and One Hundred and Tenth street..... 1
Northeast corner Ninety-ninth street and Eleventh avenue..... 1
Northwest corner One Hundred and Fiftieth street and Walton avenue..... 1
Northwest corner One Hundred and Fiftieth street and River avenue..... 1
West side of St. Ann's avenue, between One Hundred and Thirty-fourth and One Hundred and Thirty-fifth streets..... 1
Northeast corner St. Ann's avenue and One Hundred and Thirty-sixth street..... 1
Northwest corner St. Ann's avenue and One Hundred and Thirty-ninth street..... 1
Southwest corner St. Ann's avenue and One Hundred and Forty-second street..... 1
Northwest corner St. Ann's avenue and One Hundred and Forty-third street..... 1
West side of St. Ann's avenue, between One Hundred and Fifty-sixth and John streets..... 1
West side of St. Ann's avenue, between John street and Third avenue..... 1
Southwest corner Seventy-second street and Boulevard..... 1
Southeast corner Seventy-second street and Eleventh avenue..... 1
North side of One Hundred and Twenty-third street, between Eighth and St. Nicholas avenues..... 1
Northwest corner One Hundred and Twenty-third street and St. Nicholas avenue..... 1
Northeast corner One Hundred and Twenty-third street and Ninth avenue..... 1
South side of One Hundred and Sixteenth street, between Sixth and Seventh avenues..... 1
Southwest corner One Hundred and Sixteenth street and Sixth avenue..... 1
South side of One Hundred and Thirty-fourth street, between Sixth and Seventh avenues..... 1
North side of One Hundred and Thirty-fourth street, between Sixth and Seventh avenues..... 1
Northeast corner One Hundred and Fifty-first street and Tenth avenue..... 1
Northwest corner One Hundred and Fifty-first street and Tenth avenue..... 1
Northeast corner One Hundred and Fifty-first street and Boulevard..... 1
North side of Ninety-third street, between Ninth and Tenth avenues..... 1
North side of Ninety-fourth street, between Ninth and Tenth avenues..... 2
North side of Ninety-fourth street, between Eighth and Ninth avenues..... 2
Southwest corner Kingsbridge road and Columbia avenue..... 1
Southwest corner Ninth avenue and One Hundred and Twenty-seventh street..... 1
North side of Eighty-ninth street, between First and Second avenues..... 2
Northwest corner Eighth avenue and Ninetieth street..... 1
West side of Madison avenue, between Talmadge and Irving streets..... 1
Northwest corner Madison avenue and Irving street..... 1
Northwest corner Madison avenue and Grove street..... 1
Northwest corner Madison avenue and Taylor street..... 1
Northwest corner Fordham and Pelham avenues and Arthur street..... 1
Northeast corner Fordham and Pelham avenues and Frederick street..... 1
Northeast corner Fordham and Pelham avenues and Pyn street..... 1
West side of Creston avenue, between One Hundred and Eighty-fourth and Irving streets..... 1
Northeast corner Creston avenue and Irving street..... 1
Northwest corner Creston avenue and One Hundred and Eighty-fourth street..... 1
Northeast corner Thirty-first street and First avenue..... 1
North side of Thirty-first street, at East river..... 1
South side of Eighty-fifth street, between Ninth and Tenth avenues..... 3
Northeast corner One Hundred and Forty-first street and Eighth avenue..... 1
Northeast corner One Hundred and Forty-first street and Seventh avenue..... 1
Southeast corner One Hundred and Sixth street and Ninth avenue..... 1
Southwest corner One Hundred and Sixth street and New avenue..... 1

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METERS.

No appropriation has been made for the repairs and placing of the Navarro meters paid for by the City in 1885. This leaves \$1,500,000 worth of property of no use, and loses the City the increased amounts that would be paid for water used through same, and also the benefits of the saving of water and stopping of waste, always very apparent where meters are used.

Meters placed during quarter ending December 31, 1885..... 561
Meters placed during the year ending December 31, 1885..... 2,055
Number of meters now in use..... 13,680

Water-meters in Use December 31, 1885.

WHERE PLACED.	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	TOTAL.
Hotels.....	11	63	134	67	48	19	5	....	347
Breweries, bottlers, etc.....	10	84	100	49	67	12	2	....	324
Charitable institutions.....	....	5	20	33	33	4	2	....	97
Offices.....	23	739	698	276	75	21	11	....	1,843
Manufacturing establishments....	51	180	235	203	112	4	3	....	788
Gas-works.....	....	....	10	3	2	12	13	....	40
Railroads.....	5	87	52	6	10	18	22	1	201
Stables.....	198	935	419	58	22	7	1	....	1,640
Apartment-houses.....	....	6	29	42	48	4	4	....	133
Docks.....	3	4	12	....	27	40	30	....	116
Riverdale.....	22	29	10	1	....	1	2	....	65
Miscellaneous.....	2,375	2,623	2,140	589	289	64	5	1	8,286
Total.....	2,698	4,755	3,859	1,327	733	105	100	2	13,680

KIND OF METER.	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	TOTAL.
Gem .....	....	....	2	....	4	16	6	....	28
Crown	2,410	2,380	1,570	145	61	8	10	2	6,586
Worthington	288	2,375	2,287	1,182	668	182	84	....	7,066
Total	2,698	4,753	3,859	1,327	733	206	100	2	13,680

Average Number of Gallons used Per Day through Meters.

NUMBER OF METERS.	WHERE USED.	GALLONS.
347	Hotels	1,694,000
324	Breweries, bottlers, etc	1,628,000
97	Charitable institutions	406,000
1,830	Offices	1,731,000
762	Manufacturing establishments	2,165,000
40	Gas-works	781,600
201	Railroads	1,311,800
1,624	Stables	1,120,000
133	Apartment-houses	291,000
116	Docks	1,543,000
2	Riverdale	51,300
7,448	Miscellaneous	9,446,000
12,924	Total	22,177,700

Amount received by Water Register in 1885	\$647,177 17
Amount returned to Bureau of Arrears in 1885	26,927 25
Amount received by Water Register from docks in 1885	74,954 02
Amount received by Water Register from Riverdale in 1885	2,141 50
Total	\$747,199 94

WASTE AND USE OF WATER.

The small amount of the appropriation for 1885 stopped the regular examinations of houses for waste of water, so that every consumer will soon fall into the former careless waste of water. No increased appropriation will be available for 1886. The increased number of meters now in use, the placing of new meters and keeping the accounts for same, will take all of the money appropriated, and I recommend that ten more Meter Inspectors be employed and two Clerks, and the force on Waste and Use of Water (except five for making examinations for placing meters) be discharged.

The Board of Apportionment having taken the responsibility as to waste, this Department is obligated to carry on and take care of the meter system now so extensively in use.

Examinations of Inspectors of Waste Water.

WHOLE NUMBER OF BUILDINGS EXAMINED.	WHOLE NUMBER WHERE PLUMBING WAS FOUND DEFECTIVE.	DURING QUARTER.										DURING YEAR.									
		FACETS.		URINALS.		HYDRANTS.		PIPES.		BELL COCKS.		FACETS.		URINALS.		HYDRANTS.		PIPES.		BELL COCKS.	
During Quarter.	During Year.	Leak.	Waste.	Leak.	Waste.	Leak.	Waste.	Burst.	Wanted.	Leak.	Waste.	Leak.	Waste.	Leak.	Waste.	Burst.	Wanted.	Leak.	Waste.	Burst.	Wanted.
27,066	47,590	1,071	5,231	877	9	113	12	23	5	10	21	4,664	60	192	102	60	25	107	21		

WATER SUPPLY FOR THE TWENTY-FOURTH WARD.

The rate charged for water supplied by Yonkers for this ward was, after several meetings with the Board of Water Commissioners of the City of Yonkers, reduced from fifteen (15) cents to thirteen (13) cents per hundred cubic feet.

Six hundred and ninety (690) lineal feet of pipe was laid in this district during the year.

SUPPLY OF WATER TO SHIPPING AND BUILDING.

	PERMITS ISSUED.		AMOUNT RECEIVED.	
	During Quarter.	During Year.	During Quarter.	During Year.
For water supplied to shipping	141	538	\$6,592 18	\$28,053 42
For water supplied to shipping, measured by meter .....	....	....	79,447 17	74,954 02
For water for building purposes	200	806	6,643 00	27,067 00
To engines on wharves	34	63	665 00	1,601 80
Total	375	1,407	\$33,347 45	\$133,596 24

IMPROVEMENT OF FOURTH AVENUE AT NINETY-EIGHTH STREET.

Under chapter 528, Laws of 1885, plans and specifications have been made for this work and contract entered into November 24, 1885.

It being so late in the season the work will not be commenced until spring.

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

There is along the East and North rivers twenty-five miles of six-inch and twelve-inch mains, which are so corroded by the action of salt water, that they are in constant danger of breaking; leaks now exist along same, but being within the bounds of tide water no chance is offered of their being discovered.

The taps and service-pipes to the houses are in the same condition, and no extra pressure can be put on these mains and taps until they are replaced and renewed, and when the water from the New Aqueduct is received the whole lower part of the city will have to be without increased pressure on this account.

This is the weak point in the present system of distribution, and it is a shame that the Board of Estimate and Apportionment did not appropriate a sum for that purpose.

Yours respectfully,

G. W. BIRDSALL, Chief Engineer Croton Aqueduct.

Document "E."

DEPARTMENT OF PUBLIC WORKS,
WATER PURVEYOR'S OFFICE, NO. 31 CHAMBERS STREET, ROOM 1,
New York, January 9, 1886.

Hon. ROLLIN M. SQUIRE, Commissioner of Public Works:

SIR—In compliance with your instructions I beg leave to submit the following report of the transactions of this Bureau for the quarter ending December 31, 1885, together with a summary of the work done under the direction of the Bureau during the year 1885.

REPAIRS AND RENEWAL OF PAVEMENTS AND REGRADING.

The average force employed on repairs to pavements during the quarter was as follows:
In October, 539 men and 91 carts.
In November, 534 men and 91 carts.
In December, 20 men.

In consequence of the insufficient appropriation, the repair gangs were disbanded on the 4th day of November, only twenty men being retained to attend to dangerous places in the pavements, etc.

In the summary of work for the year will be found a detailed statement in reference to the street repairs made during the season.

Forty permits were issued to citizens during the quarter to repair pavements at their own expense.

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

The following-named streets under contract to be repaved were completed during the quarter, viz.:

Essex street, from Houston to Division street.
Fourth street, from Broadway to Bowery.
Hester street, from Centre to Elizabeth street.
Forty-fourth street, from Tenth to Eleventh avenue.
Thirty-fifth street, from Broadway to Seventh avenue.
Fifth street, from Bowery to Lewis street.
Ninth street, from Avenue A to First avenue.
Thirty-sixth street, from Third to Lexington avenue.
Forty-seventh street, from Tenth to Eleventh avenue.
Sullivan street, from Third to Canal street.
Leonard street, from Elm to Baxter street.
Doyer street, from Pell to Chatham street.
Baxter street, from Leonard to Walker street.
Pell street, from Bowery to Mott street.
Thames street, from Broadway to Greenwich street.
Jersey street, from Crosby to Mulberry street.
Essex Market place, from Essex to Ludlow street.
Duane street, from William to Rose street.
Batavia street, from Roosevelt to James street.
Chestnut street, from Madison to Oak street.
Albany street, from Greenwich to Washington street.
Eleventh street, from Avenue B to Avenue D.
Monroe street, from Catharine to Clinton street.
Fourth street, from Bowery to Avenue B.
Tenth avenue, from Fifty-ninth to Sixty-fourth street.
The total number of square yards repaved during the quarter is 83,731.

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

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

In October, 78 men and 9 carts.
In November, 78 men and 9 carts.
In December, 79 men and 9 carts.

1,210 repairs were made to fire-hydrants.
102 new fire-hydrants were substituted for old ones.
7 new fire-hydrants were erected.
413 defects in pipes and stop-cocks were repaired.
139 taps were shut off on account of leaks in service-pipes.
402 defects in pavements were repaired.

PUBLIC DRINKING-HYDRANTS.

45 drinking-hydrants were repaired during the quarter.
7 new drinking-hydrants were erected.

VAULTS.

67 permits were issued for the construction of vaults.
The amount received for the same is \$12,803.41.
43 permits were issued to repair vaults.

105 vouchers were transmitted during the quarter and charged to the following accounts, viz.:	
Public Drinking-hydrants	\$2,385 78
Repaving Streets and Avenues, 1884	98 23
Repaving Streets and Avenues, 1885	130,332 22
Repaving Streets and Avenues—Salaries	1,407 00
Repairs and Renewal of Pavements and Regrading	57,456 72
Repairs and Renewal of Pavements and Regrading—Salaries	2,299 50
Repairing and Renewal of Pipes, Stop-cocks, etc.	17,135 38
Flagging Sidewalks and Fencing Vacant Lots, etc.	48 55
Restoring and Repaving—Special Fund, D. P. W.	10,389 51
Fund for Local Improvements	630 20
Total	\$222,243 09

SUMMARY OF WORK DONE DURING THE YEAR.

Repairs and Renewal of Pavements and Regrading.

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

206,735 square yards of pavement repaired.
244 old crosswalks repaired.
25 new crosswalks laid.
2,961 defects in pavements repaired.

The following is a list of the streets in which the repairs were made, viz.:

Blocks Repaired from Curb to Curb.

Sixty-second street, from Fourth to Madison avenue.
Sixty-third street, from Fifth to Madison avenue.
Sixty-fifth street, from Fifth to Madison avenue.
Eighth avenue, from One Hundred and Twenty-fourth to One Hundred and Twenty-fifth street.

Half Blocks Repaired from Curb to Curb.

Fifty-fifth street, between Fourth and Lexington avenues.
Fifty-ninth street, between Madison and Fifth avenues.
Fifty-ninth street, between Seventh avenue and Broadway, south side.
Madison avenue, between Fifty-eighth and Fifty-ninth streets, west side.
Madison avenue, between Sixty-fourth and Sixty-fifth streets, west side.

Avenues Repaired.

First avenue, from Sixty-fifth to Sixty-sixth street, Seventy-fourth to Seventy-fifth street, and Forty-third to Forty-fourth street.
Second avenue, from Ninth to Eleventh street, Thirteenth to Fourteenth street, Nineteenth to Twenty-first street, and Forty-ninth to Fiftieth street.
Second avenue, from Fifty-first to Fifty-third street, Fifty-fourth to Fifty-fifth street, Sixtieth to Sixty-fifth street, and Sixty-ninth to Seventy-fourth street.
Second avenue, from Seventy-fifth to Seventy-sixth street, Seventy-seventh to Seventy-eighth street, Seventy-ninth to Eightieth street and Eighty-ninth to Ninetieth street.
Second avenue, from One Hundred and Fifth to One Hundred and Sixth street, One Hundred and Eighth to One Hundred and Ninth street and One Hundred and Thirteenth to One Hundred and Fourteenth street.
Second avenue, from One Hundred and Sixteenth to One Hundred and Seventeenth street and One Hundred and Twenty-third to One Hundred and Twenty-fourth street.

Third avenue, from Forty-seventh to Fifty-first street, Sixty-first to Sixty-third street, Sixty-ninth to Seventieth street and Seventy-fourth to Seventy-fifth street.
 Third avenue, from Seventy-eighth to Eightieth street, Eighty-eighth to Eighty-ninth street and Ninety-eighth to One Hundredth street.
 Third avenue, from One Hundred and Fifth to One Hundred and Tenth street, One Hundred and Thirtieth to One Hundred and Fourteenth street, and One Hundred and Nineteenth to One Hundred and Thirtieth street.
 Fourth avenue, from Twenty-third to Twenty-fourth street and Fiftieth to Fifty-first street.
 Fourth avenue, from Sixty-first to Seventy-second street, east side, and Sixty-fourth to Seventy-second street, west side.
 Fifth avenue, from Fourteenth to Fifty-seventh street.
 Sixth avenue, from Thirteenth to Fourteenth street, Eighteenth to Twentieth street, west side.
 Sixth avenue, from Twenty-seventh to Twenty-eighth street and Fifty-sixth to Fifty-seventh street.
 Seventh avenue, from Fortieth to Forty-first street and Fiftieth to Fifty-first street.
 Eighth avenue, from Fifty-fifth to Fifty-sixth street.
 Ninth avenue, from Seventeenth to Eighteenth street, Twenty-fifth to Twenty-sixth street, Thirty-third to Thirty-fifth street and Fifty-third to Fifty-fourth street.
 Tenth avenue, from Thirty-first to Thirty-second street and Forty-seventh to Forty-eighth street.
 Eleventh avenue, from Twenty-seventh to Thirtieth street and Fifty-ninth to Sixtieth street.
 Thirteenth avenue, from Fifteenth to Sixteenth street and Seventeenth to Eighteenth street.
 Park avenue, from Fortieth to Forty-first street, Thirty-ninth to Fortieth street and Thirty-seventh to Thirty-eighth street, west side.
 Madison avenue, from Thirtieth to Thirty-first street.
 Lexington avenue, from Twenty-eighth to Twenty-ninth street, Fifty-second to Fifty-third street and Seventy-fourth to Seventy-seventh street.
 Lexington avenue, from Eighty-fifth to Eighty-sixth street and One Hundred and Sixteenth to One Hundred and Seventeenth street.
 Avenue A, from Fourteenth to Sixteenth street.
 Avenue B, from Second to Fifth street.
 Avenue D, from Seventh to Eighth street and Eleventh to Sixteenth street.

Streets Repaired.

Albany street, from West to Washington street.
 Attorney street, from Houston to Division street.
 Batavia street, from Roosevelt to James street.
 Beaver street, from William to Hanover street.
 Battery place, from Broadway to West street.
 Beach street, from West to Washington street.
 Barclay street, from West to Washington street.
 Broad street, from South to Wall street.
 Broome street, from South Fifth avenue to Thompson street.
 Broome street, from Greene to East street.
 Bethune street, from West street to Thirteenth avenue.
 Bedford street, from Christopher to Morton street.
 Bank street, from West to Hudson street.
 Broadway, from Forty-fifth to Forty-seventh street.
 Beckman street, from Nassau street to Park Row.
 Bleecker street, from Carmine street to Broadway.
 Birmingham street, from Madison to Henry street.
 Barrow street, from Hudson to West street.
 Cherry street, from Corlears street to Franklin Square.
 Caroline street, from Jay to Duane street.
 Collister street, from Beach to Hubert street.
 Clarkson street, from Hudson to West street.
 Cornelia street, from Bleecker to Fourth street.
 Canal street, from West to Varick street.
 Canal street, from Greene to Mott street.
 Cottage place, from Bleecker to Fourth street.
 Congress street, from Houston to King street.
 Centre Market place, from Grand to Broome street.
 Crosby street, from Howard to Bleecker street.
 Chrystie street, from Bayard to Grand street.
 Cannon street, from Houston to Grand street.
 Clarkson street, from West to Washington street.
 Downing street, from Varick to Bleecker street.
 Delancey street, from Bowery to East street.
 Dry Dock street, from Tenth to Twelfth street.
 Dover street, from South to Pearl street.
 Elm street, from Broome to Leonard street.
 Extra place.
 Elizabeth street, from Bayard to Bleecker street.
 Eldridge street, from Division to Houston street.
 Fulton street, from Gold to South street.
 Fulton street, from West to Washington street.
 Front street, from Whitehall to Beekman street.
 Front street, from James to Roosevelt street.
 Front street, from Corlears to Montgomery street.
 Greenwich street, from Fulton to Vesey street.
 Goerck street, from Grand to Third street.
 Greene street, from Houston to Canal street.
 Grand street, from Varick to Thompson street.
 Gansevoort street, from West street to Thirteenth avenue.
 Grove street, from Bleecker to Fourth street.
 Gramercy place, from Twentieth to Twenty-first street.
 Houston street, from West to Washington street.
 Houston street, from Norfolk street to East river.
 Hester street, from Bowery to Division street.
 Hamilton street, from Catharine to Pike street.
 James Slip, from South to William street.
 John Slip, from Broadway to William street.
 Jackson street, from Front to Grand street.
 Leonard street, from Broadway to Elm street.
 Lispenard street, from Church street to West Broadway.
 Ludlow street, from Canal to Houston street.
 Leroy street, from West to Hudson street.
 Little Twelfth street, from Ninth to Tenth avenue.
 Lewis street, from Grand to Eighth street.
 Murray street, from Broadway to West street.
 Mercer street, from Houston to Canal street.
 Madison street, from Grand street to James Slip.
 Mott street, from Hester to Bleecker street.
 Mulberry street, from Canal to Spring street.
 Mangin street, from Houston to Grand street.
 Montgomery street, from Grand to Water street.
 Monroe street, from Catharine to Corlears street.
 New Church street, from Morris to Liberty street.
 Nassau street, from Pine to Cedar street.
 New Chambers street, from Cherry to Batavia street.
 Orchard street, from Division to Houston street.
 Pine street, from William to South street.
 Pitt street, from Houston to Grand street.
 Pelham street, from Cherry to Madison street.
 Peck Slip, from Pearl to South street.
 Reade street, from Broadway to Elm street.
 Renwick street, from Canal to Spring street.
 Rivington street, from Bowery to East river.
 Ryder's alley, from Fulton to Gold street.
 Ridge street, from Division to Houston street.
 Rutgers Slip, from Cherry to Water street.
 State street, from Battery place to South street.
 Spring street, from Broadway to Macdougall street.
 St. John's lane, from York to Beach street.
 Suffolk street, from Hester to Houston street.
 Sheriff street, from Delancey to Rivington street.
 Sullivan street, from Watts to Spring street.
 Scammel street, from Water to Grand street.
 Stanton street, from Bowery to Norfolk street.
 South street, from Whitehall to Maiden lane.

South street, from Fulton to Montgomery street.
 Thomas street, from Church street to West Broadway.
 Thompson street, from Bleecker to Fourth street.
 Theatre alley, from Beckman to Ann street.
 Tompkins street, from Stanton to Delancey street.
 Water street, from Market to Pike street.
 Water street, from Dover to Roosevelt street.
 West street, from Battery place to Rector street.
 West street, from Barclay to Vesey street.
 West street, from Beach to Hubert street.
 West street, from Canal to Morton street.
 West street, from Charlton to Perry street.
 West street, from Gansevoort to Little Twelfth street.
 Washington place, from Broadway to Wooster street.
 West Washington place, from Sixth avenue to Macdougall street.
 Whitehall street, from South street to Bowling Green.
 Wooster street, from Houston to Canal street.
 Washington street, from Spring to Little Twelfth street.
 Worth street, from Broadway to Mulberry street.
 Waverley place, from Bank to Christopher street.
 York street, from West Broadway to St. John's lane.
 First street, from Bowery to Avenue A.
 Third street, from First to Second avenue.
 Fourth street, from First avenue to Avenue A.
 Fourth street, from Lewis street to East river.
 Fifth street, from Lewis street to East river.
 Seventh street, from First to Second avenue.
 Ninth street, from Third to Fourth avenue.
 Tenth street, from Hudson to West street.
 Tenth street, from Greenwich avenue to Broadway.
 Tenth street, from Second avenue to Avenue A.
 Eleventh street, from Broadway to University place.
 Twelfth street, from Broadway to University place.
 Sixteenth street, from First avenue to Avenue D.
 Seventeenth street, from First to Third avenue.
 Seventeenth street, from Avenue B to Avenue C.
 Eighteenth street, from First avenue to Avenue A.
 Eighteenth street, from Avenue B to Avenue C.
 Eighteenth street, from Ninth to Tenth avenue.
 Nineteenth street, from Avenue A to Second avenue.
 Nineteenth street, from Broadway to Seventh avenue.
 Nineteenth street, from Tenth to Eleventh avenue.
 Twentieth street, from First to Third avenue.
 Twentieth street, from Sixth to Seventh avenue.
 Twentieth street, from Ninth to Tenth avenue.
 Twenty-second street, from First avenue to Avenue A.
 Twenty-third street, from Avenue A to Second avenue.
 Twenty-third street, from Broadway to Madison avenue.
 Twenty-third street, from Fifth to Sixth avenue.
 Twenty-third street, from Ninth to Eleventh avenue.
 Twenty-fourth street, from First avenue to Avenue A.
 Twenty-fourth street, from Broadway to Sixth avenue.
 Twenty-fifth street, from First avenue to East river.
 Twenty-sixth street, from Third to Lexington avenue.
 Twenty-sixth street, from Tenth to Eleventh avenue.
 Twenty-eighth street, from Ninth to Eleventh avenue.
 Twenty-ninth street, from First to Second avenue.
 Thirtieth street, from Eleventh avenue to North river.
 Thirty-third street, from Tenth to Eleventh avenue.
 Thirty-fourth street, from First avenue to East river.
 Thirty-sixth street, from First avenue to East river.
 Thirty-eighth street, from First to Second avenue.
 Thirty-eighth street, from Broadway to Sixth avenue.
 Thirty-eighth street, from Seventh to Tenth avenue.
 Thirty-eighth street, from Eleventh avenue to North river.
 Thirty-ninth street, from Second to Third avenue.
 Thirty-ninth street, from Seventh to Eighth avenue.
 Fortieth street, from Park to Madison avenue.
 Fortieth street, from First to Second avenue.
 Forty-first street, from Broadway to Ninth avenue.
 Forty-second street, from Fourth to Lexington avenue.
 Forty-second street, from Eighth to Ninth avenue.
 Forty-second street, from Tenth avenue to North river.
 Forty-fourth street, from Sixth to Seventh avenue.
 Forty-fifth street, from Second to Third avenue.
 Forty-fifth street, from Vanderbilt to Fifth avenue.
 Forty-fifth street, from Sixth to Eighth avenue.
 Forty-sixth street, from First avenue to East river.
 Forty-sixth street, from Third to Lexington avenue.
 Forty-sixth street, from Sixth to Madison avenue.
 Forty-sixth street, from Eighth to Tenth avenue.
 Forty-seventh street, from Fifth to Seventh avenue.
 Forty-seventh street, from Eleventh avenue to North river.
 Forty-eighth street, from First avenue to East river.
 Forty-eighth street, from Ninth avenue to North river.
 Forty-ninth street, from Madison to Fifth avenue.
 Forty-ninth street, from Sixth to Seventh avenue.
 Fiftieth street, from Third to Madison avenue.
 Fifty-first street, from Second to Third avenue.
 Fifty-first street, from Tenth to Eleventh avenue.
 Fifty-second street, from First to Second avenue.
 Fifty-second street, from Third to Lexington avenue.
 Fifty-third street, from Ninth to Tenth avenue.
 Fifty-third street, from Second avenue to East river.
 Fifty-fourth street, from Fourth to Madison avenue.
 Fifty-fourth street, from Sixth to Seventh avenue.
 Fifty-fifth street, from Third to Lexington avenue.
 Fifty-fifth street, from Tenth avenue to North river.
 Fifty-sixth street, from Fourth to Madison avenue.
 Fifty-sixth street, from Eighth to Tenth avenue.
 Fifty-seventh street, from Fourth to Sixth avenue.
 Fifty-seventh street, from Broadway to Eleventh avenue.
 Fifty-eighth street, from Sixth to Seventh avenue.
 Fifty-eighth street, from Eighth to Eleventh avenue.
 Fifty-ninth street, from Fifth to Seventh avenue.
 Fifty-ninth street, from Ninth avenue to North river.
 Sixty-first street, from Fifth to Madison avenue.
 Sixty-first street, from Ninth to Tenth avenue.
 Sixty-second street, from Fifth to Madison avenue.
 Sixty-fourth street, from First to Second avenue.
 Sixty-sixth street, from Third to Lexington avenue.
 Sixty-eighth street, from Fifth to Madison avenue.
 Seventy-first street, from Fourth to Madison avenue.
 Seventy-first street, from Eighth to Ninth avenue.
 Seventy-third street, from Fourth to Lexington avenue.
 Seventy-third street, from Ninth to Tenth avenue.
 Seventy-fifth street, from Third to Lexington avenue.
 Seventy-fifth street, from Fifth to Madison avenue.
 Seventy-sixth street, from Third to Fourth avenue.
 Seventy-sixth street, from First to Second avenue.
 Seventy-eighth street, from Fourth to Madison avenue.
 Seventy-eighth street, from Tenth avenue to Boulevard.
 Seventy-ninth street, from Second to Third avenue.
 Eightieth street, from Second to Third avenue.
 Eighty-first street, from Fifth to Madison avenue.
 Eighty-first street, from Tenth avenue to Boulevard.
 Eighty-first street, from Lexington to Second avenue.
 Eighty-second street, from Tenth avenue to Boulevard.
 Eighty-third street, from Lexington to Fourth avenue.
 Eighty-third street, from Eighth to Ninth avenue.
 Eighty-fourth street, from Lexington to Fourth avenue.

Eighty-fourth street, from Ninth to Tenth avenue.
 Eighty-sixth street, from Second to Third avenue.
 Eighty-sixth street, from Lexington to Fourth avenue.
 Ninetieth street, from Lexington to Third avenue.
 Ninety-third street, from Second to Fourth avenue.
 Ninety-sixth street, from Boulevard to North river.
 Ninety-ninth street, from Second to Third avenue.
 One Hundredth street, from Eighth to Tenth avenue.
 One Hundred and Third street, from Fourth to Lexington avenue.
 One Hundred and Seventh street, from Second to Third avenue.
 One Hundred and Ninth street, from Second to Third avenue.
 One Hundred and Eleventh street, from Third to Lexington avenue.
 One Hundred and Fourteenth street, from First to Pleasant avenue.
 One Hundred and Seventeenth street, from Fourth to Pleasant avenue.
 One Hundred and Nineteenth street, from Second to Third avenue.
 One Hundred and Twenty-first street, from Fourth to Madison avenue.
 One Hundred and Twenty-fifth street, from Second to Eighth avenue.
 One Hundred and Twenty-seventh street, from Sixth to Eighth avenue.
 One Hundred and Twenty-eighth street, from Second to Eighth avenue.
 One Hundred and Twenty-ninth street, from Second to Third avenue.
 One Hundred and Thirtieth street, from Madison to Fifth avenue.
 One Hundred and Thirtieth street, from Madison to Fourth avenue.
 One Hundred and Thirtieth street, from Fifth to Sixth avenue.
 One Hundred and Thirtieth street, from Seventh to Eighth avenue.
 In addition to the above the following work was done on "orders," the expense in each case being less than \$1,000.

4,041 square yards of pavement were repaired, including 984 square yards of Asphalt pavements.

The list of streets in which the repairs were made is as follows:
 Seventy-third street, from Fourth to Lexington avenue.
 Fourth avenue, from Sixty-fourth to Sixty-fifth street.
 Seventy-sixth street, from Madison to Fourth avenue.
 Sixty-first street, from Madison to Fourth avenue.
 Thirty-fifth street, from Twelfth avenue to North river.

Asphalt Pavements Repaired.

Fifth avenue, from Waverly place to Ninth street.
 Fifth avenue, from Twenty-fourth to Twenty-fifth street.
 Fifth avenue, from Twenty-sixth to Twenty-seventh street.
 Fifteenth street, west of Fifth avenue.
 Twenty-eighth street, from Broadway to Fifth avenue.
 Thirty-eighth street, from Fifth to Madison avenue.
 Eighteenth street, from Fourth avenue to Irving place.
 Pine street, from Broadway to Nassau street.
 Pine street, in front of United States Treasury building.
 Intersection of Exchange place and New street.
 103 permits were issued during the year to citizens to repair pavements at their own expense.

Street Openings.

The system of inspection of openings made in the streets by private corporations, plumbers, etc., inaugurated by your predecessor, Hon. H. O. Thompson, and now in operation, has during the past year, been attended with the most satisfactory results.

Although there have been upward of 15,000 openings made in the street pavements for various purposes, not including the miles of gas and steam pipes and telegraph conduits laid, not a single complaint of bad or defective work has reached this office.

The work done under this branch of the Bureau during the past year is as follows:

15,217 openings to repair mains and for gas, water and sewer service connections.
 3,048 notices sent to companies and others to repair bad pavement over their openings.
 2,873 bad places repaired in compliance with notices sent from this office.
 20³/₁₀₀ miles of gas, steam and salt water mains laid.
 9¹/₁₀₀ miles of double track horse railways constructed.
 10¹/₁₀₀ miles of underground telegraph and telephone conduits laid.
 11,060 feet of electric-light circuits suspended.

In May last the construction of the Broadway Surface Railroad was commenced, and in the short time of twenty-one days it was completed from the Battery to Union Square. During this rapid work this office took such precautions that the traffic of that busy thoroughfare was not hindered or obstructed to any extent whatever, and there was not a single complaint received from any citizen on that account.

On the 10th day of December, the Chambers Street and Grand Street Ferry Railroad Company commenced to construct their road on South street, James Slip, New Chambers street, Chambers street and Duane street, and on the 31st day of December the road was completed.

The traffic, both transient and local, on these streets is the heaviest in the city. On Chambers and Duane streets, west of Broadway, almost every building is occupied by merchants whose trucks are constantly receiving and delivering merchandise.

This office took every precaution to prevent any obstruction to their heavy traffic during the construction of the road, and no complaints were received.

Owing to the lateness of the season and the frost, the pavement adjacent to this work will not stand as well as if it had been done at a more favorable time of the year; but as the company is obliged to keep it in repair for one year, it will be required to make the necessary repairs in the spring.

During the year, the Forty-second Street, Manhattanville and St. Nicholas Avenue Railroad Company completed the construction of the road on the Boulevard, Manhattan street, West Eighty-sixth street, and on Forty-second street.

The Harlem Railroad Company constructed their railway on Madison avenue, from Eighty-sixth street to the Harlem river, and also a branch on East Eighty-sixth street, from Madison avenue to Second avenue.

Reparing Streets and Avenues—Chapter 476, Laws of 1875.

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

STREET OR AVENUE.	FROM.	SQUARE YARDS.	LENGTH IN FEET.
<i>Granite-blocks.</i>			
Essex street	Houston to Division street	7,551	2,850.5
Mott street	Canal to Chatham street	3,064	1,136.5
Mulberry street	Park to Canal street	2,281	923.7
Park street	Centre to Pearl street	501	211.3
Park street	Mott to Mulberry street	308	100.4
Fourth street	Broadway to Bowery	2,150	739.5
Hester street	Centre to Elizabeth street	2,450	801.4
Fifth street	Bowery to Lewis street	14,334	4,331.1
Ninth street	Avenue A to First avenue	2,043	657.6
Thirtieth street	Third to Lexington avenue	1,411	436.8
Monroe street	Catharine to Clinton street	7,682	2,512.3
Fourth street	Bowery to Avenue B	8,488	2,566.2
Tenth avenue	Fifty-ninth to Sixty-fourth street	8,447	1,305.3
Forty-seventh street	Tenth to Eleventh avenue	8,795	819.0
Totals		63,439	19,471.2
<i>Trap-blocks.</i>			
Stone street	Broadway to Broad street	982	397.1
Thompson street	Canal to Bleeker street	7,145	2,613.4
Twelfth street	Second avenue to Avenue A	4,272	1,300.8
Forty-fourth street	Tenth to Eleventh avenue	2,660	817.7
Thirtieth street	Bowery to Seventh avenue	2,155	657.6
One Hundred and Twenty-ninth street	Seventh to Eighth avenue	2,696	816.0
Sullivan street	Third to Canal street	8,833	3,069.2
Leonard street	Elm to Baxter street	1,530	691.6
Loyer street	Pell to Chatham street	480	321.0
Baxter street	Leonard to Walker street	2,325	822.3
Pell street	Bowery to Mott street	765	438.4
Thames street	Broadway to Greenwich street	765	497.0
Jersey street	Crabey to Mulberry street	395	239.7
Essex Market place	Essex to Ludlow street	366	181.2
Duane street	William to Rose street	409	181.2
Batavia street	Roosevelt to James street	399	284.8
Chestnut street	Madison to Oak street	200	158.2
Albany street	Greenwich to Washington street	679	213.7
Eleventh street	Avenue B to Avenue D	4,477	1,374.0
Twenty-fifth street	Second to Third avenue	9,075	665.7
Thirty-sixth street	First to Second avenue	2,136	667.3
Totals		45,732	16,458.9

STREET OR AVENUE.	FROM.	SQUARE YARDS.	LENGTH IN FEET.
<i>Asphalt-blocks.</i>			
Elm street	North of Grand street	452	157.0
RECAPITULATION.			
Granite-blocks		63,439	19,471.2
Trap-blocks		45,732	16,458.9
Asphalt-blocks		452	157.0
Totals		109,623	36,087.1

Total length of streets repaved, 36,087 feet, or 6⁷/₁₀₀ miles.

New Pavements under Assessment.

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

STREET OR AVENUE.	FROM.	SQUARE YARDS.	LENGTH IN FEET.
<i>Macadam.</i>			
St. Nicholas place	One Hundred and Fifty-fifth street to Avenue St. Nicholas	7,370	1,596.0
One Hundred and Fifty-second street	St. Nicholas place to Avenue St. Nicholas	457	144.0
One Hundred and Fifty-third street	St. Nicholas place to Avenue St. Nicholas	644	199.0
Totals		8,471	1,939.0
<i>Granite-blocks.</i>			
First avenue	Ninety-second to One Hundred and Ninth street	28,552	4,424.9
Seventy-third street	Ninth avenue to 225 feet west of Eighth avenue	1,888	573.0
Eighty-second street	Eighth to Ninth avenue	2,720	819.0
Eighty-eighth street	Second to Third avenue	2,089	629.0
Eighty-ninth street	First avenue to Avenue A	2,094	631.0
Ninety-third street	First avenue to Avenue A	2,119	645.0
One Hundred and Fifteenth street	Fifth to Sixth avenue	3,125	898.0
One Hundred and Thirty-fourth street	Madison to Fifth avenue	1,489	449.6
One Hundred and Fifty-third street	Tenth avenue to Avenue St. Nicholas	1,811	555.0
Totals		45,887	9,624.5
<i>Trap-blocks.</i>			
Seventieth street	Avenue A to 650 feet easterly	2,091	637.0
Eighty-ninth street	Second to Fifth avenue	7,999	2,416.2
Totals		10,090	3,053.2
RECAPITULATION.			
Macadam		8,471	1,939.0
Granite-blocks		45,887	9,624.5
Trap-blocks		10,090	3,053.2
Totals		64,448	14,616.7

Total length of new pavements, 14,616 feet, or 2⁷/₁₀₀ miles.

The following is a list of the location of new pavements ordered by ordinances of the Common Council, and which could not be executed on account of the restrictions on the issue of bonds for local improvements, viz:

One Hundred and Second street, from Lexington to Fifth avenue.
 Ninth avenue, from Seventy-seventh to One Hundred and Tenth street.
 Ninety-first street, from Second to Fourth avenue.
 Eighty-third street, from Boulevard to Riverside Drive.
 Madison avenue, from Eighty-sixth to One Hundred and Thirty-fifth street.
 Boulevard, at Seventy-second street and Tenth avenue.
 One Hundred and Third street, from First to Second avenue.
 One Hundred and Thirty-third street, from Seventh to Eighth avenue.
 Eighty-eighth street, from First to Second avenue.
 Eighty-second street, from Avenue A to Avenue B.
 Tenth avenue, Seventy-fourth to One Hundred and Tenth street.
 Seventy-fifth street, from Tenth avenue to Boulevard.
 Ninety-third street, from Eighth to Ninth avenue.
 Sixty-sixth street, from Boulevard to Tenth avenue.
 Seventy-fourth street, from Boulevard to Eleventh avenue.
 One Hundred and Fifty-fifth street, from Avenue St. Nicholas to St. Nicholas place.
 One Hundred and Thirty-second street, from Seventh to Eighth avenue.
 One Hundred and Twenty-ninth street, from Twelfth avenue to North river.
 One Hundred and Seventh street, from Third to Lexington avenue.
 Ninety-sixth street, from Third to Lexington avenue.

Crosswalks.

Across One Hundred and Twenty-sixth street, at west side of Avenue St. Nicholas.
 Both sides of Sixth avenue, from One Hundred and Twenty-fifth to One Hundred and Forty-fifth street.
 Tenth avenue, between One Hundred and Fifty-fifth and One Hundred and Sixty-fifth streets.

Repairing and Renewal of Pipes, Stop-cocks, etc.

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

4,104 repairs were made to fire-hydrants.
 478 new fire-hydrants were substituted for old ones.
 15 new fire-hydrants were erected.
 1,600 defects in pipes and stop-cocks were repaired.
 741 taps were shut off on account of leaks in service-pipes.

Wells and Pumps.

1 pump was repaired.
 5 pumps were removed and wells closed.

Public Drinking-hydrants.

342 drinking-hydrants were repaired during the year.
 14 new drinking-hydrants were erected at the following locations, viz.:
 Riverdale avenue, 300 feet south of Rock street.
 One Hundred and Sixty-ninth street and Union avenue.
 No. 745 Second avenue.
 Northeast corner Rutgers and Cherry streets.
 Southwest corner Rivington and Tompkins streets.
 Boulevard, between Fifty-ninth and Sixtieth streets.
 Marcher avenue, 300 feet north of High Bridge.
 Depot lane, corner of Sedgwick avenue.
 Northwest corner of First avenue and Ninety-ninth street.
 No. 1873 Second avenue.
 No. 195 First avenue.
 No. 5 Barrow street.
 Kingsbridge road and One Hundred and Eighty-seventh street.
 Sedgwick avenue, corner of Riverside place.

Vaults.

233 permits were issued for the construction of vaults.
 The amount received for the same is \$64,710.09.
 131 permits were issued to repair vaults.

The following statement shows the amounts on vouchers drawn, together with the estimated liabilities and balances on the appropriations for the year, which are under the charge of this Bureau :

ON WHAT ACCOUNT.	APPROPRIATIONS AND TRANSFERS.	VOUCHERS DRAWN.	ESTIMATED LIABILITIES.	ESTIMATED BALANCES.
Public Drinking-hydrants	\$6,000 00	\$3,891 07	\$2,051 73	\$57 20
Repaving Streets and Avenues.....	200,000 00	181,429 04	11,118 87	7,452 09
Repaving Streets and Avenues—Salaries.....	6,900 00	4,890 00	.....	2,010 00
Repairs and Renewal of Pavements and Regrading....	192,500 00	191,864 35	518 00	117 65
Repairs and Renewal of Pavements and Regrading—Salaries.....	8,600 00	8,486 99	.....	113 01
Wells and Pumps—Repairing and Cleaning.....	250 00	25 75	.....	224 25
Flagging Sidewalks and Fencing Vacant Lots, etc.....	.....	48 55	.....	.....
Repairing and Renewal of Pipes, Stop-cocks, etc.....	.....	65,841 76	2,700 13	.....
Restoring and Repaving—Special Fund—Department Public Works.....	.....	34,273 36	.....	.....
Street Improvement Fund and Fund for Local Improvements.....	.....	157,092 71	.....	.....

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

Macadam	27.77 miles.
Asphalt .....	.65 "
Granite-blocks	68.05 "
Trap-blocks	235.70 "
Cobble-stone	31.03 "
Total.....	363.20 miles.

Respectfully submitted,

A. CULVER, Water Purveyor.

Document "F."

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF ENGINEER IN CHARGE OF SEWERS,
NEW YORK, December 31, 1885.

Hon. ROLLIN M. SQUIRE, Commissioner of Public Works:

SIR—I submit the following report of the transactions of this office for the quarter ending December 31, 1885, together with a summary of work done during the year :

There have been built during the past year 18,663 feet of sewer, 603 feet of culvert, and 28 receiving-basins, making the total length of sewers in the city, exclusive of the Twenty-third and Twenty-fourth Wards, 410 36-100 miles, with 5,035 receiving-basins.

Particular attention has been paid the repair and improvement of old sewers, and the care of the general sewerage system. The following is a statement of the work done :

- 2,395 linear feet of sewer rebuilt.
- 474 linear feet of culvert rebuilt.
- 9 new manholes built.
- 14 manholes rebuilt.
- 713 manholes repaired.
- 1,048 manholes furnished with ventilating covers.
- 45 receiving-basins rebuilt.
- 171 receiving-basins repaired.
- 86 receiving-basins furnished with solid stone heads, in place of the old ones, which were formed of several parts.

Several very important repairs have been made, four of which were quite extensive, namely : the main outlet sewer in Canal street, at West street, which required renewing above the ordinary flow line ; the Sixty-third street sewer, between Fourth and Madison avenues ; the Ninety-eighth street sewer, between Second and Third avenues, and the One Hundred and First street sewer, between First and Second avenues.

The work on the Canal street sewer was done by removing the old arch, which was in an almost falling condition, and building up the sides vertically to the proper height to receive a row of iron I beams, arched in between with brick ; making a substantial covering, strong enough to bear the heavy traffic of the river front, where the street grades are so low that there is barely room for the pavement above the top of the sewer. The sewer is sixteen feet wide inside at this point.

The Sixty-third street repair consisted of replacing the old broken pipe sewer by a strong, small, egg-shaped brick sewer, backed up with concrete, and laid upon a concrete foundation ; being the continuation of similar repairs, done from time to time, during previous years.

The old sewer was completely broken throughout, owing to the settlement of the street, which had been formed principally of broken rock filling about thirty feet above the original boggy surface, rendering it impossible to secure a firm foundation, without inordinate expense, at the time the original sewer was demanded.

Many similar cases have received attention in former years, and many still remain to be done.

The Ninety-eighth and One Hundred and First streets repairs were of a similar character, although the old sewers were of brick and had been injured by filling over them after their construction.

These repairs were done by contract awarded to the lowest bidder at public letting, except the last case, where the extent of the work could not be estimated beforehand.

Other important repairs were in Fifth avenue, between Fifty-sixth and Fifty-eighth streets ; Fifty-eighth street, between Fifth and Seventh avenues ; Madison avenue, between Eighty-first and Eighty-third streets ; Ninth street, between Fifth and Sixth avenues ; Twelfth street, between Fifth and Sixth avenues ; Fourth avenue, between Sixty-sixth and Sixty-seventh streets ; Lexington avenue, between Sixty-fourth and Sixty-fifth streets ; and a large number of minor repairs were also made.

The placing of the new style of perforated manhole covers for sewer ventilation progressed as rapidly as means permitted ; but the appropriation for the work was much less than could have been advantageously used.

The repair of the old and dilapidated basin-heads had to be practically suspended for want of funds. Some of the more dangerous cases have been put in temporary order by the regular force of mechanics and laborers attached to this office.

Systematic examinations of the old sewers have brought to light many unexpected defects, several of which are of serious character and will have to receive immediate attention. Sewers heretofore free from obstructions are now found filled with deposits of ashes and street-dirt, mixed with solid sewage matter and manufactory wastes, all of which have to be removed by hand at great cost. One cause of this obstruction is to be found in the recent economy practiced in the use of Croton water, the free and constant use of which hitherto served to flush the old sewers and keep them free from obstructions, overcoming, to a great extent, their imperfect form and arrangement. Another cause is the practice of the men employed in the Street Cleaning Department of lodging street-sweepings in the gutters, and of sometimes depositing it in the street-basins direct.

Many of the old sewers are of a size very much larger than can be flushed or kept clean by the small quantity of sewage passing through them, which spread over the broad bottom of the sewers, has less velocity than is necessary to carry on its solid portion, which latter settles and accumulates, until it becomes necessary to remove it by hand. Many such sewers are of excellent and durable workmanship ; and to replace them by sewers of proper size and form, would be both expensive and unwarranted, especially when located in crowded business thoroughfares. It is found practicable however, to form a new invert bottom within these sewers, without disturbing them or the streets in which they are laid ; and this has been done in several instances with great success, causing no inconvenience to the travelling public, by permitting our laborers to enter the sewers through the manholes, and to carry on the work of building the new floor or invert to an uniform grade throughout, entirely inside the sewers, and without breaking them down or altering their external size or shape. The flow of sewage increases in depth when confined within the smooth sides and bottoms of these inverts, and its velocity is so greatly accelerated that no deposit can take place.

Figure No. 1, in the annexed plan, shows a section of sewer with new invert bottom, formed of concrete, with facing of vitrified earthenware moulded to shape ; and figure No. 2, a section of old sewer filled with deposit.

FIG. 1.

Section of Sewer with Self-cleaning Invert Bottom.

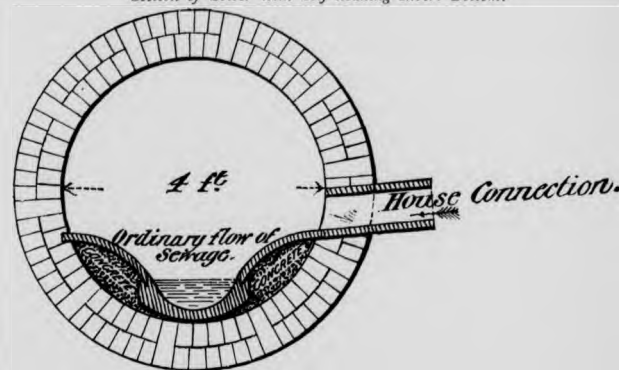
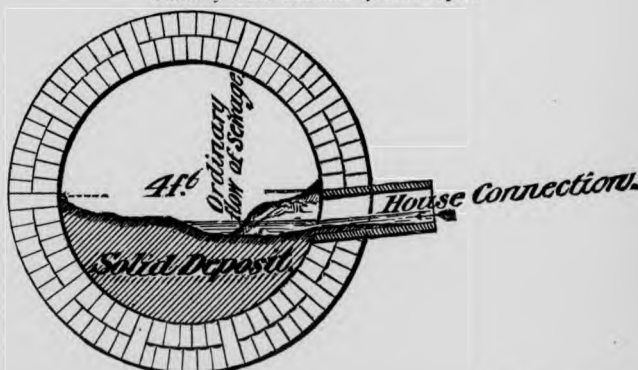


FIG. 2.

Section of Sewer Obstructed by Solid Deposit.



It is to be regretted that the reduced appropriation will allow only a very limited extent of the old sewers to be improved in this way, the advantage of which consists, not only in saving the expense of constant cleaning, but in benefiting the health of the neighborhoods where they are situated ; as the sewers are nothing less than long cesspools, requiring the frequent removal of their foul and malignant accumulations.

Owing to legal obstacles arising from the passage of the constitutional amendment limiting the possible debt of the city, the necessary operations of the office have been seriously hindered during the year ; and the building of new sewers, to be paid for by assessments on the property benefited, has been confined to the prosecution of such contracts as were made prior to the 1st of January, 1885, and which remained uncompleted on the 31st of December, 1884, all of which are embraced in the following list :

1. Second avenue, west side, between Sixty-sixth and Sixty-seventh streets, and in Sixty-seventh street, between Second and Third avenues.
2. Tenth avenue, east side, between One Hundred and Sixty-second and One Hundred and Seventieth streets, and west side, between Kingsbridge road and One Hundred and Seventy-third street.
3. Eighty-fifth street, between Eighth and Ninth avenues.
4. Tenth avenue, between Fifty-sixth and Fifty-seventh streets.
5. First avenue, between Forty-eighth and Forty-ninth streets.
6. One Hundred and Forty-sixth street, between Avenue St. Nicholas and Tenth avenue.
7. One Hundred and Forty-first street, between Boulevard and Diagonal avenue (completing unfinished sewer).
8. Eighty-fourth street, between Tenth and Riverside avenues.
9. Fifty-ninth street, between Eighth avenue and end of present sewer east of Eighth avenue.
10. One Hundred and Forty-first street, between Avenue St. Nicholas and Tenth avenue.
11. Eighty-eighth street, between Madison and Fifth avenues, and in Madison avenue, between Eighty-seventh and Ninety-first streets.
12. Ninety seventh street, between Third and Fourth avenues, from end of present sewer east of Lexington avenue.
13. Fourth avenue, east side, between Fifty-seventh and Fifty-eighth streets.
14. Eighty-eighth, Eighty-ninth and Ninetieth streets, between Ninth and Tenth avenues.
15. One Hundred and Thirty-fourth street, between Sixth and Seventh avenues, and between Eighth avenue and summit east of Eighth avenue.
16. One Hundred and Forty-fifth street, north side, between Boulevard and Tenth avenue, and in Tenth avenue, west side, between One Hundred and Forty-fifth and One Hundred and Forty-sixth streets.
17. Eighty-fourth street, between Boulevard and West End avenue.
18. Lexington avenue, between Ninety-fifth and Ninety-seventh streets, and in Ninety-fifth and Ninety-sixth streets, between Lexington and Fourth avenues, with alteration and improvement to existing sewers in Third avenue, between Ninety-seventh and Ninety-eighth streets.
19. One Hundred and Fifty-first street, between Avenue St. Nicholas and Tenth avenue, and in Tenth avenue, east side, between One Hundred and Fiftieth and One Hundred and Fifty-first streets.
20. Sixty-sixth street, between Eighth and Ninth avenues.
21. One Hundred and Fourth street, between Tenth avenue and Boulevard.
22. Eighth avenue, between One Hundred and Fourteenth and One Hundred and Sixteenth streets.
23. Kingsbridge road, between One Hundred and Fifty-fifth and One Hundred and Fifty-sixth streets.
24. Southwest corner of One Hundred and Twenty-third street and Fourth avenue (receiving-basin).
25. East side of Ninth avenue, opposite Seventy-eighth, Seventy-ninth and Eightieth streets, and alteration and improvements to basins on the northeast corner of Seventy-seventh street, and southeast corner of Eighty-first street and Ninth avenue (receiving-basins).

Of the above contracts, twenty-one have been completed during the year ; leaving three only in progress at this date, two of which will probably be finished before the end of January, 1886. One contract—that for sewer in One Hundred and Fifty-first street, between St. Nicholas and Tenth avenues, etc.—was abrogated by the Commissioner of Public Works on the 20th of June, 1885, the contractor having persistently violated the terms of his agreement ; and the open trench was subsequently protected and finally filled in by employees of this office, to insure the public safety. The sewers now in progress are :

1. Sewers in Tenth avenue, east side, between One Hundred and Sixty-second and One Hundred and Seventieth streets, etc.
2. Sewers in Eighty-eighth, Eighty-ninth and Ninetieth streets, between Ninth and Tenth avenues.
3. Sewers in Lexington avenue, between Ninety-fifth and Ninety-seventh streets, etc.

There has been great activity in the erection of new buildings, especially on the west side of the city, above Fifty-ninth street, during the year 1885 ; and many sewers to drain them were applied for shortly prior to the passage of the constitutional amendment to which I have alluded. As whole rows of houses, in anticipation of at once obtaining proper drainage, were erected on streets where public sewers have not yet been placed, some of which houses were even engaged for tenancy, great inconvenience, damage to health and financial loss have resulted ; and it appears that the operation of a law that prohibits improvements of such vital consequence, has been a great surprise, injury and vexation to owners of real estate who have desired to improve their property.

In some pressing cases, temporary drainage has been possible and provided, wherever such an expedient was sanctioned by the Health Department, whilst houses less fortunately situated must remain unoccupied until sewers can be built. In a few cases, where it has been found practicable, permits have been issued to property-owners, under bonds of indemnity, to construct sewers themselves, the work to be inspected by this office, and governed by the technical provisions of the specifications used in contracts made with the Department of Public Works; but, in the vast majority of cases this could not be done, owing to the inability of the several owners of property on a street to act in concert.

Many extensive building undertakings have been abandoned for the reasons named, and the great impetus given to the improvement of the beautiful section on the west side of the city by the elevated railroads and the surface railroad extensions, has been nearly destroyed. The new cable railroad on Tenth avenue, between One Hundred and Twenty-fifth and One Hundred and Ninetieth streets, has made accessible a healthful and picturesque portion of the city, which cannot be occupied until sewers are built and streets opened and graded.

I append to my report a list showing the sewers which have been applied for, and for which plans and specifications have been made for putting under contract. They are all very much needed; and in most instances, the delay in building them is a serious menace to the public comfort and health.

Plans have likewise been completed for several important alterations and improvements to old sewers, which must also be deferred, to the great injury of individual interests and the public health, until such time as funds can be had for their prosecution.

Whenever the necessary authority is obtained to proceed, the contracts can be made; but the work of printing the forms of agreement and specifications will have to be done over again, on account of the long delay and corrections required by the Corporation Counsel, based on laws of recent enactment.

STREET OPENINGS.

The Commissioner of Public Works is required to make all surveys, maps, profiles and assessment lists for the opening and closing of all streets (inclusive of the Twenty-third and Twenty-fourth Wards); and this duty takes much of my time heretofore devoted to sewer matters alone.

The following is a list of streets and avenues for which maps, abstracts, etc., have been completed and delivered during the year 1885:

Manhattan street extension, Twelfth avenue to Hudson river.....	Jan.	21,	1885.
Gansevoort street widening, Eighth avenue to Washington street, Thirteenth street.....	May	13,	"
One Hundred and Sixth street, between Eleventh avenue and Kingsbridge road, July	13,	"	"
One Hundred and Sixty-first street, between Tenth and Eleventh avenues.....	Mar.	24,	"
One Hundred and Forty-second street, between Tenth avenue and Boulevard.....	Feb.	9,	"
Eighty-third street, between Avenues A and B.....	June	26,	"
One Hundred and Fortieth street, between Seventh and Eighth avenues.....	"	30,	"
One Hundred and Ninth street, between Eighth and Riverside avenues.....	"	9,	"

Streets and Avenues for which Maps, etc., are being made.

Lexington avenue, Ninety-seventh to One Hundred and Second street.
One Hundred and Forty-third street, between Eighth avenue and New avenue, west of Eighth avenue.
Extension of Elm street, Reade street to Astor place.
One Hundred and Thirty-eighth street and Hamlin avenue, between Avenue St. Nicholas and Tenth avenue.
Hamilton Grange, Avenue St. Nicholas, Tenth avenue and One Hundred and Thirty-sixth and One Hundred and Forty-fifth streets.
Tyckman street.
One Hundred and Thirty-fourth street, between Boulevard and Tenth avenue.
Ninety-ninth street, between Third and Fourth avenues.
Fifty-second street, between Eleventh avenue and Hudson river.
A public place in the Twenty-second Ward.
One Hundred and Seventieth street, between Tenth avenue and Kingsbridge road.
Edgemoor road, One Hundred and Fifty-fifth to One Hundred and Seventy-fifth street.
One Hundred and Forty-eighth street, between Eighth avenue and Hudson river.
One Hundred and Forty-ninth street, between Eighth avenue and Hudson river.
One Hundred and Seventy-third street, between Tenth avenue and Kingsbridge road.
Ninety-fourth street, between First and Second avenues.
One Hundred and Twelfth street, between Tenth and Eleventh avenues.
One Hundred and Nineteenth street, between Eighth avenue and Morningside avenue.
One Hundred and Twenty-first street, between Eighth and Ninth avenues.
Audubon avenue, between One Hundred and Sixty-fifth and One Hundred and Seventy-fifth streets.
One Hundred and Sixty-sixth street, between Tenth and Eleventh avenues.
One Hundred and Seventieth street, between Kingsbridge road and Fort Washington road.
One Hundred and Fifty-fourth street, between Eighth avenue and Harlem river.

Respectfully submitted,

STEVENSON TOWLE, Engineer in Charge of Sewers.

List of Sewers, etc., that are Necessary to be Built as soon as possible.

Location.	Approximate Estimate of Cost, including Engineering and Inspectors' Fees.
Fourth avenue, east side, between Fifty-fourth and Fifty-fifth streets.....	\$1,800 00
Lexington avenue, between Eighty-ninth and Ninety-first, and between Ninety-third and Ninety-fourth streets.....	7,000 00
Lexington avenue, between Eighty-third and Eighty-fifth streets.....	5,800 00
Attorney street, between Stanton and Rivington streets.....	2,500 00
Sixty-seventh, Sixty-eighth and Sixty-ninth streets, between West End avenue and land of New York Central and Hudson River Railroad.....	10,600 00
Eighty-seventh street, between Tenth and Riverside avenues.....	13,800 00
Ninety-fifth street, between Ninth and Tenth avenues.....	8,100 00
Ninety-seventh street, between Boulevard and Riverside avenue.....	5,400 00
One Hundred and Sixth street, between summits east and west of Tenth avenue.....	6,400 00
One Hundred and Sixth street, between Boulevard and summit east.....	4,500 00
One Hundred and Fourteenth street, between Fourth and Sixth avenues.....	9,400 00
One Hundred and Seventeenth street, between Fifth and Sixth avenues, in Avenue St. Nicholas, etc.....	14,000 00
Ninety-second street, between Ninth avenue and Boulevard, and in Tenth avenue, etc., etc.....	18,000 00
Eighth avenue, between One Hundred and Fifth and One Hundred and Fourteenth streets, with connection, etc.....	50,000 00
One Hundred and Fifty-sixth and One Hundred and Fifty-seventh streets, between Tenth avenue and Kingsbridge road, etc.....	25,000 00
Lexington avenue, between One Hundred and Twenty-second and One Hundred and Twenty-third streets.....	2,500 00
Ninety-fourth street, between Eighth and Ninth avenues.....	6,000 00
West End avenue, between Sixty-fourth and Sixty-fifth streets, and in Sixty-fourth street, etc.....	24,500 00
One Hundred and Forty-third street, between Boulevard and (Diagonal) avenue Hamilton place, etc., etc.....	9,500 00
Seventy-sixth street, between Avenue A and East river.....	11,500 00
Alteration and improvement to sewers, Eleventh avenue, between Fourteenth and Seventeenth streets, etc.....	40,000 00
Receiving-basins on northwest and southwest, northeast and southeast corners One Hundred and Sixth street and Fourth avenue, etc.....	1,800 00
Fourth avenue, west side, between Ninety-third and One Hundred and Third streets.....	240,000 00
Forsyth street, between Stanton and Houston streets.....	1,800 00
One Hundredth street, between Third avenue and a point west of Lexington avenue.....	14,000 00
One Hundred and Fifth street, between Manhattan avenue and summit west of Ninth avenue.....	19,000 00
Ninety-ninth street, between Boulevard and West End avenue.....	2,000 00
One Hundred and Seventh street, between Eighth and Tenth avenues, and in Ninth avenue, etc.....	18,000 00
Ninety-seventh street, between Eighth and Ninth avenues.....	7,000 00
Fourth avenue, west side, between One Hundred and Twenty-first and One Hundred and Twenty-third streets.....	12,000 00
Completion of unfinished contract for sewer in One Hundred and Fifty-first street, between Avenue St. Nicholas and Tenth avenue.....	4,500 00
One Hundred and Fifteenth street, between Eighth avenue and New avenue, east of Morningside Park.....	3,700 00

Location.	Approximate Estimate of Cost, including Engineering and Inspectors' Fees.
One Hundred and Thirty-seventh street, between Seventh and Eighth avenues.....	\$3,500 00
Sixty-fourth street, between Avenue A and First avenue.....	9,600 00
Avenue B, between Fifteenth and Sixteenth, and between Seventeenth and Eighteenth streets.....	3,000 00
Pleasant avenue, between One Hundred and Thirteenth and One Hundred and Sixteenth streets.....	4,300 00
One Hundred and Forty-fourth street, between Boulevard and Tenth avenue, and in Tenth avenue, etc.....	9,000 00
One Hundred and Sixty-fifth street, between Tenth avenue and Edgemoor road.....	6,500 00
Fourth avenue, east side, between One Hundred and Twentieth and One Hundred and Twenty-first streets.....	2,000 00
Sixty-second street, between Tenth and Eleventh avenues.....	10,500 00
Avenue St. Nicholas, east side, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.....	8,000 00
One Hundred and Thirty-third street, between Eighth avenue and Avenue St. Nicholas.....	1,500 00
Fifty-third street, between Tenth and Eleventh avenues, with connection, etc.....	11,500 00
One Hundred and Fifth street, between First avenue and Harlem river.....	5,000 00
One Hundred and Forty-fifth street, between Avenue St. Nicholas and Tenth avenue, etc., etc.....	13,000 00
One Hundred and Third street, between Eighth and Ninth avenues.....	8,800 00
Forty-fourth street, from end of present sewer, east of Sixth avenue.....	5,500 00
Fourth avenue, east side, between Fifty-eighth and Fifty-ninth streets.....	1,600 00
Seventy-fourth street, between Eighth and Tenth avenues.....	22,000 00
Seventy-fourth street, between West End avenue and Boulevard.....	3,500 00
One Hundred and Fifteenth street, between Seventh and Eighth avenues.....	4,000 00
Fifth avenue, between One Hundred and Thirty-fifth and One Hundred and Thirty-seventh streets, and in One Hundred and Thirty-seventh street, between Fifth and Sixth avenues.....	10,000 00
One Hundred and Thirty-seventh street, between Sixth and Seventh avenues.....	11,000 00
Outlet sewer in Roosevelt street, with intercepting sewers, etc.....	150,000 00
Eighty-eighth street, between Riverside and Tenth avenues, and in Tenth avenue, west side, between Eighty-eighth and Eighty-ninth streets.....	35,000 00
Fourth avenue, east side, between One Hundred and First and One Hundred and Second streets, with branch in One Hundred and First street, between Lexington and Fourth avenues.....	6,500 00
Hudson street, between Beach and North Moore streets.....	7,200 00
Hudson street, between Franklin and North Moore streets.....	1,200 00
One Hundred and Fourth street, between First avenue and Harlem river.....	6,000 00
Ninety-first street, between Avenue A and Second avenue.....	15,000 00
One Hundred and Second street, between Manhattan and Ninth avenues.....	9,000 00
One Hundred and Twenty-third street, between Eighth avenue and Avenue St. Nicholas.....	750 00
Madison avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets.....	6,000 00
Ninety-seventh street, between Ninth and Tenth avenues.....	15,000 00
Eighth avenue, east side, between One Hundred and Forty-ninth and One Hundred and Fifty-fifth streets; west side, between One Hundred and Forty-seventh and One Hundred and Fifty-fifth streets, and One Hundred and Fifty-third street, between Eighth avenue and Harlem river.....	100,000 00
Birmingham street, between Henry and Madison streets.....	900 00
One Hundred and Twenty-first street, from end of present sewer west of Avenue A, etc.....	900 00
Hudson street, west side, between Gansevoort and Horatio streets.....	900 00
Receiving-basins on the north side of One Hundred and Twenty-ninth street, at junction Manhattan street, etc.....	750 00
Receiving-basins on the southwest corner Sixty-second street and Avenue A.....	250 00
Receiving-basins on the northwest corner One Hundred and Twenty-first street and Fourth avenue.....	425 00
Receiving-basins on the southeast corner One Hundred and Ninth street and Fourth avenue.....	250 00
Receiving-basins on the northeast and southeast corners One Hundred and Eighth street and Lexington avenue.....	425 00
Receiving-basin on the southeast corner Twenty-first street and Thirteenth avenue.....	250 00
Receiving-basin on the northwest corner Forty-sixth street and Eleventh avenue.....	250 00
Receiving-basins on Fourth avenue, between One Hundred and Eighth and One Hundred and Ninth streets.....	250 00
First avenue, between Fifty-sixth and Fifty-seventh streets.....	5,000 00
Total.....	\$1,110,100 00

REPORT OF THE TRANSACTIONS OF THE OFFICE OF THE ENGINEER IN CHARGE OF SEWERS FOR THE QUARTER ENDING DECEMBER 31, 1885.

Credit to General Fund—	
Amount received for 355 permits for sewer connections.....	\$9,388 34
Engineers' Fees—	
Amount of Engineers' and Surveyors' fees assessed on property benefited, charged on assessment lists and credited to Fund for Local Improvements.....	\$1,573 89
Sewers—Repairing and Cleaning—	
Balance on hand September 30, 1885.....	\$18,200 15
N. Y. Mutual Gas-light Company's bill returned unpaid.....	116 22
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Laborers, etc.....	\$12,150 50
Special repairs.....	3,932 11
Materials and sundries.....	1,313 65
Transportation expenses.....	236 67
Balance on hand December 31, 1885.....	683 44
	<u>\$18,316 37</u>
Salaries—Sewers—Repairing and Cleaning—	
Balance on hand September 30, 1885.....	\$2,076 00
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Inspectors, etc.....	\$2,074 48
Balance on hand December 31, 1885.....	1 52
	<u>2,076 00</u>
Salaries—Sewerage System—	
Balance on hand September 30, 1885.....	\$4,344 49
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Engineers, etc.....	\$4,344 03
Balance on hand December 31, 1885.....	46
	<u>4,344 49</u>
Surveys, Maps, etc., for Street Openings, etc.—	
Balance on hand September 30, 1885.....	\$4,499 35
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Draughtsmen, etc.....	\$3,999 29
Balance on hand December 31, 1885.....	500 06
	<u>4,499 35</u>
Restoring and Repaving—Special Fund—	
Amount received for 502 permits for street openings.....	\$6,318 00
Fund for Local Improvements—	
Vouchers transmitted to the Commissioner of Public Works.....	\$17,822 72
Pay-rolls of Engineers, etc.....	\$2,605 66
Pay-rolls of Inspectors on sewers.....	1,148 00
On contracts for sewers, etc.....	13,979 06
	<u>17,822 72</u>

Work done by Mechanics and Laborers—Charles H. Babcock, General Inspector of Repairs, etc.—

645 receiving-basins and culverts cleaned.
8,804 lineal feet of sewer cleaned.
367 lineal feet of sewer rebuilt.
454 lineal feet of sewer repaired.
91 lineal feet of culvert rebuilt.
111 lineal feet of spur-pipe laid.
62 lineal feet of curb reset.
15 lineal feet of new curb set.
15 lineal feet of gutter stone relaid.
45 receiving-basins repaired.
6 new basin-heads put on.
6 basin-heads reset.
11 new basin-covers put on.
192 manholes repaired.
94 new manhole heads and covers put on.
31 manhole-heads reset.
259 new manhole-covers put on.
5 new manholes built.
433 square feet of flagging relaid.
665 square yards of pavement relaid.
9 cubic yards of rock excavated.
1,720 cubic yards of earth excavated and refilled.
378 cubic yards of earth filled in.
2,211 cart-loads of dirt removed.

Work done by Contract—

2,025 lineal feet of sewer built.
90 lineal feet of culvert built.
10 receiving-basins built.

Making the present total length of sewerage in the city, 2,166,723 lineal feet ($410\frac{3}{100}$ miles), with 5,035 receiving-basins.

STATEMENT OF THE TRANSACTIONS OF THE OFFICE OF THE ENGINEER IN CHARGE OF SEWERS FOR THE YEAR ENDING DECEMBER 31, 1885.

Work done by Mechanics and Laborers—Charles H. Babcock, General Inspector of Repairs, etc.—

2,598 receiving-basins and culverts cleaned.
58,007 lineal feet of sewer cleaned.
1,610 lineal feet of sewer rebuilt.
3,185 lineal feet of sewer repaired.
474 lineal feet of culvert rebuilt.
366 lineal feet of spur-pipe laid.
53 lineal feet of box sewer built.
20 lineal feet of dry stone wall built.
78 lineal feet of pipe sewer laid.
162 lineal feet of curb reset.
145 lineal feet of new curb set.
5 lineal feet of drain repaired.
15 lineal feet of gutter stone relaid.
4 new bulkheads built.
45 receiving-basins rebuilt.
171 receiving-basins repaired.
86 new basin heads and covers put on.
20 basin-heads reset.
41 new basin-covers put on.
9 new manholes built.
14 manholes rebuilt.
713 manholes repaired.
490 new manhole-heads and covers put on.
199 manhole-heads reset.
558 new manhole-covers put on.
3,602 square feet of flagging relaid.
32 square feet of crosswalk relaid.
4,293 square yards of pavement relaid.
22 cubic yards of rock excavated and refilled.
9,010 cubic yards of earth excavated and refilled.
467 cubic yards of earth filled in.
9,140 cart-loads of dirt removed.

Work done by Contract—

18,663 lineal feet of sewer built.
785 lineal feet of sewer rebuilt.
603 lineal feet of culvert built.
28 receiving-basins built.

Making the present total length of sewerage in the city, 2,166,723 lineal feet ($410\frac{3}{100}$ miles), with 5,035 receiving-basins.

Document "G."

DEPARTMENT OF PUBLIC WORKS,
BUREAU OF STREET IMPROVEMENTS, No. 31 CHAMBERS STREET, ROOM 5,
NEW YORK, January 6, 1886.

Hon. ROLLIN M. SQUIRE, 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 three months of October, November and December, 1885:

During the year twenty-three contracts have been completed, at a cost of \$614,546.74, and for which assessment lists have been transmitted to the Chief Clerk's office.

The most important contracts completed during the year are the following:

Morningside avenue, East, and One Hundred and Twenty-third street.
Boulevard and Eleventh avenue, from One Hundred and Fifty-fifth street to Kingsbridge road.
Madison avenue, from One Hundred and Thirty-fifth to One Hundred and Thirty-seventh street.
Sixty-fourth street, from First avenue to East river.
Sixty-sixth street, from Eighth avenue to Boulevard.
Seventy-fourth street, from Eighth avenue to Riverside Drive.
Eighty-eighth street, from Tenth avenue to Riverside Drive.
Ninety-fifth street, from Tenth avenue to Riverside Drive.
One Hundred and First street, from Third avenue to five feet east of Fourth avenue.
One Hundred and Fifty-eighth street, from Kingsbridge road to Public Drive.

WORKS UNDER CONTRACT.

Morningside avenue, West One Hundred and Tenth street to Tenth avenue—

It having been decided to rebuild the old wall on the southern end of this avenue, the work necessary therefor has been lately commenced and is expected it will be completed in May next.

Fort Washington Ridge road—

Good progress has been made on this contract during last year, and being a large work will probably not be completed before the summer of next year.

Kingsbridge road, from One Hundred and Fifty-fifth to One Hundred and Ninetieth street—

This work is now so far advanced that its completion may be expected in the early spring.

Fourth avenue, from Ninety-seventh to One Hundred and Second street—

The bulk of this work is done, and it was necessary to suspend its completion in order to allow the building of a foot-bridge and retaining-wall at Ninety-eighth street, under an act of the Legislature.

West End avenue, from Seventy-second street to Boulevard—

This large contract is in active progress and it may be completed in September or October next.

Eleventh avenue, from Kingsbridge road to Dyckman street—

The work under this contract is very nearly completed.

Ninety-third street, from West End avenue to Riverside Drive—

This work, which is one mainly of rock excavation, has well progressed during the year, and its completion may be expected early in the summer.

Ninety-fourth street, from Boulevard to Riverside Drive—

This is also a heavy rock-cutting contract and will take this year to complete the same.

One Hundred and Eighteenth street, from Fourth to Sixth avenue—

The work on this contract will probably be completed in April or May next.

One Hundred and Thirty-second street, from Tenth avenue to Broadway—

This contract has been suspended during the frost season and can easily be finished during the summer.

One Hundred and Fifty-third street, from sixty feet east of Seventh avenue to New avenue—

The most of the work required to be done on this contract has been performed, and the completion of the contract is expected in April next.

One Hundred and Eighty-fifth street, from Tenth avenue to Kingsbridge road—

This contract is also in such an advanced state of progress that it can be very soon completed.

APPROPRIATIONS.

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

The appropriation for this purpose amounted to \$2,000, of which sum \$1,070 has been expended on account of numbering of streets, \$700 for resetting of monument stones, leaving a balance (estimated) of \$230 unexpended.

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

The amount appropriated for this purpose was \$1,200, which has been expended for repairs and renewals of sidewalks, fences, etc., in front of City property as from time to time became necessary.

NEW WORKS.

I also hand you herewith a statement of the ordinances passed by the Board of Aldermen and approved by the Mayor during the last year, with the estimated cost of the same. No contracts have been entered into last year (on account of the constitutional amendment) for these works. Nearly all of these improvements are urgently desired by the property-owners in order that their property may be rendered available for sale or improvement.

Respectfully submitted,

GEO. A. JEREMIAH, Superintendent of Street Improvements.

STATEMENT OF THE AMOUNT OF WORK DONE DURING THE QUARTER ENDING DECEMBER 31, 1885.

Earth excavated, cubic yards.....	27,100
Rock excavated, cubic yards.....	52,125
Filling furnished, cubic yards.....	26,944
Curb-stones set, linear feet.....	26,974½
Flagging laid, square feet.....	112,140
Culverts built, linear feet.....	666

Work Done in front of City Property.

Curb-stones reset, linear feet.....	234¼
Flagging laid, square feet.....	1,961½
Flagging relaid, square feet.....	1,990
Picket fence built, linear feet.....	53

AMOUNT OF VOUCHERS DRAWN.

On account of—	
Fund for Local Improvements.....	\$82,053 47
Street Improvements—For Surveying, Monumenting and Numbering of Streets.....	280 00
Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	794 35
Contingencies—Department of Public Works.....	60 00
Total.....	\$83,187 82

APPROPRIATIONS, 1885.

Street Improvements—For Surveying, Monumenting and Numbering of Streets.....	\$2,000 00
Amount of vouchers drawn—	
During first quarter.....	\$328 00
During second quarter.....	251 00
During third quarter.....	231 00
During fourth quarter.....	280 00
Outstanding liabilities, estimated.....	680 00
Balance, estimated.....	230 00
Total.....	2,000 00

Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	\$1,200 00
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Amount of vouchers drawn—	
During second quarter.....	\$255 18
During third quarter.....	98 80
During fourth quarter.....	794 35
Balance, estimated.....	51 67
Total.....	1,200 00

WORKS COMPLETED.

Regulating, grading, etc.—

One Hundred and Twelfth street, Seventh to Eighth avenue.....	\$12,839 16
One Hundred and Twenty-sixth street, Tenth avenue and Boulevard.....	7,557 03

Total.....	\$20,396 19
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AMOUNT OF WORK DONE DURING THE YEAR 1885.

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.....	19,107	25,820	40,678	27,100	112,705
Rock excavated, cubic yards.....	59,945	66,210	64,772	52,125	243,052
Filling furnished, cubic yards.....	22,208	19,010	24,963	26,944	93,125
Curb-stones set, linear feet.....	10,026½	13,464	20,770½	26,974½	71,235½
Curb-stones reset, linear feet.....	175	.....	917½	.....	1,092½
Gutter-stones set, linear feet.....	1,694½	.....	1,501½	.....	3,196½
Flagging laid, square feet.....	29,868½	82,486	68,287½	112,140	292,782
Flagging relaid, square feet.....	520	.....	6,576½	.....	7,096½
Pavement laid, square yards.....	81	.....	.....	.....	81
Soil for tree spaces, cubic yards.....	36	.....	.....	.....	36
Trees planted.....	8	.....	.....	.....	8
Culverts built, linear feet.....	.....	.....	.....	666	666

Work Done in front of City Property.

Curb-stones reset, linear feet.....	.....	.....	.....	234¼	234¼
Flagging laid, square feet.....	550	501½	.....	1,961½	3,012½
Flagging relaid, square feet.....	56	1,676½	.....	1,990	3,722½
Picket fence built, linear feet.....	.....	67½	164½	53	285½

AMOUNT OF VOUCHERS DRAWN.

ON ACCOUNT OF—	JANUARY 1 TO MARCH 31.	APRIL 1 TO JUNE 30.	JULY 1 TO SEPTEMBER 30.	OCTOBER 1 TO DECEMBER 31.	TOTAL.
Street Improvement Fund contracted after June 9, 1880.....	\$93,871 71	\$140,824 56	.....	.....	\$234,696 27
Street Improvement Fund, June 9, 1880.....	2,467 48	.....	.....	.....	2,467 48
Street Improvements above Fifty-ninth Street, June 9, 1880.....	21,043 69	1,186 79	.....	.....	22,230 48
Fund for Local Improvements.....	.....	.....	\$151,404 90	\$82,053 47	233,458 37
Street Improvements—For Surveying, Monumenting and Numbering of Streets.....	328 00	251 00	231 00	280 00	1,090 00
Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	188 145 80	255 18	98 80	794 35	1,294 13
Contingencies—Department of Public Works.....	62 50	60 00	60 00	60 00	242 50
Total.....	\$117,921 18	\$142,577 53	\$151,794 70	\$83,187 82	\$495,487 23

WORKS COMPLETED DURING THE YEAR 1885.

Regulating, grading, etc.—	
Morningside avenue, East, and One Hundred and Twenty-third street.....	\$142,301 65
Boulevard and Eleventh avenue, One Hundred and Fifty-fifth street to Kingsbridge road.....	97,500 44
Madison avenue, One Hundred and Thirty-fifth to One Hundred and Thirty-seventh street.....	7,312 39
Sixty-fourth street, First avenue to East river.....	16,587 08
Sixty-sixth street, Eighth avenue to Boulevard.....	22,878 55
Seventy-fourth street, Eighth avenue to Riverside Drive.....	36,033 70
Eighty-eighth street, Tenth avenue to Riverside Drive.....	24,240 60
Ninety-first street, Third to Fourth avenue.....	1,688 51
Ninety-fourth street, Second to Third avenue.....	4,326 98
Ninety-fifth street, Tenth avenue to Riverside Drive.....	118,046 42
One Hundred and First street, Third avenue to five feet east of Fourth avenue.....	27,899 59
One Hundred and Third street, Ninth to Tenth avenue.....	7,123 51
One Hundred and Third street, Tenth avenue to Riverside Drive.....	13,080 21
One Hundred and Fourth street, Boulevard to Riverside Drive.....	9,552 65
One Hundred and Twelfth street, Seventh to Eighth avenue.....	12,839 16
One Hundred and Seventeenth street, Sixth to Seventh avenue.....	6,908 22
One Hundred and Twenty-sixth street, Tenth avenue to Boulevard.....	7,557 03
One Hundred and Forty-first street, Tenth to Diagonal avenue.....	1,247 80
One Hundred and Fifty-seventh street, Tenth avenue to Boulevard.....	13,922 55
One Hundred and Fifty-eighth street, Kingsbridge road to Public Drive.....	19,711 33
One Hundred and Sixty-second street, Tenth to Edgecomb avenue.....	13,774 31
Curb and flagging—	\$605,745 58
Eighty-fifth street, Ninth to Tenth avenue.....	2,318 13
Flagging—	
Sixth avenue, One Hundred and Twenty-fifth to One Hundred and Forty-fifth street.....	6,483 03
Total.....	\$614,546 74

RECAPITULATION.

21 contracts for regulating, grading, etc.....	\$605,745 58
1 contract for curb and flagging.....	2,318 13
1 contract for flagging.....	6,483 03
23 contracts.....	\$614,546 74

LIST OF ORDINANCES PASSED BY THE BOARD OF ALDERMEN AND APPROVED BY THE MAYOR, ALSO ESTIMATED COST OF SAME.

Regulating, Grading, Curb, Gutter, Flagging and Fencing.

One Hundred and Thirteenth street, from Eighth to New avenue.....	\$6,600 00
Ninety-seventh street, from Boulevard to Riverside Drive.....	12,700 00
One Hundred and Fourteenth street, from Fourth to Eighth avenue.....	27,600 00
New avenue, from One Hundred and Forty-fifth to One Hundred and Fifty-fifth street, William street, from Duane to North William street.....	95,000 00
Sixty-fifth street, from First avenue to Avenue A.....	1,200 00
One Hundred and Twelfth street, from Eighth to New avenue.....	10,400 00
Washington street, from Twelfth to Fourteenth street.....	7,500 00
One Hundred and Fifty-fifth street, from Eighth avenue to McComb's Dam lane.....	2,000 00
One Hundred and Second street, from Ninth avenue to Riverside Drive.....	11,500 00
One Hundred and Seventh street, from Tenth avenue to Boulevard.....	28,500 00
One Hundred and Thirty-third street, from Eighth to St. Nicholas avenue.....	6,900 00
One Hundred and Fourteenth street, from Tenth avenue to Riverside Drive.....	4,000 00
Ninety-fifth street, from Eighth to Ninth avenue.....	8,000 00
Fort George avenue, from Tenth to Eleventh avenue.....	10,000 00
Kingsbridge road, from One Hundred and Ninetieth street to Harlem river.....	25,000 00
One Hundred and Forty-ninth street, from Seventh to Eighth avenue.....	80,000 00
Claremont avenue, from One Hundred and Sixteenth to One Hundred and Twenty-second street.....	7,900 00
Ninety-first street, from Tenth avenue to Riverside Drive.....	25,000 00
One Hundred and Sixty-fifth street, from Tenth to Edgecomb avenue.....	15,400 00
Seventh avenue, from One Hundred and Twenty-eighth to One Hundred and Forty-fifth street.....	7,000 00
East side Madison avenue, from Seventy-ninth to Eightieth street.....	8,200 00
North side Seventy-ninth street, from Ninth to Tenth avenue.....	115 00
South side Fifty-ninth street, from Fourth avenue east.....	900 00
South side Sixty-second street, from First to Second avenue.....	130 00
South side One Hundred and Twenty-first street, from Lexington to Fourth avenue.....	300 00
South side Eighty-third street, from First to Second avenue.....	160 00
North side One Hundred and Twenty-third street, from Second to Third avenue.....	300 00
North side Ninety-third street, from Third to Lexington avenue.....	125 00
South side Seventy-seventh street, from Fourth to Madison avenue.....	100 00
North side Seventy-fourth street, from west of First avenue.....	150 00
West side Fourth avenue, from Seventy-sixth to Seventy-seventh street, etc.....	40 00
Block bounded by Lexington and Third avenues, One Hundred and Twenty-second and One Hundred and Twenty-third streets.....	90 00
Northwest corner Seventh avenue and One Hundred and Twenty-sixth street.....	130 00
Northeast corner Fourth avenue and One Hundred and Twenty-seventh street.....	150 00
McComb's Dam road, from One Hundred and Forty-ninth to One Hundred and Fifty-fifth street.....	15,000 00
One Hundred and Eighth street, from Tenth avenue to Boulevard.....	5,000 00
Total.....	\$924,800 00

Statement showing Works under Contract in Bureau of Street Improvements on the 31st day of December, 1885.

LOCATION OF WORK.	CONTRACTOR.	SURVEYOR.	INSPECTOR.	CONTRACT TIME.	ESTIMATED COST.	AMOUNT EARNED.	AMOUNT RETAINED.	AMOUNT PAID.	REMARKS.
Regulating, Grading, Curb and Flagging—									
Morningside avenue, West One Hundred and Tenth street to Tenth avenue.....	James W. O'Grady.....	Peter J. Moran.....	James McCarthy.....	350 days.	\$60,593 10	\$121,393 13	\$36,417 91	\$84,975 22	
Fort Washington Ridge road.....	Allen & O'Malley.....	W. V. Smith.....	Joseph McGowan.....	400 "	130,161 70	48,970 00	14,691 00	34,279 00	
Kingsbridge road, One Hundred and Fifty-fifth to One Hundred and Ninetieth street.....	Allen, O'Grady & Co.....	W. V. Smith.....	William F. Gannon.....	200 "	71,697 00	95,121 25	28,536 37	66,584 88	
Fourth avenue, Ninety-seventh to One Hundred and Second street.....	Michael Egan.....	W. V. Smith.....	Edward T. Bennett.....	30 "	3,354 50	.....	.....	.....	Work suspended.
West End avenue, Seventy-second street to Boulevard.....	Thomas O'Malley.....	W. V. Smith.....	Mark Neary.....	200 "	98,782 38	50,700 00	15,210 00	35,490 00	
Eleventh avenue, Kingsbridge road to Dyckman street.....	Mairs & Daly.....	W. V. Smith.....	David Simmons.....	350 "	109,138 69	117,598 00	35,279 40	82,318 60	
Ninety-third street, West End avenue to Riverside Drive.....	Thomas O'Malley.....	R. L. Waters.....	Edward C. Brady.....	150 "	33,987 73	28,628 00	8,583 40	20,039 60	
Ninety-fourth street, Boulevard to Riverside Drive.....	Thomas O'Malley.....	R. L. Waters.....	Edward C. Brady.....	150 "	33,311 60	5,110 00	1,533 00	3,577 00	
Ninety-ninth street, Eleventh avenue to Riverside Drive.....	V. Del Genovese.....	H. K. Viele.....	.....	100 "	8,974 90	8,967 00	2,690 10	6,276 90	Work completed, but not yet accepted.
One Hundred and Eighteenth street, Fourth to Sixth avenue.....	Michael Finn.....	W. V. Smith.....	John Lawrence.....	250 "	20,032 30	27,424 00	8,227 30	19,196 80	
One Hundred and Thirty-second street, Tenth avenue to Broadway.....	F. Tullmann, Jr.....	R. L. Waters.....	.....	200 "	9,468 56	3,220 00	966 00	2,254 00	Work suspended.
One Hundred and Fifty-third street, sixty feet east of Seventh avenue to New avenue.....	Patrick Farley.....	J. McIntyre Smith.....	.....	350 "	23,435 30	26,089 00	7,826 70	18,262 30	Work suspended.
One Hundred and Eighty-fifth street, Tenth avenue to Kingsbridge road.....	W. J. Reilly.....	W. V. Smith.....	Andrew J. Fleming.....	90 "	12,336 64	11,893 00	3,567 90	8,325 10	
Total.....					\$625,190 40	\$545,113 38	\$163,533 98	\$381,579 40	

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DEPARTMENT OF PUBLIC WORKS,
BUREAU OF STREETS AND ROADS, NO. 31 CHAMBERS STREET,
NEW YORK, January 11, 1886.

ROLLIN M. SQUIRE, Esq., Commissioner of Public Works:

SIR—In compliance with your instructions, I have the honor to submit the following report of work done and material used; also the amounts expended from the various appropriations, under the charge of this Bureau, for the quarter ending December 31, 1885.

During the last quarter I have directed my attention chiefly to the repairs of the principal macadam roadways, that they might be in as good condition as the circumstances would admit, prior to the snow-storms of the winter. The breaking up of the roadways, caused by the incessant trapear, making the roadway anything but pleasant for driving. I have, therefore, deemed it advisable to proceed with the work, to preserve, as far as possible, the uniformity of the roadways. Being confident that the general public is unaware of the immense amount of daily travel on these roads, I have caused to be made a careful and, I believe, accurate count, with a partial classification of all vehicles passing over two of the most prominent drives now under my charge (table for which is annexed), showing a result which should conclusively prove to the most skeptical, the fact that if the roadways are to be maintained in a condition suitable for the purpose for which they were originally constructed, i.e., light pleasure driving, an amount of money, sufficiently great, should be each year appropriated to enable those in charge to purchase the most suitable material for the purpose, which, by its lasting qualities, will prove to be practical economy.

It has been the practice during the past few years to cover the roadways with sharp sand, the idea evidently being that because the price to be paid per yard was less than that for gravel, that it was more economical. The facts are these: New sand, when spread, makes very pleasant wheel-way, but becomes quickly pulverized, or dead, either blows away in clouds of dust or is washed by the storms into the gutters; as much of this it is possible to use again is replaced on the roadways, making a covering far from satisfactory, while with gravel, the result is very different, containing as it does, sufficient adhesive qualities, and even though it does pulverize, adheres to the macadam stone to a great extent, and such unground portions as are washed into the gutters are cleansed by the rains and can be used again with good advantage. It is, therefore, my opinion, that by purchasing gravel (or as much thereof as the appropriation will admit) instead of sand, that the result would be more satisfactory to the drives, and a principle of practical economy would be shown by the ultimate result. The accuracy of this conclusion has of late been fully demonstrated. The roadways on which sand was used have been completely cleaned by the winds, and are now entirely bare, while those on which gravel has been used are in a fairly good condition. During the past year the macadam roadways have been maintained for 0.06 per square yard, which figures include sprinkling, cleaning, covering, repairs to all tools used, ploughing snow, cleaning basins, trimming trees, and in fact all work necessary in connection with them, but not including the

resurfacing of the Boulevard, a sum small indeed, considering the immense amount of work necessary to keep them in proper condition. I believe these figures will compare favorably with those of any city in this country or Europe, where the same privileges are accorded to drivers of all kinds of vehicles.

The contract for resurfacing the Western Boulevard, between Fifty-ninth and Seventy-ninth streets, has been completed in a most satisfactory manner, and is now under the charge of this Bureau. Among the unpaved streets requiring special mention are the following:

Ninety-sixth street, from Third to Second avenue, the roadway of which has been entirely reggraded with material furnished by contractors wishing a dumping-ground, free from any expense to the City.

Ninety-sixth street, from Fifth to Lexington avenue, regulated.
Eighty-third street, from First avenue to Avenue B, regulated.
Eighty-fourth street, from First avenue to Avenue B, regulated.
Ninety-seventh street, from Fifth avenue to Third avenue, regulated.
F street, from Inwood street to Bolton road, macadamized.
Kingsbridge road, macadamized and repaired.
One Hundred and Fifty-second street, west of Boulevard, resurfaced with limestone screenings.
One great cause of expense on unpaved streets is the indiscriminate dumping of dirt, etc., by contractors and others. Until some means can be devised to stop this, the City will be compelled to expend money each year to keep these streets in passable condition.

I herewith respectfully submit the detailed statement of work done during the last quarter.

Respectfully,

GEO. E. BABCOCK, Superintendent of Streets.

The following is a statement of work done and material used and removed on the various macadam roads, streets, avenues and boulevards, during the quarter ending December 31, 1885:

Repairing and cleaning Avenue A, between Fifty-seventh and Eighty-sixth streets. Material used and removed was—

23 team-loads of sand.
51 cart-loads of broken stone.
569 team-loads of dirt removed.
Laying bridge-stone on Avenue A, at Eighty-fourth street—
116 feet of lineal bridge-stone laid.
Basins cleaned on Avenue A, at northwest corner of Seventieth and Eighty-second streets.

Repairing and cleaning First avenue, between One Hundred and Ninth and One Hundred and Sixteenth streets. Material used and removed was—

42 team-loads of broken stone.
51 team-loads of paving blocks.
14½ team-loads of sand.
42 team-loads of dirt removed.

Repairing and cleaning Pleasant avenue, between One Hundred and Sixteenth and One Hundred and Twenty-fourth streets. Material used and removed was—
68 team-loads of sand spread.
15 team-loads of dirt removed.

Repairing and cleaning Fifth avenue, between Fifty-eighth and One Hundred and Twentieth streets, One Hundred and Twenty-fourth and One Hundred and Thirtieth streets. Material used and removed was—
46 team-loads of broken stone.
11½ team-loads of sand.
26 team-loads of gutter stuff spread.
5 cart-loads of sand spread.
435 team-loads of dirt removed.

Resetting bridge-stone on Fifth avenue and One Hundred and Sixth street. Material used was—
3 cart-loads of Belgium blocks reset.

Repairing and cleaning Sixth avenue, between One Hundred and Tenth and One Hundred and Forty-fifth streets. Material used and removed was—
10 team-loads of gutter stuff spread.
4½ team-loads of broken stone.
2 cart-loads of sand.
2 cart-loads of limestone chips.
11 cart-loads of cobble stone.
65 team-loads of dirt removed.

Resetting flagging on Sixth avenue, between One Hundred and Twenty-fourth and One Hundred and Twenty-fifth street. Material used was—
20 team-loads of sand.

Trimming and pruning trees on Sixth avenue, between One Hundred and Tenth and One Hundred and Forty-fifth street—
364 trees.

Repairing and cleaning Seventh avenue, between One Hundred and Tenth and One Hundred and Fifty-fourth streets. Material used and removed was—
33 team-loads of gutter stuff spread.
89 team-loads of sand spread.
32½ team-loads of trap-rock stones.
17 team-loads of limestone chips.
15 team-loads of sand repair.
86 team-loads of dirt removed.

Resetting flagging on Seventh avenue, between One Hundred and Twenty-first and One Hundred and Twenty-third streets, between One Hundred and Thirtieth and One Hundred and Thirty-first streets, and between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets. Material used was—
18 team-loads of sand.

Repairing and cleaning Avenue St. Nicholas, between One Hundred and Twenty-fifth and One Hundred and Fifty-fifth streets. Material used and removed was—
75 team-loads of gravel.
26½ team-loads of dirt.
103½ team-loads of dirt removed.
19 team-loads of gravel from basin.

Cleaning basins on Avenue St. Nicholas, between One Hundred and Forty-first and One Hundred and Fifty-fourth streets—
14 basins.

Repairing and cleaning Seventy-second street, between Avenue A and Fifth avenue, and between Ninth and Tenth avenues. Material used and removed was—
4 cart-loads of broken stone.
1 cart-load of sand.
39 team-loads of trap-rock.
109 team-loads of dirt removed.

Repairing and cleaning One Hundred and Tenth street, between First and Sixth avenues. Material used and removed was—
20 team-loads of broken stone.
4 team-loads of sand.
83 team-loads of dirt removed.

Repairing and cleaning One Hundred and Sixteenth street, between First and Fifth avenues. Material used and removed was—
4 team-loads of broken stone.
62 team-loads of dirt removed.

Repairing and cleaning One Hundred and Twenty-third street, between Mount Morris and Eighth avenues, and at New avenue. Material used and removed was—
10 team-loads of dirt.
18½ team-loads of dirt removed.

Repairing and cleaning One Hundred and Twenty-fourth street, between Pleasant and Fifth avenues, and between Sixth and Seventh avenues. Material used and removed was—
1 cart-load of broken stone.
1 cart-load of sand.
50½ team-loads of dirt removed.

Repairing and cleaning One Hundred and Forty-fifth street, between Eighth avenue and Avenue St. Nicholas. Material used and removed was—
49 team-loads of trap-rock.
9 team-loads of sand.
3 team-loads of dirt.
48 team-loads of dirt removed.
30 team-loads of earth removed.

Relaying bridge-stone on One Hundred and Forty-fifth street and Eighth avenue—
22 feet by 4 feet.

Cleaning One Hundred and Fifty-second street, between Avenue St. Nicholas and Tenth avenue. Material removed was—
21 team-loads of dirt.

Cleaning Mount Morris avenue, between One Hundred and Twentieth and One Hundred and Twenty-fourth streets. Material removed was—
10 team-loads of gutter stuff.

Repairing and cleaning Western Boulevard—
Between Seventy-ninth and Eighty-first streets (repaired).
Between One Hundred and Twenty-ninth and One Hundred and Thirty-first streets (cleaned).
Between One Hundred and Thirty-sixth and One Hundred and Fifty-third streets (cleaned).
Material used and removed was—
6 team-loads of trap-rock.
240½ team-loads of dirt removed.
4 team-loads of earth removed at Sixty-second street.
2½ team-loads of earth removed at Sixty-third street.
2 team-loads of earth removed at Sixty-seventh street.

Reparing intersection of Sixty-first street.
Reparing intersection of Sixty-second street.
Reparing intersection of Sixty-third street.
Reparing intersection of Sixty-seventh street.
Reparing gutter at Seventy-second street—
30 feet by 4 feet.
Material used on the intersections was:
10½ team-loads of sand.
13½ team-loads of paving-blocks.

Cleaning basins on Western Boulevard, between One Hundred and Nineteenth and One Hundred and Fifty-fifth streets—
34 basins.

Repairing sidewalks on Western Boulevard—
Between One Hundred and Thirtieth and One Hundred and Thirty-first streets.
Between One Hundred and Forty-second and One Hundred and Forty-third streets.
Material used was—
2½ team-loads of dirt.

Relaying flagging on west side of Western Boulevard, at Sixty-second street—
18 feet by 4 feet.

Trimming and pruning trees on Western Boulevard, between Fifty-ninth and Seventy-second streets.
265 trees.

The following are the sewers and water connections that have been repaired on various macadam roads, streets and avenues:
Sewer connection, on Pleasant avenue, between One Hundred and Nineteenth and One Hundred and Twentieth streets. Material used was—
3 cart-loads of broken stone.
2 cart-loads of sand.

Sewer connection, Nos. 1, 3, 5 and 7 West One Hundred and Twenty-third street. Material used was—
6 cart-loads of Telford stone.
5 cart-loads of broken stone.

Water connection, No. 433 Pleasant avenue. No new material used.

Water connection, northwest corner of One Hundred and Twenty-third street and Sixth avenue. Material used was—
1 cart-load of Telford stone.
1 cart-load of broken stone.

Water connection, Nos. 81, 83 and 85 East One Hundred and Tenth street. Material used was—
1 cart-load of Telford stone.
1 cart-load of broken stone.
1 cart-load of sand.

Water connection, No. 227 West One Hundred and Twenty-third street. Material used was—
4 cart-loads of broken stone.
3 cart-loads of sand.

Water connection, Tenth avenue and One Hundred and Seventieth street. Material used was—
1 team-load of stone.

Water connection, No. 337 East One Hundred and Sixteenth street. Material used was—
2 cart-loads of broken stone.
2 cart-loads of sand.

Sewer connection, southwest corner of One Hundred and Tenth street and First avenue. Material used was—
3 cart-loads of Telford stone.
3 team-loads of broken stone.

Sewer connection, No. 334 East One Hundred and Sixteenth street. Material used was—
2 team-loads of broken stone.
1 cart-load of broken stone.
2 cart-loads of sand.

The following are the unpaved roads, streets and avenues that have been repaired, and the material used during the quarter ending December 31, 1885:

Repairing Seventy-eighth street and Ninth avenue.
Material used was 4 cart-loads of dirt.

Repairing Eighty-second street, between Avenue A and First avenue.

Repairing Eighty-third street, between Avenue B and First avenue.

Repairing Eighty-fourth street, between Avenue A and First avenue.

Repairing Eighty-sixth street, between Boulevard and Tenth avenue.
Material used was 5 cart-loads of dirt.

Repairing Ninety-fifth street, between Second and Third avenues.

Repairing Ninety-fifth street, between Lexington and Fifth avenues.

Repairing Ninety-sixth street, between Second and Fifth avenues.
Material used was given by contractor.

Repairing Ninety-sixth street, between Boulevard and Eleventh avenue.
Material used was 7 team-loads of dirt.

Repairing Ninety-seventh street, between Lexington and Fifth avenues.

Repairing One Hundred and Twelfth street, near Fifth avenue.
Material used was 4 team-loads of dirt.

Repairing One Hundred and Twenty-second street, between Seventh and St. Nicholas avenues.

Repairing One Hundred and Twenty-third street and New avenue.
Material used was 39 team-loads of dirt.

Repairing One Hundred and Twenty-fifth street, between Tenth avenue and Boulevard.
Material used was 8 cart-loads of dirt.

Repairing One Hundred and Thirty-fourth street, between Eighth and St. Nicholas avenue.
Material used was 2 team-loads of dirt.

Repairing One Hundred and Thirty-fifth street, between Fifth and St. Nicholas avenues.

Repairing One Hundred and Forty-first street, between Eighth and St. Nicholas avenues.
Material used was 2 team-loads of dirt.

Repairing One Hundred and Forty-third street, between Eighth and St. Nicholas avenues.
Material used was 156 team-loads of dirt.

Repairing One Hundred and Forty-fourth street, between Tenth avenue and Boulevard.
Material used was 1½ team-loads of dirt.

Repairing One Hundred and Fifty-first street, between Boulevard and Hudson river.
Material used was 46 team-loads of dirt.

Repairing One Hundred and Fifty-seventh street, between Tenth and Eleventh avenues.

Repairing One Hundred and Fifty-ninth street, between Tenth and Eleventh avenues.

Repairing One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road.
Material used was 2 team-loads of dirt.

Repairing F street, at Inwood.

Repairing Eighth avenue, between One Hundred and Forty-fifth and One Hundred and Forty-sixth streets.
Material used was 18 team-loads of dirt.

Repairing Eighth avenue, between One Hundred and Forty-seventh and One Hundred and Forty-eighth streets.
Material used was 3 team-loads of dirt.

Repairing Ninth avenue, corner Sixty-fourth street.
15 feet by 2 feet.

Repairing Ninth avenue, between Sixty-third and Sixty-fourth streets.
114 feet by 2 feet.

Repairing Ninth avenue, at Seventy-eighth street.
Material used was 11 team-loads of dirt.

Repairing Ninth avenue, between Seventy-seventh and Seventy-ninth streets.
Material used was 65 team-loads of dirt.

Repairing Ninth avenue and One Hundred and Twenty-fourth street. Material used was—
1 team-load of trap-rock.
1 team-load of dirt.

Repairing Tenth avenue and Seventy-fourth street.
Material used was 1 cart-load of dirt.

Repairing Eleventh avenue and Sixty-fifth street.
Material used was 1 cart-load of dirt.

Repairing Eleventh avenue and Sixty-sixth street.
Material used was 2 team-loads of dirt.

Repairing Kingsbridge road, from Inwood lane to Spuyten Duyvil.

Repairing French Boulevard, between One Hundred and Fifty-eighth street and Deaf and Dumb Asylum.

Filling New avenue, between Manhattan and One Hundred and Twenty-third streets—
107 team-loads of dirt.

Repairing culvert on Kingsbridge road at Two Hundred and Twenty-fourth street.

Replanking Farmers' Bridge over Dyckman's creek.

Sprinkling Kingsbridge road, from One Hundred and Ninetieth street to Spuyten Duyvil.
1,286 team-loads of earth and clay on the various unpaved streets.

The following macadam roads, streets and avenues were sprinkled during the quarter ending December 31, 1885:

Seventy-second street, between Fifth avenue and Avenue A.

One Hundred and Tenth street, between First and Eighth avenues.

One Hundred and Sixteenth street, between Seventh and Pleasant avenues.

One Hundred and Twenty-third street, between Eighth and Mount Morris avenues.

One Hundred and Twenty-fourth street, between Sixth and Pleasant avenues.

One Hundred and Fifty-fifth street, between Avenue St. Nicholas and Boulevard.

Fifth avenue, between Fifty-eighth and One Hundred and Twentieth streets.

Sixth avenue, between One Hundred and Tenth and One Hundred and Thirty-fifth streets.

Seventh avenue, between One Hundred and Tenth and One Hundred and Fifty-fourth streets.

Pleasant avenue, between One Hundred and Nineteenth and One Hundred and Twenty-fourth streets.

St. Nicholas avenue, between One Hundred and Tenth and One Hundred and Fifty-fifth streets.

Mount Morris avenue, between One Hundred and Twentieth and One Hundred and Twenty-fourth streets.

Avenue A, between Fifty-seventh and Eighty-sixth streets.

The following are the quantities of material used during the quarter ending December 31, 1885, at the repair-shops, on New avenue and One Hundred and Twenty-second street, in repairing the sprinklers, hand-carts, road-rollers and scrapers, and tools:

Repairing 14 picks, steeled.

Repairing 35 picks, sharpened.

Material used—

392 pounds of iron.
34 pounds of cast steel.
146 pounds of spring steel.
343 carriage bolts.
3½ gross of screws.
30 pounds of nails.
1 paper of finishing nails.
348 feet of oak.
270 feet of pine.
10 feet of white wood.
80 feet of hemlock.
97 pounds of white lead.
1 pound of Indian red.
6 pounds of black lead.
13 pints of raw oil.
9 pints of turpentine.
9 pints of varnish.

Table showing the Amount and Class of Travel on the Western Boulevard at Seventy-ninth Street, from November 17 to November 23, 1885, for the Ten Hours between 7 A. M. and 5 P. M.

1885.	Weather.	Stone Trucks.	Dirt Trucks.	Light Trucks.	Bear Trucks, Loaded and Light.	Express Trucks, Loaded and Light.	Feed Wagons, Loaded and Light.	One-horse, Sand Truck, Loaded and Light.	Two-horse, Sand Truck, Loaded and Light.	One-horse, Horse and Horse-Drawn Truck, Loaded and Light.	Butcher and Baker Wagons, etc.	Other kinds of Vehicles.	Total.	Average Travel per Hour.
Nov. 17.....	Clear.	221	414	510	102	147	79	217	331	163	125	570	2,879	287+
" 18.....	"	246	482	500	171	167	181	289	451	392	200	678	3,757	375+
" 19.....	"	395	571	531	150	160	172	405	466	302	308	617	4,053	406+
" 20.....	"	260	430	446	238	229	207	417	632	451	298	738	4,331	433+
" 21.....	"	265	364	356	193	154	211	264	568	389	278	849	3,891	389+
" 22, S.....	"	.....	125	.....	.....	.....	.....	.....	.....	.....	100	240	465	46+
" 23.....	"	30	64	65	137	133	75	10	.....	.....	185	416	1,115	111+
Totals.....		1,417	2,271	2,533	1,031	981	925	1,602	2,448	1,657	1,488	4,108	20,501	..
Average daily travel, 2,928+.		Average travel per hour for 70 hours, 292+.												

Table Showing the Amount of Travel on Seventh Avenue, at One Hundred and Twenty-fifth Street, from November 27 to December 3, 1885, for Ten Hours, from 7 A. M. to 5 P. M.

1885.	One-horse Vehicles.	Two-horse Vehicles.	Stone Trucks.	Dirt Trucks.	Light Trucks.	Two-horse, Loaded and Light.	One-horse, Loaded and Light.	One-horse, Loaded and Light.	Two-horse, Loaded and Light.	Horse-drawn Riders.	Total.	Average, per hour.	Weather.
Nov. 27.....	2,060	1,773	191	358	365	377	185	410	320	.....	6,039	603+	Clear.
" 28.....	2,455	2,230	325	450	455	400	345	380	355	.....	7,395	739+	"
" 29 S.....	8,358	4,160	.....	60	.....	.....	.....	.....	.....	325	12,903	1,290+	"
" 30.....	4,545	2,610	455	590	535	570	350	430	605	85	10,775	1,077+	"
Dec. 1.....	3,383	2,035	347	430	451	416	250	315	445	108	8,180	818+	"
" 2.....	3,166	2,375	412	485	525	485	250	315	505	175	8,684	868+	"
" 3.....	2,383	1,291	238	305	280	239	150	375	299	125	5,690	569+	"
Total.....	26,355	16,474	1,968	2,618	2,671	2,428	1,530	2,275	2,329	818	59,666	.....	..
Average daily travel, 8,523+.		Average travel per hour for 70 hours, 852+.											

Table Showing Number and Kind of Sprinkling Wagons, with Capacity of each in Gallons.

No.	MONITORS.	REMARKS.	No.	BOX SPRINKLERS.	REMARKS.
	No. of Gallons.			No. of Gallons.	
1	625.60	.....	19	434.62	.....
2	598.30	.....	20	461.15	.....
3	386.74	.....	21	432.95	.....
4	625.60	.....	22	432.95	.....
5	687.75	.....	23	448.87	.....
6	628.70	.....	24	405.00	.....
7	624.40	.....	25	432.95	.....
8	615.10	.....	26	432.95	.....
9	625.60	.....	27	432.95	.....
10	625.60	.....	28	432.95	.....
11	625.60	.....	29	432.95	.....
12	618.10	.....	30	461.15	.....
13	625.60	.....	31	432.95	.....
14	687.72	.....	32	432.95	.....
15	687.70	.....	33	467.00	.....
16	615.10	.....		
17	572.20	.....		
18	577.20	.....		

Total number of gallons used during the quarter 2,289,780
 Total number of barrels used during the quarter 3,582

Table Showing the different Streets and Avenues that have been Cleaned and Repaired, together with Area of same.

Western Boulevard—	
Trees trimmed.....	265
Basins cleaned.....	37
Gutters cleaned.....	56,822 square feet.
Macadam repaired with trap rock.....	1,606
Flagging laid.....	120
Block pavement relaid at Sixty-seventh street.....	264
Block pavement relaid at Sixty-second street.....	392
Block pavement relaid at Sixty-first street.....	390

Western Boulevard—	
Block pavement relaid at Sixth-fourth street.....	228 square feet.
Block pavement relaid at Seventy-second street.....	30
One Hundred and Forty-fifth street, from Sixth avenue to Boulevard—	
Macadam repaired with trap rock, intersection of Eighth avenue.....	4,593
Gutters cleaned between Seventh and Eighth avenues.....	1,100
Old bridge-stones relaid.....	88
Ninth avenue, from One Hundred and Twenty-third to One Hundred and Twenty-fourth street—	
Macadam repaired with trap rock.....	45
Seventy-second street, between Ninth and Tenth avenues—	
Macadam repaired with trap rock.....	1,856
Seventy-second street, between Avenue A and Fifth avenue—	
Gutters cleaned.....	30,632
Seventh avenue, from One Hundred and Tenth to One Hundred and Fifty-fourth street—	
Macadam repaired with trap rock, limestone, screenings and sand.....	20,770
Gutters cleaned.....	78,368
Sand or gutter stuff spread.....	151,513
Flagging relaid.....	1,842
Avenue St. Nicholas, from One Hundred and Twenty-fifth to One Hundred and Fifty-fifth street—	
Roadway and gutters repaired with gravel.....	20,290
Gutters cleaned.....	65,239
Basins cleaned.....	16
One Hundred and Fifty-second street, from Boulevard to St. Nicholas avenue—	
Gutters cleaned.....	11,460
Surfaced with limestone screenings.....	5,400
Fifth avenue, from Fifty-eighth to One Hundred and Tenth street—	
Macadam repaired with blue stone.....	8,478
Roadway and gutters cleaned.....	109,884
Old bridge-stone relaid.....	120
Block pavement relaid.....	27
Fifth avenue, from One Hundred and Tenth to One Hundred and Twentieth street—	
Gutters cleaned.....	21,266
Macadam repaired with trap rock.....	312
Sand or gutter stuff spread.....	85,066
Fifth avenue, from One Hundred and Twenty-fourth to One Hundred and Thirtieth street—	
Macadam repaired with trap rock, limestone screenings and sand.....	4,235
Gutters cleaned.....	12,528
First avenue, from One Hundred and Ninth to One Hundred and Sixteenth street—	
Macadam repaired with trap rock and sand.....	7,375
Roadway and gutters cleaned.....	92,412
Avenue A, from Fifty-eighth to Eighty-sixth street—	
Macadam repaired with blue stone.....	2,984
Gutters cleaned.....	59,700
New bridge-stones laid.....	232
Block pavement.....	135
One Hundred and Twenty-fourth street, from Pleasant to Seventh avenue—	
Macadam repaired with trap rock.....	525
Roadway and gutters cleaned.....	143,870
One Hundred and Sixteenth street, from First to Seventh avenue—	
Macadam repaired with trap rock.....	5,431
Roadway and gutters cleaned.....	46,720
Sixth avenue, from One Hundred and Tenth to One Hundred and Forty-sixth street—	
Trees.....	364
Gutters cleaned.....	46,146
Flagging relaid.....	1,032
Mount Morris avenue, from One Hundred and Twentieth to One Hundred and Twenty-fourth street—	
Gutters cleaned.....	83,865
F street—	
Macadamized with gneiss and clay.....	2,989
Surfaced with limestone.....	6,789
One Hundred and Tenth street, from First to Sixth avenue—	
Roadway and gutters cleaned.....	73,837
Pleasant avenue—	
Roadway and gutters cleaned.....	79,149
Sand spread.....	79,149
One Hundred and Twentieth street, from Fifth to Mount Morris avenue—	
Roadway and gutters cleaned.....	12,900
One Hundred and Twenty-third street, from Mount Morris to Eighth avenue—	
Roadway and gutters cleaned.....	65,100

RECAPITULATION.

Trees trimmed.....	629
Basins cleaned.....	43
Gutters cleaned.....	399,638 square feet.
Roadway and gutters cleaned.....	623,872
Macadam repaired with trap rock, limestone screenings and sand.....	25,005
Roadway repaired with gravel.....	20,290
Roadway surfaced with limestone.....	12,189
Macadam repaired with trap rock and sand.....	22,823
Macadam repaired with blue stone.....	11,462
Macadamized with gneiss stone and clay.....	2,989
Sand or gutter stuff spread.....	315,728
Flagging relaid.....	2,994
New bridge-stone laid.....	232
Old bridge-stone relaid.....	208
Block pavement repaired.....	1,466

The following is a statement of the appropriation and expenditures on "Boulevards, Roads and Avenues, Maintenance of," 1885:

Amount appropriated for 1885.....	\$75,000 00
Amount transmitted during the first quarter, 1885.....	8,830 46
Balance, April 1, 1885.....	\$66,169 54
Amount transmitted during the second quarter, 1885.....	18,110 36
Balance, July 1, 1885.....	\$48,059 18
Amount transferred to Boulevard Resurfacing, between Fifty-ninth and Seventy-ninth streets.....	25,000 00
Balance, July 1, 1885.....	\$23,059 18
Amount transmitted during the third quarter, 1885.....	14,522 17
Balance, October 1, 1885.....	\$8,537 01
Amount transferred from Boulevard Resurfacing, between Fifty-ninth and Seventy-ninth streets, to Boulevards, Maintenance of.....	5,000 00
Balance, October 1, 1885.....	\$13,537 01
Amount transmitted during the fourth quarter, ending December 31, 1885, is as follows:	
For Pay-roll, Laborers, etc., September 30, 1885.....	\$2,024 12
" " " " October 15, ".....	1,318 00
" " " " " 31, ".....	1,696 87
" " " " November 15, ".....	1,800 00
" " " " " 30, ".....	2,376 25
" " " " December 15, ".....	3,149 62
Use of horse by Superintendent of Streets.....	270 00
Repairing sprinklers.....	50 50
Axle grease.....	10 16
Coal.....	20 00
Bridge-stone.....	87 00
Sand.....	225 00
Balance, January 1, 1886.....	\$509 49

The following is a statement of the appropriation and expenditures on "Boulevard Resurfacing, between Fifty-ninth and Seventy-ninth streets":

Amount appropriated for 1885	\$25,000 00
Amount transferred to Boulevard, Maintenance of	5,000 00
Balance, October 1, 1885	\$20,000 00
Amount transmitted during the fourth quarter, ending December 31, 1885, is as follows:	
No. 1. Payment on contract	\$4,935 00
" 2. " " " "	6,251 00
" 3. " " and final	6,862 00
Order for resurfacing between Fifty-ninth and Sixty-first streets	515 12
	18,563 12

Balance, January 1, 1886.....\$1,436 88

Restoring and Repaving—Special Fund.

Amount transmitted during the fourth quarter, ending December 31, 1885, is as follows:	
Pay-roll, Laborers, etc., September 30, 1885	\$56 75
" " " " October 15, "	109 37
" " " " November 15, "	75 00
" " " " 30, "	138 00
" " " " December 15, "	153 50
Total amount transmitted	\$532 62

The following is a statement of the appropriation and expenditures on "Roads, Streets and Avenues, Unpaved, Maintenance of":

Amount appropriated for 1885	\$25,000 00
Amount transmitted during the first quarter, 1885	2,210 10
Balance, April 1, 1885	\$22,789 90
Amount transmitted during the second quarter, 1885	5,424 66

Balance, July 1, 1885.....\$17,365 24

Amount transmitted during the third quarter, 1885.....9,141 08

Balance, October 1, 1885.....\$8,224 16

Amount transmitted during the fourth quarter, ending December 31, 1885, is as follows:

Pay-roll, Laborers, etc., September 30, 1885	\$1,622 62
" " " " October 15, "	1,370 24
" " " " 31, "	1,755 75
" " " " November 15, "	1,264 37
" " " " 30, "	785 99
" " " " December 15, "	434 50
Limestone screenings	203 35
Gneiss stone	192 13
Covering and building stone	108 00
Lumber	63 27
Voucher No. 569 was charged to 1884 appropriation and transferred to 1885	94 05
	7,894 27

Balance, January 1, 1886.....\$329 89

Amount transmitted during the fourth quarter from the appropriation of 1883: For limestone chips, as per judgment of the Superior Court.....\$584 28

The following is a statement of the appropriation and expenditures on "Boulevards, Roads and Avenues, Maintenance of—Salaries":

Amount appropriated for 1885	\$2,000 00
Amount transmitted during the first quarter, 1885	450 00

Balance, April 1, 1885.....\$1,550 00

Amount transmitted during the second quarter, 1885.....533 71

Balance, July 1, 1885.....\$1,016 29

Amount transmitted during the third quarter, 1885.....561 29

Balance, October 1, 1885.....455 00

Amount transmitted during the fourth quarter, ending December 31, 1885, is as follows:

Pay-roll, Clerk, October, 1885	\$150 00
" " " " November, 1885	150 00
" " " " December, 1885	150 00
	450 00

Balance, January 1, 1886.....\$5 00

The following is the amount that was received during the fourth quarter, ending December 31, 1885, for the use of steam rollers and sprinklers and stone sold at public auction and deposit to the credit of the "General Fund".....\$539 01

The following table shows the area of unpaved streets, avenues and country roads in charge of this Bureau:

	LINEAL FEET.	SQUARE FEET.	ACRES.	MILES.
Streets	187,732	6,214,116	142	35.5
Avenues	51,613	3,024,780	69	9.7
Country roads	20,576	680,020	16	3.9
Total	259,921	9,918,916	227	49.1

The following are partially macadamized, but are included in table, as streets or country roads: Kingsbridge road, from One Hundred and Ninetieth street to Kingsbridge; F street, from Inwood street to Boulton road; Eleventh avenue, from One Hundred and Fifty-fifth to One Hundred and Fifty-eighth street, west side; One Hundred and Fifty-eighth street, from Eleventh avenue to Hudson river.

Table Showing the Amount of Material Used or Removed on or from the Macadamized Streets and Avenues during the Year 1885.

	No.	TEAM-LOADS.	LINEAL FEET.	SQUARE FEET.
Dirt removed	8,218	..	..	..
Dirt used	148	..	..	..
Sand used	2,532	..	..	..
Broken stone used	1,038	..	..	..
Gutter stuff spread	345	..	..	..
Basin dirt removed	291	..	..	..
Bridge-stone laid or re-laid	..	..	..	1,904

	No.	TEAM-LOADS.	LINEAL FEET.	SQUARE FEET.
Cobble-stones used	24	..	..	..
Paving blocks	7,297	..	..	..
Basins cleaned	312	..	..	..
Telford stone used	19	..	..	..
Trees trimmed	4,109	..	..	..
Stone removed	89	..	..	..
Gravel used	335	..	..	..
Gutter-stone reset	85	..	..	..
Flagging relaid	..	..	..	220
Gutter repaved	..	..	..	3,811

The above does not include material delivered on work by contractor.

The following is the total number of sewers and water connection repaired, with the amount of material used during the year 1886:

Sewer-connection repaired (31). Material used was—	
207 cart loads of broken stone.	
179 cart loads of Telford stone.	
55 cart loads of sand.	
76 cart loads of dirt excavated.	
Water connection repaired (20). Material used—	
30 cart loads of broken stone.	
11 cart loads of Telford stone.	
9 cart loads of sand.	
12 cart loads of earth excavated.	

The following are the amounts and classification of material obtained by the Bureau, free of cost. The prices given represent the value at the places from which they were obtained:

1,479 cubic yards of trap-rock and Gneiss stone, mixed, at \$1.75 per yard	\$2,588 25
2,350 cubic yards of trap-rock, at \$1.50 per yard	35 25
134 cubic yards of blue stone, at 50 cents per yard	67 00
55 cubic yards of blue stone, at \$1 per yard	55 00
89 cubic yards of sand, at 75 cents per yard	66 75
1,238 cubic yards of sand, at 50 cents per yard	619 00
Hauled from Twelfth avenue and One Hundred and Twenty-eighth street.	
Total	\$3,431 25

Table showing places and amount of work done during the Nine Months ending December 31, 1885.

(The first quarter's work not being kept in this way, it is impossible to furnish.)

Western Boulevard—	
Roadway and gutters cleaned	431,092 square feet.
Macadam repaired with four quar. trap-rock	30,592 "
Catch stones built between One Hundred and Twenty-second and One Hundred and Thirty-fifth streets	1,483 "
Crosswalks laid at Sixty-eighth, Seventieth, Seventy-second and Seventy-third streets	1,250 "
Trees trimmed	2,115 "
Block pavement repaired	3,811 "
Gutters cleaned	174,352 "
Sand spread	348,935 "
Basins cleaned	64 "
Flagging relaid	208 "
New bridge-stone laid	1,280 "
West Seventy-second street—	
Sand spread between Eighth and Ninth avenues	12,240 "
Sand spread between Boulevard and Riverside Drive	79,748 "
Macadam repaired with trap-rock	2,436 "
Roadway and gutters cleaned	79,748 "
Gutters cleaned	8,409 "
East Seventy-second street—	
Roadway and gutters cleaned	306,320 "
Macadam repaired	807 "
Roadway repaired with bluestone	1,170 "
Gutters cleaned	30,632 "
West One Hundred and Twenty-second street—	
Roadway and gutters cleaned	55,220 "
Gutters cleaned	10,440 "
One Hundred and Tenth street, west of Eighth avenue—	
Roadway and gutters cleaned	118,000 "
Macadam repaired	75 "
Gutters cleaned	9,584 "
One Hundred and Tenth street, from First to Eighth avenue—	
Roadway and gutters cleaned	256,687 "
Gutters cleaned	19,920 "
One Hundred and Sixteenth street—	
Sand spread, Fifth to Madison, and Fourth to Lexington avenues	49,500 "
Roadway cleaned, Fifth to Madison, and Fourth to Lexington avenues	49,500 "
Gutters cleaned, between Lexington and Pleasant avenues	64,156 "
Gutters cleaned between Fifth and Seventh avenues	13,952 "
Macadam repaired with trap-rock	7,031 "
Roadway and gutters cleaned	46,720 "
Fifth avenue, North—	
Roadway cleaned	62,640 "
Sand spread	50,112 "
Gutters cleaned	25,056 "
Macadam repaired	666 "
Macadam repaired with trap-rock	4,235 "
Fifth avenue, between Fifty-eighth and One Hundred and Tenth streets—	
Roadway and gutters cleaned	1,406,167 "
Macadam repaired with 5 quar. blue stone	24,615 "
" " " " trap-rock	312 "
Gutters cleaned	21,266 "
Sand or gutter stuff spread	85,066 "
Bridge-stone relaid	120 "
Block pavement relaid	27 "
One Hundred and Twenty-fourth street, between Pleasant and Seventh avenues—	
Roadway and gutters cleaned	241,250 "
Gutters cleaned	28,704 "
Macadam repaired with trap-rock and sand	15,645 "
Mount Morris avenue—	
Sand spread from One Hundred and Twentieth to One Hundred and Twenty-fourth streets	62,899 "
Gutters cleaned from One Hundred and Twentieth to One Hundred and Twenty-fourth streets	16,772 "
One Hundred and Twenty-third street, between Mount Morris and Eighth avenues—	
Roadway and gutters cleaned	130,200 "
Sixth avenue, between One Hundred and Tenth and One Hundred and Forty-sixth streets—	
Gutters cleaned	93,626 "
Sand spread	439,576 "
Trees trimmed	814 "
New bridge-stone laid on north side of One Hundred and Twenty-fifth street	312 "
Flagging relaid	1,032 "
Seventh avenue—	
Gutters cleaned	199,824 "
Sand or gutter stuff spread	1,079,701 "

Seventh avenue—	
Macadam repaired with trap-rock, limestone and sand.....	20,770 square feet.
Flagging relaid.....	1,842 "
New bridge-stone laid.....	312 "
One Forty-fifth street, West, from Eighth avenue to Boulevard—	
Roadway and gutters cleaned.....	142,500 "
Repairs to cobble-stone gutters.....	640 "
Gutters cleaned.....	21,008 "
One Hundred and Forty-fifth street, East, from Sixth to Eighth avenue—	
Gutters cleaned.....	12,000 "
Sand spread.....	90,000 "
Macadam repaired with trap-rock.....	5,693 "
Bridge-stone relaid.....	88 "
One Hundred and Fifty-second street—	
Roadway and gutter cleaned.....	40,496 "
Gutters cleaned.....	11,291 "
Macadamized with broken stone, and limestone.....	16,400 "
Avenue St. Nicholas—	
Roadway and gutters cleaned.....	287,398 "
Gutters cleaned.....	193,257 "
Roadway resurfaced with Roa Hook gravel.....	97,030 "
Repairs at One Hundred and Twenty-fourth street intersection.....	210 "
Basins cleaned.....	15 "
One Hundred and Fifty-fifth street—	
Roadway and gutters cleaned.....	71,744 "
Kingsbridge Road—	
Repaired with limestone, between One Hundred and Ninetieth street and Kingsbridge, limestone screenings, trap-rock screenings and gneiss stone.....	48,310 "
One Hundred and Fifty-eighth street, between Eleventh avenue and Boulevard, and Eleventh avenue, between One Hundred and Fifty-fifth and One Hundred and Fifty-eighth streets—	
Repaired with broken gneiss stone, limestone screenings and clay.....	9,420 "
Roadway re-surfaced with gneiss.....	4,200 "
Roadway re-surfaced with limestone.....	11,500 "
One Hundred and Forty-first street—	
Macadamized with broken limestone and screenings.....	9,367 "
First avenue, from One Hundred and Ninth to One Hundred and Sixteenth street—	
Roadway and gutters cleaned.....	184,824 "
Belgium pavement not included.....	
Macadam, repaired with trap-rock and sand.....	7,375 "
Ninth avenue, from One Hundred and Twenty-third to One Hundred and Twenty-sixth street—	
Roadway and gutters cleaned.....	29,097 "
Gutters cleaned.....	1,720 "
Macadam repaired with trap-rock.....	45 "
Avenue A or Pleasant avenue—	
Roadway and gutters cleaned.....	158,298 "
Sand spread.....	79,149 "

Avenue A, from Fifty-eighth to Eighty-sixth street—	
Roadway and gutters cleaned.....	896,408 square feet.
Macadam repaired with bluestone.....	3,524 "
Gutters cleaned.....	57,760 "
New bridge-stone laid.....	232 "
Block pavement.....	135 "
F street, between Inwood lane and Bolton road—	
Roadway re-surfaced with gneiss stone.....	6,789 "
Stone culvert built.....	127 lineal feet.
Stone culvert cleaned.....	75 "
Roadway re-surfaced with limestone.....	6,689 square feet.
Barry's Hill, from Seventh avenue to Central Bridge—	
Macadam repaired with trap-rock and bluestone.....	2,800 "
Inwood street, from Kingsbridge road to Harlem river—	
Stone culvert cleaned.....	600 lineal feet.
Manhattan street, between Avenue St. Nicholas and Ninth avenue—	
Gutters cleaned.....	3,512 square feet.
Diagonal street, from One Hundred and Forty-first to One Hundred and Forty-fifth street—	
Roadway repaired with limestone.....	1,080 "
One Hundred and Twentieth street, from Fifth to Mount Morris avenue—	
Roadway and gutter cleaned.....	12,900 "

RECAPITULATION.

	Area.
Roadway and gutters cleaned.....	5,011,350 square feet.
Gutters cleaned.....	967,184 "
Sand or gutter-stuff spread.....	2,307,926 "
Macadam repaired.....	17,692 "
" with trap rock.....	44,009 "
" with bluestone.....	15,072 "
Cobble stone gutters repaired.....	640 "
Gravel roadway resurfaced.....	97,030 "
Macadam repaired or renewed with limestone.....	70,166 "
" with gneiss stone and clay.....	12,409 "
Block pavement repaired with blocks.....	311,488 "
Macadam pavement repaired or new work.....	7,476 "
Gneiss stone and limestone screenings.....	7,476 "
" only.....	7,900 "
Surface with limestone screenings.....	11,520 "
" limestone chips.....	11,080 "
Trap rock and limestone screenings.....	2,850 "
Stone culvert built.....	127 lineal feet.
" cleaned.....	675 "
New bridge-stone laid.....	2,130 square feet.
Macadam repaired with trap rock, limestone and sand.....	25,005 "
" and sand.....	22,823 "
Flagging relaid.....	2,994 "
Trees trimmed.....	2,029 "
Basins cleaned.....	81 "

Macadam Roadways.

LOCATIONS.	LENGTH BY FEET.	LENGTH BY MILES.	ROAD WIDTH.	SQUARE FEET.	SQUARE FEET IN RETURNS.	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	
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	436,346.40	.....	48,505.15	10.021	
Sixth avenue, from north curb of One Hundred and Tenth street to south curb of One Hundred and Forty-fifth street.....	9,518.88	1.803	80.00	761.40	18,300.00	86,645.60	17.901	
Seventh avenue, from north curb of One Hundred and Tenth street to north curb of One Hundred and Fifty-fourth street.....	11,609.35	2.198	80.00	928,188.00	12,000.00	104,618.33	21.604	
Avenue A, from north side of Fifty-seventh street to south line of Eighty-sixth street.....	7,470.07	1.415	60.00	448,204.20	6,905.00	50,577.68	10.447	
One Hundred and Twenty-second street, from west house-line of Tenth avenue to east line of Riverside Drive.....	1,293.00	0.245	42.00	54,306.00	.....	6,034.00	1.247	
One Hundred and Tenth street, from First to Eighth avenue.....	6,095.00	.....	30.00	182,850.00	1,514.00	20,484.88	4.232	
One Hundred and Tenth street, from west curb of Eighth avenue to east curb of Riverside Drive.....	3,043.00	1.730	40.00	121,720.00	.....	13,544.44	2.794	
First avenue, from south curb of One Hundred and Ninth street to north curb of One Hundred and Sixteenth street.....	1,932.81	0.367	60.00	115,968.60	1,680.00	13,072.06	2.701	
Fifth avenue, from north curb of Fifty-eighth street to south curb of One Hundred and Twentieth street.....	16,393.76	3.105	42.00	698,887.92	10,350.00	77,654.21	16.044	
Seventy-second street, from north curb of Avenue A to Fifth avenue.....	3,829.00	.....	40.00	153,160.00	1,570.00	17,102.22	3.552	
Seventy-second street, from Eighth avenue to Riverside Drive.....	2,957.00	.....	60.00	174,420.00	.....	19,780.00	4.286	
One Hundred and Fifty-second street, from west curb of Avenue St. Nicholas to east curb of Boulevard.....	1,435.88	0.271	30.00	43,016.40	.....	4,779.60	0.987	
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	7,859.49	1.622	
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	.....	8,716.60	1.800	
One Hundred and Twentieth street, from five feet east of curb of Fifth avenue to west curb of Mt. Morris avenue.....	430.00	0.081	30.00	12,900.00	.....	1,433.33	0.296	
Mt. Morris avenue, from south curb of One Hundred and Twentieth street to fourteen 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	1.454	
Fifth avenue, from north curb of One Hundred and Twenty-fourth street to ten feet south of south curb of One Hundred and Thirtieth street.....	1,566.00	0.297	40.00	62,640.00	2,160.00	7,038.80	1.454	
One Hundred and Forty-fifth street, from west curb of Sixth avenue to east curb of Boulevard.....	4,243.58	0.804	60.00	254,014.80	950.00	28,396.08	5.866	
One Hundred and Sixteenth street, from Pleasant to Fourth avenue.....	2,905.50	.....	40.00	116,220.00	.....	13,020.55	2.690	
One Hundred and Sixteenth street, from Fourth to Seventh avenue.....	2,621.00	0.085	60.00	169,260.00	500.00	18,862.22	3.989	
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	
Ninth avenue, from west curb of One Hundred and Twenty-third street to south curb of One Hundred and Twenty-fifth street.....	479.96	.....	60.00	28,377.60	300.00	3,136.40	0.658	
Ninth avenue, from north side of One Hundred and Twenty-fifth street to twelve feet north of south curb of One Hundred and Twenty-sixth street.....	263.83	0.140	60.00	15,829.80	300.00	1,792.20	0.370	
Manhattan street, from west curb of Avenue St. Nicholas to east curb of Ninth avenue.....	430.00	.....	70.00	30,730.00	.....	3,414.33	0.705	
Manhattan street, from west curb of Ninth avenue to One Hundred and Twenty-fifth street.....	580.00	0.109	Triangular.	12,671.00	.....	1,407.88	0.290	
One Hundred and Twenty-third street, from east side of Eighth avenue to west side of Mount Morris avenue.....	217.00	0.041	30.00	65,100.00	.....	7,233.33	1.494	
One Hundred and Twenty-fourth street, from west curb of Avenue A to five feet west of west curb of Fifth avenue.....	3,859.00	.....	30.00	115,770.00	1,340.00	13,010.44	2.688	
One Hundred and Twenty-fourth street, from west curb of Sixth avenue to east curb of Seventh avenue.....	570.00	0.095	30.00	26,100.00	.....	2,900.00	0.599	
Grand Boulevard, from junction of east curb of St. Nicholas avenue to north side of One Hundred and Twenty-fifth street.....	7,909.08	.....	100.00	734,618.16	7,350.00	82,440.24	17.935	
Between parkway curbs and street intersections.....	2,578.83	.....	22.00	56,734.26	.....	.....	.....
Grand Boulevard, from Circle at Fifty-fifth street to south curb of Manhattan street.....	18,315.92	3.321	80.00	1,465,273.60	19,491.90	171,277.75	35.387	
St. Nicholas place, from fifteen feet five inches south of north curb of One Hundred and Fiftieth street to thirty-one feet north of south curb of One Hundred and Fifty-first street.....	243.00	0.046	40.00	9,720.00	.....	1,080.00	0.223	
One Hundred and Fiftieth street, from St. Nicholas place to east curb of St. Nicholas avenue.....	78.00	0.015	15.50	1,200.00	.....	134.33	0.028	
One Hundred and Fifty-first street, from east curb of St. Nicholas avenue to west curb of St. Nicholas place.....	96.50	0.018	30.00	2,895.00	.....	321.66	0.066	
Avenue St. Nicholas, from north curb of One Hundred and Twenty-fifth street to five feet north of north curb of One Hundred and Fifty-fifth street.....	8,149.70	.....	55.00	448,233.50	8,730.95	50,773.82	10.490	
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	.....	55.00	73,370.00	1,730.60	8,346.73	1.724	
Avenue St. Nicholas, from west curb of Seventh avenue to east curb of Eighth avenue.....	1,544.10	.....	55.00	84,920.00	1,584.45	9,611.60	1.985	
Avenue St. Nicholas, from west curb of Eighth avenue to ten feet south of south curb of One Hundred and Twenty-fifth street.....	1,036.75	2.302	55.00	57,021.55	704.20	6,413.97	1.335	
Morningside avenue, east of north curb of One Hundred and Tenth street to north side of One Hundred and Twenty-third street.....	.....	.....	.....	.....	.....	.....	.....
Morningside avenue, east of north curb of One Hundred and Tenth street to north line of One Hundred and Fourteenth street.....	1,070.27	.....	42.00	49,900.41	.....	5,544.49	1.145	
Morningside avenue, east of north line of One Hundred and Fourteenth street to south line of One Hundred and Sixteenth street.....	566.85	.....	61.00	24,034.14	.....	2,670.46	0.551	
Morningside avenue, east of south line of One Hundred and Sixteenth street to north line of One Hundred and Twenty-third street.....	1,932.83	0.676	60.00	128,292.39	.....	14,254.71	2.945	
St. Nicholas place, from junction of east curb of St. Nicholas avenue to north side of One Hundred and Fifty-fifth street, except where paved.....	1,490.00	0.280	40.00	59,004.00	.....	6,556.00	1.354	
Grand total.....	145,732.18	27.600	.....	8,535,018.13	133,080.10	958,638.45	108.051	

N.B.—Four hundred and seventy-two receiving basins to be cleaned and maintained; three thousand six hundred and seventy trees to be pruned, watered, and generally cared for.

JANUARY, 1886.

The following synopsis will show some of the more important and extensive pieces of work repaired during the year on unpaved streets and avenues; also on country roads:

Kingsbridge road was re-macadamized with limestone from about One Hundred and Ninetieth street to Kingsbridge, and repairs made on other portions of the road.

F street was macadamized with gneiss stone and limestone screenings, from Inwood street to Bolton road.

The stone culvert in Inwood street was thoroughly cleaned, and a new culvert built in F street to connect with this.

One Hundred and Fifty-second street, from Boulevard, was macadamized, from Boulevard to summit west, with gneiss stone and limestone screenings.

One Hundred and Fifty-eighth street, from Eleventh avenue west, macadam repaired and renewed with gneiss and limestone screenings.

Eleventh avenue, between One Hundred and Fifty-fifth and One Hundred and Fifty-eighth streets, macadam repaired.

Bridge over Dykeman's Creek entirely replanked.

Plank walks on One Hundred and Fifty-fourth street, between McComb's Dam road and Eighth avenue, replanked.

Barry Hill, between Seventh avenue and Central Bridge, was repaired with gneiss stone and limestone screenings.

Fort Washington Depot lane, from Eleventh avenue to Hudson River Railroad, repaired with dirt and stone.

Farmers' Bridge road, from Kingsbridge road, was repaired with dirt.

Boulevard, from One Hundred and Fifty-eighth street to Deaf and Dumb Asylum, was thoroughly repaired with dirt.

McComb's Dam road, from One Hundred and Fiftieth street to Central Bridge, repaired with dirt. One Hundred and Fifty-second street, from summit west of Boulevard to Hudson River Railroad. In addition to this, a vast number of other streets have been regulated, gutters opened, and otherwise repaired.

The amount of material used on these were as follows :

4,563 team-loads of dirt.
24 team-loads of stone.
218 team-loads of broken stone.
12 team-loads of sand.
75 lineal feet of culvert built.
120 lineal feet of covering stone.
28 square yards of flagging relaid.

The above does not include any material furnished and delivered by contractors.

The following streets in this list have been sprinkled :

Boulevard, from One Hundred and Fifty-fifth to One Hundred and Fifty-eighth street.
Kingsbridge road, from Two Hundred and Twenty-fourth street to Kingsbridge.
Farmers' Bridge road, from Kingsbridge road to Harlem river.

Document "I."

DEPARTMENT OF PUBLIC WORKS,
BUREAU OF LAMPS AND GAS,
NEW YORK, January 7, 1886.

Hon. ROLLIN M. SQUIRE, Commissioner of Public Works :

SIR—Herein I have the honor to submit a report of the transactions of the Bureau of Lamps and Gas for the quarter ending December 31, 1885, with a summary of the same for the entire year.

In Exhibit "A" will be found a statement showing the amounts expended for gas to the various public markets, offices, 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 whole 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 thirty-four thousand three hundred and seventy dollars and sixty-six cents (\$234,370.66), and for the year, of seven hundred thousand six hundred and seventy-one dollars and twenty-one cents (\$700,671.21), leaving a surplus balance of sixteen thousand and twenty-eight dollars and seventy-nine cents (\$16,028.79). Of this surplus the sum of sixteen thousand dollars (\$16,000) has been transferred by the Board of Estimate and Apportionment to the account of two other Bureaux of this Department; still leaving a surplus of twenty-eight dollars and seventy-nine cents, as all bills have been audited, and there are no outstanding claims against the Bureau.

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 fourteen hundred and forty-nine dollars and ninety-five cents (\$1,449.95), and for the year of fifty-nine hundred and eighty-three dollars and twenty-eight cents (\$5,983.28), leaving a surplus balance of three hundred and sixteen dollars and seventy-two cents (\$316.72).

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. Two hundred and forty-one new gas-lamps have been lighted, seventy-eight gas-lamps relighted, and seventy-two gas-lamps discontinued during the quarter, and eight hundred and thirteen new gas-lamps, sixty-one new electric-lamps and fifty new naphtha-lamps have been lighted, three hundred and thirty-one old gas-lamps have been relighted and five hundred and twelve gas-lamps have been discontinued during the year, of which discontinued gas-lamps one hundred and ninety-six were displaced by the sixty-one new electric-lamps. The total number of lamps lighted at the close of the year was twenty-three thousand five hundred and fifty-five gas, seven hundred and eight electric and fifty naphtha lamps. The total net increase during the year was six hundred and thirty-two gas-lamps, sixty-one electric and fifty naphtha.

Exhibit "E" is a statement showing the lowest, highest and average illuminating power of the gases supplied to the city by the several gas-light companies during the fourth quarter, as also for the entire year.

Exhibit "F" is a copy of the contract with the Consolidated Gas Company for the lighting of the public lamps for the year ending on April 30, next; the contracts with the other gas companies being similar, in all respects, except as to districts and prices, the rates paid the other companies being shown further on.

Exhibit "G" is a copy of the time-table for lighting and extinguishing the public gas-lamps during the contract year. The electric-lamps are lighted about thirty to forty minutes after sunset, and extinguished about thirty minutes before sunrise, according to the conditions of the weather.

The following statement shows 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.—						
New York Branch.....	24	100	69	160	46	254
Manhattan Branch.....	49	33	26	72	21	76
Metropolitan Branch.....	149	22	42	69	8	28
Harlem Branch.....	284	78	77	589	33	46
New York Mutual Gas-light Co.	1	5	18	1	7	
Equitable Gas-light Co.....	7	11	15	49	6	48
Central Gas-light Co.....	58	83	95	448	1	2
Northern Gas-light Co.....	178	5	19	373	....	37
Yonkers Gas-light Co.....	10	....	....	....	....	....
N. Y. & N. J. Globe Gas-light Co.	50	....	....	....	....	....
Totals.....	809	333	348	1,778	116	498

The following table will show the number of new lamps lighted by the several gas companies in each of the years from 1878 to 1885, both inclusive :

BY WHAT GAS COMPANY.	NEW LAMPS LIGHTED IN—							
	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Consolidated Gas Co.—								
New York Branch.....	150	78	30	26	31	17	18	23
Manhattan Branch.....	72	131	58	41	67	53	22	50
Metropolitan Branch.....	148	110	137	126	146	156	67	159
Harlem Branch.....	130	134	138	99	219	255	308	312
New York Mutual Gas-light Co.....	....	152	1	....	3	....	5	....
Equitable Gas-light Co.....	....	....	....	....	....	....	....	7
Central Gas-light Co.....	89	115	42	65	105	75	134	74
Northern Gas-light Co.....	27	90	....	67	102	124	109	178
Yonkers Gas-light Co.....	....	....	16	14	187	36	2	10
* N. Y. and N. J. Globe Gas-light Co.....	....	....	....	....	....	....	....	50
Totals.....	615	810	422	438	860	716	566	863
† Brush Electric Illuminating Co.....	....	....	23	....	32	....	292	....
† United States Illuminating Co.....	....	....	....	....	73	....	227	61

* Naphtha-lamps.

† Electric-lamps.

The following statement shows the average number of lamps lighted under the supervision of the Department of Public Works in each of the years from 1878 to 1885, inclusive :

BY WHAT COMPANY.	AVERAGE NUMBER OF LAMPS LIGHTED IN—							
	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Consolidated Gas Co.—								
* New York Branch.....	3,148	3,381	3,560	3,565	3,461	3,369	3,046	3,450
Manhattan Branch.....	6,618	6,687	6,804	6,667	6,495	6,477	6,053	4,456
Metropolitan Branch.....	3,800	4,068	4,282	4,349	4,599	4,658	4,504	4,172
Harlem Branch.....	3,960	4,280	4,682	4,774	4,950	5,157	5,422	5,767
New York Mutual Gas-light Co.....	587	800	1,037	986	826	768	591	316
Equitable Gas-light Co.....	....	....	....	....	....	....	....	1,471
Central Gas-light Co.....	1,649	1,764	1,834	1,874	1,938	2,007	2,072	2,205
Northern Gas-light Co.....	989	1,026	1,090	1,117	1,181	1,308	1,429	1,551
Yonkers Gas-light Co.....	72	72	76	91	207	295	325	331
† N. Y. and N. J. Globe Gas-light Co.....	506	510	....	....	....	....	....	50
Brush Electric Illuminating Co.....	....	....	23	55	55	55	246	347
United States Illuminating Co.....	....	....	....	....	73	73	243	338
Totals.....	21,419	22,590	23,388	23,478	23,715	24,167	23,931	24,394

* This branch of the Consolidated Gas Company in 1885 gained 1,308 lamps, which were transferred from the account of the Manhattan Branch, being all the lamps between Grand and Houston streets; and it lost 256 lamps, of which 61 were transferred to the Equitable Gas Company and 195 were displaced by electric-lights. This is exclusive of the new lamps lighted, old lamps relighted and lamps discontinued for ordinary causes. The Manhattan Branch transferred to Equitable Gas Company 850 lamps and the 1,308 lamps to the New York Branch of Consolidated Company. The Mutual Gas Company transferred 202 lamps to the Equitable Company. The Metropolitan Branch transferred 293 lamps to the Equitable Company. The Equitable Company commenced with 1,400 lamps, transferred as above.

† These are naphtha-lamps, the same having been discontinued in 1879, but 50 new lamps were erected in 1885 at Woodlawn Heights, a locality which could not be reached by gas.

Gas-mains have been laid during the year, as follows :

By Consolidated Gas Co.—	
New York Branch.....	1,973'
Manhattan Branch.....	2,700'
Metropolitan Branch.....	7,391' 6"
Harlem Branch.....	31,185'
Municipal Branch.....	11,657'
Knickerbocker Branch.....	11,193'
By New York Mutual Gas-light Co.....	47,335' 4"
By Equitable Gas-light Co.....	2,253'
By Central Gas-light Co.....	10,500'
By Northern Gas-light Co.....	1,000'
By Yonkers Gas-light Co.....	1,000'

Total laid in 1885, 24,467 miles, or..... 127,187' 10"

Gas-mains have been taken up or abandoned during the year, as follows :

By New York Branch of Consolidated Gas Co.....	4,821'
By Manhattan Branch of Consolidated Gas Co.....	441'
By Harlem Branch of Consolidated Gas Co.....	10,208'
By Municipal Branch of Consolidated Gas Co.....	46'
By Equitable Gas-light Co.....	95' 10"

Total taken up or abandoned..... 15,611' 10"

The total miles of gas-mains in the streets of this city on December 31, 1885, was as follows :

Consolidated Gas Co.—	Miles.	Feet.
New York Branch.....	105	3,209
Manhattan Branch.....	175	2,710
Metropolitan Branch.....	146	2,111
Harlem Branch.....	142	178
Municipal Branch.....	76	2,324
Knickerbocker Branch.....	70	4,044
Total of Consolidated Gas Co.....	716	4,016
New York Mutual Gas-light Co.....	122	1,173
Equitable Gas-light Co.....	53	4,715 10"
Central Gas-light Co.....	50	859
Northern Gas-light Co.....	25	4,990
Yonkers Gas-light Co.....	10	3,610
Total miles of gas-mains, December 31, 1885.....	977	8,888

Of these mains, 890,684 miles are on Manhattan Island, and 86,111 miles are in the annexed territory north of Harlem river.

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

Four-inch main.....	28,699' 8"
Six-inch main.....	125,131' 8"
Eight-inch main.....	49,913' 5"
Twelve-inch main.....	38,022' 8"
Sixteen-inch main.....	19,805' 8"
Twenty-inch main.....	11,591' 9"
Twenty-four-inch main.....	11,457' 9"
Total.....	284,651' 8"

—and it has paid into the City Treasury, as required in the conditions prescribed by the Gas Commission, at the rate of twenty cents per lineal foot, amounting in the aggregate to \$56,930.33.

The New York Branch of the Consolidated Gas Company lights the lamps and supplies gas to the public in that part of the city lying south of Houston street. Its works are at Twenty-first street, East river. Its manufacture, water gas, and its office at corner of Hester and Elizabeth streets.

The Manhattan Branch lights lamps and supplies gas in that part of the city lying between Houston and Thirty-fourth streets. 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 Irving place and Fifteenth street.

The Municipal Branch does not light any public lamps; it supplies gas to the public in a part of the section lying between Thirty-fourth and Seventy-ninth streets. 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.

The Metropolitan Branch lights lamps and supplies gas in the district between Thirty-fourth and Seventy-ninth streets. Its works are at Forty-second street, North river; its manufacture is coal gas, and its office is at Broadway and Forty-sixth street.

The Harlem Branch had coal gas works at One Hundred and Eleventh street, East river, but on the consolidation of the several companies these works were closed, and its gas-mains were connected with the mains of the Knickerbocker Branch. Its office at Third avenue and One Hundred and Fourteenth street was maintained however, and, in connection with the Knickerbocker Branch, it lights all the lamps and supplies gas in that part of Manhattan Island lying north of Seventy-ninth street.

The Knickerbocker Branch had an office in Third avenue, but this was closed and its office business consolidated with the Harlem Branch. It manufactures water gas at its works at Ninety-ninth street, East river.

Consolidated Gas Company—Capital, \$39,070,000; capacity of works, 28,000,000 cubic feet per day.

The main or principal office is at Irving place and Fifteenth street.

The New York Mutual Company has mains in various streets or parts of streets between Battery place and Sixty-sixth street, and lights a few of the public lamps between Thirty-fourth and Sixty-third streets. It manufactures water gas at the works at Eleventh street, East river, and its office is at Fourth avenue and Sixteenth street.

Capital, \$3,500,000; capacity of works, 4,000,000 cubic feet per day.

The Equitable Gas-light Company has mains in various streets or parts of streets between Canal and Fifty-seventh streets. 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.

Capital, \$3,000,000; capacity of works, 2,000,000 cubic feet per day, now being enlarged to 4,000,000 per day.

The Central Gas-light Company supplies gas to the Twenty-third Ward (formerly Town of Morrisania), and lights all the public lamps therein. It manufactures coal gas at the works at One Hundred and Thirty-eighth street, Port Morris, and its office is at Alexander avenue and One Hundred and Forty-second street.

Capital, \$450,000; capacity of 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 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.

Capital, \$125,000; capacity of works, 150,000 cubic feet per day.

The Yonkers Gas-light Company has mains in, supplies gas to, and lights the public lamps in a small section of the Twenty-fourth Ward (formerly Town of Kingsbridge). Its gas-works and office are in the City of Yonkers, and its manufacture is water gas.

Capital, authorized, \$300,000; paid in, \$200,000; capacity of works, 250,000 cubic feet per day; business principally confined to the City of Yonkers, Westchester County.

The New York and New Jersey Globe Gas-light Company lights its lamps by means of naphtha contained in a reservoir on each lamp.

The length of streets, etc., lighted during the year 1885, was 12,344 miles.
The total length of streets of the city lighted on December 31, 1885, was 455,100 miles.
The total length of piers lighted on December 31, 1885, was 1,100 miles.
The total length of bridges lighted on December 31, 1885, was 1,100 miles.
The total area of parks lighted on December 31, 1885, was 383 acres.
The total area of Gansevoort Market lighted on December 31, 1885, was 3 1/2 acres.

The following streets were lighted by gas during the year:

Eighty street, from Lewis street to East river.
Sixteenth street, from Avenue C to Avenue D.
Twenty-sixth street, from Eleventh avenue to North river.
Thirty-sixth street, between Eleventh and Twelfth avenues (in part).
Fifty-fifth street, between Avenue A and East river (in part).
Sixty-sixth street, from Tenth avenue to the Boulevard.
Sixty-seventh street, from Avenue A to Third avenue.
Sixty-seventh street, from Tenth to Eleventh avenue.
Sixty-eighth street, from Eleventh to Twelfth avenue (in part).
Sixty-ninth street, from Eleventh to Twelfth avenue (in part).
Seventieth street, from Avenue A to East river (in part).
Seventy-first street, from Eleventh avenue to the Boulevard.
Seventy-second street, from Boulevard to Riverside Drive.
Seventy-fourth street, from Boulevard to Eleventh avenue.
Seventy-fifth street, from Boulevard to Eleventh avenue.
Seventy-sixth street, from Ninth to Tenth avenue.
Seventy-eighth street, from Tenth avenue to Boulevard.
Seventy-ninth street, north side, from Ninth to Tenth avenue.
Eighty-second street, from Ninth to Tenth avenue.
Ninety-first street, from First avenue to Avenue A.
Ninety-third street, from Ninth to Tenth avenue.
Ninety-fifth street, from Ninth to Tenth avenue.
One Hundred and Second street, from Second to Third avenue.
One Hundred and Second street, from Lexington to Fourth avenue.
One Hundred and Sixth street, north side, from Ninth to Tenth avenue.
One Hundred and Sixteenth street, north side, from Fourth to Eighth avenue.
One Hundred and Thirtieth street, from Academy place east.
One Hundred and Thirty-fourth street, from Eighth avenue to St. Nicholas avenue.
One Hundred and Thirty-fifth street, from Madison avenue to Fifth avenue.
One Hundred and Forty-sixth street, between Tenth avenue and Boulevard (in part).
One Hundred and Fifty-first street, from Tenth avenue to the Boulevard.
One Hundred and Fifty-third street, from Tenth avenue to Boulevard (in part).
One Hundred and Fifty-seventh street, from St. Nicholas avenue to Boulevard.
One Hundred and Seventy-fifth street, north side, from Tenth avenue to Kingsbridge road.
Avenue A, from Fifty-sixth to Fifty-eighth street.
Avenue A, from Sixty-fifth to Sixty-eighth street.
Academy place, from One Hundred and Twenty-eighth to One Hundred and Thirtieth street.
Avenue St. Nicholas, east side, from One Hundred and Thirty-second to One Hundred and Forty-fourth street.
Depew place, from Forty-second to Forty-fourth street.
First avenue, west side, from One Hundred and Fifth to One Hundred and Ninth street.
Madison Avenue Bridge and approach.
Madison avenue, from One Hundred and Thirty-fifth to One Hundred and Thirty-seventh street.
Seventh avenue, west side, from One Hundred and Forty-second to One Hundred and Forty-fifth street.
Eighth avenue, west side, from One Hundred and Forty-fifth to One Hundred and Fifty-fourth street.
Ninth avenue, from Ninety-third to Ninety-ninth street.
Tenth avenue, from Seventy-fourth to Seventy-ninth street.
Tenth avenue, west side, from Eightieth to Ninety-fifth street.
Pier 57, North river.
Bulkhead between Piers 56 and 57, North river.

The following streets in Twenty-third Ward:

Anderson avenue, from Orchard street to High Bridge street.
Approach to Madison Avenue Bridge.
Madison Avenue Bridge, fixed spans.
One Hundred and Thirty-eighth street, from Mott avenue to Madison Avenue Bridge.
One Hundred and Forty-eighth street, from Bergen avenue to Brook avenue.
One Hundred and Fifty-sixth street, from Third to Elton avenue.
One Hundred and Sixty-third street, from Tinton to Union avenue.
One Hundred and Seventieth street, from Third to Washington avenue.

The following streets in Twenty-fourth Ward:

Arthur avenue, from Tremont avenue to Kingsbridge road.
Bailey avenue, from Kingsbridge road to Riverdale avenue.
Berrian avenue, from Southern Boulevard to Suburban street.
Claremont avenue, from High Bridge street to Devoe street.
Columbia avenue, from Kingsbridge road to Jackson avenue.
Depot Squares at Bedford Park station.
Hull avenue, from Southern Boulevard to Suburban street.
Monroe avenue, from Kingsbridge road to Columbia avenue.
Riverdale road, from Sidney street to Warren avenue.
Southern Boulevard, from Tremont avenue to Kingsbridge road.
Southern Boulevard, from Orchard street to Hull avenue.
Tiebout avenue, from Kingsbridge road to Clark street.
Walnut street, from Jerome avenue to Weeks street.
Warren avenue, from Independence avenue to east of Riverdale road.
Washington avenue, east side, from One Hundred and Seventy-eighth to Samuel street.
Washington avenue, from One Hundred and Eightieth to One Hundred and Eighty-seventh street.

Williamsbridge road, from Suburban street to Jerome Park Railroad.
Woodruff avenue, from Franklin avenue to Broad street.

The following streets at Woodlawn Heights, Twenty-fourth Ward, were lighted by naphtha lamps:

Clinton avenue, from First to Second street.
First street, from Grand avenue to Clinton avenue.
First avenue, from Second to Third street.
Fourth avenue, from Second avenue to Mile Square road.
Grand avenue, from Harlem Railroad to Third street.
Second street, from Grand avenue to Fifth avenue.
Second avenue, from Second to Third street.
Third avenue, from Second to Third street.
Third street, from Grand avenue to Third avenue.

The following statement will show the prices now paid the several companies, under the existing contracts, for furnishing the gas to and lighting, extinguishing, cleaning, repairing and maintaining the public lamps for the year ending April 30, next:

CONTRACTOR.	For Gas to and Lighting, etc., each Lamp, per annum.	For each Lamp-post Straightened.	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	1 50	3 50	8 00	8 00
Northern Gas-light Co.....	30 00	1 50	1 50	3 00	3 50	8 00	8 00
Yonkers Gas-light Co.....	30 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

Electric-Lamp Contracts.

United States Illuminating Company, for the year ending April 30, 1886, at seventy cents each lamp per night (\$255.50 per year), including the fitting-up and every cost of maintenance, for lighting the following-named streets:

	Lamps.
Bleecker street, from the Bowery to Eighth avenue.....	33
Broadway, from Battery place to Twelfth street.....	52
Canal street, from the Bowery to North river.....	26
Catharine street, from East Broadway to East river.....	7
Chambers street, from Broadway to North river.....	8
East Broadway, from Chatham Square to Grand street.....	20
Fifth avenue, from Washington Square to Fourteenth street.....	7
Fulton street, from North river to East river.....	17
South street, from Whitehall street to Grand street.....	64
West street, from Battery place to West Eleventh street.....	50
Battery Park.....	20
City Hall Park.....	13
Tompkins Park.....	16
Washington Park.....	15
Gansevoort Market Square.....	13
Total.....	361

Brush Electric Illuminating Company, for the year ending April 30, 1886, at seventy cents each lamp per night (\$255.50 per year), including the fitting-up and every cost of maintenance, for lighting the following-named streets:

	Lamps.
Broadway, from Fourteenth to Fifty-ninth street.....	47
Fifth avenue, from Fourteenth to Fifty-ninth street.....	41
Fourth avenue, from Eighteenth to Thirty-fourth street.....	16
Park avenue, from Thirty-fourth to Forty-second street.....	9
Seventh avenue, from Fourteenth to Fifty-ninth street.....	43
Fourteenth street, from North river to East river.....	40
Twenty-third street, from North river to East river.....	34
Thirty-fourth street, from North river to East river.....	36
Forty-second street, from North river to East river.....	35
Fifty-ninth street, from Third avenue to Ninth avenue.....	22
Madison Park, 6 lamps on mast, equivalent to.....	12
Union Park, 6 lamps on mast, equivalent to.....	12
Total.....	347

The total aggregate length of streets now lighted by electric-lights is thirty miles, and the total area of public parks and Gansevoort Market Squares is forty-one and three-fourths acres.

In order that a comparison may be made of the relative cost of lighting the streets by electric-lights and by gas, I submit the following:

Statement Showing the Streets and Public Places now Lighted by Electric-lights, with the Number of such Lights and Cost of Same; also the Number of Gas-lamps Displaced by Electric-lights, and Annual Cost of Gas-lamps.

STREETS AND PUBLIC PLACES NOW LIGHTED.	Number of Electric-lamps at \$85.50 per Year each.	Aggregate cost of same per Year.	Number of Gas-lamps Displaced, at \$17.50 per Year each.	Aggregate cost of same per Year.	Excess of cost for Electric-lamps per Year.
Bleecker street, from Bowery to Eighth avenue.....	33	\$2,811 50	128	\$2,240 00	\$5,191 50
Broadway, from Battery place to Fifty-ninth street.....	47	25,294 50	490	8,575 00	16,719 50
Canal street, from Bowery to North river.....	26	6,643 50	89	1,557 50	5,085 50
Catharine street, from East Broadway to East river.....	7	1,788 50	28	490 00	1,298 50
Chambers street, from Broadway to North river.....	8	2,014 00	28	385 00	1,659 00
East Broadway, from Chatham Square to Grand street.....	20	5,110 00	90	1,575 00	3,535 00
Fulton street, from North to East river.....	17	4,343 50	56	980 00	3,363 50
Fourth avenue, from Eighteenth to Thirty-fourth street.....	17	4,343 50	75	1,312 50	3,031 00
Fifth avenue, from Fourteenth to Fifty-ninth street.....	41	12,464 00	240	4,357 50	7,906 50
Park avenue, from Thirty-fourth to Forty-second street.....	8	2,014 00	70	1,225 00	819 00
Seventh avenue, from Fourteenth to Fifty-ninth street.....	43	10,285 50	167	2,922 50	8,064 00
Fourteenth street, from North river to East river.....	40	10,220 00	153	2,677 50	7,542 50
Twenty-third street, from North river to East river.....	34	8,697 00	118	2,065 00	6,632 00
Thirty-fourth street, from North river to East river.....	36	9,128 00	108	1,890 00	7,238 00
Forty-second street, from North river to East river.....	35	8,248 50	145	2,537 50	5,405 00
Fifty-ninth street, from Third to Ninth avenue.....	22	5,621 00	80	1,400 00	4,221 00
South street, from Whitehall to Grand street.....	64	16,352 00	198	3,465 00	12,887 00
West street, from Battery place to West Eleventh street.....	50	12,775 00	217	3,797 50	8,977 50
Battery Park.....	20	5,110 00	90	1,732 50	3,377 50
City Hall Park.....	13	3,331 50	98	1,715 00	1,616 50
Tompkins Park.....	16	4,088 00	157	2,747 50	1,340 50
Washington Park.....	15	3,812 50	129	2,257 50	1,575 00
Madison Park.....	12	3,066 00	68	1,190 00	1,441 00
Union Park.....	12	3,066 00	68	1,155 00	1,491 00
Gansevoort Market Square.....	13	3,331 50	85	1,487 50	1,834 00
Total.....	708	\$180,894 00	3,211	\$56,192 50	\$124,701 50

Resolutions have been adopted by the Common Council requesting the Gas Commission to cause quite a number of additional streets to be lighted by the electric system, and in order to show the additional expense which would be incurred by such lighting, I submit the following:

Statement showing the Several Streets or Parts of Streets and Public Places in which an Extension of Electric-lights is requested by Resolution of the Common Council, with the Estimated Number of Lights required to comply with same, and the cost; also the Number of Gas-lamps which could be Displaced, and their cost.

	Estimated number of Electric-lights.	Aggregate Cost of Same per Year.	Number of Gas-lamps Displaced.	Aggregate Cost of Same per Year.	Excess of Cost of Electric Lighting.
Avenue A, Houston to Eighth street.....	8	\$2,044 00	22	\$385 00	\$1,659 00
Avenue A, Tenth to Fourteenth street.....	4	1,022 00	12	210 00	812 00
Avenue B, Houston to Twenty-third street.....	20	5,110 00	50	875 00	4,235 00

FOR WHAT STREETS.

	Estimated number of Electric Lights.	Aggregate Cost of Same per Year.	Number of Gas-lamps Displaced.	Aggregate Cost of Same per Year.	Excess of Cost of Electric Lighting.
Avenue C, Houston to Fourteenth street.....	15	\$3,832 50	49	\$857 50	\$4,690 00
Avenue D, Houston to Fourteenth street.....	13	3,321 50	35	612 50	2,709 00
First avenue, First to Twenty-third to Forty-second street.....	17	4,343 50	44	1,407 50	2,936 00
First avenue, Houston to Fourteenth street.....	14	3,577 00	61	1,067 50	2,509 50
First avenue, Fifty-ninth to Eighty-sixth street.....	29	7,409 50	108	1,890 00	5,519 50
Second avenue, Houston to Eighth street.....	8	2,044 00	31	542 50	1,501 50
Second avenue, Twenty-third to Forty-second street.....	17	4,343 50	71	1,442 50	2,901 00
Third avenue, Twenty-third to Forty-second street.....	17	4,343 50	75	1,512 50	2,830 50
Third avenue, One Hundred and Sixth to One Hundred and Thirtieth street.....	25	6,387 50	100	1,750 00	4,637 50
Fourth avenue, Fifth to Fourteenth street.....	10	2,555 00	40	805 00	1,750 00
Third avenue, Harlem Bridge to One Hundred and Seventieth street.....	53	13,514 50	190	3,325 00	10,189 50
Fifth avenue, Fifty-ninth to One Hundred and Tenth street.....	50	12,775 00	210	3,675 00	9,100 00
Sixth avenue, Fourteenth to Fifty-ninth street.....	41	10,475 50	180	3,150 00	7,325 50
Eighth avenue, Fourteenth to One Hundred and Tenth street.....	91	23,250 50	285	4,987 50	18,263 00
Ninth avenue, Fourteenth to Forty-second street.....	27	6,898 50	113	1,977 50	4,921 00
Ninth avenue, West side, between Fifty-ninth and Sixtieth streets.....	1	255 50	4	70 00	185 50
Tenth avenue, Fourteenth to Forty-second street.....	27	6,898 50	108	1,890 00	5,008 50
Eleventh avenue, Fourteenth to Forty-second street.....	27	6,898 50	104	1,820 00	5,078 50
Thirteenth avenue, Eleventh to Twenty-fifth street.....	20	5,110 00	73	1,277 50	3,832 50
Tenth street, Avenue A to Third avenue.....	18	2,044 00	17	315 00	1,729 00
Tenth street, West side to Sixth avenue.....	12	2,660 00	32	560 00	2,100 00
Fifteenth street, Seventh avenue to North river.....	13	3,321 50	30	525 00	2,796 50
Sixteenth street, Seventh avenue to North river.....	14	3,577 00	31	542 50	3,034 50
Seventeenth street, Seventh avenue to North river.....	14	3,577 00	27	472 50	3,104 50
Eighteenth street, Seventh avenue to North river.....	14	3,577 00	24	342 50	3,234 50
Nineteenth street, Seventh avenue to North river.....	14	3,577 00	29	507 50	3,069 50
Twentieth street, Seventh avenue to North river.....	14	3,577 00	33	577 50	2,999 50
Twenty-first street, Seventh avenue to North river.....	14	3,577 00	32	500 00	3,077 00
Twenty-second street, Seventh avenue to North river.....	14	3,577 00	34	507 50	3,069 50
Twenty-third street, Seventh avenue to North river.....	14	3,577 00	35	612 50	2,964 50
Twenty-fourth street, Seventh avenue to North river.....	14	3,577 00	31	512 50	3,064 50
Twenty-fifth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Twenty-sixth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Twenty-seventh street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Twenty-eighth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Twenty-ninth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirtieth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-first street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-second street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-third street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-fourth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-fifth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-sixth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-seventh street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-eighth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Thirty-ninth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fortieth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-first street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-second street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-third street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-fourth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-fifth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-sixth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-seventh street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-eighth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Forty-ninth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fiftieth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-first street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-second street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-third street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-fourth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-fifth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-sixth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-seventh street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-eighth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Fifty-ninth street, Seventh avenue to North river.....	14	3,577 00	30	525 00	3,052 00
Sixty-first street, First avenue to East River Park.....	7	1,788 50	20	350 00	1,438 50
Sixty-second street, Central Park to North river.....	14	3,577 00	28	490 00	3,087 00
One Hundred and Twenty-fifth street, East to North river.....	38	9,709 00	145	2,537 50	7,171 50
Barclay street, Broadway to West street.....	6	1,533 00	18	315 00	1,218 00
Barrow street, West to Fourth street.....	10	2,555 00	30	525 00	2,030 00
Bowery, Chatham Square to Sixth street.....	40	10,220 00	100	1,750 00	8,470 00
Broad street, Wall to South street.....	9	2,229 50	34	505 00	1,724 50
Canal street, Broadway to East Broadway.....	12	3,067 00	18	315 00	2,752 00
Carmine street, Varick to Bleeker street.....	4	1,022 00	10	175 00	847 00
Centre street, Chambers to Broome street.....	15	3,832 50	40	700 00	3,132 50
Circle, Eighth avenue and Fifty-ninth street.....	12	3,066 00	20	350 00	2,716 00
Circle street, East to West street.....	12	3,067 00	18	315 00	2,752 00
Christopher street, West to Sixth avenue.....	14	3,577 00	14	270 00	3,307 00
Clarkson street, West to Varick street.....	7	1,788 50	14	245 00	1,543 50
Cortlandt street, Broadway to North river.....	5	1,277 50	21	307 50	970 00
Delancey street, Hudson street to North river.....	4	1,022 00	10	175 00	847 00
East river water-front, Grand to Fourteenth street.....	25	5,554 50	42	735 00	4,819 50
Elizabeth street, Canal to Bleeker street.....	14	3,577 00	32	500 00	3,077 00
Grand street, East river to Sullivan street.....	30	9,198 00	151	2,042 50	6,555 50
Greenwich avenue, Sixth to Eighth avenue.....	10	2,555 00	30	525 00	2,030 00
Houston street, East to North river.....	44	11,242 50	120	2,100 00	9,142 50
Hudson street, Chambers to Fourth street.....	34	8,687 00	137	2,397 50	6,289 50
Liberty street, Broadway to North river.....	15	3,832 50	40	700 00	3,132 50
Madison avenue, Twenty-third to Fifty-ninth street.....	32	8,170 00	120	2,100 00	6,070 00
Mott street, Canal to Bleeker street.....	14	3,577 00	30	525 00	3,052 00
Mulberry street, Canal to Bleeker street.....	13	3,277 00	30	525 00	2,752 00
Paradise Park.....	3	760 50	9	157 50	603 00
Pier No. 12, East river.....	1	255 50	4	70 00	185 50
Spring street, Bowery to North river.....	20	5,110 00	72	1,277 50	3,832 50
Varick street, Canal to Carmine street.....	11	2,810 50	32	500 00	2,310 50
Vesey street, Broadway to West street.....	6	1,533 00	18	315 00	1,218 00
Wall street, Broadway to East river.....	10	2,555 00	30	525 00	2,030 00
Washington street, Fulton street to Battery place.....	15	3,832 50	40	700 00	3,132 50
West street, Eleventh to Twelfth street.....	12	3,066 00	20	350 00	2,716 00
Whitehall street, Bowling Green to South Ferry.....	7	1,788 50	18	315 00	1,473 50
World street, Broadway to Chatham Square.....	11	2,810 50	32	500 00	2,310 50
Bryant Park.....	10	4,088 00	..	..	4,088 00
Central Park Drives.....	254	64,897 00	..	..	64,897 00
Mount Morris Park.....	12	3,066 00	..	..	3,066 00
Totals.....	2,062	\$526,840 00	5,135	\$89,862 50	\$436,977 50

It will be seen by the foregoing statements that, in order to carry into effect the resolutions of the Common Council, an annual expenditure would be incurred for electric-lighting of seven hundred and seven thousand seven hundred and thirty-four dollars, as against one hundred and forty-six thousand and fifty-five dollars for lighting the same streets by gas, showing an excess of cost for electric-lighting of five hundred and sixty-one thousand six hundred and seventy-nine dollars, and the sum which would be required for this Bureau would necessarily amount to over one million dollars per annum.

The following statement will show the average amount of impurities found in the gases of the several gas companies, as determined by the analyses made by Dr. E. G. Love, our Gas Examiner, at the laboratories of this Department.

OF WHAT COMPANY.	SULPHUR. (Grs. in 100 cu. ft.)	AMMONIA. (Grs. in 100 cu. ft.)	SULPHURET HYDROGEN.
Consolidated Gas Co.—			
New York Branch.....	3.64	0.26	None.
Manhattan Branch.....	15.44	4.54	"
Metropolitan Branch.....	10.44	2.85	"
Municipal Branch.....	4.96	0.23	"
Knickerbocker Branch.....	5.33	0.67	"
New York Mutual Gas-light Co.....	1.91	0.33	Traces.
Equitable Gas-light Co.....	2.48	0.23	None.

The following shows the specific gravity of the gases:

Consolidated Gas Co.—	
New York Branch, specific gravity.....	.622 to .660
Manhattan Branch, ".....	.409 to .426
Metropolitan Branch, ".....	.472 to .504
Municipal Branch, ".....	.634 to .643
Knickerbocker Branch, ".....	.630 to .673
New York Mutual Gas-light Co., specific gravity.....	.666 to .673
Equitable Gas-light Co., ".....	.618 to .682

The gases manufactured by the several companies are of the following kinds:
New York Branch of Consolidated Gas Co., water gas, "Tessie du Motay" process.
Manhattan Branch of Consolidated Gas Co., coal gas.
Metropolitan Branch of Consolidated Gas Co., coal gas.
Municipal Branch of Consolidated Gas Co., water gas, "Tessie du Motay" process.
Knickerbocker Branch of Consolidated Gas Co., 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 pressure on the mains of such of the companies as connect with our photometrical stations, as recorded on the pressure registers during the quarter, this average being made for the time during which the public lamps are required to be kept lighted:

OF WHAT COMPANY.	AVERAGE MAXIMUM PRESSURE.	AVERAGE MINIMUM PRESSURE.	WHERE TAKEN.	DISTANCE FROM GAS-WORKS.
	Inches.	Inches.		Miles.
Consolidated Gas Co.—				
New York Branch.....	1.57	1.16	Cor. Bowery and Grand street..	1 ¹ / ₈
Manhattan Branch.....	2.12	1.12	" " " "	1 ¹ / ₈
Metropolitan Branch.....	1.17	0.77	{ Seventy-ninth street, between Second and Third avenues. }	3 ¹ / ₈
Municipal Branch.....	2.61	1.26	Cor. Bowery and Grand street.	3 ¹ / ₈
Knickerbocker Branch.....	3.10	1.40	{ Seventy-ninth street, between Second and Third avenues. }	1 ¹ / ₈
New York Mutual Gas-light Co.....	2.12	1.78	Cor. Bowery and Grand street..	1 ¹ / ₈
Equitable Gas-light Co.....	2.07	1.30	" " " "	2 ¹ / ₈

The price paid for gas during the year 1885, supplied to such of the public buildings, etc., as are furnished through this Bureau, was as follows:

To Consolidated Gas Co.....	\$1 50 per 1,000 cubic feet, for 19,650,000 cubic feet.
To Equitable Gas-light Co.....	1 40 " " for 4,759,000 "
To New York Mutual Gas-light Co.....	1 50 " " for 3,500 "
To Central Gas-light Co.....	2 00 " " for 15,400 "

Total amount consumed..... 24,428,800 cubic feet.

On December 18 a contract was executed with the Equitable Gas-light Company for furnishing illuminating gas during the year 1886, to such of the public buildings as are on the line of its mains, at the rate of \$1.40 per one thousand cubic feet. Also on the same date a contract was made with the Consolidated Gas Company for furnishing gas to the public buildings which are not on the line of the Equitable gas-mains, at the rate of \$1.50 per one thousand cubic feet.

The prices charged to private consumers by the several gas-light companies are as follows:

By Equitable Gas-light Co.....	\$1 75 per one thousand cubic feet.
By Consolidated Gas Co.....	1 75 " "
By New York Mutual Gas-light Co.....	1 75 " "
By Central Gas-light Co.....	2 00 " "
By Northern Gas-light Co.....	2 50 " "
By Yonkers Gas-light Co. (Kingsbridge district).....	2 50 " "

On January 1, 1886, the new bridge over the Harlem river at Madison avenue was lighted. This bridge and its approaches contain 105 lamps, of which 32 are on the draw or swing-span; these 32 lamps each consume 3 cubic feet of gas per hour and burn 14 hours per night, thereby using 1,344 cubic feet of gas per night. As the draw has to be opened for the passage of vessels, it was necessary that a supply of gas should be stored in order that all the lamps might be kept lighted while the draw was open. To accomplish this, two gas-holders were suspended under the roadway, fore and aft of the engine room; these tanks are each 14 feet by 10 feet 3 inches inside diameter and 2 feet 9 inches high, with a rubber bag to raise 2 feet 6 inches. The holders are supplied with counter-weights in order that the gas may be delivered to the lamps at an adequate pressure, the tanks being filled during the day-time by rubber hose connection, which is disconnected from the gas-main when a full supply of gas is obtained.

Prior to September last, this office had no facilities for testing the illuminating power of the gases supplied to the Twenty-third and Twenty-fourth Wards, inasmuch as the City has no testing stations in these localities. Deeming it proper that this Department should have the means of determining whether the contracts were complied with, so far as the illuminating power of the gas was concerned, requisition was made on the American Meter Company for the necessary portable apparatus, which, when placed in position, would constitute a complete 60-inch bar Bunsen photometer. Mr. Love, the Gas Examiner, was then requested to confer with the manufacturers and to have the apparatus made according to his directions. This portable photometer was completed in October and by its use the gas of the Central Gas-light Company was tested at night and found to have an illuminating power of 18.48 candles; and the gas of the Northern Gas-light Company was ascertained to have an illuminating power of 18.12 candles, the testing burner being the "Empire" 5-foot burner. The gas of the Yonkers Gas Company has also been tested by Mr. Love and this was found to have an illuminating power of 22.07 candles.

During the past year serious annoyance and inconvenience has been caused this Bureau and the several gas companies in consequence of the very frequent destruction of glass in the public lamps. Lamp-lighters have reglazed their lamps during the morning on finding the same broken, and on lighting the lamps at night the same lamps would again be found broken. On the night of July 16 the new lamps on Sixty-seventh street, from Third avenue to Avenue A, had then been lighted for the first time, and on the following day the glass in nearly all of these lamps was broken, and the destruction of lamps in this locality has repeatedly occurred. The record of the Consolidated Gas Company shows that during the month of December 7,040 lights of glass were broken in the public lamps of this company, and adding the reports of the other gas companies we find that during the month of December about 8,500 lights of glass were broken in the public lamps of this city. This is at the rate of 100,000 lights of glass per year, and during a snow-fall the breakages are greater because the boys then attack the lamps with snow-balls, while in the month of December we had no snow-fall. The destruction of the lamps is generally done by boys by the means of an instrument called bean-shooters, by which pebbles or small pieces of stone are thrown against the lamps. These instruments are composed of a strip of strong rubber or of a stout wire, and have such power that if a small stone thrown from one should strike a person on the head serious injury would be caused. When the lamps are broken of course the lights are extinguished by the winds, and then complaints are received at this office because the lamps are not lighted. It seems to me that an ordinance should be adopted by the Common Council prohibiting the use of these so-called bean-shooters, and the police should give us better assistance toward the protection of the public lamps. Superintendent of Police Murray, however, has taken the matter in hand, and it is to be hoped that by his aid the trouble may be in a degree remedied.

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 1885, 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.....	\$680 70	\$587 25	\$491 55	\$808 50	\$2,568 00
Catharine Country Market.....	33 45	17 85	22 65	37 05	111 00
Catharine Meat Market.....	29 55	26 40	21 00	33 15	110 00
Fulton Meat Market.....	350 55	273 15	246 00	398 40	1,268 10
Fulton Country Market.....	106 50	451 70	352 80	642 00	2,053 00

	FIRST QUARTER, ENDING MARCH 31.	SECOND QUARTER, ENDING JUNE 30.	THIRD QUARTER, ENDING SEPT. 30.	FOURTH QUARTER, ENDING DEC. 31.	TOTAL.
Essex Market.....	\$40 32	\$28 42	\$25 20	\$37 38	\$131 32
Centre Market.....	102 00	72 90	67 05	81 90	324 75
Union Market.....	201 60	138 30	112 05	202 65	655 20
Clinton Market.....	13 05	6 00	6 30	12 60	39 75
Tompkins Market.....	120 58	79 52	78 40	127 26	397 06
J. J. J. Market.....	303 52	176 54	91 42	314 72	886 20
First District Police Court.....	187 95	166 50	145 80	273 60	773 85
Second District Police Court.....	249 75	153 13	79 35	191 10	673 35
Third District Police Court.....	40 28	21 08	18 50	50 52	131 74
Fourth District Police Court.....	133 28	103 04	79 38	126 68	442 38
Fifth District Police Court.....	52 50	17 25	5 40	53 55	128 70
First District Civil Court.....	1 50	15	30	6 00	7 95
Second District Civil Court.....	22 35	17 25	16 05	20 25	81 90
Fourth District Civil Court.....	12 18	10 75	5 04	10 64	38 62
Fifth District Civil Court.....	82 35	55 63	15 30	71 40	224 70
Sixth District Civil Court.....	6 58	5 18	4 06	5 60	21 42
Eighth District Civil Court.....	5 25	6 15	4 35	13 20	29 95
Ninth District Civil Court.....	7 50	4 50	4 05	7 50	24 15
Tenth District Civil Court.....	1 05	1 05	60	30 40	32 50
Court of Special Sessions.....	10 60	30	10 05	21 15	71 90
Court-room, Brown-stone Building.....	101 10	84 75	64 50	118 20	368 55
Court-house.....	1,367 25	1,281 60	861 15	1,397 10	4,936 10
City Hall.....	419 55	356 70	313 95	496 35	1,586 15
Corporation Counsel's Office.....	20 10	3 00	1 50	37 20	70 80
Corporation Attorney's Office.....	63 15	58 95	40 05	82 50	245 65
Receiver of Taxes' Office.....	244 55	219 90	126 45	417 90	1,009 10
Department of Public Works.....	377 40	259 55	189 45	338 00	1,155 40
Department of Taxes.....	11 55	0 00	5 10	13 20	29 75
Assessment Commission.....	9 45	3 85	4 05	6 60	23 95
City Record Book-binding.....	15	1 05	9 00	6 20	21 20
County Jail.....	537 75	435 60	277 35	492 30	1,743 00
Pipe Yard.....	11 55	7 20	6 00	14 25	38 00
Water Purveyor's Repair Shop, Thirtieth street.....	8 40	7 05	5 25	7 05	27 75
Water Purveyor's Repair Shop, Eighty-third st. and Twenty-ninth street.....	13 35	8 55	11 85	13 80	47 55
South Gate-house.....	85 80	51 90	49 50	91 80	279 00
Engine-house, High Bridge.....	88 80	56 10	38 05	67 45	250 40
Engine-house, Ninety-eighth street.....	129 90	94 95	127 65	160 80	513 30
Clock-tower.....	219 08	227 78	187 34	202 86	837 06
Photometrical Room, Grand street.....	28 39	26 07	6 90	6 90	68 26
Photometrical Room, Seventy-ninth street.....	8 85	4 35	9 00	1 50	15 60
Seventh Regiment Armory.....	1,503 30	640 05	211 50	1,074 75	3,429 60
Eighth Regiment Armory.....	293 65	227 70	125 40	265 85	812 60
Ninth Regiment Armory.....	149 05	281 60	151 80	431 40	1,013 85
Tenth Regiment Armory.....	130 20	100 50	76 05	168 60	475 35
Eleventh Regiment Armory.....	205 40	239 85	214 30	313 95	973 50
Twelfth Regiment Armory.....	307 68	581 14	296 54	640 50	2,226 26
Seventy-first Regiment Armory.....	224 84	182 84	108 84	241 22	818 74
First Battery Armory.....	50 40	34 20	18 50	55 05	158 15
Second Battery Armory.....	125 70	98 25	63 00	125 25	412 20
Public Bath, Battery.....	.....	6 90	37 00	6 90	43 80
Public Bath, Gouverneur street.....	.....	7 15	24 04	4 25	35 54
Public Bath, Duane street.....	.....	15	16 05	4 25	30 00
Public Bath, Fifth street.....	.....	4 80	34 95	4 35	44 10
Public Bath, Horatio street.....	.....	1 95	30 40	6 90	39 25
Public Bath, Nineteenth street.....	.....	4 05	24 40	6 08	34 95
Public Bath, Twenty-seventh street.....	.....	.....	30 90	6 00	36 90
Public Bath, Thirty-seventh street.....	.....	3 50	33 60	3 00	40 10
Public Bath, Fifty-first street.....	.....	2 10	27 75	8 60	38 45
Public Bath, One Hundred and Twelfth street.....	.....	1 50	20 25	3 60	25 35
Public Bath, One Hundred and Thirty-eighth street.....	.....	.....	20 80	3 60	24 40
Electric lighting in Receiver of Taxes' Office.....	.....	.....	375 00	375 00	750 00
Electric-lighting in City Hall.....	.....	.....	375 00	375 00	750 00
Traveling expenses.....	.....	97 30	.....	116 75	214 05
Gas examinations.....	.....	350 50	350 50	350 50	1,352 00
Lighting public markets (pay-rolls).....	285 00	285 00	498 00	519 00	1,587 00
Cleaning photometrical Rooms (pay-rolls).....	15 00	15 00	15 00	15 00	60 00
New lamp-posts.....	.....	1,495 20	1,540 00	1,543 75	4,678 95
New lamp-posts, Twenty-third and Twenty-fourth Wards.....	.....	.....	621 91	770 00	1,391 91
New street-lamps, Twenty-third and Twenty- fourth Wards.....	435 00	1,502 00	1,305 00	1,243 00	4,485 00
New cross-heads.....	.....	.....	405 00	405 00	810 00
New brackets.....	.....	.....	671 25	571 25	1,242 50
New lamp-irons.....	.....	.....	430 00	430 00	860 00
New lamp-irons, Twenty-third and Twenty-fourth Wards.....	.....	304 00	5 00	48 71	357 71
Street-signs.....	60 50	120 80	1,046 00	190 00	1,417 30
Street-signs, Twenty-third and Twenty-fourth Wards.....	.....	.....	228 00	1,447 30	1,675 30
Supplies for Photometrical Rooms.....	.....	.....	251 75	251 75	503 50
Maps.....	11 00	.....	126 71	51 63	249 34
Madison Avenue Bridge, gas-piping, etc.....	838 32	.....	.....	300 00	1,138 32
Gas-fitting at Photometrical Rooms.....	130 52	.....	.....	838 32	968 84
Gravel base.....	.....	.....	94 60	94 60	189 20
Repairing and repainting lamp-posts.....	.....	325 00	131 75	519 00	975 75
Photometrical apparatus.....	.....	35 00	.....	35 00	70 00
Gas regulator.....	.....	.....	16 95	16 95	33 90
Draining materials.....	.....	150 00	350 00	350 00	850 00
Photometrical Room, Grand street (rent).....	90 00	90 00	90 00	90 00	360 00
Photometrical Room, Seventy-ninth street (rent) Curtains.....	.....	.....	45 00	45 00	90 00
Fitting-up new lamps.....	280 00	350 00	1,722 00	1,740 00	4,092 00
Fitting-up new lamps, Twenty-third and Twenty- fourth Wards.....	104 00	288 00	424 00	1,154 00	1,966 00
Resetting and repairing lamp-posts.....	430 00	995 50	2,090 50	1,883 50	5,400 00
Resetting and repairing lamp-posts, Twenty- third and Twenty-fourth Wards.....	43 00	626 00	840 50	1,035 00	2,544 50
Lighting public lamps.....	57,393 22	84,755 74	81,149 51	109,567 51	332,866 98
Lighting public lamps, Twenty-third and Twenty- fourth Wards.....	20,173 17	29,867 72	29,176 96	40,327 74	119,545 59
Lighting naphtha-lamps.....	.....	16 80	312 51	416 68	745 99
Lighting electric-lamps.....	25,556 60	41,572 30	44,983 40	60,255 30	173,367 60
Totals.....	\$119,447 41	\$172,501 34	\$174,351 80	\$234,370 66	\$700,671 21

RECAPITULATION.

Gas to public offices.....	\$11,216 29	\$8,266 23	\$5,771 80	\$11,108 85	\$36,363 17
Electric-lighting in public offices.....	.....	.....	375 00	379 16	754 16
Supplies to public lamps.....	3,449 13	5,757 93	7,068 71	5,407 17	21,683 06
Supplies to public lamps, Twenty-third and Twenty-fourth Wards.....	.....	.....	811 91	1,427 75	2,239 66
Fitting-up new lamps.....	280 00	350 00	1,722 00	1,740 00	4,092 00
Fitting-up new lamps, Twenty-third and Twenty- fourth Wards.....	104 00	288 00	424 00	1,152 00	1,968 00
Resetting and repairing lamp-posts.....	430 00	995 50	2,090 50	1,883 50	5,400 00
Resetting and repairing lamp-posts, Twenty- third and Twenty-fourth Wards.....	43 00	626 00	840 50	1,035 00	2,544 50
Lighting public lamps.....	57,393 22	84,755 74	81,149 51	109,567 51	332,866 98
Lighting public lamps, Twenty-third and Twenty- fourth Wards.....	20,173 17	29,867 72	29,176 96	40,327 74	119,545 59
Lighting naphtha-lamps.....	.....	16 80	312 51	416 68	745 99
Lighting electric-lamps.....	25,556 60	41,572 30	44,983 40	60,255 30	173,367 60
Totals.....	\$119,447 41	\$172,501 34	\$174,351 80	\$234,370 66	\$700,671 21

EXHIBIT "B."

Summary of the Appropriation for "Lamps and Gas and Electric Lighting," for 1885, showing the Amounts Expended during the Quarter and the Year, with the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Lamps and Gas and Electric Lighting," 1885.....	\$716,700 00
Amount of vouchers drawn to September 30.....	\$466,300 55
Amount expended during the quarter ending December 31, 1885.....	234,370 66

Total amount expended during the year 1885..... 700,671 21

Unexpended balance..... \$16,028 79

Of this balance there was transferred by Board of Estimate and Apportionment on October 30, To "Supplies for and Cleaning Public Offices," 1885..... \$4,000 00
November 13, To "Repairs and Renewal of Pipes, Stop-cocks, etc.," 1885..... 12,000 00

Total amount transferred..... 16,000 00

Surplus balance..... \$28 79

EXHIBIT "C."

Summary of the Appropriation for "Lamps and Gas and Electric Lighting—Salaries," for 1885, showing the Amount Expended during the Year, and the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Lamps and Gas and Electric Lighting—Salaries," 1885.....	\$6,300 00
Amount of vouchers drawn in first quarter, ending March 31.....	\$1,575 00
Amount of vouchers drawn in second quarter, ending June 30.....	1,575 00
Amount of vouchers drawn in third quarter, ending September 30.....	1,383 32
Amount of vouchers drawn in fourth quarter, ending December 31.....	1,449 96

Total amount expended during the year..... 5,983 28

Surplus balance..... \$316 72

EXHIBIT "D."

Summary of the "Lamp Account," showing the Number of New Lamps Lighted, Old Lamps Relighted, and Lamps Discontinued by each Gas Company during the Quarter ending December 31, 1885, also a Statement for the Year.

CONSOLIDATED GAS COMPANY, NEW YORK BRANCH.	
Number of lamps lighted September 30, 1885.....	3,897
Number of new lamps lighted during the quarter.....	4
Number of old lamps relighted during the quarter.....	7
Less lamps discontinued during the quarter.....	3,908

Number of lamps lighted December 31, 1885..... 3,897

CONSOLIDATED GAS COMPANY, MANHATTAN BRANCH.	
Number of lamps lighted September 30, 1885.....	3,664
Number of new lamps lighted during the quarter.....	24
Number of old lamps relighted during the quarter.....	3
Less lamps discontinued during the quarter.....	3,691

Number of lamps lighted December 31, 1885..... 3,677

CONSOLIDATED GAS COMPANY, METROPOLITAN BRANCH.	
Number of lamps lighted September 30, 1885.....	4,119
Number of new lamps lighted during the quarter.....	46
Number of old lamps relighted during the quarter.....	4
Less lamps discontinued during the quarter.....	4,169

Number of lamps lighted December 31, 1885..... 4,163

CONSOLIDATED GAS COMPANY, HARLEM BRANCH.	
Number of lamps lighted September 30, 1885.....	5,839
Number of new lamps lighted during the quarter.....	77
Number of old lamps relighted during the quarter.....	42
Less lamps discontinued during the quarter.....	5,958

Number of lamps lighted December 31, 1885..... 5,935

NEW YORK MUTUAL GAS-LIGHT COMPANY.	
Number of lamps lighted September 30, 1885.....	231
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	231

Number of lamps lighted December 31, 1885..... 0

EQUITABLE GAS-LIGHT COMPANY.	
Number of lamps lighted September 30, 1885.....	1,411
Number of new lamps lighted during the quarter.....	6
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	1,417

Number of lamps lighted December 31, 1885..... 1,416

CENTRAL GAS-LIGHT COMPANY.	
Number of lamps lighted September 30, 1885.....	2,224
Number of new lamps lighted during the quarter.....	13
Number of old lamps relighted during the quarter.....	22
Less lamps discontinued during the quarter.....	2,259

Number of lamps lighted December 31, 1885..... 2,242

NORTHERN GAS-LIGHT COMPANY.	
Number of lamps lighted September 30, 1885.....	1,586
Number of new lamps lighted during the quarter.....	71
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	1,657

Number of lamps lighted December 31, 1885..... 1,657

YONKERS GAS-LIGHT COMPANY.	
Number of lamps lighted September 30, 1885.....	337
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	337

Number of lamps lighted December 31, 1885..... 337

UNITED STATES ILLUMINATING COMPANY.	
Number of lamps lighted September 30, 1885.....	361
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	361

Number of lamps lighted December 31, 1885..... 361

BRUSH ELECTRIC ILLUMINATING COMPANY.	
Number of lamps lighted September 30, 1885.....	347
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	347

Number of lamps lighted December 31, 1885..... 347

ELECTRIC-LAMPS.	
Number of lamps lighted September 30, 1885.....	347
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	347

Number of lamps lighted December 31, 1885..... 347

ELECTRIC-LAMPS.	
Number of lamps lighted September 30, 1885.....	347
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	347

Number of lamps lighted December 31, 1885..... 347

ELECTRIC-LAMPS.	
Number of lamps lighted September 30, 1885.....	347
Number of new lamps lighted during the quarter.....	0
Number of old lamps relighted during the quarter.....	0
Less lamps discontinued during the quarter.....	347

RECAPITULATION FOR QUARTER.

Number of gas-lamps lighted September 30, 1885.....	23,308
Number of naphtha-lamps lighted September 30, 1885.....	50
Number of electric-lamps lighted September 30, 1885.....	708
	24,066
Number of new gas-lamps lighted during the quarter.....	241
Number of new naphtha-lamps lighted during the quarter.....	0
Number of new electric-lamps lighted during the quarter.....	0
Number of gas-lamps relighted during the quarter.....	78
Number of naphtha-lamps relighted during the quarter.....	0
Number of electric-lamps relighted during the quarter.....	0
	319
	24,385
Less gas-lamps discontinued during the quarter.....	72
Less naphtha-lamps discontinued during the quarter.....	0
Less electric-lamps discontinued during the quarter.....	0
	72

Total number of lamps lighted December 31, 1885..... 24,313

Summary of the "Lamp Account" for the Year 1885.
CONSOLIDATED GAS COMPANY, NEW YORK BRANCH.

Number of lamps lighted December 31, 1884.....	2,839
Number of new lamps lighted during the year.....	23
Number of old lamps relighted during the year.....	38
Number of old lamps transferred from Manhattan Branch.....	1,308
	4,208
Less lamps discontinued during the year.....	53
Less lamps transferred to Equitable Gas-light Company.....	61
Less lamps discontinued on account of electric-lights.....	195
	311

Number of lamps lighted December 31, 1885..... 3,897

CONSOLIDATED GAS COMPANY, MANHATTAN BRANCH.

Number of lamps lighted December 31, 1884.....	5,748
Number of new lamps lighted during the year.....	50
Number of lamps relighted during the year.....	34
Number of lamps transferred from Mutual Gas-light Company.....	29
	5,861
Less lamps discontinued during the year.....	22
Less lamps transferred to New York Branch.....	1,308
Less lamps transferred to Equitable Gas-light Company.....	854
	2,184

Number of lamps lighted December 31, 1885..... 3,677

CONSOLIDATED GAS COMPANY, METROPOLITAN BRANCH.

Number of lamps lighted December 31, 1884.....	4,299
Number of new lamps lighted during the year.....	159
Number of old lamps relighted during the year.....	25
Number of lamps transferred from Mutual Gas-light Company.....	5
	4,488
Less lamps discontinued during the year.....	32
Less lamps transferred to Equitable Gas-light Company.....	293
	325

Number of lamps lighted December 31, 1885..... 4,163

CONSOLIDATED GAS COMPANY, HARLEM BRANCH.

Number of lamps lighted December 31, 1884.....	5,589
Number of new lamps lighted during the year.....	312
Number of old lamps relighted during the year.....	127
	6,028
Less lamps discontinued during the year.....	93

Number of lamps lighted December 31, 1885..... 5,935

NEW YORK MUTUAL GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	474
Number of new lamps lighted during the year.....	0
Number of old lamps relighted during the year.....	1
	475
Less lamps discontinued during the year.....	8
Less lamps transferred to Consolidated Gas Company.....	34
Less lamps transferred to Equitable Gas-light Company.....	202
	244

Number of lamps lighted December 31, 1885..... 231

EQUITABLE GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	0
Number of lamps transferred from New York Branch of Consolidated Gas Company.....	61
Number of lamps transferred from Manhattan Branch of Consolidated Gas Company.....	854
Number of lamps transferred from Metropolitan Branch of Consolidated Gas Company.....	293
Number of lamps transferred from New York Mutual Gas-light Company.....	202

Number of new lamps lighted during the year.....	7
Number of old lamps relighted during the year.....	0
	1,417
Less lamps discontinued during the year.....	1

Number of lamps lighted December 31, 1885..... 1,416

CENTRAL GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	2,152
Number of new lamps lighted during the year.....	74
Number of old lamps relighted during the year.....	77
	2,303
Less lamps discontinued during the year.....	61

Number of lamps lighted December 31, 1885..... 2,242

NORTHERN GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	1,495
Number of new lamps lighted during the year.....	178
Number of old lamps relighted during the year.....	0
	1,673
Less lamps discontinued during the year.....	16

Number of lamps lighted December 31, 1885..... 1,657

YONKERS GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	327
Number of new lamps lighted during the year.....	10
Number of old lamps relighted during the year.....	0
	337
Less lamps discontinued during the year.....	0

Number of lamps lighted December 31, 1885..... 337

Total number of gas-lamps December 31, 1885..... 23,555

NAPHTHA-LAMPS.

NEW YORK AND NEW JERSEY GLOBE GAS-LIGHT COMPANY.

Number of lamps lighted December 31, 1884.....	0
Number of new lamps lighted during the year.....	50
Number of old lamps relighted during the year.....	0
	50
Less lamps discontinued during the year.....	0

Number of lamps lighted December 31, 1885..... 50

ELECTRIC-LAMPS.

BRUSH ELECTRIC ILLUMINATING COMPANY.

Number of lamps lighted December 31, 1884.....	347
Number of new lamps lighted during the year.....	0
Number of old lamps relighted during the year.....	0
	347
Less lamps discontinued during the year.....	0

Number of lamps lighted December 31, 1885..... 347

UNITED STATES ILLUMINATING COMPANY.

Number of lamps lighted December 31, 1884.....	300
Number of new lamps lighted during the year.....	61
Number of old lamps relighted during the year.....	0
	361
Less lamps discontinued during the year.....	0

Number of lamps lighted December 31, 1885..... 361

Total number of electric-lamps lighted December 31, 1885..... 708

RECAPITULATION.

Number of gas-lamps lighted December 31, 1884.....	22,923
Number of naphtha-lamps lighted December 31, 1884.....	0
Number of electric-lamps lighted December 31, 1884.....	647
	23,570
Number of new gas-lamps lighted during the year.....	813
Number of new naphtha-lamps lighted during the year.....	50
Number of new electric-lamps lighted during the year.....	61
	924
Number of old gas-lamps relighted during the year.....	302
Number of old naphtha-lamps relighted during the year.....	0
Number of old electric-lamps relighted during the year.....	0
	302

	24,796
Less gas-lamps discontinued during the year.....	288
Less gas-lamps discontinued for electric-lamps during the year.....	195
Less naphtha-lamps discontinued during the year.....	0
Less electric-lamps discontinued during the year.....	0
	483

Total number of lamps lighted December 31, 1885..... 24,313

EXHIBIT "E."

Statement giving the Illuminating Power, in Candles, of the Gas supplied to the City by the several Gas-light Companies during the Quarter ending December 31, 1885, as shown by the Daily Observations at the Photometrical Rooms of the Department of Public Works, with the Average for the Year.

FOR WHAT TIME.	CONSOLIDATED GAS CO. NEW YORK BRANCH.			CONSOLIDATED GAS CO. MANHATTAN BRANCH.			CONSOLIDATED GAS CO. METROPOLITAN BRANCH.			CONSOLIDATED GAS CO. MUNICIPAL BRANCH.			CONSOLIDATED GAS CO. KNICKERBOCKER BRANCH.			N. Y. MUTUAL GAS-LIGHT CO.			EQUITABLE GAS-LIGHT CO.			ILLUMINATING POWER IN CANDLES.		
	ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.					
	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Central Gas Co.	Northern Gas Co.	Yonkers Gas Co.
Oct. 3.....	21.82	24.74	23.50	18.21	18.92	18.58	20.78	22.46	21.47	28.25	29.62	28.83	24.00	25.21	24.40	23.57	30.17	29.22	31.32	33.50	32.35	.....	.....	.....
" 10.....	20.32	23.83	21.87	18.70	20.09	19.49	20.20	21.37	20.61	27.37	28.74	28.26	22.76	24.72	23.57	24.94	28.78	26.81	30.95	34.47	32.58	.....	.....	.....
" 17.....	20.82	23.36	22.15	19.10	20.22	19.52	20.95	22.21	21.65	27.24	30.60	29.05	24.27	26.61	25.35	26.77	31.04	29.44	30.40	33.07	31.96	.....	.....	.....
" 24.....	21.58	24.01	22.99	18.63	19.46	19.18	20.88	22.14	21.41	27.04	29.53	28.42	24.38	26.02	25.43	28.35	30.26	29.14	30.90	33.13	32.03	.....	.....	.....
" 31.....	22.58	23.58	22.85	18.49	19.87	18.92	20.34	22.04	20.96	28.17	29.32	28.81	23.77	25.85	24.54	23.89	31.84	28.62	29.50	32.83	31.42	.....	.....	.....
Nov. 7.....	22.47	24.24	23.40	19.24	19.80	19.44	20.15	21.41	20.95	27.84	30.56	28.79	23.64	26.19	24.61	30.34	31.76	30.98	28.28	33.80	31.82	.....	.....	.....
" 14.....	22.44	25.80	23.45	17.43	19.49	18.66	20.27	21.53	21.01	28.14	30.34	29.34	23.39	25.37	24.29	29.25	32.24	31.42	31.48	33.81	32.61	18.48	18.12	.....
" 21.....	22.59	23.58	23.04	17.38	17.87	17.72	21.11	21.62	21.35	27.93	28.70	28.35	23.55	25.28	24.14	28.70	31.50	29.97	31.74	33.29	32.46	.....	.....	.....
" 28.....	22.73	23.68	23.37	18.50	19.45	19.01	21.08	21.64	21.43	28.01	28.60	28.39	23.15	23.72	23.43	29.33	30.48	29.68	32.34	33.44	32.78	.....	.....	.....
Dec. 5.....	22.03	22.47	22.23	17.44	18.63	18.04	20.48	22.00	21.16	27.71	28.58	28.12	23.48	24.64	24.16	28.36	31.65	29.88	32.70	33.26	33.04	.....	.....	.....
" 12.....	20.58	23.98	22.69	18.18	19.21	18.57	21.00	21.97	21.51	26.90	30.16	28.69	23.16	24.94	24.51	25.89	29.97	28.62	32.43	35.81	33.46	.....	.....	.....
" 19.....	22.21	24.33	23.44	18.07	19.50	18.81	20.58	21.29	21.00	27.34	28.88	28.35	22.91	24.83	23.59	28.14	30.75	29.59	33.22	36.16	34.76	.....	.....	.....
" 26.....	22.63	24.95	23.64	17.74	18.80	18.49	20.89	22.62	21.88	27.16	29.32	28.30	23.42	24.93	24.07	27.62	29.87	28.80	32.85	34.55	33.95	.....	.....	22.07
Average.....	22.97			18.80			21.26			28.60			24.35			29.39			32.71					

Average for the Year.

FOR WHAT TIME.	CONSOLIDATED GAS CO. NEW YORK BRANCH.			CONSOLIDATED GAS CO. MANHATTAN BRANCH.			CONSOLIDATED GAS CO. METROPOLITAN BRANCH.			CONSOLIDATED GAS CO. MUNICIPAL BRANCH.			CONSOLIDATED GAS CO. KNICKERBOCKER BRANCH.			N. Y. MUTUAL GAS-LIGHT CO.			EQUITABLE GAS-LIGHT CO.		
	ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.		
Month.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.
January	22.62	25.67	23.77	18.56	20.57	19.69	21.00	23.76	22.36	27.51	31.56	29.32	24.79	27.90	26.21	21.73	31.04	28.48	.....	.....	.....
February	23.83	25.73	24.51	18.18	20.14	19.16	20.26	23.36	21.71	28.19	30.95	29.54	24.24	29.56	25.69	26.35	31.11	28.61	30.83	32.74	31.21
March	21.86	26.27	24.55	17.15	20.40	18.92	20.95	24.66	22.07	27.76	32.22	30.09	25.15	29.52	26.77	26.53	33.47	29.08	32.55	35.22	32.62
April	25.03	27.64	26.22	18.28	20.10	19.16	21.29	28.14	24.37	28.64	31.57	29.91	25.50	32.40	30.31	26.19	31.20	29.68	29.15	33.61	31.68
May	24.95	28.55	26.89	18.22	20.16	19.05	25.07	27.97	26.65	28.13	29.93	29.02	28.19	33.10	31.95	26.42	33.37	29.58	29.64	33.52	31.18
June	26.36	29.10	27.83	18.06	21.15	19.31	24.49	26.59	25.64	28.64	31.54	29.77	27.05	30.91	29.75	23.48	31.53	27.37	26.72	31.82	30.20
July	26.30	28.06	27.23	17.80	19.51	18.60	23.88	25.68	24.65	27.40	31.23	29.20	24.59	29.70	27.95	21.76	29.37	26.76	24.42	30.20	27.35
August	24.44	27.42	25.66	17.59	19.62	18.79	20.48	25.93	22.48	28.52	30.65	29.66	20.94	28.35	27.13	23.46	32.59	28.58	28.02	32.78	30.71
September	22.23	27.64	24.28	17.80	20.37	18.84	20.17	21.83	21.13	27.26	30.38	28.88	21.13	24.56	22.95	25.65	32.16	28.52	28.88	34.48	32.05
October	20.32	24.74	22.07	18.21	20.22	19.14	20.20	22.46	21.22	27.04	30.60	28.67	22.76	26.61	24.65	24.94	31.84	28.65	29.50	34.47	32.27
November	22.47	25.80	23.31	17.38	19.80	18.71	20.15	21.64	21.18	27.84	30.56	28.71	23.15	26.19	24.12	28.70	32.24	30.51	28.28	33.81	32.11
December	20.58	24.95	23.00	17.44	19.50	18.47	20.48	22.62	21.39	26.90	30.16	28.29	22.91	24.94	24.08	25.89	31.65	29.22	32.43	36.16	33.50
For the Year	20.32	29.10	24.99	17.15	21.15	18.90	20.15	28.14	22.90	26.90	32.22	29.25	20.94	33.10	26.40	21.73	33.47	28.75	24.42	36.16	31.31
Distance from Gas-works.....	1.10 Miles			1.00 Miles			3.20 Miles			3.80 Miles			1.60 Miles			1.00 Miles			2.70 Miles		
Testing burner.....	Bray's Silt Union No. 7.....			Empire, 5 feet.....			Bray's Silt Union No. 6.....			Bray's Silt Union No. 7.....			Bray's Silt Union No. 7.....			Bray's Silt Union No. 7.....			Bray's Silt Union No. 7.....		
Gas.....	Water gas (Tessie du Motay)			Coal gas.....			Coal and naphtha.....			Water gas (Tessie du Motay)			Water gas (Tessie du Motay)			Water gas.....			Water gas (Jerzewanowski process).		

EXHIBIT "F."
AGREEMENT.

This agreement, made and entered into this thirtieth day of April, in the year one thousand eight hundred and eighty-five, 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 The Consolidated Gas Company of New York of said City, 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 illuminating gas to, and to light and extinguish the public lamps belonging to the parties of the first part in the portions of the City of New York bounded and described as follows, to wit:

In all that part of the City of New York, lying south of Harlem river and Spuyten Duyt Creek, including the draw-spans and southerly fixed spans of the Thiel Avenue and Madison Avenue Bridges, the southerly fixed span of Central Bridge, and all of High Bridge; excepting such streets or parts of streets, parks and places as are to be lighted by electric lights; and excepting such streets or parts of streets as are to be lighted by the Equitable and New York Mutual Gas-light Companies for and during the term of one year, commencing on the first day of May, A. D. 1885, and ending on the 30th day of April, A. D. 1886, both days inclusive. And during the same period to repair and paint the lamp-posts and lanterns of such lamps, and replace the cocks, tubes and burners, cross-heads, lamp-irons and lanterns thereof, and clean and reglaze such lanterns; and to fit up, light and extinguish 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, reglaze and replace such new lamps and the appurtenances thereto.

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 pipes or 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 gas or materials 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 herewith-contained specifications.

D. Should any alteration or any attachment be required to any portion of the lamps to be lighted under this agreement, for the purpose of using any other material than illuminating gas, then such alteration will be done and attachments placed and maintained on the lamps by the party of the second part hereto at its own cost and expense.

E. If the estimate or bid of the party hereto of the second part included any lamps with which the pipes or 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 laying of gas-mains or conductors in the streets or parts of streets in which the said lamps are located.

F. But no payment on account of any such lamps will be made to the party of the second part for the time so allowed, nor until the same shall have been connected with the mains or conductors of the party of the second part, nor will payment 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.

G. 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. Lighting.—The lamps shall be lighted during such times as the public lamps throughout the City of New York may be required to be lighted, by the regulations of the said parties of the first part, in accordance with a time-table 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 gas-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 4,000 hours for the term, 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 public gas-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 4,000 per term, 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 awarded to be lighted by the party of the second part under this contract. If the lamps are to be lighted by means of gas or naphtha, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; also that they shall be lighted either by the means of a torch, or the use of a ladder, and that the lamp-lighters will not be permitted to climb the lamp-posts for such purposes. The party of the second part to keep the service-pipes and stand-pipes (if any are used) of said lamps cleared of all obstructions and in good order, at its own cost and expense, except such service-pipes

as shall have been broken or removed by the construction of sewers. If, however, any of the lamps should be lighted by the electric current or electric light, then all such lamps shall be lighted within ten minutes from the time for beginning, and all such electric-lamps shall be kept lighted 3,518 hours during the contract.

2. Illuminating Material, Quality of.—If the material to be furnished under this agreement shall be illuminating gas, then such gas shall have an illuminating power of not less than sixteen candles, when tested at a distance of not less than one mile from the place of manufacture, on the improved form of the Bunsen Photometer, by a Sugg-Letheby 15-hole Argand burner, calculated on a consumption of five cubic feet of gas per hour. The regular daily tests, however, will be made with a burner that will obtain from the gas the greatest amount of light, and practicable for use by the consumer, and consuming at the rate of five cubic feet of gas per hour; the testing candle shall be of sperm of six to the pound, and consuming as near as possible, one hundred and twenty grains of spermaceti per hour; and no candle shall be used for testing which consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And, as regards purity, the gas shall be free, within limits not injurious to the public health, from ammonia, sulphureted hydrogen, and other sulphur and noxious compounds. In case the illuminating material shall be oil or naphtha, then the quantity of light produced by the burner used for such material shall be equal to the quantity (by photometrical test) produced by the sixteen-candle coal-gas, above described, consumed by the 3-feet gas-burner called for in this agreement. But in case the lamps, or any of them, should be lighted by what is known as the Incandescent system of electric lighting, then the quantity of light furnished by each of such lamps shall be equal to the light furnished by a 3 feet gas-burner, such as is used in the public gas-lamps of this city, when burning the sixteen-candle gas called for by this agreement. If, however, the lamps, or any of them, shall be lighted by the "Voltaic Arc" system of electric lighting, then the quantity of light produced by each of such lamps shall not be less than the light produced by 2,000 of the standard sperm candles by which illuminating gas is tested, and the light shall be measured on a Bunsen Photometer, according to the London standard.

3. Burners.—All the burners to be used for the illuminating material, commonly called illuminating gas, shall be of a capacity to burn three cubic feet of gas per hour, under a pressure of one inch, and each of said burners shall burn three cubic feet of gas per hour during all the time the lamps are required to be kept lighted. Should the illuminating material be oil or naphtha, then the burners to be used for such illuminating material shall give a light (by photometrical test) equal to the light given by the gas-burners in use in the public lamps in the City of New York. The burners are to be kept clear at all times so as to allow a free and unobstructed flow of the illuminating material, and to permit a full and normal flame.

It is agreed, however, that the parties of the first part shall have the right to require that burners of a greater consuming capacity than three cubic feet of gas per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of one year; provided that the parties of the first part will pay to the party of the second part, for the lamps so furnished, an additional compensation, equivalent to a pro rata increase of the compensation hereinafter allowed, after deducting from such compensation the sum of (\$4) four dollars per lamp, for the cost of lighting, extinguishing, cleaning, repairing, reglazing and painting, and proportioned only to the increased amount of gas consumed by each burner over and above three cubic feet per hour.

4. Cleaning.—All the lamps and glass street-signs are to be kept in a cleanly condition, and they shall be cleaned at least three times in each week, and oftener if the Department of Public Works shall direct or require the same, and at each of these cleanings all the glass shall be thoroughly cleaned both on the inside and outside of the lantern, and all dust and dirt shall be brushed from the frames.

5. Repairing and Reglazing.—The lamps, including the bottoms, are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the party of the second part of the second part, without cost to the city. Stained glass of a ruby color shall be placed in the tops of the gas lantern nearest to the several fire-alarm signal boxes, and in the tops of the gas lanterns on the street corner nearest said boxes. And in case any of such stained glass should be broken, after being placed in the lamps, then the party of the second part shall procure glass of the same color, and place and keep the same in the lamps without cost to the city.

6. Repairing Lamp-posts.—Whenever the Department of Public Works shall require that any lamp-post or posts shall be straightened, or that any column or columns be released, 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.

7. Painting.—The lamp-posts, lamp-irons, brackets and lanterns used for gas or naphtha, are to have one heavy coat of best paint, ground in oil, as follows: The lamp-posts, cross-heads, and stand-pipes of bracket lanterns to have one coat of dark green paint, blue shade. The square lamp-irons, brackets, and outside of lanterns to have one coat of green paint, pea-green shade; the design being to make a strong contrast between lamp-posts and lanterns. The tin work on inside of lanterns to be painted in all their parts with one heavy coat of best white lead paint; the round lamp-irons and the underside of the reflectors of the globe lamps to be painted with one coat of the best white lead paint, and so much of the stand-pipes as project above the lamp-posts, to be painted in the same manner as the lamp-posts. The ornamental lamp-posts to be painted in at least three colors. All the material shall be of the best quality, and prepared so as to present a gloss finish. All the painting is to be completed by the first day of November next.

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

9. Cocks, Tubes, and Burners.—The cocks, tubes, and burners which may become worn out or useless, or which in the opinion of the Department of Public Works are worn out or useless, to be immediately replaced by the party of the second part, at its own cost and expense.

10. Fitting up New Lamps.—New lamps are to be fitted up on any street, avenue, pier, park or public place, wherever the same may be required by the Department of Public Works. The butts and columns are to be placed in a strictly perpendicular position, the socket of the butt to be calked with yarn gasket and melted lead, the lead to be tamped and then trimmed even with rim of butt. The service-pipe and stand-pipe to be of three-quarter inch wrought-iron pipe, the service-pipe to have a direct fall to the main, the service-pipe and bend on bottom of stand-pipe to rest on solid earth to prevent the same from settling and forming a trap; the earth is to be thoroughly tamped about the butt as the same is thrown into the excavation. Bracket-lamps are to be fitted up in lieu of lamp-posts, when required, the brackets and stand-pipes to be fastened to the wall in a firm and secure manner. The service-pipes, stand-pipes and fittings are to be furnished and con-

nected by the party of the second part; the lamp-posts, lamp-irons, lanterns, and brackets will be furnished by the parties of the first part, through the Department of Public Works, to the party of the second part. New lamps, which may be required to burn any other material than illuminating gas, to be fitted up without service-pipes or stand-pipes. All new lamp-posts are to be painted immediately after the same shall have been erected.

11. Lanterns.—All lanterns used for gas or naphtha which, in the opinion of the Superintendent of Lamps and Gas, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed from the posts and other lanterns substituted in lieu thereof (and globe lamps substituted for square lamps) by the party of the second part without charge to the city, when so ordered by the said Superintendent. The lanterns and globes for that purpose will be furnished by the parties of the first part, through the Department of Public Works, to the said party of the second part.

12. Cross-heads and Lamp-irons.—The cross-heads and lamp-irons used for gas or naphtha-lamps which, in the opinion of the Department of Public Works, may become broken or out of order, are to be replaced on the posts by the party of the second part without charge to the city. The cross-heads and lamp-irons for that purpose are to be furnished by the parties of the first part, through the Department of Public Works, to the said party of the second part.

13. Street-signs.—The glass street-signs to be placed and retained in their proper places and positions in the gas or naphtha lantern, and are to be kept in a cleanly condition; and globes containing street names are to be placed upon the gas lamp-posts when required by the Department of Public Works. The signs and globes are to be furnished by the Department of Public Works to the party of the second part.

14. Electric-lamps.—The poles, wires, conductors, lamps, carbon electrodes, 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 wires and 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 wires or conductors. And in case clear or plain glass globes should be used on "Voltaic Arc" lights, 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 globes substituted therefor.

15. Carriages.—All supplies which, under this agreement, may be required to be furnished by the parties of the first part, will be so furnished, but the cartage thereof shall be done by the parties of the second part.

16. 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 to 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 the aforesaid illuminating material for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, cross-heads, lamp-irons, and lanterns therefor, for the aforementioned period of one year, the sum of seventeen dollars and fifty cents (\$17.50).

For each lamp-post straightened, the sum of one dollar and fifty cents (\$1.50).

For each column releaded, the sum of one dollar and fifty cents (\$1.50).

For each column refitted, the sum of three dollars and fifty cents (\$3.50).

For each lamp-post removed, the sum of three dollars and fifty cents (\$3.50).

For each lamp-post reset, the sum of eight dollars (\$8.00).

For each new lamp fitted up, the sum of eight dollars (\$8.00).

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 May 1, 1885, and April 30, 1886, upon giving forty-eight hours written notice to the Department 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-mentioned provisions of statute, or repairing the pipes or conductors, to conduct the said gas, or other illuminating material. 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 so conduct the manufacture and manufactories of gas, or stations for other illuminating material, as not to create a nuisance, and that it 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 and street-signs aforesaid. And it is further agreed, that, in order that the Commissioner of Public Works and his assistants may determine whether the gas-lamps are lighted and extinguished in accordance with the time-table furnished by said Commissioner, the party of the second part shall furnish to the Superintendent of Lamps and Gas, a map or maps showing the lamps on the district of each lamp-lighter, and designating the particular lamp at which each lighter commences to light, and also the lamp at which he completes the lighting; and in extinguishing the lamps, the lamp-lighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the party of the second part shall notify the Superintendent of Lamps and Gas of any change which may be made in the beginning and finishing point on any lamp district during the term of this contract. And it is further agreed that the party of the second part shall furnish to the Superintendent of Lamps and Gas a report weekly, stating therein the number and location of all new lamps fitted up and lighted, of lamp-posts removed and reset, and of lamps discontinued during the preceding week. And it is hereby expressly provided, that nothing herein contained shall be construed or deemed as granting to the said party of the second part, any sole or exclusive right or privilege, or as preventing the said parties of the first part from granting the like privileges as are hereby given to the said party of the second part, to any other company, persons, or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas, his or their own house, store, manufactory, or premises.

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 light, repair, paint, clean or fit up the public 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 and not lighted the whole night, the part 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.

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, 1885, to the month of May, 1886, 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 furnished the illuminating material of the quality hereinbefore specified, and that all the lanterns have been cleaned three times in each week of said month, and also that the gas-burners have consumed three cubic feet of gas, each per hour, 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.

O. 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.

P. 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.

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.

W. R. GRACE,
Mayor of the City of New York.
EDWARD V. LOEW,
Comptroller of the City of New York.
ROLLIN M. SQUIRE,
Commissioner of Public Works.

Witness:
JOHN S. ROUTH.

[SEAL.]

Witness as to Company:
S. McCORMICK.

Attest:
H. E. GAWTRY, Secretary.

CONSOLIDATED GAS COMPANY,
By CHARLES ROOME, President.
H. E. GAWTRY, Secretary.

EXHIBIT "G."

Time Table for Lighting and Extinguishing the Public Lamps, for the Contract Year from May 1, 1885, to April 30, 1886.

MONTHS.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.	MONTHS.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.
	H. M.	H. M.		H. M.	H. M.
May 1.....	6.45	4.00	Nov. 5.....	4.40	5.45
" 7.....	6.55	3.40	" 12.....	4.30	6.00
" 14.....	7.00	3.30	" 19.....	4.25	6.10
" 21.....	7.10	3.15	" 26.....	4.20	6.15
" 28.....	7.15	3.15			
June 4.....	7.25	3.15	Dec. 3.....	4.20	6.15
" 11.....	7.25	3.15	" 10.....	4.20	6.20
" 18.....	7.30	3.15	" 17.....	4.20	6.25
" 25.....	7.30	3.15	" 24.....	4.20	6.25
July 2.....	7.30	3.15	Jan. 1.....	4.30	6.30
" 9.....	7.30	3.15	" 8.....	4.40	6.30
" 16.....	7.20	3.15	" 15.....	4.30	6.25
" 23.....	7.20	3.15	" 22.....	5.00	6.25
" 30.....	7.10	3.30	" 29.....	5.05	6.15
Aug. 6.....	7.10	3.45	Feb. 5.....	5.10	6.10
" 13.....	6.55	4.00	" 12.....	5.20	5.55
" 20.....	6.45	4.10	" 19.....	5.30	5.55
" 27.....	6.30	4.20	" 26.....	5.30	5.45
Sept. 3.....	6.15	4.30	Mar. 5.....	5.40	5.35
" 10.....	6.05	4.40	" 12.....	5.50	5.20
" 17.....	5.55	4.50	" 19.....	6.00	5.10
" 24.....	5.40	5.00	" 26.....	6.10	4.55
Oct. 1.....	5.30	5.00	Apr. 2.....	6.15	4.40
" 8.....	5.20	5.10	" 9.....	6.25	4.30
" 15.....	5.10	5.20	" 16.....	6.30	4.20
" 22.....	5.00	5.30	" 23.....	6.40	4.10
" 29.....	4.45	5.35	" 30.....	6.45	4.00

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, and all the lamps must be lighted within one hour from the time of beginning.

II.—The lamps must be kept clean and in good condition; the top glass, sides and bottom glass must be thoroughly cleaned, both on the outside and inside of the lantern, three times in each week, and often if necessary to keep them clean, and dust and dirt must be brushed from the frames, and the glass street-signs must also be cleaned. Lighters must bear in mind that with clean glass a greater brilliancy is obtained from the flame. In the winter season the snow must be brushed from the lanterns after each snow-fall. Dirty and disordered lamps will be considered as evidence of a careless and incompetent lamp-lighter.

III.—The glass street-signs and house numbers must be kept in their proper positions. The sign bearing the name of any avenue or main street must face the roadway of such avenue or street. One of the signs bearing the name of a cross street must face the roadway of such street and the

other sign must be placed on the opposite side of the lantern. Be careful to observe that the name does not face the inside of the lantern.

IV.—Advertising signs on the lamp-posts or lantern, or colored or ground glass in the lantern, are a violation of a Corporation ordinance, and must not be permitted, except the red glass near the fire-alarm boxes, and these must be kept in place.

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. If he should find a glass broken while lighting, he must replace the same before lighting time of the following day, and the bottom glass must be kept in place as well as sides and tops. If he should find any portion of the tin work broken, he must take the lantern to his superintendent for repairs.

VI.—The burners must be kept in good condition to burn with a full, clear, steady flame, and not with a single or forked jet. If a burner, when lighted, should not emit the proper flame, then the same must be immediately cleared from its obstruction; and if it will not burn properly, another burner must be substituted.

VII.—If a lighter, when lighting, finds that a lamp will not burn, he will leave such lamp and finish his route. He must then return to the unlighted lamps and endeavor to get them in burning order. If he cannot make the lamp burn, he must report the same on the following morning to the superintendent of the gas company.

VIII.—Lamp-lighters will not be permitted to climb the lamp-posts. The lamps must be lighted either by means of a torch or use of a ladder.

IX.—In case a lamp-post should be found broken or taken down, or requiring repairs, he must report the same at once to the superintendent of the gas company, stating the correct location of the post and what repairs are required. If the post has been taken down, he must report by whom and for what purpose, and date when done. No excuse will be accepted from any lamp-lighter who fails to report lamp-posts taken down or broken.

X.—Lighters must not break the lamp bottoms, nor the street-sign slots. Lamps furnished with these slots should be placed on corner lamp-posts.

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, shall be liable to a penalty of three dollars for each offense.

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, under the penalty of ten dollars for each offense.

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, without the permission of the Superintendent of Lamps and Gas; and the owner or owners of such vault shall cause the lamp-posts so removed to be reset at their own expense immediately upon the completion of the vault, under the penalty of twenty-five dollars for each offense.

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 or that may hereafter be so erected, under the penalty named in the next section.

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. Any person offending against any of the provisions of this section shall be deemed guilty of a misdemeanor, and on conviction thereof before any of the police magistrates or justices of this city, shall be punished by a fine not exceeding ten dollars, or in default of the payment of such fine, by imprisonment not exceeding ten days.

Sec. 1955 of the New York City Consolidation Act of 1882. If any person shall wilfully 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.

Document "K."

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 6, 1886.

Hon. ROLLIN M. SQUIRE, 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 three months ending December 31, 1885.

Among the principal items of work were the following:

THE NEW COURT-HOUSE.

The steam-heating apparatus in the basement has been overhauled and put in repair. Several of the steam-coils have been rebuilt and enlarged; new valves and steam-traps have been put on a number of the steam-coils, and the drip-pipes from the radiators in the new wing have been extended so as to discharge into the elevator tank. The elevator pump has been repaired and a new stuffing-box put in.

Supreme Court—New Holland shades have been put on the windows in Chambers and Part IV. Countersunk socket-eyes have been put in the window-sashes in Part IV., the Library, Judges' room and the basement rooms. The swinging outer doors have been changed from the Library to Part IV. The lettering on the signs has been altered to conform with the changes made in the rooms, and new signs furnished for Part IV. and Oyer and Terminer.

Superior Court—The window-shades have been put in order and new ones furnished for Part IV.

THE BROWN-STONE BUILDING.

District Attorney's Office—A case, containing numerous small drawers, has been furnished, for the safe keeping of murderous weapons, and a black walnut book-case has been supplied for the private office. The hot-air furnaces have been cleaned and repaired, and new castings supplied where needed to put them in good order. The elevator has been repaired; the ropes, sheaves, blocks and running gear overhauled and put in good working order, and the steam-pump furnished with new valves and springs. The cellar has been thoroughly cleaned.

THE CITY HALL.

On the death of the Hon. Thomas A. Hendricks, Vice-President of the United States, the entrance porch, columns, cornices and balustrades were appropriately draped in mourning. In the Mayor's office—a book-case and wardrobe have been fitted up, and repairs made to the sash, doors and shelving.

THE HALL OF RECORDS.

The hot-air furnaces have been cleaned and repaired, and new castings furnished to replace those burned out. The windows in the cellar have been repaired and glazed, the water-closets and urinal put in order, and gas-fixtures repaired.

31 CHAMBERS STREET.

New Holland window-shades have been put up in the office of the Commissioner of Public Works. The railing in the Water Purveyor's office has been repaired, and the cellar cleaned.

FINANCE DEPARTMENT.

New gas-pendants and brackets and new desk pillar lights have been put up in the Auditing Bureau and Bureau of Arrears. A black walnut desk has been furnished for the use of the City Chamberlain, and a new Wilton carpet laid in the office. A rotary spring-back desk chair has been furnished for use of the Collector of City Revenue. A new ash desk has been put up in the City Paymaster's office and the partition and door in the vestibule altered.

THE CORPORATION COUNSEL'S OFFICE.

New gas pendants and brackets have been put up and alterations made in the pipe and fixtures in several of the rooms. Four black walnut tables, five desks, and two dozen oak bent cane-seated dining chairs furnished. Some new shelving has been put up, the signs have been changed and lettered as directed, and new signs put up.

CORPORATION ATTORNEY'S OFFICE.

A new Globe ventilating office-stove, with the necessary pipe and fixtures, has been put up in the office of the Assistant Attorney.

THE COURTS (POLICE AND CIVIL).

Special Sessions—The carpet in the Clerk's office has been taken up, cleaned and relaid, and the storm-door changed from the old to the new entrance to the office.

First Police Court—A new slate hearth-stone and a grate have been set in the Judge's private room.

Second Police Court—A new long pendulum clock has been furnished for use of the Court.

Sixth Police—The water-closets have been repaired, a new urinal put in, and the water-main supplying the building repaired.

THE CORPORATION YARDS.

Gansevoort Street Yard—A new Globe office-stove has been furnished and put up.

Rivington Street Yard—The doors and windows of the office have been repaired, new doors put on where required, the sash reglazed, new outside blinds put on, and a new Globe office-stove, with the necessary pipe and fixtures, has been put up.

THE MARKETS.

Washington Market—Repairs have been made to the iron panel-work on the curb-line on Fulton street.

West Washington Market—Repairs have been made to Vesey street pier.

Clinton Market—The skylights and sash on the roof have been repaired and reglazed.

Fulton Market—The outer walls, brick cornice work and coping have been pointed up with cement mortar wherever the same was found necessary.

Tompkins Market—The cellar and areas have been cleaned, and the water-closets and urinals repaired.

SIXTY-NINTH REGIMENT ARMORY.

The boiler furnaces have been relined with fire-brick, the walls pointed up, a new clearing door put in the flue, and the flue repaired. New check-valves have been put on the steam risers in the basement, and the gas-fixtures in some of the company rooms have been altered and repaired.

FREE FLOATING BATHS.

The Baths have been towed from their summer stations to their winter quarters in Gowanus Basin, where they are securely beached.

In addition to the foregoing, the furnishing of necessary supplies to the various courts and offices, the keeping in repair of the plumbing, gas and steam fitting; the putting up, cleaning and repairing of stoves in the several buildings, and supplying them with coal and wood, form a considerable portion of the work performed by this bureau.

Very respectfully,

THOMAS H. MCAVOY, Superintendent Repairs and Supplies.

Document "L."

DEPARTMENT OF PUBLIC WORKS—BUREAU OF INCUMBRANCES,
ROOM 16, NO. 31 CHAMBERS STREET,
NEW YORK, January 4, 1886.

Hon. ROLLIN M. SQUIRE, Commissioner of Public Works:

SIR—I herewith submit the report of the operations of this Bureau for the quarter ending December 31, 1885 (months of October, November and December), together with a condensed statement of the entire business during the year:

Number of complaints received and notices issued therefor against obstructions and incumbrances on sidewalks, streets, and avenues.....	1,028
Number of removals of merchandise, wagons, trucks, carts, signs, stands, etc., etc., to the Corporation Yard, foot of Gansevoort street, North river, or other suitable place.....	367

Expense of such removals including 715 loads of dirt, stone, rubbish, etc., and 14 dead and dangerous trees from various parts of the city.....	\$1,450 15
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Total expenses for the quarter.....	\$2,130 21
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Received from owners for the redemption of seized articles, etc.....	\$277 83
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Received from public sale held at the Corporation Yard, foot of Gansevoort street, Thursday November 5, 1885.....	\$32 00
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Total.....	\$809 83
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Which amount was duly paid over to the City Chamberlain.	
Number of permits issued to builders.....	1,600
Number of permits issued to cut down trees.....	39
Number of permits issued for special purposes.....	155
Number of notices issued to repair and reflag sidewalks.....	824
Number of notices issued to repair vault covers.....	2
During the year 1885 the total number of complaints received and notices issued therefor were.....	3,947
Removals to the Corporation Yard.....	1,374
Removals of loads of stone, dirt, refuse, etc.....	2,814
Removals of dead and dangerous trees.....	402
Number of building permits issued.....	8,260
Number of special permits issued.....	704
Number of permits issued to cut down trees.....	67
Number of notices issued to repair and reflag sidewalks.....	1,836
Number of notices issued to repair defective vault covers.....	28

Total expenditures for the year.....	\$9,999 92
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Receipts for articles redeemed by owners.....	\$1,053 07
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Receipts from public sales at Corporation Yard, foot of Gansevoort street, North river.....	1,342 50
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Total.....	\$2,395 57
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All of which was duly paid over to the City Chamberlain.

No more convincing answer can be made to complaints as to any lack of efficiency on the part of this Bureau, than to call attention to the following plain statement of facts in connection with the foregoing report. The entire appropriation for this Bureau for the year 1885, was \$10,000, of which \$3,116 was designated and fixed by the Board of Estimate and Apportionment, for the payment of salaries to Inspectors, etc., leaving a balance of \$6,884 for the removal of all and every kind of obstructions and incumbrances of this great city. Out of this is to be deducted the expense of carting away 2,184 loads of stone and dirt, which the Street-Cleaning Department refuses to touch, and the removal of over 400 dead and dangerous trees, involving the expenditure of \$3,879.75. There is then left to this Bureau to meet all the complaints of citizens, to respond to the notices from the Police as to abandoned property, and for all other purposes the beggarly amount of \$3,004.25 for the whole year's work of removals, a sum that would barely suffice to do one month's work properly, or take care of a single ward. As against this small outlay there has been received and paid over to the City Chamberlain, and deposited in the Sinking Fund, \$2,395.57, leaving the entire actual cost to the city for the removal of all obstructions and incumbrances (other than dirt, stones and trees) from the Battery to the Harlem Bridge, during the year 1885, at the small amount of \$608.68.

For the present year, notwithstanding that several decisions of the courts have declared against many classes of hitherto protected privileges, and that the public seem determined to get rid of many existing obstructions and nuisances, by reason of which the demands upon this Bureau will be greatly increased, the same insignificant amount has been again appropriated.

This Bureau, as its reports for the past eight years will show, has persistently and always held and avowed the opinions that are now declared by the courts, that the public highways belong to the public, and that no authority exists in any power short of the Legislature, to authorize their occupancy and use for other than general purposes; and that no special permit for the use thereof for personal or private ends, is or can be legal or binding. The public have fully awakened to their rights in this respect, and it only remains to be seen how long the authorities will continue to authorize or attempt to legalize the maintenance of illegal unsightly and dangerous obstructions.

Respectfully,

JOSEPH BLUMENTHAL, Superintendent of Incumbrances.

Document "M."

BUREAU OF WATER REGISTER, NO. 31 CHAMBERS STREET,
NEW YORK, December 31, 1885.

Hon. ROLLIN M. SQUIRE, Commissioner of Public Works:

SIR—I herewith transmit statement of moneys received for water rents, penalties and taps, for the quarter ending December 31, 1885:

	Principal.	Penalties.	Taps.
October	\$104,095 16	\$2,151 90	\$1,502 50
November	106,328 20	2,527 70	1,302 50
December	114,275 26	1,558 20	1,054 00
Total	\$324,698 62	\$6,237 80	\$3,859 00

Total

Deposit to the credit of "Water-meter Fund, No. 2"—

October	\$1,021 21
November	941 46
December	259 98
Total	\$2,222 65

Special Fund—"Repairing Streets"—

October	\$1,399 00
November	1,192 00
December	1,022 00
Total	\$3,613 00

I have the honor to also submit a statement of moneys for the year ending December 31, 1885, and placed to the credit of their respective accounts with the City Chamberlain.

Total Receipts.

Regular water rates and penalties	\$1,374,172 14
Water by meter measurements	729,272 69
Permits for water for building purposes	27,967 00
Water rates returned in arrears	\$137,762 30
Water by meter measurement returned in arrears	26,927 25
Pipe-tapping receipts	164,689 55
Restoring pavements	15,738 00
Collections for Meter and Meter Settings— Special Meter Stock	\$18 95
Water Meter Fund, No. 2	\$21,123 23
Amount returned to Bureau of Arrears for meters and meter settings	6,312 70
Total	\$2,743,935 93

The amount received during the year for restoring pavements of \$15,738 is reserved for repairing openings in streets, made for the purpose of connecting water-pipes with buildings, repairing, etc., etc.

The special meter account of \$27,435.93 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, show an increase over the last year (1884), amounting to \$147,276.01.

The receipts for pipe-tapping show an increase over last year amounting to \$2,070.50; for building purposes, an increase of \$3,147; for restoring pavements, an increase of \$5,529. The total showing an increase in the product from Croton water for the year 1885, over 1884, to be \$157,022.01.

A large number of steam-engines are in use throughout the city, which are rated according to horse power; in many cases the owners of such engines dispute their bills as being too high. I would therefore recommend that every steam-engine in the city be metered as soon as practicable, which would no doubt prove more satisfactory to the City, and to the owner, who would be charged only for the quantity of water consumed.

The waste of water has been greatly repressed and diminished during the past year by the prohibition of the use of hose, for washing sidewalks, fronts of buildings, stoops, areas, etc., but still an enormous quantity is actually wasted by many who disregard the rule of the Department by watering their gardens after night-fall, and by the free use of hose on the sidewalks early in the morning. I would recommend that an ordinance be passed by the Common Council, exacting a penalty for waste of this kind.

The profuse and excessive use of water in families is another cause of waste, which cannot be remedied without invading the privacy of dwellings, an exercise of authority which it is difficult to carry out, and complaints of this nature when made or reported against a tenant or owner of any building is met by a general denial.

Meters have been applied to many places of business and have operated beneficially in determining the quantity of water consumed; this as a general rule gives better satisfaction to the consumer than charging as heretofore for water by estimated amount used. The clerical force of this Bureau is entirely too limited, the general and minute knowledge required of clerks cannot be acquired without experience, and after such information as to their respective duties has been obtained by steady employment, the citizens would be more satisfactorily served, and the city be the gainer in its revenue. The limited appropriation allowed last year was insufficient to meet the payment of the necessary officers to keep the work continuously up to its proper standard, and I would therefore respectfully recommend that additional permanent clerks be appointed to carry on the work, without having to rely upon inexperienced persons temporarily detailed to perform clerical duty, during the busy periods of the year.

The special inspections made during the year for "extra rents," have been received and entered on the books for the current year, excepting the Twelfth and Nineteenth Wards. Notices have been served to parties where additions have been made, some of whom have responded by payment, while others have disputed the additional charges, and decline to pay on the ground that they have already paid for the year.

The increase from extras cannot be fully shown in this year's receipts, but will undoubtedly reach the sum of \$150,000.

All of which is respectfully submitted,

J. H. CHAMBERS, Water Register.

POLICE DEPARTMENT.

The Board of Police met on the 19th day of February, 1886.
Present—Commissioners French, Porter, McClave, and Voorhis.

Leaves of Absence Granted.

Patrolman Francis W. Hogan, Second Precinct, five days, half-pay.

" George W. Krowle, Twentieth Precinct, one and one-half days, half pay.

Report of the Superintendent pursuant to Rule 435 (arrests by Detective Squad in January, 1886) was ordered on file.

Mask-ball Permits Granted.

Julius Crux, at Metropolitan Assembly Rooms, February 20. Fee, \$10.

William R. Hill, at Harmony Assembly Rooms, February 27. Fee, \$25.

John Shumaker, at Concordia Hall, February 22. Fee, \$25.

Adolph Sempliner, at Everett Hall, February 27. Fee, \$25.

John J. Wager, Walhalla Hall, February 27. Fee, \$25.

Timothy J. Campbell, Walhalla Hall, March 6. Fee, \$25.

Herman Richtberg, Lyric Hall, March 10. Fee, \$10.

H. Johannsen, Beethoven Hall, March 13. Fee, \$10.

Ernst Regelman, Germania Assembly Rooms, February 27. Fee, \$25.

Applications for Promotions Referred to the Board of Examiners for Citation.

Precinct.	Precinct.
Roundsman Patrick Byrne..... 3	Patrolman John A. Keating..... 17
" Henry Hurlbut..... 23	" John Gallagher..... 12
Patrolman Jerome S. Renner..... 10	" Richard Walsh..... 12
" John Leonard..... 19 sub	

Applications for Advancement to Second Grade Denied.

Patrolman Peter J. Klein, Fourteenth Precinct.
" Michael Donlin, Eighteenth Precinct.
" James J. Concannon, Eighteenth Precinct.

Applications for Pensions Referred to the Committee on Pensions.

Sarah Flood, widow of late Patrolman James C. Flood.
Charlotte Bliss, widow of late Patrolman Charles R. Bliss.
Application of Isaac H. Bailey and others, for appointment of Dr. John F. Dunphy as Police Surgeon, was ordered on file.

Application of Joseph D. Macdonald and others, business men and residents of Sixth avenue, from Fourteenth to Nineteenth street, for appointment of James M. Martin as Special Patrolman, was referred to the Superintendent for report.

Communication from the Counsel to the Corporation, submitting form of bill for increasing salaries of the Captains to \$2,750 per year, was ordered to be forwarded to the Mayor with the approval of the Board.

Communications from C. H. Woodman, Secretary Civil Service Board, ordered on file.

Eligible lists for Sergeants, February 19, 1886.

Eligible lists for Doormen, February 19, 1886.

Relative to certificate required under Regulation 53, for candidates for examination for promotion.

Communication from Lieutenant-General P. H. Sheridan, commending police arrangements and action at the late funeral of General W. S. Hancock, was ordered on file.

Communication from Henry Bergh, Jr., Secretary Society Prevention Cruelty to Animals, relative to telegraph connection with Central Office, and accepting the proposition to pay cost of maintenance, was referred to Superintendent Crowley with direction to make the connection.

Special Patrolman Appointed.

Edward Collard, for Central Vermont Railroad and Steamboat Line.

Appointment Special Patrolman Revoked.

Amos W. Atkinson and David H. Ten Brook.

Employed as Doormen on Probation.

William H. Bruder
Thomas Crowley.

Employed as Patrolman on Probation.

James E. Elliott.

Transfers, etc.

Roundsman Robert A. Montgomery, from Thirty-third Precinct to Twenty-third Precinct.
Patrolman Patrick Hardiman, from Eighth Precinct to Sixteenth Precinct.

" David Bartley, from Sixteenth Precinct to Eighth Precinct.

" Adolph H. Schmidt, from Sixteenth Precinct to Eighteenth Precinct.

" Daniel J. Hogan, from Eleventh Precinct to Fourteenth Precinct.

" Thomas Mulhern, from Eighteenth Precinct to Nineteenth Precinct.

" Philip E. Reville, from Thirty-third to Thirty-second Precinct, and detail to special duty.

" George W. Gill, Sixteenth Precinct, detail as Precinct Detective.

" John H. Kellar, Sixteenth Precinct, detail as Precinct Detective.

Resolved, That Michael J. Mullen be and is hereby granted re-examination by the Surgeons.

Advanced to First Grade—From January 1, 1886.

Precinct.	Precinct.
Patrolman John J. Cronin..... 4	Patrolman Emanuel Meyer..... 11
" Hugh Foley..... 5	" George W. Macfail..... 18
" Charles G. Carroll..... 5	" Thomas Keefe..... 18
" Richard Berrian..... 8	" Edward J. Costa..... 19
" John J. Munson..... 9	" John Hughes..... 20
" John McKinney..... 10	" Patrick McGuire..... 22
" John H. Repper..... 10	" Bernard J. Smith..... 29
" William Rousby..... 11	" Thomas Mahon..... 30
" Edward Clifford..... 11	" John W. Goodwin..... 30

Advanced to Second Grade.

Patrolman James J. Burke, Eleventh Precinct, from January 1, 1886.

" John C. Moore, Twelfth Precinct, from January 1, 1886.

" Andrew J. Kenha, Twenty-ninth Precinct, from January 1, 1886.

" John A. Bromley, Thirty-fourth Precinct, from January 1, 1886.

" Cornelius W. Roe, Thirty-fifth Precinct, from January 1, 1886.

" Thomas McCarthy, Fourth Precinct, from February 12, 1886.

" Charles Hays, Seventeenth Precinct, from February 12, 1886.

" John H. Strang, Twenty-second Precinct, from February 12, 1886.

" Francis Bannon, Twenty-eighth Precinct, from February 18, 1886.

Resolved, That the following bill be approved, and the Treasurer authorized to pay the same—all aye:

Wm. W. McLoughlin, detective expenses.....\$33 46

On recommendation of the Committee on Repairs and Supplies, it was

Resolved, That the following bills be approved and the Treasurer authorized to pay the same—all aye:

Martin B. Brown, book.....	\$25 00	Frazer & Co., horse feed.....	\$227 58
" printing.....	810 00	" ".....	207 20
" ".....	585 00	" ".....	171 09
Eugene R. Cole, " etc.....	732 12	John J. Fox, horseshoeing.....	57 75
Colwell Lead Co., plumbing materials.....	320 25	" ".....	42 00
Comins & Martin, repairing, etc., wagon.....	75 00	B. Gray, carriage hire.....	17 50
John E. Cusick, prisoners' meals.....	5 25	F. X. Haggerty, expenses.....	2 50
L. Eickwart, drugs.....	14 33	C. H. Hance, soap.....	19 50
Mary English, prisoners' meals.....	7 25	Frank B. Hedenberg, window shades.....	16 20
Evening Post Job Printing Office, printing.....	590 30	Hektograph Manfg. Co., repairing hectograph.....	5 00
James Fay, pumping engine.....	400 00	Howe Bros., horseshoeing.....	50 44
J. Greust, prisoners' meals.....	7 00	Michael Kirley, expenses.....	11 40
James McGuire ".....	33 00	George F. Lewis, expenses.....	3 70
Frederick Mullen, ".....	9 50	Francis McCabe, cartages.....	39 75
Philip Page, ".....	5 50	William McKenna, horseshoeing.....	6 75
Sam'l C. Reynolds, prisoners' meals.....	2 25	John J. McNally, expenses.....	4 24
Samuel Savoy, ".....	18 50	P. Malone, horseshoeing.....	49 00
Slate & Jones, stationery, etc.....	722 91	Metropolitan T. and T. Co., rent telephones.....	260 00
F. Thornton, prisoners' meals.....	5 75	Metropolitan T. and T. Co., rent telephones.....	43 25
John Burns, repairing wagon.....	2 15	Miller, Morrison & Co., harness leather.....	9 20
" ".....	2 47	Moore & Co., printing.....	8 00
Thomas D. Butler, repairing sleigh.....	7 50	James Neely, rent.....	18 00
William Carlin, horseshoeing.....	40 25	N. Y. Belting & Packing Co., hose, etc.....	93 75
Patrick Connolly, ".....	5 25	Northern Gas Co., gas.....	30 50
Cassidy & Son, gas-fittings.....	23 38	Patterson Bros., hardware.....	6 92
" ".....	4 50	" ".....	3 00
Clark & Wilkens, wood.....	12 00	" weather strips.....	7 56
N. L. Coe, photographs.....	20 00	J. E. Quackenbush & Son, hardware.....	46 21
Colwell Lead Co., plumbing materials.....	22 25	" ".....	15 00
" plumbing.....	40 00	" ".....	2 50
Consolidated Gas Co., gas.....	214 20	" ".....	2 10
" ".....	803 25	John H. Seaman, lime and sand.....	22 10
F. W. Devoe & Co., white lead, etc.....	47 97	T. J. Sellow, chairs.....	18 00
" shellac.....	12 00	John Stier & Son, repairing wagon.....	7 05
" oil.....	2 00	W. & J. Sloane, carpet.....	67 22
" ".....	2 28	James D. Trimble, lumber.....	9 12
" ".....	2 20	T. & W. Thorn & Co., horse feed.....	173 29
" "etc.....	12 13	Mary Webb, meals.....	87 00
John Doran, newspapers.....	4 59	" ".....	12 15
" ".....	3 90	White & Co., horsefeed.....	127 57
" ".....	4 90	Winant & Terhune, coal.....	135 00
Doremus & Corbit, chairs.....	18 75	D. D. A. Wortendyke & Son, ice.....	17 36
Charles W. Dorn, telg. supplies.....	11 25	Chas. M. Young, Atty., keeping horses.....	50 00
Samuel B. Ferdon, repg. railing.....	21 80		
Wm. S. Fraser, expenses.....	5 90		

\$7,978 88

Judgments—Fines imposed.

Sergeant Henry K. Woodruff, Nineteenth Precinct, five days.
Patrolman Edward F. Flood, Sixth Precinct, two days.
" Adolph Hummell, Tenth Precinct, one day.
" Charles Bernstein, Thirteenth Precinct, one day.
" Albert Reed, Thirty-fourth Precinct, one day.
" John Hanna, Thirty-fourth Precinct, one day.
" Charles Haeussler, Thirteenth Precinct, one day.
" Thomas H. Hackett, Twenty-second Precinct, one day.
" William Whispell, Ninth Precinct, three days.
" Robert Murphy, Tenth Precinct, one day.
" Joseph M. Hode, Thirteenth Precinct, one day.
" Joseph M. Hode, Thirteenth Precinct, three days.
" Joseph M. Hode, Thirteenth Precinct, two days.
" Andrew J. Kenna, Thirteenth Precinct, one day.
" Thomas Courtois, Fourteenth Precinct, one day.
" Thomas Flaherty, Twenty-first Precinct, one day.

Reprimands.

Precinct.		Precinct.	
Sergeant Andrew J. Thompson	5	Patrolman James Doyle	15
Patrolman Floyd Gill	9	" Watson Drummond	28
" William H. Wachner	10	" Matthias Bruen	31
" George Mayforth	10	" Peter Quinn	32
" John F. Powers	12		

Complaints Dismissed.

Precinct.		Precinct.	
Patrolman Daniel O'Neill	1	Patrolman William J. Skelly	13
" Joseph A. Gardiner	8	" Thomas McBride	13
" John Guinan	12	" John O'Sullivan	14
" Edward Drescher	12	" Joseph B. Kelly	15
" William T. Cagney	12	" William A. Huntress	19
" Lorenzo D. Lovell	12	" Mark Harrigan	22
" John Gallaher	12	" George W. Kiernan	23
" James McCusker	12	" Montgomery Ditmars	33
" Thomas Gorman	12	" John Pepper	35

Whereas, James Moran, without permission of this Board, has resigned his office of Patrolman in the Police Department of the City of New York, and thereby ceased to be a member of the Police force; and

Whereas, Under the laws of this State the effect of such resignation was to place the said Moran beyond the power and jurisdiction of the Board of Police to examine and try him upon the complaint of Harry Hill, for demanding and receiving money from him for alleged police protection (the said complaint having been made, copy of charges served, and examination of the same pending at the time of such resignation); therefore,

Resolved, That the Chief Clerk be and is hereby directed to forward to the District Attorney a copy of the affidavit of Harry Hill, upon which the said charges and complaint were based, for such action as he may deem necessary in the premises.

Adjourned.

WM. H. KIPP, Chief Clerk.

BOARD OF ESTIMATE AND APPORTIONMENT

BOARD OF ESTIMATE AND APPORTIONMENT—CITY OF NEW YORK,
MAYOR'S OFFICE, CITY HALL,
WEDNESDAY, February 24, 1886—1.30 o'clock P. M.

The Board met in pursuance of the following call:

OFFICE OF THE MAYORALTY,
EXECUTIVE DEPARTMENT—CITY HALL,
NEW YORK, February 19, 1886.

In pursuance of the authority contained in the 18th section of the New York City Consolidation Act of 1882, a meeting is hereby called of the Mayor, Comptroller, President of the Board of Aldermen, and the President of the Department of Taxes and Assessments, constituting a Board of Estimate and Apportionment, to be held at the office of the Mayor, on Wednesday, February 24, 1886, at 1.30 o'clock P. M., for the purpose of transacting such business as may be brought before the Board.

ROBERT B. NOONEY, Acting Mayor.

INDORSED:

We hereby consent that the rule adopted February 2, 1885, relating to calls of meetings, be suspended for this meeting.

Admission of a copy of the within as served upon us this 19th day of February, 1886.

ROBERT B. NOONEY,
Acting Mayor;
EDWARD V. LOEW,
Comptroller;

M. COLEMAN,
President of the Department of Taxes and Assessments.

Present—The following members, viz.:

Edward V. Loew, the Comptroller; Robert B. Nooney, the President of the Board of Aldermen; Michael Coleman, the President of the Department of Taxes and Assessments.

Absent—Wm. R. Grace, the Mayor.

The reading of the minutes of the meeting held February 9, 1886, was dispensed with.

The Comptroller moved that when the Board adjourns, it do so to meet on Monday, March 1, 1886, at 2 o'clock P. M.

Which was agreed to.

On motion, the Board adjourned.

M. COLEMAN, Secretary.

FINANCE DEPARTMENT.

Abstract of transactions of the Finance Department for the week ending February 20, 1886:

Deposited in the Treasury.

To the Credit of the Sinking Fund	\$57,752 69
" City Treasury	264,324 14
Total	\$322,076 83

Stock Issued.

Three per cent. Stock	\$50,000 00
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Warrants Registered for Payment.

The Mayoralty—	
Contingencies—Mayor's Office	\$42 08
The Common Council—	
City Contingencies	12 50
The Finance Department—	
Contingencies—Comptroller's Office	62 10
Interest on the City Debt	4,990 00
Aqueduct Commissioners—	
Additional Water Fund	897 37
The Law Department—	
Contingencies—Law Department	\$643 85
Contingencies—Public Administrator's Office	87 00
For Counsel Fee in Matter of Proceedings for Equalization of the State Tax	2,000 00
For Procuring and Presenting Evidence relative to Frauds on the City and County of New York, prior to January 1, 1872	1,600 00
For Prosecuting Delinquents for Arrears of Personal Taxes	34 00
Salaries—Law Department	200 00
	4,564 85

The Department of Public Works—

Aqueduct—Repairs, Maintenance and Strengthening	\$1,327 49
Boulevards, Roads and Avenues, Maintenance of	63 63
Contingencies—Department of Public Works	677 34
Croton Water Fund	23,993 13
Fund for Local Improvements	4,770 82
Lamps and Gas and Electric Lighting	3,088 30
Laying Croton Pipes (Chapter 381, Laws 1879)	2,283 20
Public Buildings—Construction and Repairs	27 00
Removing Obstructions in Streets and Avenues	42 00
Repairs and Renewal of Pavements and Regrading	86 00
Repairing and Renewal of Pipes, Stop-cocks, etc.	3,249 04
Sewers—Repairing and Cleaning	356 96
Supplies for and Cleaning Public Offices	504 05
Water Meter Fund, No. 2	1,801 23
	\$42,690 19

The Department of Public Parks—

Bridge and Approaches over Mott Haven Canal, at One Hundred and Thirty-eighth Street	\$28 12
Bronx River Bridges—For the Repairing and Maintenance of Bridges over the Bronx River within the City limits	5 75
Cromwell's Creek Bridges and Bridges other than those of the Harlem River and Bronx River	3 50
Harlem River Bridges—Repairs, Improvements and Maintenance	762 45
Incumbrances—Twenty-third and Twenty-fourth Wards, Removal of	27 38
Jeannette Park	21 56
Maintenance and Government of Parks and Places	14,096 11
Maintenance—Twenty-third and Twenty-fourth Wards	708 97
Morningside Park—Improvement Fund	48 00
Riverside Park and Avenue—For the Improvement and Maintenance of	246 98
Sewers and Drains—Twenty-third and Twenty-fourth Wards	126 11
Surveying, Laying-out, etc.—Tax and Assessment Maps—Twenty-third and Twenty-fourth Wards	1,052 68
Surveys, Maps and Plans	1,491 41
	18,619 02

The Department of Public Charities and Correction—

Public Charities and Correction	43,587 65
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The Health Department—

For Removal of Night-soil, Offal and Dead Animals	\$3,000 00
Health Fund	398 84
Hospital Fund—For Completion of Hospital Buildings on North Brother Island	531 00
Hospital Fund—For Care and Maintenance of Buildings and Hospitals on North Brother Island	189 45
Hospital Supplies and Transportation—For Care of Contagious Diseases	355 76
	4,475 05

The Police Department—

Expenses of Detectives	\$1,041 66
Police Fund	302,316 00
Police Fund—For Salaries of Clerical Force, etc.	6,894 16
Police Station-houses—Alterations, Fitting-up, etc.	2,083 33
Supplies for Police	6,500 00
	318,835 15

The Department of Street Cleaning—

Cleaning Streets—Department of Street Cleaning	40,532 27
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The Fire Department—

Fire Department Fund	5,139 39
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The Dock Department—

Dock Fund	10,773 75
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The Board of Education—

College of the City of New York	\$163 89
Public Instruction	13,479 96
	13,643 85

The Judiciary—

Salaries—City Courts	\$166 66
Salaries—Judiciary	590 86
	757 52

Charitable Institutions—

Association for Befriending Children and Young Girls	\$1,499 29
Foundling Asylum of the Sisters of Charity	22,358 35
New York Catholic Protectory	19,572 84
New York Infant Asylum	7,266 78
State Homeopathic Asylum for the Insane	711 06
	51,408 32

Advertising, Printing, Stationery and Blank Books—

Advertising	\$49 90
Printing, Stationery and Blank Books	2,708 84
Publication of the CITY RECORD	3,338 71
	6,097 45

Miscellaneous—

Assessment Commission, Expenses of	\$300 00
Contingencies—District Attorney's Office	136 87
Election Expenses	541 66
For Burial of Honorably Discharged Soldiers, Sailors or Marines	910 00
For Construction of Bridge over Harlem River	2,269 94
For Deficiencies in Appropriations of 1885 and Previous Years	109 75
Jurors' Fees, Including Expenses of Jurors in Civil and Criminal Trials	3,770 00
Refunding Assessments Paid in Error	62 50
Refunding Taxes Paid in Error	54 91
Salary of the Physician to the Jail of the City and County of New York	174 99
Sheriff's Fees	3,187 88
	11,518 50

Total	\$578,947 01
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CLAIMS FILED.

DATE.	NAME OF CLAIMANT.	AMOUNT.	NATURE OF CLAIM.	ATTORNEY.
1886.				
Feb. 16...	James Reilly, Newark, N.J.	\$950 00	Notice of claim against James Duffy. For stone furnished for engine-house and Fire Department Headquarters, etc., on Sixty-seventh street, between Third and Lexington avenues.	Fettretch, Silkman & Seybel.
" 17...	Adon Smith, Jr., as committee, etc.	195 43	Demand. For payment of judgment recovered in matter of Adon Smith, Jr., as committee, etc., against the Commissioners of Taxes and Assessments, \$185.43; also, \$10 additional costs.	A. P. & W. Man.
" 19...	John McArthur and others.	.....	Demand. For amount of award made to John McArthur, deceased, in matter of opening One Hundred and Twenty-seventh street.	James C. Foley.
" 19...	Thomas Furey, administrator.	5,000 00	Claim and demand. For damages for personal injuries received on January 18, 1886, by Michael Reynolds, resulting in his death.	James C. Foley.

SUITS, ORDERS OF COURT, JUDGMENTS, ETC.

COURT.	NAME OF PLAINTIFF.	AMOUNT.	NATURE OF ACTION.	ATTORNEY.
Surrogates	In matter of estate of Henry Dean, deceased	\$476 63	Certified copy order directing Comptroller to pay over to Ferdinand A. Straus, or his attorney, for his claim, \$476.63, or such sum as may be in his hands to apply thereon	E. Nusbaum.
Superior..	Francis A. Bassler agst Samuel G. French and others. ....	.....	Notice of appeal to General Term, by plaintiff, from judgment entered in said action on February 5, 1886.	John C. Shaw, attorney for plaintiff.
" ..	Franklyn J. Nowell, as administrator... ..	2,854 49	Transcript of judgment.	Frank E. Blackwell.
Supreme..	Charles Devlin.....	395 46	Orders reducing assessments as follows : One Hundred and Twenty-second street regulating and grading, from Mount Morris Square to Ninth avenue	John C. Shaw.
" ..	" ..	913 19	One Hundred and Twenty-third street regulating and grading, between Mount Morris Square and Eighth avenue	"
Superior..	The Twenty-fourth Ward Real Estate Association of the City of New York.	688 02	Summons and complaint. For judgment to have taxes for years 1874 to 1885, inclusive, on plots 4, 5 and 6, in Twenty-fourth Ward, canceled, and to have tax sales of 1877 to 1879 on the same vacated.	Arnoux, Rich & Woodford.
Supreme..	Charles H. Russell. .	2,152 11	Order reducing assessment for Seventy-third street regulating, etc., from Eighth avenue to Hudson river	P. A. Hargous.
" ..	The New York Juvenile Asylum....	7,391 75	Complaint. For return of amount paid August 9 or 10, 1877, for an assessment on Farm 58, Twelfth Ward, for One Hundred and Seventy-third and One Hundred and Eighty-third streets drains, between Kingsbridge road and Harlem river.	A. B. Johnson.
" ..	John Cornwell, Jr....	5,000 00	Summons and complaint. For balance due on account of laying water-mains in various streets and avenues.	Morgan J. O'Brien.
" ..	Michael Cronin.....	500 64	Order reducing assessment for Avenue A sewer, with branches, from Fifty-ninth to Sixty-first street	T. F. Neville.
" ..	" ..	114 52	Order vacating assessment for regulating, etc., Avenue A (Eastern Boulevard), from Fifty-seventh to Eighty-sixth street.	"
Superior..	Edward J. Weisman..	183 30	Transcript of judgment.	C. N. Nassau.
Court of Appeals	The People ex rel. Adon Smith, Jr., as Committee, etc., agst. the Commissioners of Taxes and Assessments....	.....	Order denying motion for return of remittitur Summons and complaint. For amount awarded him for the taking of his land and buildings for the purpose of a public market at Gansevoort street, the property being designated in Commissioners' report as Nos. 10, 11 and 12.	A. P. & W. Man.
Superior..	William Collins.....	22,750 00	Summons and complaint. For amount due for materials furnished on contract for regulating, etc., Eleventh avenue, from Kingsbridge road to Dyckman street	James A. Deering.
Supreme..	James McGay.....	105 68	Transcript of judgment	T. H. Baldwin.
" ..	Nicholas Krapp.....	118 62	" ..	"
" ..	John W. Andreas.....	702 54	" ..	"
" ..	Jacob Ruppert.....	958 49	" ..	"
" ..	" ..	1,067 50	" ..	"
" ..	Isaac H. Reid	365 08	" ..	"
Superior..	Hubert O. Thompson.	15,254 95	Summons and complaint. For amount audited and allowed by the Board of Estimate and Apportionment for costs, counsel fees and expenses incurred by plaintiff in years 1882, 1883 and 1884.	Bangs & Stetson.
Supreme..	The Hecla Powder Co. agst. The Mayor, etc., C. F. Mairs and others.....	1,314 70	Summons and complaint. For amount due for materials furnished on contract for regulating, etc., Eleventh avenue, from Kingsbridge road to Dyckman street	Frost & Coe.
" ..	John W. Wilson et al. agst. Ernest L. Dawson, individually, etc.....	3,316 48	Order directing attorneys, deputies, agents, etc., of the late Sheriff to deposit fees, etc., with the United States Trust Co.	H. W. Sackett, attorney for plaintiffs.
" ..	William T. Carlisle..	233 21	Summons and complaint. For repayment of amount paid under protest to Receiver of Taxes for personal taxes of 1884, by Mary Buchanan	William T. Carlisle.

CONTRACTS REGISTERED FOR THE WEEK ENDING FEBRUARY 20, 1886.

NO.	DATE OF CONTRACT.	DEPARTMENT.	NAMES OF CONTRACTORS.	DESCRIPTION OF WORK.
7310	Dec. 1, 1885	Docks.....	E. A. Moody and W. R. Bracken. (Sureties: Andrew G. Myers, Wm. M. Gibson. Bond, \$75.)	Labor and materials for gas-fitting for a building on Pier A, North river. Total, \$375.
7311	Feb. 3, 1886	Aqueduct Commission	John Brunton & Co..... (Surety: The American Surety Company of the City of New York. Bond, \$57,000.)	Building section 13 of the New Croton Aqueduct in the Twelfth Ward. Estimate, \$418,565.
7312	" 3, "	" ..	John Brunton & Co..... (Surety: The American Surety Company of the City of New York. Bond, \$85,000.)	Building section 14 of the New Croton Aqueduct in the Twelfth Ward. Estimate, \$619,115.
7313	Jan. 28, "	Fire.....	John Moonan..... (Sureties: John A. Anthony, Henry Chastain. Bond, \$4,000.)	Furnishing 350,000 pounds hay, 75,000 pounds rye straw, 3,000 bags white oats and 2,000 bags bran. Total, \$8,125.
7314	Feb. 15, "	Public Works.....	Virgilio Del Genovese..... (Sureties: James Slattery, Patrick Larney. Bond, \$3,000.)	Sewers in Ninety-seventh street, between Boulevard and Riverside avenue. Estimate, \$4,691.

Certificates of the Commissioners of Taxes and Assessments of the Remission by them of Taxes of 1885 on Personal Estate, received, as follows:

DATE.	NAME.	ADDRESS.	ASSESSED VALUATION.	TAX REMITTED.
Feb. 18..	Ury Danenberg.....	102 Front street.....	\$3,000 00	\$72 00
" 18..	Albo Debernales.....	34 Nassau street.....	10,000 00	240 00
" 18..	Leonard F. Beckwith	229 Broadway.....	5,000 00	120 00
" 18..	John McCarren.....	241 Washington street.....	2,000 00	48 00

Certificate of the Commissioners of Taxes and Assessments of the Reduction by them of Taxes of 1885 on Personal Estate, received, as follows:

DATE.	NAME.	ADDRESS.	ASSESSED VALUATION.	CORRECTED VALUATION.	TAX REMITTED.
Feb. 18..	James R. Feely.....	25 John street.....	\$3,000 00	\$119 00	\$69 14

Official Bond Approved and Filed.

February 20. William V. Smith, Deputy Commissioner of Public Works, Principal.
David J. Dean, No. 2143 Sixth avenue,
William M. Dean, No. 33 East One Hundred and Twenty-seventh street, } Sureties.
Dated February 20, 1886. Penalty, \$5,000.

Opening of Proposals.

February 18. The Comptroller (by representative), attended the opening of the proposals at the Department of Public Works, for furnishing 1,975 tons of Lehigh and Wilkesbarre Company's coal, and 25 tons of English canal coal.

Approval of Sureties.

The Comptroller approved of the adequacy and sufficiency of the sureties on the following proposals, viz.:

February 15. For furnishing 2,000 barrels of flour, No. 2, for use of the Department of Public Charities and Correction.
George Hollister, No. 90 Broad street, Principal.
William N. Crane, No. 7 East Forty-third street, } Sureties.
Effingham Maynard, No. 286 Lexington avenue, }

February 15. For furnishing 2,000 barrels flour, No. 1, for use of the Department of Public Charities and Correction.
Thurber, Whyland & Co., West Broadway and Reade street, Principals.
John Early, No. 145 Chambers street, } Sureties.
James S. Barrow, No. 141 Chambers street, }

February 17. For constructing sewer in Morris avenue, from summit between One Hundred and Thirty-ninth and One Hundred and Fortieth streets, to North Third avenue.
Michael Casey, One Hundred and Seventieth street and College place, Principal.

February 17. For constructing sewer in Morris avenue, from summit between One Hundred and Thirty-ninth and One Hundred and Fortieth streets, to North Third avenue.
Michael Casey, One Hundred and Seventieth street and College place, Principal.
Michael Hughes, No. 1531 Avenue A,
Thomas Casey, No. 432 East Eighty-first street, } Sureties.

February 19. For constructing sewer in Fourth avenue, east side, between Fifty-fourth and Fifty-fifth streets.
Patrick Hardiman, 1216 Second avenue, Principal.

February 19. For regulating, grading, etc., One Hundred and Thirty-third street, from Eighth avenue to Avenue St. Nicholas.
Henry G. Peters, No. 57 East One Hundred and Twenty-fourth street, Principal.

February 19. For regulating, grading, etc., One Hundred and Thirty-third street, from Eighth avenue to Avenue St. Nicholas.
Frederick K. Keller, No. 123 West Forty-seventh street, } Sureties.
Luer Immen, No. 477 Fourth avenue, }

February 20. For furnishing the Department of Public Works with 1,975 tons Lehigh and Wilkesbarre coal and 25 tons English canal coal.
William D. Bruns, Jr., No. 141 East Twenty-sixth street, Principal.

February 20. For furnishing the Department of Public Works with 1,975 tons Lehigh and Wilkesbarre coal and 25 tons English canal coal.
Andrew Koch, No. 455 First avenue, } Sureties.
John F. Hanley, No. 362 Avenue A, }

Return of Proposals.

February 15. Proposal of Michael Casey for sewer in Morris avenue, from summit between One Hundred and Thirty-ninth and One Hundred and Fortieth streets to North Third avenue, returned to Department of Public Parks for action on the proposed substitution of Thomas Casey, No. 432 East Eighty-first street, as a surety thereon, in the place of John McMahon, No. 1062 Franklin avenue, one of the original sureties.

February 17. Proposal of Patrick Hardiman for sewer in Fourth avenue, between Fifty-fourth and Fifty-fifth streets, returned to the Department of Public Works for action on the proposed substitution of Dennis McGrath, No. 35 East One Hundred and Fourth street, as a surety thereon, in the place of Patrick Larney, No. 325 East Thirty-eighth street, one of the original sureties.

February 17. Proposal of Henry G. Peters for regulating, etc., One Hundred and Thirty-third street, from Eighth avenue to Avenue St. Nicholas, returned to the Department of Public Works for action on the proposed substitution of Luer Immen, No. 477 Fourth avenue, as a surety thereon, in the place of Patrick H. Power, No. 569 Seventh Avenue, one of the original sureties.

EDWARD V. LOEW, Comptroller.

EXECUTIVE DEPARTMENT.

MAYOR'S OFFICE,
NEW YORK, January 7, 1886. }

Pursuant to section 9 of chapter 339, Laws of 1883, I hereby designate

"New York Times" and the "Daily News" two of the daily newspapers printed in the City of New York, in which notice of each sale of unredeemed pawns or pledges by public auction in said city, by pawnbrokers, shall be published for at least six days previous thereto, until otherwise ordered.

W. R. GRACE, Mayor.

W. R. GRACE, Mayor.

MAYOR'S OFFICE,

NEW YORK, December 31, 1885. }

In pursuance of the ordinance, approved April 30, 1877, and amended June 1, 1877, entitled,

"An ordinance to prevent the danger of hydrophobia to any of the inhabitants of the City of New York," notice is hereby given that all Dogs found at large in the City of New York on and after January 1, contrary to such ordinance, will be seized and disposed of as provided therein.

The Dog Pound at the foot of Sixteenth street,

East river, is hereby designated as the place where dogs so captured must be delivered to the Keeper thereof. The Pound will be open from eight o'clock A. M. until five o'clock P. M. daily, Sundays excepted, on and after the first day of January, 1886.

WM. R. GRACE,
Mayor.

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.
WILLIAM R. GRACE, Mayor; WILLIAM L. TURNER, 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. ADAMSON.

AQUEDUCT COMMISSIONERS.

Room 209, Stewart Building, 4th floor, 9 A. M. to 5 P. M.
 THE MAYOR, President; JAMES W. McCULLOH, Secretary; BENJAMIN S. CHURCH, Chief Engineer.

LEGISLATIVE DEPARTMENT.

Office of Clerk of Common Council.
 No. 8 City Hall, 10 A. M. to 4 P. M.
 ROBERT B. NOONEY, President Board of Aldermen.
 FRANCIS J. TWOMEY, Clerk Common Council.

City Library.

No. 12 City Hall, 10 A. M. to 4 P. M.

DEPARTMENT OF PUBLIC WORKS.

Commissioner's Office.
 No. 31 Chambers street, 9 A. M. to 4 P. M.
 ROLLIN M. SQUIRE, Commissioner; WILLIAM V. 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.
 GEORGE A. JEREMIAH, Superintendent.

Engineer-in-Charge of Sewers.

No. 31 Chambers street, 9 A. M. to 4 P. M.
 STEVENSON TOWLE, Engineer-in-Charge.

Bureau of Repairs and Supplies.

No. 31 Chambers street, 9 A. M. to 4 P. M.
 THOMAS H. McAVOY, 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. BARCOCK, Superintendent.

Bureau of Incinerators.

No. 31 Chambers street, 9 A. M. to 4 P. M.
 JOSEPH BLUMENTHAL, Superintendent.

Keeper of Buildings in City Hall Park.

MARTIN J. KEESSE, City Hall.

FINANCE DEPARTMENT.

Comptroller's Office.
 No. 15 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.
 EDWARD V. LOWE, Comptroller; RICHARD A. STORRS, Deputy Comptroller.

Auditing Bureau.

Nos. 19, 21, 23 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.

WM. J. LYON, Auditor of Accounts.
 DAVID E. AUSTEN, Deputy 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. CADDY, 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. KELSO, Collector of the City Revenue and Superintendent of Markets.

Bureau for the Collection of Taxes.

First floor, Brown-stone Building, City Hall Park.
 GEORGE W. McLEAS, Receiver of Taxes; ALFRED VREDEBURG, 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. LYONS, City Chamberlain.

Office of the City Paymaster.

No. 33 Reade street, Stewart Building.
 MOOR FALLS, 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.

E. HENRY LACOMBE, Counsel to the Corporation
 ANDREW T. CAMPBELL, Chief Clerk.

Office of the Public Administrator.

No. 49 Beekman street, 9 A. M. to 4 P. M.

RICHARD J. MORRISON, Public Administrator.

Office of the Corporation Attorney.

No. 49 Beekman street, 9 A. M. to 4 P. M.

WILLIAM A. BOVD, Corporation Attorney.

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, 8.30 A. M. to 5.30 P. M.

HENRY H. PORTER, President; GEORGE F. BRITTON, Secretary.

FIRE DEPARTMENT.

Office hours for all except where otherwise noted from 9 A. M. to 4 P. M. Saturdays, to 3 P. M.

Headquarters.

Nos. 135 and 137 Mercer street.

HENRY D. PURROV, President; CARL JUSSEN, Secretary.

Bureau of Chief of Department.

CHARLES O. SHAY, Chief of Department.

Bureau of Inspector of Combustibles.

PETER SEERY, Inspector of Combustibles.

Bureau of Fire Marshal.

GEORGE H. SHELTON, Fire Marshal.

Bureau of Inspection of Buildings.

ALBERT F. D'ORCH, Superintendent of Buildings.

Attorney to Department.

WM. L. FINDLEY, Nos. 135 and 137 Mercer street.

Fire Alarm Telegraph.

J. ELLIOT SMITH, Superintendent of Telegraph, Nos. 135 and 137 Mercer street.

Central Office Fire Alarm Telegraph open at all hours.

Repair Shops.

Nos. 128 and 130 West Third street.

JOHN CASTLES, Foreman-in-Charge, 8 A. M. to 5 P. M.

Hospital Stables.

Ninety-ninth street, between Ninth and Tenth avenue.
 JOSEPH SHEA, Foreman-in-Charge.
 Open at all hours.

HEALTH DEPARTMENT.

No. 301 Mott street, 9 A. M. to 4 P. M.
 ALEXANDER SHALER, President; EMMONS CLARK, Secretary.

DEPARTMENT OF PUBLIC PARKS.

No. 36 Union Square, 9 A. M. to 4 P. M.
 HENRY R. BECKMAN, 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.

Nos. 117 and 119 Duane street, 9 A. M. to 4 P. M.
 JOSEPH KOCH, President; B. W. ELLISON, Secretary.
 Office hours from 9 A. M. to 4 P. M. daily, except Saturdays, on Saturdays as follows: From September 15 to June 15, from 9 A. M. to 3 P. M.; from June 15 to September 15, 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, 3 P. 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 COMBORD, Clerk.

DEPARTMENT OF STREET CLEANING.

Nos. 31 and 32 Park Row, "World" Building, Rooms 8 and 9, 9 A. M. to 4 P. M.

JAMES S. COLEMAN, Commissioner; JACOB SEABOLD, Deputy Commissioner; M. I. MORRISON, Chief Clerk.

CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS.

Room No. 11, City Hall.

EVERETT P. WHEELER, Chairman of the Advisory Board; CHARLES H. WOODMAN, Secretary and Executive Officer.

BOARD OF ESTIMATE AND APPORTIONMENT.

Office of Clerk, Staats Zeitung Building, Room 5.

The Mayor, Chairman; CHARLES V. ADER, Clerk.

BOARD OF ASSESSORS.

Office, City Hall, Room No. 115, 9 A. M. to 4 P. M.

EDWARD GILON, Chairman; WM. H. JASPER, Secretary.

BOARD OF EXCISE.

Corner Bond street and Bowery, 9 A. M. to 4 P. M.

NICHOLAS HAUGHTON, President; JOHN K. PERLEY, 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. SEXTON, Under Sheriff; BERNARD F. MARTIN, Order Arrear Clerk.

REGISTER'S OFFICE.

East side City Hall Park, 9 A. M. to 4 P. M.

JOHN REILLY, Register; JAMES A. HANLEY, Deputy Register.

COMMISSIONER OF JURORS.

Room 127, Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.

CHARLES REILLY, 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.

RANDOLPH B. MARTINE, District Attorney; JOHN M. COMAN, Chief Clerk.

THE CITY RECORD OFFICE.

And Bureau of Printing, Stationery, and Blank Books.

No. 2 City Hall, 8 A. M. to 5 P. M., except Saturdays, on which days 8 A. M. to 3 P. M.

THOMAS COSTIGAN, Supervisor; R. P. H. ABELL, Book-keeper.

CORONERS' OFFICE.

Nos. 13 and 15 Chatham street, 8 A. M. to 5 P. M. Sundays and holidays, 8 A. M. to 12.30 P. M.

MICHAEL J. R. 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.

General Term, Room No. 35.

Chambers, Room No. 33, 10 A. M.

Circuit, Part I., Room No. 14, SAMUEL BARRY, Clerk.

Circuit, Part II., Room No. 12, FRANCIS S. McAVOY, Clerk.

Circuit, Part III., Room No. 13, JOHN VON GLAHN, Clerk.

Circuit, Part IV., Room No. 15, J. LEWIS LYON, Clerk.

Judges' Private Chambers, Rooms 19, 20 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, 10 A. M.

Part I., Room No. 34.

Part II., Room No. 35.

Judges' Private Chambers, Room No. 30.

Naturalization Bureau, Room No. 32.

John Sedgwick, Chief Judge; THOMAS BOSSE, 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.

Clerk's Office, Room No. 22, 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.

CHARLES P. DALY, 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-SLEEVE and RUPES B. COWING, Judges of the said Court.

John Sparks, Clerk. Office, Room No. 11, 10 A. M. till 4 P. M.

CITY COURT.

General Term, Room No. 20.

Part I., Room No. 11, Room No. 20.

Part II., 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; JOHN REID, Clerk.

OVER AND TERMINER COURT.

New County Court-house, second floor, southeast corner, Room No. 12. Court opens at 10.30 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 COURTS.

Judges—MAURICE J. POWER, J. HENRY FORD, JACOB PATTERSON, JR., JAMES T. KILBRETH, JOHN J. GORMAN, HENRY MURRAY, SOLON B. SMITH, ANDREW J. WHITE, CHARLES WELDE, DANIEL O'REILLY, PATRICK G. DUFFY.

GEORGE W. CREIGER, Secretary.

Office of Secretary, Fifth District Police Court, One Hundred and Twenty-fifth street, near Fourth avenue.

First District—Tombs, Centre street.

Second District—Jefferson Market.

Third District—No. 65 Essex street.

Fourth District—Fifty-seventh street, near Lexington avenue.

Fifth District—One Hundred and Twenty-fifth street, near Fourth avenue.

Sixth District—One Hundred and Fifty-eighth street and Third avenue.

PUBLIC BOUND.

N. W. YORK, February 24, 1886.

ROAN HORSE, THREE WHITE FEET, STAR on forehead, sixteen hands high, to be sold from the Public Pound, N. W. York street and Second avenue, on Saturday, February 27, at 2 P. M.

DAVID McMAHON, Pound-keeper.

Ninety-third street and Second avenue.

ASSESSMENT COMMISSION.

NOTICE IS HEREBY GIVEN, THAT A MEETING of the Commissioners under the act passed 550 of the Laws of 1880, entitled "An act relating to certain assessments for local improvements in the City of New York," passed June 9, 1880, will be held at their office, No. 27 Chambers street, on Friday, February 26, 1886, at 2 o'clock P. M.

DANIEL LORD, JR., JOHN KELLY, ALLAN CAMPBELL, JOSEPH GARRY, JOHN W. MARSHALL, Commissioners under the Act.

JAMES J. MARTIN, Clerk.

DEPARTMENT OF PUBLICWORKS.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, ROOM 6, NO. 31 CHAMBERS STREET, NEW YORK, February 24, 1886.

TO CONTRACTORS.

BIDS OR ESTIMATES ENCLOSED IN A SEALED envelope, with the title of the work and the name of the bidder endorsed thereon, also the number of the work as in the advertisement, will be received at this office until 12 o'clock M., Tuesday, March 9, 1886, at which place and hour they will be publicly opened by the board of assessors and read in the following:

NO. 1. LAYING WATER-MAINS IN NINTH, EIGHTH, ST. NICHOLAS, MADISON AND NEW AVENUES, AND ONE HUNDRED AND FORTY-FIFTH, ONE HUNDRED AND SIXTY-SEVENTH, NINETY-SEVENTH, EIGHTY-SEVENTH, SEVENTY-SECOND AND SEVENTEENTH STREETS.

NO. 2. LAYING WATER-MAINS IN FAIRMOUNT, COLUMBIA, TREMONT, PROSPECT AND RIVERDALE AVENUES, AND IN KINGSBRIDGE ROAD.

Bidders for the above contracts must be personally engaged in the business and well prepared for furnishing the materials they propose for; and no contract will be made with any bidder who is not prepared to furnish satisfactory evidence to that effect.

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 fact a true and correct estimate of the work to be done.

All aspects far 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 materials 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 of 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 household 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 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 national banks of the City of New York, drawn to the

List 2158, No. 2. Sewer in West End avenue (formerly Eleventh avenue), between Sixty-fifth and Sixty-sixth streets, and in Sixty-sixth street, between West End and Tenth avenues.

List 2159, No. 3. Sewer in Eighty-ninth street, between Eighth and Ninth avenues.

List 2272, No. 4. Sewer in Fourth avenue, east side, between Fifty-seventh and Fifty-eighth streets.

List 2299, No. 5. Sewer in One Hundred and Fourth street, between Tenth avenue and Boulevard.

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 New avenue, between One Hundred and Fourth streets; and south side of One Hundred and Fifth streets, between One Hundred and Fourth streets, New and Ninth avenues.

No. 2. Both sides of West End avenue, between Sixty-fifth and Sixty-sixth streets, and both sides Sixty-sixth street, between West End and Tenth avenues.

No. 3. Both sides of Eighty-ninth street, between Eighth and Ninth avenues.

No. 4. East side of Fourth avenue, between Fifty-seventh and Fifty-eighth streets.

No. 5. Both sides of One Hundred and Fourth street, between Boulevard and Tenth avenue; also west side of Tenth avenue, from One Hundred and Fourth to One Hundred and Fifth street, and south side of One Hundred and Fifth street, from One Hundred and Fourth to Fifty-seventh street, and south side of One Hundred and Fifty-seventh street, from One Hundred and Fourth to Fifty-seventh street.

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. 113 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 2d day of March, 1886.

EDWARD GILSON, Chairman.
PATRICK M. HAVERTY,
CHAS. J. VAN BRUGH LIVINGSTON,
Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS,
No. 113 City Hall,
NEW YORK, January 30, 1886.

BOARD OF EDUCATION.

SEPARATE SEALED PROPOSALS WILL BE received by the Board of School Trustees of the Twelfth Ward, at the Hall of the Board of Education, No. 146 Grand street, until Monday, March 8, 1886, and until 4 o'clock P. M. on said day, for the steam-heating apparatus required for Grammer School Building No. 83 on East One Hundred and Tenth street, near Third avenue, and for the addition to Grammer School Building No. 43, corner One Hundred and Twenty-ninth street and Tenth avenue.

Plans and specifications may be seen, and blanks for proposals, and all necessary information may be obtained at the office of the Engineer, No. 146 Grand street, corner of Elm street, third floor.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name, place of residence and place of business on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases.

No proposal will be considered from persons whose character or antecedent dealings with the Board of Education render their responsibility doubtful.

The Committee reserve the right to reject any or all of the proposals submitted.

GEO. W. DEBEVOISE,
ANDREW L. SOULARD,
JOHN WHALEN,
DAVID H. KNAPP,
ROBERT E. STEEL,
School Trustees, Twelfth Ward.

Dated New York, February 20, 1886.

SEALED PROPOSALS WILL BE RECEIVED BY the Board of School Trustees of the Twelfth Ward, at the Hall of the Board of Education, No. 146 Grand street, until Monday, March 2, 1886, and until 4 o'clock P. M. on said day, for the furniture required for the addition to Grammer School No. 43, on West One Hundred and Twenty-ninth street, near Tenth avenue.

Plans and specifications may be seen, and blanks for proposals, and all necessary information may be obtained at the office of the Superintendent of School Buildings, No. 146 Grand street, corner of Elm street, third floor.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name, place of residence and place of business on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases.

No proposal will be considered from persons whose character or antecedent dealings with the Board of Education render their responsibility doubtful.

The Committee reserve the right to reject any or all of the proposals submitted.

GEO. W. DEBEVOISE,
ANDREW L. SOULARD,
JOHN WHALEN,
DAVID H. KNAPP,
ROBERT E. STEEL,
School Trustees, Twelfth Ward.

Dated, New York, February 15, 1886.

FIRE DEPARTMENT.

HEADQUARTERS
FIRE DEPARTMENT, CITY OF NEW YORK,
155 AND 157 MERCER STREET,
NEW YORK, February 18, 1886.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING A second size Clapp & Jones steam fire-engine, with drop boiler, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 155 and 157 Mercer street, in the City of New York, until 11 o'clock A. M., Wednesday, March 3, 1886, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.

For information as to the style and construction of the engine and time of delivery, bidders are referred to the specifications which form part of these proposals.

The engine to be delivered to the Fire Department in complete working order, with a guarantee that the material and workmanship are of the best character, and to replace, at the expense of the contractor, such parts, if any, as may fail, if such failure is properly attributable to defective material or inferior workmanship. Said engine shall have a full and complete trial of its working powers at New York, under the superintendence of a competent engineer.

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-five (\$25) 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 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, and is not a part of, any other 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 Chief 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 requisite that the verification be made and subscribed by all the parties interested.

The 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, on his behalf, become bound as sureties for his faithful performance in the sum of two thousand two hundred (\$2,200) 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 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 at any subsequent letting; and 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, 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 is 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 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 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-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 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 security 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 the security shall 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 the same and do not execute the contract within proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be reawarded and relet, as provided by law.

Bidders will write out the amount of their estimate, in addition to inserting the same in figures.

The form of the agreement, with specifications and showing the manner of payment for the work, may be seen and forms of proposals may be obtained at the office of the Department.

HENRY D. PURROY,
RICHARD CROKER,
EDWARD SMITH,
Commissioners.

HEADQUARTERS FIRE DEPARTMENT,
CITY OF NEW YORK,
155 AND 157 MERCER STREET,
NEW YORK, February 18, 1886.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING SIX four-wheeled hose tenders, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 155 and 157 Mercer street, in the City of New York, until 11 o'clock A. M., Wednesday, March 3, 1886, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.

For information as to the style and construction of the tenders and time of delivery, bidders are referred to the specifications which form part of these proposals.

The tenders are to be delivered to the Fire Department in complete working order, with a guarantee that the material and workmanship are of the best character, and to replace, at the expense of the contractor, such parts, if any, as may fail, if such failure is properly attributable to defective material or inferior workmanship.

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-five (\$25) 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 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, and is not a part of, any other 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 Chief 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 requisite 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, on his behalf, become bound as sureties for his faithful performance in the sum of three thousand

dollars (\$3,000); 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 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 at any subsequent letting; and 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, 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 is 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 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 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-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 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 security 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 the same and do not execute the contract within proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be reawarded and relet, as provided by law.

Bidders will write out the amount of their estimate, in addition to inserting the same in figures.

The form of the agreement, with specifications, and showing the manner of payment for the work, may be seen, and forms of proposals may be obtained at the office of the Department.

HENRY D. PURROY,
RICHARD CROKER,
EDWARD SMITH,
Commissioners.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING TWO Hayes' Extension Ladder Trucks, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 155 and 157 Mercer street, in the City of New York, until 11 o'clock A. M., Wednesday, March 3, 1886, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.

For information as to the style and construction of the trucks and time of delivery, bidders are referred to the specifications which form part of these proposals.

The trucks are to be delivered to the Fire Department in complete working order, with a guarantee that the material and workmanship are of the best character, and to replace, at the expense of the contractor, such parts, if any, as may fail, if such failure is properly attributable to defective material or inferior workmanship. Said trucks shall have a full and complete trial of their working powers at New York, under the superintendence of a competent engineer.

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-five (\$25) 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 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, and is not a part of, any other 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 Chief 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 requisite 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, on his behalf, become bound as sureties for his faithful performance in the sum of three thousand and two hundred dollars (\$3,200); 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 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 at any subsequent letting; and 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, 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 is 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 Banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of one hundred and sixty dollars (\$160). 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-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 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 the same and do not execute the contract and give 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 reawarded and relet, as provided by law.

Bidders will write out the amount of their estimate, in addition to inserting the same in figures.

The form of the agreement with specifications and showing the manner of payment for the work, may be seen and forms of proposals may be obtained at the office of the Department.

HENRY D. PURROY,
RICHARD CROKER,
EDWARD SMITH,
Commissioners.

HEADQUARTERS
FIRE DEPARTMENT, CITY OF NEW YORK,
155 AND 157 MERCER STREET,
NEW YORK, February 15, 1886.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING A third size Clapp & Jones steam fire-engine will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 155 and 157 Mercer street, in the City of New York, until 11 o'clock A. M., Wednesday, March 3, 1886, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.

For information as to the style and construction of the engine and time of delivery, bidders are referred to the specifications which form part of these proposals.

The engine to be delivered to the Fire Department in complete working order, with a guarantee that the material and workmanship are of the best character, and to replace, at the expense of the contractor, such parts, if any, as may fail, if such failure is properly attributable to defective material or inferior workmanship. Said engine shall have a full and complete trial of its working powers at New York, under the superintendence of a competent engineer.

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-five (\$25) 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 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, and is not a part of, any other 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 Chief 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 requisite 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, on his behalf, become bound as sureties for his faithful performance in the sum of two thousand and two hundred dollars (\$2,200); 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 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 at any subsequent letting; and 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, 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 is 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 Banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of one hundred and ten dollars (\$100). 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-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 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 the same and do not execute the contract and give 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 reawarded and relet, as provided by law.

Bidders will write out the amount of their estimate, in addition to inserting the same in figures.

The form of the agreement with specifications and showing the manner of payment for the work, may be seen and forms of proposals may be obtained at the office of the Department.

HENRY D. PURROY,
RICHARD CROKER,
EDWARD SMITH,
Commissioners.

HEADQUARTERS
FIRE DEPARTMENT, CITY OF NEW YORK,
155 & 157 MERCER STREET,
NEW YORK, May 12, 1885.

NOTICE IS HEREBY GIVEN THAT THE Board of Commissioners of this Department will meet daily, at 10 o'clock A. M., for the transaction of business.

By order of

HENRY D. PURROY, President.
RICHARD CROKER,
EDWARD SMITH,

Commissioners.

CARL JUSSEN,
Secretary.

NEW PARKS.

NOTICE IS HEREBY GIVEN TO ALL OWNERS and persons interested in lands or buildings included within the limits of Pelham Bay Park, who have not yet appeared before the Commissioners of Appraisal, to present their proofs of title and value to said Commissioners at their office, Room 17, Liverpool and London and Globe Insurance Company's Building, Nos. 45, 47 and 49, Nassau street, in the City of New York, on Thursday, the 25th day of February, 1886, at two o'clock, in the afternoon of that day, and that in the event of their failure so to do, awards for lands or buildings which such owners and persons may be interested in, will be made in accordance with the provisions of chapter 52 of the Laws of 1884.

Dated New York, February 18, 1886.

LUTHER R. MARSH,
GEORGE W. QUINTARD,
J. SEAVEY PAGE,

Commissioners.

ARTHUR BERRY,
Clerk

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,
No. 66 THIRD AVENUE,
New York, February 19, 1886.

THE UNDERSIGNED WILL SELL AT PUBLIC Auction, for account of the Commissioners of Public Charities and Correction, at their office, No. 66 Third Avenue, on Thursday, March 4, 1886, at 11 o'clock A. M., the following articles, viz:

13,000 pounds Mixed Rags.
10,000 pounds Scrap Iron.
300 pounds Old Copper.
172 Syrup Barrels.
50 Iron-bound Barrels.
300 Barrels Slate (broken).
2,250 Barrels Coal.
200 Barrels Coal Tar.

to be delivered at the foot of East Twenty-sixth street, and to be paid for as follows:
Twenty-five per cent. of estimated value to be paid on day of sale, and the remainder on delivery.

R. E. CLEARY,
Storekeeper.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,
No. 66 THIRD AVENUE.

TO CONTRACTORS.

PROPOSALS FOR GROCERIES, DRY GOODS, HARDWARE AND LUMBER.

SEALED BIDS OR ESTIMATES FOR FURNISHING

GROCERIES.

6,500 pounds Dairy Butter, sample on exhibition
Thursday, February 25, 1886.
1,000 pounds Cheese.
10,000 pounds Dried Apples.
10,000 pounds Barley, price to include packages.
10,000 pounds Cornmeal.
10,000 pounds Hominy, price to include packages.
400 bushels Beans.
100 bushels Peas.
300 bushels Rye.
100 bushels Crackers.
2,200 dozen Fresh Eggs, all to be canned.
500 barrels good, sound Irish Potatoes, to weigh 165 pounds net per barrel.
100 barrels Prime Russia Turnips, 175 pounds net per barrel.
100 barrels Prime Carrots, 120 pounds net per barrel.
100 barrels Prime Red Onions.
300 bushels Oats.
50 bales Prime quality Timothy Hay, tare not to exceed 3 pounds; weight charged as received at Blackwell's Island.
100 barrels Prime quality Charcoal (3 bushels each).

DRY GOODS.

3,000 yards Furniture Check.
500 yards Blue Flannel.
250 Women's Thimbles, Nos. 8 to 11.
24,000 Sewing Needles, 6 No. 4, 6 No. 6, 6 No. 7, 6 No. 5.
100 pieces Crotoline.
150 Toilet Quills.

HARDWARE, ETC.

2 gross Carpenters' Pencils.
10 kegs best quality Nails, 8d.
10 kegs best quality Nails, 10d.
3 kegs best quality Nails, 40d.
1 dozen Screw Wrenches, 10-in.
1 dozen Screw Wrenches, 12-in.
3 dozen Claw hammers.
100 gross Matches.
1 dozen Wall Brushes.
1 dozen Feed Cups.

LIME, ETC.

50 barrels best quality Whitewash Lime.
20 barrels best quality Plaster Paris.

LUMBER.

10,000 lineal feet first quality cone or vertical grained, thoroughly seasoned Georgia Yellow Pine Flooring, 1 1/2 in. x 3 in., dressed one side, tongued and grooved.
20,000 lineal feet first quality cone or vertical grained, thoroughly seasoned Georgia Yellow Pine Flooring, 1 1/2 in. x 3 1/2 in., dressed one side, tongued and grooved.
All lumber to be delivered at Ward's Island.

will be received at the Department of Public Charities and Correction, in the City of New York, until 9 o'clock A. M. of Friday, February 26, 1886. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Groceries, Dry Goods, Hardware, Lime and Lumber," with his or her 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 bids or estimates received will be publicly opened by the President of said Department and read.

THE BOARD OF PUBLIC CHARITIES AND CORRECTION reserves the right to reject all bids or estimates if deemed to be for the public interest, as provided in section 64, CHAPTER 410, LAWS OF 1882.

No bid or 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 award of the contract will be made as soon as practicable after the opening of the bids.

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 the effect that 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 her 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 her therein; and of no other person 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; that the bidder is not a member of the 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 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 requisite 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 residence, to the effect that if the contract be awarded to the person making the estimate, they will, on 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 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 at any subsequent time, 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, 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 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 Comptroller of the City of New York.

No bid or estimate will be considered unless accompanied by either a certified check upon one of the 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 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-book, and no estimate can be deposited in said box, unless a check or money has been so deposited with the 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 refusal; but he shall be allowed to 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 her 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 defaulted in it, and in default of such security the contract will be re-advertised and relet 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, as shown and deposited at the said Department. 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.

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, 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 instructions of the Commissioners of Public Charities and Correction.

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.

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, February 13, 1886.

HENRY H. PORTER, President.
THOMAS S. BRENNAN, Commissioner.
CHARLES E. SIMMONS, Commissioner,
Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,
COMMISSIONERS' OFFICE,
No. 66 THIRD AVENUE,
NEW YORK, February 16, 1886.

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 foot of Seventy-eighth street, East river—Unknown man, aged about 35 years; 5 feet 7 1/2 inches high; light brown hair, blue eyes, dark moustache, no clothing.

At Workhouse, Blackwell's Island—Ann Brown, aged 55 years; committed November 25, 1885.
John Lynch, aged 55 years; committed December 18, 1885.
Henry Wortenberg, aged 55 years; committed November 24, 1885.

Nothing known of their friends or relatives.

G. F. BRITTON,
Secretary.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,
No. 66 THIRD AVENUE,
NEW YORK, February 11, 1886.

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 foot of Seventy-eighth street, East river—Unknown man, aged about 35 years; 5 feet 7 1/2 inches high; light brown hair, blue eyes, dark moustache, no clothing.

Unknown man, from Chambers street Hospital, aged about 45 years; 5 feet 7 1/2 inches high; dark hair, mixed with gray; blue eyes; dark moustache, mixed with gray. India ink mark, 25, on right arm.

At Penitentiary, Blackwell's Island—Daniel Sweeney, alias Justin McCarthy, aged 53 years; 5 feet 5 inches high; black hair; hazel eyes. Had on when received blue striped sack coat, black pants, blue check shirt, garters, straw hat.

John Brande, aged 19 years; 5 feet 1 inch high; light brown hair; gray eyes. Had on when received black sack coat, green striped pants, black vest, blue flannel shirt, felt hat, garters.

At Workhouse, Blackwell's Island—Mary Murray, aged 50 years; committed August 17, 1885.
Felix Hartman, aged 65 years; committed December 18, 1885.

John Smith, aged 35 years; committed December 23, 1885.
Jacob Deiter, aged 50 years; committed January 11, 1886.

At Lunatic Asylum, Blackwell's Island—Margaret Horn, aged 40 years; 5 feet 13 inch high; gray hair; blue eyes.

At Homoeopathic Hospital, Ward's Island—Charles Thompson, aged 69 years; 5 feet 6 inches high; gray hair and eyes. Had on when admitted, dark mixed coat and pants, blue vest, laced shoes, black derby hat.

Adam Gatrin, aged 48 years; 5 feet 7 inches high; gray eyes; brown hair. Had on when admitted, blue overcoat, blue sack coat, dark mixed pants, laced shoes, black hat.

At Hart's Island Hospital—Mary Mahoney, aged 79 years.

Nothing known of their friends or relatives.

By order.

G. F. BRITTON,
Secretary.

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 1882, it is hereby advertised that the books of the City of New York, for the assessed Valuations of Real and Personal Estate, of the City and County of New York, for the year 1886, will be open for examination and correction from the second Monday of January, 1886, until the first day of May, 1886.

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 person assessed, to the 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. FEENEY,

Commissioners of Taxes and Assessments.

SUPREME COURT.

In the matter of the application of the Counsel to the Corporation of the City of New York, for and in behalf of the Mayor, Aldermen and Commonality of the City of New York, under and in pursuance of chapter 496 of the Laws of 1885, to acquire title to the additional lands required for Riverside Park, as defined, laid out and established by said act.

PURSUANT TO THE PROVISIONS OF CHAPTER 496 of the Laws of 1885, and of all other 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 the Chambers thereof, in the County Court-house, in the City of New York, on Friday, the twenty-sixth day of March, 1886, 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 behalf of the Mayor, Aldermen and Commonality of the City of New York, to all the additional lands, and in behalf of the buildings thereon and appurtenances thereto belonging, required for Riverside Park, as laid out and established by chapter 496 of the Laws of 1885, passed June 11, 1885, being the following described lots, pieces or parcels of land, viz:

PARCEL A.

Beginning at a point in the western line of Twelfth Avenue, distant 20 1/2 feet southerly from the intersection of the western line of Twelfth Avenue and the western prolongation of the northern line of Eighty-sixth street;

2d. Thence northwesterly along the southern line of Eighty-sixth street for 34 1/2 feet;

3d. Thence southwesterly on the arc of a circle whose centre lies northeasterly of the last described course, and whose radius, drawn through the western extremity of the preceding course, forms an angle of 8° or 45° southwardly with said course and is 2.967 feet for 54 1/2 feet;

4th. Thence southwesterly on a line tangent to the preceding course for 76 1/2 feet;

5th. Thence curving to the right southwesterly on the arc of a circle tangent to the preceding course whose radius is 6.033 feet, for 92 1/2 feet, to the point of beginning.

PARCEL B.

Beginning at the intersection of the western line of Twelfth Avenue with the northern line of Eighty-seventh street;

1st. Thence northeasterly along the western line of Twelfth Avenue for 724 feet to the southern line of Ninetieth street;

2d. Thence northwesterly along the southern line of Ninetieth street for 40 1/2 feet;

3d. Thence southwesterly on the arc of a circle whose centre lies southeasterly of the last described course, and whose radius, drawn through the western extremity of the preceding course, forms an angle of 7° or 20° southwardly of the said course, and is 2.967 feet, for 75 1/2 feet;

4th. Thence southeasterly along the northern line of Eighty-seventh street for 41 1/2 feet, to the point of beginning.

PARCEL C.

Beginning at the intersection of the western line of Twelfth Avenue with the northern line of Ninetieth street;

1st. Thence northeasterly along the western line of Twelfth Avenue for 152 1/2 feet;

2d. Thence deflecting to the left 80° or 44° northwesterly for 6 1/2 feet;

3d. Thence deflecting to the left 90° southwesterly for 71 1/2 feet;

4th. Thence curving to the left southwesterly on the arc of a circle tangent to the preceding course, and whose radius is 2.967 feet, for 84 1/2 feet to the northern line of Ninetieth street;

5th. Thence southeasterly along the northern line of Ninetieth street for 31 1/2 feet, to the point of beginning.

PARCEL D.

Beginning at a point in the western line of Twelfth Avenue, distant 724 1/2 feet southerly from the southern line of One Hundred and Fourteenth street, measured at right angles to the said line;

1st. Thence northeasterly along the western line of Twelfth Avenue for 67 1/2 feet;

2d. Thence deflecting to the left 12° or 14° northerly for 75 1/2 feet;

3d. Thence deflecting to the left 174° or 26° southerly for 34 1/2 feet, to a point of curve;

4th. Thence curving to the right southeasterly on the arc of a circle tangent to the preceding course whose radius is 10.033 feet, for 108 1/2 feet, to the point of beginning.

PARCEL E.

Beginning at a point in the western line of Twelfth Avenue, distant 412 1/2 feet southerly from the southern line of One Hundred and Twenty-second street, measured at right angles to the said line;

1st. Thence northeasterly along the western line of Twelfth Avenue for 150 1/2 feet;

2d. Thence deflecting to the left 7° 56' or 29° northeasterly for 264 1/2 feet, to the southern line of One Hundred and Twenty-second street;

3d. Thence northwesterly along the southern line of One Hundred and Twenty-second street for 24 1/2 feet;

4th. Thence deflecting to the left 98° or 30° southwesterly for 112 1/2 feet to a point of curve;

5th. Thence curving to the right southwesterly on the arc of a circle tangent to the preceding course whose radius is 5.033 feet, for 41 1/2 feet, to the point of beginning.

PARCEL F.

Beginning at the intersection of the western line of Twelfth Avenue with the northern line of One Hundred and Twenty-second street;

1st. Thence northwesterly along the western line of Twelfth Avenue for 83 1/2 feet;

2d. Thence deflecting to the right 7° 56' or 29° northeasterly for 155 1/2 feet;

3d. Thence southwesterly, on the arc of a circle whose centre lies easterly of the last described course, and whose radius, drawn through the northern extremity of the preceding course, forms an angle of 84° 51' 34" southerly with said course, and is 1.967 feet, for 466 1/2 feet to a point of tangency;

4th. Thence southwesterly on a line tangent to the preceding course for 521 1/2 feet to the northern line of One Hundred and Twenty-second street;

5th. Thence southeasterly along the northern line of One Hundred and Twenty-second street for 25 1/2 feet, to the point of beginning.

PARCEL G.

Beginning at the intersection of the western line of Twelfth Avenue with the southern line of One Hundred and Twenty-ninth street;

1st. Thence northwesterly along the southern line of One Hundred and Twenty-ninth street for 60 1/2 feet;

2d. Thence deflecting to the left 82° or 52° southwesterly for 162 1/2 feet;

3d. Thence deflecting to the right 0° 41' 19" southwesterly for 52 1/2 feet;

4th. Thence deflecting to the left 2° 28' 27" southwesterly for 502 1/2 feet, to the western line of Twelfth Avenue;

5th. Thence northeasterly along the western line of Twelfth Avenue for 76 1/2 feet, to the point of beginning.

Dated, New York, February 18, 1886.

E. HENRY LACOMBE,
Counsel to the Corporation,
2 Tryon Row, New York City.

JURORS.

NOTICE

IN RELATION TO JURORS FOR STATE COURTS.

OFFICE OF THE COMMISSIONER OF JURORS,
ROOM 127, STEWART BUILDING,
CHAMBERS STREET AND BROADWAY,
NEW YORK, June 1, 1885.

APPLICATIONS FOR EXEMPTIONS WILL BE heard here, from 10 to 12 o'clock, 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 for permanent exemption, must 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 excuse will be allowed for interference permitted. The fines if unpaid will be entered as judgments upon the property of the delinquents. All good citizens will aid the cause of justice, and secure reliable and respectable jurors, 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 absences, persons temporarily ill, and United States and District Court 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.

FINANCE DEPARTMENT.

REAL ESTATE RECORDS.

THE ATTENTION OF LAWYERS, REAL Estate Owners, Monetary Institutions engaged in making loans upon real estate, and all who are interested in providing themselves with facilities for reducing the cost of examinations and searches, is invited to these Official Indices of Records, containing all recorded transfers of real estate in the City of New York from 1853 to 1885, prepared under the direction of the Commissioners of Records.
Grants, grantees, suits in equity, insolvents and Sheriff's sales, in 61 volumes, full bound, price \$100 00
The same in 25 volumes, half bound, 50 00
Complete sets, folded, ready for binding, 15 00
Records of Judgments, 25 volumes, bound 10 to 20
Orders should be addressed to "Mr. Stephen Angell, Room 23, Stewart Building."

EDWARD V. LOEW,

Comptroller

POLICE DEPARTMENT.

POLICE DEPARTMENT—CITY OF NEW YORK,
OFFICE OF THE PROPERTY CLERK (Room No. 9),
No. 300 MULBERRY STREET,
NEW YORK, 1885.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of the City of New York, No. 300 Mulberry Street, New York, for the following property, now in his custody, without claimants: Boats, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc., etc. Small amount of money taken from prisoners and found by patrolmen of this Department.

JOHN F. HARRIOT,
Property Clerk

THE CITY RECORD.

COPIES OF THE CITY RECORD CAN BE obtained at No. 2 City Hall (northwest corner basement). Price three cents each.