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DEPARTMENT OF PUBLIC WORKS.

Report for the Quarter and Year ending December 31, 1889.

DEPARTMENT OF PUBLIC WORKS—COMMISSIONER'S OFFICE,
No. 31 CHAMBERS STREET,
NEW YORK, February 1, 1890.

Hon. HUGH J. GRANT, Mayor :

SIR—In compliance with section 49 of the New York City Consolidation Act of 1882, I have the honor to present the following report of the transactions of the Department of Public Works for the quarter ended December 31, 1889, with a brief review of the operations of the Department 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..... | \$917,055 18 |
| On account of Local Improvements..... | 263,736 69 |
| On account of Funded Debt, for improvement and extension of water supply..... | 81,336 33 |
| On account of Revenue Bonds, in anticipation of collection of charges for water-meters..... | 3,384 65 |
| On account of Special Fund, for restoring pavements over street openings..... | 8,622 37 |
| Total..... | \$1,274,135 22 |

SUMMARY STATEMENT OF CONTRACTS.

Contracts Entered Into during the Quarter.

| | |
|---|----------------|
| 14 sewer contracts, estimated cost..... | \$39,148 39 |
| 12 regulating and grading contracts, estimated cost..... | 53,967 30 |
| 15 paving contracts, assessment work, estimated cost..... | 190,259 53 |
| 3 repaving contracts, under section 321 of the Consolidation Act, estimated cost..... | 155,998 30 |
| 19 repaving contracts, under chapter 346, Laws of 1889, estimated cost..... | 811,914 00 |
| 2 contracts for laying crosswalks, estimated cost..... | 7,364 60 |
| 1 contract for laying water-mains, estimated cost..... | 7,421 00 |
| 2 gas contracts, estimated cost..... | 39,500 00 |
| 7 contracts for relaying pavements, estimated cost..... | 30,526 50 |
| 2 miscellaneous contracts, estimated cost..... | 26,677 00 |
| 20 contracts, under \$1,000 each, estimated cost..... | 9,423 74 |
| 97 contracts, total estimated cost..... | \$1,372,200 36 |

Contracts Completed during the Quarter.

| | |
|--|----------------|
| 26 sewer contracts, cost..... | \$81,381 78 |
| 11 regulating and grading contracts, cost..... | 42,850 21 |
| 18 paving contracts, cost..... | 274,236 70 |
| 1 contract for relaying pavement, cost..... | 1,940 50 |
| 2 contracts for laying water-mains, cost..... | 29,857 67 |
| 1 contract for reservoir, cost..... | 523,839 33 |
| 8 miscellaneous contracts, cost..... | 87,812 05 |
| 34 contracts under \$1,000 each, cost..... | 15,264 90 |
| 101 contracts, total cost..... | \$1,057,183 14 |

BUREAU OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

During the quarter the natural flow of the Croton river kept the Aqueduct supplied to its full capacity, without any draughts upon the storage reservoirs, and with a large surplus flowing over the Croton dam.

The rainfall at the several stations where rain-gauges are kept by the Department, was as follows :

| LOCATION. | OCTOBER. INCHES. | NOVEMBER. INCHES. | DECEMBER. INCHES. | TOTAL INCHES. |
|-------------------------------|---------------------|----------------------|----------------------|------------------|
| Boyd's Corners Reservoir..... | 4.85 | 8.45 | 2.94 | 16.24 |
| South East Reservoir..... | 3.35 | 8.73 | 3.17 | 15.25 |
| Kensico Reservoir..... | 3.60 | 8.74 | 2.34 | 14.68 |
| Croton Dam..... | 3.39 | 8.28 | 2.92 | 14.59 |
| Central Park Reservoir..... | 2.71 | 10.01 | 1.77 | 14.49 |

The work for the construction of the new storage Reservoir A, on the Muscoot river, which is a branch of the Croton river, has been commenced, and the engineering force is making the necessary detailed surveys for the further prosecution of the work. The Commissioners appointed by the Supreme Court to appraise part of the lands required for this reservoir have made their report. The maps and descriptions for the remainder of the lands required have been placed in the hands of the Counsel to the Corporation to make application for the appointment of Commissioners of Appraisal.

A daily supply of 16,000,000 gallons of water has been received through the Bronx river conduit, and for this supply 300,000,000 gallons of water were drawn from the Rye Ponds Storage Reservoir. The Kensico Reservoir is filled to high-water mark. The receiving and distributing reservoir at Williamsbridge has been completed.

The building of a Keeper's house at this reservoir was begun in September last, and is now approaching completion.

There have been no serious leaks in the Aqueduct during the quarter, and the work upon it has been confined to the ordinary care and maintenance, the watching and repairing of small leaks and building and repairing fences. A force of watchmen has regularly patrolled the storage reservoirs, lakes and streams in the Croton water-shed to detect and prevent pollution of the water.

In extending the water service into new streets 26,469 lineal feet of water-mains were laid in nine different streets. In addition to this, 3,690 lineal feet of 48-inch mains were laid to connect with the New Aqueduct pipes, and prepare for the proper distribution of the additional water supply which will be received when the New Aqueduct is completed. The work of replacing the water-mains contiguous to the water-front, which have become worn by corrosion from contact with salt water has been continued with a gang of skilled and experienced mechanics and laborers, but the work is now suspended until spring, for the reason that during winter the pavements over excavations in the busy streets where this work is carried on could not be promptly and properly restored.

During the quarter 409 additional water-meters were placed, making 19,870 meters now in use.

BUREAU OF WATER PURVEYOR.

Eighteen contracts for laying new pavements, to be paid for by local assessments, were completed during the quarter, including 31,761.38 square yards of granite-block pavement ; 1,879.82 square yards of trap-block pavement, and 11,436.35 square yards of asphalt pavement. These new pavements are distributed over 18 streets in the upper part of the city.

In the repavement of streets under the annual appropriation made by the Board of Estimate and Apportionment 42,311.67 square yards of stone-block pavements were laid on 17 different streets to replace worn out and defective pavements.

In repairs of pavements an average force of 513 mechanics and laborers, 93 carts and 4 teams was employed during the quarter, and 140,762 square yards of pavement were taken up and relaid by this force. In addition to this, 12,730 square yards of pavements were taken up and relaid by contract.

On the repairs of water-mains, stop-cocks and fire-hydrants, which work is under the charge of the Water Purveyor, an average force of 29 mechanics, 86 laborers and 15 carts was employed, and, in connection with this work, 118 new fire-hydrants were erected in place of old and defective ones, and 4 additional fire-hydrants were placed.

Five new public drinking-hydrants were erected and 14 public drinking-hydrants were repaired.

OFFICE OF ENGINEER IN CHARGE OF SEWERS.

Twenty-nine contracts for new sewers, and 18 contracts for receiving-basins, have been completed during the quarter. The total length of the new sewers built under these contracts is 7,300 lineal feet, distributed over 23 different streets. At the close of the quarter work was in progress on 21 contracts for new sewers and 2 contracts for repairs to sewers. The sewerage system on Manhattan Island now includes 433.73 miles of sewers, with 5,209 receiving-basins.

The following are the principal items of work done in cleaning and repairing sewers :

- 947 receiving-basins and culverts cleaned.
- 18,975 lineal feet of sewers cleaned.
- 65 lineal feet of sewers repaired or rebuilt.
- 149 lineal feet of sewers rebuilt.
- 125 lineal feet of new culverts built.
- 96 lineal feet of tile bottom laid.
- 63 lineal feet of spur-pipe laid.
- 10 receiving-basins repaired.
- 4 new receiving-basins built.
- 2,601 cart-loads of sewer deposit removed.

BUREAU OF STREET IMPROVEMENTS.

The following regulating and grading works were completed during the quarter :

- First avenue, from One Hundred and Twenty-fifth street to Harlem river.
- One Hundred and Twelfth street, from the Boulevard to Tenth avenue.
- One Hundred and Twenty-fourth street, between Ninth and Tenth avenues.
- One Hundred and Thirty-first street, between Twelfth avenue and the Boulevard.
- One Hundred and Forty-eighth street, between Seventh and Eighth avenues.

In addition to this, the contract for the retaining-wall on the north side of Forty-ninth street, between First avenue and Beekman place ; 14 contracts for flagging sidewalks, and three contracts for fencing vacant lots were completed.

The aggregate quantities of work done under the contracts in progress during the quarter are as follows :

- 5,798 cubic yards earth excavated.
- 10,643 cubic yards rock excavated.
- 69,489 cubic yards filling placed in embankments.
- 8,646 lineal feet curb-stones set.
- 3,945 lineal feet curb-stones reset.
- 77,275 square feet flagging laid.
- 16,210 square feet flagging relaid.
- 2,314 lineal feet picket fence built.
- 411 lineal feet iron railing furnished and set.

At the close of the quarter work was in progress on 14 regulating and grading contracts, and 1 contract for flagging sidewalks.

BUREAU OF STREETS AND ROADS.

The following are the principal items of work done during the quarter in the maintenance and repairs of Macadam roadways under the charge of this Bureau :

- 11,763 square yards macadam roadways resurfaced and repaired.
- 420 square yards gravel roadway resurfaced.
- 1,443 square yards new macadam pavement laid.
- 254 square yards gneiss pavement laid.
- 1,350 square feet bridge-stone relaid.
- 411 shade-trees trimmed.
- 25½ miles macadam roadways cleaned and sprinkled, when necessary.

BUREAU OF LAMPS AND GAS.

In the extension and rearrangement of the public lights on streets, roads and avenues during the quarter, 268 new gas-lamps have been lighted, 1 new electric-lamp lighted, 6 new naphtha-lamps lighted and 6,381 old gas-lamps relighted in place of 1,190 electric-lamps discontinued. At the close of the quarter, there were 28,029 gas-lamps, 145 electric-lights and 126 naphtha-lamps in use on the streets, parks, places, docks and bridges of the city.

BUREAU OF REPAIRS AND SUPPLIES.

The following are the principal items of repairs, alterations and improvements made during the quarter in the public buildings, courts, offices and armories in charge of the Department:

County Court-house.

Extensive alterations and additions have been made to the heating apparatus; the New York Steam Company's service has been introduced for heating the building and operating the passenger elevators and the ventilating apparatus; an automatic system for regulating the heat has been applied in the court-rooms and offices of the Supreme Court. A description of this system will be found in the report of the Superintendent of Repairs and Supplies hereto annexed.

City Hall.

The contracts for the new marble steps, for retiling the portico and repaving the plaza in front of the City Hall with concrete blocks, have been completed. A contract has been made for cleaning the east, west and south fronts of the building, and, at the close of the quarter, that work was in progress with fair prospect of speedy completion. The dome of the clock tower has been repaired and painted.

Hall of Records.

A slight fire having occurred in this building through a defect in one of the furnaces, the furnace was taken down, repaired and reset, and the heating apparatus repaired and made safe.

Civil and Police Courts.

In the Second District Civil Court the walls and ceilings in the Judges' and Clerks' rooms, and the hall and stairway, have been repaired and painted.

The work under the contract for alterations and improvements in the Fifth District Court building is nearly completed and the building will soon be ready for occupancy.

Minor repairs have been made in the other courts.

Public Markets.

New yellow pine flooring has been laid on the Beekman street side of Fulton Market in place of the defective asphalt flooring.

The contract for the extensive alterations, repairs and painting of the Catharine Market buildings has been completed, greatly improving the appearance of the building.

A new tin roof has been put on the Broome street extension of Centre Market.

Armories.

In the Seventh Regiment Armory a disc fan, driven by a gas engine, with necessary pipe, pulleys, shafting and fixtures, has been placed in the rifle range to drive out smoke and is working satisfactorily.

In the Twenty-second Regiment Armory the butts of the rifle range have been taken down and rebuilt.

In the Sixty-ninth Regiment Armory about 12,000 square feet of yellow pine flooring has been laid in the basement.

Free Floating Baths.

With the completion of 2 new baths laid last season, the City now owns 15 free floating baths, which have all been put into winter quarters in Gowanus Bay, at the foot of Twenty-second and Twenty-third streets, South Brooklyn, and where they will be thoroughly repaired and equipped for the next bathing season.

BUREAU OF INCUMBRANCES.

The following is a summary of the work of this Bureau for the quarter:

| | |
|---|--|
| 1,086 complaints of obstructions received and attended to. | |
| 1,691 seizures and removals of obstructions made. | |
| 1,842 permits issued to place building material on streets. | |
| 5 permits issued to cut down shade-trees. | |
| 279 miscellaneous permits issued. | |
| 247 notices issued to repair defective sidewalks. | |
| 12 notices issued to repair defective vault covers. | |
| 252 cart-loads of dirt, stone and refuse material removed. | |
| 49 dead and dangerous shade trees, stumps, etc., removed. | |
| 1,061 telegraph poles removed. | |
| About 709 miles of electric-wires removed. | |

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 | \$430,222 64 |
| For penalties on water rents | 6,370 50 |
| For permits to tap water-pipes | 3,396 00 |
| Total | \$439,989 14 |

MISCELLANEOUS REVENUE.

The Department also collected and paid into the City Treasury the following amounts from various sources:

| | |
|--|-------------|
| For sewer permits | \$7,239 11 |
| For vault permits | 21,984 13 |
| For redemption of street obstructions | 420 50 |
| For articles sold at public auction | 654 30 |
| For work done and materials furnished citizens | 228 73 |
| Total | \$30,526 77 |

REVIEW OF THE OPERATIONS OF THE DEPARTMENT FOR THE YEAR 1889.

SUMMARY OF EXPENDITURES.

| | |
|--|----------------|
| On appropriation account for 1889 | \$2,960,678 83 |
| On Fund for Local Improvements | 1,088,874 78 |
| On Croton Water Fund | 257,124 93 |
| On Special Fund for restoring pavements over street openings | 33,807 95 |
| On Revenue Bonds for water-meters | 12,745 35 |
| Total | \$4,353,231 84 |

Three of these classes of expenditures are not charges upon the City or tax-payers at large. For the expenditure of \$1,088,874.78 for local improvements, the City is reimbursed by the collection of assessments on property adjacent to and benefited by the improvement; for the expenditure of \$33,807.95 for restoring pavements over plumbers' excavations, collections are made in advance on each permit issued for making and repairing sewer-connections and water-connections, and in the case of the expenditure of \$12,745.35 for furnishing and setting water-meters, the City is reimbursed by the collection of the expense in each case where a water-meter has been furnished and set, which charges are liens on the respective property, and, if not paid within the proper time, are returned in arrears, and must, therefore, ultimately be paid with the penalties and interest provided by law.

SUMMARY STATEMENT OF CONTRACTS FOR THE YEAR 1889.

Contracts Entered Into.

| | |
|--|--------------|
| 62 sewer contracts, estimated cost | \$292,497 41 |
| 31 regulating and grading contracts, estimated cost | 167,047 23 |
| 57 paving contracts, estimated cost | 916,651 54 |
| 11 contracts for relaying pavements | 53,613 81 |
| 19 contracts for repaving streets, under chapter 346, Laws of 1889, estimated cost | 811,914 00 |
| 6 contracts for laying water-mains, estimated cost | 165,013 90 |
| 2 contracts for storage reservoirs, estimated cost | 749,765 00 |
| 9 gas contracts, estimated cost | 507,650 00 |
| 25 miscellaneous contracts, estimated cost | 240,683 30 |
| 80 contracts, under \$1,000 each, estimated cost | 29,677 09 |

302 contracts, total estimated cost

\$3,934,513 28

Contracts Completed.

| | |
|---|--------------|
| 67 sewer contracts, cost | \$326,658 12 |
| 33 regulating and grading contracts, cost | 315,048 22 |
| 43 paving contracts, cost | 595,318 02 |
| 4 contracts for relaying pavements, cost | 28,974 44 |
| 3 contracts for laying water-mains, cost | 45,156 62 |
| 1 contract for storage reservoir, cost | 523,839 33 |
| 25 miscellaneous contracts, cost | 248,290 41 |
| 115 contracts under \$1,000 each, cost | 45,513 46 |

291 contracts, total cost

\$2,128,834 62

WATER SUPPLY.

Croton Water-shed.

Consecutive records of the rain-fall in the Croton water-shed have been kept by this Department, and its predecessor, the Croton Aqueduct Department, since 1866, when a rain-gauge had been established at the storage reservoir at Boyd's Corners, Putnam County. Subsequently rain-gauges were established and records kept at other points. These records show that for the past three consecutive years the rain-fall has been greater than in any preceding year. In 1887 it was 61.68 inches; in 1888, 63.51 inches, and in 1889, 55.75 inches.

In respect to the distribution of rain-fall throughout the successive seasons, the past year has been a phenomenal one, especially in respect to the abundance of rain-fall during the summer and early autumn, when, in other years, difficulty was always experienced from droughts and the supply through the Aqueduct could only be kept up by large draughts upon the storage reservoirs and lakes to supplement the natural flow of the Croton river. Throughout the past year the flow of the Croton river was more than sufficient to supply the Aqueduct to its fullest capacity, and no draughts had to be made on the water stored in reservoirs and lakes. The Chief Engineer of the Croton Aqueduct says, in his report, that for the past three years, with the present storage capacity of reservoirs and lakes in the Croton water-shed, the city could have obtained an additional and uninterrupted supply of 100,000,000 gallons of water per day if there were sufficient conduit capacity to convey it to the city. All that is needed, therefore, to relieve the city from the inconveniences and difficulties caused by the present dearth of water supply in the city is the completion of the New Aqueduct, and, with the completion of the two reservoirs on the east branch of the Croton river at Sodom, now in course of construction under the direction of the Aqueduct Commissioners; the reservoir on the Muscoot river, now being built by this Department; the reservoir on the Titicus river, the contract for which is now being advertised for public letting, the city will be assured of an adequate supply of water for the next ten years.

Bronx River Supply.

From this source an average daily supply of 16,000,000 gallons of water has been received during the past year. The area of the Bronx river water-shed is $13\frac{1}{2}$ square miles, and the supply obtained is over 1,180,000 gallons per day for each square mile of water-shed. This furnishes the best demonstration of the fact that, with adequate storage capacity and conduit capacity, a daily supply of over 390,000,000 gallons per day could be obtained from the Croton water-shed, which has an area of 338 square miles above the Croton dam. To keep up this large supply from the Bronx river 300,000,000 gallons of water were drawn from the Rye Ponds storage reservoir.

With the completion of the receiving and distributing reservoir at Williamsbridge, the quality of the water supplied from the Bronx river has been much improved, the reservoir serving as a settling basin instead of delivering the water directly from the main conduit as heretofore.

Work is now in progress on the construction of the canal and tunnel to convey the waters of the Byram river to the Bronx river, and, upon its completion, the water supply from that source will be increased by about 6,000,000 gallons per day.

The expenditures for the acquisition of lands and water-rights and construction of works for the Bronx river and Byram river supply for the past year are \$205,088.72, and the total expenditures on this account to date are \$4,113,803.06.

The Croton Aqueduct.

For some years past the Aqueduct has been operated to the fullest capacity and strain to which it can safely be subjected in order to supply the constantly growing demands for water in the city, and, while the structure has so far withstood this extra strain, the Department is anxiously awaiting and expecting the completion of the New Aqueduct to give perfect assurance that the city's water supply may not be suddenly interrupted by a serious break in the present structure. The work of strengthening the Aqueduct, in addition to the ordinary care and maintenance, has been carried on during the past year to the full extent which the means appropriated for the purpose would admit. The following are the principal items of work done on the Aqueduct during the year:

| |
|--|
| 13,413 cubic yards of earth excavated. |
| 7,875 cubic yards of stone quarried. |
| 3,018 cubic yards retaining-walls built. |
| 16,394 lineal feet fences built. |
| 8,394 cubic yards filling placed in embankments. |

Distribution of Water.

In extending and improving the water service there were laid during the year:

| |
|--------------------------------------|
| 7,513 lineal feet of 48-inch mains. |
| 860 lineal feet of 36-inch mains. |
| 169 lineal feet of 20-inch mains. |
| 22,057 lineal feet of 12-inch mains. |
| 69,369 lineal feet of 6-inch mains. |

99,968 lineal feet of mains, or 18.93 miles.

In connection with this work, 173 additional stop-cocks, and 229 additional fire-hydrants were placed, and the distributing system now includes 657.19 miles of water-mains, with 6,760 stop-cocks and 8,420 fire-hydrants.

With the exception of the old water-mains contiguous to the water-front in the lower part of the city, which have become corroded by contact with salt water, the distributing mains are in good condition, and the replacement of these worn-out mains will be continued to the full extent that the appropriation will admit.

At this time there is a demand upon the appropriation for laying water-mains which, by law, is limited to \$250,000 per annum, additional to the work of extending the water-service into new streets and districts. The distributing system has to be reinforced by the laying of large mains to properly distribute the additional supply of water which will be received through the New Aqueduct when completed. This work is now in progress and will be continued as rapidly as the means appropriated to the Department will permit.

Additional large mains will also be needed in the Twenty-third and Twenty-fourth Wards for the proper distribution of the Bronx river water supply, which has recently been much interfered with by the lowering of the tracks of the New York and Harlem Railroad, which necessitated the cutting off of some of the mains, and gave rise to numerous complaints of decrease in supply and pressure of water in that section of the city.

In view of this extra demand for large distributing mains, which are required for the proper distribution of the additional supply which will be received through the New Aqueduct, and for improving the distribution from the Bronx river supply, an additional appropriation of \$500,000 for each of the next three years, 1890, 1891 and 1892, will be needed, and the law should be amended so as to authorize such additional appropriations, without which the benefits of the increased supply of water could not be fully realized, as the present limit of appropriation, \$250,000 per annum, is fully required for the ordinary work of laying water-mains to extend the water-service into new streets and districts.

High Service Supply.

The high service pumping works, which were established at High Bridge and at Ninety-eighth street and Ninth avenue, to supply the buildings on elevations above the level which could be reached by the ordinary service, have been operated to their fullest capacity. The building operations have been much more extensive in the high service district than in any other part of the city, and, in consequence, the decrease in pressure in the delivery of water has been much greater, and on account of the great variation or irregularity of levels above tide-water in that section of the city, the people occupying houses on the highest points have suffered great inconvenience from insufficient supply and pressure of water. Heretofore the high service supply has been limited to ground 60 feet or more above mean-tide. When the additional supply will be received through the New Aqueduct the pressure of water in the general service will be sufficient to supply buildings up to 70 feet of elevation above mean-tide. The area of the high service district can then be correspondingly reduced, and the service rendered more effective.

In a few locations on the highest grounds, the water does not rise above the basement floors in the day time, and in consequence of the necessity of supplying additional houses as they are completed and become occupied, the pressures will undoubtedly be still further reduced before the additional supply is received through the New Aqueduct. Many applications are received by the Department, and the applicants feel themselves aggrieved because, under the existing circumstances, the Department is unable to comply with their requests.

A contract is about to be made for an additional pumping-engine for the Ninety-eighth Street High-service Station, not so much for the purpose of increasing the high-service supply as for security against interruption of the present supply.

Waste of Water.

The difficulties heretofore experienced by the Department in respect to waste of water have been in the heat of summer, when consumers would use water in too much profusion, and in the cold of winter, when faucets were kept running day and night to prevent freezing in the service-pipes. The people of the city are to be congratulated on the fact that during the past year there has been comparatively little waste from these causes, owing to the prevailing humidity of atmosphere throughout the summer season. Only for these conditions of weather, which reduced the usual amount of waste, there would have been much greater reduction in the pressure of water in the mains and consequent inconvenience to consumers. Under the most favorable circumstances, and with the greatest abundance of water supply, as may be expected when the New Aqueduct is brought into use, the people should be educated to such economy in the use of water as is consistent with all necessary convenience, public health and protection from fire. The most effective method of enforcing such economy, which has yet been devised, is the use of water-meters, compelling consumers to pay for water according to the quantity used. During the past year 1,659 additional water-meters have been placed, and the total number of meters in use at the close of the year is 19,870.

The following is a summary statement of the distribution of meters in the various classes of buildings and establishments, and the average daily consumption of water through them so far as the indices of the meters have been taken:

| NO OF METERS. | WHERE USED. | GALLONS. | NO OF METERS. | WHERE USED. | GALLONS. |
|---------------|------------------------------------|-----------|---------------|-------------------------------|------------|
| 369 | Hotels | 1,704,000 | 1,045 | Stables | 1,202,800 |
| 388 | Breweries, etc. | 1,747,000 | 217 | Apartment-houses | 413,000 |
| 120 | Charitable institutions | 770,000 | 190 | Docks and shipping | 1,726,100 |
| 2,027 | Office Buildings | 1,931,000 | 91 | Riverdale District | 85,400 |
| 1,305 | Manufacturing establishments | 2,932,000 | 12,330 | Miscellaneous buildings | 11,785,000 |
| 48 | Gas-works | 1,329,400 | | | |
| 223 | Railroads | 1,806,600 | 19,253 | Total | 27,482,300 |

STREET PAVEMENTS.

The inferior and unsatisfactory condition of the pavements in many of the streets of the city have been a source of complaint for many years past. With the aid of favorable legislation, considerable advance has been made toward the improvement of the pavements. Prior to 1889, the Department has been limited in its authority and expenditure for pavements to the Local Improvement Fund for pavements on new streets in the upper part of the city, ordered by ordinances of the Common Council, and payable by assessments on the property fronting on the streets, and to the annual appropriation for repavements, which is included in the annual tax levy, and is limited to \$500,000 per annum. The appropriation has always been kept below this limit, the one for 1889 being \$350,000. The two acts passed by the Legislature of 1889 afford a great relief and scope for improvement in this respect. By chapter 346 of the Laws of 1889 the City is authorized to expend \$3,000,000, not exceeding \$1,000,000 in any one year, to be raised by bonds, for such repavement of streets as may be authorized by the Board of Estimate and Apportionment.

One of the public demands which, in recent years, has grown to such importance as to call for prompt recognition, is that for the substitution of smooth and noiseless, yet durable, pavements, especially in residential streets where the noise and dust which are inseparable from stone-block pavements are most objectionable, and where there is comparatively little freight traffic. Much

research, care and attention have been devoted to the subject of selecting the proper kinds of pavements to be laid under this appropriation in place of old and defective ones. The conclusion reached is that, in purely residential streets, and in some streets where the buildings are exclusively occupied for offices, and where wagon traffic is not too heavy, a good asphalt pavement is the most suitable, and that, in the busy thoroughfares of commerce, a solid granite-block pavement is best suited to withstand the wear and tear of traffic and climate. Acting upon these conclusions, I recommended to the Board of Estimate and Apportionment for repavement with granite blocks a list of streets in the lower and business portion of the city, and the Boulevard, from Fifty-ninth to Seventy-ninth street, and another list of streets to be repaved with asphalt, all of which are residential streets, except Broad street, from Wall street to Exchange place, where the buildings on both sides are entirely occupied for office purposes. The repavements so recommended have been authorized by the Board of Estimate and Apportionment, except that the Board substituted asphalt pavement for the Boulevard. The present pavement on the Boulevard, macadam on Telford foundation, was laid nearly twenty years ago, and was designed for a public drive for light carriage traffic, but with the heavy freight traffic to which it has been subjected of late years, south of One Hundred and Tenth street, caused principally by the extensive building operations and street improvement works in progress in that section of the city, the roadway has become so much worn that it is a nuisance and detriment to the adjacent property, and beyond redemption by ordinary repairs.

Contracts for these repavements have been made approximately up to the entire amount of \$1,000,000 appropriated for 1889. Two of these contracts, viz.: for asphalt pavement on the present stone-block pavement on Park avenue, between Thirty-fourth and Fortieth streets, and for granite-block pavement on Franklin street, between West Broadway and Washington street, have been completed, and work on the others will be begun as early as practicable next spring. In the report of the Water Purveyor, hereto annexed, a list of the streets for the repavement of which contracts have been made under the act above mentioned, is given.

One of the greatest difficulties in the way of the maintenance of good pavements in this city exists in the numerous underground structures in the streets—sewers, water-mains, gas-mains, steam-pipes, electrical subways, with their innumerable house connections, and the frequent necessity of tearing up the pavements for the purpose of laying these mains and connections and for repairs. The surface railroads are another obstacle to the maintenance of good pavements, especially where the objectionable centre-bearing rails are used which cause the wagon traffic to run in certain grooves, and the wearing of deep ruts into the pavements. The Department has endeavored to overcome these difficulties and obstacles by calling upon the railroad companies to replace the objectionable centre-bearing rails with a grooved rail, or other rail, which would be as nearly as possible flush with the pavement, and do away with the projections and depressions which now obstruct wagon traffic. The Department has also called upon the several companies and corporations which have underground structures in the streets to complete their structures in the streets which are to be repaved so as to obviate the necessity of tearing up the new pavements on that account.

By chapter 531, Laws of 1889, the surface railroad companies are authorized, when given consent by the State Railroad Commissioners, to change their motive power to cable traction, electricity, or any other system except steam-motors, and any action of the railroad companies in making changes under this act would in most cases involve reconstruction of the tracks and consequent tearing up of the pavements.

I have called upon the several city railroad companies to inform me as to their plans and intention in that respect, but have received no positive reply from any of them. As these several matters have been held in abeyance, no streets in which there are rail-tracks have been included in the list recommended for repavement under last year's appropriation, although many of them are badly in need of repavement.

Another difficulty which has stood in the way of maintaining proper pavements in the busy thoroughfares adjacent to the water front is that most of these streets are within the limits of grants of land under water, under the conditions of which the grantees and their successors, the present owners, were required to build up, pave and maintain the streets at their own expense. For several years past the Department has made unsuccessful efforts to compel compliance with these obligations. The difficulty is now overcome by the enactment of chapter 449 of the Laws of 1889, which provides that the Common Council may, by ordinance, authorize the repairs or repavements of any of these streets, the cost to be assessed on the property held under land grants and fronting on the streets, and that, by the payment of the assessment for such repairs or repavements, the owners of the property shall be forever released from all obligations in respect to the maintenance of those streets. Several ordinances directing the repavement of such streets have been passed by the Common Council, and the necessary measures are now in progress to have these repavements put under contract in time to begin the work early next spring.

In the repairs of pavements a large proportion of the work has been done under contracts, and the area of payments relaid under contract is 59,230 square yards. The pavement repair gangs employed by the Department relaid, during the year, 390,760 square yards of pavements.

The following is a summary of the work done in laying new pavements during the year:

Pavements on Uptown Streets, Payable by Local Assessments.

| | |
|---------------------|-----------------------|
| Granite-block | 110,223 square yards. |
| Trap-block | 5,178 " |
| Asphalt | 14,938 " |
| Total | 130,339 square yards. |

Repavements Under the Annual Appropriation Raised by Taxation.

| | |
|---------------------|----------------------|
| Granite-block | 55,761 square yards. |
| Trap-block | 10,667 " |
| Total | 66,428 square yards. |

Repavements Made Under Chapter 346, Laws of 1889.

| | |
|---------------------|----------------------|
| Granite-block | 4,927 square yards. |
| Asphalt | 10,647 " |
| Total | 15,574 square yards. |

Total area of new pavements laid during the year 212,341 square yards.

SEWERAGE AND DRAINAGE.

This Department has charge of the sewerage and drainage in all that part of the city south of the Harlem river. The work in connection with the sewerage and drainage system consists (1) in the extension of sewers into new streets and districts; (2) the ordinary work of cleaning and repairing sewers, and (3) the alteration, extension and improvement of the old sewers in the lower part of the city, which were built many years ago, before a comprehensive sewerage system was devised. The following are the principal works completed during the year in extending the sewerage in the upper part of the city:

Sewer in Fourth avenue, between Ninety-ninth and One Hundred and Third streets.

Sewer in Hamilton place, between One Hundred and Thirty-sixth and One Hundred and Fortieth streets.

Sewer in Eighty-fifth street, between the Boulevard and Riverside avenue.

Sewer in Seventy-second street, between Hudson river and Eleventh avenue, with branches in Riverside Drive.

The most important work done in the improvement of the old sewerage system in the lower part of the city is the construction of a collective sewer in South street, between Peck Slip and Fulton street; West street, between Rector and Carlisle streets, and between Murray and Jay streets, and Eleventh avenue, between Fourteenth and Thirty-third streets. In all these cases outlets are built to the ends of the piers, discharging into the tidal currents, where the sewage is diffused instead of being stagnated and deposited in the slips between the piers, as is the case with the old sewer outlets.

In the extension and improvement of the sewerage system, 28,279 lineal feet of sewers, 1,274 lineal feet of culverts and 46 receiving-basins were built, and the sewerage system on Manhattan Island now includes 433.73 miles of sewers, with 5,209 receiving-basins.

REGULATING AND GRADING STREETS.

The following are the principal regulating and grading works completed during the year:

- Retaining-wall in Fortieth street, between First avenue and Beekman place.
- Regulating and grading Fort Washington Ridge road.
- Regulating and grading First avenue, from One Hundred and Twenty-fifth street to the Harlem river.
- Regulating and grading Ninety-second street, from the Boulevard to Riverside Drive.
- Regulating and grading One Hundred and Fortieth street, from Tenth avenue to the Boulevard.
- Regulating and grading One Hundred and Seventieth street, between Tenth and Eleventh avenues.

In the report of the Superintendent of Street Improvements will be found a complete list of all the contracts for grading, curbing and flagging streets and fencing vacant lots, which have been completed during the year and the condition of the works now in progress.

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

- 26,856 cubic yards earth excavated.
- 62,164 cubic yards rock excavated.
- 246,417 cubic yards filling placed in embankments.
- 30,413 lineal feet curb-stones set.
- 8,398 lineal feet curb-stones reset.
- 239,152 square feet flagging laid.
- 94,285 square feet flagging relaid.
- 5,000 cubic yards of retaining-wall built.
- 2,901 lineal feet picket fence built.

MACADAM ROADWAYS.

The present length of macadam roadways in the city is 24½ miles, covering 911,146 square yards.

Most of these roadways were originally built for suburban drives, but the districts in which they are located are no longer suburban, and macadam pavement has become unsuitable, because it cannot be properly maintained under the heavy wagon traffic which has grown up since the upper part of the city has become populated. This applies especially to the macadam roadways on the east side of the city, which should be replaced as rapidly as possible with stone-block pavements. The Western Boulevard, from Fifty-ninth street to One Hundred and Fifty-fifth street, was macadamized about nineteen years ago. On the lower section of it, say south of One Hundred and Tenth street, it has for some years past lost its character as a public drive for light wagon traffic, for the reason that, by the heavy freight traffic, the roadway has become worn so as to be beyond restoration by repairs and impossible to maintain in fair condition. In consideration of these facts, the Board of Estimate and Apportionment has authorized the repavement of the Boulevard with asphalt pavement, from Fifty-ninth street to Seventy-ninth street, under the appropriation made by chapter 346, Laws of 1889.

In the report of the Superintendent of Streets will be found a detailed statement of the work done in the maintenance and repairs of macadam roadways during the year, of which the following are the principal items:

- 139,071 square yards of roadways resurfaced and repaired.
- 30,193 square yards roadways repaired with gravel.
- 345,235 square yards roadways covered with gravel screenings.
- 8,991 square yards roadways covered with limestone chips.

One of the principal objections to the macadam roadways has been that, in rainy weather, the mud is so deep as to make crossing the roadways by pedestrians very uncomfortable. To overcome this objection crosswalks have been laid during the past year at 70 street intersections, the total area of bridge stone so laid being 14,402 square feet. These crosswalks are laid under ordinances of the Common Council, passed upon certificate of the Commissioner of Public Works as to the necessity for the same, and the cost is assessed on the adjacent property.

PUBLIC LAMPS.

The average number of public lamps in use on the public streets, avenues, parks, places, docks and bridges of the city during the year 1889, was 25,068, including 23,707 gas-lamps, 1,240 electric-lights and 121 naphtha-lamps.

The several gas companies laid, during the year, 47½ miles of gas-mains, and the present length of gas-mains in the streets of the city is 1,228 miles, of which 105 miles are north of the Harlem river, in the Twenty-third and Twenty-fourth Wards.

By the franchise under which the Equitable Gas-light Company is operated the company has to pay into the City Treasury 20 cents for each lineal foot of gas-main laid. The total length of gas-mains laid by the company since the commencement of its operations in 1883 is 594,702 lineal feet, and the amount paid into the City Treasury is \$118,940.40.

The aggregate length of new streets to which public lamps have been extended is 12.9 miles. Public lamps are now in use on 502.8 miles of streets, about two miles of docks and bridges, and 69 acres of public parks and places.

The contracts made with the several gas companies for lighting gas-lamps for the year beginning May 1, 1889, are at the following prices:

Consolidated Gas Company, \$17.50 per annum for each lamp; New York Mutual Gas-light Company, \$17.50 per annum for each lamp; Equitable Gas-light Company, \$12 per annum for each lamp; Central Gas-light Company, \$27 per annum for each lamp; Northern Gas-light Company, \$28 per annum for each lamp; Yonkers Gas-light Company, \$28 per annum for each lamp. The three last-named companies, which light public lamps in the Twenty-third and Twenty-fourth Wards, have each reduced their prices \$1 per lamp from those of the preceding year, and the prices of the other three companies, which light the gas-lamps south of the Harlem river, remain unchanged.

Contracts have been made with electric-light companies, after public competition and letting, at the following rates:

- 28 lamps, at 23 cents each per night.
- 18 lamps, at 24 cents each per night.
- 173 lamps, at 25 cents each per night.
- 169 lamps, at 29 cents each per night.
- 839 lamps, at 35 cents each per night.
- 70 lamps, at 45 cents each per night.
- 19 lamps, at 50 cents each per night.

Of the 1,316 lamps thus contracted for, to light 56½ miles of streets and 69 acres of public parks and places, all but 134 have been extinguished in consequence of the cutting and removal of defective and dangerous wires, and, in their place, the old gas-lamps have been relighted as rapidly as they could be refitted and reconnected with the gas-mains.

OBSTRUCTIONS ON STREETS.

The removal of illegal obstructions on streets and sidewalks has been carried on with all the vigor and to the full extent which the means appropriated to the Department permitted. More than two-thirds of this work consisted in the removal of dead and defective electric wires and poles. The work of the Bureau of Incumbrances for the year is summarized as follows:

- 4,754 complaints of obstructions received and attended to.
- 5,318 seizures and removals of obstructions made.
- 2,646 cart-loads of stone and refuse material removed from the streets.
- 428 dead and dangerous shade trees removed.
- 2,592 telegraph poles removed.
- 2,760 miles of electric wires removed.
- 7,658 permits issued to place building material on streets.
- 18 permits issued to cut down shade trees.
- 1,188 miscellaneous permits issued.
- 869 notices issued to repair defective sidewalks.
- 23 notices issued to repair defective vault covers.

SURVEYS FOR LAYING OUT AND OPENING NEW STREETS.

The law requires this Department to furnish to the Board of Street Opening and Improvement, to the Counsel to the Corporation and to the Commissioners of Estimate and Assessment in the various legal proceedings, the necessary surveys, maps and descriptions of land for establishing, altering, closing or opening new streets. Among the surveys and maps made last year are those for the widening and extension of Elm Street, from Chambers street to Lafayette place; the extension of Centre street, from Broome to Fourth street; the extension of Sixth avenue, from its present southern terminus to West Broadway at Franklin street. In neither of these cases has action been taken to carry out the proposed extensions. The Department has also furnished surveys, maps, etc., for widening and extending College place and Greenwich street, from Chambers to Dey street, and for the extension of Bethune street, from Greenwich to Hudson street, and in both of these cases the Board of Street Opening and Improvement has established the street as widened and extended, and proceedings are about to be commenced for the acquisition of the necessary land and property, and the appraisal of damages and benefit.

Rule maps and technical descriptions have been furnished to the Counsel to the Corporation for nine proceedings for opening streets, and damage and benefit maps and assessment lists have been furnished to Commissioners of Estimate and Assessment in sixteen proceedings for opening new streets.

Further detailed information in respect to this work will be found in the report of Mr. J. O. B. Webster, the Assistant Engineer in charge, hereto annexed.

CITY REVENUE.

During the year the Department collected and paid into the City Treasury the following revenue from the water service:

| | |
|--|----------------|
| For regular water rents and penalties..... | \$1,491,110 22 |
| For water supplied through meters..... | 999,548 71 |
| For water supplied for building purposes, etc..... | 53,991 14 |
| Total..... | \$2,544,650 07 |
| For permits to tap water-pipes..... | 12,388 00 |
| To this should be added the unpaid water rents returned in arrears, which are liens upon the respective property, and are, therefore, a part of the assured revenue of the city, amounting to..... | 149,100 25 |
| Making the total revenue from the water service..... | \$2,706,138 32 |

In the report of the Water Register, Document M hereto annexed, will be found a list of charitable institutions which, under advice asked for and received from the Counsel to the Corporation, are entitled to exemption from charges for water supply, under the provisions of chapter 696 of the Laws of 1887. The report also contains a tabular statement of the revenue from the water service for each year since the introduction of Croton water in 1842, the total amount to December 31, 1889, being \$56,873,539.97.

MISCELLANEOUS REVENUE.

The Department also collected from various sources, and paid into the City Treasury during the year, the following amounts:

| | |
|--|--------------|
| For sewer permits..... | \$31,071 24 |
| For vault permits..... | 104,945 33 |
| For redemption of street obstructions..... | 2,033 50 |
| For use of sprinklers and road-rollers..... | 348 84 |
| For articles sold at auction..... | 4,552 75 |
| For work and materials furnished citizens..... | 2,543 67 |
| For rent of city property..... | 60 00 |
| For restoration of pavements over street openings..... | 44,776 05 |
| For furnishing and placing water-meters..... | 16,608 10 |
| Total..... | \$206,939 48 |

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

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

Very respectfully,

THOS. F. GILROY, Commissioner of Public Works.

Document "A."

Showing Titles of Appropriations; Balances of 1888 on October 1, 1889; Requisitions on 1888 in Fourth Quarter of 1889, together with Transfers; Balances of 1888 on December 31, 1889; Appropriations, including Transfers of 1889; Requisitions, First Nine Months of 1889; Requisitions, Fourth Quarter of 1889; Balances on December 31, 1889; and the Titles and Conditions of the Trust and Special Accounts.

| TITLES OF APPROPRIATIONS. | BALANCES OF 1888, ON OCTOBER 1, 1889. | REQUISITIONS AND TRANSFERS OF 1888 IN FOURTH QUARTER, 1889. | BALANCES OF 1888 ON DECEMBER 31, 1889. | APPROPRIATIONS, INCLUDING TRANSFERS OF 1889. | REQUISITIONS, FIRST NINE MONTHS, 1889. | REQUISITIONS, FOURTH QUARTER, 1889. | TOTAL REQUISITIONS, 1889. | BALANCES ON DECEMBER 31, 1889. |
|---|---------------------------------------|---|--|--|--|-------------------------------------|---------------------------|--------------------------------|
| Aqueduct—Repairs, Maintenance and Strengthening..... | \$2 14 | \$2 14 | ..... | \$218,800 00 | \$116,605 88 | \$57,182 75 | \$174,178 63 | \$41,621 37 |
| Aqueduct—Repairs, Maintenance and Strengthening—Salaries..... | 1,034 97 | 1,091 97 | ..... | 27,161 00 | 19,908 95 | 6,424 44 | 26,331 40 | 834 60 |
| Boring Examinations for Grading and Sewer Contracts..... | 325 33 | 325 33 | ..... | 3,600 00 | 2,739 50 | 860 00 | 3,599 30 | 50 00 |
| Boulevards, Roads and Avenues, Maintenance of..... | 451 86 | 451 86 | ..... | 100,000 00 | 75,851 56 | 22,631 55 | 98,483 11 | 1,513 89 |
| Boulevards, Roads and Avenues, Maintenance of—Salaries..... | 41 77 | 41 77 | ..... | 2,500 00 | 1,874 97 | 621 99 | 2,496 96 | 64 00 |
| Bronx River Works—Maintenance and Repairs..... | 2 74 | 2 74 | ..... | 24,350 00 | 12,543 45 | 8,004 90 | 20,548 35 | 3,731 65 |
| Bronx River Works—Maintenance and Repairs—Salaries..... | ..... | ..... | ..... | 3,900 00 | 2,691 67 | 975 00 | 3,666 67 | 233 33 |
| Construction of two New Baths, at Market and Fifty-ninth streets, East river..... | ..... | ..... | ..... | 25,000 00 | ..... | 24,900 00 | 24,900 00 | 10 00 |
| Contingencies—Department of Public Works..... | 105 36 | 105 36 | ..... | 4,000 00 | 2,338 25 | 1,195 17 | 3,533 43 | 466 57 |
| Flagging Sidewalks and Fencing Vacant Lots, etc..... | 2,612 63 | 2,652 63 | ..... | 6,000 00 | 774 08 | 1,672 15 | 2,446 23 | 3,553 77 |
| For New Water-main and Testing for Water Supply, North Brother Island..... | 4,873 77 | 4,873 77 | ..... | ..... | ..... | ..... | ..... | ..... |
| Free Floating Baths—Care and Maintenance..... | 6,951 47 | 6,951 47 | ..... | 18,550 00 | 14,707 25 | 2,172 01 | 16,879 26 | 1,670 74 |
| Free Floating Baths—Care and Maintenance—Salaries..... | 202 50 | 202 50 | ..... | 30,000 00 | 22,281 50 | 4,074 00 | 26,355 50 | 3,644 50 |
| Lamps and Gas and Electric Lighting..... | ..... | ..... | ..... | 700,000 00 | 431,048 01 | 191,511 87 | 622,559 87 | 77,400 13 |
| Lamps and Gas and Electric Lighting—Salaries..... | 25 20 | 25 20 | ..... | 6,500 00 | 4,541 53 | 1,421 63 | 5,963 16 | 536 84 |
| Laying Croton Pipes..... | 20,046 42 | 16,079 97 | \$3,966 45 | 232,000 00 | 92,003 06 | 67,691 58 | 159,694 64 | 72,305 36 |
| Laying Croton Pipes—Salaries..... | 3,312 03 | 3,312 03 | ..... | 18,000 00 | 11,634 46 | 4,608 50 | 15,242 96 | 1,737 04 |
| Public Buildings—Construction and Repairs..... | 482 88 | 482 88 | ..... | 101,875 00 | 54,324 81 | 32,894 07 | 85,218 89 | 16,656 11 |
| Public Drinking-fountains..... | 310 36 | 310 36 | ..... | 6,000 00 | 1,618 55 | 433 05 | 2,051 60 | 3,948 40 |
| Public Drinking-fountains—Salaries..... | ..... | ..... | ..... | 1,200 00 | 800 00 | 400 00 | 1,200 00 | ..... |
| Removing Obstructions in Streets and Avenues..... | ..... | ..... | ..... | 48,771 04 | 30,225 10 | 8,669 95 | 38,895 05 | 9,875 99 |
| Removing Obstructions in Streets and Avenues—Salaries..... | 462 03 | 462 03 | ..... | 8,400 00 | 5,288 41 | 1,725 00 | 7,013 41 | 1,386 59 |
| Repairing and Renewal of Pipes, Stop cocks, etc..... | 04 | 04 | ..... | 224,125 00 | 121,032 19 | 57,471 67 | 178,503 86 | 46,621 14 |
| Repairs and Renewal of Pavements and Regrading..... | 974 77 | 974 77 | ..... | 400,000 00 | 238,878 10 | 116,920 55 | 355,798 65 | 54,201 35 |
| Repairs and Renewal of Pavements and Regrading—Salaries..... | 22 70 | 22 70 | ..... | 18,000 00 | 13,322 41 | 4,590 97 | 17,913 38 | 86 62 |
| Repaving Streets and Avenues..... | 128,113 07 | 81,560 27 | 46,552 80 | 319,714 35 | 56,602 13 | 60,144 88 | 116,747 01 | 279,509 47 |
| Repaving Streets and Avenues—Salaries..... | 4,718 03 | 4,718 03 | ..... | 18,000 00 | 6,051 53 | 3,682 75 | 9,734 28 | 8,263 72 |
| Repaving—Chapter 346, Laws 1889..... | ..... | ..... | ..... | 1,000,000 00 | ..... | 34,676 19 | 34,676 19 | 965,323 81 |
| Roads, Streets and Avenues Unpaved—Maintenance and Sprinkling..... | 173 23 | 173 23 | ..... | 25,000 00 | 15,635 37 | 8,112 93 | 23,748 30 | 1,251 70 |
| Salaries—Department of Public Works..... | 4,861 72 | 4,861 72 | ..... | 105,700 00 | 72,095 64 | 28,677 39 | 100,773 03 | 10,926 97 |
| Salaries—Engineers, Clerks, Inspectors—Water Register, etc..... | 1,063 50 | 1,063 50 | ..... | 55,000 00 | 35,913 41 | 10,866 61 | 46,780 02 | 7,136 98 |
| Sewers—Repairing and Cleaning..... | 1,528 60 | 1,347 35 | 181 25 | 175,000 00 | 100,350 58 | 48,295 42 | 148,646 00 | 26,354 00 |
| Sewers—Repairing and Cleaning—Salaries..... | 175 38 | 175 38 | ..... | 10,000 00 | 7,444 04 | 2,489 93 | 9,933 97 | 60 88 |
| Sewerage System—Salaries..... | 119 34 | 119 34 | ..... | 17,000 00 | 10,080 33 | 2,810 57 | 12,890 90 | 4,100 05 |
| Street Improvements—For Surveying, Monumenting, etc..... | 1,783 00 | 1,783 00 | ..... | 2,000 00 | 850 00 | 785 95 | 1,635 95 | 356 05 |
| Supplies for and Cleaning Public Offices..... | 75 49 | 75 49 | ..... | 133,885 98 | 87,726 54 | 32,133 17 | 119,859 71 | 11,086 27 |
| Surveys, Maps, etc., for Street Openings, etc.—Salaries..... | 188 02 | 188 02 | ..... | 2,000 00 | 14,141 42 | 4,831 30 | 19,972 72 | 7 28 |
| Supplying Water to Shipping and for Building, etc.—Salaries..... | 66 53 | 66 53 | ..... | 10,000 00 | 8,512 51 | 2,078 98 | 10,591 49 | 1,408 51 |
| Water Supply for the Twenty-fourth Ward..... | 201 00 | 201 00 | ..... | 10,183 00 | 7,500 00 | 2,550 00 | 10,050 00 | 65 00 |
| Water Supply for the Twenty-fourth Ward—Salaries..... | 1,316 76 | 1,316 76 | ..... | 1,200 00 | 3,761 62 | 1,229 27 | 5,000 00 | 2,809 11 |
| Wells and Pumps—Repairing and Cleaning..... | 143 60 | 143 60 | ..... | 250 00 | 155 81 | 34 35 | 190 16 | 59 84 |
| Totals..... | \$186,886 43 | \$136,185 93 | \$50,700 50 | \$4,161,467 37 | \$1,646,273 56 | \$853,742 79 | \$2,500,016 35 | \$1,661,449 02 |

* Credit reduction in bill of T. N. Motley, Requisition No. 10809, \$9.50.

Transfers by Board of Estimate and Apportionment, Fourth Quarter, 1889—Boulevards, Roads and Avenues, Maintenance of, 1885, \$90; Aqueduct—Repairs, Maintenance and Strengthening of, 1887, \$18.86.

| TITLES OF TRUST ACCOUNTS. | BALANCES FROM 1888, RETURNS TO ARREARS AND RECEIPTS, FIRST NINE MONTHS, 1889. | RECEIPTS, FOURTH QUARTER, 1889. | TOTAL BALANCES, 1888 AND RECEIPTS FOR 1889. | REQUISITIONS, FIRST NINE MONTHS, 1889. | REQUISITIONS, FOURTH QUARTER, 1889. | TOTAL REQUISITIONS FOR 1889. | BALANCES, DECEMBER 31, 1889. |
|---|---|---------------------------------|---|--|-------------------------------------|------------------------------|------------------------------|
| Croton Water Fund..... | ..... | ..... | ..... | \$175,788 60 | \$81,336 33 | \$257,124 93 | ..... |
| Fund for Local Improvements..... | ..... | ..... | ..... | 825,117 99 | 263,736 09 | 1,088,854 08 | ..... |
| Restoring and Repaving—Special Fund—Department of Public Works..... | \$36,740 55 | \$8,031 50 | \$44,772 05 | 25,185 58 | 8,622 37 | 33,807 95 | \$10,964 10 |
| Water-meter Fund, No. 2..... | 13,832 66 | 2,775 44 | 16,608 10 | 9,360 70 | 3,384 65 | 12,745 35 | 3,862 75 |
| Criminal Court-house Fund..... | ..... | ..... | ..... | ..... | 525 00 | 525 00 | ..... |

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 1889, during the Fourth Quarter, 1889, and the Total for the Year.

| SOURCE OF REVENUE. | FIRST NINE MONTHS, 1889. | FOURTH QUARTER, 1889. | TOTAL FOR YEAR. | SOURCE OF REVENUE. | FIRST NINE MONTHS, 1889. | FOURTH QUARTER, 1889. | TOTAL FOR YEAR. |
|--|--------------------------|-----------------------|-----------------|--|--------------------------|-----------------------|-----------------|
| Water rents..... | \$2,101,302 13 | \$430,222 64 | \$2,531,524 77 | Water-meter Fund No. 1..... | ..... | ..... | \$17 45 |
| Water penalties..... | 6,754 80 | 6,370 50 | 13,125 30 | Return of Water-rents, etc., in Arrears— | ..... | ..... | ..... |
| Pipe tapping..... | 8,992 00 | 3,396 00 | 12,388 00 | Regular Croton-water rents..... | ..... | \$83,053 60 | ..... |
| Sewer permits..... | 23,832 13 | 7,239 11 | 31,071 24 | Water by meter measurement..... | ..... | 66,006 63 | \$149,060 25 |
| Vault permits..... | 82,961 20 | 21,984 13 | 104,945 33 | Meters and meter setting..... | ..... | ..... | 4,102 40 |
| Redemption of street obstructions..... | 1,613 00 | 422 50 | 2,035 50 | Totals..... | \$2,231,077 49 | \$470,515 91 | \$2,701,593 40 |
| Use of sprinkling wagons and road rollers..... | 348 84 | ..... | 348 84 | | | | |
| Sales at auction..... | 3,898 45 | 654 30 | 4,552 75 | | | | |
| Work done and material furnished citizens..... | 2,314 04 | 228 73 | 2,542 77 | | | | |
| Rent of farm at Lake Gilead..... | 60 00 | ..... | 60 00 | | | | |

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

Document "B."

A Detailed Statement of Expenditures for which Requisitions were drawn on the Comptroller by the Commissioner of Public Works during the Quarter ending December 31, 1889.

APPROPRIATIONS.

| | |
|--|-------------|
| Aqueduct—Repairs, Maintenance and Strengthening— | |
| Blacksmithing..... | \$284 67 |
| Cement..... | 393 75 |
| Coal and wood..... | 9,413 20 |
| Lumber, etc..... | 2,279 96 |
| Paint, etc..... | 40 44 |
| Pay-rolls..... | 35,031 55 |
| Plumbing..... | 159 50 |
| Oil..... | 801 85 |
| Removing excavated material..... | 4,200 00 |
| Rent of offices..... | 106 25 |
| Repairing engines, etc..... | 2,328 48 |
| " tower and chimney..... | 439 99 |
| Taxes..... | 579 36 |
| Tools and supplies..... | 1,282 29 |
| Traveling expenses..... | 141 46 |
| Total..... | \$57,482 75 |
| Boring Examinations for Grading and Sewer Contracts— | |
| Pay-rolls..... | \$860 00 |
| Boulevards, Roads and Avenues, Maintenance of— | |
| Broken stone and screenings..... | \$2,800 85 |
| Horse-hire..... | 270 00 |
| Pay-rolls..... | 18,564 84 |
| Rent of yard..... | 900 00 |
| Telephone service..... | 33 75 |
| Tools and supplies..... | 61 11 |
| Total..... | \$22,630 55 |

Bronx River Works—Maintenance and Repairs—

| | |
|-------------------------|------------|
| Lumber..... | \$188 00 |
| Paint..... | 171 28 |
| Pay-rolls..... | 7,111 00 |
| Taxes..... | 252 86 |
| Tools and supplies..... | 351 76 |
| Total..... | \$8,074 90 |

Construction of Two New Baths—

| | |
|-------------------------|------------|
| Architect's fees..... | \$1,100 00 |
| Constructing baths..... | 23,800 00 |
| Total..... | 24,900 00 |

Contingencies—Department of Public Works—

| | |
|--------------------------|------------|
| Analyses of asphalt..... | \$145 00 |
| Horse-hire..... | 270 00 |
| Incidental expenses..... | 400 00 |
| Postage..... | 343 25 |
| Steel tapes, etc..... | 24 52 |
| Traveling expenses..... | 12 40 |
| Total..... | \$1,195 17 |

Flagging Sidewalks and Fencing Vacant Lots, etc.—

| | |
|-----------------------------------|------------|
| Flagging around Essex Market..... | \$653 46 |
| " Tompkins Market..... | 112 00 |
| Pay-rolls..... | 906 69 |
| Total..... | \$1,672 15 |

For New Water-main, etc., North Brother Island, 1888—

| | |
|------------------|------------|
| Laying pipe..... | \$4,873 77 |
|------------------|------------|

Free Floating Baths—Care and Maintenance—

| | |
|-------------------------|------------|
| Carpenter work..... | \$46 21 |
| Horse-hire..... | 90 00 |
| Plumbing..... | 27 38 |
| Recovering anchors..... | 240 00 |
| Towing baths..... | 600 00 |
| Traveling expenses..... | 62 74 |
| Wharfage..... | 1,041 48 |
| Supplies..... | 64 20 |
| Total..... | \$2,172 01 |

Lamps and Gas and Electric Lighting—

| | |
|--|--------------|
| Gas examinations..... | \$379 50 |
| Gas governors..... | 425 00 |
| Horse-hire..... | 185 00 |
| Lamp-brackets..... | 312 00 |
| Lamp-irons..... | 98 00 |
| Lamp-globes..... | 1,250 00 |
| Lamp-posts..... | 4,408 55 |
| Lamp-tops and reflectors..... | 475 00 |
| Lamps..... | 5,082 75 |
| Pay-rolls..... | 872 00 |
| Rent of offices..... | 240 00 |
| Repairing gas-holder..... | 11 75 |
| Repairing lamps..... | 6 00 |
| Street signs..... | 562 50 |
| Supplies..... | 87 34 |
| Lighting Armory, Seventh Regiment..... | 790 25 |
| " " Eighth..... | 82 88 |
| " " Ninth..... | 179 12 |
| " " Twelfth..... | 431 00 |
| " " Twenty-second Regiment..... | 585 50 |
| " " Sixty-ninth..... | 187 25 |
| " " Seventy-first..... | 265 25 |
| " " First Battery..... | 73 75 |
| " " Second..... | 110 00 |
| " " Brigade Headquarters..... | 76 50 |
| " " Bath, Battery..... | 16 37 |
| " " Duane street..... | 16 26 |
| " " Corlears street..... | 20 37 |
| " " Stanton street..... | 17 75 |
| " " Horatio street..... | 8 88 |
| " " East Nineteenth street..... | 15 37 |
| " " East Thirty-seventh street..... | 6 88 |
| " " East Fifty-first street..... | 19 37 |
| " " West Twenty-seventh street..... | 24 75 |
| " " West Fifty-first street..... | 14 75 |
| " " East One Hundred and Twelfth street..... | 17 25 |
| " " East One Hundred and Thirty-eighth street..... | 50 96 |
| " " Brown-stone Building..... | 184 14 |
| " " City Hall..... | 528 37 |
| " " City Record Bindery..... | 4 87 |
| " " County Jail..... | 358 50 |
| " " Court, Civil, First District..... | 2 63 |
| " " " Second..... | 3 50 |
| " " " Fourth..... | 8 75 |
| " " " Fifth..... | 31 00 |
| " " " Sixth..... | 2 00 |
| " " " Eighth..... | 9 00 |
| " " " Ninth..... | 10 63 |
| " " Court, Police, First..... | 352 99 |
| " " " Second..... | 85 00 |
| " " " Third..... | 46 75 |
| " " " Fourth..... | 86 50 |
| " " " Fifth..... | 22 12 |
| " " Court-house, Third District (clock)..... | 288 50 |
| " " County..... | 1,365 74 |
| " " Court of Special Sessions..... | 42 76 |
| " " Dog Pound..... | 5 00 |
| " " Engine-house, High Bridge..... | 103 87 |
| " " Ninety-eighth street..... | 191 63 |
| " " Market, Catharine..... | 67 24 |
| " " " Centre..... | 110 75 |
| " " " Clinton..... | 187 12 |
| " " " Essex..... | 31 00 |
| " " " Fulton..... | 575 38 |
| " " " Jefferson..... | 131 75 |
| " " " Tompkins..... | 111 75 |
| " " " Union..... | 9 14 |
| " " " Washington..... | 1,015 12 |
| " " Office, Board of Assessors..... | 5 13 |
| " " " Board of Civil Service..... | 9 49 |
| " " " Corporation Attorney..... | 40 38 |
| " " " Corporation Counsel..... | 48 24 |
| " " " Department of Public Works..... | 252 75 |
| " " " Department of Taxes and Assessments..... | 11 62 |
| " " " Photometrical..... | 5 75 |
| " " " Public Administrator..... | 63 03 |
| " " " Register..... | 102 50 |
| " " Rivington Street Yard..... | 6 50 |
| " " Sixteenth Street Yard..... | 12 12 |
| " " Twenty-fourth Street Yard..... | 9 50 |
| " " One Hundred and Nineteenth Street Yard..... | 5 13 |
| " " Repair Shop, Thirtieth street..... | 6 75 |
| " " " Eighty-seventh street..... | 5 13 |
| " " " One Hundred and Twenty-fifth street..... | 13 74 |
| " " South Gate-house..... | 47 88 |
| " " Streets, Brush Electric Illuminating Co..... | 18,743 60 |
| " " " East River Electric-light Co..... | 10,064 95 |
| " " " Harlem Lighting Co..... | 3,674 45 |
| " " " Mount Morris Electric-light Co..... | 1,355 57 |
| " " " United States Illuminating Co..... | 12,218 08 |
| " " " Central Gas-light Co..... | 17,925 69 |
| " " " Consolidated Gas Co..... | 72,060 11 |
| " " " Equitable Gas-light Co..... | 9,141 94 |
| " " " New York Mutual Gas-light Co..... | 1,325 67 |
| " " " New York and New Jersey Globe Gas-light Co..... | 728 69 |
| " " " Northern Gas-light Co..... | 15,503 13 |
| " " " Yonkers Gas-light Co..... | 3,834 40 |
| Total..... | \$191,501 87 |

Laying Croton Pipes—

| | |
|--|-----------|
| Altering sewer-basins..... | \$869 80 |
| Cast-iron pipe..... | 11,934 37 |
| Changing taps..... | 260 63 |
| Horse-hire..... | 450 00 |
| Pay-rolls..... | 3,017 25 |
| Protecting gas-mains..... | 34 36 |
| Setting fire-hydrants..... | 274 80 |
| Stop-cocks, hydrants, etc..... | 4,014 50 |
| Supplies..... | 85 38 |
| Traveling expenses..... | 209 96 |
| Bainbridge, Sedgwick, Riverside avenues, etc..... | 2,675 55 |
| Depot place..... | 214 00 |
| Reservoir Terrace, between Powell place and Dock street..... | 220 50 |
| St. Ann's, Walton, New, Rider avenues, etc..... | 4,302 00 |
| Woodruff street, between Main street and Lillian place..... | 322 40 |

Laying Croton Pipes—

| | |
|--|-------------|
| Eighty-seventh, One Hundred and Twelfth, One Hundred and Fifteenth, One Hundred and Thirty-fifth, One Hundred and Forty-seventh, One Hundred and Sixty-fifth streets, etc..... | \$4,797 00 |
| Ninety-sixth street, between Eighth avenue and Central Park..... | 12,368 07 |
| Ninety-sixth street, between Tenth avenue and Boulevard..... | 217 55 |
| One Hundred and Ninth street, between First avenue and East river..... | 295 80 |
| One Hundred and Eighteenth street, between Park and Madison avenues..... | 263 40 |
| One Hundred and Twenty-fifth street, between Fourth and Ninth avenues..... | 20,526 47 |
| One Hundred and Forty-eighth street, between Brook and Willis avenues..... | 337 70 |
| Total..... | \$67,691 58 |

Laying Croton Pipes, 1888—

| | |
|--|------------|
| Avenue A, Madison, Arthur avenues, etc..... | \$452 93 |
| Morris, Anthony and Fifth avenues..... | 767 65 |
| Tenth, Fourth, West End, Westchester avenues, etc..... | 728 08 |
| Sixty-third street, between Tenth and Eleventh avenues..... | 470 00 |
| Seventy-ninth street to Blackwell's Island..... | 2,523 06 |
| One Hundred and Tenth street, between Tenth and Manhattan avenues..... | 2,759 50 |
| Total..... | \$7,701 22 |

Public Buildings—Construction and Repairs—

| | |
|-------------------------------------|-------------|
| Armory, Seventh Regiment..... | \$1,157 00 |
| " Twelfth Regiment..... | 36 75 |
| " Twenty second Regiment..... | 270 00 |
| " Sixty-ninth Regiment..... | 1,491 12 |
| Brown-stone Building..... | 332 03 |
| Bureau Repairs and Supplies..... | 959 62 |
| City Hall..... | 8,421 93 |
| " Prison..... | 389 47 |
| County Jail..... | 284 80 |
| Court, Civil, First District..... | 15 52 |
| " Second District..... | 489 50 |
| " Third District..... | 20 20 |
| " Fourth District..... | 19 60 |
| Court, Police, Second District..... | 8 45 |
| " Third District..... | 266 37 |
| " Fourth District..... | 8 82 |
| Court-house, Third District..... | 139 64 |
| " Seventh District..... | 92 21 |
| " County..... | 144 58 |
| Dog Pound..... | 6,947 38 |
| Farmers' Hotel..... | 106 00 |
| Hall of Records..... | 307 01 |
| Market, Catharine..... | 2 67 |
| " Centre..... | 3,564 25 |
| " Clinton..... | 577 37 |
| " Essex..... | 230 66 |
| " Fulton..... | 210 26 |
| " Jefferson..... | 665 00 |
| " Tompkins..... | 74 56 |
| " Washington..... | 35 00 |
| " West Washington..... | 480 70 |
| Pay-rolls..... | 26 69 |
| Rivington Street Yard..... | 2,631 60 |
| Sixteenth Street Yard..... | 6 50 |
| Staats Zeitung Building..... | 74 32 |
| Stewart Building..... | 1,109 31 |
| No. 27 Chambers street..... | 143 71 |
| No. 31 Chambers street..... | 15 15 |
| No. 49 Beekman street..... | 311 14 |
| Traveling expenses..... | 503 58 |
| Total..... | 49 30 |
| Total..... | \$32,894 07 |

Public Drinking-hydrants—

| | |
|-------------------------|----------|
| Repairing hydrants..... | \$433 05 |
|-------------------------|----------|

Removing Obstructions in Streets and Avenues—

| | |
|--------------------------------|------------|
| Pay-rolls..... | \$1,228 00 |
| Removing obstructions..... | 4,185 90 |
| " trees..... | 294 00 |
| " telegraph poles, etc..... | 2,771 50 |
| Traveling expenses..... | 190 55 |
| Total..... | \$8,669 95 |

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

| | |
|---------------------------|-------------|
| Cement..... | \$26 00 |
| Changing taps, etc..... | 11 55 |
| Coal..... | 26 25 |
| Hydrants, etc..... | 1,231 96 |
| Iron..... | 208 48 |
| Lead and solder..... | 680 89 |
| Lumber..... | 125 79 |
| Pay-rolls..... | 50,343 83 |
| Placing meters..... | 539 80 |
| Removing pipe..... | 355 00 |
| " rock..... | 60 00 |
| Repairing hydrants..... | 634 79 |
| " tapping machine..... | 263 20 |
| Tapping-cocks..... | 1,869 00 |
| Telephone service..... | 204 65 |
| Tools and supplies..... | 1,020 70 |
| Traveling expenses..... | 80 23 |
| Total..... | \$57,691 12 |

Repairs and Renewal of Pavements and Regrading—

| | |
|--------------------------------|--------------|
| Bridge-stone..... | \$1,526 24 |
| Carting paving-blocks..... | 50 00 |
| Horse-hire..... | 917 00 |
| Paving cement..... | 149 54 |
| Pay-rolls..... | 103,546 73 |
| Repairing pavement..... | 4,218 97 |
| " tool carts and wagon..... | 143 50 |
| " tools, etc..... | 469 50 |
| Sand..... | 5,362 12 |
| Tools and supplies..... | 426 60 |
| Traveling expenses..... | 110 35 |
| Total..... | \$116,920 55 |

Repairs and Renewal of Pavements and Regrading, 1888—

| | |
|------------------------|----------|
| Laying crosswalks..... | \$378 10 |
|------------------------|----------|

Repaving—Chapter 346, Laws of 1889—

| | |
|--|-------------|
| Pay-rolls..... | \$4,858 99 |
| Park avenue, between Thirty-fourth and Fortieth streets..... | 29,817 20 |
| Total..... | \$34,676 19 |

| | |
|--|-------------|
| Repaving Streets and Avenues— | |
| Chambers street, between Park Row and Greenwich street..... | \$18,129 74 |
| Little West Twelfth street, between Ninth avenue and Washington street, etc..... | 9,813 72 |
| Madison avenue, between Thirty-second and Fifty-eighth streets, etc..... | 5,482 40 |
| New Chambers street, between Park Row and Cherry street..... | 6,804 00 |
| Perry street, between Waverley place and Fourth street..... | 7,964 74 |
| Thirty-third street, between Fourth and Lexington avenues..... | 7,631 38 |
| Thirty-seventh street, between First avenue and 109 feet east..... | 776 15 |
| Total..... | \$56,602 13 |

| | |
|--|-------------|
| Repaving Streets and Avenues, 1888— | |
| Hudson street, between Spring and Fourteenth streets..... | \$49,700 00 |
| Twenty-eighth street, between First avenue and East river..... | 134 30 |
| Total..... | \$49,834 30 |

| | |
|--|------------|
| Roads, Streets and Avenues Unpaved, Maintenance, etc.— | |
| Flagging..... | \$439 36 |
| Lumber..... | 32 41 |
| Pay-rolls..... | 7,640 41 |
| Supplies..... | 75 |
| Total..... | \$8,112 93 |

| | |
|--------------------------------|-------------|
| Sewers—Repairing and Cleaning— | |
| Brick, cement, etc..... | \$348 75 |
| Building manholes..... | 767 00 |
| Cleaning sewers..... | 10,446 24 |
| Horse-hire..... | 270 00 |
| Manhole covers, etc..... | 815 24 |
| Map..... | 52 00 |
| Pay-rolls..... | 19,865 47 |
| Removing basin-heads..... | 55 00 |
| Repairing sewers..... | 14,730 35 |
| “ tools..... | 9 05 |
| Sewer pipe, etc..... | 267 38 |
| Tools and supplies..... | 225 39 |
| Traveling expenses..... | 413 55 |
| Total..... | \$48,265 42 |

| | |
|---|----------|
| Street Improvements—For Surveying, Monumenting, etc.— | |
| Maps..... | \$52 00 |
| Pay-rolls..... | 700 00 |
| Surveying..... | 31 95 |
| Total..... | \$783 95 |

| | |
|---|-------------|
| Supplies for and Cleaning Public Offices— | |
| Bureau of Repairs and Supplies..... | \$1,878 08 |
| Court, City..... | 583 02 |
| “ General Sessions..... | 161 00 |
| Court-house, County..... | 1,082 85 |
| City Hall..... | 100 00 |
| Office, Corporation Counsel..... | 983 17 |
| “ Department of Finance..... | 427 32 |
| “ “ Public Works..... | 175 05 |
| “ “ Taxes and Assessments..... | 242 10 |
| Recorder..... | 67 65 |
| Coal and wood..... | 6,301 81 |
| Ice..... | 886 21 |
| Pay-rolls..... | 19,244 91 |
| Total..... | \$32,133 17 |

| | |
|--|------------|
| Water Supply for the Twenty-fourth Ward— | |
| Supply of water..... | \$1,229 27 |

| | |
|---|---------|
| Wells and Pumps—Repairing and Cleaning— | |
| Repairing pump..... | \$34 35 |

RECAPITULATION OF APPROPRIATIONS.

| | |
|---|--------------|
| Aqueduct—Repairs, Maintenance and Strengthening..... | \$57,482 75 |
| Aqueduct—Repairs, Maintenance and Strengthening—Salaries..... | 6,422 44 |
| Boring Examinations for Grading and Sewer Contracts..... | 160 00 |
| Boulevards, Roads and Avenues, Maintenance of..... | 22,630 55 |
| Boulevards, Roads and Avenues, Maintenance of—Salaries..... | 624 99 |
| Bronx River Works—Maintenance and Repairs..... | 8,074 90 |
| Bronx River Works—Maintenance and Repairs..... | 975 00 |
| Construction of Two New Baths..... | 24,990 00 |
| Contingencies—Department of Public Works..... | 1,165 17 |
| Flagging Sidewalks and Fencing Vacant Lots..... | 1,672 15 |
| For New Water-main, etc., North Brother Island, 1888..... | 4,873 77 |
| Free Floating Baths—Care and Maintenance..... | 2,172 01 |
| Free Floating Baths—Salaries..... | 4,074 00 |
| Lamps and Gas and Electric Lighting..... | 191,501 87 |
| Lamps and Gas and Electric Lighting..... | 1,421 63 |
| Laying Croton Pipes..... | 67,691 58 |
| Laying Croton Pipes, 1888..... | 7,701 22 |
| Laying Croton Pipes—Salaries..... | 4,608 50 |
| Public Buildings—Construction and Repairs..... | 32,894 07 |
| Public Drinking Hydrants..... | 433 05 |
| Public Drinking Hydrants..... | 400 00 |
| Removing Obstructions in Streets and Avenues..... | 8,669 95 |
| Removing Obstructions in Streets and Avenues—Salaries..... | 1,725 00 |
| Repairing and Renewal of Pipes, Stop-cocks, etc..... | 57,691 12 |
| Repairs and Renewal of Pavements and Regrading..... | 116,920 55 |
| Repairs and Renewal of Pavements and Regrading, 1888..... | 378 10 |
| Repairs and Renewal of Pavements and Regrading—Salaries..... | 4,590 97 |
| Repaving—Chapter 346, Laws of 1889..... | 34,676 19 |
| Repaving Streets and Avenues..... | 56,602 13 |
| Repaving Streets and Avenues—Salaries..... | 49,834 30 |
| Roads, Streets and Avenues Unpaved—Maintenance of and Sprinkling..... | 3,684 75 |
| Sewers—Repairing and Cleaning..... | 8,112 93 |
| Sewers—Repairing and Cleaning..... | 48,265 42 |
| Salaries—Department of Public Works..... | 2,489 98 |
| Salaries of Engineer, Clerks, Inspectors..... | 22,677 39 |
| Sewerage System—Salaries..... | 10,869 61 |
| Street Improvements for Surveying, Monumenting, etc..... | 2,810 57 |
| Supplies for and Cleaning Public Offices..... | 783 95 |
| Supplies for and Cleaning Public Offices—Salaries..... | 32,133 17 |
| Supplying Water to Shipping and for Building Purposes—Salaries..... | 4,832 30 |
| Surveys, Maps, etc., for Street Openings, etc.—Salaries..... | 2,559 00 |
| Water Supply for the Twenty-fourth Ward..... | 2,078 98 |
| Water Supply for the Twenty-fourth Ward..... | 1,229 27 |
| Wells and Pumps—Repairing and Cleaning..... | 400 00 |
| Wells and Pumps—Repairing and Cleaning..... | 34 35 |
| Total..... | \$916,749 63 |

TRUST ACCOUNTS.

| | |
|----------------------------|----------|
| Criminal Court-house Fund— | |
| Surveys, Maps, etc..... | \$525 00 |

| | |
|--|-------------|
| Croton Water Fund— | |
| Building Keeper's House at Williamsbridge..... | \$2,700 00 |
| Clerical services..... | 1,340 84 |
| Horse-hire..... | 667 88 |
| Land..... | 18,554 00 |
| Legal services..... | 5,635 00 |
| Printing..... | 168 85 |
| Pay-rolls..... | 18,995 54 |
| Rent of offices..... | 195 00 |
| Rent of mill seat..... | 300 00 |
| Repairing instruments..... | 18 25 |
| Reservoir at Williamsbridge..... | 30,332 36 |
| Reservoir and Dam on Byram River..... | 1,304 22 |
| Traveling expenses..... | 650 88 |
| Tools and supplies..... | 413 51 |
| Total..... | \$81,336 33 |

| | |
|--------------------------------------|------------|
| Restoring and Repaving—Special Fund— | |
| Pay-rolls..... | \$3,616 87 |
| Restoring pavements..... | 5,005 50 |
| Total..... | \$8,622 37 |

| | |
|-------------------------------|--------------|
| Street Improvement Fund— | |
| Curbing and flagging..... | \$6,016 44 |
| Paving and crosswalks..... | 113,800 39 |
| Regulating, grading, etc..... | 36,665 68 |
| Sewers..... | 76,519 27 |
| Fencing..... | 970 40 |
| Pay-rolls..... | 24,128 73 |
| Surveying..... | 5,635 78 |
| Total..... | \$263,736 69 |

| | |
|--------------------------|------------|
| Water-meter Fund, No. 2— | |
| Water meters..... | \$2,096 00 |
| Placing meters..... | 1,288 65 |
| Total..... | \$3,384 65 |

| | |
|--|--------------|
| Recapitulation of Funds— | |
| Criminal Court-house Fund..... | \$525 00 |
| Croton Water Fund..... | 81,336 33 |
| Restoring and Repaving—Special Fund..... | 8,622 37 |
| Street Improvement Fund..... | 263,736 69 |
| Water Meter Fund, No. 2..... | 3,384 65 |
| Total..... | \$357,605 04 |

GENERAL SUMMARY.

| | |
|---------------------|----------------|
| Appropriations..... | \$916,749 63 |
| Funds..... | 357,605 04 |
| Total..... | \$1,274,354 67 |

Document "C."

STATEMENT OF CONTRACTS.

Contracts Entered into During the Three Months ending December 31, 1889.

| Date of Contract. | NATURE AND LOCATION OF WORK. | CONTRACTOR. | SURETIES. | ESTIMATED COST. |
|---------------------------------------|---|--|--|-----------------|
| 1889. | | | | |
| Sewer Contracts. | | | | |
| Oct. 7 | Sewer in One Hundred and Fifty-fourth street, between Tenth avenue and summit east..... | John Connolly, 185 East 80th street.. | Daniel McLaughlin, 128 Leroy street.... John Coleman, 95th street and Madison avenue..... | \$2,544 00 |
| " 9 | Sewer in One Hundred and Twenty-third street, between Ninth and Tenth avenues..... | Haskins & Culver, 1172 Ninth avenue.. | E. P. Steers, 2067 Fifth avenue... Antonio Rasino, 116 West 126th street | 2,960 79 |
| " 18 | Alteration and improvement to sewer in Tenth avenue, between Fifth and Fifty-first streets, etc..... | John Slattery, 372 Park avenue.... | A. J. Kerwin, 82 East 92d street... Thomas F. Leamy, 609 Lexington ave.. | 2,009 75 |
| " 19 | Sewer in Avenue B, between Eighty-second and Eighty-third streets.. | W. J. Murray, 1041 Madison avenue | Sarah Murray, 1041 Madison ave... W. H. Trainer, 1041 Madison ave... | 1,417 50 |
| " 21 | Repairs to sewer in Twelfth street, between Avenues A and C..... | Edward Kenny, 342 West 18th street. | William C. Clarke, 152 West 28th street. Thomas Clarke, 314 West 25th street. | 3,352 60 |
| " 23 | Sewer in Fourth avenue, west side, between Eighth and Ninth streets, connecting with present sewer in Ninth street..... | W. F. Cunningham, 320 East 83d street.. | William Lyman, 51 East 122d street.. C. Keegan, 551 West 53d street.. | 1,630 60 |
| " 23 | Sewer in Park avenue, west side, between Ninety-third and Ninety-fourth streets, connecting with present sewer in Ninety-fourth street..... | Michael J. Dempsey, 402 East 89th street. | John Coleman, 95th st. and Mad. ave. Charles Rieger, 211 East 92d street.. | 3,029 25 |
| " 28 | Sewer in One Hundred and Forty-fourth street, between Seventh and Eighth avenues, etc..... | Leeson & McNeerney, 2271 Seventh avenue. | F. Grasmuck, 226 Edgecombe ave. George Daiker, 740 St. Nicholas ave. | 5,058 00 |
| Nov. 4 | Sewer in One Hundred and Thirty-eighth street, between Eighth and Edgecombe avenues..... | E. Del Genovese, 354 Bowery..... | A. Del Genovese, 13 Bowery..... V. Del Genovese, 268 Bowery..... | 1,281 60 |
| Dec. 2 | Sewer in One Hundred and Twenty-fifth street, between Manhattan street and Tenth avenue..... | W. J. Reilly, 126th street and Grand Boulevard.. | Theodore F. Tone, 12th ave. and 130th st. Thomas Hueston, Broadway and Lawrence street..... | 1,602 83 |
| " 2 | Sewer in Fifty-second street, between Hudson river and Eleventh avenue..... | E. S. Van Aiken, 864 Eighth avenue.. | James King, 42 Duane street.... D. G. McGowan, 1319 Avenue A..... | 9,786 00 |
| " 3 | Sewer in One Hundred and Third street, between Boulevard and Tenth avenue..... | P. McInerney, 214 East 85th street.. | John Fleming, 175 East 82d street.. Charles McGinnis, 127 Broome street... | 1,141 00 |
| " 10 | Sewer in Tenth avenue, west side, between One Hundred and Forty-sixth and One Hundred and Forty-eighth streets, etc..... | W. J. Murray, 1041 Madison ave... | Sarah Murray, 1041 Madison avenue W. H. Trainer, 1041 Madison avenue | 1,319 00 |
| " 13 | Sewer in One Hundred and Thirty-second street, between Broadway and Tenth avenue..... | Joseph Moore, 170 East 89th street. | John McLaughlin, 127 East 78th street. Morris Jacoby, 1542 Second avenue. | 2,015 50 |
| Regulating, Grading, etc., Contracts. | | | | |
| Oct. 11 | Flagging, west side Park avenue, from Fifty-eighth to Fifty-ninth street, etc..... | A. E. Moran, 1302 Second avenue.. | Peter McGinnis, 1048 Park avenue... D. W. Moran, 219 East 71st street.. | \$724 00 |
| " 11 | Flagging, etc., Sixty-fourth street, between Tenth and Eleventh avenues..... | John Slattery, 372 Park avenue.... | A. J. Kerwin, 82 East 92d street, Thomas F. Leamy, 609 Lexington ave... | 3,738 70 |
| " 11 | Flagging, etc., both sides Ninety-second street, between Second avenue and East river..... | A. E. Moran, 1302 Second avenue.. | Peter McGinnis, 1048 Park avenue... D. W. Moran, 219 East 71st street.. | 2,849 30 |

| Date of Contract. | NATURE AND LOCATION OF WORK. | CONTRACTOR. | SURETIES. | ESTIMATED COST. | Date of Contract. | NATURE AND LOCATION OF WORK. | CONTRACTOR. | SURETIES. | ESTIMATED COST. |
|-------------------|---|--|---|-----------------|-------------------|--|---|---|-----------------|
| 1889. | | | | | 1889. | | | | |
| Oct. 11 | Flagging, etc., both sides Eighty-ninth and Ninetieth streets, from Madison to Fifth avenue..... | A. E. Moran, 1302 Second avenue.. | Peter McGinnis, 1048 Park avenue... D. W. Moran, 219 East 71st street.. | \$3,600 50 | Oct. 26 | Paving with granite-block pavement, Laight street, from Canal to Greenwich street..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | \$19,285 00 |
| " 11 | Flagging, etc., north side Thirty-eighth street, from First to Second avenue..... | W. F. Cunningham, 320 East 83d street.. | John Fleming, 211 East 83d street.. Edmond Dyer, 207 East 74th street.. | 700 85 | " 26 | Paving with granite-block pavement, Thirtieth street, between Avenue B and Fifth avenue..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 64,42 00 |
| " 15 | Regulating and grading One Hundred and Forty-sixth street, from Eighth avenue to Harlem river.. | Charles V. Hough, 233 East 119th st.... | Jacob Sireffer, 2098 Eighth avenue. S. O. Wright, 19 East 121st street.. | 15,951 60 | " 29 | Paving with asphalt pavement, Park avenue, between Thirty-fourth and Fortieth streets..... | Barber Asphalt Paving Company, 1 Broadway..... | R. E. Dietz, 124 West 48th street. James D. Leary, 43 East 25th street.. | 44,100 00 |
| " 21 | Reregulating and regrading Edgecombe avenue, from One Hundred and Forty-first to One Hundred and Forty-fifth street, etc..... | John J. Hopper, 163 West 122d street. | Isaac A. Hopper, 163 West 122d street. William E. Dean, 58 West 127th street. | 1,454 02 | Dec. 3 | Paving with asphalt pavement Broadway (or Boulevard), from Fifty-ninth to Seventy-ninth street | Barber Asphalt Paving Co., 1 Broadway..... | James J. Coogan, 121 Bowery..... James D. Leary, 61 William street.... | 188,810 00 |
| Nov. 12 | Flagging, etc., Seventy-first street, from First avenue to East river.. | Walter J. Ford, 316 West 19th street. | Bernard Mahon, 2293 Seventh avenue. Thomas J. Dunn, 321 East 68th street. | 3,362 50 | " 3 | Paving with asphalt pavement Forty-third street, between Madison and Fifth avenues; Sixtieth street, between Fourth and Fifth avenues; Sixty-seventh street, between Fourth and Fifth avenues, and Sixty-eighth street, between Park and Fifth avenues. | Barber Asphalt Paving Co., 1 Broadway..... | James J. Coogan, 121 Bowery..... James D. Leary, 61 William street.... | 37,323 00 |
| " 13 | Regulating and grading Claremont avenue, from One Hundred and Twenty-second to One Hundred and Twenty-seventh street..... | B. J. Carr, Jr., High Bridge, N. Y.. | James Brady, 319 East 56th street. D. W. Moran, 219 East 71st street.. | 17,368 88 | " 12 | Paving with asphalt pavement, Forty-sixth and Forty-seventh streets, between Madison and Sixth avenues..... | Matthew Taylor, 15 State street..... | Edward Kearney, 130 East 13th street. William Bostelmann, 102 West street..... | 33,294 00 |
| Dec. 10 | Flagging, Eighty-eighth street, from Madison to Park avenue..... | A. E. Moran, 1302 Second avenue.. | M. McGrath, 64 East 106th street. Thomas J. Dunn, 321 East 68th street. | 1,168 50 | " 12 | Paving with asphalt pavement Twenty-fifth street, between Broadway and Sixth avenue, Thirtieth street, between Madison and Fifth avenues, and Fortieth street, between Fourth and Fifth avenues..... | Matthew Taylor, 15 State street..... | Edward Kearney, 130 East 13th street. William Bostelmann, 102 West street..... | 24,849 60 |
| " 16 | Flagging, etc., Sixty-fifth street, from Central Park, west, to Ninth avenue..... | J. R. Anderson, 833 Lexington ave.. | John Dawson, 235 East 35th street.. | 2,000 65 | " 16 | Paving with granite-block pavement Spring street, from Bowery to Broadway..... | Bernard Mahon, 2293 Seventh avenue. | J. J. Donovan, Grand Union Hotel. Thomas J. Dunn, 321 East 68th street. | 18,040 00 |
| " 16 | Flagging, west side Fifth avenue, from One Hundred and Seventeenth to One Hundred and Eighteenth street, etc..... | J. R. Anderson, 833 Lexington ave.. | John Dawson, 235 East 35th street.. | 1,047 80 | " 16 | Paving with granite-block pavement Broome street, from Centre street to Broadway, and Bleecker street, from Bowery to Crosby street... | Bernard Mahon, 2293 Seventh avenue. | J. J. Donovan, Grand Union Hotel. Thomas J. Dunn, 321 East 68th street. | 21,715 00 |
| | | | | \$53,967 30 | " 16 | Paving with granite-block pavement Varick street, from Franklin to Canal street..... | Bernard Mahon, 2293 Seventh avenue. | J. J. Donovan, Grand Union Hotel. Thomas J. Dunn, 321 East 68th street. | 17,455 00 |
| | Paving Contracts—Assessment Work. | | | | | | | | \$811,914 00 |
| Oct. 9 | Paving with granite-block pavement Eighty-seventh street, from Boulevard to West End avenue. | Thomas Gearty, 135 East 83d street.. | Thomas Regan, 719 Lexington ave.. Michael Regan, 99 Barrow street.... | 3,238 60 | | Paving Contracts under Section 321, New York City Consolidation Act, as Amended by Chapter 569, Laws 1887. | | | |
| " 9 | Paving with granite-block pavement Eighty-eighth street, from Eighth to Ninth avenue..... | Thomas Gearty, 135 East 83d street.. | Thomas Regan, 719 Lexington ave.. Michael Regan, 99 Barrow street.... | 7,216 00 | Nov. 1 | Paving with asphalt pavement, Madison avenue, from Thirty-second to Thirty-third street, from Thirty-sixth to Forty-first street, from Forty-second to Fifty-eighth street, and Fifty-ninth street, from Madison to Fifth avenue... | The Sicilian Asphalt Paving Co., 56 E. 89th street. | Howard Carroll, Pier 18, N.R..... George C. Clausen, 309 E. 47th street.... | 126,100 00 |
| " 9 | Paving with granite-block pavement Ninety-fourth street, from Madison to Fifth avenue..... | P. H. McCullagh, 153 East 84th street.. | Thomas Regan, 719 Lexington ave.. Michael Regan, 99 Barrow street.... | 3,792 50 | Dec. 11 | Paving with granite-block pavement, Madison avenue from Thirty-third to Thirty-sixth street, and from Forty-first to Forty-second street | William Kelly, 444 W. 51st street... | Philip Ryan, 591 Eleventh avenue. Henry Kelly, 424 West 42d street. | 23,377 50 |
| " 9 | Paving with granite-block pavement Sixty-sixth street, from Tenth to Eleventh avenue..... | P. H. McCullagh, 153 East 84th street.. | Thomas Regan, 719 Lexington ave.. Michael Regan, 99 Barrow street.... | 7,159 50 | " 12 | Paving with granite-block pavement, Wall street, from Broadway to Nassau street, and from Hanover to Pearl street..... | William J. Clark, 339 East 63d street.. | Matthew Baird, 339 East 63d street.. James Baird, 273 West 73d street.. | 6,520 80 |
| " 14 | Paving with granite-block pavement Ninetieth street, from Boulevard to Riverside Drive..... | P. H. McCullagh, 153 East 84th street.. | John McLaughlin, 346 East 81st street.. Thomas Smith, 152 East 84th street. | 6,893 50 | | | | | \$155,998 30 |
| " 14 | Paving with granite-block pavement Ninety-fifth street, from Lexington to Madison avenue..... | P. H. McCullagh, 153 East 84th street.. | John McLaughlin, 346 East 81st street.. Thomas Smith, 152 East 84th street. | 7,214 00 | | Laying Crosswalk Contracts. | | | |
| " 14 | Paving with granite-block pavement Tenth avenue, from One Hundred and Fortieth to One Hundred and Fifty-first street..... | Thomas Gearty, 135 East 83d street.. | John McLaughlin, 346 East 81st street.. Alex. Milne, Stamford, Conn..... | 43,681 06 | Oct. 25 | Laying crosswalks across Leroy avenue, at north and south sides of One Hundred and Fifteenth, One Hundred and Seventeenth, One Hundred and Sixteenth, One Hundred and Twelfth, One Hundred and Thirteenth, One Hundred and Fourteenth, One Hundred and Nineteenth, One Hundred and Twentieth, One Hundred and Twenty-first, One Hundred and Twenty-second, One Hundred and Twenty-fourth, One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets..... | George F. Masterson, 1005 Madison avenue | William Lyman, 51 East 122d street.. Patrick Larney, 325 East 38th street. | 84,290 60 |
| " 19 | Paving, etc., with granite-block pavement, Seventy-ninth street, from Twelfth avenue to Hudson river. | W. A. Cumming, Stamford, Conn..... | James Mulry, 30 East 81st street.... Alexander Milne, Stamford, Conn..... | 4,789 45 | " 31 | Laying crosswalks across Seventh avenue, north and south sides of One Hundred and Fourteenth, One Hundred and Seventeenth, One Hundred and Twentieth, One Hundred and Twenty-first, One Hundred and Twenty-second, One Hundred and Twenty-fourth, One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets..... | Denis McGrath, 35 East 104th street. | Thomas Gearty, 135 East 83d street.. William Kelly, 460 West 51st street. | 3,074 00 |
| Nov. 8 | Paving with granite-block pavement One Hundred and First street, from Ninth to Tenth avenue..... | W. A. Cumming, Stamford, Conn..... | James Mulry, 30 East 81st street.... Alexander Milne, Stamford, Conn..... | 7,815 80 | | | | | \$7,364 60 |
| " 8 | Paving with granite-block pavement One Hundred and Thirty-fifth street, from Madison avenue to Harlem river..... | W. A. Cumming, Stamford, Conn..... | James Mulry, 30 East 81st street.... Alexander Milne, Stamford, Conn..... | 9,186 30 | | Taking-up and Relaying Pavement Contracts. | | | |
| " 12 | Paving with asphalt pavement Eighty-second street, from Boulevard to Riverside Drive..... | Barber Asphalt Paving Co., 1 Broadway..... | James D. Leary, 61 William street.... James J. Coogan, 121 Bowery..... | 8,814 00 | Oct. 9 | Taking up and relaying the pavement in Centre street and Tryon Row, from Chambers street to Park Row; Twenty-ninth street, from Fourth to Lexington avenue; Twenty-ninth street, from Second to Third avenue; Thirty-first street, from Broadway to Fifth avenue, and Forty-eighth street, from Second to Third avenue.... | Haskins & Culver, 1172 Ninth avenue.. | Michael Gearon, 2114 Madison avenue. James A. Kehoe, 222 First avenue... | \$6,051 85 |
| " 12 | Paving with asphalt pavement Pleasant avenue, from One Hundred and Fifteenth to One Hundred and Nineteenth street..... | Barber Asphalt Paving Co., 1 Broadway..... | James D. Leary, 61 William street.... James J. Coogan, 121 Bowery..... | 23,598 75 | " 26 | Taking up and relaying the pavement in Sixth avenue, west side, from Forty-ninth to Fiftieth street; Sixth avenue, east side, from Fiftieth to Fifty-first street; Fifty-second street, from First to Second avenue, and Fifty-eighth street, from Avenue A to Third avenue..... | James Quinn, 1483 Avenue A..... | John McLaughlin, 346 East 81st street.. Thomas Casey, 347 East 76th street. | 4,807 20 |
| " 15 | Paving with granite-block pavement One Hundred and Forty-second street, from Seventh to Eighth avenue..... | John G. Smith, 329 West 48th street. | John F. Moore, 220 West 105th street. James Slattery, 218 West 57th street. | 7,260 85 | " 25 | Taking-up and relaying the pavement in One Hundred and Fourth street, from Fourth to Madison avenue; One Hundred and Fifth street, from First to Second avenue; One Hundred and Eighth street, from Lexington to Fourth avenue, and from Fourth to Madison avenue, and One Hundred and Ninth street, from Third to Fourth avenue..... | James Quinn, 1483 Avenue A..... | John McLaughlin, 346 East 81st street.. Thomas Casey, 347 East 76th street. | 3,581 00 |
| " 15 | Paving with granite-block pavement, One Hundred and Forty-first street, from Tenth avenue to Boulevard..... | John G. Smith, 329 West 48th street. | John F. Moore, 220 West 105th street. James Slattery, 218 West 57th street. | 7,856 79 | " 26 | Taking up and relaying the pavement in Lexington avenue, from One Hundred and Fourth to One Hundred and Sixth street, from One Hundred and Sixth to One Hundred and Ninth street, from One Hundred and Ninth to One Hundred and Twelfth street, at intersection of One Hundred and Thirtieth and One Hundred and Thirtieth streets, from One Hundred and Seventeenth to One Hundred and Eighteenth street, from One Hundred and Twenty-second to One Hundred and Twenty-third street, and One Hundred and Twenty-sixth street, from Eighth to St. Nicholas avenue..... | James Quinn, 1483 Avenue A..... | John McLaughlin, 346 E. 81st street.. Thomas Casey, 347 E. 76th street.... | 4,448 75 |
| Dec. 3 | Paving with asphalt pavement One Hundred and Twenty-second street, from Lenox to Mt. Morris avenue..... | Barber Asphalt Paving Co., 1 Broadway..... | James D. Leary, 61 William street.... James J. Coogan, 121 Bowery..... | 5,165 50 | | | | | |
| " 12 | Paving with asphalt pavement Ninety-sixth street, between Ninth and Tenth avenues..... | Matthew Taylor, 15 State street..... | Edward Kearney, 130 East 13th street. William Bostelmann, 102 West street. | 18,243 51 | | | | | |
| " 12 | Paving with asphalt pavement Ninety-sixth street, between Eighth and Ninth avenues..... | Matthew Taylor, 15 State street..... | Edward Kearney, 130 East 13th street. William Bostelmann, 102 West street. | 18,333 42 | | | | | |
| | | | | \$150,259 53 | | | | | |
| | Paving Contracts, under Chap. 346, Laws of 1889. | | | | | | | | |
| Oct. 14 | Paving with granite-block pavement Cedar street, from Broadway to Greenwich street; Cedar street, from Pearl to Nassau street, and Bridge street, from Broad to State street..... | James Pollock, 239 East 128th street. | James Mulry, 30 East 81st street.. Michael Larkin, 338 East 15th street. | \$19,678 50 | | | | | |
| " 14 | Paving with granite-block pavement Platt street, from Pearl to William street; Cliff street, from Ferry to John street, and Stone street, from William to Broad street.... | James Pollock, 239 East 128th street. | James Mulry, 30 East 81st street.. Michael Larkin, 338 East 15th street. | 20,090 50 | | | | | |
| " 14 | Paving with granite-block pavement Thomas street, between Church and Hudson streets; Howard street, from Broadway to Mercer street; Greenwich avenue, from Eighth avenue to West Thirtieth street, and Horatio street, from Greenwich avenue to West Fourth street..... | James Pollock, 239 East 128th street. | James Mulry, 30 East 81st street.. Michael Larkin, 338 East 15th street. | 20,959 40 | | | | | |
| " 18 | Paving with granite-block pavement Lexington avenue, between Thirtieth and Thirty-fifth streets, between Fifty-ninth and Sixty-sixth streets, and between Sixty-ninth and Ninety-seventh streets | Thomas Gearty, 135 East 83d street.. | Thomas Smith, 152 East 84th street.. James Mulry, 30 East 81st street... | 178,190 00 | | | | | |
| " 23 | Paving with granite-block pavement, Worth street, from Broadway to Hudson street..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 17,588 50 | | | | | |
| " 23 | Paving with granite-block pavement Franklin street, from West Broadway to Washington street..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 20,34 00 | | | | | |
| " 26 | Paving with granite-block pavement Broad street, from Exchange place to Pearl street..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 20,850 00 | | | | | |
| " 26 | Paving with granite-block pavement, Reade street, between Elm and Washington streets..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 29,430 50 | | | | | |
| " 26 | Paving with granite-block pavement, Leonard street, from Broadway to Hudson street..... | Charles Guidet, 237 Broadway..... | Martin B. Brown, 931 Madison avenue. Richard W. Buckley, 58 East 73d street... | 15,269 00 | | | | | |

| Date of Contract. | NATURE AND LOCATION OF WORK. | CONTRACTOR. | SURETIES. | ESTIMATED COST. | Contracts Completed. | | | |
|-------------------|---|---|---|-----------------|----------------------|--|---|-------------|
| | | | | | DATE. | NATURE. | LOCATION OF WORK. | TOTAL COST. |
| 1889. | | | | | | | | |
| Nov. 6 | Taking up and relaying the pavement in Sixty-sixth street, from Fourth to Lexington avenue; Sixty-eighth street, from Second to Third avenue; Seventieth street, from Lexington to Fourth avenue; Seventy-third street, from Lexington to Park and from Second to Third avenue, and Ninety-fifth street, from First to Second avenue. | F. Thilemann, Jr., 119 E. 122d street.... | John F. McDonald, 229 E. 62d street.... John Slattery, 368 Park avenue.... | \$5,187 70 | Oct. 2 | Laying water-mains..... | In Bainbridge, Sedgwick, Riverside, Eighth and Second avenues, in One Hundred and Eighty-seventh, One Hundred and Eighty-fourth, One Hundred and Fifty-fifth, Gray and Topping streets, and in Crane place..... | \$11,922 93 |
| " 14 | Taking up and relaying the pavement in Fifty-seventh street, from First to Fourth avenue..... | Haskins & Culver, 1172 Ninth avenue.. | Charles W. Dayton, 9 West 124th street. E. P. Steers, 125 East 125th street. | 5,035 50 | " 4 | Alteration and improvement to sewer | In Ninth avenue, west side, between Eighty-third and Eighty-fourth streets..... | 2,177 58 |
| " 15 | Taking up the pavement in One Hundred and Seventeenth street, between Fourth and Lexington avenues, and laying a granite-block pavement, the granite-blocks to be furnished by the Department of Public Works..... | Denis McGrath, 35 East 104th street.. | William Kelly, 444 West 51st street. Thomas Monaghan, 339 East 41st street. | 1,114 50 | " 4 | Paving with macadam pavement.... | St. Nicholas avenue, from One Hundred and Fifty-fifth street to intersection with Tenth avenue and Kingsbridge road, etc..... | 101,605 86 |
| | <i>Laying Water-main Contract.</i> | | | \$30,526 50 | " 5 | Furnishing and delivering stop-cocks, hydrants, wooden hydrant boxes, cast-iron stop-cock boxes and manhole heads..... | | 5,747 00 |
| Oct. 16 | Laying water-mains in Eighty-seventh, One Hundred and Twelfth, One Hundred and Fifteenth, One Hundred and Thirty-fifth, One Hundred and Forty-seventh and One Hundred and Sixty-fifth streets, in Park, Convent, Tenth, College, New and Edgecombe avenues, and in Kingsbridge and Old Albany roads..... | J. Cornwell, Jr., 111 East 127th street | Moses Mehrbach, 134 East 90th street. Solomon Mehrbach, 74 East 54th street.. | \$7,421 00 | " 8 | Repairs to sewer..... | In Thirteenth street, between Broadway and Fourth avenue..... | 2,307 75 |
| | <i>Miscellaneous Contracts.</i> | | | | " 8 | Sewer..... | In Seventy-eighth street, between Riverside and West End avenues..... | 3,786 78 |
| Nov. 22 | Furnishing cast-iron water-pipes, branch pipes, and special castings | Warren Foundry and Machine Co., 160 Broadway.... | American Surety Co., 160 Broadway.... William E. Stiger, 138 W. 73d street.... | \$23,777 00 | " 11 | Furnishing and delivering tapping-cocks and tapping-cock boxes..... | First avenue, from One Hundred and Twenty-fifth street to Harlem river..... | 1,682 77 |
| Dec. 9 | Furnishing materials and performing work in the pointing up and cleaning the south and east and west fronts of the City Hall..... | F. W. Burk, 1703 First avenue... | Thomas Jetter, 105 East 89th street. Charles Rieger, 211 East 92d street.. | 2,900 00 | " 12 | Regulating and grading..... | East side Boulevard, from One Hundred and Twenty-fourth to One Hundred and Twenty-fifth street.... | 117 81 |
| | <i>Gas Contracts.</i> | | | \$26,677 00 | " 12 | Flagging, etc..... | In Madison avenue, from One Hundred and Twenty-fifth to One Hundred and Twenty-ninth street.... | 1,940 50 |
| Dec. 20 | Furnishing illuminating gas for lighting public markets, armories, buildings and offices in the City of New York for the year 1890.... | Consolidated Gas Co., 4 Irving place..... | Percy R. Pyne, 25 E. 22d street.... Samuel Sloan, 7 E. 38th street.... | \$24,000 00 | " 16 | Regulating and grading..... | One Hundred and Twelfth street, from Boulevard to Tenth avenue..... | 2,934 91 |
| " 23 | Furnishing illuminating gas for lighting public markets, armories, buildings and offices in the City of New York for the year 1890.... | Equitable Gas-light Co., 340 Third avenue.... | William H. Gebhard, Park Avenue Hotel. John Fox, 160 Broadway..... | 15,500 00 | " 17 | Sewer..... | In Eighty-fifth street, between Boulevard and Riverside avenue..... | 6,268 48 |
| | <i>Special Contracts.</i> | | | \$39,500 00 | " 17 | "..... | In Ninety-second street, between West End avenue and Boulevard..... | 1,547 71 |
| Oct. 15 | Repairs to sewer in Manhattan street, between Broadway and Twelfth avenue..... | George F. Swift, 211 West 122d street. | John Flanagan, 392 Fourth avenue.. | \$740 00 | " 23 | Repairs to sewer..... | In One Hundred and Second street, between First and Second avenues..... | 2,778 95 |
| " 24 | Fencing vacant lots in block bounded by First and Second avenues, Ninetieth and Ninety-first streets | Arctander & Seabold, Willis ave. and 143d st. | J. W. Flynn, 2627 Third avenue.. | 845 70 | " 23 | Alteration and improvement to sewer | In Fifty-fourth street, between Tenth and Eleventh avenues..... | 6,919 09 |
| " 24 | Flagging, etc., southwest corner Third avenue and Twenty-first street..... | W. J. Murray, 1041 Madison ave.... | W. H. Trainer, 1041 Madison ave.... | 340 00 | " 29 | Regulating and grading..... | One Hundred and Twenty-fourth street, from Ninth to Tenth avenue..... | 3,938 74 |
| " 24 | Flagging, etc., east side Avenue A, from Eighty-first to Eighty-second street..... | W. J. Murray, 1041 Madison avenue | W. H. Trainer, 1041 Madison ave.... | 525 96 | " 29 | Sewer..... | In One Hundred and Second street, between Harlem river and First avenue..... | 4,911 52 |
| " 24 | Flagging, etc., south side Seventy-seventh street, from First to Second avenue..... | W. J. Murray, 1041 Madison avenue | W. H. Trainer, 1041 Madison ave.... | 478 38 | " 29 | "..... | In One Hundred and Seventh street, between Manhattan and Eighth avenues..... | 1,378 51 |
| " 29 | Flagging, etc., east side Second avenue, from Ninety-third to Ninety-fourth street, and south side Ninety-fourth street, from First to Second avenue..... | W. F. Croft, 150 Broadway..... | John B. Devlin, 160 West 120th street | 273 08 | " 29 | Building a retaining-wall with coping and iron railing..... | In Forty-ninth street, east of First avenue..... | 15,056 72 |
| " 29 | Flagging, etc., south side Eighty-fifth street, from Madison to Fifth avenue..... | W. F. Croft, 150 Broadway..... | John B. Devlin, 160 West 120th street | 462 44 | " 30 | Furnishing material, etc., in taking down the marble steps..... | Leading to the portico on south front of City Hall and rebuilding the same and retilling the platform under portico..... | 5,693 00 |
| " 29 | Flagging, etc., south side Eighty-first street, from First avenue to Avenue A..... | W. F. Croft, 150 Broadway..... | John B. Devlin, 160 West 120th street | 840 12 | " 31 | Extension of sewer..... | In Grand street, between Goerck and Lewis streets.. | 544 95 |
| " 31 | Fencing vacant lots, north side One Hundred and Fifteenth street, from Fifth to Lenox avenue..... | Patrick Larney, 325 East 38th street. | David Hamilton, 1415 Second avenue.. | 98 40 | " 31 | Receiving-basin..... | Southeast corner Seventy-second street and West End avenue..... | 275 65 |
| Nov. 6 | Laying a crosswalk across Avenue A, south side Seventy-seventh street..... | W. J. Murray, 1041 Madison ave.... | W. H. Trainer, 1041 Madison ave.... | 174 41 | " 31 | Sewer..... | In Ninety-seventh street, between Tenth avenue and Boulevard..... | 1,927 42 |
| " 6 | Flagging, etc., south side Canal street, between Mott and Mulberry streets..... | John Slattery, 372 Park avenue.... | John T. McDonald, 229 E. 62d street.... | 527 50 | " 31 | "..... | In One Hundred and Sixty-fifth street, between Tenth avenue and Kingsbridge road..... | 1,422 11 |
| " 6 | Regulating, grading, etc., One Hundred and Eleventh street, from Eighth to Manhattan avenue..... | Thomas F. Murray, 2349 Tenth avenue.. | John Murray, 2349 Tenth avenue.. | 972 90 | " 31 | Alteration and improvement to sewer | In Twenty-second street, between Ninth and Eleventh avenues..... | 6,838 76 |
| " 6 | Flagging, etc., east side Third avenue, between Ninety-eighth and Ninety-ninth streets..... | W. J. Murray, 1041 Madison avenue | W. H. Trainer, 1041 Madison avenue | 145 15 | " 31 | Paving with trap-block pavement.... | One Hundred and Thirty-first street, between Tenth avenue and Broadway..... | 3,258 09 |
| " 8 | Flagging, etc., Ninety-seventh street, from Madison to Fifth avenue..... | W. F. Cunningham, 320 E. 83d street.... | Cornelius Keegan, 551 W. 53d street.... | 301 78 | Nov. 1 | "..... | Thirty seventh street, from First avenue to 109 feet easterly..... | 812 25 |
| " 8 | Flagging, etc., west side Park avenue, from Sixty-eighth to Sixty-ninth street..... | W. F. Cunningham, 320 E. 83d street.... | Cornelius Keegan, 551 W. 53d street.... | 102 56 | " 2 | Furnishing materials, etc., in the paving of..... | Plaza in front of City Hall with artificial stone or concrete blocks..... | 1,600 00 |
| " 8 | Flagging, etc., west side First avenue, from One Hundred and Third to One Hundred and Fourth street, and south side One Hundred and Fourth street, from First to Second avenue..... | W. F. Cunningham, 320 E. 83d street.... | Cornelius Keegan, 551 W. 53d street.... | 341 80 | " 7 | Laying a crosswalk..... | Across Lenox avenue at south side of One Hundred and Twenty-third street..... | 202 61 |
| " 8 | Receiving-basins in One Hundred and Nineteenth street, between Pleasant avenue and Harlem river | W. J. Murray, 1041 Madison avenue | W. H. Trainer, 1041 Madison ave.... | 428 00 | " 7 | "..... | Across Lenox avenue at north and south sides of One Hundred and Twenty-third street..... | 419 22 |
| " 15 | Fencing vacant lots in block bounded by Ninety-third and Ninety-fourth streets, Madison and Park avenues..... | John F. McDonald, 229 East 62d street.. | F. Thilemann, Jr., 119 East 122d street. | 331 12 | " 7 | Sewer..... | In Front street, between Fletcher street and Burling Slip..... | 1,927 12 |
| " 19 | Flagging, etc., north side Eighty-first street, from Eighth to Ninth avenue..... | John Slattery, 372 Park avenue.... | John T. McDonald, 229 E. 62d street.... | 605 14 | " 7 | Flagging, etc..... | Ninety-first street, between First and Second avenues..... | 2,088 28 |
| " 25 | Flagging, etc., Ninety-eighth street, from Boulevard to West End avenue..... | W. J. Murray, 1041 Madison avenue | W. H. Trainer, 1041 Madison avenue | 889 30 | " 7 | Regulating and grading..... | One Hundred and Forty-eighth street, from Eighth avenue to first new avenue west..... | 451 96 |
| | | | | \$9,423 74 | " 11 | Furnishing materials, etc., in the alterations and repairs..... | To Catharine Market Buildings..... | 3,540 00 |
| | | | | | " 12 | Furnishing materials, etc., in building two floating swimming baths..... | In West street, between Spring and West Eleventh streets..... | 23,800 00 |
| | | | | | " 13 | Repairs to sewer..... | One Hundred and Twenty-first street, from Mount Morris to Lenox avenue..... | 198 00 |
| | | | | | " 14 | Paving with asphalt pavement..... | Thirty-seventh street, from 109 feet east of First avenue to East river..... | 5,749 23 |
| | | | | | " 14 | Paving with trap-block pavement.... | One Hundred and Thirty-first street, from Madison to Park avenue..... | 638 49 |
| | | | | | " 19 | Paving with granite-block pavement. | One Hundred and Fifty-ninth street, from Tenth avenue to Boulevard..... | 279 27 |
| | | | | | " 19 | Sewer..... | Ninety-eighth street, from Second to Third avenue.... | 7,216 66 |
| | | | | | " 19 | Flagging, etc..... | In Ninety-fourth street, between First and Second avenues..... | 5,523 38 |
| | | | | | " 19 | Paving with trap-block pavement.... | West side Park avenue, from Fifty-eighth to Fifty-ninth street, and north side Fifty-eighth street, from Park to Madison avenue..... | 4,378 84 |
| | | | | | " 19 | "..... | Little West Twelfth street, between Ninth and Tenth avenues, Twenty-eighth street, between Ninth and Tenth avenues, and Thirteenth street, between Ninth avenue and Washington street..... | 979 83 |
| | | | | | " 21 | Flagging, etc..... | Southeast corner Third avenue and Twenty-first street Across One Hundred and Twenty-third street, east side Lenox avenue..... | 10,389 39 |
| | | | | | " 21 | Laying a crosswalk..... | In Third avenue, west side, between One Hundredth and One Hundred and Second streets..... | 303 20 |
| | | | | | " 23 | Repairs to sewer..... | In Lexington avenue, between One Hundred and Twenty-seventh and One Hundred and Twenty-eighth streets..... | 81 87 |
| | | | | | " 27 | Sewer..... | In block bounded by First and Second avenues, Ninetieth and Ninety-first streets..... | 1,775 30 |
| | | | | | " 27 | Fencing vacant lots..... | | 976 43 |
| | | | | | " 29 | Furnishing cast-iron water-pipes, branch pipes and special castings | On northwest, northeast and southeast corners of One Hundred and Fifty-seventh street and Eleventh avenue..... | 811 75 |
| | | | | | " 30 | Receiving-basins..... | | 38,738 87 |
| | | | | | Dec. 2 | Paving with granite-block pavement. | Thirty-third street, from Fourth to Lexington avenue, Washington street, from Gansevoort street to Little Twelfth street, and First street, from Avenue A to Houston street..... | 873 03 |
| | | | | | " 3 | Receiving-basins..... | Southeast corners Ninety-fifth, Ninety-sixth and Ninety-seventh streets and Madison avenue, and on southwest corners of Ninety-eighth, Ninety-ninth, One Hundredth, One Hundred and First, One Hundred and Second and One Hundred and Third streets and Madison avenue..... | 7,928 35 |
| | | | | | " 4 | Paving with granite-block pavement. | Ninety-ninth street, from Eighth to Ninth avenue.... | 2,746 00 |
| | | | | | " 4 | Alteration and improvement to sewer | Seventy-fifth street, from Ninth to Tenth avenue..... | 6,087 12 |
| | | | | | " 6 | Flagging, etc..... | In One Hundred and Twenty-ninth street, between Boulevard and second manhole east of Broadway.. | 7,882 33 |
| | | | | | " 6 | "..... | West side Park avenue, from Sixty-eighth to Sixty-ninth street..... | 3,413 24 |
| | | | | | " 6 | "..... | South side Eighty-fifth street, from Madison to Fifth avenue..... | 111 80 |
| | | | | | " 9 | "..... | East side Avenue A, from Eighty-first to Eighty-second street..... | 349 30 |
| | | | | | " 9 | Fencing vacant lots..... | North side One Hundred and Fifteenth street, from Fifth to Lenox avenue..... | 571 62 |
| | | | | | " 9 | Paving with granite-block pavement.. | One Hundred and Fifty-sixth street, from Tenth to Eleventh avenue..... | 221 15 |
| | | | | | " 9 | " asphalt pavement..... | Park avenue, between Thirty-fourth and Fortieth streets..... | 7,272 53 |
| | | | | | " 10 | Sewer..... | In One Hundred and Fourth street, between Boulevard and West End avenue..... | 42,596 00 |
| | | | | | " 10 | "..... | In One Hundred and Fifty-third street, between Tenth avenue and summit west, etc..... | 2,470 34 |
| | | | | | " 10 | Furnishing, delivering and laying water-mains..... | In One Hundred and Tenth street, between Tenth and Manhattan avenues..... | 935 75 |
| | | | | | " 11 | Flagging, etc..... | North side Thirty-eighth street, from First to Second avenue..... | 17,934 74 |
| | | | | | " 11 | Laying a crosswalk..... | Across Lenox avenue, north and south sides One Hundred and Twenty-seventh street..... | 709 45 |
| | | | | | " 14 | Paving with granite-block pavement. | One Hundred and Sixth street, from Park to Fifth avenue..... | 409 61 |
| | | | | | " 14 | "..... | Eighty-eighth street, from Eighth to Ninth avenue.... | 15,862 22 |
| | | | | | | | | 7,430 84 |

RECAPITULATION.

| | |
|--|-----------------------|
| 14 Sewer Contracts..... | \$39,148 39 |
| 12 Regulating, Grading, etc., Contracts..... | 53,967 30 |
| 15 Paving Contracts—Assessment Work..... | 190,259 53 |
| 19 Paving Contracts under Chapter 346, Laws of 1889..... | 811,914 00 |
| 3 Paving Contracts under Section 321, New York City Consolidation Act of 1882, as amended by Chapter 569, Laws 1887..... | 155,998 30 |
| 2 Laying Crosswalk Contracts..... | 7,364 60 |
| 1 Laying Water-main Contract..... | 7,421 00 |
| 2 Miscellaneous Contracts..... | 26,677 00 |
| 2 Gas Contracts..... | 39,500 00 |
| 20 Special Contracts..... | 9,423 74 |
| 7 Taking up and Relaying Pavement Contracts..... | 30,526 50 |
| 97 Contracts..... | \$1,372,200 36 |

| DATE. | NATURE. | LOCATION OF WORK. | TOTAL COST. | WORK. | CONTRACTOR. | DATE OF CONTRACT. | ESTIMATED COST. | DATE OF FINAL ESTIMATE. | AMOUNT OF FINAL ESTIMATE. | AMOUNT PAID IN 1889. |
|---------|-------------------------------------|---|----------------|---|--|-------------------|-----------------|-------------------------|---------------------------|----------------------|
| Dec. 14 | Paving with granite-block pavement. | Sixty-sixth street, from Tenth to Eleventh avenue. | \$7,372 61 | Building iron bridge at South East | King Iron Bridge and Manufacturing Co. | 1888. | | 1889. | | |
| " 14 | " | Chambers street, from Park Row to Greenwich street, except where now paved with asphalt. | 18,825 56 | Laying water-mains in Boston road, etc. | B. Mahon | Aug. 23 | \$3,885 00 | Jan. 15 | \$3,885 00 | \$1,185 00 |
| " 14 | " | Perry street, from Waverley place to Fourth street; Commerce street, from Bleeker to Barrow street; Liberty place, from Liberty place to Maiden lane; Theatre alley, from Ann to Beekman street; Hague street, from Pearl to Cliff street; Birmingham street, from Madison to Henry street; Staple street, from Jay to Harrison street, and Collister street, from Beach to Light street. | | Boring, etc., for water on Blackwell's Island. | George W. Haskell | Nov. 20 | 4,110 00 | May 31 | 4,123 70 | 4,123 70 |
| " 17 | Building a reservoir. | At Williamsbridge | 9,457 57 | Furnishing and laying mains in One Hundred and Tenth street | B. Mahon | Dec. 7 | 20,239 50 | Dec. 10 | 17,934 74 | 17,038 00 |
| " 17 | Paving with granite-block pavement | One Hundred and Thirtieth street, from Boulevard to Riverside Drive | \$23,839 33 | Furnishing cast-iron water-pipes. | Camden Iron Works. | " 21 | 16,029 60 | June 15 | 18,288 18 | 18,288 18 |
| " 19 | Receiving-basins. | Northeast and northwest corners One Hundred and Fifty-eighth street and Eleventh avenue. | 4,937 80 | Furnishing cast-iron water-pipes. | Camden Iron Works. | " 21 | 11,451 60 | Apr. 3 | 10,093 36 | 10,093 36 |
| " 19 | Sewer. | In Front street, between Dover street and Peck Slip. | 929 52 | Building reservoir on Byram river. | John McQuade | Jan. 7 | 209,155 00 | | | 1,364 22 |
| " 19 | Sewer repairs. | In Twelfth street, between Avenues A and C. | 1,982 12 | Furnishing coal at High Bridge and Ninety-eighth street. | William D. Bruns, Jr. | Feb. 28 | 21,290 00 | | | 14,248 32 |
| " 19 | " | In Manhattan street, between Broadway and Twelfth avenue. | 3,230 60 | Furnishing stop-cocks, hydrants, etc. | Guy C. Hotchkiss, Field & Co. | " 27 | 12,997 50 | | | 10,474 89 |
| " 19 | Laying a crosswalk | Across Seventh avenue, north and south sides One Hundred and Twenty-fourth street. | 700 00 | Laying Croton-mains in Ninety-eighth street, etc. | F. Thileman, Jr. | Mar. 14 | 66,271 00 | | | 35,021 70 |
| " 19 | " | Across Seventh avenue, north and south sides One Hundred and Twenty-first street. | 407 54 | Building house at Williamsbridge. | Terence A. Smith | " 29 | 8,749 00 | | | 2,700 00 |
| " 19 | " | Across Seventh avenue, north and south sides One Hundred and Twenty-first street. | 403 89 | Loading and hauling away material at Old Reservoir, Central Park. | Terence A. Smith | Apr. 10 | 18,000 00 | | | 11,502 00 |
| " 19 | " | Across Seventh avenue, north and south sides One Hundred and Twenty-ninth street. | 422 72 | Furnishing tapping-cocks, etc. | The Corporation of Patterson Bros. | " 18 | 1,869 00 | Oct. 10 | 1,869 00 | 1,869 00 |
| " 19 | " | Across Seventh avenue, north and south sides One Hundred and Thirty-second street. | 414 89 | Furnishing stop-cocks, hydrants, etc. | John Fox | " 22 | 5,747 00 | " 4 | 5,747 00 | 5,747 00 |
| " 19 | Extension of sewer. | In Twenty-sixth street, from fifth manhole east of First avenue, etc. | 410 86 | Laying pipe in One Hundred and Twenty-fifth street. | John Cornwell, Jr. | " 22 | 52,473 00 | | | 30,963 81 |
| " 24 | Fencing vacant lots | On block bounded by Ninety-third and Ninety-fourth streets, Park and Madison avenues. | 3,191 76 | Furnishing cast-iron water-pipe. | Reading Foundry Co. | " 22 | 33,056 00 | Nov. 29 | 38,738 87 | 38,738 87 |
| " 24 | Flagging, etc. | West side First avenue, from One Hundred and Third to One Hundred and Fourth street, and south side One Hundred and Fourth street, from First to Second avenue. | 354 73 | Laying pipe in Bainbridge avenue, etc. | Martin Lipps | " 26 | 11,652 75 | Sept. 30 | 11,922 93 | 11,922 93 |
| " 24 | " | Ninety-second street, from Second avenue to East river | 471 71 | Laying pipe in West Vanderbilt avenue, etc. | John Cornwell, Jr. | May 31 | 16,416 15 | | | 8,980 38 |
| " 24 | Laying a crosswalk | Across Seventh avenue, north and south sides One Hundred and Twenty-third street. | 4,072 40 | Building house at High Bridge. | Terence A. Smith | " 31 | 13,000 00 | | | |
| " 24 | Paving with granite-block pavement | Ninety-fourth street, from Madison to Fifth avenue. | 409 10 | Building Storage Reservoir on Muscote river. | John McQuade | July 25 | 540,610 00 | | | |
| " 24 | Receiving-basins. | In One Hundred and Nineteenth street, between Pleasant avenue and Harlem river. | 3,941 16 | Laying pipe in St. Ann's avenue, etc. | F. Thileman, Jr. | Aug. 21 | 10,780 00 | | | 4,302 00 |
| " 26 | " | Northeast corner One Hundred and Fifth street and Park avenue. | 509 33 | Laying pipe in Eighty-seventh street, etc. | John Cornwell, Jr. | Oct. 16 | 7,421 00 | | | 4,797 00 |
| " 26 | Sewer | In One Hundred and Sixty-first street, between Tenth and Eleventh avenues. | 263 87 | Furnishing cast-iron water-pipe. | Warren Foundry and Machine Co. | Nov. 17 | 23,777 00 | | | |
| " 26 | " | In Ninety-fifth street, from Boulevard to Tenth avenue. | 8,708 56 | | | | | | | |
| " 26 | " | In Avenue B, between Eighty-second and Eighty-third streets. | 2,617 78 | | | | | | | |
| " 28 | Regulating and grading. | One Hundred and Thirty-first street, from Boulevard to Twelfth avenue. | 866 72 | | | | | | | |
| " 28 | Flagging, etc. | Eighty-first street, from First avenue to Avenue A. | 4,289 53 | | | | | | | |
| " 30 | Laying a crosswalk. | Across Avenue A, at north and south sides Seventy-seventh street. | 692 44 | | | | | | | |
| " 31 | Flagging, etc. | Seventy-first street, from First avenue to East river. | 247 36 | | | | | | | |
| " 31 | Repairing asphalt pavement. | In Thirty-eighth street, between Fifth and Madison avenues; Twenty-eighth street, between Fifth avenue and Broadway, and in Fifteenth street, west of Fifth avenue. | 3,919 03 | | | | | | | |
| | | | 950 00 | | | | | | | |
| | | | \$1,057,183 14 | | | | | | | |

RECAPITULATION.

| | |
|---|----------------|
| 26 Sewer Contracts | \$81,381 78 |
| 11 Regulating, Grading, etc., Contracts | 42,852 21 |
| 18 Paving Contracts | 274,236 70 |
| 9 Miscellaneous Contracts | 611,651 38 |
| 2 Laying water-main Contracts | 29,857 67 |
| 1 Taking-up and Relaying Pavement Contracts | 1,940 50 |
| 34 Special Contracts | 15,264 90 |
| 101 Contracts | \$1,057,183 14 |

Document "D."

REPORT OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF CHIEF ENGINEER, No. 31 CHAMBERS STREET, ROOM 10,
NEW YORK, January 7, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

DEAR SIR—In compliance with your letter, dated December 4, 1889, I herewith submit the report for the quarter ending December 31, 1889, and a summary for the year 1889.

EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1889.

| | |
|---|-------------|
| Aqueduct—Repairs, Maintenance and Strengthening | \$57,770 96 |
| Aqueduct—Repairs, Maintenance and Strengthening—Salaries | 6,422 44 |
| Bronx River Works—Maintenance and Repairs | 8,074 90 |
| Bronx River Works—Maintenance and Repairs—Salaries | 975 00 |
| Croton Water Fund | 76,717 11 |
| Laying Croton Pipes | 72,860 74 |
| Laying Croton Pipes—Salaries | 4,608 50 |
| Laying Pipe—Blackwell's Island | 2,523 06 |
| New Water-main, etc., North Brother Island | 4,873 77 |
| Repairing and Renewal of Pipes, Stop-cocks, etc. | 18,311 31 |
| Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries | 2,525 99 |
| Water Supply—Twenty-fourth Ward | 1,229 27 |
| Water Meter Fund, No. 2 | 3,638 06 |

Total.....\$260,540 11

SUMMARY OF EXPENDITURES FOR THE YEAR 1889.

| | |
|---|--------------|
| Aqueduct—Repairs, Maintenance and Strengthening | \$204,319 56 |
| Aqueduct—Repairs, Maintenance and Strengthening—Salaries | 26,331 40 |
| Bronx River Works—Maintenance and Repairs | 20,884 67 |
| Bronx River Works—Maintenance and Repairs—Salaries | 3,666 67 |
| Croton Water Fund | 256,686 98 |
| Laying Croton Pipes | 217,933 08 |
| Laying Croton Pipes—Salaries | 16,262 96 |
| Laying Pipe—Blackwell's Island | 6,646 76 |
| New Water-main, North Brother Island | 4,873 77 |
| Repairing and Renewal of Pipes, Stop-cocks, etc. | 83,583 29 |
| Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries | 9,899 96 |
| Water Supply—Twenty-fourth Ward | 6,411 92 |
| Water Meter Fund No. 2 | 12,998 76 |

Total.....\$870,499 78

Contracts Made, Completed and Unfinished in 1889.

| WORK. | CONTRACTOR. | DATE OF CONTRACT. | ESTIMATED COST. | DATE OF FINAL ESTIMATE. | AMOUNT OF FINAL ESTIMATE. | AMOUNT PAID IN 1889. |
|--|-----------------------|-------------------|-----------------|-------------------------|---------------------------|----------------------|
| Building reservoir at Williamsbridge | Sullivan & Moore | 1884. | | 1889. | | |
| Furnishing cast-iron water-pipes | Reading Foundry Co. | June 4 1888. | \$457,775 00 | Dec. 9 | \$523,839 33 | \$93,073 36 |
| Furnishing coal at High Bridge and Ninety-eighth street. | William D. Bruns, Jr. | Apr. 24 | 27,626 00 | Jan. 25 | 33,218 91 | 7,875 91 |
| Furnishing cast-iron water-pipes | Reading Foundry Co. | May 12 | 19,170 00 | Feb. 2 | 19,425 05 | 8,779 78 |
| Furnishing iron railing at High Bridge | J. W. Fiske | June 27 | 12,660 00 | Jan. 15 | 12,851 62 | 12,851 62 |
| | | July 6 | 4,818 00 | Feb. 4 | 4,577 10 | 4,577 10 |

STORAGE RESERVOIRS.

The Croton river has furnished a full supply of water to the Aqueduct during the quarter. During the year there was only one day that no water ran over Croton Dam.

All the reservoirs and lakes are full.

No storage water was drawn during the year.

Work on the New Reservoir on the Muscote river has been commenced.

The engineering force at this reservoir are making the necessary detail surveys, etc., for the prosecution of the work.

The commissioners appointed to appraise part of the lands on Reservoir "A," have made their report, the maps, etc., are in the hands of the Counsel to the Corporation to have a commission appointed to appraise the value of the remainder of the lands required for this reservoir.

Rainfall—Inches.

| | OCTOBER. | NOVEMBER. | DECEMBER. | TOTAL FOR QUARTER. | TOTAL FOR YEAR. |
|--------------------------|----------|-----------|-----------|--------------------|-----------------|
| Boyd's Corners Reservoir | 4.85 | 8.45 | 2.94 | 16.24 | 54.50 |
| South East Reservoir | 3.35 | 8.73 | 3.17 | 15.25 | 57.20 |
| Kensico Reservoir | 3.60 | 8.74 | 2.34 | 14.68 | 60.48 |
| Croton Dam | 3.39 | 8.28 | 2.92 | 14.59 | 55.25 |
| Central Park Reservoir | 2.71 | 10.01 | 1.77 | 14.49 | 57.88 |

This is the third year of large rainfall in the Croton basin; all of the reservoirs and lakes are full and have not been drawn from during the year, and the ground, springs, etc., are saturated.

During any of the three years an additional supply of 100,000,000 gallons a day could have been furnished to the city from the basin, with the use of the present storage supplies. All that was wanting was the New Aqueduct to convey the water to the city.

The building of the two reservoirs on the East Branch of Croton river, at Sodom; the reservoir on the Muscote river and the reservoir on the Titicus river will insure an adequate supply for the next ten years.

BRONX AND BYRAM RIVER SUPPLY.

The commissioners to appraise damages on the Bronx river, between Woodlawn and Williamsbridge are taking testimony as to same.

The last of the searches and maps are now being made to enable the Counsel to the Corporation to have commissioners appointed to appraise damages on the Bronx river, from Williamsbridge to tide-water.

A commission has been appointed to appraise the values of lands and rights taken on the Bear Gutter Creek and Byram river necessary to connect the waters of the Byram and Bronx rivers.

Searches, maps, etc., are being prepared necessary to appoint a commission to appraise values of land, etc., at Byram Pond.

The reservoir at Williamsbridge has been completed.

The work on approaches and tunnel to connect Byram and Bronx rivers is progressing favorably in view of the large amount of bad weather during the quarter.

The regular force has been employed in repairing roads, excavating, etc., at Rye Ponds, and building the necessary drains at Williamsbridge Reservoir to provide for change of drainage.

The supply of water has been uninterrupted during the quarter and year.

1,472,000,000 gallons of water were supplied during the quarter.

300,000,000 gallons has been drawn from Rye Ponds Reservoir during the quarter.

The Kensico Reservoir is full.

6,083,000,000 gallons of water were supplied during the year, an average of 16,671 million gallons per day.

The Keeper's house was commenced in September, and is now up to the second-floor.

Land Acquired and Damages Paid in 1889.

| Voucher No. | Parcel No. | NAME OF OWNER. | FOR WHAT PAID. | AMOUNT PAID. | REMARKS. |
|-------------|------------|--------------------------------|----------------|--------------|---|
| 3 | 68 | M. B. Hart | Damages | \$25 00 | Bronx river. |
| 4 | 70 | Anton Schmidt | " | 1,080 00 | " |
| 5 | 97 | C. J. Clinch and others | " | 550 00 | " |
| 6 | 113 | G. F. Hodgman and others | " | 50 00 | " |
| 7 | 116 | E. A. Jenkins | " | 1,120 00 | " |
| 8 | 116 | S. Alger | " | 280 00 | " |
| 141 | ... | John Cleary | Land | 245 00 | |
| 142 | ... | Patrick Sliny | " | 845 00 | |
| 143 | ... | J. E. Cornell | " | 4,745 00 | Land to protect Old Aqueduct on Garden street, Yonkers. |
| 144 | ... | M. Foley | " | 295 00 | |
| 376 | 210 | The Bronx Wool and Leather Co. | Damages | 9,495 00 | Bronx river. |

| Voucher No. | Parcel No. | NAME OF OWNER. | FOR WHAT PAID. | AMOUNT PAID. | REMARKS. |
|-------------|------------|---|------------------|--------------|--------------------|
| 482 | 5 | C. W. Sweeney..... | Land..... | \$220 00 | Bear Gutter Creek. |
| 483 | 13 | E. Flanderon..... | "..... | 50 00 | " |
| 587 | 41 | Thomas Cox..... | Water rights.... | 1,595 00 | Byram river. |
| 588 | 47 | John P. Tripp..... | "..... | 1,117 50 | " |
| 589 | 42 | Leonard Smith..... | "..... | 312 50 | " |
| 590 | 43 | Richard Cuddy..... | "..... | 346 75 | " |
| 591 | 30, 31, 32 | James Hopkins..... | "..... | 583 75 | " |
| 592 | 39 | S. E. Townsend..... | "..... | 408 50 | " |
| 593 | 46 | Hiram Finch..... | "..... | 158 75 | " |
| 594 | 27, 44, 45 | C. F. Lawrence..... | "..... | 1,502 50 | " |
| 595 | 33 | G. W. Smith..... | "..... | 65 00 | " |
| 596 | 35 | A. S. Hopkins..... | "..... | 234 50 | " |
| 597 | 29 | M. A. Palmer and others..... | "..... | 823 00 | " |
| 804 | 123 | F. W. Kraft and others..... | Damages..... | 913 00 | Bronx river. |
| 805 | 125 | O. P. Odell and others..... | "..... | 1,750 00 | " |
| 806 | 126 | J. T. N. B. Reynaud and others..... | "..... | 975 00 | " |
| 807 | 127 | J. A. Farrington and others..... | "..... | 750 00 | " |
| 808 | 130 | New York and Hudson River Railroad } Co. and others..... | "..... | 50 00 | " |
| 809 | 131 | Mary Palen and others..... | "..... | 460 00 | " |
| 810 | 132 | A. A. Frazer and others..... | "..... | 225 00 | " |
| 811 | 133 | E. Huckins and others..... | "..... | 900 00 | " |
| 812 | 134 | J. L. Van Wyck and others..... | "..... | 400 00 | " |
| 813 | 135 | H. W. Andrews and others..... | "..... | 1,400 00 | " |
| 814 | 136 | H. Rosenberg and others..... | "..... | 125 00 | " |
| 815 | 137 | J. Stimmel and others..... | "..... | 25 00 | " |
| 816 | 138 | Sarah Reid and others..... | "..... | 200 00 | " |
| 817 | 139 | O. P. Odell and others..... | "..... | 210 00 | " |
| 818 | 140 | M. E. Reynolds and others..... | "..... | 225 00 | " |
| 819 | 141 | C. A. Sherwood and others..... | "..... | 325 00 | " |
| 820 | 142 | James Hoyt and others..... | "..... | 275 00 | " |
| 821 | 143 | Meyer Finn and others..... | "..... | 800 00 | " |
| 822 | 144 | J. E. Hunter and others..... | "..... | 280 00 | " |
| 823 | 145 | M. Dickson and others..... | "..... | 125 00 | " |
| 824 | 146 | Charles B. Mason and others..... | "..... | 75 00 | " |
| 825 | 147 | C. W. Therasson and others..... | "..... | 5 00 | " |
| 826 | 148 | H. W. Davis and others..... | "..... | 237 00 | " |
| 827 | 149 | William J. Underwood, Jr., and others..... | "..... | 534 00 | " |
| 828 | 150 | O. Gunther and others..... | "..... | 125 00 | " |
| 829 | 151 | P. Gunther and others..... | "..... | 190 00 | " |
| 830 | 152 | E. Gabler and others..... | "..... | 950 00 | " |
| 831 | 153 | C. Gundlach and others..... | "..... | 75 00 | " |
| 832 | 154 | E. L. E. Phipps and others..... | "..... | 75 00 | " |
| 833 | 155 | J. P. Donohue and others..... | "..... | 100 00 | " |
| 834 | 156 | E. L. B. Cappleman and others..... | "..... | 150 00 | " |
| 835 | 157 | The Manhattan Life Insurance Co. and } others..... | "..... | 400 00 | " |
| 836 | 158 | F. W. Weiss and others..... | "..... | 990 00 | " |
| 837 | 160 | The United States Trust Co..... | "..... | 5 00 | " |
| 838 | 161 | F. McGuire and others..... | "..... | 125 00 | " |
| 839 | 162 | J. Siller and others..... | "..... | 100 00 | " |
| 840 | 163 | J. G. Sanford and others..... | "..... | 50 00 | " |
| 841 | 164 | E. K. Adams, Jr., and others..... | "..... | 50 00 | " |
| 842 | 165 | H. Boyer and others..... | "..... | 65 00 | " |
| 843 | 166 | C. Sperl and others..... | "..... | 140 00 | " |
| 844 | 167 | John Scanlon and others..... | "..... | 65 00 | " |
| 845 | 168 | St. John's College and others..... | "..... | 65 00 | " |
| 846 | 169 | P. Bucking and others..... | "..... | 65 00 | " |
| 847 | 170 | P. H. Finnen and others..... | "..... | 65 00 | " |
| 848 | 171 | H. Kosske and others..... | "..... | 140 00 | " |
| 849 | 172 | M. Sperl and others..... | "..... | 65 00 | " |
| 850 | 173 | J. Smith and others..... | "..... | 60 00 | " |
| 851 | 174 | A. Norotny and others..... | "..... | 100 00 | " |
| 852 | 175 | "..... | "..... | 75 00 | " |
| 853 | 176 | "..... | "..... | 100 00 | " |
| 854 | 177 | "..... | "..... | 60 00 | " |
| 855 | 178 | G. Schermer and others..... | "..... | 115 00 | " |
| 856 | 179 | M. Duhme and others..... | "..... | 65 00 | " |
| 857 | 180 | H. Wellbrock and others..... | "..... | 150 00 | " |
| 858 | 181 | The Hodgman Rubber Co..... | "..... | 225 00 | " |
| 859 | 182 | G. J. Penfield and others..... | "..... | 1,000 00 | " |
| 860 | 184 | J. H. Westcott and others..... | "..... | 150 00 | " |
| 861 | 185 | W. H. Bard and others..... | "..... | 35 00 | " |
| 862 | 186 | A. J. Kapp and others..... | "..... | 25 00 | " |
| 863 | 187 | W. H. Bard and others..... | "..... | 25 00 | " |
| 864 | 188 | B. C. McDonald and others..... | "..... | 25 00 | " |
| 865 | 189 | A. J. Kapp and others..... | "..... | 25 00 | " |
| 866 | 190 | F. Schmaltz and others..... | "..... | 25 00 | " |
| 867 | 191 | A. J. Kapp and others..... | "..... | 50 00 | " |
| 868 | 192 | C. Remhardt and others..... | "..... | 50 00 | " |
| 869 | 193 | A. J. Kapp and others..... | "..... | 35 00 | " |
| 870 | 194 | C. Remhardt and others..... | "..... | 50 00 | " |

| Voucher No. | Parcel No. | NAME OF OWNER. | FOR WHAT PAID. | AMOUNT PAID. | REMARKS. |
|-------------|------------|------------------------------------|----------------|--------------|--------------|
| 871 | 195 | W. H. Bard and others..... | Damages..... | \$35 00 | Bronx river. |
| 872 | 196 | "..... | "..... | 100 00 | " |
| 873 | 198 | W. Wyland and others..... | "..... | 50 00 | " |
| 874 | 200 | A. J. Kapp and others..... | "..... | 75 00 | " |
| 875 | 201 | D. Mayer and others..... | "..... | 20 00 | " |
| 876 | 202 | A. J. Kapp and others..... | "..... | 150 00 | " |
| 877 | 203 | W. H. Bard and others..... | "..... | 20 00 | " |
| 878 | 204 | A. J. Kapp and others..... | "..... | 20 00 | " |
| 879 | 205 | G. H. Karsten and others..... | "..... | 50 00 | " |
| 880 | 205 | F. L. Van Gillerve and others..... | "..... | 60 00 | " |
| 881 | 208 | F. J. De Peyster and others..... | "..... | 150 00 | " |

Amount Expended to December 31, 1889.

| | To DECEMBER 31, 1888. | IN 1889. | TOTAL. |
|---------------------------------|-----------------------------|--------------|----------------|
| Labor and material..... | \$2,561,552 91 | \$99,305 94 | \$2,660,858 85 |
| Land, damages and expenses..... | 1,047,770 64 | 83,698 44 | 1,131,469 08 |
| Engineering and inspection..... | 299,390 79 | 22,084 34 | 321,475 13 |
| Total to date..... | \$3,908,714 34 | \$205,088 72 | \$4,113,803 06 |

NEW AQUEDUCT.

The following work has been done during the year 1889 in connection with the New Aqueduct :
Surveys under Corporation Counsel, of lands, etc., for reservoirs in Putnam County at South East.

Surveys for dam sites for Reservoir "D" in Putnam County.
Surveys for lands required for Reservoir "M" on Titicus river.
Maps, etc., for lower end of Reservoir "M"; examinations, etc., of plans and specifications for engines, boilers, etc., at Harlem river and for Reservoir "M"; superintendence and inspection of work on New York Island and at Croton Dam where the work under the Aqueduct Commissioners interferes with or requires changes in the roads, pipes and sewers, under the care of the Department of Public Works.

The progress made by the Aqueduct Commission in the work on the New Aqueduct has been very slow; there is no means of finding out what they expect to do in the shape of repairs. They have been two years examining for bad work, and have had time enough, and, I am sure, help enough, to have found it all and had it repaired.

They have still to place under contract house over gates, etc., at Croton Dam; road at Croton Dam, from gate-house to first road south; houses or ventilators over each shaft, and railings around same; pumping facilities or a blow-off to empty depressed Aqueduct at Gould's swamp; blow-off at Shaft No. 24 into Harlem river, all of which should have been under contract early in 1889 and finished now; six months time should have the same completed and tested.

Although in view of the large amount of bad work done, etc., it will be a year after the same has been filled and in use before certainty can be expressed as to its capabilities and durability.

The mains now laid and being laid are sufficient to distribute one hundred million gallons per day additional, and the effect of same where obtained should be observed before definite plans can be made for the future.

AQUEDUCT—REPAIRS, MAINTENANCE AND STRENGTHENING.

Work Done during the Quarter ending December 31, 1889.

| DIVISIONS. | EARTH EXCAVA- TION. | STONE QUARRIED. | DRY MASONRY. | FENCE. | | FILLING AND GRADING. | SODDING. | PAVING. | FLAG- GING. |
|--------------|---------------------------|--------------------|-----------------|---------------------------|------------------------------|----------------------------|------------------|------------------|-----------------|
| | Cubic Yards. | Cubic Yards. | Cubic Yards. | Built. Lineal Feet. | Repaired. Lineal Feet. | Cubic Yards. | Square Yards. | Square Yards. | Square Feet. |
| First..... | .... | .... | .... | 50 | .... | .... | .... | .... | .... |
| Second..... | .... | .... | 33 | 2,550 | .... | .... | .... | .... | .... |
| Third..... | 199 | .... | 199 | 253 | 66 | .... | .... | .... | .... |
| Fourth..... | .... | .... | .... | 335 | 2,575 | .... | .... | .... | .... |
| Fifth..... | 500 | .... | 139 | 500 | 800 | 558 | 40 | .... | .... |
| Sixth..... | .... | 38 | 41 | .... | .... | 995 | .... | .... | .... |
| Seventh..... | 8 | .... | 5 | .... | .... | 4 | 13,122 | 4 | 500 |
| Eighth..... | 1,500 | 1,535 | .... | .... | .... | .... | .... | .... | .... |
| Total... | 2,207 | 1,593 | 417 | 3,688 | 3,441 | 1,557 | 13,162 | 4 | 500 |

The regular work on the several Divisions has been conducted as usual during the past quarter, such as care of surface of Aqueduct gate-houses, machinery, etc.; patrolling reservoirs, watching and attending leaks, building and repairing fences.

The more particular work on each Division has been as follows:

First Division—Cutting brush and trees along the line; cutting ice from culverts; raising roof on cement shed and painting same; hauling coal and cement from Sing Sing; raking leaves; spreading manure; repairing fences; attending leaks; care of dam, gate-house and machinery, and patrolling vicinity of same.

Second Division—Rebuilding portion of stone-wall in Brier Cliff road; building fences; watching and attending leaks; the leak at "File works arch" needs constant attention; cleaning up line of leaves, rubbish, etc.

Third Division—Building retaining-wall on arch bank; repointing joints of ventilators; painting roof of house; building and repairing fences; cleaning gutters of leaves and snow; the leaks on this Division have given but little trouble during the past quarter; the Aspinwall leak needing branding occasionally; cleaning surface of leaves, brush, etc.

Fourth Division—Cleaning up line of Aqueduct; building and repairing fences; repairing crosswalks; cleaning culverts; attending leaks.

Fifth Division—Building wall and excavating for the same in the Glen; filling, grading and sodding banks; paving gutters; building and repairing fence; cleaning up surface of Aqueduct; cleaning and keeping culverts clear.

Sixth Division—Building abutments to strengthen retaining-wall at Bathgate bank; building stone culverts; attending leaks; building and repairing fences; cleaning up line of leaves, brush, etc.; cleaning and keeping culverts clear.

Seventh Division—Care of High bridge, tower, machinery and grounds; building and repairing fences; keeping ditches and culverts clean; removing scaffolding from chimney of the fire-room and rebuilding footway to coal dock with lumber of the same; the dock has had new flooring where required, also a new tramway; painting engine-house and railing around reservoir; rebuilding gutters; grading, sodding and spreading manure; flagging east of reservoir; an engineer's office building has been commenced during the last quarter.

Eighth Division—Cleaning and repairs to Central Park and Forty-second Street Reservoirs, gate-house, etc.; cleaning and maintenance of High Service Works; excavating earth and rock from the old reservoir, Central Park; repairs to furnace and pumps at High Service Works, Ninety-eighth street; patrolling Central Park Reservoir and general maintenance.

Croton Aqueduct—Repairs, Maintenance and Strengthening for the Year 1889.

| DIVISIONS. | EARTH EXCAVATION. | STONE QUARRIED. | DRY MASONRY. | FENCE. | | PAVING. | FILLING AND GRADING. | STONE MASONRY. | SODDING. | FLAGGING. |
|---------------|-------------------|-----------------|--------------|--------------|--------------|---------------|----------------------|----------------|---------------|-----------|
| | | | | Built. | Repaired. | | | | | |
| | Cubic Yards. | Cubic Yards. | Cubic Yards. | Lineal Feet. | Lineal Feet. | Square Yards. | Cubic Yards. | Cubic Yards. | Square Yards. | Sq. Ft. |
| First ..... | ..... | ..... | ..... | 50 | ..... | ..... | ..... | ..... | ..... | ..... |
| Second ..... | ..... | ..... | 37 | 6,406 | 300 | ..... | ..... | ..... | ..... | ..... |
| Third | 953 | 542 | 8.8 | 1,886 | 890 | 20 | 585 | ..... | ..... | ..... |
| Fourth ..... | ..... | ..... | ..... | 1,735 | 6,170 | ..... | ..... | ..... | 55 | ..... |
| Fifth | 3,502 | ..... | 1,026 | 1,982 | 2,500 | 310 | 1,068 | ..... | 60 | ..... |
| Sixth | 513 | 678 | 1,142 | 3,985 | 3,462 | 96 | 5,319 | 134 | ..... | ..... |
| Seventh | 619 | ..... | 5 | 350 | 600 | 4 | 1,377 | ..... | 15,677 | 500 |
| Eighth | 7,826 | 6,655 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Total | 13,413 | 7,875 | 3,018 | 16,394 | 13,922 | 430 | 8,349 | 134 | 15,792 | 500 |

The general character of the work has been maintenance and strengthening, with the result of considerable improvement all along the line.

The more particular work has been building retaining-walls; attending leaks, which have been quite troublesome during the year, especially on the Second and Sixth Divisions; the leaks at these points need constant watching; the acquiring of additional property in the Glen, at Yonkers, will very much aid the prosecution of work at this point; the pipes on the bridge have been recaulked and flagging laid and curb set in front of reservoir on Tenth avenue; flagging has also been laid on the east side of reservoir to top of steps leading down to bridge; High Bridge being a central point, from which the city's water supply can be easily controlled, it has therefore been deemed advisable to erect an office building for the engineer in charge of same. To this end a building has been started and will be ready for occupancy in the early spring. A temporary office has been located in the engine-house, and at this date all connections with the former office at Yonkers have been relinquished.

First Division—The work has been replanking bridge at dam; care of dam, gate-houses and lake; keeping lake clear of vegetable growth and patrolling vicinity of same; building fences; attending leaks; cutting brush, grass and trees, and general maintenance.

Second Division—A part of the retaining-wall on Kingsland bank, and a part of retaining-wall at "Arch" bank has been rebuilt; building and repairing fences; attending leaks, which by constant attention have been kept under control; cutting grass; cleaning up grounds of leaves, brush, etc.; keeping ditches and culverts clear.

Third Division—Building retaining-wall on Kingsland bank; part of retaining-wall at Arch bank has been rebuilt, also part of stone-wall at Arch; filling and grading on high bank; repointing of joints in ventilators; the woodwork on first floor of Keeper's house has been repainted; the leaks have received constant attention; the culverts have been kept clear and open; building and repairing fences; the surface of the Aqueduct has been cleaned up and put in a presentable condition.

Fourth Division—Building and repairing fences; cleaning crosswalks; keeping culverts clear; cutting grass and cleaning up line of leaves, rubbish, etc. The Dobb's Ferry leak still remains tight.

Fifth Division—Building retaining wall near Warburton avenue and in the Glen; filling and grading banks and roads; sodding and cutting grass; building and repairing fences; excavating earth; painting house; seeding banks; cleaning culverts and crosswalks; cleaning up surface of leaves, brush, etc.

Sixth Division—Building retaining-wall on Dickerson bank and in Sanford's lot; building portion of slope wall on Bathgate bank; building stone culverts and abutments to strengthen retaining-wall at Bathgate bank; quarrying stone for same; grading banks; attending leaks; cutting grass; building and repairing fences; cleaning up line of leaves, brush, etc.

Seventh Division—Recaulking pipes in bridge; repairing coal track, and repairs to engine-house and inside of tower; a portion of stone wall on the east side of the Aqueduct has been rebuilt; resetting stone steps at east gate-house and building dry stone wall at same point; rebuilding gutter; grading south side of reservoir and spreading screenings on same; sodding banks of reservoir; grading, excavating and sodding at High Bridge steps; painting in engine-house, tower and new railing around reservoir; the large pipe in bridge has also been painted; laying sewer pipe from office building; building scaffolding around brick chimney of engine-house; the footway leading to coal dock was built of the lumber used in above scaffolding; rebuilding new plank flooring to dock where required; a new tramway built; spreading manure; new flagging has been laid and curb set on Tenth avenue in front of reservoir; flagging has also been laid from east side of reservoir to top of step leading to bridge; an office building is in course of erection on this Division for the occupancy of Engineer in charge of Aqueduct—this in addition to the general maintenance, hoisting coal, care of machinery, etc.

Eighth Division—Cleaning and repairs of Central Park and Forty-second street reservoirs and gate-houses and outside mains; repairing and pointing furnace at High Service Works; painting and repairing pumps; altering coal platform; painting iron-work at South Gate-house Chamber; excavating a large amount of rock and earth from the Old Reservoir, Central Park; filling-in for roadway leading out from same; painting gates and pipes on North Gate-house Chamber; pointing masonry around reservoir; patrolling Central Park Reservoir; cutting grass and general maintenance.

The Aqueduct has uninterruptedly furnished a full supply to the city, and having completed the strengthening of the top of the Aqueduct, is enabled to carry five inches more water in same than in 1875 when this work was commenced.

Until the New Aqueduct is completed and fully tested no more work can be done, for the necessities of the city demand the whole supply without any interruption.

The completion of the excavation of the Old Reservoir in Central Park, and the concreting of the bottom should be completed, and an appropriation has been made for all the work on same that can be economically done in 1890.

The telephone line along the Aqueduct, which was put up in 1877 and 1878, should be reconstructed on improved methods and a portion of the material has been obtained and part of the work done.

The pumping engines at High Bridge and Ninety-eighth street have been steadily running during the year, and at Ninety-eighth street the demands have made it necessary to run both of the pumping engines which leave no reserve in case of accident.

Another pumping engine will be provided next year.

In order to protect the retaining-wall built to protect the Aqueduct east of Garden street, Yonkers, from being undermined by parties owning property adjoining same, it will be necessary to buy a strip of land about 20 feet wide west of same, surveys and maps of same will be made.

HIGH BRIDGE, 1889.

Performance of High Service Pumping Engines at High Bridge.

| NUMBER OF DAYS PUMPED. | NUMBER OF STROKES. | HEIGHT PUMPED, FEET. | NUMBER OF GALLONS PUMPED. | POUNDS OF COAL CONSUMED. | GALLONS OF OIL EXPENDED. | POUNDS OF WASTE EXPENDED. |
|------------------------|--------------------|----------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 365 | 31,629,337 | 100 | 2,327,000,000 | 3,863,900 | 827 | 365 |
| Average per month. | 2,635,778 | 100 | 193,916,666 | 321,992 | .... | .... |

Average duty 50,236,491 pounds raised one foot with 100 pounds of coal.
Average amount pumped daily, 6,375,343 gallons.
Average cost of pumping 1,000,000 gallons 100 feet high, \$7.79.

NINETY-EIGHTH STREET, 1889.

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

| NUMBER OF DAYS PUMPED. | NUMBER OF STROKES. | HEIGHT PUMPED, FEET. | NUMBER OF GALLONS PUMPED. | POUNDS OF COAL CONSUMED. | GALLONS OF OIL EXPENDED. | POUNDS OF WASTE EXPENDED. |
|------------------------|--------------------|----------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 365 | 29,080,260 | 56 | 3,169,748,340 | 3,209,128 | 477 | 420 |
| Average per month. | 2,423,355 | 56 | 264,145,695 | 274,094 | .... | .... |

Average duty 45,499,700 pounds raised one foot with 100 pounds of coal.
Average amount pumped daily 8,684,242 gallons.
Average cost of pumping 1,000,000 gallons 56 feet high, \$5.18.

LAYING CROTON PIPES.

Contracts for laying water-mains in the following streets and avenues have been completed during the quarter:

Depot place, between Sedgwick avenue and the tracks of the New York Central and Hudson River Railroad.

One Hundred and Eighteenth street, between Fourth and Madison avenues.

Woodruff street, between Main street and Lillian place.

One Hundred and Forty-eighth street, between Willis and Brook avenues.

One Hundred and Ninth street, between First avenue and East river.

Ninety-sixth street, between Boulevard and Tenth avenue.

One Hundred and Tenth street, between Manhattan and Tenth avenues.

Riverview Terrace, between Dock street and Powell place.

One Hundred and Thirty-second street, between Old Broadway and Tenth avenue.

One contract for laying mains has been entered into.

One contract for furnishing cast-iron pipe and branches, and one contract for laying mains have been completed.

Amount of Pipe Laid, Stop-cocks Set and Hydrants Placed.

| DIAMETER. | DURING QUARTER ENDING DECEMBER 31, 1889. | DURING YEAR 1889. | SIZE. | DURING QUARTER ENDING DECEMBER 31, 1889. | DURING YEAR 1889. | PATTERN. | DURING QUARTER ENDING DECEMBER 31, 1889. | DURING YEAR 1889. |
|-------------|--|--------------------|-------------|--|-------------------|-----------|--|-------------------|
| 48-inch.... | Lineal feet. 3,690 | Lineal feet. 7,513 | 48-inch.... | 1 | 1 | "B".... | .. | 38 |
| 36-inch.... | ..... | 860 | 20-inch.... | 2 | 2 | "A".... | 48 | 148 |
| 20-inch.... | 95 | 169 | 12-inch.... | 7 | 32 | No. 1.... | 24 | 43 |
| 12-inch.... | 3,082 | 22,057 | 6-inch.... | 45 | 138 | Total.. | 72 | 229 |
| 6-inch.... | 23,272 | 69,369 | Total.. | 55 | 173 | | | |
| Total.. | 30,159 | 99,968 | | | | | | |

Summary, 1889.

| Diameter of Pipe. | PIPES. | | | STOP-COCKS. | | | HYDRANTS. | | | |
|-------------------|-----------------------------|---|-----------------------------------|----------------------------------|-------------------------|------------------------------------|------------------|-----------------------------------|--------------------------|---|
| | Pipe Laid to Dec. 31, 1888. | Pipe Laid from Dec. 31, 1888, to Dec. 31, 1889. | Total Pipe Laid to Dec. 31, 1889. | Stop-cocks set to Dec. 31, 1888. | Stop-cocks set in 1889. | Total Stop-cocks to Dec. 31, 1889. | Pattern. | Hydrants Placed to Dec. 31, 1888. | Hydrants Placed in 1889. | Total Hydrants Placed to Dec. 31, 1889. |
| 48-inch.... | Feet. 65,654 | Feet. 7,513 | Feet. 73,167 | 16 | 1 | 17 | Nos. 1, 2 and 3. | 3,491 | 43 | 3,534 |
| 36-inch.... | 94,382 | 860 | 95,442 | 40 | .. | 40 | Victor..... | 130 | .... | 139 |
| 30-inch.... | 4,773 | ..... | 4,773 | 29 | .. | 29 | "A" hydrants. | 2,811 | 148 | 2,959 |
| 24-inch.... | 11,542 | ..... | 11,542 | 13 | .. | 13 | "B" hydrants. | 1,750 | 38 | 1,788 |
| 20-inch.... | 193,974 | 169 | 194,153 | 180 | 2 | 182 | Totals..... | 8,191 | 229 | 8,420 |
| 16-inch.... | 17,130 | ..... | 17,130 | 22 | .. | 22 | | | | |
| 12-inch.... | 830,528 | 22,057 | 852,585 | 1,534 | 32 | 1,566 | | | | |
| 10-inch.... | 6,629 | ..... | 6,629 | 15 | .. | 15 | | | | |
| 6-inch.... | 2,075,349 | 69,369 | 2,144,718 | 4,619 | 138 | 4,757 | | | | |
| 4-inch.... | 32,867 | ..... | 32,867 | 119 | .. | 119 | | | | |
| Total feet. | 3,370,038 | 99,968 | 3,470,006 | 6,587 | 173 | 6,760 | | | | |
| Miles.... | 638.26 | 18.93 | 657.19 | ..... | ..... | ..... |  |  |  |  |

The distributing mains throughout the city are in fair condition, except those contiguous to the rivers, and the present gangs on repairs, with additional skilled caulkers and pipe-layers, I have no doubt, will be able to keep same in order when the increased pressures from the supply through the New Aqueduct is obtained.

In the upper portion of the city a number of large mains are necessary to distribute this new supply, which will have to be laid as the appropriation will permit.

HIGH SERVICE SYSTEM.

That portion of the city supplied from high service has been built upon to a greater extent during the past five years than the rest of the city, and as the levels above tide are very irregular, the higher portions are suffering during the day for water. The following means have been and will be taken to remedy this short supply:

First—As soon as an additional supply of water is obtained, all of that area supplied by high service water that is below seventy feet above mean high tide can be furnished from low service, which will relieve the pumps of one-eighth of the present district supplied.

Second—By additional pumping engine at Ninety-eighth street pumping works, for which a resolution has been passed and approved by the Mayor, November 29, 1889, and will be contracted for early in 1890.

Third—By an additional twenty-inch main to the very high ground at Ninety-third street and Fourth avenue, for which a resolution has been passed, and will be contracted for early in 1890.

The whole depends on the completion of the New Aqueduct; no more water can be obtained through the present Aqueduct, as it is now carrying more water than ever before and a larger risk is now taken with same, and the limit that one dares to take has been reached.

The exceptional growth of New York since 1879, without any proportional increase of supply, leaves all poorly provided for, especially those on high grounds.

REPLACING WATER-MAINS ON WATER, FRONT, SOUTH AND WEST STREETS, ETC.

One gang of men has been steadily employed on the work; but on account of the winter weather making it impossible to restore the pavements on the business streets to advantage, work has been stopped until spring.

During the year new mains have been laid and houses connected with same in—

Reade street, between West and Greenwich streets.
Barclay street, between West and Greenwich streets.
Chambers street, between West and Greenwich streets.
Duane street, between West and Greenwich streets.
Caroline street, between Duane and Jay streets.
Jay street, between West and Washington streets.
Grand street, between East and Mangin streets.
East street, between Grand and Cherry streets.
Harrison street, between West and Washington streets.
Franklin street, between West and Greenwich streets.
North Moore street.
Beach street.
Hubert street.
Laight street.
Vestry street.
Desbrosses street.
Hoboken street, between West and Washington streets.
Watts street, between West and Greenwich streets.
Water street, between Whitehall and Wall streets.

Moore street, between Pearl and South streets.
Old Slip, north side, between South and Water streets.
Front street, between Fulton street and Peck Slip.
Peck Slip, south side, between South and Front streets.
Beckman street, between Pearl and South streets.
The water-mains along the water-front and cross streets have been for forty years subjected to the corrosive action of salt and brackish water. They have been replaced from Canal street to the Battery, on the Hudson river, and from Battery to Fulton street, on the East river.
It will take three years more to complete this work, as it is not economical to try and do too much at once in the busy streets along the water-fronts.

METERS.

Meters placed during the quarter ending December 31, 1889 409
Meters placed during the year ending December 31, 1889 1,659
Number of meters now in use 19,870

Water-meters in Use December 31, 1889.

| WHERE PLACED. | 5/8" | 3/4" | 1" | 1 1/2" | 2" | 3" | 4" | 6" | TOTAL. |
|-----------------------------------|-------|-------|-------|--------|-------|-----|-----|----|--------|
| Hotels | 13 | 65 | 140 | 70 | 52 | 22 | 7 | .. | 369 |
| Breweries, bottlers, etc..... | 18 | 95 | 122 | 55 | 77 | 19 | 2 | .. | 388 |
| Charitable institutions, etc..... | .... | 3 | 28 | 36 | 43 | 8 | 2 | .. | 120 |
| Offices | 32 | 762 | 785 | 311 | 86 | 33 | 18 | .. | 2,027 |
| Manufacturing establishments.. | 117 | 270 | 434 | 336 | 173 | 21 | 5 | .. | 1,356 |
| Gas-works ..... | .... | 3 | 13 | 3 | 4 | 14 | 11 | .. | 48 |
| Railroads | 7 | 95 | 59 | 6 | 12 | 18 | 24 | 2 | 223 |
| Stables..... | 362 | 1,012 | 477 | 78 | 28 | 8 | 1 | .. | 1,966 |
| Apartment-houses | 10 | 16 | 63 | 61 | 62 | 7 | 4 | .. | 223 |
| Docks..... | 19 | 16 | 15 | 10 | 40 | 53 | 37 | .. | 190 |
| Riverdale | 43 | 32 | 12 | 1 | .. | 1 | 2 | .. | 91 |
| Miscellaneous .. | 4,383 | 4,055 | 3,060 | 822 | 423 | 100 | 13 | 7 | 12,869 |
| Total..... | 5,004 | 6,424 | 5,208 | 1,789 | 1,006 | 304 | 126 | 9 | 19,870 |

| STYLE OF METER. | 5/8" | 3/4" | 1" | 1 1/2" | 2" | 3" | 4" | 6" | TOTAL. |
|-------------------|-------|-------|-------|--------|-------|-----|-----|----|--------|
| Gem ..... | .... | .... | .... | .... | 2 | 8 | 1 | .. | 11 |
| Crown | 3,342 | 3,036 | 2,000 | 268 | 139 | 34 | 25 | 8 | 8,852 |
| Worthington | 588 | 2,620 | 2,477 | 1,446 | 813 | 242 | 92 | 1 | 8,284 |
| Thomson | 1,074 | 768 | 731 | 75 | 47 | 20 | 8 | .. | 2,723 |
| Total..... | 5,004 | 6,424 | 5,208 | 1,789 | 1,006 | 304 | 126 | 9 | 19,870 |

Average Number of Gallons used per day through Meters.

| NUMBER OF METERS. | WHERE USED. | GALLONS. | NUMBER OF METERS. | WHERE USED. | GALLONS. |
|-------------------|---------------------------------|-----------|-------------------|-----------------------|------------|
| 369 | Hotels | 1,704,000 | 1,945 | Stables..... | 1,202,800 |
| 388 | Breweries, bottlers, etc..... | 1,747,000 | 217 | Apartment-houses..... | 413,000 |
| 120 | Charitable institutions..... | 770,000 | 190 | Docks | 1,726,100 |
| 2,027 | Offices | 1,931,000 | 91 | Riverdale | 85,400 |
| 1,305 | Manufacturing establishments... | 2,982,000 | 12,330 | Miscellaneous | 11,785,000 |
| 48 | Gas works..... | 1,329,400 | | | |
| 223 | Railroads..... | 1,806,600 | 19,253 | Total..... | 27,482,300 |

WASTE AND USE OF WATER.

The continued large rainfall and cool weather has increased the supply from the Bronx river and decreased the average use in the city, so that the pressures during the year have only varied a few feet. The New Aqueduct supply is still an uncertain element, and when the same is obtained there will be a tendency to a large waste from increased pressures; and I recommend that all means possible be taken to regulate the use and stop the waste, and that in the high service district where the water is pumped, that all flats and buildings with more than one family be metered at the expense of the City; the cost of same will be soon returned in increased revenue and all tendency to waste checked.

In order to induce parties to use meters I would recommend that the price of water by meter be reduced to 7 1/2 cents per 100 cubic feet, same as it was in 1880 and 1881.

Yours, respectfully,

G. W. BIRDSALL, Chief Engineer Croton Aqueduct.

STREETS AND AVENUES IN WHICH WATER-MAINS HAVE BEEN LAID IN 1889.

Forty-eight-inch Pipe.

One Hundred and Tenth street, between Manhattan and Tenth avenues.
Eighth avenue (two lines), between Eighty-fifth and Ninetieth streets.
One Hundred and Twenty-fifth street, between Fifth and Eighth avenues.

Thirty-six-inch Pipe.

One Hundred and Twenty-fifth street, between Fourth and Fifth avenues.

Twelve-inch Pipe.

Southern Boulevard, between St. Ann's avenue and One Hundred and Thirty-eighth street.
Boston road, between One Hundred and Seventy-seventh and Jefferson streets.
Riverside avenue, between Seventy-third and Seventy-sixth streets.
Riverside avenue, between Eighty-fourth and Eighty-eighth streets.
One Hundred and Thirty-eighth street, between Third avenue and Mott Haven Canal.
Rivington street, between Bowery and East street.
Second avenue, between Houston and Twentieth streets.
Eighth avenue, between One Hundred and One Hundred and Tenth streets.
Park avenue (east side), between One Hundred and Seventh and One Hundred and Ninth streets.

Six-inch Pipe.

Seventy-fourth street, between Eighth and Ninth avenues.
One Hundred and Second street, between First and Second avenues.
One Hundred and Thirty-fifth street, between Madison and Fourth avenues.
Seventy-fifth street, between Eighth and Ninth avenues.
Westchester avenue, between Prospect avenue and Southern Boulevard.
One Hundred and Ninetieth street, between Tenth and Audubon avenues.
Van Courtland avenue, between Riverdale and Palisade avenues.
Seventy-seventh street, between Boulevard and Eleventh avenue.

Chestnut street, between One Hundred and Seventy-seventh street and Boston road.
Old Boston road, between Bailey and Sedgwick avenues.
Eighth avenue, between One Hundred and Fifty-eighth and One Hundred and Fifty-ninth streets.

Forty-third street, between First avenue and East river.
Walton avenue, between One Hundred and Fiftieth and One Hundred and Fifty-first streets.
One Hundred and Third street, between Eighth and Ninth avenues.
One Hundred and Eighteenth street, between Seventh and Eighth avenues.
Sixty-sixth street, between Tenth and Eleventh avenues.
Elton avenue, between One Hundred and Fifty-third and One Hundred and Fifty-fourth streets.
One Hundred and Forty-fourth street, between Eighth and New avenues.
One Hundred and Fifty-fifth street, between Elton avenue and a point westerly.
One Hundred and Eighty-seventh street, between Webster and Bainbridge avenues.
Bainbridge avenue, between One Hundred and Eighty-fourth and One Hundred Eighty-seventh streets.

One Hundred and Eighty-fourth street, from Bainbridge avenue, southerly.
Gray street, between Anthony and Morris avenues.
Crane place, between One Hundred and Seventy-third and One Hundred and Seventy-sixth streets.

Topping street, between One Hundred and Seventy-third and Gray streets.
Sedgwick avenue, between Old Boston road and Van Courtland avenue.
One Hundred and Fifty-fifth street, between New avenue and Harlem river.
Creston avenue, between One Hundred and Eighty-first and One Hundred and Eighty-third streets.

Washington avenue, between One Hundred and Eighty-first street and Pelham avenue.
Eighty-seventh street, across Fourth avenue.
Eighty-ninth street, across Fourth avenue.
One Hundred and Eighty-third street, between Creston and Ryer avenues.
Ryer avenue, between One Hundred and Eighty-first and One Hundred and Eighty-third streets.

Valentine avenue, between One Hundred and Seventy-ninth and One Hundred and Eighty-fourth streets.
Edgcombe avenue, between One Hundred and Forty-first and One Hundred and Forty-fifth streets.

One Hundred and Seventy-third street, between Week's street and Fleetwood avenue.
Eastburn street, between One Hundred and Seventy-third street and a point northerly.
Sixty-third street, between Tenth and Eleventh avenues.

New avenue, between One Hundred and Forty-second and One Hundred and Forty-fifth streets.

Rider avenue, between One Hundred and Thirty-fifth and One Hundred and Fortieth streets.
One Hundred and Forty-second street, between Boulevard and Hamilton place, Blackwell's Island.

One Hundred and Twenty-fifth street, between Tenth avenue and Manhattan street.
One Hundred and Thirty-sixth street, between Seventh and Eighth avenues.
Ninetieth street, between Boulevard and Riverside avenue.
Ninety-first street, between Boulevard and Riverside avenue.
Eighty-ninth street, between Boulevard and Riverside avenue.
One Hundred and Fourteenth street, between Madison and Fifth avenues.
One Hundred and First street, between Manhattan and Ninth avenues.
Depot place, between Sedgwick avenue and the tracks of the New York Central and Hudson River Railroad Company.

Webster avenue, from One Hundred and Seventy-ninth street, northerly.
Eighty-seventh street, from Riverside avenue, easterly.
Home street, between Southern Boulevard and Union avenue.
One Hundred and Twelfth street, between Sixth and St. Nicholas avenues.
One Hundred and Fifteenth street, between Madison and Fifth avenues.
One Hundred and Eighteenth street, between Fourth and Madison avenues.
One Hundred and Forty-seventh street, between Tenth and St. Nicholas avenues.
One Hundred and Second street, between Manhattan and Tenth avenues.
Eighty-fifth street, between Boulevard and Riverside avenue.
Woodruff street, between Main street and Lillian place.
One Hundred and Sixty-fifth street, between Prospect and Stebbins avenues.
College avenue, between College and Frederick streets.
Hunt's Point road, between Southern Boulevard and Lafayette avenue.
John street, between Marion and Webster avenues.
Arcularius place, between Mott and Sheridan avenue.
One Hundred and Forty-eighth street, between Willis and Brook avenues.
Albany avenue, between Macomb street and Van Courtland Park.
One Hundred and Ninth street, between First avenue and East river.
Ninety-sixth street, between Boulevard and Tenth avenue.
Riverview terrace, between Dock street and Powell place.
St. Ann's avenue, between Southern Boulevard and One Hundred and Thirty-second street.
One Hundred and Thirty-second street, between Old Broadway and Tenth avenue.

"B" Hydrants set in 1889.

South side Rivington street, between Bowery and Chrystie street. I
South side Rivington street, between Chrystie and Forsyth streets. I
Southeast corner Rivington and Forsyth streets. I
Southwest corner Rivington and Eldridge streets. I
Northeast corner Rivington and Eldridge streets. I
Southwest corner Rivington and Allen streets. I
South side Rivington street, between Allen and Orchard streets. I
South side Rivington street, between Orchard and Ludlow streets. I
Southeast corner Rivington and Ludlow streets. I
Northwest corner Rivington and Essex streets. I
Northeast corner Rivington and Essex streets. I
Southwest corner Rivington and Norfolk streets. I
South side Rivington street, between Norfolk and Suffolk streets. I
Northeast corner Rivington and Suffolk streets. I
Southwest corner Rivington and Clinton streets. I
South side Rivington street, between Clinton and Attorney streets. I
West side Second avenue, between Houston and First streets. I
Northwest corner Second avenue and First street. I
Southwest corner Second avenue and Third street. I
Northeast corner Second avenue and Third street. I
Northeast corner Second avenue and Fourth street. I
Southwest corner Second avenue and Fifth street. I
Northeast corner Second avenue and Fifth street. I
Southeast corner Second avenue and Sixth street. I
Southwest corner Second avenue and Seventh street. I
Southeast corner Second avenue and Eighth street. I
Southwest corner Second avenue and Ninth street. I
Southwest corner Second avenue and Tenth street. I
Northeast corner Second avenue and Eleventh street. I
Northeast corner Second avenue and Twelfth street. I
Northwest corner Second avenue and Twelfth street. I
Southeast corner Second avenue and Thirteenth street. I
Northwest corner Second avenue and Fourteenth street. I
Northwest corner Second avenue and Seventeenth street. I
Northwest corner Second avenue and Eighteenth street. I
Southwest corner Second avenue and Nineteenth street. I
Southeast corner Second avenue and Twentieth street. I
Southeast corner Tenth avenue and One Hundred and Tenth street. I

"A" Hydrants Set in 1889.

North side Seventy-fourth street, between Eighth and Ninth avenues. I
Northwest corner One Hundred and Second street and First avenue. I
Northwest corner One Hundred and Thirty-fifth street and Fourth avenue. I
Northeast corner One Hundred and Thirty-fifth street and Madison avenue. I
North side Seventy-fifth street, between Eighth and Ninth avenues. I
North side Westchester avenue, between Tiffany and Fox avenues. I
Northeast corner One Hundred and Ninetieth street and Audubon avenue. I
Northeast corner Forty-third street and First avenue. I
Northwest corner One Hundred and Third street and Eighth avenue. I
Northeast corner One Hundred and Third street and Manhattan avenue. I
Northeast corner One Hundred and Third street and Ninth avenue. I
Northwest corner One Hundred and Eighteenth street and St. Nicholas avenue. I
North side Sixty-sixth street, between Tenth and Eleventh avenues. I
Northeast corner One Hundred and Forty-fourth street and Bradhurst avenue. I
Northeast corner Seventy-fourth street and Riverside avenue. I

Northeast corner Seventy-fifth street and Riverside avenue.....
 Northeast corner Eighty-fifth street and Riverside avenue.....
 North side One Hundred and Eighty-fourth street, east of Bainbridge avenue.....
 Northwest corner One Hundred and Eighty-fourth street and Bainbridge avenue.....
 West side Bainbridge avenue, between One Hundred and Eighty-fourth and One Hundred and Eighty-seventh streets.....
 Northeast corner One Hundred and Eighty-seventh street and Bainbridge avenue.....
 Northside Gray street, between Topping and Crane places.....
 North side Crane place, between One Hundred and Seventy-third and One Hundred and Seventy-fourth streets.....
 West side Crane place, between One Hundred and Seventy-fourth and One Hundred and Seventy-fifth streets.....
 West side Crane place, between One Hundred and Seventy-fifth and Gray streets.....
 Southwest corner Crane place and One Hundred and Seventy-sixth street.....
 Northwest corner Seventy-seventh street and Boulevard.....
 Northwest corner Boston road and Ostdorp avenue.....
 Northwest corner Boston road and Woodruff street.....
 Northwest corner Boston road and Southern Boulevard.....
 Northwest corner Boston road and Minford place.....
 Southwest corner Boston road and Seabury avenue.....
 North side Boston road, opposite Siebbins avenue.....
 Northwest corner Boston road and Prospect avenue.....
 North side Boston road, between Broadway and One Hundred and Seventieth street.....
 North side Old Boston road, between Bailey and Sedgwick avenues.....
 Northwest corner Topping street and One Hundred and Seventy-third street.....
 West side Topping street, between One Hundred and Seventy-fourth and One Hundred and Seventy-fifth streets.....
 West side Topping street, between One Hundred and Seventy-fifth and Gray streets.....
 West side Sedgwick avenue, between Old Boston road and Van Courtland avenue.....
 Northeast corner One Hundred and Fifty-fifth street and Eighth avenue.....
 North side One Hundred and Fifty-fifth street, near Harlem river.....
 North side One Hundred and Fifty-fifth street, Eighth and Bradhurst avenues.....
 Northwest corner One Hundred and Thirty-eighth street and Morris avenues.....
 North side One Hundred and Thirty-eighth street, near Mott Haven Canal.....
 Northwest corner Creston avenue and One Hundred and Eighty-first street.....
 Northwest corner Creston avenue and One Hundred and Eighty-second street.....
 West side Washington avenue, between One Hundred and Eightieth and One Hundred and Eighty-first streets.....
 West side Washington avenue, between One Hundred and Eighty-first and One Hundred and Eighty-second streets.....
 Southwest corner Washington avenue and One Hundred and Eighty-second street.....
 Southwest corner Washington avenue and One Hundred and Eighty-third street.....
 West side Washington avenue, between One Hundred and Eighty-fourth and One Hundred and Eighty-fifth streets.....
 Northwest corner Washington avenue and One Hundred and Eighty-fifth street.....
 Southwest corner Washington and Third avenues.....
 West side Washington avenue, between One Hundred and Eighty-eighth and One Hundred and Eighty-ninth streets.....
 West side Washington avenue, between One Hundred and Eighty-ninth street and Pelham avenue.....
 North side One Hundred and Eighty-third street, between Creston and Ryer avenues.....
 Northwest corner Ryer avenue and One Hundred and Eighty-first street.....
 West side Ryer avenue, between One Hundred and Eighty-first and One Hundred and Eighty-second streets.....
 Southwest corner Ryer avenue and One Hundred and Eighty-third street.....
 West side Valentine avenue, between One Hundred and Eighty-first and One Hundred and Eighty-second streets.....
 West side Valentine avenue, between One Hundred and Eighty-second and One Hundred and Eighty-third streets.....
 West side Valentine avenue, between One Hundred and Eighty-third and One Hundred and Eighty-fourth streets.....
 Northwest corner Edgecombe avenue and One Hundred and Forty-first street.....
 West side Edgecombe avenue, between One Hundred and Forty-second and One Hundred and Forty-fifth streets.....
 Northwest corner Eighth avenue and One Hundred and Second street.....
 Northwest corner Eighth avenue and One Hundred and Sixth street.....
 North side Sixty-third street, between Tenth and Eleventh avenues.....
 Northwest corner One Hundred and Forty-third street and Bradhurst avenue.....
 West side Bradhurst avenue, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.....
 Northwest corner Rider avenue and One Hundred and Thirty-sixth street.....
 Northwest corner Rider avenue and One Hundred and Thirty-seventh street.....
 East side Rider avenue, between One Hundred and Thirty-eighth and One Hundred and Thirty-ninth streets.....
 East side Rider avenue, between One Hundred and Thirty-ninth and One Hundred and Fortieth streets.....
 Northeast corner One Hundred and Forty-second street and Boulevard.....
 Northwest corner One Hundred and Forty-second street and Hamilton place.....
 Northwest corner One Hundred and Twenty-fifth and Manhattan street.....
 North side One Hundred and Thirty-sixth street, between Seventh and Eighth avenues.....
 Northwest corner Ninetieth street and Boulevard.....
 Northwest corner Ninety-first street and Boulevard.....
 Northeast corner Ninety-first street and Riverside avenue.....
 Northwest corner Eighty-ninth street and Boulevard.....
 Northwest corner Eighty-ninth street and West End avenue.....
 Northeast corner Eighty-ninth street and Riverside avenue.....
 North side One Hundred and Fourteenth street, between Fifth and Madison avenues.....
 North side One Hundred and First street, between Ninth and Manhattan avenues.....
 Northwest corner One Hundred and First street and Manhattan avenue.....
 Northwest corner Depot place and Sedgwick avenue.....
 South side Depot place near Hudson River Railroad station.....
 West side Webster avenue, between One Hundred and Seventy-ninth and Samuel street.....
 Northeast corner Eighty-seventh street and Riverside avenue.....
 North side Home street, between Union avenue and Southern Boulevard.....
 Northeast corner One Hundred and Twelfth street and St. Nicholas avenue.....
 East side Park avenue, between One Hundred and Seventh and One Hundred and Eighth streets.....
 East side Park avenue, between One Hundred and Eighth and One Hundred and Ninth streets.....
 Northeast corner One Hundred and Fifteenth street and Fifth avenue.....
 West side One Hundred and Eighteenth street, between Fourth and Madison avenues.....
 West side One Hundred and Forty-seventh street, between Tenth and St. Nicholas avenues.....
 Northeast corner One Hundred and Forty-seventh street and Tenth avenue.....
 North side One Hundred and Second street, between Ninth and Tenth avenues.....
 North side One Hundred and Second street, between Ninth and Manhattan avenues.....
 Northwest corner One Hundred and Second street and Manhattan avenue.....
 Northwest corner Eighty-fifth street and Boulevard.....
 Northwest corner Woodruff and Main streets.....
 Northeast corner Woodruff street and Lillian place.....
 Northwest corner One Hundred and Sixty-fifth street and Stebbins avenue.....
 North side College avenue, between College and Frederick streets.....
 South side Hunt's Point road, between Southern Boulevard and Lafayette avenue.....
 North side John street, between Marion and Webster avenues.....
 Northwest corner Arcularius place and Sheridan avenue.....
 North side One Hundred and Forty-eighth street, between Willis and Brook avenues.....
 Northwest corner One Hundred and Forty-eighth street and Brook avenue.....
 Northeast corner One Hundred and Ninth street and First avenue.....
 Southwest corner Ninety-sixth street and Tenth avenue.....
 West side Riverview Terrace, between Dock street and Powell place.....
 Northeast corner One Hundred and Thirty-second street and Old Broadway.....
 Northwest corner One Hundred and Thirty-second street and Tenth avenue.....
 North side One Hundred and Thirty-second street, between St. Ann's and Trinity avenues.....
 West side Southern Boulevard, between Hunt's Point road and Westchester avenue.....
 West side Southern Boulevard, between Westchester avenue and Home street.....
 North side Kingsbridge road, between Southern Boulevard and Main street.....
 Northwest corner Kingsbridge road and Southern Boulevard.....
 Northeast corner One Hundred and Seventy-third street and Fleetwood avenue.....
 West side Eastburn street, north of One Hundred and Seventy-third street.....

"No. 1" Hydrants set 1889.

South side Van Courtland avenue, between Yonkers and Palisade avenues.....
 Southwest corner Eighth avenue and One Hundred and Fifty-ninth street.....

Northeast corner Rivington and Attorney streets.....
 Southwest corner Rivington and Ridge streets.....
 Northeast corner Rivington and Ridge streets.....
 Southeast corner Rivington and Pitt streets.....
 Southeast corner Rivington and Willet streets.....
 Southeast corner Rivington and Sheriff streets.....
 Southeast corner Rivington and Columbia streets.....
 Southeast corner Rivington and Cannon streets.....
 Southeast corner Rivington and Lewis streets.....
 Southeast corner Rivington and Goerck streets.....
 North side Rivington street, between Goerck and Tompkins streets.....
 Southwest corner Rivington and East streets.....
 West side Kingsbridge road, north of Two Hundred and Eighth street.....
 Blackwell's Island, east of the Engine-house.....
 Blackwell's Island, east of the Workhouse.....
 Northwest corner Lincoln avenue and Southern Boulevard.....
 Northeast corner Lincoln avenue and One Hundred and Thirty-second street.....
 Northeast corner Seventy-first street and Second avenue.....
 Northwest corner Seventy-first street and First avenue.....
 West side Albany avenue, between Macomb street and Van Courtland avenue.....
 North side One Hundred and Ninth street, near East river.....
 Southwest corner One Hundred and Twenty-fifth street and Fourth avenue.....
 South side One Hundred and Twenty-fifth street, between Sixth and Seventh avenues.....
 Southwest corner Laight and Greenwich streets.....
 Southwest corner Vestry and Greenwich streets.....
 Southwest corner Watts and Greenwich streets.....
 Southwest corner Forty-first street and Broadway.....
 Northwest corner Fortieth street and Broadway.....
 Southwest corner Fortieth street and Broadway.....
 Southwest corner Fortieth street and Seventh avenue.....
 West side Seventh avenue, between Thirty-ninth and Fortieth streets.....

PERMITS TO OPEN STREETS ISSUED IN 1889.

The Jacob Ahles Brewing Company.

Fifty-fourth street, between Lexington and Second avenues.

Sixth Avenue Railroad Company.

Sixth avenue, between One Hundred and Tenth street and Harlem river.

New York Steam Company.

One Hundred and Sixteenth street, between Pleasant avenue and Harlem river.
 Fulton street, between Church and West streets.
 Seventieth street, between Madison and Fifth avenues.
 One Hundred and Fifteenth, between First avenue and Harlem river.
 Fifty-eighth street, between Madison and Fourth avenues.

New York Mutual Gas-light Company.

Second avenue, between Thirteenth and Stuyvesant streets.
 Stuyvesant street, between Second and Fourth avenues.
 Thirteenth street, between Avenue D and Second avenue.
 Sixty-fourth street, between Fifth and Madison avenues.
 Sixty-fifth street, between Fifth and Madison avenues.
 Sixty-eighth street, between Fourth and Madison avenues.
 Madison avenue, between Sixty-seventh and Seventieth streets.

Equitable Gas-light Company.

Twenty-eighth street, between First avenue and East river.
 Fifty-ninth street, between Fourth and Madison avenues.

North and East River Railway Company.

Fulton street, between Nassau and Church streets.
 West street, between Fulton and Cortlandt streets.

Conrad Stein.

Fifty-eighth street, between Eleventh avenue and North river.

The New York Refrigerator and Cold Storage Company.

Fulton street, between Church and Washington streets.
 Washington street, between Fulton and Dey streets.

The Twenty-eighth and Twenty-ninth Street Railroad Company.

Thirtieth street, between Ninth and Tenth avenues.
 Twenty-ninth street, between Second and Eleventh avenues.
 Twenty-eighth street, between Second and Eleventh avenues.
 Twenty-fourth street, between First avenue and Avenue A.
 Avenue A, between Twenty-third and Twenty-fourth streets.
 Thirteenth avenue, between Fourteenth and Twenty-fourth streets.
 Eleventh avenue, between Thirty-fourth and Forty-second streets.
 Eleventh avenue, between Twenty-fourth and Twenty-ninth streets.
 Thirty-fourth street, between Tenth avenue and North river.
 Thirty-third street, between First avenue and East river.

National Transit Company.

Sixty-eighth street, between Eighth avenue and Hudson river.
 Sixty-fifth street, between First and Fifth avenues.
 First avenue, between Sixty-third and Sixty-fifth streets.
 Sixty-third street, between First avenue and East river.

Manhattan Railway Company.

Eighth avenue, between One Hundred and Fifty-eighth and One Hundred and Fifty-ninth streets.
 One Hundred and Fifty-ninth street, between Eighth avenue and 100 feet east.
 Eighth avenue, between One Hundred and Fifty-ninth street and Harlem river.

Jacob Ruppert.

Sixty-eighth street, between Avenue A and East river.
 Avenue A, between Sixty-seventh and Sixty-eighth streets.
 Sixty-seventh street, between Avenue A and Third avenue.

New York and Harlem Railroad Company.

Eighty-fifth street, between Madison avenue and 200 feet west.

The Consolidated Telegraph and Electrical Subway Company.

Murray street, between Broadway and College place.
 Centre street, between Worth and Grand streets.
 Houston street, between Allen and Chrystie streets.
 Seventy-ninth street, between First and Fourth avenues.
 Thirty-eighth street, between First and Lexington avenues.
 Lexington avenue, between Sixty-fifth and Seventy-ninth streets.
 Twenty-ninth street, between First and Fifth avenues.
 Fourteenth street, between First and Sixth avenues.
 Twenty-second street, between Broadway and Fourth avenue.
 Forty-ninth street, between Madison and Fourth avenues.
 Dey street, between Church and Greenwich streets.
 Fifty-eighth street, between Eighth and Tenth avenues.
 Tenth avenue, between Fifty-eighth and Fifty-ninth streets.
 Fifty-third street, between Fifth and Sixth avenues.
 Fourteenth street, between Sixth avenue and Broadway.
 Sixteenth street, between Sixth avenue and Broadway.
 Eighth avenue, between Eighteenth and Twenty-eighth streets.
 Eighteenth street, between Seventh and Eighth avenues.
 Broad street, between Exchange place and Wall street.
 Nassau street, between Wall and Pine streets.
 Broadway, between Grand and Canal streets.
 Broadway, between Fourteenth and Canal streets.
 Forty-second street, between First avenue and Broadway.
 Fifty-ninth street, between First avenue and Broadway.
 One Hundred and Twenty-fifth street, between First and Eighth avenues.
 Bowery, between Grand and Sixth street.
 Bowery, between Grand street and Chatham Square.
 Third avenue, between Sixth and Thirty-fourth streets.

Twenty-third street, between Fifth and Eleventh avenues.
 Twenty-fourth street, between Eleventh and Thirteenth avenues.
 Eleventh avenue, between Twenty-third and Twenty-fourth streets.
 Thirty-eighth street, between Sixth avenue and Broadway.
 Thirty-third street, between Fifth and Madison avenues.
 Fifty-third street, between Fifth and Madison avenues.
 Fifty-seventh street, between Fifth and Sixth avenues.
 Thirty-second street, between Fifth and Madison avenues.
 Fortieth street, between Fifth and Madison avenues.
 Forty-eighth street, between Fifth and Sixth avenues.
 Twenty-ninth street, between Fifth avenue and Broadway.
 Cedar street, between Church street and North river.
 Wall street, between Nassau and Pearl streets.
 Forty-seventh street, between Fifth and Sixth avenues.
 Forty-eighth street, between Fourth and Fifth avenues.
 Fifty-fourth street, between Sixth and Madison avenues.
 Third avenue, between Thirty-fourth and Fifty-ninth streets.
 Spring street, between Broadway and Wooster street.
 Cortlandt street, between Broadway and Church streets.
 Third avenue, between Fifty-ninth and Eightieth streets.
 Third avenue, between Eightieth and One Hundred and Fifteenth streets.
 Third avenue, between One Hundred and Fifteenth and One Hundred and Thirtieth streets.
 Houston street, between First avenue and Hancock place.
 Fulton street, between Broadway and Washington street.
 Washington street, between Fulton and Cortlandt streets.
 Seventh avenue, between Forty-fifth and Fifty-eighth streets.
 Maiden lane, between Pearl and Front streets.
 Maiden lane, between William and Nassau streets.
 Wall street, between Pearl and Water streets.
 Nassau street, between Ann and Beekman streets.

Standard Gas-light Company.

One Hundredth street, between Third and Lexington avenues.
 Ninety-seventh street, between Third and Lexington avenues.
 Lenox avenue, between One Hundred and Tenth and One Hundred and Twenty-fifth streets.
 Seventh avenue, between One Hundred and Tenth and One Hundred and Twenty-fifth streets.
 Lenox avenue, between One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets.
 One Hundred and Twenty-second street, between Mount Morris and St. Nicholas avenues.
 One Hundred and Twenty-first street, between Seventh and Eighth avenues.
 Second avenue, between Seventy-fifth and Eightieth streets.
 Lexington avenue, between Fiftieth and Eighty-first streets.
 Fifty-seventh street, between Avenue A and Second avenue.
 Fifty-seventh street, between Fifth and Seventh avenues.
 Fifty-seventh street, between Avenue A and Seventh avenue.
 Forty-second street, between Prospect place and Seventh avenue.
 Forty-second street, between First and Second avenues.
 Fortieth street, between First and Seventh avenues.
 Forty-first street, between Prospect place and Seventh avenue.
 Thirty-fourth street, between East river and Seventh avenue.
 Fifty-eighth street, between First and Seventh avenues.
 Fifty-third street, between East river and Seventh avenue.
 One Hundred and Twentieth street, between Mount Morris and St. Nicholas avenues.
 One Hundred and Twenty-third street, between Mount Morris and Eighth avenue.
 One Hundred and Twenty-fourth street, between Mount Morris and Eighth avenues.
 One Hundred and Thirteenth street, between Sixth and Manhattan avenues.
 One Hundred and Fourteenth street, between Fourth and Manhattan avenues.
 One Hundred and Fifteenth street, between Fourth and Manhattan avenues.
 One Hundred and Sixteenth street, between Fourth and Manhattan avenues.
 One Hundred and Seventeenth street, between Fourth and Manhattan avenues.
 One Hundred and Eighteenth street, between Fourth and Manhattan avenues.
 One Hundred and Nineteenth street, between Fourth and Manhattan avenues.
 Eighth avenue, between One Hundred and Tenth street and St. Nicholas avenue.
 Madison avenue, between Ninety-fourth and One Hundred and Twenty-fifth streets.
 Mount Morris avenue, between One Hundred and Twentieth and One Hundred and Twenty-fourth streets.
 One Hundred and Twenty-first street, between Mount Morris and Manhattan avenue.
 One Hundred and Twentieth street, between Fourth and Eighth avenues.
 Fourth avenue, between Thirty-fourth and Fortieth streets.
 Fourth avenue, between Thirty-second and Fortieth streets.
 One Hundred and Tenth street, between Fourth and Eighth avenues.
 One Hundred and Eleventh street, between Fourth and Eighth avenues.
 One Hundred and Twelfth street, between Fourth and Eighth avenues.
 Thirty-ninth street, between Fourth and Seventh avenues.
 One Hundred and Thirty-fifth street, between Harlem river and St. Nicholas avenue.
 Manhattan avenue, between One Hundred and Thirteenth street and St. Nicholas avenue.
 Fifty-sixth street, between First and Sixth avenues.
 Fifth avenue, between Twenty-sixth and Fifty-ninth streets.
 Fourth avenue, between Thirty-fourth and Fortieth streets.
 Thirty-fourth street, between Lexington and Fourth avenues.
 Thirty-fourth street, between Fifth and Seventh avenues.
 Thirty-ninth street, between Fourth and Seventh avenues.
 Thirty-sixth street, between Sixth avenue and Broadway.
 Forty-third street, between First and Lexington avenue.
 Forty-ninth street, between First and Fourth avenues.
 Fifty-third street, between First and Fourth avenues.
 Fifty-fifth street, between First and Fourth avenues.
 Sixtieth street, between First and Fifth avenues.
 Sixty-first street, between First and Fifth avenues.
 Sixty-second street, between First and Fifth avenues.
 Seventy-ninth street, between First and Fifth avenues.
 Eighty-first street, between First and Fifth avenues.
 Thirteenth street, between First and Seventh avenues.
 Fourteenth street, between Third and Fourth avenues.
 Fourteenth street, between Second and Third avenues.

Consolidated Gas-light Company.

Forty-second street, between Eleventh and Twelfth avenues.
 Twentieth street, between Avenue A and First avenue.
 Twenty-seventh street, between Second and Third avenues.
 One Hundred and Second street, between Ninth and Tenth avenues.
 One Hundred and Seventeenth street, between Ninth and Manhattan avenues.
 One Hundred and Eighteenth street, between Ninth and Manhattan avenues.
 Madison avenue, between Fifty-sixth and Fifty-seventh streets.
 Mott street, between Park row and Grand street.
 Bayard street, between Bowery and Baxter street.
 Elizabeth street, between Bayard and Canal streets.
 Monroe street, between Catharine and Montgomery streets.
 Staple street, between Harrison and Jay streets.
 One Hundred and Fifteenth street, between Seventh and Eighth avenues.
 One Hundred and Twenty-fifth street, between Seventh and Tenth avenues.
 One Hundred and Twenty-sixth street, between First and Second avenues.
 Eighty-second street, between Boulevard and West End avenue.
 Fifty-first street, between Eighth and Ninth avenues.
 Twentieth street, between First and Seventh avenues.
 Seventh avenue, between Nineteenth and Twentieth streets.
 Nineteenth street, between Seventh and Eleventh avenues.
 Tenth avenue, between Thirty-fourth and Thirty-fifth streets.
 Thirty-fifth street, between Tenth and Eleventh avenues.
 Eleventh avenue, between Thirty-fifth and Forty-first streets.
 One Hundred and Fifteenth street, between Eighth and Manhattan avenues.
 Manhattan street, between One Hundred and Fourteenth and One Hundred and Fifteenth streets.
 One Hundred and Sixteenth street, between Park and Madison avenues.
 Ninety-eighth street, between First and Second avenues.
 Bradhurst avenue, between One Hundred and Forty-third and One Hundred and Forty-fourth streets.
 One Hundred and Forty-fourth street, between Bradhurst and Eighth avenues.
 Ninety-third street, between Eighth and Ninth avenues.
 One Hundred and Sixty-fifth street, between Tenth avenue and Kingsbridge road.
 Park avenue, between One Hundred and Fourth and One Hundred and Fifth street.

Fourth avenue, between One Hundred and Sixth and One Hundred and Seventh streets.
 One Hundred and Sixth street, between Fourth and Madison avenues.
 Manhattan avenue, between One Hundred and Eighteenth and One Hundred and Nineteenth streets.
 West End avenue, between Sixty-seventh and Sixty-eighth streets.
 Ninety-fourth street, between Second and Third avenues.
 Twelfth avenue, between One Hundred and Thirty-third and One Hundred and Thirty-fourth streets.
 One Hundred and Thirty-eighth street, between Eighth and Bradhurst avenues.
 One Hundred and Eighteenth street, between Eighth and Manhattan avenues.
 Seventy-ninth street, between Boulevard and Twelfth avenue.
 One Hundred and Ninetieth street, between Tenth and Audubon avenues.
 Eleventh avenue, between Sixty-ninth and Seventy-second streets.
 Irving place, between Fourteenth and Twentieth streets.
 Ninety-eighth street, between Tenth avenue and Boulevard.
 Fifty-seventh street, between Eleventh avenue and North river.
 Tenth avenue, between Eighty-fifth and Eighty-sixth streets.
 One Hundred and Sixth street, between Eighth and Ninth avenues.
 Eleventh avenue, between Sixty-sixth and Sixty-seventh streets.
 One Hundred and Fourteenth street, between Madison and Fifth avenues.
 West End avenue, between Eightieth and Eighty-first streets.
 Sixty-sixth street, between Tenth and Eleventh avenues.
 First avenue, between One Hundred and Tenth and One Hundred and Eleventh streets.
 One Hundred and Eleventh street, between First and Pleasant avenues.
 Madison avenue, between Ninety-second and Ninety-third streets.
 Park avenue, between Ninety-fourth and Ninety-fifth streets.
 Ninth avenue, between One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.
 Tenth avenue, between One Hundred and Fortieth and One Hundred and Forty-fourth streets.
 Ninety-third street, between Ninth and Tenth avenues.
 Seventy-first street, between Avenue A and East river.
 One Hundred and Sixteenth street, between Madison and Fifth avenue.
 Madison avenue, between Forty-ninth and Fifty-fifth streets.
 Madison avenue, between Fifty-seventh and Fifty-eighth streets.
 Madison avenue, between Ninety-third and One Hundred and Fourth street.
 One Hundred and Eighth street, between First avenue and Avenue A.
 Tenth avenue, between Ninety-sixth and Ninety-seventh streets.
 Tenth avenue, between Ninety-ninth and One Hundred and First streets.
 Edgcombe avenue, between One Hundred and Thirty-eighth and One Hundred and Thirty-ninth streets.
 Sixty-fourth street, between First avenue and Avenue A.
 One Hundred and Seventieth street, between Tenth and Eleventh avenues.
 One Hundred and Second street, between First avenue and East river.
 Stone street, between Broad and William streets.
 Ninetieth street, between First avenue and Avenue A.
 Eighty-seventh street, between Eighth and Ninth avenues.
 Eighty-seventh street, between Boulevard and Tenth avenue.
 Ninety-sixth street, between Ninth and Tenth avenues.
 Tenth avenue, between Ninety-fifth and Ninety-sixth streets.
 Seventy-third street, between Boulevard and Tenth avenue.
 Ninth avenue, between Sixty-fifth and Sixty-sixth streets.
 Seventy-ninth street, between Boulevard and West End avenue.
 Ninth avenue, between Seventy-seventh and Seventy-ninth streets.
 Ninth avenue, between Sixty-fifth and Sixty-sixth streets.
 Sixty-sixth street, between Boulevard and Ninth avenue.
 Edgcombe avenue, between One Hundred and Forty-third and One Hundred and Forty-fourth streets.
 One Hundred and Third street, between Eighth and Ninth avenues.
 One Hundred and Seventh street, between Eighth and Ninth avenues.
 Park avenue, between One Hundred and Fifth and One Hundred and Sixth streets.
 One Hundred and Fortieth street, between Hamilton place and Boulevard.
 One Hundred and Forty-third street, between Hamilton place and Boulevard.
 One Hundred and Thirty-third street, between Tenth avenue and North river.
 One Hundred and Twenty-first street, between Eighth and Ninth avenues.
 Eighty-ninth street, between West End avenue and Boulevard.
 One Hundred and Twelfth street, between Lenox and St. Nicholas avenues.
 Eightieth street, between Ninth and Tenth avenues.
 One Hundred and Fourth street, between West End avenue and Boulevard.
 West End avenue, between One Hundred and Third and One Hundred and Fourth streets.
 One Hundred and Forty-fourth street, between Bradhurst and Eighth avenues.
 Manhattan avenue, between One Hundred and Sixteenth and One Hundred and Seventeenth streets.
 Tenth avenue, between Ninety-first and Ninety-third streets.
 Ninety-sixth street, between Tenth avenue and Boulevard.
 Ninetieth street, between Ninth and Tenth avenues.
 Cedar street, between Church and Greenwich streets.
 Worth street, between Broadway and Hudson street.
 Thomas street, between Broadway and Hudson street.
 Franklin street, between Broadway and Hudson street.
 Laight street, between Canal and Greenwich streets.
 Cliff street, between Ferry and Beekman streets.
 Lexington avenue, between Twenty-first and Twenty-third streets.
 Horatio street, between Greenwich avenue and West Fourth street.
 Twenty-fifth street, between Broadway and Sixth avenue.
 Lexington avenue, between Twenty-third and Sixty-fifth streets.
 Thirty-second street, between Madison and Fifth avenues.
 Lexington avenue, between Ninety-sixth and Ninety-seventh streets.
 Ninety-fifth street, between First and Second avenues.
 Avenue B, between Seventy-ninth and Eighty-sixth streets.
 One Hundred and Thirty-fifth street, between Madison avenue and Harlem river.
 West End avenue, between Eighty-fifth and Eighty-sixth streets.
 Ninety-sixth street, between Ninth and Tenth avenues.
 One Hundred and Thirty-sixth street, between Fifth and Sixth avenues.
 One Hundred and Sixtieth street, between St. Nicholas avenue East.
 Eighty-eighth street, between Fourth and Madison avenues.
 One Hundred and Sixth street, between Fifth and Madison avenues.
 One Hundred and Thirteenth street, between Boulevard and Riverside avenue.
 Eighth avenue, between One Hundred and Forty-fifth and One Hundred and Fifty-fifth streets.
 One Hundred and Forty-second street, between Tenth avenue and Boulevard.
 One Hundred and Eighth street, between Ninth and Tenth avenues.
 Manhattan avenue, between One Hundred and Tenth and One Hundred and Fifteenth streets.
 Seventy-seventh street, between Boulevard and West End avenue.
 Eightieth street, between Boulevard and Riverside avenue.
 West End avenue, between Seventy-sixth and Seventy-seventh streets.
 Ninety-seventh street, between Second and Third avenues.
 Avenue A, between Sixty-third and Sixty-fourth streets.
 One Hundred and Thirty-seventh street, between Seventh and Eighth avenues.
 One Hundred and Sixth street, between Tenth avenue and Boulevard.
 One Hundred and Nineteenth street, between Eighth and Ninth avenues.
 Eighty-ninth street, between Madison and Fifth avenues.
 Ninety-fourth street, between Madison and Fifth avenues.
 Ninety-sixth street, between Boulevard and Twelfth avenue.
 Sixty-sixth street, between Eighth and Ninth avenues.
 Sixty-fourth street, between Tenth and West End avenues.
 West End avenue, between Seventy-sixth and Eighty-eighth streets.
 West End avenue, between Ninety-seventh and One Hundred and Seventh streets.
 Madison avenue, between One Hundred and Sixth and One Hundred and Seventh streets.
 One Hundred and Twenty-ninth street, between Manhattan and Twelfth avenues.
 One Hundred and Fortieth street, between Eighth and Edgcombe avenues.
 Eighty-third street, between Avenue B and East river.
 Ninety-fourth street, between Park and Madison avenues.
 Ninety-fifth street, between Park and Madison avenues.
 One Hundred and Twenty-second street, between Ninth and Manhattan avenues.
 One Hundred and Twenty-third street, between Ninth and Tenth avenues.
 One Hundred and Thirty-ninth street, between Eighth and Edgcombe avenues.
 One Hundred and Fifty-ninth street, between Tenth avenue and Boulevard.
 Manhattan avenue, between One Hundred and Twelfth and One Hundred and Thirteenth streets.
 Ninth avenue, between Eighty-fourth and Eighty-fifth streets.
 Ninth avenue, between Eighty-sixth and Eighty-eighth streets.

Ninth avenue, between Eighty-ninth and Ninety-first streets.
 Ninth avenue, between Ninety-second and Ninety-third streets.
 Ninth avenue, between Ninety-eighth and Ninety-ninth streets.
 Tenth avenue, between Eighty-first and Eighty-ninth streets.
 Tenth avenue, between Ninety-third and Ninety-fourth streets.
 Tenth avenue, between Ninety-fifth and Ninety-sixth streets.
 Tenth avenue, between Ninetieth and Ninety-first streets.
 West End avenue, between Eighty-eighth and Eighty-ninth streets.
 West End avenue, between Ninety-sixth and Ninety-seventh streets.
 Eighty-sixth street, between Tenth and Eleventh avenues.
 Eighty-eighth street, between Tenth avenue and Boulevard.
 Ninety-first street, between Ninth and Tenth avenues.
 Ninety-second street, between Tenth avenue, Boulevard and Eleventh avenue.
 Ninety-seventh street, between Tenth avenue, Boulevard and Eleventh avenue.
 One Hundred and Tenth street, between Tenth avenue and Boulevard.
 Henry street, between Oliver and Gouverneur streets.
 Ninety-sixth street, between West End avenue and Boulevard.
 Seventy-seventh street, between Tenth avenue and Boulevard.
 Eighty-eighth street, between West End and Riverside avenues.
 Eighty-seventh street, between West End and Riverside avenues.
 First avenue, between Forty-third and Forty-fourth streets.
 West End avenue, between Eighty-fourth and Eighty-fifth streets.
 Ninth avenue, between One Hundred and Twenty-fourth and Manhattan streets.
 One Hundred and Thirty-sixth street, between Seventh and Eighth avenues.
 One Hundred and Thirty-eighth street, between Eighth and Edgecombe avenues.
 Tenth avenue, between One Hundred and Forty-fifth and One Hundred and Fifty-fifth streets.
 Tenth avenue, between One Hundred and Sixty-third and One Hundred and Seventy-fifth streets.
 One Hundred and Sixty-fifth street, between Tenth avenue and Kingsbridge road.
 One Hundred and Seventy-fifth street, between Tenth avenue and Kingsbridge road.
 One Hundred and Thirtieth street, between Fifth and Sixth avenues.
 One Hundred and Sixty-sixth street, between Tenth avenue and Kingsbridge road.
 Twelfth avenue, between One Hundred and Thirty-second and One Hundred and Thirty-third streets.

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REPORT OF THE WATER PURVEYOR.

DEPARTMENT OF PUBLIC WORKS,
 WATER PURVEYOR'S OFFICE, NO. 31 CHAMBERS STREET, ROOM 1,
 New York, January 1, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

SIR—I have the honor to submit the following report of the transactions of this Bureau for the quarter ending December 31, 1889, together with a summary of all receipts and expenditures and work done by the Bureau during the year 1889:

REPORT FOR THE QUARTER ENDING DECEMBER 31, 1889.

The following amounts were received and deposited with the City Chamberlain to the credit of the General Fund:

| | |
|---|-------------|
| For permits to construct vaults | \$21,984 14 |
| For labor and materials furnished | 228 73 |
| Total receipts | \$22,212 87 |

222 vouchers were transmitted during the quarter, amounting in the aggregate to four hundred and fifty-three thousand two hundred and eighty-six dollars and fifty-three cents, and were charged to the following funds and appropriations:

| | |
|--|--------------|
| Public Drinking-hydrants | \$433 05 |
| Public Drinking-hydrants—Salaries | 400 00 |
| Repairs and Renewal of Pavements and Regrading, 1888 | 378 10 |
| Repairs and Renewal of Pavements and Regrading, 1889 | 134,556 66 |
| Repairs and Renewal of Pavements and Regrading—Salaries | 4,590 97 |
| Repaving Streets and Avenues, 1888 | 49,834 30 |
| Repaving Streets and Avenues, 1889 | 56,602 13 |
| Repaving Streets and Avenues—Salaries | 4,382 75 |
| Wells and Pumps—Repairing and Cleaning | 34 35 |
| Repairing and Renewal of Pipes, Stop-cocks, etc. | 31,040 49 |
| Street Improvement Fund | 126,164 59 |
| Restoring and Repaving—Special Fund—Department of Public Works | 9,260 00 |
| Repaving, chapter 346, Laws 1889 | 35,584 89 |
| Contingencies—Department of Public Works | 15 25 |
| Total expenditures | \$453,286 53 |

PERMITS ISSUED.

- 74 for the construction of vaults.
- 51 for repairing vaults.
- 125 for erecting guy-posts.
- 46 for building fires on the streets for roofing purposes, etc.
- 40 for repairs to pavements at expense of citizens.

The following permits were issued under resolutions of the Common Council:

- Resolution of October 7, 1889—To Ehrich Bros., to lay a crosswalk across West Twenty-third street, in front of Nos. 110 and 112.
- Resolution of July 15, 1889—To Andrew Horn, to lay a crosswalk across Park Row, opposite No. 75.

REPAIRS AND RENEWAL OF PAVEMENTS AND REGRADING.

The average force employed during the quarter was:

- In October, 198 mechanics, 272 laborers, 77 carts, 4 teams.
- In November, 253 mechanics, 332 laborers, 96 carts, 4 teams.
- In December, 253 mechanics, 332 laborers, 96 carts, 4 teams.

140,762 square yards of pavement were taken up and relaid by this force.

Under orders given to different parties 1,026.71 square yards of pavement (including crosswalks) were repaired, the cost of the work in each case being less than \$1,000.

Of the above, 720 square yards were asphalt.

Contracts for taking up and relaying the pavement in the following-named streets were completed, the number of square yards so repaired amounting to 11,703.16.

- One Hundred and Seventeenth street, from Lexington to Fourth avenue.
 - Lexington avenue, from One Hundred and Fourth to One Hundred and Sixth street.
 - Lexington avenue, from One Hundred and Sixth to One Hundred and Ninth street.
 - Lexington avenue, from One Hundred and Tenth to One Hundred and Twelfth street.
 - Lexington avenue, at the intersections of One Hundred and Thirteenth and One Hundred and Fifteenth streets.
 - Lexington avenue, from One Hundred and Seventeenth to One Hundred and Eighteenth street.
 - Lexington avenue, from One Hundred and Twenty-second to One Hundred and Twenty-third street.
 - One Hundred and Twenty-sixth street, from Eighth to St. Nicholas avenue.
- The total quantity of pavement taken up and relaid by the Department repair force, on orders and under contracts, amounted to 153,491.87 square yards.

WELLS AND PUMPS, REPAIRING AND CLEANING.

The pump at the southwest corner of Hudson and Harrison streets was repaired at a cost of \$34.35.

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

The average force employed in repairing Croton water-pipes, stop-cocks, hydrants, etc., was as follows:

- In October, 29 mechanics, 88 laborers and 15 carts.
- In November, 29 mechanics, 86 laborers and 15 carts.
- In December, 29 mechanics, 86 laborers and 15 carts.
- 118 new fire-hydrants were substituted for old ones.
- 4 new fire-hydrants were erected.

PUBLIC DRINKING-HYDRANTS.

14 public drinking-hydrants were repaired.
 5 new public drinking-hydrants were erected at the following locations:
 South side of One Hundred and Eighth street, 100 feet east of Fifth avenue.
 In front of No. 127 Ninth avenue.
 Prospect avenue and One Hundred and Forty-ninth street.
 One Hundred and Thirty-sixth street and Southern Boulevard.
 No. 307 Willis avenue.

REPAVING STREETS AND AVENUES.

Contracts for repaving the following-named streets were completed during the quarter, the total area so repaved, including crosswalks, being 42,311.67 square yards:

With Granite-block Pavement.

Thirty-third street, from Fourth to Lexington avenue.
 Washington street, from Gansevoort to Little Twelfth street.
 First street, from Avenue A to Houston street.
 Chambers street, from Park Row to Greenwich street.
 Hudson street, from Spring to Fourteenth street.

Trap-block Pavement.

Thirty-seventh street, from First avenue to a point 109 feet easterly.
 Perry street, from Waverley place to Fourth street.
 Commerce street, from Bleecker to Barrow street.
 Liberty place, from Liberty street to Maiden lane.
 Theatre Alley, from Ann to Beekman street.
 Hague street, from Pearl to Cliff street.
 Birmingham street, from Madison to Henry street.
 Staple street, from Jay to Harrison street.
 Collister street, from Beach to Lighthouse street.
 Little Twelfth street, from Ninth avenue to Washington street.
 Twenty-eighth street, from Ninth to Tenth avenue.
 Thirteenth street, from Ninth to Washington street.

NEW PAVEMENTS UNDER ASSESSMENT.

Eighteen contracts for laying new pavements under assessment were finished during the quarter, the total area thereof, including crosswalks, being 45,077.55 square yards, viz.:

Granite-block Pavement.

Ninetieth street, from Boulevard to Riverside Drive.
 One Hundred and Fifty-sixth street, from Tenth to Eleventh avenue.
 Sixty-sixth street, from Tenth to Eleventh avenue.
 Eighty-seventh street, from West End avenue to Boulevard.
 Ninety-fourth street, from Madison to Fifth avenue.
 Eighty-eighth street, from Eighth to Ninth avenue.
 Seventy-fifth street, from Ninth to Tenth avenue.
 One Hundred and Sixth street, from Park to Fifth avenue.
 Ninety-eighth street, from Second to Third avenue.
 One Hundred and Fifty-ninth street, from Tenth avenue to Boulevard.
 Ninety-ninth street, from Eighth to Ninth avenue.
 One Hundred and Thirteenth street, from Boulevard to Riverside Drive.

Trap-block Pavement.

Thirty-seventh street, from 109 feet east of First avenue to East river.
 One Hundred and Thirty-first street, from Tenth avenue to Broadway.
 1,879.82 square yards of trap-block pavement completed during the quarter.

Asphalt Pavement.

One Hundred and Twenty-second street, from Mount Morris to Lenox avenue.
 Eighty-second street, from Boulevard to Riverside Drive.
 One Hundred and Twenty-first street, from Mount Morris to Lenox avenue.
 Pleasant avenue, from One Hundred and Fifteenth to One Hundred and Nineteenth street.
 11,436.35 square yards asphalt pavement, including crosswalks, completed during the quarter.

REPAVING—CHAPTER 346, LAWS OF 1889.

Two contracts were completed during the quarter, the number of yards so repaved amounting in the aggregate to 15,575.35 square yards, including crosswalks.

Asphalt Pavement.

Park avenue, from Thirty-fourth to Fortieth street.

Granite Pavement.

Franklin street, from West Broadway to Washington street.

Under the law quoted above (chapter 346, Laws of 1889), authorizing the expenditure of \$1,000,000 in 1889 for repaving purposes, contracts have been let for repaving the streets mentioned below. Actual work has been commenced on many of these streets, and some of the contracts, not mentioning the two completed ones designated above, have been very nearly completed.

Adding the final cost of Park avenue and Franklin street contracts to the estimated cost of the following ones, a total outlay of \$958,291.24 will have been reached for the year 1889, irrespective of the sum used for salaries, which amounts to \$4,920.61.

The streets referred to are as follows:

To be Repaved with Granite Blocks.

Thomas street, between Church and Hudson streets.
 Howard street, from Broadway to Mercer street.
 Greenwich street, from Eighth avenue to West Thirteenth street.
 Horatio street, from Greenwich avenue to West Fourth street.
 Cliff street, from Ferry to John street.
 Platt street, from Pearl to William street.
 Stone street, from William to Broad street.
 Cedar street, from Broadway to Greenwich street.
 Cedar street, from Pearl to Nassau street.
 Bridge street, from Broad to State street.
 Lexington avenue, from Thirty-fourth to Thirty-fifth, Fifty-ninth to Sixty-sixth, and Sixty-ninth to Ninety-seventh street.
 Worth street, from Broadway to Hudson street.
 Thirteenth street, from Avenue B to Fifth avenue.
 Broad street, from Exchange place to Pearl street.
 Reade street, from Elm to Washington street.
 Leonard street, from Broadway to Hudson street.
 Laight street, from Canal to Greenwich street.
 Broome street, from Centre street to Broadway.
 Bleecker street, from Bowery to Crosby street.
 Varick street, from Franklin to Canal street.
 Spring street, from Bowery to Broadway.

To be Repaved with Asphalt.

Boulevard, from Fifty-ninth to Seventy-ninth street.
 Forty-third street, from Madison to Fifth avenue.
 Sixtieth street, from Fourth to Fifth avenue.
 Sixty-seventh street, from Fourth to Fifth avenue.
 Sixty-eighth street, from Park to Fifth avenue.
 Lexington avenue, from Twenty-first to Thirty-second, Forty-second to Fifty-ninth, and Sixty-sixth to Sixty-ninth street.
 Forty-sixth street, from Madison to Sixth avenue.
 Forty-seventh street, from Madison to Sixth avenue.
 Twenty-fifth street, from Broadway to Sixth avenue.
 Thirty-second street, from Madison to Fifth avenue.
 Fortieth street, from Fourth to Fifth avenue.

These contracts will be ordered on and work will begin as early in the coming spring as possible.

A large number of streets have already been selected for recommendation to the Board of Estimate and Apportionment for repaving under this law. Early action by the Board in this matter will enable the Bureau to prepare the necessary specifications, so that contracts may be advertised and let, and work be commenced early in the year.

Chapter 449 of the Laws of 1889 provides that streets owned by individuals whose titles were obtained through receiving grants of land under water, may be repaved if so authorized by the Board of Aldermen, the cost of the work to be assessed upon the persons or estates holding such grants, who shall thereafter be relieved from all care or maintenance of the pavement in streets so repaved, the city assuming full charge thereof, the same as in regularly opened streets.

Many streets in the lower part of the city lying contiguous to the water-front are in a sad state of dilapidation so far as their pavements are concerned, proving a great hindrance to traffic and reflecting to the discredit of the city, and to this Department particularly, where the true facts are not understood. Among these streets are West street, portions of South street, Washington street and Greenwich street and the Slips lying along the East river front.

Recommendations will be made as soon as the necessary data can be obtained to repave the more important streets of this class, as provided in the law above quoted.

SUMMARY OF WORK DONE DURING THE YEAR.

RECEIPTS.

| | |
|---|---------------------|
| For permits to construct vaults..... | \$104,945 34 |
| For labors and materials furnished..... | 2,543 67 |
| | <u>\$107,489 01</u> |

680 vouchers were transmitted, the total amount of which was \$1,228,591.06 and were charged to the following funds and appropriations, viz.:

| | |
|---|-----------------------|
| Public Drinking Hydrants, 1888..... | \$1,001 60 |
| Public Drinking Hydrants, 1889..... | 2,051 60 |
| Public Drinking Hydrants—Salaries..... | 1,200 00 |
| Repairs and Renewal of Pavements and Regrading, 1888..... | 27,008 71 |
| Repairs and Renewal of Pavements and Regrading, 1889..... | 303,338 26 |
| Repairs and Renewal of Pavements and Regrading—Salaries..... | 17,913 38 |
| Repaving Streets and Avenues, 1888..... | 126,645 71 |
| Repaving Streets and Avenues, 1889..... | 60,144 88 |
| Repaving Streets and Avenues—Salaries..... | 10,434 27 |
| Wells and Pumps—Repairing and Cleaning..... | 190 16 |
| Repairing and Renewal of Pipes, Stop-cocks, etc., 1888..... | 179 23 |
| Repairing and Renewal of Pipes, Stop-cocks, etc., 1889..... | 104,861 59 |
| Street Improvement Fund..... | 442,955 86 |
| Restoring and Repaving—Special Fund—Department of Public Works..... | 33,786 21 |
| Repaving—Chapter 346, Laws of 1889..... | 36,814 04 |
| Contingencies—Department of Public Works..... | 65 86 |
| Total..... | <u>\$1,228,591 06</u> |

PERMITS ISSUED.

289 for construction of vaults.
169 for repairs to vaults.
642 for the erection of guy posts.
439 for lighting fires on the streets for roofing purposes, etc.
165 for repairs to pavements at applicants' expense, and under resolution of Common Council,
6 to lay crosswalks and repave streets by citizens.

REPAIRS AND RENEWAL OF PAVEMENTS AND REGRADING.

The following shows the amount of work done by the street repair gangs during the year:
386,087 square yards of pavement were taken up and relaid.
1,203 old crosswalks were repaired.
4 new crosswalks were laid.
5,046 dangerous holes in the pavement were repaired.
The following is a list of the streets in which these repairs were made.

Streets Relaid from Curb to Curb.

Twenty-sixth street, from Broadway to Sixth avenue.
Forty-fourth street, from Broadway to Sixth avenue.
Forty-fourth street, from Madison to Fifth avenue.
Forty-fifth street, from Broadway to Eighth avenue.
Forty-seventh street, from Third to Lexington avenue.
Forty-eighth street, from First to Second avenue.
Forty-eighth street, from Eighth to Ninth avenue.
Forty-ninth street, from Ninth to Tenth avenue.
Fifty-fourth street, from Sixth to Seventh avenue.
Fifty-fourth street, from Ninth to Tenth avenue.
Fifty-fourth street, from Tenth to Eleventh avenue.
Seventieth street, from Third to Lexington avenue.
Seventy-seventh street, from First to Second avenue.
Eightieth street, from Avenue A to Avenue B.
Eighty-third street, from Madison to Park avenue.
Eighty-fourth street, from Third to Lexington avenue.
Ninety-third street, from First to Second avenue.
One Hundred and Third street, from Fourth to Lexington avenue.
One Hundred and Fourth street, from Fourth to Lexington avenue.
Lexington avenue, from Seventieth to Seventy-first street, and intersection at Seventieth street.
Lexington avenue, from One Hundred and Fourth to One Hundred and Third street, and intersection.
Lexington avenue and One Hundred and Fourteenth street intersection.
New Chambers street, from William to Duane street.
Second avenue, from Fifty-first to Fifty-second street.
Second avenue, from Sixty-sixth to Sixty-seventh street.
Second avenue, from Sixty-eighth to Sixty-ninth street.
Second avenue, from Ninety-third to Ninety-fifth street.
Second avenue, from One Hundred and Second to One Hundred and Third street.
Second avenue, from One Hundred and Fourth to One Hundred and Fifth street.

Half Blocks Relaid.

Thirty-third street, between Fifth avenue and Broadway.
Thirty-fourth street, between Lexington and Third avenues.
Thirty-fourth street, between Second and Third avenues.
Fifty-ninth street, between Fifth and Sixth avenues.
Eighty-third street, between Tenth avenue and Boulevard.
Eighty-fourth street, between Riverside Drive and West End avenue.
Ninety-seventh street, between Eighth and Ninth avenues.
First avenue, between Fifty-second and Fifty-third streets.
First avenue, between Sixty-third and Sixty-fourth streets.
First avenue, between Eighty-third and Eighty-fourth streets.
Second avenue, between Fifteenth and Sixteenth streets.
Second avenue, between Twentieth and Twenty-first streets.
Second avenue, between Seventy-first and Seventy-second streets.
Second avenue, between Eightieth and Eighty-first streets.
Second avenue, between One Hundred and First and One Hundred and Second streets.
Broadway, between Fifty-first and Fifty-second streets.
Third avenue, between Fifty-first and Fifty-second streets.
Third avenue, between Fifty-second and Fifty-third streets.
Third avenue, between Sixty-first and Sixty-second streets.
Third avenue, between Seventy-first and Seventy-second streets.
Third avenue, between Eightieth and Eighty-first streets.
Third avenue, between Ninety-seventh and Ninety-eighth streets.
Madison avenue, between Fifty-eighth and Fifty-ninth streets.
Madison avenue, between Sixty-fifth and Sixty-sixth streets.
Madison avenue, between Seventy-third and Seventy-fourth streets.
Madison avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets.
Sixth avenue, between Thirteenth and Fourteenth streets.
Sixth avenue, between Fifty-seventh and Fifty-eighth streets.
Seventh avenue, between Fifty-first and Fifty-second streets.
Seventh avenue, between Fifty-second and Fifty-third streets.
Eighth avenue, between Forty-seventh and Forty-eighth streets.
Eighth avenue, between Fifty-first and Fifty-second streets.
Eighth avenue, between Fifty-second and Fifty-third streets.
Eighth avenue, between One Hundred and Thirty-fourth and One Hundred and Thirty-fifth streets.
Eighth avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets.
Ninth avenue, between Fifty-first and Fifty-second streets.
Ninth avenue, between Fifty-fifth and Fifty-sixth streets.
Ninth avenue, between Sixty-eighth and Seventy-first streets.
Ninth avenue, between Seventy-second and Seventy-fourth streets.
Tenth avenue, between Twenty-first and Twenty-second streets.

Streets Repaired.

Second street, between Avenue A and Avenue B.
Third street, between Broadway and South Fifth avenue and Avenue A and Avenue B.
Fourth street, between Broadway and Lafayette place.
Ninth street, between Fifth and Sixth avenues.
Tenth street, between Broadway, Fourth and Fifth avenues.
Eleventh street, between First and Fourth avenues, and Seventh and Eighth avenues.
Twelfth street, between Broadway and Sixth avenue, and Hudson and Greenwich avenues.
Thirteenth street, between Fifth and Seventh avenues.
Fourteenth street, between Broadway and Fifth avenue, Third and Fourth avenues, Second avenue and Avenue D, and Tenth and Eleventh avenues.
Fifteenth street, between Irving place and Fourth avenue, Fifth and Sixth avenues, and Seventh and Ninth avenues.
Sixteenth street, between Avenues C and D.
Seventeenth street, between Avenue A and First avenue.
Eighteenth street, between Seventh and Eleventh avenues.
Nineteenth street, between Sixth and Tenth avenues.
Twentieth street, between Eleventh and Thirteenth avenues.
Twenty-first street, between Seventh and Eighth and Tenth and Eleventh avenues.
Twenty-second street, between Ninth and Tenth avenues.
Twenty-third street, between Eighth and Ninth avenues and Broadway and Lexington avenue.
Twenty-fourth street, between Sixth and Seventh and First and Third avenues.
Twenty-sixth street, between Tenth and Eleventh avenues and First avenue and East river.
Twenty-seventh street, between Tenth and Eleventh avenues.
Twenty-eighth street, between Sixth and Eleventh avenues.
Twenty-ninth street, between Sixth avenue and Broadway.
Thirtieth street, between Tenth and Eleventh avenues, and Broadway and Fifth avenue, and Second avenue and East river.
Thirty-first street, between Sixth and Seventh, Third and Fourth, First and Second avenues, and Broadway and Fifth avenue.
Thirty-second street, between First avenue and Avenue A, and Madison and Fifth avenues.
Thirty-third street, between Fourth and Fifth avenues.
Thirty-fourth street, between First and Second, Fifth and Sixth avenues, and Broadway and Eighth avenue.
Thirty-fifth street, between First and Third, Sixth and Seventh and Tenth and Twelfth avenues.
Thirty-sixth street, between Third and Fifth and Tenth and Eleventh avenues.
Thirty-seventh street, between Seventh and Ninth avenues.
Thirty-eighth street, between Second and Third avenues.
Thirty-ninth street, between Second and Fourth and Sixth and Ninth avenues.
Fortieth street, between Seventh and Tenth avenues.
Forty-first street, between First and Third and Seventh and Tenth avenues.
Forty-second street, between Fourth and Fifth and Seventh and Ninth avenues.
Forty-third street, between First and Tenth avenues.
Forty-fourth street, between First and Second and Ninth and Tenth avenues.
Forty-fifth street, between Third and Fifth avenues, and Ninth avenue and North river.
Forty-seventh street, between Madison avenue and North river.
Forty-eighth street, between Eleventh avenue and North river.
Forty-ninth street, between First avenue and East river and Fifth and Sixth avenues.
Fifty-first street, between Broadway and Seventh avenue, Eighth and Ninth avenues and Lexington avenue and Avenue A.
Fifty-second street, between First avenue and East river, Fifth and Sixth, Eighth and Ninth avenues, and Eleventh avenue and North river.
Fifty-third street, between First and Second, Tenth and Eighth, and Third and Lexington avenues.
Fifty-fourth street, between First and Second, and Tenth and Eleventh avenues.
Fifty-fifth street, between Lexington and Park, and Eighth and Ninth avenues.
Fifty-sixth street, between First and Third, Madison and Park, and Fifth and Seventh avenues.
Fifty-seventh street, between Madison and Park, Fifth and Sixth avenues, Seventh avenue and Broadway, and Ninth and Tenth avenues.
Fifty-eighth street, between Madison and Park, Second and Third, and Eighth and Ninth avenues.
Fifty-ninth street, between Fifth and Sixth, and Eighth and Ninth avenues.
Sixtieth street, between Madison and Fifth, and Tenth and Eleventh avenues.
Sixty-second street, between Madison and Park, and Eighth and Ninth avenues.
Sixty-third street, between Madison and Park, and Second and Third avenues.
Sixty-fifth street, between First and Third avenues.
Sixty-sixth street, between Madison and Park avenues.
Sixty-seventh street, between Madison and Fifth, Tenth and Eleventh, and First and Third avenues.
Sixty-eighth street, between Second and Third avenues.
Seventieth street, between Madison and Park, First and Second avenues, and Ninth avenue and Boulevard.
Seventy-first street, between Madison and Fifth, Park and Lexington avenues, and First avenue and Avenue A.
Seventy-fourth street, between Madison and Fifth avenues.
Seventy-fifth street, between Fifth and Park, and First and Third avenues.
Seventy-sixth street, between Fifth and Madison avenues, and Second avenue to Avenue A.
Seventy-seventh street, between Second and Third, and Eighth and Ninth avenues.
Seventy-eighth street, between Park and Lexington avenues.
Seventy-ninth street, between Madison and Fifth, and Ninth and Tenth avenues.
Eightieth street, between Park and Fifth avenues, and First avenue and Avenue A.
Eighty-first street, between Eighth and Ninth avenues.
Eighty-second street, between First and Second, and Ninth and Tenth avenues.
Eighty-third street, between Madison and Park, First and Second, and Eighth and West End avenues.
Eighty-fourth street, between Madison and Park, First and Third avenues, Avenues A and B, Eighth avenue and Riverside Drive.
Eighty-fifth street, between Fifth and Madison, and Lexington and First avenues.
Eighty-sixth street, between Madison and Third avenues.
Eighty-seventh street, between Madison and Park avenues.
Eighty-eighth street, between Lexington and Park avenues.
Eighty-ninth street, between Lexington and Third avenues.
Ninetieth street, between Fifth and Madison, and Park and Lexington avenues.
Ninety-second street, between Second and Third avenues.
Ninety-third street, between Second and Third avenues.
Ninety-fourth street, between Eighth and Ninth avenues.
Ninety-sixth street, between Boulevard and West End avenue.
Ninety-seventh street, between Second and Third avenues.
One Hundredth street, between Eighth and Ninth avenues.
One Hundred and Third street, between First and Fourth avenues.
One Hundred and Fourth street, between Lexington and Third avenues.
One Hundred and Sixth street, between Park avenue and East river.
One Hundred and Seventh street, between Second and Third avenues.
One Hundred and Eleventh street, between Madison and Fourth avenues.
One Hundred and Sixteenth street, between Eighth and St. Nicholas avenues.
One Hundred and Eighteenth street, between Second and Third avenues.
One Hundred and Nineteenth street, between Fifth and Lenox, First and Second avenues, and Pleasant avenue and East river.
One Hundred and Twentieth street, between Mount Morris and Lenox avenues.
One Hundred and Twenty-first street, between Second and Third avenues.
One Hundred and Twenty-third street, between Second avenue and Avenue A.
One Hundred and Twenty-fourth street, between Seventh and Eighth avenues.
One Hundred and Twenty-fifth street, between Eighth avenue and Manhattan street.
One Hundred and Twenty-seventh street, between Madison and Fifth and Lenox and Eighth avenues.
One Hundred and Twenty-eighth street, between Second and Third, and Lenox and Eighth avenues.
One Hundred and Twenty-ninth street, between Broadway and Tenth avenue.
One Hundred and Thirtieth street, between Lexington and Fourth, Lenox and Eighth avenues, and Twelfth avenue and North river.
One Hundred and Thirty-first street, between Fifth and Lenox, and Seventh and Eighth avenues.
One Hundred and Thirty-second street, between Broadway and Tenth avenue, Fifth and Lenox avenues.
One Hundred and Thirty-fifth street, between Seventh and Eighth avenues.
One Hundred and Thirty-seventh street, between Seventh and Eighth avenues.
One Hundred and Thirty-eighth street, between Boulevard and North river.
One Hundred and Forty-first street, between Convent and Tenth avenue.
Attorney street, between Rivington and Stanton streets.
Ann street, between William and Nassau streets.

Bowery, between Delancey and Rivington, and Fourth and Sixth streets.
Bond street, between Broadway and Bowery.
Barclay street, between Greenwich and West streets.
Broadway, between Maiden lane and Liberty street, and Fulton and Ann streets.
Broadway, between Broome and Spring, and Prince and Bleecker streets.
Broadway, between Forty-fifth and Forty-seventh streets, and Manhattan and One Hundred and Thirty-second streets.
Bank street, between Hudson and Bleecker, and West and Thirteenth streets.
Battery place, between Greenwich and West streets.
Barrow street, between Bleecker and Fourth streets.
Bethune street, between Greenwich street and Thirteenth avenue.
Beekman place, between Forty-ninth and Fiftieth streets.
Bleecker street, between Broadway and Bowery, and Eighth avenue and Fourth street.
Bleecker street, between Leroy and Cornelia streets, and Carmine street and College place.
Bedford street, between Leroy and Carmine streets.
Canal street, between Broadway and Green street, Bowery and Ludlow street, and Mott and Essex streets.
Centre street, between Franklin and Lispenard streets.
Chambers street, between Bowery and Church street.
Charles street, between Greenwich and Hudson streets.
Clinton place, between Fifth avenue and University place, and Sixth avenue and Macdougall street.
Chrystie street, between Rivington and Stanton streets.
Cedar street, between Greenwich and West streets.
Cannon street, between Delancey street and Bowery.
Church street, between Chambers and Warren streets.
Carmine street, between Varick street and Minetta lane.
Centre Market place, between Broome and Grand streets.
Duane street, between Elm street and Park place.
Downing street, between Varick and Bleecker streets.
Elm street, between Broome and White streets.
Elizabeth street, between Hester and Broome streets.
Eldridge street, between Broome and Grand streets.
Front street, between Fulton and Beekman, and Dover and Roosevelt streets.
Great Jones street, between Broadway and Bowery.
Greenwich street, between Liberty and Barclay, and Spring and Clarkson streets.
Goerck street, between Grand and Houston streets.
Grand street, between Eldridge street and Bowery.
Houston street, between West and Washington streets.
Jersey street, between Crosby and Mulberry streets.
Leroy street, between Washington and West streets.
Little Twelfth street, between Hudson street and Ninth avenue.
Lafayette place, between Fourth and Great Jones streets.
Mercer street, between Spring and Third streets.
Manhattan street, between Ninth avenue and Boulevard.
Morris street, between Broadway and Church street.
Market street, East Broadway and Henry street.
New Bowery, between Pearl street and Park place.
Norfolk street, between Division and Grand, and Delancey and Rivington streets.
North Moore street, between Hudson and Greenwich streets.
North Washington square, between Fifth avenue and Macdougall street.
Prince street, between Sullivan and Macdougall streets.
Peck slip, between South and Front streets.
Perry street, between Washington and West streets.
Perry street, between Waverley place and Greenwich street.
Park street, between Mott and Pearl streets.
Pearl street, between City Hall place and Park row.
Roosevelt street, between Water and New Chambers streets.
Rutgers street, between South and Cherry streets.
South street, between Roosevelt street and Old slip.
Spring street, between West and Washington, and Bowery and Marion streets.
Temple street, between Cedar and Thames streets.
Thomas street, between West Broadway and Church street.
Vesey street, between Washington and West streets.
Wall street, between South and Hanover streets.
Warren street, between West and Washington streets.
Worth street, between Hudson street and West Broadway.
West street, between Battery place and Morris street.
West street, between Canal and Leroy streets.
West street, between Gansevoort and Bloomfield, and Tenth and Eleventh streets.
Water street, between Roosevelt and Beekman streets.
West Broadway, between Beach and Walker streets.
William street, between Wall and Pine streets.
Waverley place, between Broadway and University place.
University place, between Clinton place and Tenth street.
Park avenue, between Thirty-fourth and Thirty-fifth, Seventy-eighth and Seventy-ninth, Eighty-third and Eighty-fourth, and Eighty-sixth and Ninety-first streets.
Madison avenue, between Thirty-third and Thirty-fifth, Fifty-eighth and Fifty-ninth, Sixty-first and Sixty-second, Sixty-ninth and Seventieth, Seventy-third and Seventy-fourth, Seventy-eighth and Seventy-ninth, Eighty-first and Eighty-second, One Hundred and Eleventh and One Hundred and Twelfth, One Hundred and Twenty-first and One Hundred and Twenty-second, One Hundred and Twenty-fourth and One Hundred and Twenty-fifth, and One Hundred and Thirty-fifth and One Hundred and Thirty-sixth streets.
Lexington avenue, between Twenty-ninth and Thirty-first, Fifty-sixth and Fifty-seventh, Eighty-second and Eighty-third, Eighty-seventh and Eighty-eighth, Eighty-ninth and Ninetieth, One Hundred and Sixteenth and One Hundred and Seventeenth, and One Hundred and Eighteenth and One Hundred and Nineteenth streets.
Vanderbilt avenue, between Forty-second and Forty-third streets.
West End avenue, between Eighty-fourth and Eighty-fifth streets.
Manhattan avenue, between One Hundred and Eighteenth and One Hundred and Twentieth streets.
Depew avenue, between Forty-second and Forty-third streets.
Greenwich avenue, between Sixth and Eighth avenues.
South Fifth avenue, between Grand and Broome, and Bleecker and Third streets.
Avenue A, between Nineteenth and Twentieth streets.
Avenue B, between Third and Fourth streets.
First avenue, between Twenty-third and Twenty-fourth, Thirty-fifth and Thirty-sixth, Thirty-ninth and Fortieth, Sixty-ninth and Seventieth, Eighty-first and Eighty-second, and One Hundred and Twenty-third and One Hundred and Twenty-fourth streets.
Second avenue, between Ninth and Twenty-fourth, Twenty-fifth and Twenty-seventh, Forty-first and Forty-second, Forty-third and Forty-fifth, Eighty-eighth and Eighty-ninth, and Ninety-second and Ninety-third streets.
Third avenue, between Seventh and Tenth, Twenty-third and Twenty-fourth, Thirty-first and Thirty-third, Thirty-sixth and Thirty-eighth, Thirty-ninth and Forty-second, Fifty-third and Fifty-fourth, Sixty-first and Sixty-second, Eighty-second and Eighty-third, Ninety-fifth and Ninety-sixth, Ninety-seventh and Ninety-eighth, One Hundred and Third and One Hundred and Fourth, and One Hundred and Twenty-ninth and One Hundred and Thirtieth streets.
Fourth avenue, between Thirty-first and Thirty-second, One Hundred and Thirteenth and One Hundred and Fourteenth, One Hundred and Eighteenth and One Hundred and Nineteenth, and One Hundred and Twenty-first and One Hundred and Twenty-second streets.
Fifth avenue, between Eighth and Fifty-ninth streets.
Sixth avenue, between Carmine and Eleventh, Twenty-fifth and Twenty-sixth, Thirty-fourth and Thirty-seventh, Thirty-eighth and Thirty-ninth, and Fifty-seventh and Fifty-eighth streets.
Seventh avenue, between Thirty-second and Thirty-fourth, and Thirty-ninth and Fortieth streets.
Eighth avenue, between Sixtieth and Sixty-first, Eighty-second and Eighty-third, Ninety-third and Ninety-fifth, One Hundred and Twentieth and One Hundred and Twenty-third, and One Hundred and Twenty-eighth and One Hundred and Forty-sixth streets.
Ninth avenue, between Eighteenth and Thirty-second, Thirty-seventh and Thirty-eighth, Forty-first and Forty-second, Fifty-eighth and Sixty-first, Sixty-fifth and Sixty-eighth, Seventy-first and Seventy-second, Eighty-fifth and Eighty-sixth, Ninety-fourth and Ninety-fifth, One Hundred and Second and One Hundred and Fourth, and One Hundred and Fifth and One Hundred and Sixth streets.
Tenth avenue, between Eighteenth and Nineteenth, Fortieth and Forty-second, Fifty-second and Fifty-third, Sixty-fourth and Sixty-fifth, Sixty-eighth and Sixty-ninth, Seventy-fifth and Seventy-sixth, Eighty-first and Eighty-second, Eighty-eighth and Eighty-ninth, Ninety-eighth and One Hundredth, One Hundred and Fifth and One Hundred and Sixth, One Hundred and Eighth and One Hundred and Tenth, and One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets.
Eleventh avenue, between Thirty-fifth and Thirty-seventh, Fiftieth and Fifty-first, and Fifty-seventh and Fifty-eighth streets.

2,673.71 square yards of pavement, including 720 square yards of asphalt, were taken up and relaid, under orders given by the Commissioner of Public Works, the cost under each order amounting to less than \$1,000.

59,230.16 square yards of pavement, including crosswalks, were taken up and relaid by contract during the year in the following-named streets:

Park Row, west side, from Mail street to a line 473 feet northerly.
Maiden lane, from Broadway to William street.
Liberty street, from West to Washington street.
Barclay street, from Church street to College place.
College place, from Chambers to Murray street.
West Broadway, from Chambers to Canal street.
Howard street, from Broadway to Crosby street.
Thirty-ninth street, from Seventh avenue to Broadway.
Forty-ninth street, from Eighth to Ninth avenue.
Fifty-fourth street, from Seventh avenue to Broadway.
Sixtieth street, from Tenth to Eleventh avenue.
Sixty-third street, from Ninth to Tenth avenue.
Seventy-sixth street, from Ninth to Tenth avenue.
Seventy-ninth street, at intersection of West End avenue.
Eighty-fourth street, at intersection of West End avenue.
Sixth avenue, east side, from Forty-fifth to Fiftieth street.
Forty-fourth street, from Second to Third avenue.
Forty-eighth street, from Fifth to Madison avenue.
One Hundred and Second street, from Second to Third avenue.
One Hundred and Fourth street, from First to Third avenue.
Madison avenue, from One Hundred and Twenty-fifth to One Hundred and Twenty-ninth street.
One Hundred and Seventeenth street, from Lexington to Fourth avenue.
Lexington avenue, from One Hundred and Fourth to One Hundred and Sixth street.
Lexington avenue, from One Hundred and Sixth to One Hundred and Ninth street.
Lexington avenue, from One Hundred and Tenth to One Hundred and Twelfth street.
Lexington avenue, at the intersections of One Hundred and Thirteenth and One Hundred and Fifteenth streets.
Lexington avenue, from One Hundred and Seventeenth street to One Hundred and Eighteenth street.
Lexington avenue, from One Hundred and Twenty-second to One Hundred and Twenty-third street.
One Hundred and Twenty-sixth street, from Eighth to St. Nicholas avenues.

The total area of pavement, including crosswalks, taken up and relaid by day's work, by contract and under orders, in 1889, was 447,990.81 square yards.

Several contracts were let late in the year to take up and relay the pavement in quite a number of streets, and work on some of them has been nearly finished. Those not yet commenced will be put under way early in the spring.

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

In addition to the ordinary repairs made by the force employed under this appropriation, such as repairing fire-hydrants and leaks in Croton water-mains, 513 new fire-hydrants were substituted for old ones, and 9 new fire-hydrants were erected.

PUBLIC DRINKING HYDRANTS.

104 drinking-hydrants were repaired.

15 new drinking-hydrants were erected at the following points:

South side of One Hundred and Eighth street, 100 feet east of Fifth avenue.
No. 127 Ninth avenue.
No. 542 West Fourteenth street.
No. 230 Ninth avenue.
Northwest corner of Madison avenue and One Hundred and Thirty-fourth street.
West Farms Square.
Northwest corner of Eighty-sixth street and Third avenue.
Northwest corner Second avenue and One Hundred and Second street.
Northwest corner Second avenue and One Hundred and Sixteenth street.
Southeast corner Third avenue and One Hundred and Twenty-eighth street.
Prospect avenue and One Hundred and Forty-ninth street.
No. 645 Eleventh avenue.
Southwest corner of Third avenue and Ninety-seventh street.
One Hundred and Thirty-sixth street and Southern Boulevard.
No. 307 Willis avenue.

WELLS AND PUMPS—REPAIRING AND CLEANING.

4 pumps were repaired at a cost of \$190.16.

REPAVING STREETS AND AVENUES.

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

With Granite-block Pavement.

| STREET. | FROM | SQUARE YARDS. | LINEAL FEET. |
|-------------------------------|---|---------------|--------------|
| Twenty-eighth street..... | Avenue A to East river..... | 1,343.00 | 411.80 |
| Hudson street..... | Chambers to Beach street..... | 10,578.00 | 1,351.95 |
| Scammel street..... | Water street to East Broadway..... | 1,528.80 | 933.50 |
| Thirty-third street..... | Fourth to Lexington avenue..... | 1,414.11 | 439.50 |
| Washington street..... | Gansevoort to Little Twelfth street..... | 1,043.33 | 307.00 |
| First street..... | Avenue A to Houston street..... | 574.44 | 181.90 |
| Chambers street..... | Park row to Greenwich street (except where paved with asphalt)..... | 7,381.67 | 1,863.80 |
| Hudson street..... | Spring to Fourteenth street..... | 31,898.11 | 5,462.00 |
| Total, including crosswalks.. | | 55,761.46 | 10,951.45 |

With Trap-block Pavement.

| | | | |
|-------------------------------|--|----------|----------|
| Thirty-seventh street..... | First avenue to a point 109 feet easterly..... | 361 | 109 |
| Perry street..... | Waverley place to Fourth street..... | 1,001.66 | 417.40 |
| Commerce street..... | Bleecker to Barrow street..... | 1,428 | 500 |
| Liberty place..... | Liberty street to Maiden lane..... | 228.77 | 207 |
| Theatre alley..... | Ann to Beekman street..... | 450 | 329.80 |
| Hague street..... | Pearl to Cliff street..... | 198 | 187.50 |
| Birmingham street..... | Madison to Henry street..... | 298 | 210.80 |
| Staple street..... | Jay to Harrison street..... | 332 | 202.20 |
| Collister street..... | Beach to Lighthouse street..... | 593.67 | 410.10 |
| Little Twelfth street..... | Ninth avenue to Washington street..... | 1,631.90 | 489.80 |
| Twenty-eighth street..... | Ninth to Tenth avenue..... | 2,688 | 816.50 |
| Thirteenth street..... | Ninth avenue to Washington street..... | 1,456 | 437.50 |
| Total, including crosswalks.. | | 10,667 | 4,317.60 |

REPAVING (CHAPTER 346, LAWS OF 1889).

Two contracts were completed, as follows:

With Asphalt Pavement, including Crosswalks.

| STREET. | FROM. | SQUARE YARDS. | LINEAL FEET. |
|------------------|---------------------------------------|---------------|--------------|
| Park avenue..... | Thirty-fourth to Fortieth street..... | 10,647.61 | 1,512.40 |

With Granite-block Pavement, including Crosswalks.

| | | | |
|----------------------|---|----------|-------|
| Franklin street..... | West Broadway to Washington street..... | 4,927.74 | 1,122 |
|----------------------|---|----------|-------|

RECAPITULATION.

| | | |
|---|-----------|-----------|
| Total repavement with granite-blocks..... | 60,689.20 | 12,073.45 |
| Total repavement with trap-blocks..... | 10,667 | 4,317.60 |
| Total repavement with asphalt..... | 10,647.61 | 1,122 |
| Total repavement of all kinds..... | 82,003.81 | 17,513.05 |

Length of repavement in miles, 3.31.

Contracts have been awarded for the repaving of the following-named streets, under resolutions of the Board of Aldermen:

Hudson street, from Beach to Spring street.
New Chambers street, from Park Row to Cherry street.
Whitehall street, from Beaver street to South Ferry.
Madison avenue, from Thirty-third to Thirty-sixth, and Forty-first to Forty-second street.
Madison avenue, from Thirty-second to Thirty-third, Thirty-sixth to Forty-first and Forty-second to Fifty-eighth streets, and Fifty-eighth street, from Madison to Fifth avenue.
Wall street, from Broadway to Nassau street, and from Hanover to Pearl street.

The total estimated quantities of the above amounts to 64,740 square yards of pavement and the total estimated cost, \$275,702.30. The last mentioned contract calls for an asphalt pavement; the others for granite pavement.

New Chambers street is substantially finished, Hudson street is nearly finished and several blocks of the asphalt pavement on Madison avenue have been completed.

Work on all these contracts will be commenced early in the approaching paving season, and all of them will be completed before the close of next spring.

NEW PAVEMENTS UNDER ASSESSMENT.

Very few contracts for new pavements under this head were awarded until well along in the fall, and in consequence many of these works remain uncompleted. The great amount of rainy weather retarded the work materially, but this has been partly offset by the mildness of winter up to the present time permitting of several weeks in which paving could be carried on to a greater or lesser extent.

During the year contracts for laying new pavements in the following named streets were completed:

Granite Pavement, including Crosswalks.

| STREET. | FROM | SQUARE YARDS. | LINEAL FEET. |
|---|---|---------------|--------------|
| One Hundred and Thirty-fourth street.. | Sixth to Seventh avenue..... | 2,681 | 820.20 |
| Manhattan avenue..... | Morningside avenue to One Hundred and Sixteenth street..... | 3,181 | 686.10 |
| One Hundred and Fifty-seventh street.. | Tenth to Eleventh avenue..... | 2,721 | 822.10 |
| One Hundred and Twentieth street..... | Seventh to Lenox avenue..... | 2,697.33 | 819.70 |
| One Hundred and Fiftieth street..... | St. Nicholas to Tenth avenue..... | 2,410 | 728.20 |
| One Hundred and Twenty-sixth street.. | First to Second avenue..... | 2,239 | 683.60 |
| One Hundred and Eighteenth street..... | Fifth to Lenox avenue..... | 3,139 | 947.60 |
| Eighty-seventh street..... | Avenue A to Avenue B..... | 2,210.80 | 669.40 |
| One Hundred and Twenty-first street.. | Seventh to St. Nicholas avenue..... | 2,544 | 775.50 |
| One Hundred and Fifty-eighth street.... | Tenth to Eleventh avenue..... | 2,718.55 | 821.70 |
| Sixtieth street..... | Ninth to Tenth avenue..... | 2,726.33 | 818.90 |
| Eighty-seventh street..... | "..... | 2,721 | 816.50 |
| Madison avenue..... | One Hundred and Eighth to One Hundred and Tenth street..... | 2,091 | 472.70 |
| West End avenue..... | Eighty-ninth to Ninety-sixth street..... | 8,846 | 1,835.10 |
| Tenth avenue..... | One Hundred and Tenth to Manhattan street.. | 28,034.90 | 4,256.93 |
| West End avenue..... | Sixty-fifth to Sixty-ninth street..... | 7,501.20 | 1,087.33 |
| Ninetieth street..... | Boulevard to Riverside Drive..... | 2,711.44 | 816 |
| One Hundred and Fifty-sixth street.... | Tenth to Eleventh avenue..... | 2,723.33 | 817.60 |
| Sixty-sixth street..... | "..... | 2,729.50 | 816.80 |
| Eighty-seventh street..... | West End avenue to Boulevard..... | 1,159 | 352 |
| Ninety-fourth street..... | Madison to Fifth avenue..... | 1,491 | 459.80 |
| Eighty-eighth street..... | Eighth to Ninth avenue..... | 2,737 | 819 |
| Seventy-fifth street..... | Ninth to Tenth avenue..... | 2,741.66 | 827 |
| One Hundred and Sixth street..... | Park to Fifth avenue..... | 6,208.24 | 863.70 |
| Ninety-eighth street..... | Second to Third avenue..... | 2,098 | 627.70 |
| One Hundred and Fifty-ninth street.... | Tenth avenue to Boulevard..... | 2,729.66 | 820.90 |
| Ninety-ninth street..... | Eighth to Ninth avenue..... | 2,733.33 | 819.30 |
| One Hundred and Thirteenth street..... | Boulevard to Riverside Drive..... | 1,699.22 | 505.80 |
| Total..... | | 110,223.49 | 25,613.16 |

Trap-block Pavement, including Crosswalks.

| | | | |
|---|--|----------|----------|
| Thirty-seventh street..... | 109 feet east of First avenue to East river..... | 264.66 | 79.30 |
| One Hundred and Thirty-first street.... | Tenth avenue to Broadway..... | 1,615.16 | 485.00 |
| One Hundred and Thirteenth street.... | Fourth to Madison avenue..... | 1,363.00 | 411.00 |
| One Hundred and Ninth street..... | First avenue to East river..... | 1,935.00 | 579.00 |
| Total..... | | 5,177.82 | 1,554.30 |

Asphalt Pavement, including Crosswalks.

| | | | |
|--|-----------------------------------|----------|--------|
| One Hundred and Twenty-second street. | Mount Morris to Lenox avenue..... | 1,496.00 | 450.40 |
| Eighty-second street..... | Boulevard to Riverside Drive..... | 2,224.35 | 669.30 |
| One Hundred and Twenty-first street... | Mount Morris to Lenox avenue..... | 1,482.00 | 444.20 |

| STREET. | FROM | SQUARE YARDS. | LINEAL FEET. |
|----------------------|---|---------------|--------------|
| Pleasant avenue..... | One Hundred and Fifteenth to One Hundred and Nineteenth street..... | 6,234.00 | 963.70 |
| West End avenue..... | Sixty-ninth to Seventy-second street..... | 3,499.17 | 752.30 |
| Total..... | | 14,935.52 | 3,279.90 |

Macadam Pavement, including Crosswalks.

| | | | |
|--------------------------|---|-----------|----------|
| St. Nicholas avenue..... | One Hundred and Fifty-fifth street to Tenth avenue..... | 64,881.00 | 9,481.00 |
| Kingsbridge road..... | Tenth avenue to One Hundred and Ninetieth street..... | | |

RECAPITULATION.

| | | |
|------------------------------|------------|-----------|
| Granite-block pavement..... | 110,223.49 | 25,613.16 |
| Trap-block pavement..... | 5,177.82 | 1,554.30 |
| Asphalt pavement..... | 14,935.52 | 3,279.90 |
| Macadam pavement..... | 64,881.00 | 9,481.00 |
| Total new pavement laid..... | 195,217.83 | 39,928.35 |

Length of New Pavement in miles, 7.56.

The following table shows the total areas and lengths of all the different kinds of pavement at the close of the year 1889:

| KIND OF PAVEMENT. | SQUARE YARDS. | LINEAL FEET. | MILES. |
|----------------------------|---------------|--------------|--------|
| Specification granite..... | 2,098,044.96 | 456,601.11 | 94.06 |
| Block granite..... | 673,402.00 | 136,717.00 | 25.89 |
| Specification trap..... | 1,248,528.82 | 355,821.90 | 67.39 |
| Belgian blocks..... | 3,110,104.16 | 712,944.45 | 135.02 |
| Cobble..... | 101,642.76 | 27,174.60 | 5.14 |
| Asphalt..... | 59,984.13 | 14,400.30 | 2.73 |
| Wood..... | 516.00 | 158.00 | .03 |
| Russ..... | 2,964.00 | 621.00 | .12 |
| Macadam..... | 911,146.00 | 134,375.00 | 25.45 |
| Total..... | 8,206,332.83 | 1,878,813.36 | 355.83 |

Under an ordinance approved January 23, 1889, to lay a crosswalk across the Bowery from Nos. 192 to 199, a contract was awarded and the work completed in accordance therewith.

STREET OPENINGS.

The following is a brief statement of this kind of work performed under supervision of this Bureau during the year:

23,498 openings were made to repair all mains other than Croton water-mains, and make repairs of and connections for gas, steam, water, sewer, electric-lights and subways.

7,347 notices were sent to corporations and others to repair bad places in the pavement over openings made by them.

6,114 bad places in the pavement were repaired in compliance with the above notices.

38.38 miles of gas-mains were laid.

22.50 miles of subway trenches were constructed.

1,890 lineal feet of steam-pipes were laid.

4,136 lineal feet of salt water-mains were laid.

8,534 lineal feet of pipes for conducting oil were laid.

580 lineal feet of refrigerating pipes were laid.

2.88 miles of single car tracks with new approved style of rails were laid.

15,500 lineal feet of double car tracks with new improved style of rails were laid.

369 poles were erected by telegraph, telephone and electrical companies.

Respectfully,

WM. H. BURKE, Water Purveyor.

Document "F."

REPORT OF ENGINEER IN CHARGE OF SEWERS.

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF ENGINEER IN CHARGE OF SEWERS,
NO. 31 CHAMBERS STREET, ROOM 9,
NEW YORK, January 6, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

DEAR SIR—In compliance with your instructions, I hand you herewith my report of the transactions of this office for the quarter ending December 31, 1889:

7,300 lineal feet of new sewers and 1 receiving-basin connected therewith have been built, making the present total length of the sewerage of the city 2,290,108 lineal feet (433 $\frac{1}{2}$ miles), with 5,209 receiving-basins, which number includes receiving-basins built under special contract, as hereafter stated:

29 sewer and 18 basin contracts have been completed, viz.:

Sewer in One Hundred and Second street, between Harlem river and First avenue.

Sewer in One Hundred and Thirty-eighth street, between Eighth and Edgecombe avenues.

Sewer in One Hundred and Seventh street, between Manhattan and Eighth avenues.

Sewer in Ninety-seventh street, between Tenth avenue and Boulevard.

Sewer in Ninety-fourth street, between First and Second avenues.

Sewer in One Hundred and Fourth street, between Boulevard and West End avenue.

Sewer in One Hundred and Fifty-third street, between Tenth avenue and summit west, etc.

Sewer in One Hundred and Second street, between Riverside and West End avenues.

Sewer in One Hundred and Sixty-first street, between Tenth avenue and Eleventh avenue

Boulevard.

Sewer in Ninety-fifth street, between Boulevard and Tenth avenue.

Sewer in Twenty-sixth street, between fifth manhole east of First avenue, etc.

Sewer in Fourth avenue, west side, between Eighth and Ninth streets.

Sewer in Avenue B, between Eighty-second and Eighty-third streets.

Sewer in South street, between Peck Slip and Fulton street.

Sewer in Grand street, between Goerck and Lewis streets.

Sewer in Front street, between Fletcher street and Burling Slip.

Sewer in Front street, between Dover street and Peck Slip.

Sewer in Lexington avenue, between One Hundred and Twenty-seventh and One Hundred

and Twenty-eighth streets.

Alterations and improvements to sewer in Seventy-ninth street, between Tenth avenue and

summit east.

Alterations and improvements to sewer in Fourth avenue, east side, between Seventy-second

and Seventy-fourth streets, etc.

Alterations and improvements to sewer in Eighty-third street, between Eighth and Ninth

avenues.

Alterations and improvements to sewer in Twenty-ninth street, between Boulevard and second

manhole east of Broadway.

Alterations and improvements to sewer in Twenty-second street, between Ninth and Eleventh

avenues.

Repairs to sewer in One Hundred and Second street, between First and Second avenues.

Repairs to sewer in Twenty-fifth street, between Sixth and Eighth avenues.
Repairs to sewer in Twelfth street, between Avenues A and C.
Repairs to sewer in West street, between Spring and West Eleventh streets.
Repairs to sewer in Third avenue, west side, between One Hundredth and One Hundred and Second streets.
Repairs to sewer in Manhattan street, between Broadway and Twelfth avenues.
Receiving-basin southeast corner Seventy-second street and West End avenue.
Receiving-basin northwest, northeast and southeast corners One Hundred and Fifty-seventh street and Eleventh avenue.
Receiving-basin northeast and northwest corners One Hundred and Fifty-eighth street and Eleventh avenue.
Receiving-basin southeast corners Ninety-fifth, Ninety-sixth and Ninety-seventh streets and Madison avenue, and southwest corners Ninety-eighth, Ninety-ninth, One Hundredth, One Hundred and First, One Hundred and Second and One Hundred and Third streets and Madison avenue.
Receiving-basin One Hundred and Nineteenth street, between Pleasant avenue and Harlem river.
Receiving-basin, northwest corner One Hundred and Fifth street and Park avenue.
There are now in progress 21 contracts for new sewers and 2 contracts for repairs to sewers. 900 receiving-basins and 123,561 linear feet of sewer have been cleaned.

Yours, respectfully,

HORACE LOOMIS, Engineer in Charge of Sewers.

REPORT OF THE TRANSACTIONS OF THE OFFICE OF THE ENGINEER IN CHARGE OF SEWERS
FOR THE QUARTER ENDING DECEMBER 31, 1889.

| | | |
|---|----------|----|
| Credit to General Fund— | | |
| Amount received for 296 permits for sewer connections..... | \$7,239 | 11 |
| Engineers' Fees— | | |
| Amount of Engineers' fees assessed on property benefited, and charged to Street Improvement Fund..... | \$4,769 | 61 |
| Sewers—Repairing and Cleaning— | | |
| Balance on hand, September 30, 1889..... | \$66,717 | 40 |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Laborers, etc..... | \$19,062 | 96 |
| On Contracts for Repairs..... | 12,895 | 55 |
| Repairing and Cleaning (under \$1,000)..... | 12,379 | 74 |
| Materials and sundries..... | 2,451 | 36 |
| Balance on hand, December 31, 1889..... | 19,927 | 79 |
| | 66,717 | 40 |
| Sewers—Repairing and Cleaning—Salaries— | | |
| Balance on hand, September 30, 1889..... | \$2,550 | 06 |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Inspectors, etc..... | \$2,489 | 98 |
| Balance on hand, December 31, 1889..... | 60 | 08 |
| | 2,550 | 06 |
| Sewerage System—Salaries— | | |
| Balance on hand, September 30, 1889..... | \$6,919 | 62 |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Engineers, etc..... | \$2,810 | 57 |
| Balance on hand, December 31, 1889..... | 4,109 | 05 |
| | 6,919 | 62 |
| Surveys, Maps, etc., for Street Openings and New Streets—Salaries— | | |
| Balance on hand, September 30, 1889..... | \$3,487 | 49 |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Draughtsmen, etc..... | \$2,078 | 98 |
| Balance on hand, December 31, 1889..... | 1,408 | 51 |
| | 3,487 | 49 |
| Boring Examinations for Grading and Sewer Contracts— | | |
| Balance on hand, September 30, 1889..... | \$491 | 00 |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Axemen, etc..... | \$490 | 50 |
| Balance on hand, December 31, 1889..... | 50 | |
| | 491 | 00 |
| Restoring and Repaving—Special Fund— | | |
| Amount received for permits for street openings..... | \$5,561 | 50 |
| Street Improvement Fund— | | |
| Vouchers transmitted to the Commissioner of Public Works— | | |
| Pay-roll of Engineers, etc..... | \$15,040 | 48 |
| On contracts for sewers, etc..... | 73,744 | 77 |
| | \$88,785 | 25 |
| Work done by Mechanics and Laborers— | | |
| 47 receiving-basins and culverts relieved. | | |
| 900 receiving-basins and culverts cleaned. | | |
| 18,975 linear feet of sewer cleaned. | | |
| 26 linear feet of sewer repaired. | | |
| 39 linear feet of sewer rebuilt. | | |
| 35 linear feet of new sewer built. | | |
| 105 linear feet of box-sewer built. | | |
| 9 linear feet of pipe-sewer built. | | |
| 125 linear feet of new culvert built. | | |
| 12 linear feet of new culvert rebuilt. | | |
| 96 linear feet of tile bottom laid. | | |
| 63 linear feet of spur pipe laid. | | |
| 62 linear feet of new curb set. | | |
| 10 receiving-basins repaired. | | |
| 4 new basins built. | | |
| 10 new basin-heads and covers put on. | | |
| 22 new manhole-heads and covers put on. | | |
| 3 new basin-covers put on. | | |
| 23 new manhole-covers put on. | | |
| 285 manhole-heads reset. | | |
| 5 basin-heads reset. | | |
| 305 square feet of brick work built. | | |
| 128 square feet of flagging relaid. | | |
| 306 square yards of pavement relaid. | | |
| 53,096 cubic yards of earth excavated and refilled. | | |
| 2,601 cart-loads of dirt removed. | | |

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF ENGINEER IN CHARGE OF SEWERS,
NEW YORK, January 6, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

DEAR SIR—According to your instructions I present the following as my report of the operations of this office for the year 1889.

I have arranged in tabular form, classified properly, the various works carried on during the year.

Schedule "A" shows the new sewers which have been constructed under contract, together with the alterations and improvements to existing sewers.

From this it appears that 31,100 linear feet of sewers have been built, together with 1,274 feet of culvert, of which 15,000 feet were of brick, and 16,100 feet of pipe of various sizes, suited to the amount of drainage which they are required to carry, costing in all \$297,925.85. This makes the present length of sewers in the city 2,290,108 feet, equal to 433.73 miles, together with 5,209 receiving-basins. It appears from this that the mileage of sewers built has fallen off nearly one-half from last year, although the activity in building has not materially decreased. This is accounted for from the fact that the locality where the greatest number of buildings have been erected had been well provided with sewers during the past three years.

North of One Hundred and Fifty-fifth street, the progress of public improvement is still slow, although two large contracts, mentioned in my last annual report, are in progress, viz.: Sewer in Tenth avenue, between One Hundred and Seventy-eighth and One Hundred and Ninetieth streets, and sewer in Eleventh avenue and Kingsbridge road, between One Hundred and Sixty-first and

One Hundred and Sixty-ninth streets. When these are completed quite a large territory will be available for building purposes. Legal steps for obtaining title to the necessary land for an outfall sewer, from One Hundred and Sixty-seventh street and Tenth avenue to the Harlem river, are now in a fair way for a speedy conclusion, and it is hoped that during the coming season we may undertake this improvement.

The most important works completed during the season are:

Sewer in Fourth avenue, west side, between Ninety-ninth and One Hundred and Third streets.
Sewer in Hamilton place, between One Hundred and Thirty-sixth and One Hundred and Fortieth streets.

Sewer in Eighty-fifth street, between Boulevard and Riverside avenue.

Sewer in Seventy-second street, between Hudson river and Eleventh avenue, with branches in Riverside avenue.

Sewer in South street, between Peck Slip and Fulton street.

The alterations and improvements to existing sewers, consisting of the substitution of egg-shaped brick for certain pipe-sewers, which were found to be of insufficient capacity and imperfectly built, is of great importance and benefit to the localities affected, in that it provides a proper system of drainage in place of one which had failed in many essential particulars and had caused a great amount of damage and annoyance. In this way 5,565 feet of sewers have been rebuilt, the most important of which are:

Sewer in Tenth avenue, between Seventy-seventh and Eighty-first streets.

Sewer in Fifty-fourth street, between Tenth and Eleventh avenues.

Sewer in Twenty-second street, between Ninth and Eleventh avenues.

Sewer in One Hundred and Twenty-ninth street, between Broadway and Boulevard.

An examination of Schedule "B" shows that there are now about four miles of sewers in process of construction. Several of those are of great importance. I might mention in particular the intercepting and outfall sewers in West street, between Battery place and Rector streets; outlet at Pier 4, North river, and between Jay and Canal streets, etc.; outlets at Vestry and Canal streets, covering over one mile of river front, taking in all the sewers in side streets, and thereby removing all cause of complaints on account of the deposit of sewerage matter at the heads of slips.

The estimated cost of the work shown in the schedule is \$205,965.79.

Schedule "C" shows sewers petitioned for, and for which plans and specifications are under way, and which I expect will be put under contract during the coming season.

We have reason to be well satisfied with the general operation of the system during the past year. Only 11 cases of stoppage of brick sewers from any cause came to our knowledge from reports of citizens. The thorough method of examination adopted during the past few years has enabled us to know in advance the condition of sewers as to the cleanliness and repair, and to take the necessary steps to remove deposit and remedy defects.

In this work two foremen, each assisted by a party of laborers, have been engaged. They have examined nearly every sewer in the city south of Fifty-ninth street, and nearly all sewers north of Fifty-ninth street and east of Fourth avenue, not less than 250 miles. When repairs or cleaning was necessary the case has been reported and orders given for the work.

Replying to your specific inquiries as to the present extent, capacity and efficiency of the sewerage system in the upper part of the city and the need for its improvement and extension, I will state that, in considering this question, the line might properly be drawn at Fifty-ninth street, as nearly all the sewers north of that point have been built within the last twenty years, and are of modern construction and design.

About 160 miles of sewer have been constructed in this district, and about 55 miles remain to be constructed in unimproved streets.

With the exception of some of the pipe-sewers laid about the year 1876, this portion of the system, being mostly located on high ground, is in successful operation, coming fully up to the needs of the population.

Such of the pipe-sewers as have been found defective have been rebuilt from time to time, and as fast as such cases appear it would be proper to continue this work as heretofore under the title of Alteration and Improvement. Between Fifty-ninth and One Hundred and Fifty-fifth streets, all the outfall sewers are built, and it remains only to build the necessary branches as fast as called for by the erection of new buildings. North of One Hundred and Fifty-fifth street there are only two outfall sewers, viz.: at One Hundred and Fifty-eighth street and Hudson river and One Hundred and Seventy-eighth street and Harlem river, and the laterals are very few, although two large sewers are in progress of construction, as before stated. This portion of the city will receive attention as fast as streets are opened and its needs are developed.

It would hardly be proper to proceed in advance of the laying out and grading of streets and avenues, and the fixing of grades thereon, as the size and character of the structures to be built are somewhat dependent upon these conditions. According to the present plan of the streets of the city at the north end of the island, several tracts of land must be acquired for the construction of outfall sewers. It has been recently proposed to build one of these in Dyckman street, between Kingsbridge road and the Hudson river. When this street is graded, it will be proper to undertake this work. As it will be a large sewer, draining about 260 acres, it will undoubtedly stimulate building and lead to a great improvement in the property affected by it.

But, until rapid transit facilities are secured for this section of the city, no great influx of population can be expected, and no great extension of the sewer system will be needed.

There is one district of that part of the city which we are now considering which needs special mention, viz., that sometimes known as Harlem Flats, bounded by Ninety-third and One Hundred and Tenth streets, Third avenue and Harlem river. This region was originally salt marsh. It has been filled in and streets graded and is thickly covered with tenement houses, and is likely to have as dense a population as any section of the city. The sewers were built before the streets were graded, and these grades are so slight that the settlement caused by the weight of filling has, to a great extent, impaired their usefulness.

High tide fills these sewers and they receive all the deposits from the upland and are a continual source of expense for cleaning. For sanitary reasons the remodeling and rebuilding of this system should be carefully considered and undertaken without delay.

Considering the sewer system in the lower part of the city, that is south of Fifty-ninth street, "as to its condition, the plans adopted by the Department for its improvement and how far they have been carried out and what remains to be done to perfect the same, etc." it may be well to say as a matter of history that the commencement of the system dates back to Colonial times, although the bulk of it has been built within the past forty years. During that period various theories and ideas prevailed as to the necessities of the city in such matters and from this diversity of opinion resulted a great variety of underground structures intended to serve as sewers and drains.

It was only in 1865 that the Legislature authorized the adoption of a general system throughout the city. It did not appear at that time practicable to tear up and rebuild some 200 miles of sewers then existing, for it taxed the resources of the authorities to keep up with the demand for new works.

But a gradual change and renewal of the old-style drains and sewers has been going on, and is going on to this day. In the district named, about 6 miles have been rebuilt in the past twelve years, and 3 1/4 miles remodeled. Where the masonry was badly broken and gone to decay with irregular bottoms and sides, new sewers designed from the latest data have been built. In a large number of the large four-foot circular sewers which were carried of that diameter up to the head, and when the brick-work was sound, the wet perimeter or the running section has been remodeled by the substitution of a tile invert.

This has been done at a small cost, without disturbing the street surface at all, and has wrought a wonderful improvement in their efficiency. The work of improvement should go on as fast as funds are available.

But the most important matter which has engaged the attention of this Department has been the building of intercepting sewers along the river front and extending to deep water the outlets thereof.

As large areas have been reclaimed by locating the bulkhead-line far out beyond the original shore line, and the piers have been extended still farther; the necessity of these works is apparent. The foulness of the dead water lying between the piers has been a source of danger to the public health, and a nuisance to those doing business on the docks. To remedy this condition of affairs, the work of building intercepting sewers and outlets has progressed to date as follows:

North river front, from Battery—

West street, between Rector and Carlisle streets, with outlet through Pier 8, at Rector street.

West street, between Murray and Jay streets, with outlet through Pier 21, at Duane street.

West street, between Canal and West Eleventh streets, with outlet at Canal and Clarkson streets.

Eleventh avenue, between Fourteenth and Thirty-third streets, with outlet at Seventeenth street.

East river front, from Whitehall street—

South street, between Fulton and Roosevelt streets, with outlet at Pier 29, at Roosevelt street.

First avenue, between Thirtieth and Fortieth streets, with outlet at Thirty-third street.

Avenue A, between Sixty-second and Seventy-first streets, with outlet at Sixty-second street.

Avenue A, between Seventy-first and Seventy-ninth streets, with outlet at Seventy-fourth street.

Avenue B, between Seventy-ninth and Eighty-third streets, with outlet at Seventy-ninth street.

Avenue B, between Eighty-third and Eighty-seventh streets, with outlet at Eighty-sixth street.

Avenue A, between Eighty-sixth and Ninety-fourth streets, with outlet at Eighty-ninth street.

First avenue, between Ninety-second and One Hundred and Sixth streets, with outlet at One Hundred and Sixth street.

First avenue, between One Hundred and Sixth and One Hundred and Eighteenth streets, with outlet at One Hundred and Tenth street.

There are other outlets on both river-fronts draining large and small areas which, as the water-front is improved, will have to be remodeled and outlets provided at proper points.

Intercepting and overflow sewers in process of construction—

Outlet sewer through Pier 4, North river, with sewers in West street, between Rector street and Battery place, etc.

Outlet sewer through Pier 39, at Vestry street, with sewer in West street, between Jay and Canal streets, etc.

Overflow, Twentieth street, North river, with sewer in Twentieth street, between Tenth avenue and the river.

Outlet sewers for which plans are made or being prepared, the contracts for which will be let in the coming year:

Sewer in West street, between Carlisle and Dey streets, with outlet through Pier 13 at Cedar street.

Sewer in Twelfth avenue, east side, between Thirty-fifth and Thirty-eighth streets, with outlet through Pier at Thirty-sixth street.

Sewer in Twelfth avenue, east side, between Thirty-ninth and Fortieth streets, with outlet through Pier at Fortieth street.

Sewer in South street, between Roosevelt street and Pike Slip, with outlet through new Pier 29 at Market street.

Extension of sewer (outlet), Sixty-second street, at East river.

Extension of sewer (outlet), Eleventh street, at East river.

Extension of sewer (outlet), Fifty-sixth street, at North river.

Extension of sewer (outlet), Ninety-fifth street, at East river.

The following existing outlets have been extended or repaired during the year:

Sewer, Fifty-third street and East river, by Department masons.

Sewer, Corlears street and East river, by Department masons.

Sewer, Harrison street and North river, by Department masons.

Sewer, Little West Twelfth street, North river, by Department masons.

Sewer, Battery Place, Pier 1, North river, by Department masons.

Sewer, Sixty-first street and East river, by Department masons.

Sewer, Twenty-third street and East river, by Department masons.

Sewer, One Hundred and Thirty-fifth street and Harlem river, by Department masons.

Sewer, Eighth street and East river, by order.

Sewer, One Hundred and Eighteenth street and East river, by contract.

It will be seen from the foregoing that the North river front is in a fair way of being protected from the Battery to Thirty-third street, and the East river front as far as Pike street.

This work should be continued so as to cover all points contaminated by sewerage discharges, by intercepting sewers with outlets at not greater intervals than 1,000 feet.

Long collective sewers on practically a level grade are liable to hold deposits of sediment which must be removed by hand. I am therefore of the opinion that it would be good policy to increase the number of outlets to the limit above mentioned and build a number of overflows to diminish the danger of flooding.

To carry out the ideas as sketched above would involve the rebuilding of about ten miles of sewer costing in round numbers \$350,000, the rebotomming of about ten miles costing \$125,000, and the building of about nine miles of intercepting and outfall sewers at \$405,000. Total, \$880,000.

The report of Rudolph Herring, Civil Engineer, upon the sewer system was made early in the season. After an exhaustive examination, Mr. Herring indorses the present practice of rebuilding and extending the system.

He gives a large amount of valuable information upon the condition of the older sewers, and recommends the gradual renewal of the more objectionable portion by structures of modern design.

Repairing and Cleaning.

The work of keeping the sewer system in repair has been carried on during the past year to the extent of the means afforded for the purpose.

2,247 feet of brick sewer have been rebuilt and repaired, and the inner bottom of 6,924 feet have been remodeled with tile.

During the coming year the following works are proposed:

Repair with Tile Bottom.

Stanton street, between Bowery and Sheriff streets.

John street, between Front and Pearl streets.

Tenth street, between Avenues A and C.

Ninety-seventh street, between Second and Third avenues.

Twenty-eighth street, between First avenue and Avenue A.

Lispenard street, between West Broadway and Broadway.

Twenty-fourth street, between Ninth and Tenth avenues.

Lexington avenue, between Twenty-ninth and Thirty-first streets.

Twenty-seventh street, between Seventh and Eighth avenues.

Thirty-first street, between Sixth and Eighth avenues.

Repair with Brick.

Stanton street, between Bowery and Sheriff streets.

John street, between Front and Pearl streets.

Battery place, between Washington and Greenwich streets.

Water street, between Fletcher street and Burling Slip.

Walker street, between Church street and West Broadway.

Duane street, between Broadway and Hudson street.

Mulberry street, between Hester and Grand streets.

William street, between Cedar and Liberty streets.

William street, between John street and Maiden lane.

Twenty-fourth street, between Ninth and Tenth avenues.

Second street, between First avenue and Avenue A.

Lispenard street, between West Broadway and Broadway.

Lexington avenue, between Twenty-ninth and Thirty-first streets.

Brick Rebuilt.

Ninety-fifth street, between Second and Third avenues.

Sullivan street, between Broome and Canal streets.

Repairs to Pipe-sewers.

Eighth avenue, between Sixty-second and Sixty-sixth streets.

Eighty-first street, between Eighth and Ninth avenues.

Ninth street, between Eighth and Ninth avenues.

Sixty-fifth street, between Eighth and Ninth avenues.

Rebuilt Wooden Trunk Sewers.

Fulton street, both sides, from West street to Hudson river.

A force of 17 Foremen and Timekeepers, 5 Mechanics, 55 Laborers and 23 horses and carts, have been employed to clean pipe-sewers and receiving-basins, and to do all the small repairs, as well as such work as requires immediate attention. It has been found advantageous to give out by contract and orders to private parties the larger repairs and cleaning of brick sewers.

The amount appropriated for this purpose was \$175,000, and was expended as follows:

| | |
|-------------------------------------|-------------|
| Pay-roll of Laborers, etc. | \$73,302 15 |
| Materials, etc. | 15,690 14 |
| Work done under contract. | 23,112 32 |
| Work done under orders. | 42,967 60 |
| Liabilities outstanding, estimated. | 19,580 23 |
| Leaving a balance of. | 347 56 |

There has been 192,804 linear feet of sewer cleaned at an average cost of 19 cents per foot, of which 161,050 feet was brick and 31,754 feet pipe.

The low price obtained this year for cleaning is accounted for on the ground, 1st, competitive bidding for the work, and 2d, that the continuous and systematic work of the past three years has put the sewer system in a better state of cleanliness than heretofore, and there has therefore been a less amount of deposit to remove.

The system of competition went into effect about the 1st of July last, and under it the price for cleaning brick sewers averages 16 cents per foot, as against 28 cents for the previous six months. These prices can be maintained and even reduced and the money appropriated made to cover a much greater mileage, if the sewers are cleaned regularly and at short intervals. No sewer should be allowed to run more than a year without attention, and I am of the opinion that, with suitable appliances for flushing, a large part of the system could be cleaned every three months at no greater expense.

Among the larger repairs I might mention:

Manhattan avenue, between One Hundred and Sixth and One Hundred and Tenth streets.

Forty-eighth street, between First and Second avenues.

Thirtieth street, between Broadway and Fourth avenue.

One Hundred and Second street, between First and Second avenues.

Third avenue, west side, between One Hundredth and One Hundred and Second streets.

Of receiving-basins there have been 299 relieved and 3,188 cleaned.

The following is a statement of permits issued for connecting new buildings with public sewers, for repairing old connections and for repaving over connections:

| | |
|--|-------|
| Permits for new sewer connections. | 1,280 |
| Permits for repairing old connections. | 1,479 |
| Number of buildings in the above. | 4,193 |

| | |
|--|-------------|
| Amount received for sewer connections. | \$31,071 24 |
| Amount received for repaving over connections. | 24,151 50 |

\$55,222 74

The examinations made to determine the quantity of rock to be excavated under sewer contracts have been carried on during the year under the supervision of the Assistant Engineer by a force of one Axeman and four Laborers, with one horse and wagon. 12,240 feet of sewer have been thus examined, and the amount of rock estimated thereby was 20,195 cubic yards. The final estimate on these works showed 20,807 cubic yards.

The value of thus determining beforehand a large item of the expense of building sewers is therefore apparent.

The work of preparing maps and plans, etc., for sewer works has been performed by four Draughtsmen.

In addition to keeping up the records of the office they have made during the year 10 filed plans, 82 contract plans, 84 assessments, which included 152 maps showing 4,568 lots. Besides the above, the force has been engaged in making a new general plan of the sewer system of the whole city, with corrections of the date already on file. Six sheets of this plan have been finished and three sheets remain to be done.

Respectfully submitted,

HORACE LOOMIS, Engineer in Charge of Sewers.

SCHEDULE "A."

| LOCATION OF WORK. | SIZE. | SEWER. LINEAL FEET. | CULVERT. LINEAL FEET. | BASINS. | TOTAL COST. |
|---|------------|---------------------|-----------------------|---------|-------------|
| Sewer in Ninety-first street, between Riverside and West End avenues. | 15" | 325 | .... | .. | \$3,983 22 |
| Sewer in One Hundred and Forty-first street, between Boulevard and Tenth avenue, and in Tenth avenue, west side, between One Hundred and Fortieth and One Hundred and Forty-fifth streets, extension. | 3' 6" x 2' | 607 | 12 | 1 | 5,416 94 |
| Sewer in Fifty-second street, between Third and Lexington avenues, extension. | 12" | 41 | .... | .. | 1,269 37 |
| Sewer in One Hundred and Fifty-fifth street, between Harlem river and Eighth avenue. | 15" | 761 | .... | .. | 5,344 21 |
| Sewer in One Hundred and Thirty-seventh street, between Sixth and Seventh avenues. | 15" | 664 | .... | .. | 3,542 01 |
| Sewer in Third avenue, west side, between Eighty-eighth and Eighty-ninth streets. | 15" | 196 | .... | .. | 1,482 25 |
| Sewer in West street, between Rector and Carlisle streets. | 15" | 285 | .... | .. | 1,720 81 |
| Sewer in Seventy-second street, between Hudson river and Eleventh avenue, with branches in Riverside avenue, between Seventy-second and Seventy-sixth streets. | 3' 6" x 2' | 1,919 | 67½ | 5 | 32,688 07 |
| Sewer in Ninety-fifth street, between Madison and Fourth avenues. | 15" | 353 | .... | .. | 5,548 37 |
| Sewer in Ninetieth street, between Riverside and West End avenues. | 15" | 380 | .... | .. | 5,341 49 |
| Sewer in Seventy-seventh street, between Riverside and West End avenues. | 15" | 442 | .... | .. | 5,432 97 |
| Sewer in Eighty-ninth street, between Riverside and West End avenues. | 3' 6" x 2' | 530 | .... | .. | 6,422 07 |
| Sewer in Lexington avenue, between Twenty-fourth and Seventy-fifth streets. | 3' x 2' | 206 | .... | .. | 1,744 29 |
| Sewer in Eighty-eighth street, between West End avenue and Boulevard. | 15" | 290 | .... | .. | 3,325 25 |
| Sewer in Ninetieth street, between Ninth and Tenth avenues, extension. | 15" | 127 | .... | .. | 2,019 40 |
| Sewer in One Hundred and Seventeenth street, between Madison and Fourth avenues. | 3' 6" x 2' | 392½ | .... | .. | 4,835 43 |
| Sewer in One Hundred and Third street, between Eighth and Manhattan avenues. | 15" | 358 | 24 | 2 | 3,690 80 |
| Sewer in One Hundred and First street, between Boulevard and West End avenue. | 15" | 256 | .... | .. | 2,412 63 |
| Sewer in Eldridge street, between Grand and Broome streets. | 12" | 258 | .... | .. | 1,667 13 |
| Sewer in Fourth avenue, west side, between Ninety-ninth and One Hundred and Third streets. | 3' 6" x 2' | 972½ | .... | .. | 11,233 10 |
| Sewer in Tenth avenue, east side, between One Hundred and Forty-seventh and One Hundred and Forty-ninth streets, etc. | 3' 6" x 2' | 546 | .... | .. | 3,835 78 |
| Sewer in One Hundred and Sixty-fifth street, between Tenth avenue and Edgecombe road. | 15" | 394½ | .... | .. | 4,483 54 |
| Sewer in Seventy-fifth street, between Riverside and West End avenues. | 15" | 379 | .... | .. | 4,950 89 |
| Sewer in One Hundred and Ninth street, between Tenth avenue and Boulevard. | 15" | 809 | 33 | 3 | 6,748 17 |
| Sewer in Hamilton place, between One Hundred and Thirty-sixth and One Hundred and Fortieth streets. | 3' 6" x 2' | 990 | 36 | 2 | 10,234 59 |
| Sewer in Front street, between Old Slip and Wall street, extension. | 3' 6" x 2' | 230 | 18 | 1 | 2,286 02 |
| Sewer in Sixty-third street, between Tenth and Eleventh avenues. | 15" | 747 | .... | .. | 8,606 08 |
| Sewer in One Hundred and Second street, between Ninth and Tenth avenues. | 3' 6" x 2' | 741 | .... | .. | 7,999 26 |
| Sewer in Seventy-eighth street, between Riverside and West End avenues. | 15" | 376 | .... | .. | 3,754 78 |
| Sewer in Ninety-second street, between West End avenue and Boulevard. | 15" | 288 | .... | .. | 1,547 71 |
| Sewer in Eighty-fifth street, between Boulevard and Riverside avenue. | 15" | 960 | .... | .. | 6,268 48 |
| Sewer in One Hundred and Sixty-fifth street, between Harlem river and First avenue. | 3' 6" x 2' | 729½ | .... | .. | 4,911 52 |
| Sewer in One Hundred and Seventh street, between Manhattan and Eighth avenues. | 15" | 291 | 18 | 1 | 1,378 71 |
| Sewer in One Hundred and Sixty-fifth street, between Tenth avenue and Kingsbridge road. | 15" | 310 | .... | .. | 1,422 11 |
| Sewer in Ninety-seventh street, between Tenth avenue and Boulevard. | 12" | 209 | .... | .. | 1,927 42 |
| Sewer in Front street, between Dover street and Peck Slip. | 3' 6" x 2' | 225 | 30 | .. | 1,927 12 |
| Sewer in Lexington avenue, between One Hundred and Twenty-seventh and One Hundred and Twenty-eighth streets. | 12" | 165½ | .... | .. | 958 43 |
| Sewer in Ninety-fourth street, between First and Second avenues. | 3' 6" x 2' | 614½ | .... | .. | 4,378 84 |
| Sewer in Grand street, between Goerck and Lewis streets. | 15" | 67 | .... | .. | 544 95 |
| Sewer in One Hundred and Fourth street, between Boulevard and West End avenue. | 15" | 221 | .... | .. | 2,470 34 |
| Sewer in One Hundred and Fifty-third street, between Tenth avenue and summit west, etc. | 15" | 274 | .... | .. | 831 75 |
| Sewer in Fourth avenue, west side, between Eighth and Ninth streets, etc. | 3' x 2' | 275½ | 6 | .. | 1,800 00 |
| Sewer in One Hundred and Second street, between Riverside and West End avenues. | 15" | 298 | .... | .. | 2,650 00 |
| Sewer in Front street, between Dover street and Peck Slip. | 3' 6" x 2' | 235 | .... | .. | 1,982 12 |
| Sewer in Avenue B, between Eighty-second and Eighty-third streets. | 15" | 183½ | .... | .. | 866 72 |
| Sewer in Twenty-sixth street, between First avenue and East river, etc., extension. | 4' Cir. | 306 | 6 | .. | 3,191 75 |
| Sewer in South street, between Peck Slip and Fulton street. | 4' Cir. | 688 | 45 | .. | 13,985 00 |
| Sewer in One Hundred and Thirty-eighth street, between Eighth and Edgecombe avenues. | 15" | 295 | .... | .. | 1,410 00 |
| Sewer in Ninety-fifth street, between Boulevard and Tenth avenue. | 15" | 262 | .... | .. | 2,617 78 |
| Sewer in One Hundred and Sixty-first street, between Tenth and Eleventh avenues, Boulevard. | 15" | 701 | .... | .. | 8,708 56 |
| Alteration and improvement to sewer in Fifty-third street, at Tenth avenue. | 3' 6" x 2' | 216 | 34 | .. | 1,487 47 |
| Alteration and improvement to sewer in Twenty-second street, between First and Third avenues. | 4' Cir. | 380 | 60 | .. | 3,996 80 |
| Alteration and improvement to sewer in Tenth avenue, between Seventy-seventh and Eighty-first streets. | 3' 6" x 2' | 1,090 | 15 | .. | 8,381 30 |
| Alteration and improvement to sewer in Ninth avenue, west side, between Eighty-third and Eighty-fourth streets. | 3' 6" x 2' | 288½ | .... | .. | 2,177 58 |
| Alteration and improvement to sewer in Fifty-fourth street, between Tenth and Eleventh avenues. | 3' 6" x 2' | 888 | 10 | .. | 6,919 09 |

| LOCATION OF WORK. | SIZE. | SEWER, LINEAL FEET. | CULVERT, LINEAL FEET. | BASINS. | TOTAL COST. |
|---|-----------------------|---------------------|-----------------------|---------|--------------|
| Alteration and improvement to sewer in Twenty-second street, between Ninth and Eleventh avenues..... | 4' x 2' 8" | 694 | .... | .. | \$6,838 76 |
| Alteration and improvement to sewer in One Hundred and Twenty-ninth street, between Boulevard and second manhole east of Broadway..... | 3' 6" x 2' | 476 | .... | .. | 3,413 24 |
| Alteration and improvement to sewer in Eighty-third street, between Eighth and Ninth avenues..... | 3' 6" x 2' | 662 | 10 | .. | 4,500 00 |
| Alteration and improvement to sewer in Fourth avenue, east side, between Seventy-second and Seventy-fourth streets, etc..... | 15" } 3' 6" x 2' } | 870 | 80 | .. | 20,008 00 |
| Alteration and improvement to sewer in Seventy-ninth street, between Tenth avenue and summit east, etc. | 15" | 556 | 15 | .. | 3,200 00 |
| Receiving-basin, southwest corner Seventy-third street and Boulevard..... | | | 13 | 1 | 325 67 |
| Receiving-basin, southeast corner Seventieth street and West End avenue..... | | | 23 | 1 | 298 74 |
| Receiving-basins, northwest and southwest corners of One Hundred and Eighth street and Tenth avenue..... | | | 30 | 2 | 569 73 |
| Receiving-basin, southwest corner One Hundred and Thirty-fifth street and Fifth avenue..... | | | 30 | 1 | 365 65 |
| Receiving-basin, northwest corner One Hundred and Thirty-fifth street and Madison avenue..... | | | 26 | 1 | 363 10 |
| Receiving-basin, northwest corner Seventy-second street and Riverside avenue..... | | | 42 | 1 | 626 94 |
| Receiving-basin, southeast corner Eighty-sixth street and Tenth avenue..... | | | 8 | 1 | 352 48 |
| Receiving-basin, southwest corner One Hundred and Forty-eighth street and Eighth avenue..... | | | 63½ | 1 | 376 33 |
| Receiving-basin, northwest corner One Hundred and Forty-third street and Eighth avenue..... | | | 36 | 1 | 340 68 |
| Receiving-basin, northeast corner One Hundred and Thirty-third street and Seventh avenue..... | | | 17 | 1 | 283 30 |
| Receiving-basin, northeast corner One Hundred and Second street and Tenth avenue..... | | | 10½ | 1 | 281 05 |
| Receiving-basin, northeast corner One Hundred and Sixteenth street and Madison avenue..... | | | 22 | 1 | 528 22 |
| Receiving-basin, northeast corner Fifty-fourth street and Second avenue..... | | | 33 | 1 | 445 75 |
| Receiving-basin, northwest corner One Hundred and Thirty-first street and Lenox avenue..... | | | 12 | 1 | 331 04 |
| Receiving-basin, northeast corner Ninety-seventh street and Tenth avenue..... | | | 9 | 1 | 313 33 |
| Receiving-basin, southeast corner Seventy-second street and West End avenue..... | | | 20 | 1 | 275 65 |
| Receiving-basins on northwest, northeast and southeast corners One Hundred and Fifty-seventh street and Eleventh avenue..... | | | 65 | 3 | 873 03 |
| Receiving-basins, southeast corners Ninety-fifth, Ninety-sixth and Ninety-seventh streets and Madison avenue, and southwest corners Ninety-eighth, Ninety-ninth, One Hundredth, One Hundred and First, One Hundred and Second and One Hundred and Third streets and Madison avenue..... | | | 256 | 9 | 2,746 00 |
| Receiving-basins in One Hundred and Nineteenth street, between Pleasant avenue and Harlem river..... | | | 39 | 2 | 509 33 |
| Totals..... | | 28,279 80 | 1,274 80 | 46 | \$297,925 85 |

SCHEDULE "B."

| LOCATION OF WORK. | SIZE. | SEWER, LINEAL FEET. | CULVERT, LINEAL FEET. | BASINS. | ESTIMATED COST. |
|--|--|---------------------|-----------------------|---------|-----------------|
| Sewer in Seventy-third street, between East river and Avenue A..... | 3' 6" x 2' | 675 | .... | .. | \$9,105 00 |
| Sewer in Eleventh avenue Boulevard, east side, between One Hundred and Sixty-first and One Hundred and Sixty-fifth streets, etc..... | 15" } 3' 6" x 2' } | 2,515 | 150 | 4 | 24,722 75 |
| Sewer in Tenth avenue, between One Hundred and Seventy-eighth and One Hundred and Ninetieth streets..... | 3' 6" x 2' } 4' x 2' 8" } | 2,842 | 50 | 5 | 29,560 30 |
| Outlet sewer through Pier 4, North river, etc..... | 3' Cir. Wood B. | 2,070 | 70 | .. | 26,689 90 |
| Sewer in Sixty-fifth street, between Avenue A and First avenue, etc..... | 3' 6" x 2' | 765 | .... | .. | 7,041 00 |
| Sewer in West street, between Jay and Desbrosses streets, etc..... | 15" } 4' Cir. } 4' x 2' 8" } 5' x 3' 6" } | 3,070 | 250 | 8 | 44,787 50 |
| Sewer in Ninety-sixth street, between Eighth avenue and summit west, etc..... | 3' 6" x 2' | 530 | .... | .. | 3,845 00 |
| Sewer in One Hundred and Forty-second street, between Eighth and Edgecombe avenues, etc..... | 15" } 3' 6" x 2' } | 1,280 | 75 | 2 | 6,961 25 |
| Sewer in One Hundred and Twenty-third street, between Ninth and Tenth avenues..... | 15" | 683 | 30 | 1 | 2,960 79 |
| Sewer in One Hundred and Fifty-fourth street, between Tenth avenue and summit east..... | 12" | 345 | 15 | .. | 2,544 00 |
| Sewer in Park avenue, west side, between Ninety-third and Ninety-fourth streets, etc..... | 15" | 280 | .... | .. | 3,029 25 |
| Sewer in One Hundred and Forty-fourth street, between Seventh and Eighth avenues, etc..... | 3' 6" x 2' | 760 | 12 | .. | 5,058 00 |
| Sewer in Fifty-second street, between Hudson river and Eleventh avenue..... | 3' Cir. } | 913 | .... | .. | 9,786 00 |
| Sewer in One Hundred and Third street, between Boulevard and Tenth avenue..... | 15" } 3' 6" x 2' } | 231 | .... | .. | 1,141 00 |
| Sewer in One Hundred and Twenty-fifth street, between Manhattan street and Tenth avenue..... | 3' 6" x 2' | 360 | .... | .. | 1,602 80 |
| Sewer in One Hundred and Fortieth street, between Boulevard and Hamilton place..... | 12" | 278 | .... | .. | 2,809 00 |
| Sewer in One Hundred and Thirty-second street, between Broadway and Tenth avenue..... | 15" } 3' 6" x 2' } | 456 | 5 | .. | 2,015 50 |
| Sewer in Tenth avenue, west side, between One Hundred and Forty-sixth and One Hundred and Forty-eighth streets..... | 3' x 2' | 260 | .... | .. | 1,319 00 |
| Alteration and improvement to sewer in Tenth avenue, between Fifth and Fifty-first streets..... | 3' x 2' | 285 | .... | .. | 2,009 75 |
| Alteration and improvement to sewer in Twentieth street, between Tenth avenue and North river..... | Overflow. } 4' 6" x 3' } 8' x 5' 6" } | 1,264 | .... | .. | 18,497 00 |
| Receiving-basin, north side One Hundred and Twentieth street, opposite Fifth avenue..... | ..... | ..... | 45 | 1 | 481 00 |
| Totals..... | ..... | 19,802 | 702 | 21 | \$205,965 79 |

SCHEDULE "C."

Sewer in One Hundredth street, between Fourth and Madison avenues.
Sewer in Second avenue, between Ninth and Tenth streets.
Sewer in Eighth avenue, between One Hundred and Twenty-fourth and One Hundred and Thirty-seventh streets.
Sewer in Seventh avenue, west side, between One Hundred and Forty-first and One Hundred and Forty-second streets.
Sewer in Tenth avenue, east side, between One Hundred and Thirtieth and One Hundred and Thirty-first streets.
Sewer in One Hundred and Twenty-fourth street, between Ninth and Tenth avenues.
Sewer in One Hundred and Sixty-fifth street, between Tenth avenue and Avenue St. Nicholas.
Sewer in Boulevard, east side, between One Hundred and Twelfth and One Hundred and Thirteenth streets, etc.
Sewer in Seventy-second street, between Madison and Park avenues.
Sewer in Grove street, between Bleeker and West Fourth streets.
Receiving-basin, northeast corner of One Hundred and Sixth street and Madison avenue.
Receiving-basin, southeast and southwest corners of One Hundred and Forty-sixth street and Eighth avenue.

SCHEDULE "D."

Sewers and receiving-basins constructed, under permits, during the year :
Sewer in Seventy-fifth street, between Eighth and Ninth avenues.
Sewer in Seventy-first street, between Eleventh avenue and lands of the New York Central and Hudson River Railroad Co.
Sewer in One Hundred and Thirty-sixth street, between Seventh and Eighth avenues.

Sewer in Park avenue, east side, between Ninety-fourth and Ninety-fifth streets, connecting with sewer in Ninety-fifth street, east of Park avenue.

Sewer in One Hundred and Thirty-ninth street, between Eighth and Edgecombe avenues, and in Edgecombe avenue, between One Hundred and Thirty-eighth and One Hundred and Thirty-ninth streets.

1 receiving-basin, southwest corner Fifty-ninth street and Fifth avenue.

1 receiving-basin, northeast corner Eighty-sixth street and Ninth avenue.

3 receiving-basins, West street, between Warren and Jay streets.

Permits have been issued for the following sewers, but the work has not yet commenced :

Sewer in One Hundred and Thirty-seventh street, between Seventh and Eighth avenues.

Sewer in One Hundred and Thirty-eighth street, between Seventh and Eighth avenues.

SCHEDULE "E."

Repairs.

Repairs to sewer in Manhattan avenue, between One Hundred and Sixth and One Hundred and Tenth streets.

Repairs to sewer in Fourth street, between Avenues A and C.

Repairs to sewer in Forty-eighth street, between First and Second avenues.

Repairs to sewer in Thirteenth street, between Avenues A and C.

Repairs to sewer-outlet at One Hundred and Eighteenth street and Harlem river.

Repairs to sewer in Ninety-seventh street, between Second and Third avenues.

Repairs to sewer in Thirteenth street, between Broadway and Fourth avenue, etc.

Repairs to sewer in Fifteenth street, between Second avenue and Rutherford place, etc.

Repairs to sewer in One Hundred and Second street, between First and Second avenues.

Repairs to sewer in Twenty-fifth street, between Sixth and Eighth avenues.

Repairs to sewer in West street, between Spring and West Eleventh streets.

Repairs to sewer in Third avenue, west side, between One Hundredth and One Hundred and Second streets.

Repairs to sewer in Manhattan street, between Broadway and Twelfth avenue.

Repairs to sewer in Twelfth street, between Avenues A and C.

WORK DONE BY LABORERS, MECHANICS, ETC., FOR YEAR ENDING DECEMBER 31, 1889.

299 receiving-basins and culverts relieved.

3,188 receiving-basins and culverts cleaned.

2,000 lineal feet of sewer relieved.

59,407 lineal feet of sewer cleaned.

373 lineal feet of sewer rebuilt.

626 lineal feet of sewer repaired.

231 lineal feet of brick-sewer built.

9 lineal feet of pipe-sewer built.

158 lineal feet of box-sewer built.

384 lineal feet of culvert built.

85 lineal feet of culvert rebuilt.

14 lineal feet of culvert repaired.

407 lineal feet of spur-pipe laid.

387 lineal feet of new curb set.

544 lineal feet of tile bottom laid.

4 new receiving-basins built.

1 receiving-basin rebuilt.

61 receiving-basins repaired.

4 new manholes built.

33 manholes repaired.

99 new basin-heads and covers put on.

152 new manhole heads and covers put on.

176 new manhole covers put on.

35 new basin covers put on.

19 basin heads reset.

537 manhole heads reset.

1,059 square feet of brickwork built.

264 square feet of crosswalk built.

10 square yards of cribwork built.

125 square feet of rip-rap wall built.

1,963 square feet of flagging relaid.

1,619 square yards of pavement relaid.

9,113 cubic yards of earth excavated and refilled.

9,388 cart loads dirt removed.

Document "G."

REPORT OF THE SUPERINTENDENT OF STREET IMPROVEMENTS.

DEPARTMENT OF PUBLIC WORKS,
BUREAU OF STREET IMPROVEMENTS, ROOM 5, NO. 31 CHAMBERS STREET,
NEW YORK, January 4, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works :

SIR—In accordance with your instructions, I have the honor to submit herewith my report of the operations of the Bureau of Street Improvements for the quarter ending December 31, 1889, and also my yearly report, showing all the expenditures of this Bureau for the year ending December 31, 1889, together with a statement of the amount of work done and also balances of the appropriations.

On the commencement of the year 33 contracts were in existence ; 74 contracts were entered in during the year 1889, and 73 contracts were completed, at a cost of \$335,948.48, for which assessment lists have been transmitted to the Board of Assessors.

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

Retaining-wall, Forty-ninth street, from First avenue to Beekman place.

Regulating, grading, etc., Fort Washington Ridge road.

Regulating, grading, etc., Twelfth avenue, from One Hundred and Thirty-third to One Hundred and Thirty-fifth street.

Regulating, grading, etc., Eighty-seventh street, from West End avenue to Riverside Drive.

Regulating, grading, etc., Ninetieth street, from Tenth avenue to Riverside Drive.

Regulating, grading, etc., Eighty-ninth street, from Tenth avenue to Boulevard.

Regulating, grading, etc., Ninety-second street, from Boulevard to Riverside Drive.

Regulating, grading, etc., Ninety-fourth street, from First to Second avenue.

Regulating, grading, etc., One Hundred and Seventh street, from Eighth to Ninth avenue.

Regulating, grading, etc., One Hundred and Seventh street, from West End avenue to Riverside Drive.

Regulating, grading, etc., One Hundred and Twelfth street, from Boulevard to Tenth avenue.

Regulating, grading, etc., One Hundred and Twenty-fourth street, from Ninth to Tenth avenue.

Regulating, grading, etc., One Hundred and Thirty-first street, from Twelfth avenue to Boulevard.

Regulating, grading, etc., One Hundred and Fortieth street, from Tenth avenue to Boulevard.

Regulating, grading, etc., One Hundred and Forty-eighth street, from Seventh to Eighth avenue.

Regulating, grading, etc., One Hundred and Forty-ninth street, from Eighth to New avenue.

Regulating, grading, etc., One Hundred and Seventieth street, from Tenth to Eleventh avenue.

The following are the most important unfinished contracts :

Kingsbridge road, from One Hundred and Ninetieth street to Harlem river—

So far 11,000 yards earth excavation, 26,100 yards rock excavation, and 91,000 yards filling have been done on this contract. It will take about six to eight months to finish this work.

Edgecombe avenue, from One Hundred and Forty-fifth street to St. Nicholas place—

This is a large contract ; 8,500 yards earth excavation, 38,450 yards rock excavation, 34,000 yards filling and 24,375 yards retaining-wall have been done since the commencement of the work, which will be completed about May or June of this year.

First new avenue west of Eighth avenue, from One Hundred and Forty-fifth to One Hundred and Fifty-fifth street—

This contract will be completed about May of this year. 98,400 yards of filling have been furnished by the contractor.

Claremont avenue, from One Hundred and Twenty-second to One Hundred and Twenty-seventh street—

This contract is a heavy rock cut, and will be completed in about six to eight months.

Fifth avenue, from One Hundred and Thirty-eighth street to Harlem river—

This is a heavy filling contract. 62,100 yards filling have been furnished, and the work will be completed about May next.

Ninety-first street, from Ninth to Tenth avenue—
6,261 yards rock have been excavated on this street. The work will be finished in April next.

One Hundred and Sixth street, from Boulevard to Riverside Drive—
This is a very heavy rock cut. The contract will be completed during this year.

One Hundred and Ninth street, from Eighth to Manhattan avenue—
This contract has been returned as completed by the Inspector and Surveyor, and is now being examined.

One Hundred and Ninth street, from Ninth avenue to Riverside Drive—
This work has just been commenced; it is a rock cut; will be finished during the year.

One Hundred and Forty-sixth street, from Eighth avenue to Harlem river—
The contract for this work has been signed last October; it is a filling-in work, and will be completed about June next.

One Hundred and Forty-seventh street, from Eighth avenue to Harlem river—
Work on this contract has been suspended on account of the construction of a sewer.

One Hundred and Forty-seventh street, from Tenth avenue to Boulevard.
One Hundred and Forty-seventh street, from Boulevard to 500 feet west, and One Hundred and Sixty-sixth street, from Tenth to Eleventh avenue—
These three contracts are very near completion, the excavation and filling being about completed. Curb and flagging cannot be laid until April next.

One Hundred and Eighty-first street, from Tenth to Eleventh avenue—
This is a rock cut, and the work will be completed about May or June next.

APPROPRIATIONS.

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

The amount appropriated for this purpose was \$2,000, of which sum \$1,672 has been expended for numbering and renumbering of streets and avenues, leaving a balance of \$328.

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

The appropriation for this purpose amounted to \$6,000, the amount expended is \$2,446.23, balance \$3,553.77, which will be used for flagging around the Eighth Regiment Armory.

The sidewalks around Tompkins Market and Essex Market place have been repaired and put in good condition, and on west side Third avenue south of One Hundred and Twenty-first street.

In regard to defective sidewalks, in accordance with the provisions of section 321 of chapter 410, Laws of 1882, as amended by chapter 569, Laws of 1887, I beg to state that all complaints received at this Bureau have been promptly examined and the necessary ordinances and certificates transmitted to the Board of Aldermen. There are about fifty of these ordinances now before the Board on which no action has been taken by the Aldermen, and nothing can therefore be done by this Department.

Respectfully submitted,

W. M. DEAN, Superintendent Street Improvements.

STATEMENT OF THE AMOUNT OF WORK DONE DURING THE QUARTER ENDING DECEMBER 31, 1889.

| | | |
|-------------------------|--------------|--|
| Earth excavated | cubic yards. | 5,798 |
| Rock excavated | " | 10,643 |
| Filling furnished | " | 69,489 |
| Curb-stones set | linear feet. | 8,646 ³⁰ / ₁₀₀ |
| reset | " | 3,945 ¹⁰⁰ / ₁₀₀ |
| Flagging laid | square feet. | 77,275 ¹⁰⁰ / ₁₀₀ |
| relaid | " | 16,210 ¹⁰⁰ / ₁₀₀ |
| Dry stone box culverts | linear feet. | 50 |
| Picket fence built | " | 2,314 ⁸⁰ / ₁₀₀ |
| Cut stone masonry built | cubic yards. | 10 |
| Iron railing set | linear feet. | 411.60 |

AMOUNT OF VOUCHERS DRAWN.

| | |
|--|-------------|
| On account of— | |
| Street Improvement Fund | \$62,194 13 |
| Street Improvements—For Surveying, Monumenting and Numbering of Streets... | 644 00 |
| Flagging Sidewalks and Fencing Vacant Lots in front of City Property | 1,672 15 |
| Contingencies of Department of Public Works | 305 80 |
| Total | \$64,816 08 |

APPROPRIATIONS.

| | |
|--|------------|
| Flagging Sidewalks and Fencing Vacant Lots in front of City Property | \$6,000 00 |
| Amount of vouchers drawn during second quarter | \$77 00 |
| Amount of vouchers drawn during third quarter | 697 08 |
| Amount of vouchers drawn during fourth quarter | 1,672 15 |
| Balance | 3,553 77 |
| Total | 6,000 00 |

| | |
|---|------------|
| Street Improvements—For Surveying, Monumenting and Numbering of Streets | \$2,000 00 |
| Amount of vouchers drawn during first quarter | \$262 50 |
| Amount of vouchers drawn during second quarter | 262 50 |
| Amount of vouchers drawn during third quarter | 503 00 |
| Amount of vouchers drawn during fourth quarter | 644 00 |
| Balance | 328 00 |
| Total | 2,000 00 |

| | |
|--|------------|
| Contingencies—Department of Public Works— | |
| Amount of vouchers drawn during first quarter | \$270 00 |
| Amount of vouchers drawn during second quarter | 286 50 |
| Amount of vouchers drawn during third quarter | 294 52 |
| Amount of vouchers drawn during fourth quarter | 305 80 |
| Total | \$1,156 82 |

| | |
|---|---------|
| Repairs and Renewal of Pavements and Regrading— | |
| Amount of vouchers drawn | \$96 50 |

| | |
|--|------------|
| Flagging Sidewalks and Fencing Vacant Lots in Front of City Property, Appropriation, 1888— | |
| Amount of vouchers drawn | \$2,355 40 |

AMOUNT OF WORK DONE IN FRONT OF CITY PROPERTY.

| | CURB SET, LINEAR FEET. | CURB RESET, LINEAR FEET. | FLAGGING LAID, SQUARE FEET. | FLAGGING RELAID, SQUARE FEET. |
|--------------------|------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|
| Essex Market place | 218 ⁴⁰ / ₁₀₀ | 167 ⁷⁰ / ₁₀₀ | 1,278 ⁷⁰ / ₁₀₀ | 2,041 ⁸⁰ / ₁₀₀ |
| Tompkins Market | 310 ⁹⁰ / ₁₀₀ | 366 ⁹⁰ / ₁₀₀ | 2,108 ⁹⁰ / ₁₀₀ | 3,842 ⁷⁰ / ₁₀₀ |
| Total | 529 ⁹⁰ / ₁₀₀ | 533 ⁹⁰ / ₁₀₀ | 3,387 | 5,884 ⁹⁰ / ₁₀₀ |

Works Completed during the Quarter.

| | |
|--|-------------|
| Retaining-wall, etc.— | |
| Forty-ninth street, from First avenue to Beekman place | \$15,056 72 |
| Regulating, grading, etc.— | |
| First avenue, from One Hundred and Twenty-fifth street to Harlem river | \$1,682 77 |
| One Hundred and Twelfth street, from Boulevard to Tenth avenue | 2,934 91 |
| One Hundred and Twenty-fourth street, from Ninth to Tenth avenue | 3,938 74 |
| One Hundred and Thirty-first street, from Twelfth avenue to Boulevard | 4,289 53 |
| One Hundred and Forty-eighth street, from Seventh to Eighth avenue | 3,178 55 |
| Curb and Flagging— | |
| Ninety-first street, from First to Second avenue | 2,088 28 |

Flagging—

| | |
|--|-------------|
| East side Boulevard, from One Hundred and Twenty-fourth to One Hundred and Twenty-fifth street | \$117 81 |
| East side Avenue A, from Eighty-first to Eighty-second street | 571 62 |
| West side First avenue, from One Hundred and Third to One Hundred and Fourth street, etc. | 471 71 |
| West side Park avenue, from Fifty-eighth to Fifty-ninth street, etc. | 979 83 |
| West side Park avenue, from Sixty-eighth to Sixty-ninth street | 111 80 |
| Southwest corner Third avenue and Twenty-first street | 303 20 |
| One Hundred and Twelfth and One Hundred and Thirteenth streets, from Madison to Fifth avenue | 451 96 |
| North side Thirty-eighth street, from First to Second avenue | 709 45 |
| Seventy-first street, from First avenue to East river | 3,919 03 |
| South side Eighty-first street, from First avenue to Avenue A | 692 44 |
| South side Eighty-fifth street, from Madison to Fifth avenue | 349 30 |
| Ninety-second street, from Second avenue to East river | 4,072 40 |
| South side One Hundred and Thirty-first street, from Madison to Park avenue | 279 27 |
| Total | \$13,029 82 |

Fencing vacant lots—

| | |
|--|----------|
| First and Second avenues, between Ninety-first and Ninety-second streets | \$811 75 |
| Ninety-third and Ninety-fourth streets, between Park and Madison avenues | 354 73 |
| North side One Hundred and Fifteenth street, between Fifth and Lenox avenues | 121 15 |
| Total | 1,287 63 |

Total

\$47,486 95

RECAPITULATION.

| | |
|---|-------------|
| 1 contract for retaining-wall | \$15,056 72 |
| 5 contracts for regulating, grading, etc. | 16,024 50 |
| 1 contract for curb and flagging | 2,088 28 |
| 13 contracts for flagging | 13,029 82 |
| 3 contracts for fencing vacant lots | 1,287 63 |
| Total | \$47,486 95 |

ANNUAL STATEMENT.

Amount of Work Done during the Year 1889.

| 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 | 8,001 | 6,660 | 6,397 | 5,798 | 26,856 |
| Rock excavated, cubic yards | 20,277 | 18,617 | 12,627 | 10,643 | 62,164 |
| Filling furnished, cubic yards | 50,618 | 76,800 | 49,500 | 69,489 | 246,407 |
| Curb-stones set, linear feet | 2,932 ⁸⁰ / ₁₀₀ | 5,812 ⁸⁰ / ₁₀₀ | 13,022 ¹⁰⁰ / ₁₀₀ | 8,646 ³⁰ / ₁₀₀ | 30,413 ⁹⁰ / ₁₀₀ |
| Curbstones reset, linear feet | 1,036 ⁷⁰ / ₁₀₀ | 2,326 ²⁰ / ₁₀₀ | 1,090 ⁸⁰ / ₁₀₀ | 2,945 ¹⁰⁰ / ₁₀₀ | 8,398 ⁷⁰ / ₁₀₀ |
| Flagging laid, square feet | 22,845 ⁹⁰ / ₁₀₀ | 68,224 ⁸⁰ / ₁₀₀ | 70,807 ⁷⁰ / ₁₀₀ | 77,275 ¹⁰⁰ / ₁₀₀ | 239,152 ⁴⁰ / ₁₀₀ |
| Flagging relaid, square feet | 3,914 ⁹⁰ / ₁₀₀ | 6,729 ¹⁰⁰ / ₁₀₀ | 67,431 ¹⁰⁰ / ₁₀₀ | 16,210 ¹⁰⁰ / ₁₀₀ | 94,285 ⁰⁰ / ₁₀₀ |
| Dry stone box culverts, linear feet | 280 | ..... | 206 | 50 | 536 |
| Picket fence built, linear feet | ..... | 73 | 513 ⁸⁰ / ₁₀₀ | 2,314 ⁸⁰ / ₁₀₀ | 2,901 ⁸⁰ / ₁₀₀ |
| Curb-stone masonry built, cubic yards | ..... | ..... | ..... | 10 | 10 |
| Retaining-wall built, cubic yards | ..... | 3,300 | 1,700 | ..... | 5,000 |
| Iron railing set, linear feet | ..... | ..... | ..... | 411 60 | 411 60 |
| 6-inch drain-pipe laid, linear feet | ..... | 250 | 150 | ..... | 400 |
| Inlet frames | 210 | ..... | ..... | ..... | 210 |
| Trees planted | 10 | ..... | ..... | ..... | 10 |

Work Done in front of City Property.

| | | | | | |
|--------------------------------|-------|-------|-------|--------------------------------------|--------------------------------------|
| Curb-stones set, linear feet | ..... | ..... | 676 | 529 ⁹⁰ / ₁₀₀ | 1,205 ⁹⁰ / ₁₀₀ |
| Curb-stones reset, linear feet | ..... | ..... | 325 | 533 ⁹⁰ / ₁₀₀ | 858 ⁹⁰ / ₁₀₀ |
| Flagging laid, square feet | ..... | ..... | 8,869 | 3,387 | 12,256 |
| Flagging relaid, square feet | ..... | ..... | 1,682 | 5,884 ⁹⁰ / ₁₀₀ | 7,566 ⁹⁰ / ₁₀₀ |

Amount of Vouchers Drawn During the Year 1889.

| ON ACCOUNT OF— | JANUARY 1 TO MARCH 31. | APRIL 1 TO JUNE 30. | JULY 1 TO SEPTEMBER 30. | OCTOBER 1 TO DECEMBER 31. | TOTAL. |
|--|------------------------------|---------------------------|-------------------------------|---------------------------------|--------------|
| Fund for Local Improvements | \$52,408 45 | ..... | ..... | ..... | \$52,408 45 |
| Street Improvement Fund | 50,583 99 | \$77,913 41 | \$73,660 28 | \$62,194 13 | 264,351 81 |
| Street Improvements—For Surveying, Monumenting and Numbering of Streets | 262 50 | 262 50 | 503 00 | 644 00 | 1,672 00 |
| Flagging Sidewalks and Fencing Vacant Lots in Front of City Property | ..... | 77 00 | 697 08 | 1,672 15 | 2,446 23 |
| Flagging Sidewalks and Fencing Vacant Lots in Front of City Property, 1888 | ..... | ..... | 2,355 40 | ..... | 2,355 40 |
| Contingencies of Department of Public Works | 270 00 | 286 50 | 294 52 | 305 80 | 1,156 82 |
| Repairs and Renewal of Pavements and Regrading | ..... | 96 50 | ..... | ..... | 96 50 |
| Total | \$103,524 94 | \$78,635 91 | \$77,510 28 | \$64,816 08 | \$324,487 21 |

Works Completed During the Year 1889.

| | |
|--|-------------|
| Retaining-wall— | |
| Forty-ninth street, First avenue to Beekman place | \$15,056 72 |
| Regulating and Grading— | |
| Fort Washington Ridge road | 173,367 81 |
| Regulating, Grading, etc.— | |
| First avenue, from One Hundred and Twenty-fifth street to Harlem river | \$1,682 77 |
| Twelfth avenue, from One Hundred and Thirty-third to One Hundred and Thirty-fifth street | 2,257 79 |
| Eighty-seventh street, from West End avenue to Riverside Drive | 6,247 97 |
| Ninetieth street, from Tenth avenue to Riverside Drive | 3,222 48 |
| Eighty-ninth street, from Tenth avenue to Boulevard | 5,085 39 |
| Ninety-second street, from Boulevard to Riverside Drive | 23,292 86 |
| Ninety-fourth street, from First to Second avenue | 3,124 21 |
| One Hundred and Seventh street, from Eighth to Ninth avenue | 4,307 11 |
| One Hundred and Twelfth street, from Boulevard to Tenth avenue | 5,894 93 |
| One Hundred and Twelfth street, from Boulevard to Tenth avenue | 2,934 91 |
| One Hundred and Twenty-fourth street, from Ninth to Tenth avenue | 3,938 74 |

Regulating, Grading, etc.—

| | |
|--|-------------|
| One Hundred and Thirtieth street, from Eighth to St. Nicholas avenue..... | \$437 00 |
| One Hundred and Thirty-first street, from Twelfth avenue to Boulevard..... | 4,289 53 |
| One Hundred and Fortieth street, from Tenth avenue to Boulevard..... | 9,552 24 |
| One Hundred and Forty-third street, from Tenth avenue to Boulevard..... | 3,423 91 |
| One Hundred and Forty-eighth street, from Seventh to Eighth avenue..... | 3,178 55 |
| One Hundred and Forty-ninth street, from Eighth to New avenue..... | 4,232 78 |
| One Hundred and Seventieth street, from Tenth to Eleventh avenue..... | 9,528 33 |
| | \$96,631 50 |

Curb and Flagging—

| | |
|---|------------|
| Ninety-first street, from First to Second avenue..... | \$2,088 28 |
| One Hundred and Eighteenth street, from Seventh to Eighth avenue..... | 2,055 49 |
| | 4,143 77 |

Flagging, etc.—

| | |
|---|----------|
| East side Boulevard, from One Hundred and Twenty-fourth to One Hundred and Twenty-fifth street..... | \$117 81 |
| Northeast corner Seventh avenue and One Hundred and Twenty-first street..... | 364 29 |
| Southwest corner Third avenue and Twenty-first street..... | 303 20 |
| East side Avenue A, from Eighty-first to Eighty-second street..... | 571 62 |
| East side Avenue A, from Eighty-seventh to Eighty-eighth street..... | 239 89 |
| Lenox avenue, from One Hundred and Eleventh to One Hundred and Forty-third street..... | 6,097 47 |
| East side Lenox avenue, from One Hundred and Forty-third to One Hundred and Forty-sixth street..... | 558 88 |
| West side Madison avenue, from One Hundredth to One Hundredth and First street, etc..... | 495 29 |
| West side Park avenue, from Fifty-eighth to Fifty-ninth streets, etc..... | 979 83 |
| West side Park avenue, from Sixty-eighth to Sixty-ninth street..... | 111 80 |
| West side Park avenue, from Eighty-fourth to Eighty-fifth street..... | 324 01 |
| East side Fifth avenue, from Sixty-fifth to Sixty-sixth street..... | 333 92 |
| Seventh avenue, from One Hundred and Sixteenth to One Hundred and Eighteenth street..... | 462 56 |
| West side Eighth avenue, from One Hundred and Twelfth to One Hundred and Thirteenth street..... | 533 58 |
| East side Tenth avenue, from Sixty-first to Sixty-second street..... | 986 07 |
| West side of Park avenue, from One Hundred and Thirteenth to One Hundred and Fourteenth street..... | 270 96 |
| East side Madison avenue, from Eighty-eighth to Eighty-ninth streets..... | 796 61 |
| West side Second avenue, from One Hundred and Twenty-fifth to One Hundred and Twenty-eighth street..... | 309 56 |
| West side Third avenue, from Eighty-seventh to Eighty-eighth street..... | 525 71 |
| East side Fifth avenue, from Fifty-sixth to Fifty-seventh street, etc..... | 1,052 74 |
| East side Fifth avenue, from Eightieth to Eighty-first street..... | 516 96 |
| One Hundred and Twelfth and One Hundred and Thirteenth streets, from Madison to Fifth avenue..... | 451 96 |
| North side Thirty-eighth street, from First to Second avenue..... | 709 45 |
| South side Fifty-fourth street, from Eighth to Ninth avenue..... | 1,664 66 |

Flagging, etc.—

| | |
|---|-------------|
| North side Fifty-seventh street, east of Sixth avenue..... | \$278 95 |
| North side Fifty-seventh street, from Sixth to Seventh avenue..... | 145 85 |
| North side Sixty-second street, from Second to Third avenue..... | 97 18 |
| North side Seventy-first street, from First avenue to East river..... | 3,919 03 |
| South side Seventy-seventh street, from Park to Madison avenue..... | 319 62 |
| Seventy-ninth street, from Boulevard to Hudson river..... | 7,103 50 |
| South side Eighty-first street, from First avenue to Avenue A..... | 692 44 |
| South side Eighty-fifth street, from Madison to Park avenue..... | 695 41 |
| South side Eighty-fifth street, from Madison to Fifth avenue..... | 349 30 |
| Eighty-ninth street, from First to Second avenue..... | 845 60 |
| Ninety-second street, from Second avenue to East river..... | 4,072 40 |
| Eighty-ninth and Ninetieth streets, from Second to Third avenue..... | 1,414 69 |
| South side Ninetieth street, from First to Second avenue..... | 280 76 |
| One Hundred and Fifteenth street, from Second to Third avenue..... | 978 89 |
| One Hundred and Sixteenth street, from Second to Third avenue..... | 680 53 |
| One Hundred and Sixteenth street, from Pleasant avenue to Harlem river..... | 1,395 53 |
| One Hundred and Eighteenth street, from Fifth to Lenox avenue..... | 808 46 |
| North side One Hundred and Twenty-first street, from Lenox to Seventh avenue..... | 187 49 |
| South side One Hundred and Twenty-fifth street, from Second to Third avenue..... | 761 80 |
| South side One Hundred and Thirty-first street, from Madison to Park avenue..... | 279 27 |
| One Hundred and Thirty-third street, from Fifth to Lenox avenue..... | 557 03 |
| West side First avenue, from One Hundred and Third to One Hundred and Fourth street, etc..... | 471 71 |
| | \$45,123 27 |

Fencing Vacant Lots—

| | |
|--|----------|
| First and Second avenues, Ninety-first and Ninety-second streets..... | \$811 75 |
| Ninety-third and Ninety-fourth streets, from Fifth to Madison avenue..... | 296 84 |
| Ninety-third and Ninety-fourth streets, from Park to Madison avenue..... | 354 73 |
| South side Seventy-seventh street, from Madison to Park avenue..... | 40 94 |
| North side One Hundred and Fifteenth street, from Fifth to Lenox avenue..... | 121 15 |
| | 1,625 41 |

Total.....\$335,948 48

Recapitulation.

| | |
|--|--------------|
| 1 contract for retaining wall..... | \$15,056 72 |
| 1 contract for regulating and grading..... | 173,367 81 |
| 18 contracts for regulating, grading, etc..... | 96,631 50 |
| 2 contracts for curb and flagging..... | 4,143 77 |
| 46 contracts for flagging..... | 45,123 27 |
| 5 contracts for fencing vacant lots..... | 1,625 41 |
| 73 contracts, amounting to..... | \$335,948 48 |

Statement showing Works under Contract in Bureau of Street Improvements on the 31st day of December, 1889.

| LOCATION OF WORK. | CONTRACTOR. | SURVEYOR. | INSPECTOR. | CONTRACT TIME. | ESTIMATED COST. | AMOUNT EARNED. | AMOUNT RETAINED. | AMOUNT PAID. | REMARKS. |
|--|------------------------|---------------------|------------------------|----------------|-----------------|----------------|------------------|--------------|---------------------------------------|
| <i>Regulating, Grading, Curbing and Flagging.</i> | | | | | | | | | |
| Street Improvement Fund— | | | | | | | | | |
| Kingsbridge road, One Hundred and Ninetieth street to Harlem river..... | B. F. Coleman..... | J. McL. Smith..... | William J. Girvan..... | 300 days. | \$204,990 00 | \$101,075 00 | \$30,322 50 | \$70,752 50 | |
| Edgecombe avenue, One Hundred and Forty-fifth street to St. Nicholas place..... | J. F. Dawson..... | J. McL. Smith..... | L. Buck..... | 300 " | 56,826 06 | 156,532 75 | 46,959 82 | 109,572 93 | |
| Edgecombe avenue, One Hundred and Forty-first to One Hundred and Forty-fifth street..... | J. J. Hopper..... | G. A. Wheeler..... | | 45 " | 1,454 02 | | | | Work not yet commenced. |
| Claremont avenue, One Hundred and Twenty-second to One Hundred and Twenty-third street..... | B. J. Carr, Jr..... | Thomas Slator..... | D. Simmons..... | 200 " | 17,368 88 | | | | |
| First new avenue, One Hundred and Forty-fifth to One Hundred and Fifty-fifth street..... | William J. Kelly..... | J. McL. Smith..... | J. R. Mount..... | 500 " | 55,120 00 | 49,212 40 | 14,763 72 | 34,448 68 | |
| West side Fifth avenue, One Hundred and Seventeenth and One Hundred and Eighteenth streets, and One Hundred and Thirty-second and One Hundred and Thirty-third streets, etc..... | J. R. Anderson..... | W. H. Bostwick..... | | 5 " | 1,047 80 | | | | " |
| Fifth avenue, One Hundred and Thirty-eighth street to Harlem river..... | J. Finn..... | J. R. Wardlaw..... | B. V. Fraser..... | 500 " | 18,817 24 | 13,823 00 | 4,146 90 | 9,676 10 | " |
| Sixty-fourth street, Tenth to Eleventh avenue..... | J. Slattery..... | L. A. Risse..... | | 35 " | 3,738 70 | | | | " |
| Sixty-fifth street, Central Park west, to Ninth avenue..... | J. R. Anderson..... | J. F. Carey..... | | 17 " | 2,000 65 | | | | " |
| Ninety-first street, Ninth to Tenth avenue..... | M. Fortunato..... | R. Amernan..... | M. T. Griffin..... | 100 " | 13,292 10 | 8,014 08 | 2,404 22 | 5,609 86 | " |
| Eighty-eighth street, Madison to Park avenue..... | J. R. Anderson..... | E. L. Viele..... | | 9 " | 1,168 50 | | | | " |
| One Hundred and Sixth street, Boulevard to Riverside Drive..... | J. Canill..... | R. L. Waters..... | P. F. Sullivan..... | 150 " | 22,360 35 | 8,834 00 | 2,668 20 | 6,225 80 | |
| One Hundred and Ninth street, Ninth avenue to Riverside Drive..... | Thomas F. Murray..... | R. J. Dodge..... | C. M. Torpey..... | 210 " | 16,163 00 | 3,220 00 | 965 00 | 2,254 00 | |
| One Hundred and Ninth street, Eighth to Manhattan avenue..... | J. J. Farley..... | Thomas Slator..... | L. A. Russell, Jr..... | 40 " | 4,084 08 | | | | |
| One Hundred and Forty-third street, Eighth to New avenue..... | Thomas F. Murray..... | E. L. Viele..... | B. Martin..... | 69 " | 2,054 60 | | | | |
| One Hundred and Forty-sixth street, Eighth avenue to Harlem river..... | Charles V. Hough..... | E. L. Viele..... | J. Kearney..... | 250 " | 15,951 60 | | | | |
| One Hundred and Forty-seventh street, Eighth avenue to Harlem river..... | Charles V. Hough..... | R. Amernan..... | | 150 " | 14,228 13 | 9,838 62 | 2,951 58 | 6,887 04 | { Work suspended on account of sewer. |
| One Hundred and Forty-seventh street, Tenth avenue to Boulevard..... | M. Fortunato..... | M. A. Lacy..... | J. McCue..... | 150 " | 15,576 52 | 11,635 00 | 3,490 50 | 8,144 50 | |
| One Hundred and Forty-seventh street, Boulevard to 500 feet west..... | H. Van Zant..... | R. J. Dodge..... | D. O'Connor..... | 100 " | 4,595 00 | | | | |
| One Hundred and Sixty-sixth street, Tenth to Eleventh avenue..... | F. Thilemann, Jr..... | F. E. Towle..... | Thos. W. Gibbons..... | 210 " | 8,833 75 | 3,600 00 | 1,080 00 | 2,520 00 | |
| One Hundred and Eighty-first street, Tenth to Eleventh avenue..... | William G. Leeson..... | R. L. Waters..... | S. Bennett..... | 150 " | 14,147 25 | 5,700 00 | 1,710 00 | 3,990 00 | |
| <i>Special Contracts (under \$1,000).</i> | | | | | | | | | |
| Regulating, Grading, Curb and Flagging— | | | | | | | | | |
| One Hundred and Eleventh street, Eighth to Manhattan avenue..... | Thomas F. Murray..... | Thomas Slator..... | | 75 " | 972 90 | | | | Work not yet commenced. |
| Flagging, etc.— | | | | | | | | | |
| South side Canal street, Mott to Mulberry street..... | J. Slattery..... | J. F. Carey..... | | 5 " | 537 50 | | | | Work completed but not yet accepted. |
| East side Second avenue, Ninety-third to Ninety-fourth street, etc..... | William F. Croft..... | J. R. Wardlaw..... | | 7 " | 273 08 | | | | Work completed but not yet accepted. |
| East side Third avenue, Ninety-eighth to Ninety-ninth street..... | William J. Murray..... | J. R. Wardlaw..... | | 4 " | 145 15 | | | | Work completed but not yet accepted. |
| North side of Eighty-first street, Eighth to Ninth avenue..... | J. Slattery..... | F. E. Towle..... | Ch. W. McCusker..... | 10 " | 605 14 | | | | Work completed but not yet accepted. |
| South side Seventy-seventh street, First to Second avenue..... | William J. Murray..... | B. R. Guion..... | | 10 " | 478 38 | | | | Work completed but not yet accepted. |
| South side Ninety-seventh street, Madison to Fifth avenue..... | Wm. F. Cunningham..... | J. F. Carey..... | | 4 " | 301 78 | | | | Work completed but not yet accepted. |
| Ninety-eighth street, Boulevard to West End avenue..... | William J. Murray..... | J. R. Wardlaw..... | | 15 " | 889 30 | | | | Work completed but not yet accepted. |
| Totals .. | | | | | \$528,021 46 | \$371,544 85 | \$111,463 44 | \$260,081 41 | |

Document "H."

REPORT OF THE SUPERINTENDENT OF STREETS.

DEPARTMENT OF PUBLIC WORKS,
BUREAU OF STREETS AND ROADS, ROOM 12, No. 31 CHAMBERS STREET,
NEW YORK, January 13, 1890.

THOMAS F. GILROY, Esq., Commissioner of Public Works:

SIR—I transmit herewith yearly report of this Bureau for the year 1889, and also report of the work done during the quarter ending December 31, 1889.

The following is the amount of work done on macadamized roadways during the quarter ending December 31, 1889:

| | |
|--------------------------------------|----------------------|
| Roadway resurfaced and repaired..... | 11,763 square yards. |
| Gravel roadway resurfaced..... | 420 " |
| New macadam pavement laid..... | 1,443 " |
| Gneiss pavement laid..... | 254 " |
| Stone-block pavement relaid..... | 34 " |
| Gutters paved..... | 7 " |

| | |
|--------------------------|--------------------|
| Flagging relaid..... | 5,500 square feet. |
| Sidewalk repaired..... | 708 " |
| Bridge-stone relaid..... | 1,350 " |
| Curb reset..... | 73 lineal feet. |
| Trees trimmed..... | 411 " |
| Gravel spread..... | 77 truck loads. |

The roadways and gutters of 26 miles of streets were cleaned at various times during the quarter.

The following material was used by the bureau during the quarter:

| | |
|---------------------------|--------------------|
| Broken trap-stone..... | 1,434 cubic yards. |
| Trap-rock screenings..... | 1,116 " |
| Gneiss stone..... | 60 " |
| Gravel..... | 150 " |
| Sand..... | 114 " |
| Telford..... | 21 truck loads. |
| Earth..... | 21 " |
| Ashes..... | 105 " |

Macadam pavement over 8 sewer connections was replaced.

The following material was removed from macadam roadways:

| | |
|------------|--------------------|
| Dirt..... | 3,166 truck loads. |
| Stone..... | 125 " |

The following is the work done on unpaved streets during the quarter ending December 31, 1889:

| | |
|--|---------------------|
| Roadway macadamized with broken gneiss stone and clay..... | 400 square yards. |
| Gutters paved with Telford and covered with broken gneiss stone..... | 350 " |
| Retaining-wall built..... | 50 cubic yards. |
| Gneiss stone broken..... | 200 " |
| Stone drain built..... | 25 lineal feet. |
| Curb-stone reset..... | 200 " |
| Flagging relaid..... | 10,000 square feet. |

The following material, which was obtained without cost, was used on the unpaved streets:

| | |
|------------|--------------------|
| Earth..... | 1,330 truck loads. |
| Stone..... | 1,553 " |
| Dirt..... | 614 " |

437 truck-loads of surplus dirt were removed.

10,984 square feet flagging were relaid on Kingsbridge road by contract.

The following is a summary of the work done on macadam roadways during the year 1889:

| | |
|---|-----------------------|
| Roadway resurfaced and repaired..... | 139,071 square yards. |
| Roadway repaired with gravel..... | 30,193 " |
| Roadway covered with gravel screenings..... | 345,235 " |
| Roadway covered with limestone chips..... | 8,991 " |
| Stone-block pavement relaid..... | 59 " |
| Sidewalk cleaned..... | 121,000 " |
| Bridge stone relaid..... | 1,980 square feet. |
| Flagging relaid..... | 45,304 " |
| Sidewalk repaired..... | 9,170 " |
| Temporary sidewalk laid..... | 200 " |
| Gutter stone reset..... | 86 lineal feet. |
| Curb reset..... | 159 " |
| Drain cleaned..... | 1,187 " |
| Basins cleaned..... | 450 " |
| Basin built..... | 1 " |
| Trees cultivated and trimmed..... | 3,519 " |

The roadways and gutters of 26 miles of streets were cleaned at various times during the year.

The following material was used by the Bureau in making the above named repairs:

| | |
|----------------------------|--------------------|
| Broken stone and dirt..... | 6,708 cubic yards. |
| Trap-rock screenings..... | 1,439 " |
| Gneiss stone..... | 1,303 " |
| Gravel..... | 2,141 " |
| Gravel screenings..... | 1,116 " |
| Sand..... | 114 " |
| Telford..... | 75 " |
| Ashes..... | 150 " |
| Sweepings..... | 15 " |
| Lime-stone chips..... | 200 " |

10,248 truck loads of dirt, stone and brush were removed from macadam roadways and basins thereon.

The following is a statement of the various appropriations under the charge of the Bureau of Streets:

| | |
|---|--------------|
| Boulevards, Roads and Avenues, Maintenance of, 1889..... | \$100,000 00 |
| Amount transmitted during the first quarter ending March 31, 1889..... | 10,951 28 |
| Balance, March 31, 1889..... | \$89,048 72 |
| Amount transmitted during the second quarter ending June 30, 1889..... | 30,867 60 |
| Balance, June 30, 1889..... | \$58,181 12 |
| Amount transmitted during the third quarter ending September 30, 1889..... | 34,036 68 |
| Balance, September 30, 1889..... | \$24,144 44 |
| Amount transmitted during the fourth quarter ending December 31, 1889, is as follows: | |
| Pay-roll, Laborers, etc., ending September 30, 1889..... | \$3,887 54 |
| October 15, "..... | 3,885 19 |
| November 15, "..... | 4,168 00 |
| December 15, "..... | 3,458 43 |
| Use of horse..... | 1,978 00 |
| Supplies..... | 1,187 68 |
| Telephone service..... | 270 00 |
| Rental of yard..... | 61 11 |
| Stone and screenings..... | 33 75 |
| | 900 00 |
| | 2,800 85 |
| | 22,630 55 |
| Balance, December 31, 1889..... | \$1,513 89 |

The following is a statement of the various appropriations under charge of the Bureau of Streets and Roads:

| | |
|---|-------------|
| Roads, Streets and Avenues Unpaved—Maintenance of and sprinkling, 1889..... | \$25,000 00 |
| Amount transmitted during the first quarter ending March 31, 1889..... | 4,212 08 |
| Balance, March 31, 1889..... | \$20,787 92 |
| Amount transmitted during the second quarter ending June 30, 1889..... | 5,495 15 |
| Balance, June 30, 1889..... | \$15,292 77 |
| Amount transmitted during the third quarter ending September 30, 1889..... | 5,928 89 |
| Balance, September 30, 1889..... | \$9,363 88 |
| Amount transmitted during the fourth quarter ending December 31, 1889, is as follows: | |
| Pay-roll, Laborers, etc., ending September 30, 1889..... | \$1,334 25 |
| October 15, "..... | 1,363 94 |
| November 15, "..... | 1,484 50 |
| December 15, "..... | 1,157 49 |
| Lumber..... | 645 75 |
| Flagging..... | 1,654 48 |
| | 32 41 |
| | 439 36 |
| | 8,112 18 |
| Balance, December 31, 1889..... | \$1,251 70 |

The following is a statement of the various appropriations under charge of the Bureau of Streets and Roads:

| | |
|--|------------|
| Boulevards, Roads and Avenues, Maintenance of—Salaries, 1889..... | \$2,500 00 |
| Amount transmitted during the first quarter ending March 31, 1889..... | 624 99 |
| Balance, March 31, 1889..... | \$1,875 01 |
| Amount transmitted during the second quarter ending June 30, 1889..... | 624 99 |
| Balance, June 30, 1889..... | \$1,250 02 |
| Amount transmitted during the third quarter ending September 30, 1889..... | 624 99 |
| Balance, September 30, 1889..... | \$625 03 |
| Amount transmitted during the fourth quarter ending December 31, 1889..... | 624 99 |
| Balance, December 31, 1889..... | \$0 04 |

Amount transmitted during the quarter ending December 31, 1889, and charged to Restoring and Repaving—Special Fund.....

| | |
|--|------------|
| Salaries—Inspectors of crosswalks..... | \$276 50 |
| Surveyor's fees..... | 651 17 |
| Contractor's final payments..... | 2,517 06 |
| Total..... | \$3,444 73 |

I desire to call your attention to the peculiar condition of some of the avenues, particularly those on the east side of the city. Avenue A, Pleasant avenue and First avenue, for instance, are paved in part with stone and in part with macadam, which, in my opinion, should be so changed as to make the pavements of those avenues uniform and homogeneous. The character of the traffic on those avenues is becoming such that granite-block pavement should be substituted on all parts where macadam is at present laid. All the parts of lateral streets on the east side, from Ninety-second to One Hundred and Twenty-seventh street, which are now unpaved, should, I think, be also paved as quickly as possible with stone, from where pavements on those streets now end to the East river.

One Hundred and Sixteenth street, from Third to Pleasant avenue, has been more complained of than any other street under the care of this Bureau. From St. Nicholas to Pleasant avenue it is a macadam roadway, and although my predecessor has recommended, in a previous report, the resurfacing of portions of it with macadam, I am convinced that granite-block pavement would be more suitable for this street, from Park avenue to Pleasant avenue.

Another avenue, which is in a similar condition to the avenues named on the east side, is Tenth avenue, from One Hundred and Twenty-fifth street to a point near its termination at Fort George. The construction of the Cable Railroad clearly had much to do with destroying the roadway of this avenue where it was unpaved and macadamized, and I would suggest that steps be taken at once to put that portion of it north of One Hundred and Sixty-first street in a better condition for driving, as this is at present the main approach to the new Washington Bridge across the Harlem river at One Hundred and Eighty-first street.

Until very recently, Lenox and Seventh avenues, which are the principal drives north of Central Park and south of the Harlem river, were in fair condition for driving purposes, although considerably worn down from the established grade. The laying of blue-stone crosswalks, which was authorized and directed by ordinances of the Common Council, has seriously hurt both these avenues in their character of drives, and should not, in my opinion, be laid on any other parts of either, at least, until an opportunity and means are had to completely resurface both.

Respectfully,

JOHN B. SHEA, Superintendent of Streets.

Document "I."

REPORT OF THE SUPERINTENDENT OF LAMPS AND GAS.

DEPARTMENT OF PUBLIC WORKS—BUREAU OF LAMPS AND GAS, }
NEW YORK, January 10, 1890. }

Hon. THOMAS F. GILROY, Commissioner of Public Works:

SIR—In compliance with the directions contained in your letter of the 4th ultimo, I herein submit a report of the business of the Bureau of Lamps and Gas for the quarter ending December 31, 1889, with a summary of the same for the entire year.

In Exhibit "A" will be found a statement showing the amounts expended for a supply of illuminating gas to the various public markets, court rooms, offices, armories, etc., and for the fitting up, lighting and maintenance of the public lamps for each of the four quarters of the year, 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 quarter of one hundred and ninety-eight thousand three hundred and eighty-six dollars and fifty-one cents (\$198,386.51), and for the year of six hundred and thirty-two thousand one hundred and thirty-five dollars and thirteen cents (\$632,135.13), with liabilities amounting to sixty-four thousand three hundred and twenty-three dollars and forty-two cents (\$64,323.42), leaving a surplus balance of thirty-five hundred and forty-one dollars and forty-five cents (\$3,541.45). These liabilities, as shown on the exhibit, consist of bills for the public lighting for month of December and for sundry supplies for the public lamps, the bills not having been received in time to be audited before the making up of this report.

Exhibit "C" is a summary of the appropriation for "Salaries—Lamps and Gas and Electric-lighting," and this shows an expenditure during the quarter of one thousand four hundred and twenty-one dollars and sixty-three cents (\$1,421.63), and for the year of five thousand nine hundred and sixty-three dollars and sixteen cents (\$5,963.16), leaving a surplus balance of five hundred and thirty-six dollars and eighty-four cents (\$536.84).

Exhibit "D" is a summary of the "Public 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 sixty-eight new gas-lamps have been lighted, six new naphtha lamps lighted, one new electric-lamp lighted, sixty-three hundred and eighty-one gas-lamps relighted, and one electric lamp relighted, and two thousand and twenty-three gas-lamps discontinued, and eleven hundred and ninety-seven electric-lamps discontinued during the quarter; and eight hundred and sixty-one new gas-lamps, six new naphtha-lamps, and nineteen new electric-lamps have been lighted; seventy-four hundred and seven gas-lamps, and one hundred and sixty-nine electric-lamps relighted, and twenty-nine hundred and seventy-one gas-lamps discontinued, and thirteen hundred and seventy-one electric-lamps have been discontinued during the year. Of the gas-lamps relighted, forty-three hundred and seventy-eight were relighted in consequence of the extinguishment of the electric-lights. The total number of lamps of all kinds lighted on December 31, 1889, was twenty-eight thousand and twenty-nine gas, one hundred and twenty-six naphtha, and one hundred and forty-five electric; making a total of twenty-eight thousand three hundred lamps burning December 31, 1889.

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

Exhibit "F" is a copy of the time-table for lighting and extinguishing the public gas-lamps.

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

| BY WHAT GAS COMPANY. | NEW LAMPS FITTED UP. | LAMP-POSTS REMOVED. | LAMP-POSTS RESET. | LAMP-POSTS STRAIGHTENED. | COLUMNS REFITTED. | COLUMNS RELEASED. |
|---------------------------------------|----------------------|---------------------|-------------------|--------------------------|-------------------|-------------------|
| Consolidated Gas Co., Branch 1..... | 6 | 26 | 154 | 289 | 39 | 379 |
| Consolidated Gas Co., Branch 2..... | 8 | 11 | 136 | 72 | 9 | 90 |
| Consolidated Gas Co., Branch 3..... | 10 | 9 | 67 | 110 | 5 | 58 |
| Consolidated Gas Co., Branch 4..... | 266 | 40 | 163 | 124 | 16 | 45 |
| Consolidated Gas Co., Branch 6..... | 228 | 57 | 122 | 113 | 26 | 58 |
| New York Mutual Gas-light Co..... | .... | 4 | 14 | 28 | 4 | 8 |
| Equitable Gas-light Co..... | 9 | 3 | 47 | 213 | 19 | 185 |
| Central Gas-light Co..... | 171 | 94 | 103 | 165 | .... | 10 |
| Northern Gas-light Co..... | 77 | 53 | 73 | 89 | .... | 10 |
| Yonkers Gas-light Co..... | 108 | .... | .... | 9 | .... | 1 |
| N. Y. & N. J. Globe Gas-light Co..... | 6 | .... | .... | 27 | .... | .... |
| Totals..... | 889 | 297 | 879 | 1,239 | 118 | 844 |

The following table will show the number of new lamps lighted by the several gas and electric-light companies in each of the years from 1882 to 1889, both inclusive:

| BY WHAT COMPANY. | NEW LAMPS LIGHTED IN— | | | | | | | |
|-------------------------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. |
| Consolidated Gas Co., Branch 1..... | 31 | 17 | 18 | 23 | 19 | 26 | 12 | 6 |
| Consolidated Gas Co., Branch 2..... | 67 | 53 | 22 | 50 | 27 | 20 | 17 | 8 |
| Consolidated Gas Co., Branch 3..... | .... | .... | .... | .... | 11 | 44 | 26 | 10 |
| Consolidated Gas Co., Branch 4..... | 146 | 136 | 67 | 159 | 62 | 264 | 181 | 251 |
| Consolidated Gas Co., Branch 6..... | 219 | 255 | 308 | 312 | 342 | 332 | 230 | 243 |
| New York Mutual Gas-light Co..... | 3 | .... | 5 | .... | .... | 1 | .... | .... |
| Equitable Gas-light Co..... | .... | .... | .... | 7 | 14 | 5 | .... | 9 |

| BY WHAT COMPANY. | NEW LAMPS LIGHTED IN— | | | | | | | |
|---------------------------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. |
| Central Gas-light Co..... | 105 | 75 | 134 | 74 | 13 | 89 | 118 | 149 |
| Northern Gas-light Co..... | 102 | 124 | 109 | 173 | 72 | 145 | 216 | 77 |
| Yonkers Gas-light Co..... | 187 | 36 | 2 | 10 | 2 | 91 | 21 | 108 |
| N. Y. & N. J. Globe Gas-light Co..... | .... | .... | .... | 50 | 70 | .... | .... | 6 |
| Brush Electric Illuminating Co..... | 32 | .... | 292 | .... | 1 | 30 | 13 | .... |
| United States Illuminating Co..... | 73 | .... | 227 | 61 | 2 | .... | 45 | 18 |
| Harlem Lighting Co..... | .... | .... | .... | .... | .... | 95 | 12 | .... |
| North New York Lighting Co..... | .... | .... | .... | .... | .... | 26 | .... | .... |
| Mount Morris Electric-light Co..... | .... | .... | .... | .... | .... | .... | 18 | .... |
| East River Electric-light Co..... | .... | .... | .... | .... | .... | .... | 408 | 1 |
| Total..... | 965 | 716 | 1,085 | 924 | 723 | 1,168 | 1,317 | 886 |

The following statement will show the average number of lamps lighted under the supervision of the Bureau of Lamps and Gas, in each of the years from 1882 to 1889, both inclusive:

| BY WHAT COMPANY. | AVERAGE NUMBER OF LAMPS LIGHTED IN— | | | | | | | |
|---|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|
| | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. |
| Consolidated Gas Co., Branch 1..... | 3,461 | 3,369 | 3,046 | 3,450 | 3,865 | 3,863 | 3,199 | 2,912 |
| Consolidated Gas Co., Branch 2..... | 6,495 | 6,477 | 6,053 | 4,456 | 3,239 | 2,593 | 1,912 | 1,648 |
| Consolidated Gas Co., Branch 3..... | .... | .... | .... | .... | 1,122 | 3,152 | 2,463 | 2,322 |
| Consolidated Gas Co., Branch 4..... | 4,529 | 4,658 | 4,504 | 4,172 | 3,719 | 2,725 | 3,063 | 3,075 |
| Consolidated Gas Co., Branch 6..... | 4,950 | 5,157 | 5,422 | 5,767 | 5,787 | 5,640 | 5,535 | 5,785 |
| New York Mutual Gas-light Co..... | 826 | 768 | 591 | 316 | 216 | 202 | 158 | 206 |
| Equitable Gas-light Co..... | .... | .... | .... | 1,411 | 1,586 | 1,853 | 1,925 | 2,685 |
| Central Gas-light Co..... | 1,938 | 2,007 | 2,072 | 2,205 | 2,256 | 2,350 | 2,316 | 2,474 |
| Northern Gas-light Co..... | 1,181 | 1,308 | 1,429 | 1,551 | 1,686 | 1,780 | 1,922 | 2,123 |
| Yonkers Gas-light Co..... | 207 | 295 | 325 | 331 | 337 | 373 | 444 | 477 |
| N. Y. and N. J. Globe Gas-light Co..... | .... | .... | .... | 50 | 90 | 120 | 120 | 121 |
| Brush Electric Illuminating Co..... | 55 | 55 | 246 | 347 | 347 | 343 | 366 | 320 |
| United States Illuminating Co..... | 73 | 73 | 243 | 358 | 361 | 363 | 395 | 457 |
| Harlem Lighting Co..... | .... | .... | .... | .... | .... | 88 | 102 | 92 |
| North New York Lighting Co..... | .... | .... | .... | .... | .... | 25 | 26 | 26 |
| Mount Morris Electric-light Co..... | .... | .... | .... | .... | .... | .... | 18 | 31 |
| East River Electric-light Co..... | .... | .... | .... | .... | .... | .... | 379 | 314 |
| Totals..... | 23,715 | 24,167 | 23,931 | 24,394 | 24,611 | 25,741 | 24,343 | 25,068 |

New gas-mains have been laid by the several gas-light companies during the year, as follows:

| | Feet. | In. |
|---|---------|-----|
| By Consolidated Gas Company..... | 114,751 | 6 |
| By New York Mutual Gas-light Company..... | 5,950 | .. |
| By Equitable Gas-light Company..... | 987 | 3 |
| By Standard Gas-light Company..... | 100,957 | 3 |
| By Central Gas-light Company..... | 9,757 | .. |
| By Northern Gas-light Company..... | 3,200 | .. |
| By Yonkers Gas-light Company..... | 14,126 | .. |
| Total laid in 1889..... | 249,729 | .. |

The total miles of gas-mains in the streets of this city on December 31, 1889, was as follows:

| | Miles. | Feet. | In. |
|--|--------|-------|-----|
| Consolidated Gas Company..... | 776 | 3,415 | 9 |
| New York Mutual Gas-light Company..... | 123 | 1,843 | .. |
| Equitable Gas-light Company..... | 112 | 3,241 | 3 |
| Standard Gas-light Company..... | 110 | 3,474 | 5 |
| Central Gas-light Company..... | 54 | 5,105 | .. |
| Northern Gas-light Company..... | 34 | 2,071 | .. |
| Yonkers Gas-light Company..... | 15 | 4,119 | .. |
| Total..... | 1,228 | 2,149 | 5 |

Of these mains 1,123,141 miles are on Manhattan Island, and 105,735 miles are in the annexed territory, north of Harlem river.

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

| | Feet. | In. |
|----------------------------|---------|-----|
| Three-inch main..... | 394 | .. |
| Four-inch main..... | 69,332 | 1 |
| Six-inch main..... | 327,947 | 8 |
| Eight-inch main..... | 63,061 | 2 |
| Twelve-inch main..... | 55,727 | .. |
| Sixteen-inch main..... | 29,684 | 7 |
| Twenty-inch main..... | 28,074 | 7 |
| Twenty-four-inch main..... | 20,481 | 1 |
| Total..... | 594,702 | 2 |

And as it is compelled by its franchise, under the conditions prescribed by the Gas Commission, to pay into the City Treasury at the rate of twenty cents for each lineal foot of mains laid, the sum amounts at the present time to \$118,940.40; and this is the only gas company that makes any compensation to the city for the privilege of laying gas-mains. It is also compelled to light all the public street-lamps on the lines of its mains at a rate not exceeding twelve dollars per year for each lamp.

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

| | Feet. | In. |
|----------------------------|---------|-----|
| Four-inch main..... | 122,648 | 1 |
| Six-inch main..... | 173,287 | 6 |
| Eight-inch main..... | 154,426 | 11 |
| Ten-inch main..... | 80,938 | 10 |
| Twelve-inch main..... | 4,171 | 9 |
| Sixteen-inch main..... | 23 | 6 |
| Twenty-inch main..... | 43,107 | 9 |
| Twenty-four inch main..... | 5,668 | 11 |
| Total..... | 584,273 | 3 |

And its franchise require that it shall light all the public lamps on the lines of its mains at a rate not to exceed twelve dollars and fifty cents per year for each lamp. No public lamps, however, have as yet been lighted by this company.

The gas supplied by the Consolidated Gas Company is manufactured at seven stations, viz.: Fourteenth Street Station (formerly Manhattan Gas-light Company), located at Fourteenth street and Avenue C; manufactures coal-gas.

Eighteenth Street Station (formerly Manhattan Gas-light Company), located at Eighteenth street and Tenth avenue; coal-gas.

Twenty-first Street Station (formerly New York Gas-light Company), located at Avenue A and Twenty-first street; manufactures water-gas.

Forty-second Street Station (formerly Metropolitan Gas-light Company), located at Forty-second street, North river; manufactures coal-gas.

Forty-fourth Street Station (formerly Municipal Gas-light Company), located at Forty-fourth street, North river; manufactures water-gas.

Ninety-ninth Street Station (formerly Knickerbocker Gas-light Company), located at Ninety-ninth street and Second avenue; manufactures water-gas.

One Hundred and Eleventh Street Station (formerly Harlem Gas-light Company), located at One Hundred and Eleventh street and First avenue; manufactures coal-gas.

The general office of the company is at No. 4 Irving place, its capital is \$35,430,000, and the capacity of the several gas-works is 30,000,000 cubic feet per day.

Branch Office No. 1, at Hester and Elizabeth streets, attends to the gas supply, including the lighting of the public lamps in that part of the city lying south of the centre-line of Houston street.

Branch Office No. 2, at No. 4 Irving place, attends to the gas supply, including the lighting of the public lamps in that part of the city lying north of the centre-line of Houston street and south of the centre-line of Twenty-third street.

Branch Office No. 3, at the corner of Fourth avenue and Twenty-sixth street, attends to the gas supply, including the lighting of the public lamps, in that part of the city lying north of the centre-line of Twenty-third street and east of the centre-line of Fifth avenue to Fifty-ninth street, and all east of the Central Park, from Fifty-ninth street to the centre-line of Seventy-ninth street.

Branch Office No. 4, at Broadway and Forty-sixth street, attends to the gas supply, including the lighting of the public lamps, in that part of the city lying north of the centre-line of Twenty-third street and west of the centre-line of Fifth avenue to Fifty-ninth street, and on the west side of Central Park, between Fifty-ninth and One Hundred and Tenth streets, and south of the centre-line of One Hundred and Tenth street, from Eighth avenue to the North river, including Transverse roads 1 and 2.

Branch Office No. 6, at No. 2084 Third avenue, attends to the gas supply, including the lighting of the public lamps, in that part of the city lying north of the centre-line of Seventy-ninth street to One Hundred and Tenth street east of Central Park, and all the city north of One Hundred and Tenth street to Harlem river, including Transverse road No. 3.

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

The Equitable Gas-light Company has mains in various streets between Division and Seventy-fourth streets, and it lights the public lamps on the lines of its mains. Its works are at Forty-first street, East river; the manufacture is water-gas, and its office is at Third avenue and Twenty-fifth street. The capital is \$4,000,000, and the capacity of its works is 6,000,000 cubic feet per day.

The Standard Gas-light Company obtained its franchise and rights to lay gas-mains in the streets of this city direct from the State Legislature, by chapter 248 of the Laws of 1886. It now has mains in various streets between Thirteenth and One Hundred and Thirty-seventh streets, and between Avenue C and Eighth avenue. Its works are at One Hundred and Fifteenth street, East river, and its main office is at No. 2 Cortlandt street, with sub-offices at No. 19 West One Hundred and Twenty-fifth street and at corner of Lexington avenue and Forty-second street. The manufacture is water-gas. Its capital is \$10,000,000, and the capacity of its present works is 2,000,000 cubic feet of gas per day.

The Central Gas-light Company supplies gas to the Twenty-third Ward (formerly the town of Morrisania) and lights all the public gas-lamps therein. It manufactures coal-gas at its works at One Hundred and Thirty-eighth street, East river, and its office is at No. 350 Alexander avenue. The capital is \$487,400, and the capacity of its works is 800,000 cubic feet per day.

The Northern Gas-light Company supplies gas to that part of the Twenty-fourth Ward formerly town of West Farms, and lights all the public lamps therein. It manufactures coal-gas at its works on the Bronx river, and its office is at No. 1845 Vanderbilt avenue. The capital is \$125,000, and the capacity of its gas-works is 250,000 cubic feet per day.

The Yonkers Gas-light Company has mains in, lights the public gas-lamps and supplies gas to, that part of the Twenty-fourth Ward, formerly town of Kingsbridge, except the section known as Woodlawn Heights. Its gas-works and office are in the City of Yonkers, Westchester County, and its manufacture is water-gas. This company has been leased to the United Gas Improvement Company, and its business is principally confined to the City of Yonkers.

The New York and New Jersey Globe Gas-light Company lights 126 lamps at Woodlawn Heights, in the Twenty-fourth Ward, being at the extreme northeastern section of the city, and which at present is beyond the reach of gas-mains. The lamps are lighted by means of naphtha contained in a tank or reservoir on each lamp.

Several requests have been made during the year for the laying of gas-mains in this section of the city.

The following additional streets have been lighted by gas during the year:

Avenue B, west side, from Seventy-ninth to Eighty-fourth street.

Bradhurst avenue, from One Hundred and Forty-fourth to One Hundred and Forty-fifth street.

Madison avenue, west side, from Ninety-fourth to One Hundred and Fourth street.

Madison avenue, from One Hundred and Seventeenth to One Hundred and Twentieth street.

Manhattan avenue, from One Hundred and Thirteenth to One Hundred Fifteenth street.

Manhattan avenue, from One Hundred and Eighteenth to One Hundred and Nineteenth street.

Park avenue, west side, from Ninety-fourth to Ninety-fifth street.

Park avenue, west side, from One Hundred and Twelfth to One Hundred and Fifteenth street.

West End avenue, from Sixty-eighth to Eighty-eighth street.

West End avenue, from Ninety-sixth to One Hundred and Sixth street.

Tenth avenue, east side, from Eighty-first to Ninety-third street.

Tenth avenue, east side, from One Hundred and Fortieth to One Hundred and Forty-third street.

Fifty-third street, from Tenth to Eleventh avenue.

Sixty-fifth street, from Boulevard to Tenth avenue.

Sixty-sixth street, from Tenth to West End avenue.

Seventy-fourth street, from Eighth to Ninth avenue.

Seventy-fifth street, from Eighth to Ninth avenue.

Seventy-sixth street, from Eighth to Ninth avenue.

Seventy-seventh street, from West End avenue to Riverside drive.

Seventy-eighth street, from Boulevard to West End avenue.

Seventy-ninth street, from West End avenue to Riverside Drive.

Eightieth street, from Boulevard to Riverside Drive.

Eightieth street, from Boulevard to Ninth avenue.

Eighty-seventh street, from Boulevard to West End avenue.

Eighty-seventh street, from West End avenue to Riverside Drive.

Eighty-eighth street, from Boulevard to Tenth avenue.

Eighty-eighth street, from Park to Madison avenue.

Eighty-ninth street, from West End avenue to Riverside Drive.

Eighty-ninth street, from Boulevard to West End avenue.

Eighty-ninth street, from Madison to Fifth avenue.

Ninety-fourth street, from Park to Fifth avenue.

Ninety-fifth street, from Lexington to Madison avenue.

Ninety-sixth street, from Boulevard to Riverside Drive.

Ninety-sixth street, from Boulevard to Tenth avenue.

Ninety-sixth street, from Ninth to Tenth avenue.

One Hundredth street, from West End avenue to Riverside Drive.

One Hundredth street, from Third to Lexington avenue.

One Hundred and Second street, from Ninth to Tenth avenue.

One Hundred and Fourth street, from Madison to Fifth avenue.

One Hundred and Sixth street, north side, from Tenth avenue to Boulevard.

One Hundred and Sixth street, from Madison to Fifth avenue.

One Hundred and Eighth street, from Ninth to Tenth avenue.

One Hundred and Thirteenth street, from Boulevard to Riverside Drive.

One Hundred and Fourteenth street, from Madison to Fifth avenue.

One Hundred and Seventeenth street, from Manhattan to Ninth avenue.

One Hundred and Eighteenth street, from Eighth to Ninth avenue.

One Hundred and Eighteenth street, from St. Nicholas to Seventh avenue.

One Hundred and Nineteenth street, from Eighth to Manhattan avenue.

One Hundred and Nineteenth street, from Lenox to Seventh avenue.

One Hundred and Twenty-first street, from Eighth to Manhattan avenue.

One Hundred and Twenty-second street, from Manhattan to Ninth avenue.

One Hundred and Twenty-ninth street, from Manhattan to Twelfth avenue.

One Hundred and Thirty-third street, from Tenth avenue to Old Broadway.

One Hundred and Thirty-third street, from Boulevard to Twelfth avenue.

One Hundred and Thirty-seventh street, from Seventh to Eighth avenue.
One Hundred and Forty-second street, from Hamilton place to Boulevard.
One Hundred and Forty-third street, from Boulevard to Hamilton place.
One Hundred and Fifty-ninth street, from Audubon to Eleventh avenue.

The following streets in the Twenty-third Ward:

Brook avenue, from One Hundred and Forty-first street to Westchester avenue.
Brook avenue, from Third avenue to One Hundred and Sixty-second street.
Cauldwell avenue, from One Hundred and Sixty-first to One Hundred and Sixty-third street.
Cottage place, from One Hundred and Seventieth street to line of Crotona Park.
Home street, from Southern Boulevard to Union avenue.
Jefferson street, from Franklin avenue to Boston avenue.
Jackson avenue, north of One Hundred and Sixty-first street.
Jackson avenue, south of One Hundred and Sixty-fifth street.
Rider avenue, from One Hundred and Thirty-fifth to One Hundred and Forty-fourth street.
Sheridan avenue, from One Hundred and Fifty-eighth to One Hundred and Sixty-first street.
Stebbins avenue, from One Hundred and Sixty-sixth to Home street.
Teller avenue, from One Hundred and Sixty-second to One Hundred and Sixty-fourth street.
Tinton avenue, from Home street to One Hundred and Sixty-eighth street.
Union street, from Ogden avenue to Bremer avenue.
Walton avenue, from One Hundred and Forty-ninth street to Hudson River Railroad.
One Hundred and Forty-fourth street, from Brook to St. Ann's avenue.
One Hundred and Sixty-first street, from Walton avenue to Jerome avenue.

The following streets in Twenty-fourth Ward:

Beach street, from Riverdale avenue to Forest avenue.
Boston avenue, from Sedgwick avenue to Bailey avenue.
Jacob street, from Hoffman street to Third avenue.
McComb's Dam Road, from Highbridge road to Kingsbridge road.
Montgomery avenue, from Boston avenue, north 750 feet.
Moshulu avenue, from Riverdale lane to depot of New York Central Railroad.
Rockfield street, from Williamsbridge road to Anthony avenue.
Samuel street, from Daley avenue to Honeywell avenue.
Sedgwick avenue, from Boston avenue to Oloff street.
Spuyten Duyvil road.
Webbers lane, from Broadway to Kingsbridge avenue.
Webster avenue, from Suburban street to Olin avenue.
One Hundred and Seventy-ninth street, from Webster avenue to Valentine avenue.

The aggregate length of the additional streets lighted during the year was 12,418 miles.

The total aggregate length of streets of the city lighted on December 31, 1889, was 502,448 miles.

The total length of piers lighted was $\frac{31,200}{1,000}$ of a mile.

The total length of bridges lighted (exclusive of Washington Bridge, 2,380 feet), was $\frac{1,000}{1,000}$ miles.

The total area of parks lighted was 66 acres.

The total area of Gansevoort Market Square lighted was $\frac{3}{4}$ acres.

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

| CONTRACTORS. | For Gas and Light- ing each Lamp per annum. | For each Lamp-post Straightened. | For each Column Re-labeled. | 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..... | 27 00 | 1 50 | 1 50 | 3 50 | 3 50 | 8 00 | 8 00 |
| Northern Gas-light Co..... | 28 00 | 1 50 | 1 50 | 3 00 | 3 50 | 8 00 | 8 00 |
| Yonkers Gas-light Co..... | 23 00 | 1 00 | 1 00 | 1 00 | 1 50 | 8 00 | 8 00 |
| *New York and New Jersey Globe Gas-light Co..... | 23 00 | 1 00 | 1 00 | 2 00 | 3 00 | 5 00 | ..... |

*Naphtha Lamps.

The following contracts for furnishing, operating and maintaining electric "arc" lamps of not less than 1,000 candle-power have been made during the year:

With the Brush Electric Illuminating Company ("Brush System")—

| | Lamps. |
|---|---|
| Fourth avenue, from Fourteenth to Forty-second street | 29 |
| Fifth avenue, from Fourteenth to Fifty-ninth street | 44 |
| Seventh avenue, from Fourteenth to Fifty-ninth street | 43 |
| Fourteenth street, from North river to East river | 41 |
| Twenty-third street, from North river to East river | 35 |
| Thirty-fourth street, from North river to East river | 36 |
| Forty-second street, from North river to East river | 36 |
| Fifty-ninth street, from Third to Ninth avenue | 22 |
| Grand street, from Broadway to Sullivan street | 5 |
| Irving place, from Fourteenth to Twentieth street | 6 |
| | 297 lamps, at 35 cents each lamp per night. |

| | |
|---|--|
| Broadway, from Fourteenth to Fifty-ninth street | 47 |
| Madison Square Park | 14 |
| Union Square Park | 9 |
| | 70 lamps, at 45 cents each lamp per night. |

Total, 367 lamps.

United States Illuminating Company ("United States System")—

| | Lamps. |
|---|---|
| Fifth avenue, from Washington square to Thirteenth street | 7 |
| Eighth avenue, from Fourteenth to Fifty-fifth street | 38 |
| Broadway, from Battery place to Thirteenth street | 53 |
| Christopher street, from West to Bleecker street | 6 |
| Centre street, from Canal to Broome street | 3 |
| Houston street, from Avenue C to Bowery | 13 |
| Grand street, from East river to Broadway | 28 |
| Park row, from Ann street to Bowery | 14 |
| | 162 lamps, at 25 cents each lamp per night. |

| | |
|---|---|
| Avenue B, from Houston to Seventh street | 5 |
| Bowery, from Park row to Third avenue | 28 |
| Third avenue, from Bowery to Eighty-sixth street | 76 |
| Sixth avenue, from Carmine to Thirty-third street | 29 |
| Tompkins Park | 16 |
| Washington Park | 15 |
| | 169 lamps, at 29 cents each lamp per night. |

| | |
|--|----|
| Barclay street, from Broadway to North river | 7 |
| Battery Park | 20 |
| Bleecker street, from Bowery to Thirteenth street | 34 |
| Bloomfield street, from West street to Thirteenth avenue | 1 |
| Canal street, from Bowery to North river | 26 |
| Catharine street, from East Broadway to East river | 7 |
| Chambers street, from North river to East river | 21 |
| City Hall Park | 13 |
| Cortlandt street, from Broadway to North river | 6 |
| East Broadway, from Chatham Square to Grand street | 20 |

| | Lamps. |
|--|--------|
| Fulton street, from North river to East river | 17 |
| Gansevoort street, from West street to Thirteenth avenue | 1 |
| Liberty street, from Broadway to North river | 5 |
| South street, from Whitehall to Grand street | 64 |
| Stuyvesant Park, West | 8 |
| West street, from Battery place to West Eleventh street | 50 |
| Whitehall street, from Bowling Green to South Ferry | 6 |

Total, 637 lamps.

East River Electric-light Company ("Thomson-Houston System")—

| | Lamps. |
|--|--------|
| Avenue B, from Seventh to Fourteenth street | 7 |
| Avenue D, from Houston to Fourteenth street | 12 |
| First avenue, from Houston to Fourteenth street | 13 |
| Fourth avenue, from Bowery to Fourteenth street | 9 |
| Eighth avenue, from Fifty-fifth to Fifty-ninth street | 3 |
| Tenth avenue, from Fourteenth to Fifty-ninth street | 42 |
| Eighth street, from Sixth to Fourth avenue | 8 |
| Tenth street, from Second avenue to East river | 12 |
| Centre street, from Brooklyn Bridge to Canal street | 12 |
| Christopher street, from Bleecker street to Sixth avenue | 6 |
| Houston street, from East river to Avenue C | 7 |
| Houston street, from Bowery to Mulberry street | 3 |
| Stuyvesant Park, East | 8 |
| Stuyvesant street, from Eighth to Tenth street | 3 |
| South Fifth avenue, from Canal street to Washington Square | 14 |
| West Broadway, from Chambers to Canal street | 10 |

Total, 169 lamps, at 35 cents each lamp per night.

Mount Morris Electric-light Company ("Schuyler System")—

| | Lamps. |
|---|--------|
| Thirteenth avenue, from Gansevoort to Bloomfield street | 3 |
| Gansevoort Market Square | 13 |
| West Washington Market | 12 |

28 lamps, at 23 cents each lamp per night.

| | |
|---|--|
| Greenwich street, from Battery place to Chambers street | 18 lamps, at 24 cents each lamp per night. |
|---|--|

| | |
|---|--|
| One Hundred and Twenty-fifth street, from Lenox to Ninth avenue | 11 lamps, at 25 cents each lamp per night. |
|---|--|

Total, 57 lamps.

Harlem Lighting Company ("Fort Wayne-Jennie System")—

| | Lamps. |
|--|--------|
| Third avenue, from Eighty-sixth to One Hundred and Thirtieth street | 49 |
| One Hundred and Twenty-fifth street, from East river to Fifth avenue | 16 |
| Harlem Bridge, southerly span | 2 |

67 lamps, at 35 cents each lamp per night.

| | |
|-------------------|--|
| Mount Morris Park | 19 lamps, at 50 cents each lamp per night. |
|-------------------|--|

Total, 86 lamps.

Recapitulation of Electric Lamps.

| | |
|--|--|
| 28 lamps at 23 cents each per night, or \$83.95 each per year. | |
| 18 " 24 " " " 87.60 " | |
| 173 " 25 " " " 91.25 " | |
| 169 " 29 " " " 105.85 " | |
| 839 " 35 " " " 127.75 " | |
| 70 " 45 " " " 164.25 " | |
| 19 " 50 " " " 182.50 " | |

1,316 lamps.

20 lamps in Third avenue, from Harlem Bridge to Willis avenue.
6 lamps in One Hundred and Thirty-eighth street, from Third avenue to Madison Avenue Bridge.

Lighted by North New York Lighting Company, without contract.

1,342 electric-lamps.

The total aggregate length of streets lighted by electric-lights was $\frac{56,800}{1,000}$ miles, and the total area of public parks and Gansevoort Market Square, was $\frac{69}{100}$ acres.

All of the foregoing electric-lamps have been extinguished in consequence of the cutting of the wires, with the exception of:

- *18 lamps in Greenwich street, between Battery place and Chambers street.
- †1 lamp in Bloomfield street, between West street and Thirteenth avenue.
- †1 lamp in Gansevoort street, between West street and Thirteenth avenue.
- *3 lamps in Thirteenth avenue, between Gansevoort and Bloomfield streets.
- *13 lamps in Gansevoort Market Square.
- *12 lamps in West Washington Market.
- †49 lamps in Third avenue, from Eighty-sixth to One Hundred and Thirtieth street.
- †16 lamps in One Hundred and Twenty-fifth street, from East river to Fifth avenue.
- †19 lamps in Mount Morris Park.
- †2 lamp on Harlem Bridge approach.

134 electric-lamps lighted at this date.

* Mount Morris Company.

† United States Company, now lighted by Mount Morris Company.

‡ Harlem Lighting Company.

A contract has been made with the Equitable Gas-light Company for supplying illuminating gas, of not less than twenty-eight candle-power, to the public buildings, markets and armories on the lines of its mains for the year 1890, at \$1.25 per 1,000 cubic feet. Also, one with the Consolidated Gas Company for furnishing gas, of not less than twenty candle-power, to certain buildings, at \$1.25 per 1,000 cubic feet. The various buildings to which gas is furnished by this Bureau are shown on exhibit "A."

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

| OF WHAT COMPANY. | SULPHUR. (Grains in 100 cubic feet.) | | | | AMMONIA. (Grains in 100 cubic feet.) | | | | SULPHURET HYDROGEN. |
|---|---|--------------------|-------------------|--------------------|---|--------------------|-------------------|--------------------|------------------------|
| | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | |
| Consolidated Gas Co., Twenty-first Street Station | 8.70 | 5.20 | 4.37 | 9.63 | 1.17 | 0.71 | 3.01 | 8.20 | None. |
| Consolidated Gas Co., Fourteenth and Eighteenth Streets Stations | 20.99 | 11.75 | 6.41 | 18.13 | 6.34 | 7.99 | 5.87 | 7.81 | " |
| Consolidated Gas Co., Forty-fourth Street Station | 5.04 | 6.33 | 4.48 | 5.39 | 0.33 | 0.30 | 0.22 | 0.58 | " |
| Consolidated Gas Co., Forty-second Street Station | 17.33 | 21.40 | 19.97 | 18.95 | 17.16 | 29.57 | 20.97 | 11.83 | " |
| Consolidated Gas Co., Ninety-ninth and One Hundred and Eleventh Streets Station | 5.76 | 4.15 | 3.90 | 5.81 | 0.91 | 0.70 | 0.59 | 1.02 | " |
| New York Mutual Gas-light Co. | 5.75 | 6.67 | 10.62 | 5.02 | 0.22 | 0.19 | 0.19 | 0.28 | Traces. |
| Equitable Gas-light Co. | 6.89 | 7.19 | 5.83 | 6.45 | 0.14 | 0.16 | 0.16 | 0.23 | None. |

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

| OF WHAT COMPANY. | FIRST QUARTER. | SECOND QUARTER. | THIRD QUARTER. | FOURTH QUARTER. |
|---|----------------|-----------------|----------------|-----------------|
| Consolidated Gas Co., Twenty-first Street Station..... | .562 | .616 | .591 | .591 |
| Consolidated Gas Co., Fourteenth and Eighteenth Streets Stations..... | .521 | .466 | .522 | .523 |
| Consolidated Gas Co., Forty-fourth Street Station..... | .650 | .650 | .648 | .660 |
| Consolidated Gas Co., Forty-second Street Station..... | .491 | .514 | .580 | .504 |
| Consolidated Gas Co., Ninety-ninth and One Hundred and Eleventh Streets Stations..... | .426 | .655 | .650 | .531 |
| New York Mutual Gas-light Co. | .748 | .709 | .683 | .714 |
| Equitable Gas-light Co. | .736 | .715 | .709 | .713 |

The gases manufactured by the several companies are of the following kinds :

Consolidated Gas Co., Twenty-first Street Station, water-gas, "Tessie du Motay" process.
 Consolidated Gas Co., Fourteenth and Eighteenth Streets Stations, coal-gas.
 Consolidated Gas Co., Forty-fourth Street Station, water-gas, "Tessie du Motay" process.
 Consolidated Gas Co., Forty-second Street Station, coal-gas.
 Consolidated Gas Co., Ninety-ninth and One Hundred and Eleventh Streets Stations, coal-gas and water-gas, "Tessie du Motay" process.
 New York Mutual Gas-light Co., water-gas, "Wilkinson's" process.
 Equitable Gas-light Co., water-gas, "Jerzmonowski" process.
 Central Gas-light Co., coal-gas.
 Northern Gas-light Co., coal-gas.
 Yonkers Gas-light Co., water-gas, "Saulsbury" process.
 Standard Gas-light Co., water-gas, "Flannery" process.

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

| OF WHAT COMPANY. | AVERAGE MAXIMUM PRESSURE. | | | | AVERAGE MINIMUM PRESSURE. | | | |
|---|---------------------------|-----------------|----------------|-----------------|---------------------------|-----------------|----------------|-----------------|
| | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. |
| | Inches. | Inches. | Inches. | Inches. | Inches. | Inches. | Inches. | Inches. |
| Consolidated Gas Co., Twenty-first Street Station..... | 1.78 | 1.96 | 1.80 | 2.30 | 1.36 | 1.92 | 1.77 | 1.89 |
| Consolidated Gas Co., Fourteenth and Eighteenth Streets Stations..... | 2.54 | 2.64 | 2.01 | 2.36 | 1.22 | 1.45 | 1.47 | 1.23 |
| Consolidated Gas Co., Forty-fourth Street Station..... | 2.41 | 2.71 | 2.39 | 2.81 | 1.03 | 1.71 | 1.64 | 1.10 |
| Consolidated Gas Co., Forty-second Street Station..... | 1.67 | 1.79 | 1.80 | 2.02 | 0.83 | 0.97 | 0.95 | 0.98 |
| Consolidated Gas Co., One Hundred and Eleventh Street Station..... | 3.09 | 2.99 | 2.90 | 2.72 | 1.38 | 1.53 | 1.36 | 1.43 |
| New York Mutual Gas-light Co. | 3.68 | 3.18 | 2.62 | 2.96 | 1.65 | 2.05 | 1.86 | 1.84 |
| Equitable Gas-light Co. | 2.65 | 2.95 | 2.97 | 2.89 | 1.21 | 1.64 | 1.67 | 1.39 |

Photometric examinations of the electric lights of the United States, East River and Harlem Lighting Companies have been made by our electrical expert, Lieutenant John Millis, during the year, and the results of his tests show that the lights furnished by these companies have exceeded the 1,000 candle-power required in the contracts, the tests having been made at the stations of the several companies by attaching a lamp on a regular street-lamp circuit.

The new Washington Bridge over the Harlem river has been thrown open to the public during the year, and is now very extensively used as a public thoroughfare. The bridge, however has not been turned over to the city, and is still in charge of the commissioners appointed under a State law for the purposes of construction. It has been lighted during the year by the Consolidated Gas Company, on the request of the Bridge Commissioners, but the company has not received any payment for such lighting. It seems to me essential that some action should be taken to secure the permanent lighting of this important bridge. Of course, if the lighting should be discontinued, the bridge would necessarily have to be closed at night, and in such case a very serious inconvenience would be imposed upon the residents of that vicinity.

GAS BURNERS.

On the 12th day of May, 1823, the first contract for lighting the streets of this city by gas was entered into between the City of New York and the then New York Gas-light Company. The gas-burners adopted by the city when gas-lighting was introduced, were of a capacity to consume three cubic feet of gas per hour, and these, doubtless, were considered ample inasmuch as the city was then not much larger than some of the towns now existing in this country, and the streets were unimportant and sparsely built upon. Sixty-six years have passed, and our city has grown to be the great commercial metropolis of the western world, but no advance has been made in the size of the gas-burners used for lighting our streets, for our contracts still provide that the burners used in the public lamps shall consume three cubic feet of gas per hour, while other cities of this country are using burners capable of passing five or six feet of gas per hour. It is true that in a few favored localities a sudden advance was made from a three-foot gas-burner to the "arc" electric-light. This, however, was in but in one-ninth of the city, while the residents of the other eight-ninths have to be content with a three-foot gas-burner, and the property-owners of the larger part of the city are taxed for supplying the "arc" light to the few favored localities. It seems to me that the City of New York, the empire city of the United States, should provide all its inhabitants with well-lighted streets, as those tend to the comfort, protection and convenience of the people, besides materially acting as a valuable adjunct to the police. Of course, the adoption of larger gas-burners would materially increase the cost of the public lighting, but the increase would only be for the additional amount of gas consumed, as the expense of lighting, cleaning and maintenance would remain the same. It seems to me, therefore, that this is a matter which might be properly considered by the Gas Commission.

An improved street-lamp, consuming 14 feet of gas per hour, has been exhibited in several sections of the city during the past year, the gas companies furnishing the increased quantity of gas without any additional expense to the city. They were in use on Fifth avenue, from Washington Square to Twenty-third street, in Madison avenue, from Thirty-first street to Thirty-fourth street, and they are now in use in Forty-ninth and Fiftieth streets, from Madison to Sixth avenue, and on the Worth Plaza without expense to the city. Seventy-five have been placed in Lenox avenue, from One Hundred and Tenth to One Hundred and Twenty-ninth street, and have been in use during the month of December. The burners emit a steady, soft and mellow light entirely different from the harsh and intense glare of the "arc" light which is so offensive and injurious to the eyes. The residents of the various localities in which the lamps have been used are unanimous in their praise and have urgently asked for their retention. It might, perhaps, be well to try these lamps on one of the principal avenues from which the electric-lights have been shut off and in which there is no subway. For instance, on Fifth avenue, from Washington Square to Fifty-ninth street.

ELECTRIC LIGHTING.

The lighting of our streets and public places by electric-lights during the past year has been bad in the extreme, and the people have doubtless been greatly inconvenienced thereby. On three different occasions portions of our city have been shrouded in darkness in consequence of the extinguishments of the electric-lights. On April 16 (Centennial week) a large portion of the Brush district was thrown in darkness by the company because of the cutting of the wires in Broadway by orders of the Board of Electrical Control, and the gas-lamps had to be relighted and then extinguished when the electric-lights were again started. On October 11 the Western Union Lineman was killed by an electric shock while working on the telegraph wires on the pole at Chambers and Centre streets, the telegraph wires having been crossed by an electric-light wire at some distance from the spot. On October 14, the United States and Brush Companies discontinued lighting, and all the streets and parks in these two large districts were thrown in darkness. On October 16 the Mount Morris Company did no lighting and this district was thrown in darkness. On October 15, 16, 17 and 18, the Harlem Lighting Company shut down and more gloom was added to the city. In the meantime, the city authorities being enjoined from interfering with the wires of the electric-light companies through an injunction obtained from a Justice of the Supreme Court, the companies improved the opportunity by removing their old "underwriters" wire and substituting new and

heavily insulated wire, and then the lights were again started. On December 13 the injunction was dissolved by the Supreme Court, General Term, and on Saturday 14 the cutting of the wires and removal of poles was commenced, and on that night the districts of the United States, Brush, East River, Mount Morris and Harlem Companies were thrown in darkness, all these companies having shut down. On December 16 the Mount Morris Company started up, and on 15th the Harlem Company started. On December 14 the wires of the North New York Company were cut and this company shut down. By these several extinguishments of the electric-lights 56 1/2 miles of streets and 66 acres of parks were thrown in darkness. In 3 1/2 miles of streets electric-lamps have been relighted, and these remain lighted.

In addition to the above-mentioned extinguishments the Police reports show that very many electric-lamps have been found not lighted during the year, the extinguishments lasting from ten or fifteen minutes to all night in various parts of the city; in some cases entire circuits have been temporarily shut off in consequence of some defect at the generating station, and the extinguishments have occurred on Broadway, north of Fourteenth street, and in Madison and Union Parks, which places are lighted from the subway, as also in streets lighted from aerial wires.

The extinguishments of the past month were, to this Bureau, a very serious affair, and imposed upon us much hard work. The trouble came at an unexpected and inopportune time. The several gas companies were unusually busy in stripping, repairing and recalking their mains in the numerous streets which are to be repaved by you during the ensuing spring, in order that there might be no necessity for disturbing the new pavements after being laid. The several manufacturers of lamps and lighting fixtures were naturally pressed with work, as is generally the case prior to the holiday season, and then, when the electric-lights were shut off, a sudden and very pressing demand was made on gas companies and manufacturers for more light and lighting apparatus, consequently this caused me much trouble and some delay in procuring a sufficient number of lanterns for use on the streets from which the electric-lights had been cut off. I also found unexpected obstacles in lamp-posts from which the service pipes had been disconnected by builders, cellar diggers and others, and by workmen on the electric subway construction, twenty-three lamp-posts having been found on the short piece of Broadway between Houston and Fourteenth streets without gas connections, this having been caused by subway work. However, on Saturday, December 14, the wires were cut, and on the following Monday we had the gas-lamps in all the public parks relighted, and by Friday, the 27th, we had the 56 miles of streets relighted, 4,378 gas-lamps having been relighted between the 14th and 28th of December, leaving some scattered gas-lamps on side streets adjacent to an avenue yet to be relighted, but this was done by the aid and co-operation of the several gas companies. In regard to the entire stoppage of work by the electric-light companies, I am very firmly of the opinion that some of the streets were unnecessarily thrown in darkness, especially in the lower sections of the city, where the wires had not been disturbed. On the afternoon of the day when the wire cutting was commenced, I had arranged with the gas company for the relighting of the gas-lamps in City Hall and Battery Parks for that very night, and this would have been done had I not been informed by two officers of the electric-light company that such action was unnecessary, because the electric-lighting would be continued on these parks and on lower Broadway. On that night I visited the lower sections of the city, and, to my great surprise and indignation, I found the above places in utter darkness, notwithstanding the assurance given me that the electric-lamps would be kept lighted. Had the company continued the lighting down town, which I am firmly convinced it could have done, we would have had the use of several hundred lanterns for streets up-town.

The streets and public places of this city should never be left in darkness, but at all times of night and under all circumstances artificial illumination should be maintained, and the illuminating material should be such as will afford an absolute certainty of light. Can this be done by means of electric-lighting, as at present constituted? The experiences of the past would seem to indicate that the "arc" light, in its present stage, cannot be relied upon for artificial illumination with any degree of absolute certainty. It seems to me that there are too many possibilities of interruption. The electric current cannot be stored to any extent, and the lights can only be maintained while the wires are intact and the plant at the generating station is in proper working condition.

We have had gas-lighting in this city for the last sixty years, and I can find no record of our streets being thrown in darkness in consequence of an accident to a gas works, excepting on one occasion when the gas-lamps in a few of the up-town streets were not lighted for one night. There have been fires and explosions, but the gas-lamps remained lighted. There are ten gas works on Manhattan Island, with two, three, four and, in some cases, six sets of gas-mains in the streets; hence, no accident could possibly occur at any one of the gas works which would tend to deprive the city of gas.

SUBWAYS.

I have noticed that in the streets in which subways or conduits for electrical wires have been constructed the ground selected for the trenches is generally in the same parts of the streets which are occupied by the gas-mains. When excavations are made for the subway work the gas-mains are necessarily exposed, and continuous lengths of several hundred feet are suspended by ropes or chains. Subway workmen have been seen sitting on the cast-iron mains, directly over the joints, thereby causing a possible settlement and consequent leakage of gas; numerous house services and lamp-post services have been found badly damaged by the workman's pick, and street-lamp services have been found cut and the orifice of the pipe closed by a wooden plug. Mains have been inclosed in masonry or so covered by the conduits that it is found impossible to reach the mains for the purposes of tapping or repairs. It is a well-known fact that a certain admixture of illuminating gas and atmospheric air forms a very explosive compound. The insulation of the conductors will naturally, in the course of time, become rotten, especially where exposed to the chemical action of the gases in the earth, thereby causing a leakage of the electric current which might be taken up by the iron pipe or conduit containing the cable. Under these circumstances it seems to me that there will be a possible source of danger below ground, and no wonder need be expressed if accidents should occur in the future. It will therefore be seen that the greatest care should be exercised in doing the work and the best possible system adopted for construction. It would have been much better, in my opinion, if the subways had been located further from the curb-line and at some distance from the gas-mains.

UNUSED LAMP-POSTS.

Since the establishment of electric-lighting in the streets of this city, frequent suggestions have been made that it would be well to remove the unused lamp-posts standing in the electric-lighted streets. Several of these suggestions have come from managers of electric-light companies as well as from citizens, but my answer has been that under no consideration should these lamp-posts be removed, but, on the contrary, they should be kept in place to be ready for any future emergency, and that if, at any time, the electric-light companies should enter into a combination to advance the price of the public lighting, the gas lamp-posts would then come in very handy. In January, 1888, a gentleman of this city addressed a communication to the then Mayor (Mr. Hewitt), suggesting that it would be well for the City to remove these unused lamp-posts. This paper was referred to the Commissioner of Public Works, and by him referred to this Bureau. I then stated that we had over 3,000 of these lamp-posts, which had been erected at a cost of \$30,000, exclusive of the cost of the posts. That, if removed, there would be a dead loss to the city of this \$30,000; that their removal would involve the cost of \$10,000 and the opening of 3,000 places in the public streets, and then, if it was deemed advisable in the future to return to gas-lighting, 3,000 openings would again be required to effect their replacement. I also stated that the electric-light companies well understood that so long as these lamp posts remained in position, the city authorities could return to gas-lighting when so disposed; whereas, if the lamp-posts were removed, the city would be entirely in their power. We have now found how very unwise it would have been had we accepted the suggestions frequently given by causing the removal of the unused lamp-posts.

REMOVAL OF LANTERNS.

During the past month an article appeared in one of our newspapers stating that storekeepers when introducing electric-lights were wise enough to keep their gas-fixtures in place, but that the Superintendent of Lamps and Gas did not have the wisdom to retain his lamps on the posts. Now, it seems to me, there is a vast difference between the fixtures inside of a store and a gas lantern out of use and exposed on a public lamp-post. There is no ball-playing inside of a store nor boys with beanshooters or catapults peppering away at the globes. When Fourteenth street was first lighted by electric-lights the gas lanterns were left on the lamp-posts to be ready for any future emergency which might possibly occur. Within two weeks, however, after the gas-lighting had ceased there was not a light of glass remaining in a lantern on the entire street, and much of the metal work was smashed and beyond repair. This I find to be the experience of other cities where electric-lighting is used to any extent. In fact, we have very great difficulty in keeping our lighted gas lamps in proper condition for lighting in consequence of the constant breakage of glass by malicious and unruly boys, and my letter-book will show numerous letters to the Police in regard to the matter. The number of lights of glass broken in the public street-lamps of this city during the past year was 139,500, and more than 1,200 of the Boulevard lamp-globes. It is therefore evident that the lanterns cannot be left on the unused lamp-posts for any length of time. If, however, the electric-lighting should be resumed to any extent proper storage room should be procured convenient to the electric-lighted district, where at least 2,000 or 3,000 lanterns could be kept in good condition for future use. Of course, if this should be done, the expense of the storage and care of the lamps would be properly chargeable to electric-lighting, inasmuch as such expense would only be required on account of electric-lighting, and yet this may be deemed an absurd suggestion.

All of which is respectfully submitted.

S. MCCORMICK, Superintendent of Lamps and Gas.

EXHIBIT "A."

Statement showing the Amounts on Vouchers drawn for Gas to the various Public Markets, Offices, etc., and for Fitting up, Repairing, Lighting, etc., the Public Lamps, for the First, Second, Third and Fourth Quarters of the Year 1889, 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 | \$1,005 36 | \$805 49 | \$746 74 | \$1,149 50 | \$3,709 09 |
| Catharine Country Market..... | 39 51 | 32 63 | 32 63 | 49 12 | 153 89 |
| Catharine Meat Market..... | 15 88 | 15 37 | 14 00 | 28 74 | 73 99 |
| Fulton Meat Market..... | 376 99 | 294 50 | 179 37 | 270 38 | 1,121 24 |
| Fulton Country Market | 607 38 | 485 75 | 267 75 | 448 25 | 1,809 13 |
| Essex Market | 47 50 | 27 12 | 24 00 | 34 75 | 133 37 |
| Centre Market | 134 75 | 95 50 | 94 62 | 121 25 | 446 12 |
| Clinton Market..... | 237 37 | 182 88 | 146 13 | 204 75 | 771 13 |
| Union Market..... | 12 63 | 5 12 | 4 00 | 13 26 | 35 01 |
| Tompkins Market..... | 116 25 | 96 25 | 97 50 | 121 75 | 431 75 |
| Jefferson Market..... | 204 75 | 109 25 | 62 50 | 180 75 | 557 25 |
| First District Police Court..... | 366 75 | 350 01 | 300 38 | 377 37 | 1,394 51 |
| Second District Police Court..... | 142 50 | 82 25 | 46 75 | 111 50 | 388 00 |
| Third District Police Court..... | 45 50 | 35 75 | 26 50 | 58 50 | 166 25 |
| Fourth District Police Court..... | 115 50 | 91 75 | 61 50 | 105 00 | 373 75 |
| Fifth District Police Court..... | 27 12 | 9 99 | 3 87 | 38 62 | 79 60 |
| First District Civil Court..... | 7 13 | 51 | 62 | 5 13 | 13 39 |
| Second District Civil Court..... | ..... | ..... | ..... | 27 75 | 27 75 |
| Fourth District Civil Court..... | 11 75 | 8 25 | 5 25 | 11 25 | 36 50 |
| Fifth District Civil Court | 46 13 | 37 50 | 6 00 | 48 00 | 137 63 |
| Sixth District Civil Court..... | 1 50 | 2 00 | 1 00 | 2 25 | 6 75 |
| Eighth District Civil Court..... | 9 50 | 7 25 | 4 50 | 12 75 | 34 00 |
| Ninth District Police Court..... | 9 50 | 7 12 | 5 89 | 11 75 | 34 26 |
| Tenth District Police Court..... | ..... | ..... | ..... | 2 88 | 2 88 |
| Court-room, Brown-stone Building..... | 227 12 | 189 37 | 135 26 | 221 51 | 773 26 |
| New Court-house | 1,320 01 | 1,252 75 | 1,134 74 | 1,543 12 | 5,250 62 |
| City Hall | 534 13 | 558 63 | 448 62 | 569 00 | 2,110 38 |
| Corporation Counsel's Office..... | 46 25 | 23 37 | 10 87 | 73 99 | 154 48 |
| Corporation Attorney's Office..... | 65 49 | 63 12 | 36 38 | 54 37 | 219 36 |
| Public Administrator's Office | 12 | 38 | 13 | 1 13 | 1 76 |
| Board of Assessors..... | 37 | 4 38 | 4 63 | 6 26 | 15 64 |
| Department of Public Works..... | 450 50 | 343 00 | 194 37 | 298 50 | 1,286 37 |
| Department of Taxes..... | 12 14 | 8 25 | 6 63 | 12 62 | 39 64 |
| Court of Special Sessions..... | 34 12 | 24 88 | 28 01 | 56 51 | 143 52 |
| CITY RECORD Book Bindery..... | 5 24 | 5 38 | 4 87 | 5 13 | 20 62 |
| Register's Office | 103 38 | 88 74 | 61 87 | 132 12 | 386 11 |
| County Jail | 355 75 | 353 50 | 299 50 | 389 00 | 1,407 75 |
| Pipe Yard, Rivington street | 6 87 | 4 49 | 5 25 | 6 62 | 23 23 |
| Pipe Yard, East Twenty-fourth street..... | 5 63 | 4 51 | 4 38 | 10 88 | 25 40 |
| Water Purveyor's Shop, West Thirtieth street..... | 9 38 | 5 00 | 2 75 | 10 00 | 27 13 |
| Water Purveyor's Shop, East Eighty-seventh street | 5 87 | 4 61 | 3 01 | 5 88 | 19 37 |
| Water Purveyor's Shop, East One Hundred and Twenty-fifth street..... | 21 25 | 13 13 | 5 49 | 18 62 | 58 49 |
| Water Purveyor's Office, No. 335 Third avenue..... | ..... | ..... | ..... | 21 92 | 21 92 |
| South Gate House..... | 50 13 | 35 00 | 34 38 | 50 00 | 169 51 |
| Engine-house, High Bridge..... | 112 12 | 79 50 | 76 37 | 114 12 | 382 11 |
| Engine-house, Ninety-eighth street | 170 12 | 163 13 | 158 88 | 216 25 | 708 38 |
| Clock Tower, Third District Court-house..... | 277 25 | 403 13 | 304 00 | 309 75 | 1,294 13 |
| New York City Civil Service Board..... | 11 63 | 13 37 | 6 25 | 9 61 | 40 86 |
| Bureau Streets and Roads, One Hundred and Nineteenth street | 1 38 | 2 13 | 2 87 | 6 00 | 12 38 |
| Corporation Yard, East Sixteenth street..... | 4 50 | 3 25 | 12 | 6 00 | 13 87 |
| Dog Pound, East One Hundred and Second street..... | 5 00 | 4 75 | 5 00 | 5 25 | 20 00 |
| Photometrical Room, Grand street | 16 75 | 10 75 | 7 75 | 23 01 | 58 26 |
| Photometrical Room, Seventy-ninth street..... | 8 00 | 4 88 | 50 | 5 62 | 19 00 |
| Seventh Regiment Armory | 974 75 | 535 00 | 178 25 | 975 49 | 2,663 49 |
| Eighth Regiment Armory | 244 50 | 225 87 | 39 12 | 212 63 | 722 12 |
| Ninth Regiment Armory | 330 25 | 250 38 | 51 24 | 261 00 | 892 87 |
| Eleventh Regiment Armory | 25 50 | ..... | ..... | ..... | 25 50 |
| Twelfth Regiment Armory | 390 00 | 357 25 | 230 75 | 556 25 | 1,534 25 |
| Twenty-second Regiment Armory | 875 50 | 625 50 | 349 75 | 725 25 | 2,576 00 |
| Sixty-ninth Regiment Armory | 224 00 | 242 63 | 91 25 | 224 75 | 782 63 |
| Seventy-first Regiment Armory | 390 75 | 296 25 | 110 00 | 385 50 | 1,182 50 |
| First Battery | 77 25 | 82 12 | 36 25 | 92 50 | 288 12 |
| Second Battery..... | 104 75 | 62 75 | 40 25 | 160 50 | 368 25 |
| Brigade Headquarters | 117 50 | 104 00 | 39 50 | 86 00 | 347 00 |
| Public Bath, Battery ..... | ..... | 2 87 | 24 62 | 6 25 | 33 74 |
| Public Bath, Corlears street..... | ..... | 1 25 | 32 37 | 7 00 | 40 62 |
| Public Bath, Duane street..... | ..... | 1 50 | 33 63 | 5 13 | 40 26 |
| Public Bath, Stanton street ..... | ..... | 1 75 | 29 88 | 6 12 | 37 75 |
| Public Bath, Horatio street ..... | ..... | 1 25 | 21 38 | 3 88 | 26 51 |
| Public Bath, Nineteenth street, East river..... | ..... | ..... | 22 87 | 6 00 | 28 87 |
| Public Bath, Twenty-seventh street, North river..... | ..... | ..... | 35 88 | 9 75 | 45 63 |
| Public Bath, Thirty-seventh street, East river..... | ..... | ..... | 23 13 | 1 75 | 24 88 |
| Public Bath, Fifty-first street, North river..... | ..... | ..... | 28 62 | 4 63 | 33 25 |
| Public Bath, Fifty-first street, East river..... | ..... | ..... | 26 24 | 10 12 | 36 36 |
| Public Bath, One Hundred and Twelfth street, East river..... | ..... | ..... | 27 75 | 4 87 | 32 62 |
| Public Bath, One Hundred and Thirty-eighth street, East river ..... | ..... | ..... | ..... | 56 96 | 56 96 |
| Traveling expenses..... | ..... | ..... | ..... | \$126 58 | \$126 58 |
| Gas examinations | \$385 50 | \$376 50 | \$386 50 | 383 00 | 1,531 50 |
| Lighting public markets (pay-rolls)..... | 776 00 | 779 50 | 785 50 | 857 00 | 3,198 00 |
| Cleaning photometrical rooms (pay-rolls) | 15 00 | 15 00 | 15 00 | 15 00 | 60 00 |
| Rubber hose, etc..... | 27 75 | ..... | ..... | 11 75 | 39 50 |
| New lamp-posts..... | 787 50 | 882 43 | 574 86 | 3,713 47 | 5,958 26 |
| New lamp-posts, Twenty-third and Twenty-fourth Wards ..... | ..... | 630 00 | 622 66 | 1,234 53 | 2,487 19 |
| New street-lamps | 531 00 | 1,841 26 | 1,586 00 | 5,286 25 | 9,244 51 |
| New street-lamps, Twenty-third and Twenty-fourth Wards ..... | ..... | 446 25 | ..... | 427 00 | 873 25 |
| New Boulevard-lamps..... | 600 00 | 2,194 25 | 1,247 50 | 5,203 50 | 9,245 25 |
| New cross-heads..... | ..... | 204 00 | 325 00 | 325 00 | 854 00 |
| New lamp-irons..... | 416 00 | ..... | 245 00 | 373 00 | 1,034 00 |
| New lamp-brackets..... | ..... | ..... | ..... | 312 00 | 312 00 |
| New street-signs | 56 25 | 375 00 | ..... | 562 50 | 993 75 |
| New street signs, Twenty-third and Twenty-fourth Wards ..... | ..... | ..... | 187 50 | ..... | 187 50 |
| Photometrical apparatus..... | 354 00 | ..... | 42 53 | ..... | 396 53 |
| Supplies for photometrical rooms ..... | ..... | 54 75 | ..... | 87 34 | 142 09 |
| Lettering Boulevard globes..... | ..... | ..... | 119 10 | ..... | 119 10 |
| Iron wedges..... | ..... | ..... | ..... | 20 44 | 20 44 |
| Cartages..... | ..... | 100 00 | 162 50 | 97 50 | 360 00 |
| Gas governors..... | ..... | ..... | ..... | 425 00 | 425 00 |
| Painting lamp-posts..... | ..... | ..... | ..... | 684 00 | 684 00 |
| Rent of photometrical rooms, Grand street..... | 150 00 | 150 00 | 150 00 | 150 00 | 600 00 |
| Rent of photometrical rooms, Seventy-ninth street..... | 90 00 | 90 00 | 90 00 | 90 00 | 360 00 |
| Fitting up new lamps..... | 184 00 | 268 00 | 1,390 00 | 1,988 00 | 3,830 00 |
| Fitting up new lamps, Twenty-third and Twenty-fourth Wards | 120 00 | 424 00 | 448 00 | 1,054 00 | 2,056 00 |
| Resetting and repairing lamp-posts..... | 734 00 | 2,295 00 | 1,461 00 | 2,144 50 | 6,634 50 |
| Resetting and repairing lamp-posts, Twenty-third and Twenty-fourth Wards..... | 95 50 | 538 00 | 484 00 | 942 50 | 2,060 00 |
| Lighting public lamps..... | 50,136 60 | 75,771 40 | 76,696 26 | 78,395 22 | 280,999 48 |
| Lighting public lamps, Twenty-third and Twenty-fourth Wards | 23,540 85 | 35,068 00 | 34,649 97 | 35,278 72 | 128,537 54 |
| Lighting electric-lamps..... | 8,410 50 | 43,854 23 | 29,356 34 | 46,056 65 | 127,677 72 |
| Lighting naphtha-lamps..... | 499 73 | 730 00 | 690 00 | 706 69 | 2,626 42 |
| Inspectors of Lamps, etc. (pay-rolls)..... | \$99,107 68 | \$176,338 56 | \$158,302 38 | \$198,386 51 | \$632,135 13 |
| Totals | \$100,732 63 | \$177,880 18 | \$159,677 31 | \$199,808 14 | \$638,098 29 |

RECAPITULATION.

| | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|
| Gas to public offices, etc..... | \$11,197 50 | \$9,250 99 | \$6,587 11 | \$11,425 37 | \$38,460 97 |
| Supplies to public lamps, etc | 4,129 00 | 7,062 69 | 5,729 54 | 18,723 33 | 35,704 56 |
| Supplies to public lamps, etc., Twenty-third and Twenty-fourth Wards ..... | ..... | 1,076 25 | 810 16 | 1,661 53 | 3,547 94 |
| Fitting up new lamps..... | 184 00 | 268 00 | 1,390 00 | 1,988 00 | 3,830 00 |
| Fitting up new lamps, Twenty-third and Twenty-fourth Wards | 120 00 | 424 00 | 448 00 | 1,054 00 | 2,056 00 |
| Resetting and repairing lamp-posts | 734 00 | 2,295 00 | 1,461 00 | 2,144 50 | 6,634 50 |
| Resetting and repairing lamp-posts, Twenty-third and Twenty-fourth Wards..... | 95 50 | 538 00 | 484 00 | 942 50 | 2,060 00 |
| Lighting public lamps | 50,136 60 | 75,771 40 | 76,696 26 | 78,395 22 | 280,999 48 |
| Lighting public lamps, Twenty-third and Twenty-fourth Wards | 23,540 85 | 35,068 00 | 34,649 97 | 35,278 72 | 128,537 54 |
| Lighting electric-lamps..... | 8,410 50 | 43,854 23 | 29,356 34 | 46,056 65 | 127,677 72 |
| Lighting naphtha lamps..... | 499 73 | 730 00 | 690 00 | 706 69 | 2,626 42 |
| Inspectors of lamps, etc. (pay-rolls)..... | \$99,107 68 | \$176,338 56 | \$158,302 38 | \$198,386 51 | \$632,135 13 |
| Totals | \$100,732 63 | \$177,880 18 | \$159,677 31 | \$199,808 14 | \$638,098 29 |

EXHIBIT "B."

Summary of the Appropriation for "Lamps and Gas and Electric Lighting," for 1889, showing the Amounts Expended during each of the Quarters of the Year, with the Balance standing to the Credit of the Appropriation.

| | |
|--|--------------|
| Amount appropriated for "Lamps and Gas and Electric Lighting," 1889..... | \$700,000 00 |
| Vouchers drawn in first quarter ending March 31..... | \$99,107 68 |
| Vouchers drawn in second quarter ending June 30..... | 176,338 56 |
| Vouchers drawn in third quarter ending September 30..... | 158,302 38 |
| Vouchers drawn in fourth quarter ending December 31..... | 198,386 51 |
| Total amount of vouchers drawn during the year..... | 632,135 13 |
| Balance | \$67,864 87 |

LIABILITIES.

| | |
|---|-------------|
| Consolidated Gas Co., lighting public lamps, month of December.... | \$27,320 18 |
| Equitable Gas-light Co., | 3,276 23 |
| New York Mutual Gas-light Co., | 646 80 |
| Central Gas-light Co., | 6,207 93 |
| Northern Gas-light Co., | 5,410 11 |
| Yonkers Gas-light Co., | 1,530 04 |
| New York and New Jersey Globe Gas-light Co., lighting public lamps, month of December | 241 50 |
| United States Illuminating Co., lighting public lamps, month of December | 2,486 02 |
| Brush Electric Illuminating Co., | 1,595 95 |
| East River Electric Light Co., | 582 75 |
| Mount Morris Electric Light Co., | 380 25 |
| Harlem Lighting Co., | 785 95 |
| North New York Lighting Co., lighting public lamps, May 1 to December 31..... | 2,212 55 |
| John Mills, electric-light examinations..... | 500 00 |
| J. B. & J. M. Cornell, 600 lamp irons..... | 204 00 |
| Cassidy & Son, cocks and tubes..... | 180 00 |
| Matthews' Decorative Glass Co., 2,000 glass street signs..... | 375 00 |
| H. Birdsall, cartages..... | 125 00 |
| E. P. Gleason Manufacturing Co., 350 street lamps..... | 854 00 |
| B. Goetz Manufacturing Co., 250 street lamps..... | 610 00 |
| J. L. Mott Iron Works, 15 lamp-post butts..... | 84 00 |

| | |
|--|-------------|
| Bartlett Street Lamp Manufacturing Co., 175 Boulevard lamps..... | \$875 00 |
| Wellington Manufacturing Co., 350 street lamps..... | 875 00 |
| Department City Works, Brooklyn, 300 street lamps..... | 828 00 |
| H. T. Wakeman, 200 street lamps..... | 500 00 |
| Birdsall's Express, cartages..... | 126 00 |
| Consolidated Gas Co., cartages..... | 269 75 |
| James R. Floyd & Sons, 500 crossheads..... | 340 00 |
| Department City Works, Brooklyn, 150 street lamps..... | 450 00 |
| Wellington Manufacturing Co., 300 street lamps..... | 750 00 |
| John Fox, 100 lamp-posts..... | 779 54 |
| George Stancliff, repairing and reglazing public lamps..... | 116 25 |
| Bartlett Street Lamp Manufacturing Co., 300 Boulevard lamp tops and 200 reflectors..... | 750 00 |
| Wellington Manufacturing Co., 250 street lamps..... | 625 00 |
| John Fox, 75 lamp-posts..... | 590 62 |
| Bartlett Street Lamp Manufacturing Co., 375 Boulevard globes..... | 750 00 |
| | \$64,323 42 |
| Balance..... | \$3,541 45 |

EXHIBIT "C."

Summary of the Appropriation for "Lamps and Gas and Electric Lighting—Salaries" for 1889, showing the Amounts Expended during each of the Quarters of the Year, with the Balance standing to the Credit of the Appropriation.

| | |
|---|------------|
| Amount appropriated for "Lamps and Gas and Electric Lighting—Salaries," 1889 .. | \$6,500 00 |
| Vouchers drawn in first quarter ending March 31 | \$1,624 95 |
| Vouchers drawn in second quarter ending June 30 | 1,541 62 |
| Vouchers drawn in third quarter ending September 30 | 1,374 96 |
| Vouchers drawn in fourth quarter ending December 31 | 1,421 63 |
| Total amount of vouchers drawn during the year | 5,963 16 |
| Surplus balance | \$536 84 |

EXHIBIT "D."

Summary of the "Lamp Account," showing the Number of New Lamps Lighted, Old Lamps Relighted and Lamps Discontinued by each Gas and Electric-light Company during the Quarter ending December 31, 1889; also a Statement for the Year.

| | | | |
|--|-------|-------|--------|
| CONSOLIDATED GAS COMPANY, BRANCH 1. | | | |
| Number of lamps lighted September 30, 1889..... | 2,719 | | |
| Number of new lamps lighted during the quarter..... | 3 | | |
| Number of old lamps relighted during the quarter..... | 4 | | |
| Number of old lamps relighted on account of electric-lights..... | 1,416 | | |
| | | 4,142 | |
| Less lamps discontinued during the quarter..... | 3 | | |
| Less lamps discontinued on account of electric-lights..... | 389 | | |
| | | 392 | |
| Number of lamps lighted December 31, 1889..... | | | 3,750 |
| CONSOLIDATED GAS COMPANY, BRANCH 2. | | | |
| Number of lamps lighted September 30, 1889..... | 1,467 | | |
| Number of new lamps lighted during the quarter..... | 1 | | |
| Number of old lamps relighted during the quarter..... | 9 | | |
| Number of old lamps relighted on account of electric-lights..... | 1,075 | | |
| | | 2,552 | |
| Less lamps discontinued during the quarter..... | 2 | | |
| Less lamps discontinued on account of electric-lights..... | 179 | | |
| | | 181 | |
| Number of lamps lighted December 31, 1889..... | | | 2,371 |
| CONSOLIDATED GAS COMPANY, BRANCH 3. | | | |
| Number of lamps lighted September 30, 1889..... | 2,159 | | |
| Number of new lamps lighted during the quarter..... | 9 | | |
| Number of old lamps relighted during the quarter..... | 3 | | |
| Number of old lamps relighted on account of electric-lights..... | 518 | | |
| | | 2,689 | |
| Less lamps discontinued during the quarter..... | 1 | | |
| Less lamps discontinued on account of electric-lights..... | 168 | | |
| | | 169 | |
| Number of lamps lighted December 31, 1889..... | | | 2,520 |
| CONSOLIDATED GAS COMPANY, BRANCH 4. | | | |
| Number of lamps lighted September 30, 1889..... | 2,967 | | |
| Number of new lamps lighted during the quarter..... | 44 | | |
| Number of old lamps relighted during the quarter..... | 4 | | |
| Number of old lamps relighted on account of electric-lights..... | 829 | | |
| | | 3,844 | |
| Less lamps discontinued during the quarter..... | 6 | | |
| Less lamps discontinued on account of electric-lights..... | 235 | | |
| | | 241 | |
| Number of lamps lighted December 31, 1889..... | | | 3,603 |
| CONSOLIDATED GAS COMPANY, BRANCH 6. | | | |
| Number of lamps lighted September 30, 1889..... | 5,865 | | |
| Number of new lamps lighted during the quarter..... | 57 | | |
| Number of old lamps relighted during the quarter..... | 11 | | |
| Number of old lamps relighted on account of electric-lights..... | 215 | | |
| | | 6,148 | |
| Less lamps discontinued during the quarter..... | 5 | | |
| Less lamps discontinued on account of electric-lights..... | 131 | | |
| | | 136 | |
| Number of lamps lighted December 31, 1889..... | | | 6,012 |
| Total number of lamps lighted by Consolidated Gas Com- pany, December 31, 1889..... | | | 18,256 |
| NEW YORK MUTUAL GAS-LIGHT COMPANY. | | | |
| Number of lamps lighted September 30, 1889..... | 171 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| Number of old lamps relighted on account of electric-lights..... | 943 | | |
| | | 1,114 | |
| Less lamps discontinued during the quarter..... | 0 | | |
| Less lamps discontinued on account of electric-lights..... | 411 | | |
| | | 411 | |
| Number of lamps lighted December 31, 1889..... | | | 703 |

EQUITABLE GAS-LIGHT COMPANY.

| | | | |
|--|-------|-------|-------|
| Number of lamps lighted September 30, 1889..... | 2,938 | | |
| Number of new lamps lighted during the quarter..... | 4 | | |
| Number of old lamps relighted during the quarter..... | 10 | | |
| Number of old lamps relighted on account of electric-lights..... | 1,223 | | |
| | | 4,175 | |
| Less lamps discontinued during the quarter..... | 1 | | |
| Less lamps discontinued on account of electric-lights..... | 485 | | |
| | | 486 | |
| Number of lamps lighted December 31, 1889..... | | | 3,689 |

CENTRAL GAS-LIGHT COMPANY.

| | | | |
|--|-------|-------|-------|
| Number of lamps lighted September 30, 1889..... | 2,493 | | |
| Number of new lamps lighted during the quarter..... | 39 | | |
| Number of old lamps relighted during the quarter..... | 12 | | |
| Number of old lamps relighted on account of electric-lights..... | 109 | | |
| | | 2,653 | |
| Less lamps discontinued during the quarter..... | 6 | | |
| Number of lamps lighted December 31, 1889..... | | | 2,647 |

NORTHERN GAS-LIGHT COMPANY.

| | | | |
|---|-------|-------|-------|
| Number of lamps lighted September 30, 1889..... | 2,116 | | |
| Number of new lamps lighted during the quarter..... | 62 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 2,178 | |
| Less lamps discontinued during the quarter..... | 1 | | |
| Number of lamps lighted December 31, 1889..... | | | 2,177 |

YONKERS GAS-LIGHT COMPANY.

| | | | |
|--|-----|-----|--------|
| Number of lamps lighted September 30, 1889..... | 508 | | |
| Number of new lamps lighted during the quarter..... | 49 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 557 | |
| Less lamps discontinued during the quarter..... | 0 | | |
| Number of lamps lighted December 31, 1889..... | | | 557 |
| Total number of gas-lamps lighted December 31, 1889..... | | | 28,029 |

NAPHTHA-LAMPS.

NEW YORK AND NEW JERSEY GLOBE GAS-LIGHT COMPANY.

| | | | |
|--|-----|-----|-----|
| Number of lamps lighted September 30, 1889..... | 120 | | |
| Number of new lamps lighted during the quarter..... | 6 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 126 | |
| Less lamps discontinued during the quarter..... | 0 | | |
| Number of lamps lighted December 31, 1889..... | | | 126 |
| Total number of naphtha-lamps lighted December 31, 1889..... | | | 126 |

ELECTRIC-LAMPS.

BRUSH ELECTRIC ILLUMINATING COMPANY.

| | | | |
|---|-----|-----|---|
| Number of lamps lighted September 30, 1889..... | 366 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 366 | |
| Less lamps discontinued during the quarter..... | 366 | | |
| Number of lamps lighted December 31, 1889..... | | | 0 |

UNITED STATES ILLUMINATING COMPANY.

| | | | |
|---|-----|-----|---|
| Number of lamps lighted September 30, 1889..... | 636 | | |
| Number of new lamps lighted during the quarter..... | 1 | | |
| Number of old lamps relighted during the quarter..... | 1 | | |
| | | 638 | |
| Less lamps discontinued during the quarter..... | 636 | | |
| Number of lamps lighted December 31, 1889..... | | | 2 |

HARLEM LIGHTING COMPANY.

| | | | |
|---|----|----|----|
| Number of lamps lighted September 30, 1889..... | 86 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 86 | |
| Less lamps discontinued during the quarter..... | 0 | | |
| Number of lamps lighted December 31, 1889..... | | | 86 |

MOUNT MORRIS ELECTRIC-LIGHT COMPANY.

| | | | |
|---|----|----|----|
| Number of lamps lighted September 30, 1889..... | 57 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 57 | |
| Less lamps discontinued during the quarter..... | 0 | | |
| Number of lamps lighted December 31, 1889..... | | | 57 |

NORTH NEW YORK LIGHTING COMPANY.

| | | | |
|---|----|----|---|
| Number of lamps lighted September 30, 1889..... | 26 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 26 | |
| Less lamps discontinued during the quarter..... | 26 | | |
| Number of lamps lighted December 31, 1889..... | | | 0 |

EAST RIVER ELECTRIC-LIGHT COMPANY.

| | | | |
|---|-----|-----|-----|
| Number of lamps lighted September 30, 1889..... | 169 | | |
| Number of new lamps lighted during the quarter..... | 0 | | |
| Number of old lamps relighted during the quarter..... | 0 | | |
| | | 169 | |
| Less lamps discontinued during the quarter..... | 169 | | |
| Number of lamps lighted December 31, 1889..... | | | 0 |
| Total number of electric-lamps lighted December 31, 1889..... | | | 145 |

| RECAPITULATION FOR QUARTER. | | | CENTRAL GAS-LIGHT COMPANY. | | |
|---|--------|--------|--|--------|--------|
| Number of gas-lamps lighted September 30, 1889..... | 23,403 | | Number of lamps lighted December 31, 1888..... | 2,395 | |
| Number of naphtha-lamps lighted September 30, 1889..... | 120 | | Number of new lamps lighted during the year..... | 149 | |
| Number of electric-lamps lighted September 30, 1889..... | 1,340 | 24,863 | Number of old lamps relighted during the year..... | 46 | |
| Number of new gas-lamps lighted during the quarter..... | 268 | | Number of old lamps relighted on account of electric-lights..... | 109 | 2,699 |
| Number of new naphtha-lamps lighted during the quarter..... | 6 | | Less lamps discontinued during the year..... | 52 | 52 |
| Number of new electric-lamps lighted during the quarter..... | 1 | 275 | Number of lamps lighted December 31, 1889..... | | 2,647 |
| Number of gas-lamps relighted during the quarter..... | 53 | | NORTHERN GAS-LIGHT COMPANY. | | |
| Number of gas-lamps relighted during the quarter on account of electric-lights..... | 6,328 | | Number of lamps lighted December 31, 1888..... | 2,101 | |
| Number of naphtha-lamps relighted during the quarter..... | 0 | | Number of new lamps lighted during the year..... | 77 | |
| Number of electric-lamps relighted during the quarter..... | 1 | 6,382 | Number of old lamps relighted during the year..... | 0 | 2,178 |
| Less gas-lamps discontinued during the quarter..... | 25 | 31,520 | Less lamps discontinued during the year..... | 1 | 1 |
| Less gas-lamps discontinued during the quarter on account of electric-lights..... | 1,998 | | Number of lamps lighted December 31, 1889..... | | 2,177 |
| Less naphtha-lamps discontinued during the quarter..... | 0 | | YONKERS GAS-LIGHT COMPANY. | | |
| Less electric-lamps discontinued during the quarter..... | 1,197 | 3,220 | Number of lamps lighted December 31, 1888..... | 449 | |
| Total number of lamps lighted December 30, 1889..... | | 28,300 | Number of new lamps lighted during the year..... | 108 | |
| | | | Number of old lamps relighted during the year..... | 0 | 557 |
| | | | Less lamps discontinued during the year..... | 0 | 0 |
| | | | Number of lamps lighted December 31, 1889..... | | 557 |
| | | | Total number of gas-lamps lighted December 31, 1889..... | | 28,029 |
| Summary of the "Lamp Account" for the Year 1889. | | | NAPHTHA LAMPS. | | |
| CONSOLIDATED GAS COMPANY, BRANCH 1. | | | NEW YORK AND NEW JERSEY GLOBE GAS-LIGHT COMPANY. | | |
| Number of lamps lighted December 31, 1888..... | 2,971 | | Number of lamps lighted December 31, 1888..... | 120 | |
| Number of new lamps lighted during the year..... | 6 | | Number of new lamps lighted during the year..... | 6 | |
| Number of old lamps relighted during the year..... | 32 | | Number of old lamps relighted during the year..... | 0 | 126 |
| Number of old lamps relighted on account of electric-lights..... | 1,433 | 4,442 | Less lamps discontinued during the year..... | 0 | 0 |
| Less lamps discontinued during the year..... | 62 | | Number of lamps lighted December 31, 1889..... | | 126 |
| Less lamps discontinued on account of electric-lights..... | 407 | | | | |
| Less lamps transferred to Equitable Gas-light Co..... | 223 | 692 | ELECTRIC LAMPS. | | |
| Number of lamps lighted December 31, 1889..... | | 3,750 | BRUSH ELECTRIC ILLUMINATING COMPANY. | | |
| CONSOLIDATED GAS COMPANY, BRANCH 2. | | | Number of lamps lighted December 31, 1888..... | 367 | |
| Number of lamps lighted December 31, 1888..... | 1,631 | | Number of new lamps lighted during the year..... | 0 | |
| Number of new lamps lighted during the year..... | 8 | | Number of old lamps relighted during the year..... | 123 | 490 |
| Number of old lamps relighted during the year..... | 13 | | Less lamps discontinued during the year..... | 490 | 490 |
| Number of old lamps relighted on account of electric-lights..... | 1,228 | 2,880 | Number of lamps lighted December 31, 1889..... | | 0 |
| Less lamps discontinued during the year..... | 7 | | UNITED STATES ILLUMINATING COMPANY. | | |
| Less lamps discontinued on account of electric-lights..... | 331 | | Number of lamps lighted December 31, 1888..... | 408 | |
| Less lamps transferred to Equitable Gas-light Co..... | 171 | 509 | Number of new lamps lighted during the year..... | 18 | |
| Number of lamps lighted December 31, 1889..... | | 2,371 | Number of old lamps relighted during the year..... | 26 | |
| CONSOLIDATED GAS COMPANY, BRANCH 3. | | | Number of lamps transferred from East River Electric light Company..... | 222 | 674 |
| Number of lamps lighted December 31, 1888..... | 2,456 | | Less lamps discontinued during the year..... | 644 | 672 |
| Number of new lamps lighted during the year..... | 10 | | Less lamps transferred to Mount Morris Electric-light Company..... | 28 | |
| Number of old lamps relighted during the year..... | 7 | | Number of lamps lighted December 31, 1889..... | | 2 |
| Number of old lamps relighted on account of electric-lights..... | 598 | 3,071 | HARLEM LIGHTING COMPANY. | | |
| Less lamps discontinued during the year..... | 11 | | Number of lamps lighted December 31, 1888..... | 101 | |
| Less lamps discontinued on account of electric-lights..... | 241 | | Number of new lamps lighted during the year..... | 0 | |
| Less lamps transferred to Equitable Gas-light Co..... | 299 | 551 | Number of old lamps relighted during the year..... | 1 | 102 |
| Number of lamps lighted December 31, 1889..... | | 2,520 | Less lamps discontinued during the year..... | 16 | 86 |
| CONSOLIDATED GAS COMPANY, BRANCH 4. | | | Number of lamps lighted December 31, 1889..... | | |
| Number of lamps lighted December 31, 1888..... | 2,985 | | MOUNT MORRIS ELECTRIC-LIGHT COMPANY. | | |
| Number of new lamps lighted during the year..... | 251 | | Number of lamps lighted December 31, 1888..... | 18 | |
| Number of old lamps relighted during the year..... | 32 | | Number of new lamps lighted during the year..... | 0 | |
| Number of old lamps relighted on account of electric-lights..... | 1,143 | 4,411 | Number of old lamps relighted during the year..... | 11 | |
| Less lamps discontinued during the year..... | 33 | | Number of lamps transferred from United States Illuminating Company..... | 28 | 57 |
| Less lamps discontinued on account of electric-lights..... | 494 | | Less lamps discontinued during the year..... | 0 | 0 |
| Less lamps transferred to Equitable Gas-light Co..... | 281 | 808 | Number of lamps lighted December 31, 1889..... | | 57 |
| Number of lamps lighted December 31, 1889..... | | 3,603 | *NORTH NEW YORK LIGHTING COMPANY. | | |
| CONSOLIDATED GAS COMPANY, BRANCH 6. | | | Number of lamps lighted December 31, 1888..... | 26 | |
| Number of lamps lighted December 31, 1888..... | 5,677 | | Number of new lamps lighted during the year..... | 0 | |
| Number of new lamps lighted during the year..... | 243 | | Number of old lamps relighted during the year..... | 0 | 26 |
| Number of old lamps relighted during the year..... | 111 | | Less lamps discontinued during the year..... | 26 | 26 |
| Number of old lamps relighted on account of electric lights..... | 215 | 6,246 | Number of lamps lighted December 31, 1889..... | | 0 |
| Less lamps discontinued during the year..... | 54 | | EAST RIVER ELECTRIC-LIGHT COMPANY. | | |
| Less lamps discontinued on account of electric lights..... | 180 | 234 | Number of lamps lighted December 31, 1888..... | 408 | |
| Number of lamps lighted December 31, 1889..... | | 6,012 | Number of new lamps lighted during the year..... | 1 | |
| Total number of lamps lighted by Consolidated Gas Company, December 31, 1889..... | | 18,256 | Number of old lamps relighted during the year..... | 8 | 417 |
| NEW YORK MUTUAL GAS-LIGHT COMPANY. | | | Less lamps discontinued during the year..... | 195 | 417 |
| Number of lamps lighted December 31, 1888..... | 145 | | Less lamps transferred to United States Illuminating Company..... | 222 | |
| Number of new lamps lighted during the year..... | 0 | | Number of lamps lighted December 31, 1889..... | | 0 |
| Number of old lamps relighted during the year..... | 3 | | Total number of electric-lamps lighted December 31, 1889..... | | 145 |
| Number of old lamps relighted on account of electric lights..... | 1,078 | 1,226 | RECAPITULATION FOR YEAR. | | |
| Less lamps discontinued during the year..... | 1 | | Number of gas-lamps lighted December 31, 1888..... | 22,732 | |
| Less lamps discontinued on account of electric lights..... | 518 | | Number of naphtha-lamps lighted December 31, 1888..... | 120 | |
| Less lamps transferred to Equitable Gas-light Company..... | 4 | 523 | Number of electric-lamps lighted December 31, 1888..... | 1,328 | 24,180 |
| Number of lamps lighted December 31, 1889..... | | 703 | Number of new gas-lamps lighted during the year..... | 861 | |
| EQUITABLE GAS-LIGHT COMPANY. | | | Number of new naphtha-lamps lighted during the year..... | 6 | |
| Number of lamps lighted December 31, 1888..... | 1,922 | | Number of new electric-lamps lighted during the year..... | 19 | 886 |
| Number of new lamps lighted during the year..... | 9 | | | | |
| Number of old lamps relighted during the year..... | 42 | | | | |
| Number of old lamps relighted on account of electric lights..... | 1,317 | | | | |
| Number of lamps transferred from Consolidated Gas Co..... | 974 | | | | |
| Number of lamps transferred from Mutual Gas-light Co..... | 4 | 4,268 | | | |
| Less lamps discontinued during the year..... | 7 | | | | |
| Less lamps discontinued on account of electric-lights..... | 572 | 579 | | | |
| Number of lamps lighted December 31, 1889..... | | 3,689 | | | |

| | | | | | |
|--|--------|--|--|-------|--------|
| Number of gas-lamps relighted during the year..... | 286 | | Less gas-lamps discontinued during the year..... | 228 | |
| Number of gas-lamps relighted on account of electric-lights..... | 7,121 | | Less gas-lamps discontinued on account of electric-lights..... | 2,743 | |
| Number of naphtha-lamps relighted during the year..... | 0 | | Less naphtha-lamps discontinued during the year..... | 0 | |
| Number of electric-lamps relighted during the year..... | 169 | | Less electric-lamps discontinued during the year..... | 1,371 | |
| | 7,576 | | | 4,342 | |
| | 32,642 | | Total number of lamps lighted December 31, 1889..... | | 28,300 |

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, 1889, 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., BRANCH 1. | | | CONSOLIDATED GAS CO., BRANCH 2. | | | CONSOLIDATED GAS CO., BRANCH 3. | | | CONSOLIDATED GAS CO., BRANCH 4. | | | CONSOLIDATED GAS CO., BRANCH 6. | | | 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. | | |
| Week ending— | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. |
| October 5, 1889..... | 22.81 | 24.66 | 23.85 | 21.00 | 21.94 | 21.40 | 26.48 | 28.70 | 27.57 | 22.13 | 23.21 | 22.78 | 27.15 | 28.68 | 27.79 | 27.91 | 30.59 | 29.30 | 28.45 | 30.31 | 29.66 |
| " 12, "..... | 22.97 | 26.85 | 25.24 | 20.25 | 24.44 | 21.78 | 26.82 | 29.52 | 27.81 | 23.52 | 24.00 | 23.82 | 25.90 | 26.61 | 26.24 | 28.22 | 30.88 | 29.59 | 30.32 | 31.13 | 30.73 |
| " 19, "..... | 23.79 | 26.65 | 25.30 | 21.30 | 23.80 | 22.72 | 27.16 | 29.50 | 28.38 | 22.97 | 24.13 | 23.58 | 26.74 | 28.29 | 27.43 | 29.32 | 31.38 | 30.45 | 30.80 | 31.20 | 30.85 |
| " 26, "..... | 24.89 | 28.23 | 26.34 | 22.48 | 24.32 | 23.57 | 27.34 | 28.36 | 28.07 | 22.95 | 26.80 | 24.88 | 24.10 | 26.96 | 25.74 | 29.14 | 32.00 | 30.39 | 30.03 | 31.88 | 30.92 |
| November 2, 1889..... | 24.80 | 25.54 | 25.06 | 22.40 | 22.84 | 22.52 | 28.29 | 29.39 | 28.82 | 23.44 | 23.95 | 23.72 | 26.87 | 29.70 | 28.96 | 29.12 | 31.36 | 30.09 | 29.66 | 30.88 | 30.23 |
| " 9, "..... | 25.14 | 25.84 | 25.48 | 23.04 | 23.60 | 23.29 | 28.26 | 28.87 | 28.55 | 22.75 | 23.20 | 23.02 | 24.30 | 29.65 | 27.22 | 29.30 | 31.70 | 30.07 | 30.14 | 30.70 | 30.44 |
| " 16, "..... | 24.22 | 27.36 | 25.98 | 20.26 | 22.80 | 21.82 | 28.70 | 30.59 | 29.81 | 22.98 | 25.45 | 24.51 | 24.76 | 29.26 | 27.60 | 30.20 | 31.24 | 30.78 | 30.24 | 31.01 | 30.77 |
| " 23, "..... | 23.78 | 26.80 | 24.64 | 20.10 | 22.60 | 21.92 | 28.05 | 28.94 | 28.40 | 21.33 | 25.50 | 24.78 | 26.96 | 29.90 | 28.14 | 27.68 | 29.88 | 28.99 | 30.24 | 30.79 | 30.55 |
| " 30, "..... | 23.75 | 25.08 | 24.38 | 20.68 | 22.44 | 21.72 | 28.24 | 29.18 | 28.71 | 23.87 | 25.87 | 24.96 | 25.90 | 28.92 | 27.84 | 29.04 | 30.10 | 29.55 | 29.18 | 30.72 | 29.90 |
| December 7, "..... | 23.39 | 24.33 | 23.89 | 20.34 | 22.14 | 21.44 | 28.37 | 29.01 | 28.61 | 24.50 | 27.24 | 25.50 | 24.94 | 28.58 | 27.54 | 28.00 | 29.43 | 28.86 | 28.08 | 30.14 | 29.28 |
| " 14, "..... | 22.79 | 24.28 | 23.47 | 19.74 | 20.99 | 20.48 | 28.78 | 29.74 | 29.24 | 23.96 | 25.39 | 24.69 | 25.85 | 28.62 | 27.85 | 29.03 | 30.08 | 29.48 | 30.61 | 31.14 | 30.83 |
| " 21, "..... | 21.81 | 23.60 | 22.69 | 20.86 | 21.66 | 21.14 | 27.90 | 28.73 | 28.47 | 26.80 | 28.08 | 27.41 | 27.16 | 28.31 | 27.84 | 27.74 | 30.19 | 29.46 | 30.00 | 30.53 | 30.22 |
| " 28, "..... | 24.30 | 25.27 | 24.84 | 22.06 | 22.46 | 22.27 | 28.32 | 28.70 | 28.55 | 24.76 | 25.85 | 25.15 | 24.36 | 25.74 | 25.10 | 27.61 | 29.70 | 28.63 | 29.46 | 30.84 | 30.38 |
| For the Quarter..... | 21.81 | 28.23 | 24.70 | 19.74 | 24.44 | 22.00 | 26.48 | 30.59 | 28.54 | 22.13 | 27.24 | 24.52 | 24.10 | 29.90 | 27.33 | 27.61 | 32.00 | 29.66 | 28.08 | 31.88 | 30.37 |

Average for the Year.

| FOR WHAT TIME. | CONSOLIDATED GAS CO., BRANCH 1. | | | CONSOLIDATED GAS CO., BRANCH 2. | | | CONSOLIDATED GAS CO., BRANCH 3. | | | CONSOLIDATED GAS CO., BRANCH 4. | | | CONSOLIDATED GAS CO., BRANCH 6. | | | 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 of— | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. | Lowest. | Highest. | Average. |
| January..... | 22.94 | 29.64 | 25.40 | 19.05 | 20.48 | 19.86 | 27.06 | 30.02 | 28.49 | 21.22 | 24.13 | 22.99 | 23.58 | 27.91 | 25.68 | 26.70 | 32.76 | 30.56 | 29.69 | 34.32 | 32.23 |
| February..... | 20.38 | 27.05 | 24.44 | 18.48 | 20.38 | 19.45 | 27.54 | 30.24 | 28.75 | 22.61 | 24.63 | 23.48 | 25.30 | 27.91 | 26.66 | 27.24 | 31.79 | 29.21 | 29.89 | 33.08 | 32.01 |
| March..... | 20.60 | 27.40 | 23.44 | 19.68 | 22.87 | 20.87 | 25.61 | 28.76 | 27.26 | 21.87 | 25.56 | 23.56 | 26.38 | 29.60 | 27.56 | 28.10 | 31.76 | 30.07 | 28.58 | 33.84 | 31.47 |
| April..... | 22.87 | 25.16 | 23.83 | 20.59 | 22.85 | 21.54 | 26.98 | 30.28 | 28.42 | 21.93 | 24.90 | 23.27 | 27.23 | 30.18 | 28.13 | 29.19 | 32.57 | 31.52 | 28.46 | 32.38 | 31.35 |
| May..... | 22.04 | 26.42 | 24.45 | 20.10 | 23.97 | 22.09 | 28.04 | 31.18 | 29.20 | 22.80 | 24.86 | 23.71 | 27.44 | 30.06 | 28.70 | 27.00 | 34.02 | 31.60 | 27.02 | 32.08 | 30.52 |
| June..... | 21.46 | 25.41 | 23.99 | 18.76 | 23.09 | 20.88 | 27.78 | 30.70 | 29.07 | 21.75 | 24.36 | 23.32 | 26.26 | 29.59 | 27.90 | 28.22 | 32.41 | 30.83 | 28.58 | 32.45 | 31.14 |
| July..... | 22.05 | 27.93 | 24.49 | 19.83 | 23.87 | 21.31 | 25.09 | 30.22 | 27.73 | 19.75 | 24.02 | 22.23 | 27.09 | 30.64 | 28.82 | 27.75 | 31.86 | 30.05 | 27.09 | 32.12 | 30.60 |
| August..... | 20.77 | 26.85 | 24.19 | 18.89 | 22.62 | 20.72 | 25.27 | 30.34 | 27.58 | 21.95 | 25.07 | 23.57 | 24.37 | 28.96 | 27.26 | 29.23 | 31.60 | 30.51 | 26.56 | 31.06 | 28.95 |
| September..... | 22.87 | 26.34 | 24.10 | 19.62 | 22.55 | 20.84 | 26.00 | 29.83 | 27.91 | 22.08 | 25.48 | 24.03 | 26.22 | 28.45 | 27.19 | 25.80 | 30.84 | 28.89 | 27.40 | 30.89 | 29.59 |
| October..... | 22.97 | 28.23 | 25.18 | 20.25 | 24.44 | 22.37 | 26.48 | 29.52 | 27.96 | 22.13 | 26.80 | 23.76 | 24.10 | 28.68 | 26.80 | 27.91 | 32.00 | 29.93 | 28.45 | 31.88 | 30.54 |
| November..... | 23.75 | 27.36 | 25.11 | 20.10 | 23.60 | 22.25 | 28.05 | 30.59 | 28.86 | 22.75 | 25.87 | 24.20 | 24.30 | 29.90 | 27.95 | 27.68 | 31.70 | 29.90 | 29.18 | 31.01 | 30.38 |
| December..... | 21.81 | 25.27 | 23.72 | 19.74 | 22.46 | 21.33 | 27.90 | 29.74 | 28.72 | 23.96 | 28.05 | 25.69 | 24.36 | 28.62 | 27.08 | 27.61 | 30.19 | 29.11 | 28.08 | 31.14 | 30.18 |
| Totals for the Year..... | 20.38 | 29.64 | 24.35 | 18.48 | 24.44 | 21.13 | 25.69 | 31.18 | 30.00 | 19.75 | 28.08 | 23.65 | 23.58 | 30.64 | 27.48 | 25.80 | 32.76 | 30.19 | 26.56 | 34.32 | 30.75 |
| Distance from gas-works..... | 1.84 Miles..... | | | 1.68 Miles..... | | | 3.44 Miles..... | | | 3.22 Miles..... | | | 1.86 Miles..... | | | 1.61 Miles..... | | | 2.78 Miles..... | | |
| Testing burner..... | Bray's Slit Union No. 7.... | | | Empire, 5 feet..... | | | Bray's Slit Union No. 7.... | | | Bray's Slit Union No. 6.... | | | Bray's Slit Union No. 6.... | | | Bray's Slit Union No. 7.... | | | Bray's Slit Union No. 7.... | | |
| Gas..... | Water-gas (Tessie du Motay) | | | Coal-gas with water-gas... | | | Water-gas (Tessie du Motay) | | | Coal and naphtha..... | | | Water-gas (Tessie du Motay) | | | Water-gas..... | | | Water-gas (Jerzmonowski process). | | |

EXHIBIT "F."

Time Table for Lighting and Extinguishing the Public Lamps for the Year from May 1, 1889, to April 30, 1890.

| MONTHS. | BEGIN TO LIGHT. | BEGIN TO EXTINGUISH. | MONTHS. | BEGIN TO LIGHT. | BEGIN TO EXTINGUISH. | MONTHS. | BEGIN TO LIGHT. | BEGIN TO EXTINGUISH. |
|-------------|-----------------|----------------------|---------------|-----------------|----------------------|--------------|-----------------|----------------------|
| May 1, 1889 | H. M. 6.45 | H. M. 4.00 | Sept. 3, 1889 | H. M. 6.15 | H. M. 4.30 | Jan. 1, 1890 | H. M. 4.30 | H. M. 6.30 |
| " 7, " | 6.55 | 3.40 | " 10, " | 6.05 | 4.40 | " 8, " | 4.40 | 6.30 |
| " 14, " | 7.00 | 3.30 | " 17, " | 5.55 | 4.50 | " 15, " | 4.50 | 6.25 |
| " 21, " | 7.10 | 3.15 | " 24, " | 5.40 | 5.00 | " 22, " | 5.00 | 6.25 |
| " 28, " | 7.15 | 3.15 | Oct. 1, " | 5.30 | 5.00 | " 29, " | 5.05 | 6.15 |
| June 4, " | 7.25 | 3.15 | " 8, " | 5.20 | 5.10 | Feb. 5, " | 5.10 | 6.10 |
| " 11, " | 7.25 | 3.15 | " 15, " | 5.10 | 5.20 | " 12, " | 5.20 | 5.55 |
| " 18, " | 7.30 | 3.15 | " 22, " | 5.00 | 5.30 | " 19, " | 5.30 | 5.55 |
| " 25, " | 7.30 | 3.15 | " 29, " | 4.45 | 5.35 | " 26, " | 5.30 | 5.45 |
| July 2, " | 7.30 | 3.15 | Nov. 5, " | 4.40 | 5.45 | Mar. 5, " | 5.40 | 5.35 |
| " 9, " | 7.30 | 3.15 | " 12, " | 4.30 | 6.00 | " 12, " | 5.50 | 5.20 |
| " 16, " | 7.20 | 3.15 | " 19, " | 4.25 | 6.00 | " 19, " | 6.00 | 5.10 |
| " 23, " | 7.20 | 3.15 | " 26, " | 4.20 | 6.10 | Apr. 2, " | 6.15 | 4.40 |
| " 30, " | 7.10 | 3.30 | Dec. 3, " | 4.20 | 6.15 | " 9, " | 6.25 | 4.30 |
| Aug. 6, " | 7.10 | 3.45 | " 10, " | 4.20 | 6.20 | " 16, " | 6.30 | 4.20 |
| " 13, " | 6.55 | 4.00 | " 17, " | 4.20 | 6.20 | " 23, " | 6.40 | 4.10 |
| " 20, " | 6.45 | 4.10 | " 24, " | 4.20 | 6.25 | " 30, " | 6.45 | 4.00 |
| " 27, " | 6.30 | 4.20 | | | | | | |

DEPARTMENT OF PUBLIC WORKS—BUREAU OF LAMPS AND GAS, NEW YORK, May 24, 1889.

SIR—The above table will show the time for lighting and extinguishing the public lamps during the year from May 1, 1889, to April 30, 1890. All the lamps to be lighted within one hour from the time of beginning.

THOMAS F. GILROY, Commissioner of Public Works.

S. McCORMICK, Superintendent of Lamps and Gas.

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 oftener 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 cleaned glass a greater brilliancy is obtained from the flame. In the winter season the snow must be brushed from the lanterns after each snowfall. 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.

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 the use of a ladder.

IX.—In case a lamp-post should be found broken or taken down, or requiring repairs, or an excavation should be made near the same which would endanger its safety, 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 cause 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 nor 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. 1953 of the New York City Consolidation Act of 1882. If any person shall willfully break, take down or carry away any glass lamp hung or fixed in any of the streets of the City of New York, or extinguish the lights therein, or by aiding or abetting in the same, shall be subject to a fine of twenty-five dollars, and in default of payment of such fine the offender shall be committed to the penitentiary for the term of two months.

Document "K."

REPORT OF THE SUPERINTENDENT OF REPAIRS AND SUPPLIES.

CITY OF NEW YORK—DEPARTMENT OF PUBLIC WORKS,
BUREAU OF REPAIRS AND SUPPLIES,
SUPERINTENDENT'S OFFICE, NO. 31 CHAMBERS STREET, ROOM 15,
NEW YORK, January 4, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

SIR—In compliance with your instructions I have the honor to submit the following report of the transactions of this Bureau for the quarter ending December 31, 1889, together with a list of the public buildings, courts, offices and armories in care of this Bureau and their present condition. I also transmit herewith a list of the requisitions made on this Bureau for law books and office supplies, which were not furnished, owing to the inadequacy of the appropriation for "Supplies for and Cleaning Public Offices," 1889. Among the principal items of work done by the Bureau were the following:

COUNTY COURT-HOUSE.

Extensive alterations and additions have been made to the heating apparatus in the above-named building. One of the horizontal engines has been repaired and put in perfect working order. The New York Steam Company's service has been introduced and connected and is now being used. The old boilers are out of service, but still remain in position to be used in case of need, and a new automatic heat-regulating system has been applied to the heating of the apartments of the Supreme Court rooms; a device known as the thermostat is placed in each room and connected electrically with the valve which controls the flow of steam into the coils in the air chambers.

The temperature desired being determined, the thermostat records it by opening or closing the valves, regulating the inflow of steam to the coils, increasing or diminishing the flow of steam in such manner as to continuously maintain a given and uniform temperature to the atmosphere of any or all the rooms in which these devices are placed. The rotary fans operated by power deliver the air supply to the heating chambers from which it passes to deliver its heat. Ventilating flues are arranged to pass the fouled air out, and in this manner freshly heated atmosphere of pure air, drawn from the exterior of the building, is being continuously supplied. Air moistening devices have also been placed in the chambers to charge the air with proper moisture.

The walls and ceilings of the cellar of the building have been whitewashed with three coats of lime wash.

CITY HALL.

The contracts for setting the new marble steps and retiling the portico, and for repaving the plaza in front of the building with concrete blocks, has been completed. Specifications were prepared and a contract made for cleaning the east, west and south fronts of the building. This work is now progressing favorably and will soon be completed should the present mild weather continue.

The dome of the clock tower has been repaired and painted, a galvanized iron ventilator put up over room No. 20, and the leader on the east side repaired. About (200) two hundred chairs have been supplied for use in the building.

The City Court—Carpets and linoleum have been laid in Part IV., and in the Clerk's room, and rugs and mats furnished. A canopy with black walnut cornice, side and back, damask curtains, draped and trimmed with cords and tassels, has been put up over the bench in Part IV.

New Holland window shades on spring rollers have been hung in the Clerk's room. A table, 12 feet long, a rotary desk chair, some cane-seated dining chairs, an eight-day clock, and ivory gavel have been furnished to Part IV.

In the Judges' private room two polished brass chandeliers have been put up, a brass fire-set, cuspadores, waste paper baskets, umbrella stand, water cooler and stand and law books have been furnished.

BROWN STONE BUILDING.

Court of General Sessions—A canopy with black walnut cornice, with crimson Turcoman curtains and lambrequin with cords, tassels and trimming, has been put up in Part II.

HALL OF RECORDS.

A slight fire having occurred in this building, owing to a defect in one of the furnaces, the furnace was taken down, repaired and reset, some new hot-air pipe furnished with safety collars, and new smoke-pipe put up and a new cold-air box built, and the carpenter work repaired where damaged.

NO. 31 CHAMBERS STREET.

Alterations have been made to the desk and railings in the Water Register's office. New racks for street-lamps were put up in the basement and cellar, and the closets in the Bureau of Incumbrances were painted.

STAATS ZEITUNG BUILDING.

Corporation Counsel's Office—In the office of the Chief Clerk a black walnut standing desk 16 feet long, with paneled back, book rack and pigeon holes, has been furnished, and an iron wire railing with polished ash top, about 30 feet long, with two gates, having spring locks, and a wire guard about 16 feet long, placed on the desk.

In room No. 7 a white pine paneled glass partition 30 feet long, and an iron wire ash top railing, 10 feet long, have been put up, and the work painted, grained and varnished. Six roll-top oak desks, 9 desk chairs and 8 tables, a black walnut wardrobe and cane settee, have been furnished, and a carpet and matting laid in Mr. Dean's room, and the carpet in the Chief Clerk's and Examiner's rooms have been taken up, cleaned and relaid.

The cases and pigeon holes in the Record room have been painted, grained and varnished, and the walls and ceiling in the Chief Clerk's office and the Examiner's rooms have been repaired and calcimined. In the library the seams in the floor have been puttied up and the floor cleaned and given a hard oil finish.

DEPARTMENT OF TAXES AND ASSESSMENTS.

A set of drawing tools, colors, etc., and one Remington type-writer have been supplied, and a set of telephone instruments put in and connected with the New York City Exchange.

NO. 49 BEEKMAN STREET.

The old tin has been stripped off the roof and a new roof put on, of the best IX tin, underlaid with rosin-sized felt paper, the skylights repaired, the coping reset and the roof painted, two coats of metallic paint and linseed oil. The new cases in the office of the Public Administrator have been painted in parti-color.

THE COURTS, POLICE AND CIVIL.

Special Sessions, Tombs—In the Clerk's office an iron wire ash top railing, about 20 feet long, has been put up, and the desk and drawers cleaned, filled and varnished.

First District Police Court—The grate in the Judge's room has been repaired and reset.

Third District Police Court—The two furnaces have been repaired, put in good order and the chimneys cleaned.

Fifth District Police Court—The steam-boiler has been repaired, a new back connection with smoke-jack made, and a new set of grate bars put in the furnace.

Third District Court-house—The furnace under the steam-boiler has been relined with the best No. 1 fire brick, new cheek and arch blocks put in, the bridge wall rebuilt, and the flues cleaned.

Second District Civil Court—The walls and ceilings in the Judges' and Clerks' rooms and the hall and stairway have been repaired, ceilings calcimined, walls painted and grained work cleaned and varnished, and a black walnut bookcase and table furnished.

Fifth District Civil Court—The work under the contract for the alterations to this Court is very nearly completed and the building will soon be ready for occupancy.

THE MARKETS.

Washington Market—Repairs have been made to the doors and flooring in several places. The iron panels of the shed inclosure have been taken out and new panels of two-inch plank substituted; the iron posts of the shed have been repaired and fastened where needed, and some new sash put in.

Fulton Market—The old asphalt flooring on both sides of the gangway on Beekman street, extending about 80 feet from South street, has been taken up, the damaged timbers removed, the space underneath filled with clean earth, well rammed, and a new yellow pine 1 1/4-inch floor laid on chestnut sleepers.

Repairs were also made to the flooring in front of stands Nos. 40, 55 and 57 on Front street side.

Catharine Market—The contract for the alterations, repairs and painting of the market buildings has been completed, and the improved appearance of the market gives general satisfaction to the stand-holders as well as the people in the immediate neighborhood.

Centre Market—A new tin roof has been put on the extension on Broome street end, and the roof painted with metallic paint and leaders repaired. The damaged flooring in several places in the market has been removed and replaced with new yellow pine flooring and the glazing repaired.

Essex Market—The roof has been repaired, the gutters painted, flashings pointed up with roofing cement, and some new galvanized iron chimney tops put on.

Jefferson Market—The chimneys on Sixth avenue side have been cleaned and repaired and new galvanized-iron caps with Emerson tops put on. The skylight over J. L. Sayles' office has been repaired and made weather-tight.

Tompkins Market—The chimney on Seventh street, near Hall place, has been extended through the roof and a galvanized iron Emerson top put on and the chimney flashed around with IX tin.

CORPORATION YARD.

Sixteenth street, East river—A new gate and gate-posts have been put up at the entrance to the yard, and the work painted three coats of lead and oil paint.

THE DOG POUND.

A porch and storm-door have been put up at the entrance to the office, the work being done with narrow yellow pine strips built in panels, the upper panels glazed, and the roof covered by IX tin, and painted with metallic paint.

THE ARMORIES.

The Seventh Regiment Armory—The rooms in the basement have been cleaned and calcimined. In the Rifle Range—A Wing disc fan, driven by a two-horse power Welsh & Lawson gas engine with necessary pipe, pulleys, shafting and fixtures, has been placed for the purpose of keeping the range free from smoke, which work it performs to the entire satisfaction of the officers of the regiment. New spruce blocking has been put up in the archways, and around the piers in the rifle gallery to protect the brick-work of the several piers.

Twelfth Regiment Armory—A set of new grate bars has been placed in the furnace of the centre boiler.

Twenty-second Regiment Armory—Galvanized iron tops have been put on several of the chimneys, the floor repaired in many places, a pair of doors hung at the entrance to main drill-room, and the butts of the rifle range taken down and rebuilt.

Sixty-ninth Regiment Armory—The lockers in the rooms of Companies "C," "F" and "I" have been repaired, new, non-interchangeable locks put on, all to be opened with "Master Keys."

In the basement about 12,000 square feet of yellow pine flooring has been laid. In addition to the foregoing, I desire further to report on work done by the Bureau in the repairs and alterations of the plumbing, steam and gas-fitting of the several buildings, courts and offices in care of this Department. The large number of fixtures and appliances which have to be kept in good working order, the wear and tear to which they are subjected, and the constant demands made for repairs to the same, render this one of the most important of the works in charge of the Bureau.

Other important items are the repairs to the glazing of the several buildings, the repairs to office furniture, and the general repairs made by the carpenters in the employ of the Bureau in the various offices. The number and varied character of these several repairs renders it impossible to give a fuller or more detailed report of them, and I therefore refer to them in the general way.

FREE FLOATING BATHS.

The free baths have been safely moored in winter quarters at the foot of Twenty second and Twenty-third streets, South Brooklyn. Two new baths have been built this season. The fleet now comprises fifteen baths. Since the baths have been laid up, a careful examination of the floors of the swimming tanks have been made, with a view to their perfect safety, all the decayed planking is being removed and replaced with heavy and sound timber.

During the summer the number of bathers amounted to nearly 2,750,000, a large proportion of this number being women and children. The new rule requiring bathers above 12 years of age to wear suitable bathing dresses, has been very generally enforced, and without difficulty. I take pleasure in reporting that no patron of the free baths has been injured, notwithstanding the crowds of young and old people who have frequented them.

The following is a list of requisitions for office furniture and supplies on file in this Bureau, which were not filled in consequence of the inadequacy of the appropriation for Supplies for and Cleaning Public Offices, 1889.

Supreme Court—Carpets, linoleum, towels.

Court of Common Pleas—Law books.

Surrogate's Court—Large safe, cases, pigeon-holes and drawers, window-shades, awnings and ventilators, and a roll-top desk.

County Clerk's Office—Law books and Lungren lamp.

Clerk of Common Council—Window-shades, carpet and oilcloth.

City Record—Window-shades, wash stands, desks chairs, oilcloth and rugs.

Register's Office—Rotary chair, gas stove, and tubing and some bookbinder's tools.

Corporation Counsel—Ladder, chairs, awnings and one Danner bookcase.

Civil Service Commission—Ash desk and six window awnings.

Finance Department—One document file case.

Second District Police Court—Carpets, wardrobe and desk.

Third District Police Court—Carpets, closets, chairs, etc.

Third District Civil Court—Law books.

Fourth District Police Court—Engineer's tools and supplies.

Fifth District Civil Court—Window-shades, curtains, lambrequins, chairs, and repairs to old furniture.

Fourth District Civil Court—Window screens and awnings.

Fifth District Police Court—Carpets and linoleum.

Sixth District Civil Court—Jury box and gavel.

Seventh District Civil Court—Awnings.

Eighth District Civil Court—Law books, linoleum.

Ninth District Civil Court—Law books.

Eleventh District Civil Court—One desk.

Board Police Justices—Law books.

The following is the list of public buildings, offices and armories, owned or leased by the City and in the care of the Bureau of Repairs and Supplies, Department of Public Works, with a statement of their present condition:

Buildings marked * are leased by the City.
 City Hall—The court-rooms need painting and the flooring in the corridors should be renewed, and the brown stone of the rear wall should be repaired.
 New Court-house—Some of the court-rooms need painting, and considerable alterations and repairs are needed to the plumbing and steam heating of the building, roof and ventilating pipes.
 Brown-stone Building—The Grand Jury rooms need repairs and painting.
 Hall of Records—Needs painting inside and out, and the roof needs repairing, and other extensive alterations are requested.
 First District Civil Court—Needs painting and repairs.
 Second District Civil Court—Good condition.
 Third District Civil Court—Good condition.
 *Fourth District Civil Court—Good condition.
 Fifth District Civil Court—Newly reconstructed.
 *Sixth District Civil Court—In bad condition, needs repairs and painting.
 Seventh District Civil Court—Needs new tin roof.
 *Eighth District Civil Court—Needs painting and calcimining.
 *Ninth District Civil Court—Good condition.
 *Tenth District Civil Court—Good condition.
 *Eleventh District Civil Court—Good condition.
 Court of Special Sessions—Good condition.
 First District Police Court—Good condition.
 Second District Police Court—Good condition.
 Third District Police Court—Good condition.
 Fourth District Police Court—Good condition.
 Fifth District Police Court—Needs painting and calcimining.
 Sixth District Police Court—Good condition.
 County Jail—Windows need painting and repairing, and the plumbing to be overhauled. The water supply is insufficient.
 *Comptroller's Office—Good condition.
 *Commissioner of Jurors—Good condition.
 *Commissioner of Accounts—Good condition.
 *Tax Receiver's Office—Good condition.
 *Department of Public Works—No. 31 Chambers street and No. 7 Reade street—The flooring in Water Register's office needs repairing, and several of the offices need painting.
 *No. 27 Chambers street—Surveyors and Commissioners of Taxes and Assessments—In good condition.
 *Staats Zeitung Building—Department of Taxes and Assessments, Corporation Counsel's office, and Clerk's office, Board of Estimate and Apportionment. All the above offices are in fair condition.

No. 49 BEEKMAN STREET.

Public Administrator's office—Needs painting.
 Corporation Attorney's office—Good condition.
 Public Administrator's store-room, No. 5 Duane street—Building old and in poor condition.

ARMORIES.

*Headquarters First Brigade, N. G. S. N. Y., and Seventy-first Regiment—Plumbing needs overhauling. The regiment is in great need of more water-closets, as the present ones are inadequate and of faulty construction.
 *First Battery Armory—Good condition.
 *Second Battery Armory—A new floor required.
 Seventh Regiment Armory—Good condition.
 Eighth Regiment Armory—New building.
 *Ninth Regiment Armory—In fair condition.
 Twelfth Regiment Armory—Roof needs extensive repairs.
 *Twenty-second Regiment Armory—Good condition.
 Sixty-ninth Regiment Armory—Officers' room and toilet need repairs and painting. Plumbing requires overhauling. Should have a gas pump to keep tank supplied.

CORPORATION YARDS.

Rivington Street Yard—Good condition.
 Sixteenth street, East river—Requires new roof on office. Building in very bad condition.
 Twenty-fourth Street Yard—Good condition.
 *One Hundred and Twenty-first Street Yard—Good condition.

REPAIR SHOPS.

No. 134 West Thirtieth street—In good condition.
 Nos. 427 and 429 East Eighty-seventh street—In good condition.
 No. 302 East One Hundred and Twenty-fifth street—In good condition.
 Old Arsenal Building, corner Elm and White streets—In fair condition.

THE MARKETS.

Washington Market—In good condition.
 West Washington Market—In good condition.
 Fulton Market—The old asphalt flooring in this building will all have to be removed and new flooring laid.
 Centre Market—Roof needs repairing.
 Clinton Market—Building very old and in poor condition, is in need of continuous repairs.
 Essex Market—Needs painting and general repairs.
 Tompkins Market—Some of the stand-holders in this market allow their waste water to flow into the basement, creating thereby a great nuisance. Attention has been called to this matter several times, but still the evil exists.
 The building which is of iron is very much in need of repairs and painting. I find that some of the telegraph companies have fastened a wire to the Sixth street balcony to brace a pole, and it has pulled the balcony railing out of place; this wire should be removed.
 Jefferson Market—Good condition.
 Union Market—Good condition.
 Dog Pound—Needs new slate roof.

Very respectfully,

W. G. BERGEN, Superintendent Repairs and Supplies.

Document "L."

REPORT OF THE SUPERINTENDENT OF INCUMBRANCES.

DEPARTMENT OF PUBLIC WORKS—BUREAU OF INCUMBRANCES,
 No. 31 CHAMBERS STREET,
 NEW YORK, January 6, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

DEAR SIR—I have the honor to make the following report of the business of this Bureau for the quarter ending December 31, 1889 (months of October, November and December):

| | |
|--|-------------|
| 1,086 complaints of obstructions received and attended to. | |
| 1,691 seizures and removals of obstructions made. | |
| 1,842 building permits issued. | |
| 279 miscellaneous permits issued. | |
| 5 permits issued to cut down shade-trees. | |
| 247 notices issued to repair defective sidewalks. | |
| 12 notices issued to repair defective vault covers. | |
| Expense of seizing and removing 1,691 articles, including 252 loads of dirt, stone, refuse, etc., and 49 dead and dangerous trees, stumps, etc., also 1,061 telegraph poles, and about 3,727,930 lineal feet of electric wire. | \$13,499 35 |
| Total expenses for the quarter | \$15,437 40 |
| Received from owners for the redemption of seized articles. | \$407 75 |
| Received from public sale of unredeemed goods, etc., November 9, 1889. | 654 50 |
| Total | \$1,062 25 |
| All of which was duly paid over to the City Chamberlain. | |
| Salary account—Appropriation. | \$8,400 00 |
| Expended up to December 31, 1889 | 7,013 41 |
| Balance | \$1,386 59 |

| | |
|--|-------------|
| Appropriation for the removal of obstructions in streets and avenues, including rents for Corporation Yards. | \$48,771 04 |
| Amount expended up to December 31, 1889. | 46,783 60 |
| Balance | \$1,987 44 |

Respectfully,

MICHAEL F. CUMMINGS, Superintendent of Incumbrances.

DEPARTMENT OF PUBLIC WORKS—BUREAU OF INCUMBRANCES,
 No. 31 CHAMBERS STREET,
 NEW YORK, January 8, 1890.

Hon. THOMAS F. GILROY, Commissioner of Public Works:

DEAR SIR—I have the honor to submit herewith a condensed statement of the entire business of the Bureau transacted during the year 1889:

| | |
|--|------------|
| The number of complaints received and attended to regarding obstructions, etc., was. | 4,754 |
| Removals to the Corporation Yards. | 5,318 |
| Removals of loads of dirt, stone, refuse, etc. | 2,646 |
| Removals of dead and dangerous trees, stumps, etc. | 428 |
| Removals of telegraph and electric-light poles. | 2,592 |
| Removals of lineal feet of electric wire, about. | 14,583,559 |
| Number of building permits issued. | 7,658 |
| Number of miscellaneous permits issued. | 1,188 |
| Number of permits to cut down trees. | 18 |
| Number of notices issued to repair defective sidewalks. | 869 |
| Number of notices issued to repair defective vault covers. | 23 |

APPROPRIATIONS FOR THE YEAR 1889.

| | |
|---|-------------|
| For removals of obstructions in streets and avenues. | \$48,771 04 |
| For removals of obstructions in streets and avenues—Salaries. | 8,400 00 |
| Total. | \$57,171 04 |

Total expenditure for the year, as follows:

| | |
|---|------------|
| Removals of redeemable obstructions. | \$2,903 75 |
| Removals of dirt, stone, etc. | 2,868 65 |
| Removals of dead and dangerous trees, etc. | 1,505 00 |
| Removals of telegraph poles. | 10,368 00 |
| Removals of electric wire. | 24,808 50 |
| Transportation expenses. | 821 05 |
| Salaries—Inspectors, Keeper of Corporation Yard, Watchmen, Skilled and Detailed Laborers. | 10,522 06 |
| Balance | \$3,374 03 |

| | |
|---|-------------|
| Actual cost of removing obstructions and poles and wires. | \$38,080 25 |
| Received from owners of seized articles. | \$2,019 75 |
| Received from auction sales of unredeemed articles. | \$3,116 61 |
| Less Auctioneer's fees, 10 per cent. | 311 66 |
| | 2,804 95 |
| Difference. | \$33,255 55 |

The work of this Bureau during the past year has been largely in excess of any previous year, principally owing to the work of removing telegraph poles and electric wires. The great number of obstructions and incumbrances, caused by the erection of new buildings, the repair and alteration to others, and the increasing demands of business, besides the many unnecessary and objectionable ones, which are the outgrowth of many years of custom and questionable legislation, renders the work of this Bureau at all times difficult, and often attended with serious and harassing obstacles. The conflicting and varied opinions which exist in different branches of the City Government as to granting extraordinary or unnecessary privileges to individuals for the use of the streets and sidewalks tend to add to these evils and to confuse the public mind as to the rights and privileges conferred by the laws and ordinances. Under these circumstances this Bureau, while hardly claiming entirely satisfactory results for its work during the past year, has yet done all that was possible with the means and limited force at its disposal to abate and remove the worst and most objectionable obstructions and incumbrances, especially such as were offensive to or interfering with the comfort and rights of neighbors, etc.

Another class of obstructions we are constantly dealing with is the removal of dirt, stone, refuse, etc., surreptitiously dumped and left on the streets by persons unknown, which the Street Cleaning Department will not remove.

The quantity removed by this Bureau during the year 1889 and the expense incurred in its removal is larger than any previous year. This evil we are powerless to prevent; but it is my opinion that, with proper vigilance on the part of the police, this dumping of dirt and rubbish upon the thoroughfares, which is now done by carmen with impunity, would to a very great extent be abated.

The work of removing telegraph poles and electric wires during the past year has been prosecuted with all possible rapidity considering the many difficulties encountered. Among the many I may mention the removal of poles in narrow streets and where the elevated roads are constructed. The work has always been retarded in these streets for want of sufficient space, and required much extra labor, as poles are required to be lowered with the aid of a "dummy," while in streets and avenues of wider area the poles are dropped. By the latter method the work is carried on much more rapidly. Many difficulties have been experienced in removing poles around which stations of the elevated roads have been built.

The presence of fire-alarm wires have prevented the removal of many poles that could otherwise have been removed. I refer to poles that have been entirely stripped of all wires save a single fire-alarm wire. I have been informed that, in many cases, such wires could be transferred to other poles, and thus enable the removal of many unnecessary poles now standing.

Utmost precaution must also be taken in regard to "live wires," which are liable to appear during the work at any time. In avoiding this danger the men engaged in the work have been particularly fortunate.

In conclusion, I may add that the work, considering the many difficulties, has been very creditably performed, and, in anticipation of a greater amount of work being done during the coming year, our city will soon be rid of an unsightly and objectionable nuisance, which will receive the grateful appreciation and hearty approval of the general public.

Respectfully,

MICHAEL F. CUMMINGS, Superintendent of Incumbrances.

Document "M."

REPORT OF THE WATER REGISTER.

BUREAU OF WATER REGISTER, No. 31 CHAMBERS STREET,
 NEW YORK, December 31, 1889.

Hon. THOS. F. GILROY, Commissioner of Public Works:

SIR—I herewith transmit statement of moneys received for water rents, penalties and taps, for the quarter ending December 31, 1889:

| | Principal. | Penalties. | Taps. |
|---|--------------|------------|------------|
| October | \$237,236 35 | \$4,022 55 | \$1,381 50 |
| November | 85,334 30 | 1,585 20 | 899 00 |
| December | 107,651 99 | 762 75 | 1,115 50 |
| Total | \$430,222 64 | \$6,370 50 | \$3,396 00 |
| Deposit to the credit of "Water-meter Fund, No. 2"— | | | |
| October | | | \$2,155 27 |
| November | | | 309 08 |
| December | | | 311 09 |
| Total | | | \$2,775 44 |

"Special Fund—Repairing Streets"—

| | |
|----------------|------------|
| October | \$984 00 |
| November | 751 00 |
| December | 739 00 |
| Total | \$2,474 00 |

I have the honor to also submit a statement of moneys received for the year ending December 31, 1889, and placed to the credit of their respective accounts with the City Chamberlain:

TOTAL RECEIPTS.

| | |
|---|----------------|
| Regular water rates and penalties | \$1,491,110 22 |
| Water by meter measurements | 999,548 71 |
| Permits for water for building purposes | 53,931 14 |
| Penalties for using hose | 60 00 |
| Water rates returned in arrears | \$83,063 60 |
| Water by meter measurements returned in arrears | 66,036 65 |
| Pipe-tapping receipts | 149,100 25 |
| Restoring pavements | 12,388 00 |
| Receipts for Meters and Meter Setting during the Year 1889. | |
| "Water-meter Fund, No. 2" | \$8,948 78 |
| Amount returned to Bureau of Arrears | 4,102 40 |
| Total | \$13,051 18 |

Croton water supplied to shipping for the year is as follows, viz.:

| | |
|---|--------------|
| Receipts from meters on docks | \$84,006 75 |
| Receipts from 780 permits for steamboats, amounting to | 18,236 21 |
| Receipts from 36 permits for engines on wharves, etc., amounting to | 436 30 |
| Total | \$102,679 26 |

1,479 permits were issued for building purposes during the year.
2,943 permits were issued for taps during the year.

On permits issued during the year for making and repairing house connections with water mains, \$10,442 was collected for restoring pavements. These collections are credited to the Special Fund, from which is paid the expense of repaving the streets over the excavations made for new connections and repairs.

The Bureau also collected during the year \$8,948.78 for expense incurred in purchasing and setting water-meters where the house-owners failed to comply with the notices requiring them to place meters. This is set apart to reimburse the City for the expense of procuring and setting the meters.

In the matter of issuing permits to steam-tugs to take water, the usual period for which permits were issued prior to July last was six months, and the amount charged and collected accordingly. Since July the permits have been issued for shorter periods with the view of making arrangements for having all tugs supplied with water through meters at designated points on the water-front. In consequence of this the returns for 1889 show an increase in the number of permits issued with a decrease in the receipts as compared with 1888.

In preparing the Ward Books for each ensuing water year, it is of vital importance that the proper and correct Ward numbers of lots shall appear thereon. In past years errors in Ward numbers have crept into the books, and have annually been transcribed into the new books from the books of the preceding year. The Bureau is without means to prevent or correct these errors except by examination of the tax maps in the possession of the Tax Commissioners, when access to them could be had, but they are not accessible at all times. It is a matter of public necessity that this be obviated by the purchase of copies of the official maps for all the Wards for the use of this Bureau, and the City would be more than repaid in a single year for the expense of purchasing such maps by the avoidance and correction of errors, and the keeping of correct records of all new improvements and alterations in buildings, resulting in increased collection of revenue.

The examination of buildings throughout the city, which is now being made, is progressing rapidly, and will be completed in time for recording on the books for the ensuing water year the various changes and additions in buildings. The returns from this inspection are being verified, and where occasion requires it a re-examination is made.

The following is a list of charitable institutions which have applied for exemption from charges for Croton water, under the provisions of chapter 696 of the Laws of 1887, and which the Counsel to the Corporation has advised are entitled to exemption under the act. The list also shows the location of each institution and the amounts heretofore charged to each annually.

| INSTITUTION. | LOCATION. | AMOUNT. |
|--|--|----------|
| Association for the Relief of Aged and Indigent Females | Tenth avenue and One Hundred and Fourth street | \$45 00 |
| Baptist Home for Aged and Infirm Persons | Fourth avenue and East Sixty-eighth street | 128 30 |
| Colored Orphan Asylum | One Hundred and Forty-third street, Northern Boulevard | 639 20 |
| French Benevolent Society | No. 131 West Fourteenth street | 27 00 |
| German Hospital and Dispensary | Park avenue and Seventy-seventh street | 724 70 |
| Hebrew Sheltering and Guardian Society | Northeast corner Eighty-seventh street and Avenue A | 190 90 |
| Home for the Aged and Indigent Women | West side of Boulevard, One Hundred and Fifteenth and One Hundred and Fifty-first streets | 801 80 |
| Home for the Aged and Infirm Hebrews | Southeast corner Tenth avenue and One Hundred and Fourth street | 180 10 |
| Hebrew Benevolent and Orphan Asylum | No. 119 to No. 127 West One Hundred and Fifth street | 282 30 |
| House of Good Shepherd, St. Ann's Home (not finished) | West side Tenth avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-eighth streets | 2,441 30 |
| Hahnemann Hospital | Southeast corner Eighty-ninth street and Avenue A | |
| Leake & Watts Orphan House | East side Fourth avenue, Sixty-seventh and Sixty-eighth streets | 447 60 |
| Manhattan Dispensary and Hospital | West One Hundred and Tenth street and Ninth avenue | 96 30 |
| Manhattan Eye and Ear Hospital | One Hundred and Thirty-first street and Tenth avenue | 32 00 |
| Methodist Episcopal Church Home | No. 103 Park avenue | 247 90 |
| Montefiore Home for Chronic Invalids | Nos. 1584-1602 Tenth avenue | 219 00 |
| Mt. Sinai Hospital | Boulevard and West One Hundred and Thirty-eighth street | 143 00 |
| New York Asylum for Lying-in Women | East side Lexington avenue, Sixty-sixth and Sixty-seventh streets | 1,091 60 |
| New York Cancer Hospital | No. 139 Second avenue | 12 00 |
| New York Hospital and Bloomingdale Asylum | Southwest corner One Hundred and Sixth street and Eighth avenue | 269 10 |
| New York Homoeopathic Hospital | No. 160 Chambers street, Nos. 7 to 21 West Fifteenth street, and No. 8 West Sixteenth street | 2,801 40 |
| New York Ophthalmic Hospital | Boulevard, One Hundred and Seventeenth and One Hundred and Eighteenth streets | 1,402 20 |
| New York Post Graduate | West side Avenue A, Sixty-third and Sixty-fourth streets | 50 00 |
| New York Society for the Relief of Ruptured and Crippled | No. 201 East Twenty-third street | 122 50 |
| New York Infirmary for Women and Children | No. 226 East Twentieth street | 52 00 |
| New York Mothers' Home for the Sisters of Misericorde | No. 135 East Forty-second street | 454 50 |
| Nursery and Child's Hospital | Nos. 4 and 5 Livingston place | 38 00 |
| P. E. Orphan Home and Asylum | No. 531 East Eighty-sixth street | 21 00 |
| Presbyterian Hospital | No. 571 Lexington avenue | 577 70 |
| | East Forty-ninth street, Lexington and Fourth avenue | 241 90 |
| | Park avenue and East Seventieth street | 756 70 |

| INSTITUTION. | LOCATION. | AMOUNT. |
|---|--|-------------|
| Roman Catholic Orphan Asylum | East side Fifth avenue, Fifty-first and Fifty-second streets, south side East Fifty-second street, between Fifth and Madison, and Madison and Fourth avenues | \$1,709 00 |
| Roosevelt Hospital | South side West Fifty-ninth street, Ninth and Tenth avenues | 1,040 90 |
| Sisters of the Order of St. Dominick | Nos. 137 to 143 Second street | 40 00 |
| Skin and Cancer Hospital | (No. 213 East Thirty-fourth street and Fordham Heights | 120 00 |
| Sloan Maternity Hospital | Fifty-ninth street and Tenth avenue | 144 90 |
| St. Elizabeth's Hospital | No. 225 West Thirty-first street | 32 60 |
| St. Francis Hospital | No. 609 Fifth street | 450 30 |
| St. Joseph's Hospital | No. 328 East One Hundred and Ninth street | 15 00 |
| St. Luke's Hospital | No. 17 West Fifty-fourth street | 760 10 |
| St. Vincent Hospital | (Nos. 151 to 161 West Eleventh street and Nos. 160 to 174 West Twelfth street | 308 20 |
| St. James Home | (Nos. 17 and 19 Seventh avenue | 110 00 |
| St. Phillip's Parish Home | No. 26 James and 21 Oliver street | 34 00 |
| St. Joseph's Home for the Aged | No. 127 West Thirtieth street | 10 00 |
| St. Joseph's Orphan Asylum | No. 211 West Fifteenth street | 200 00 |
| St. Mary's Free Hospital for Children | North side Eighty-ninth street, First avenue and Avenue A | 9 00 |
| Trinity Corporation | Nos. 405 and 407 West Thirty-fourth street | 138 10 |
| The Orphan Asylum Society of the City of New York | No. 50 Varick street | 86 40 |
| The Laura Franklin Free Hospital | (West Seventy-third street, Eleventh avenue and Riverside Drive | 435 60 |
| The Home for the Aged of the Church of the Holy Communion | Nos. 15 and 17 East One Hundred and Eleventh street | 115 60 |
| Home for Old Men and Aged Couples | No. 330 Sixth avenue | 11 00 |
| Woman's Hospital | Nos. 487 to 491 Hudson street | 32 00 |
| | Fiftieth street and Park avenue | 595 10 |
| | | \$20,935 10 |

REVENUE.

| THE FOLLOWING TABLE EXHIBITS THE YEARLY REVENUE DERIVED FROM CROTON WATER FROM ITS INTRODUCTION INTO THE CITY IN THE YEAR 1842, TO JANUARY 1, 1890. | | STATEMENT OF ARREARS OF WATER RENTS RETURNED TO THE COMPTROLLER, CLERK OF ARREARS, ACCORDING TO LAW, AND COLLECTED BY CLERK OF ARREARS. | | TOTAL REVENUE. |
|---|-----------------|---|--|-----------------|
| From Oct. 5, 1842, to May 1, 1843 .. | \$32,053 74 | | | \$32,053 74 |
| " May 1, 1843, " 1, 1844 .. | 84,444 68 | | | 84,444 68 |
| " " 1, 1844, " 1, 1845 .. | 117,227 86 | | | 117,227 86 |
| " " 1, 1845, " 1, 1846 .. | 163,900 52 | | | 163,900 52 |
| " " 1, 1846, " 1, 1847 .. | 193,346 24 | | | 193,346 24 |
| " " 1, 1847, " 1, 1848 .. | 219,416 72 | | | 219,416 72 |
| " " 1, 1848, " 1, 1849 .. | 250,081 51 | | | 250,081 51 |
| " " 1, 1849, to Dec. 31, 1849 .. | 259,532 97 | | | 259,532 97 |
| " Jan. 1, 1850, " 31, 1850 .. | 438,951 87 | | | 438,951 87 |
| " " 1, 1851, " 31, 1851 .. | 458,789 78 | \$30,379 20 | | 489,168 98 |
| " " 1, 1852, " 31, 1852 .. | 578,426 48 | 22,329 55 | | 600,756 03 |
| " " 1, 1853, " 31, 1853 .. | 650,021 20 | 22,230 66 | | 672,251 86 |
| " " 1, 1854, " 31, 1854 .. | 703,730 83 | 35,032 45 | | 738,763 28 |
| " " 1, 1855, " 31, 1855 .. | 790,077 70 | 47,382 34 | | 837,460 04 |
| " " 1, 1856, " 31, 1856 .. | 778,292 77 | 57,670 46 | | 835,963 23 |
| " " 1, 1857, " 31, 1857 .. | 823,156 35 | 57,671 60 | | 880,827 95 |
| " " 1, 1858, " 31, 1858 .. | 840,928 08 | 62,892 92 | | 903,821 00 |
| " " 1, 1859, " 31, 1859 .. | 855,261 47 | 55,410 05 | | 910,671 52 |
| " " 1, 1860, " 31, 1860 .. | 868,843 58 | 48,005 51 | | 916,849 09 |
| " " 1, 1861, " 31, 1861 .. | 891,430 81 | 50,836 98 | | 942,267 79 |
| " " 1, 1862, " 31, 1862 .. | 893,896 82 | 62,738 23 | | 956,635 05 |
| " " 1, 1863, " 31, 1863 .. | 982,031 26 | 55,331 11 | | 1,037,362 37 |
| " " 1, 1864, " 31, 1864 .. | 1,006,191 77 | 50,536 68 | | 1,056,728 45 |
| " " 1, 1865, " 31, 1865 .. | 1,056,772 49 | 49,478 75 | | 1,106,251 24 |
| " " 1, 1866, " 31, 1866 .. | 1,125,605 96 | 41,219 45 | | 1,166,825 41 |
| " " 1, 1867, " 31, 1867 .. | 1,261,600 30 | 45,023 65 | | 1,306,623 95 |
| " " 1, 1868, " 31, 1868 .. | 1,312,093 05 | 42,136 15 | | 1,354,229 20 |
| " " 1, 1869, " 31, 1869 .. | 1,315,676 13 | 39,844 05 | | 1,355,520 18 |
| " " 1, 1870, to Apr. 9, 1870 .. | 77,641 95 | 49,155 60 | | 126,797 55 |
| " Apr. 11, 1870, " 10, 1871 .. | 1,296,383 79 | 51,223 30 | | 1,347,607 09 |
| " " 11, 1871, " 10, 1872 .. | 1,353,591 59 | 49,428 15 | | 1,403,019 74 |
| " " 10, 1872, " 30, 1873 .. | 1,439,349 39 | 50,660 25 | | 1,490,009 64 |
| " " 30, 1873, to Dec. 31, 1873 .. | 1,386,132 41 | 48,039 53 | | 1,434,171 94 |
| " Jan. 1, 1874, to Jan. 1, 1875 .. | 1,477,277 06 | 57,721 38 | | 1,534,998 44 |
| " " 1, 1875, " 1, 1876 .. | 1,444,256 71 | 66,652 10 | | 1,510,908 81 |
| " " 1, 1876, " 1, 1877 .. | 1,478,281 00 | 67,677 50 | | 1,545,958 50 |
| " " 1, 1877, " 1, 1878 .. | 1,470,329 60 | 70,641 21 | | 1,540,970 81 |
| " " 1, 1878, " 1, 1879 .. | 1,606,509 29 | 69,219 35 | | 1,675,728 64 |
| " " 1, 1879, " 1, 1880 .. | 1,618,722 50 | 76,043 09 | | 1,694,765 59 |
| " " 1, 1880, " 1, 1881 .. | 1,560,598 57 | 69,633 70 | | 1,630,232 27 |
| " " 1, 1881, " 1, 1882 .. | 1,510,791 77 | 93,552 56 | | 1,604,344 33 |
| " " 1, 1882, " 1, 1883 .. | 1,647,183 25 | 100,743 81 | | 1,747,927 06 |
| " " 1, 1883, " 1, 1884 .. | 1,869,518 96 | 169,558 61 | | 2,039,077 57 |
| " " 1, 1884, " 1, 1885 .. | 1,985,329 32 | 164,689 55 | | 2,150,018 87 |
| " " 1, 1885, " 1, 1886 .. | 2,122,411 83 | 117,041 07 | | 2,239,452 90 |
| " " 1, 1886, " 1, 1887 .. | 2,343,792 61 | 165,425 18 | | 2,509,217 79 |
| " " 1, 1887, " 1, 1888 .. | 2,514,343 92 | 154,043 30 | | 2,668,387 22 |
| " " 1, 1888, " 1, 1889 .. | 2,437,962 66 | 149,100 25 | | 2,587,062 91 |
| " " 1, 1889, " 1, 1890 .. | 2,544,650 07 | | | 2,544,650 07 |
| | \$54,156,841 19 | \$2,716,698 78 | | \$56,873,539 97 |

On motion, the report of the Engineer-in-Chief on Secretary's Order No. 9788 was taken from the table, ordered to be placed on file, and the Engineer-in-Chief was directed to dredge thereat to a depth of ten feet at mean low water, as recommended in said report.

From Charles S. Thompson, Dock Master—Reporting upon the application of the American Transit Company for permit to erect a derrick on the lower side of Pier, old 6, East river, seventy-five feet from the L; stating, also, that, in his opinion, there is no reason why a permit should not be granted.

On motion, permit was granted upon the usual terms and conditions.

From Charles S. Coye, Dock Master—Reporting that there is a dangerous hole in front of the bulkhead north of Pier, new 21, North river.

On motion, the Engineer-in-Chief was directed to make the necessary repairs.

President Post, to whom the application of Henry Ostendorff, dated February 7, to erect a derrick on bulkhead at foot of Ninety-sixth street, North river, was referred, reports that he believes it would facilitate business on the bulkhead if the permit was granted on the condition that it be a mast derrick, subject to the free use of the public, to be erected at the place designated by the Dock Master, and to remain only during the pleasure of the Board.

On motion, the recommendation of the President approved.

From John M. Bowers, attorney and counsellor-at-law, Nos. 52 and 54 William street—Respecting the lease of Pier, new 57, North river.

Commissioner Cram moved that the lease of Pier, new 57, North river, be offered for sale at public auction for a term of ten years, from May 1, 1890, with privilege of renewal.

Commissioner Matthews moved that the further consideration of this subject be postponed until the next meeting. Which was adopted.

Commissioner Cram moved that the Engineer-in-Chief be directed to prepare plans, specifications and form of contract for repairing Pier, new 57, North river. Which was adopted.

The Treasurer, Commissioner Matthews, submitted his report of receipts for the week ending February 13, 1890, amounting to \$112,171.99, which was received and ordered to be spread in full on the minutes, as follows:

| DATE. | FROM WHOM. | FOR WHAT. | AMOUNT. | TOTAL. | DATE DEPOSITED. |
|--------|--|--|-------------|-------------|-----------------|
| 1890. | | | | | 1890. |
| Feb. 6 | Long Island Land Fertilizing Co. | 1 qrs. rent bhd. & dump, at E. 39th st. | \$500 00 | | |
| " 6 | Equitable Gas light Co. | " bhd., at E. 40th st. | 25 00 | | |
| " 6 | " | " " E. 41st st. | 25 00 | | |
| " 6 | Iron Steamboat Co. | " Pier, new 1, N. R. | 7,525 00 | | |
| " 6 | C. T. Van Santvoord. | " Pier, W. 21st st., N. R. | 875 00 | | |
| " 6 | " | " Pier, W. 22d st., N. R. | 625 00 | | |
| " 6 | G. W. Plunkitt | 40,000 filling-in tickets, at 10 cents each for south of 58th st., N. R. | 4,000 00 | | |
| " 6 | W. T. Coggeshall. | Wharfage, District No. 12, N. R. | 86 86 | \$13,661 86 | Feb. 6 |
| " 6 | F. W. J. Hurst, Agent | 1 qrs. rent, Pier, new 39, N. R. | \$7,625 00 | | |
| " 7 | New York, New Haven & Hartford R. R. Co. | " E. 1/2, Pier 51, E. R., W. 1/2, Pier 52, etc. | 2,000 00 | | |
| " 7 | Harlem & Portchester R. R. Co. | " I. u. w. for pfm. bet. Piers 50 and 51, E. R. | 375 00 | | |
| " 7 | Owens & Co. | " bhd. at E. 47th st. | 125 00 | | |
| " 7 | Popham & Co. | " " at E. 36th st. | 27 50 | 10,152 50 | " 7 |
| " 8 | Citizens' Steamboat Co. of Troy. | 4 1/2 mos. rent, Pier, new 46, N. R. | \$11,437 50 | 11,437 50 | " 8 |
| " 10 | C. L. Morgan. | 1 qrs. rent, Pier 18, E. R. | \$1,125 00 | | |
| " 10 | N. Y. Cent. & H. R. R. Co. | " bhd. & pfm. bet. Piers 4 & 5, E. R. | 250 00 | | |
| " 10 | " | " bhd. bet. Piers 5 & 6, E. R. | 250 00 | | |
| " 10 | " | " Pier 5, E. R. | 3,750 00 | | |
| " 10 | " | " Pier, new 63, N. R. | 3,750 00 | | |
| " 10 | " | " Pier 6, E. R. | 2,000 00 | | |
| " 10 | " | 1 qrs. rent I. u. w. bet. Piers, old 25, 26, 27, N. R. | 787 50 | | |
| " 10 | " | " E. 1/2, Pier 4, E. R. | 1,000 00 | | |
| " 10 | " | " I. u. w. bet. 60th and 65th streets, N. R. | 1,500 00 | | |
| " 10 | " | " I. u. w. bet. 65th and 72d streets, N. R. | 4,375 00 | | |
| " 10 | " | " I. u. w. site for Pier 59th st., N. R. | 375 00 | | |
| " 10 | " | " I. u. w. bet. Piers, old 27 & 28, N. R. | 537 37 | | |
| " 10 | " | " Pier, new 62, N. R. | 5,000 00 | | |
| " 10 | " | " Pier, new 61, N. R. | 5,000 00 | | |
| " 10 | " | 5th installment account filling in bet. 30th & 33d sts., N. R. | 15,000 00 | | |
| " 10 | Charles R. Weeks & Bro. | Test of cement. | 10 00 | | |
| " 11 | Morgan's Louisiana and Texas R. R. & S. S. Co. | 1 qrs. rent Pier, new 25, N. R. | 7,500 00 | | |
| " 11 | C. P. Huntington. | " Pier, new 37, N. R. | 17,500 00 | | |
| " 11 | " | 1/2 bhd. north and south, adjoining Pier, new 37, N. R. | 875 00 | | |
| " 11 | Charles S. Thompson. | Wharfage District No. 1, E. R. | 400 04 | | |
| " 11 | M. H. Whalen. | " 3, " | 258 00 | | |
| " 11 | John J. Ryan. | " 5, " | 53 82 | | |
| " 11 | P. J. Brady. | " 7, " | 47 34 | | |
| " 11 | Jos. B. Erwin. | " 9, " | 10 00 | | |
| " 11 | G. A. Dearborn. | " 11, " | 75 00 | | |
| " 11 | Chas. S. Coye. | " 2, N. R. | 239 11 | | |
| " 11 | Edward Abeel. | " 4, " | 124 69 | | |
| " 11 | Charles Parks. | " 6, " | 79 05 | | |
| " 11 | " | " 8, " | 146 00 | | |
| " 11 | P. J. Brady. | " 8, " | 6 40 | | |
| " 11 | Geo. A. Woods. | " 10, " | 248 25 | | |
| " 11 | Geo. A. Dearborn. | " 10, " | 81 40 | | |
| " 11 | John J. Martin. | " 12, " | 65 50 | 72,429 07 | Feb. 11 |
| " 12 | Nassau Ferry Co. | 1 qrs. rent bhd. S. of Houston st., E. R. | \$625 00 | | |
| " 12 | " | " I. u. w. for Pier, S. of Houston st., E. R. | 75 00 | | |
| " 12 | Isaac Untermeyer. | " bhd. bet. 54th and 55th sts., E. R. | 75 00 | | |

| DATE. | FROM WHOM. | FOR WHAT. | AMOUNT. | TOTAL. | DATE DEPOSITED. |
|---------|---------------------------------------|---|--------------|--------------|-----------------|
| 1890. | | | | | 1890. |
| Feb. 13 | Hoboken Land and Improvement Company. | 1 qrs. rent I. u. w. for ferry S. of Barclay st., N. R. | \$2,151 06 | | |
| " 13 | Metropolitan Ferry Co., assignee. | " S. 1/2, outer end Pier 33d st., E. R. | 725 00 | | |
| " 13 | Metropolitan Ferry Co., assignee. | " N. 1/2, outer end Pier 33d st., N. R. | 250 00 | | |
| " 13 | John H. Starin. | " Pier at 32d st., E. R. | 300 00 | | |
| " 13 | " | " pfm. bet. Piers 18 and 20, N. R. | 300 00 | | |
| | | | | \$4,501 06 | Feb. 13 |
| | | | \$112,171 99 | \$112,171 99 | |

Respectfully submitted,

JAMES MATTHEWS, Treasurer.

From Engineer-in-Chief:

1st. Report for the week ending February 8, 1890.

On motion, ordered to be placed on file.

2d. Reporting non-commencement of repairs to sundry premises on the North river.

On motion, the Secretary was directed to send in each case a notice to the effect, that if the repairs called for are not made within ten days, the same will be done by the Department at their cost and expense.

3d. Reporting non-completion of repairs to sundry premises on the North and East rivers.

On motion, the Secretary was directed to call the attention of the parties complained of to the orders previously issued by this Department, and notify them that the same must be obeyed.

4th. Reporting repairs ordered to bulkhead west of Corlears street, and east of Pier 54, East river.

On motion, the Secretary was ordered to request the Department of Street Cleaning to have the said bulkhead cleaned as recommended in the report of the Engineer-in-Chief, in order that repairs may be made.

5th. Report on Secretary's Order No. 7435, respecting the permit issued to the New York Steam Company, January 26, 1888, for the erection of derricks for loading stone on scows berthed at the bulkhead between Forty-ninth and Fifty-first streets, East river, and the placing of stone within the limits of the bulkhead line for the purpose of aiding in the construction of the bulkhead wall, and stating that the only work that has been done thereat by the said company was the erection of a rip-rap wall, extending from Forty-ninth to Fiftieth streets, which was commenced March 5, 1888, and proceeded with from time to time up to about September 10, 1888, and then suspended, no further work has been done since that time, and from what he can learn it is not the intention of the said Steam Company to do any further work thereat for the present, and suggesting that the permit be revoked.

On motion, permit was revoked.

6th. Special report on Secretary's Order No. 9128, that on June 7, 1889, permit was granted to John H. Starin to place a temporary awning of corrugated iron on Pier foot of Thirty-second street, East River, to shelter the passengers using the Glen Island boats during the summer. For some reason the said awning was not erected thereat, but the old wooden one with canvas cover which had been used up till last year under a permit granted by the Board, was again made do duty for the season. Consequently the permit granted to Mr. Starin was not made use of, and nothing was done under the said order.

On motion, permit was revoked.

7th. Special report on Secretary's Order No. 7908, in relation to the permit granted to the Northern Gas Light Company, June 4, 1888, to extend crib dock at West Farms, Bronx river, and recommending that, as no work has been done thereat, the permit be revoked.

On motion, permit was revoked.

8th. Report on Secretary's Order No. 9545, that John Gillies, contractor, has not repaired the fender-pile at crib-bulkhead at East Seventeenth Street Yard damaged by the tug "Edith Beard," on September 24, 1889.

On motion, the Secretary was ordered to notify Mr. Gillies to cause the said repairs to be made forthwith.

9th. Report on Secretary's Order No. 9830, submitting result of cement tested for Leopold Weil & Brother. The Secretary was directed to send the parties a copy of said report.

10th. Report on Secretary's Orders Nos. 9814 and 9868, submitting specifications and form of contract for dredging the half slips adjoining Piers 61, East river, and new 59, North river, which was,

On motion, ordered to be placed on file, and the following resolution in relation thereto adopted: Resolved, That the specifications and form of contract as prepared and submitted by the Engineer-in-Chief of this Department for dredging the half slips adjoining Pier 61, East river, and at Pier, new 59, North river, be and they hereby are approved, subject to the approval of the Counsel to the Corporation as to form, and the Secretary be and hereby is directed to have a sufficient number of blank forms of proposals printed and proper advertisements inviting estimates for doing the said work inserted in the various newspapers designated by law.

11th. Report on Secretary's Order No. 9149, that he had painted the designations on the outer ends of piers and bulkheads on the North, East and Harlem rivers.

On motion of Commissioner Matthews, the following resolution was adopted:

Resolved, That the Engineer-in-Chief be and he is hereby directed to keep and maintain the designation of piers and bulkheads at the foot of streets as shall from time to time be required.

12th. Report on Secretary's Order No. 9664, that he had directed and superintended the repairing of ferry premises at the foot of Grand street, East river.

13th. Report on Secretary's Order No. 9791, that he had directed and superintended the repairing of the outer southerly corner of Pier at Thirty-seventh street, North river.

14th. Report on Secretary's Order No. 9848, that he had directed and superintended the driving and fastening of five white oak fender piles in front of Pier 5, North river.

The resolution heretofore submitted respecting the manner in which resolutions and motions shall hereafter be offered for consideration, was upon motion of Commissioner Matthews ordered to be placed on file.

The matter of the lease of John Dobbins of the bulkhead on the south half of One Hundred and Thirty-eighth street, and west side of Harlem river, was upon motion, referred to the Treasurer, Commissioner Matthews, to examine and report.

On motion of President Post, the Secretary was directed to transmit to the Department of Street Cleaning a copy of the letters forwarded to that Department August 22 and September 5, 1889, respecting the dumping-board on Pier 12, East river.

On motion of President Post, the Secretary was directed to cause to be served upon the Mutual Gas Light Company a notice similar to that issued to James Affleck, executors, etc., October 1, 1889, in relation to dredging at Pier foot of Eleventh street, East river, it having been ascertained that the aforesaid Gas Company are part owners of the said pier.

On motion of President Post, the specifications and form of contract submitted January 30, 1889, for dredging at Pier, new 29, North river, together with the work to be done at Twenty-eighth street, East river, was referred back to the Engineer-in-Chief, with instructions to modify the same so that it will not include any dredging for which Treasurer's orders are now outstanding.

President Post, to whom was referred on the 8th instant the application of John W. Flaherty for an extension of time for the completion of the work specified under Contract No. 309, respectfully reports: That having learned that Mr. Flaherty had, at all times, a sufficient number of workmen employed on the work, to have completed the same within the time prescribed by the terms of said contract; and that the delay in its execution was occasioned by a succession of high tides which prevailed during its continuance, he therefore thinks it proper that the time for the completion of the said contract should be extended until the 29th of December, 1889.

On motion of Commissioner Cram, the report was approved.

The Treasurer, Commissioner Matthews, reported that he had received the following estimates for furnishing the Department with manila rope, window-glass, oak pails and 1,000 cubic yards of rip-rap:

| BIDDERS. | THREE COILS, ABOUT 900 POUNDS 3" MANILA ROPE. | TWO COILS, ABOUT 1,350 POUNDS 3 1/2" MANILA ROPE. | TWO BOXES 18 x 36 WINDOW-GLASS. | TWO DOZEN HEAVY OAK PAILS. |
|--------------------|---|---|--|----------------------------|
| John Early & Co. | \$128 16 | \$192 24 | \$11 00 | \$11 00 |
| J. S. Barron & Co. | 14 1/10 c's. per pound. | 14 1/10 cts. per pound. | { 2d qual. \$5.85 per box } { 3d qual. 5.45 " } | 6 75 per doz. |
| Alexander Pollock. | 14 3/4 cts. per pound. | 14 3/4 cts. per pound. | 5.25 per box. | 6 00 " |
| H. A. Rogers & Co. | \$337 50 | for both. | 11 00 | 11 50 |

| 1,000 Cubic Yards Rip-rap. | | |
|--|---|-----------------|
| John A. Bouker..... | 53 cents per cubic yard. | |
| Brown & Fleming..... | 67 | |
| The action of the Treasurer in awarding orders for furnishing the same to John Early & Co., and John A. Bouker respectively, was approved. | | |
| The following requisitions were passed: | | |
| Register No. | For What. | Estimated cost. |
| 8060. | Manila rope, glass and pails..... | \$324 50 |
| 8061. | Nails and ship clamp-screws..... | 67 50 |
| 8062. | Repairs to disk for centrifugal pump..... | 10 00 |
| 8063. | Repairs floating property..... | 15 00 |
| 8064. | Twelve ash oars, etc..... | 39 96 |
| 8065. | Repairs, etc., to level..... | 10 00 |
| 8066. | Repairs, etc., to transit..... | 25 00 |
| 8067. | About 1,000 pounds second-hand chains..... | 45 00 |
| 8068. | Repairs 12-ton derrick..... | 68 00 |
| 8069. | About 35 gross tons egg coal..... | 144 00 |
| Requisition No. | | |
| 460. | One cabinet and renewal of type-writer..... | |
| 461. | Seventy-five copies contract 322..... | |
| 462. | " " " 323..... | |
| 463. | " " " 324..... | |
| 464. | " " " 325..... | |
| 465. | Stationery..... | |
| Commissioner Matthews moved that when this Board adjourns, it do so to meet on Friday, February 14, 1890, at 3 o'clock, P. M. | | |
| Which was agreed to. | | |
| On motion, the Board adjourned. | | |

AUGUSTUS T. DOCHARTY, Secretary.

LAW DEPARTMENT.

The following schedules form a report of the transactions of the office of the Counsel to the Corporation for the week ending February 22, 1890.

The Mayor, Aldermen and Commonalty of the City of New York are defendants, unless otherwise mentioned.

SCHEDULE "A."

SUITS AND SPECIAL PROCEEDINGS INSTITUTED.

SUPREME COURT.

In the matter of Albert H. Rogers, an alleged lunatic—Habeas corpus for release of relator.

The Emigrant Industrial Savings Bank vs. Patrick Sullivan and The Mayor, etc.—To foreclose a mortgage against Susan Sullivan (City a judgment creditor against John Sullivan for \$10).

The New York Law Journal Publishing Company—For publishing calendar of the Courts and other legal notices, from June 23, 1888, to December 23, 1889, \$5,999.94.

Robert Irwin—Case on submission. Question as to whether the City should pay interest on a school site award, tender having been made within four months from date.

William R. Newell and another—Balance alleged to be due, and for loss and damages sustained under contract for regulating, etc., One Hundred and Seventieth street, from Tenth to Eleventh avenue, \$3,139.95.

In the matter of the application of the Department of Public Parks of the City of New York, relative to opening of North Third avenue, etc., on the petition of John McGuire—For an award made to unknown owners on damage map Nos. 38 and 39, \$2,336.16.

The Manhattan Electric Light Co., Limited, vs. Hugh J. Grant, Mayor of the City of New York, Jacob Hess and another, constituting the Board of Electrical Control, et al.—To restrain defendants, Hugh J. Grant and Board of Electrical Control, from modifying existing contracts with the other defendant, and from making a new contract with the Standard Electrical Subway Co., and restraining the Consolidated Telegraph and Electrical Subway Co. from transferring possession of its subways to the Standard Electrical Subway Co.

Theodore W. Morris et al. vs. The Mayor, etc., of the City of New York, the Willis Iron Works, et al.—To foreclose lien for glass and labor furnished in the enlargement of the Metropolitan Museum of Art in August 1888, \$1,318.35.

John Flanagan vs. The Mayor, etc., of the City of New York, John J. Farley et al.—To foreclose lien for materials furnished under contract of J. J. Farley for regulating, etc., One Hundred and Ninth street, from Eighth to Manhattan avenue, \$2,289.36.

Rapauno Chemical Co. vs. The Mayor, etc., of the City of New York, Maicho Fortunato, et al.—To foreclose a lien for material furnished under contract of Fortunato for regulating, etc., One Hundred and Forty-seventh street, from Tenth avenue to Boulevard, \$749.15.

Rapauno Chemical Co. vs. The Mayor, etc., of the City of New York, Maicho Fortunato, et al.—To foreclose a lien for materials furnished under contract of Fortunato for regulating, etc., Ninety-first street from Ninth to Tenth avenue, \$216.60.

In re petition of John B. Taylor—To vacate assessment and sale for filling low grounds at One Hundred and Fifteenth and One Hundred and Twenty-fourth streets, from Fifth to Eighth avenues.

COMMON PLEAS.

Angelina Tagg—That tax for year 1879 on premises known as line No. 1455, Ward No. 2676, Twentieth Ward, be canceled of record, \$51.60.

SCHEDULE "B."

JUDGMENTS ENTERED AND ORDERS OF THE GENERAL AND SPECIAL TERMS.

People ex rel. William Darrow and another vs. Tax Commissioners—Order entered vacating assessment against relators for the year 1887, pursuant to decision of Court of Appeals.

William P. Mitchell—Judgment entered in favor of plaintiff for \$8,969.24, after trial before Lawrence, J., and jury.

Jacob Scholle—Order entered granting extra allowance of \$750, upon motion before Beach, J.

The Mayor, etc., vs. Harris Beaver et al.—Judgment entered in favor of defendants dismissing the complaint on the merits and for costs, as follows: Beaver & Brady, \$166.69; Ritter, \$153.82, after trial before Lawrence, J., and jury.

Harlem Library—Judgment entered in favor of plaintiff canceling tax for year 1870 on Ward No. 39, Block 412, Twelfth Ward, amounting to \$112.50, upon motion before Lawrence, J.

People of the State of New York vs. Henry Goltze and another—Ordered entered directing Comptroller to pay \$300 on account of \$342.60 heretofore deposited with him by the District Attorney, upon motion at General Term.

Mary E. Brennan—Judgment entered in favor of plaintiff for \$1,479.77, after trial before Lawrence, J., and jury.

People ex rel. Wm. D. True vs. Hugh J. Grant, Mayor, etc.—Order entered denying motion for mandamus without costs, and without prejudice to any other proceedings the petitioner may be advised to take in the premises.

Washington Tobias—Judgment entered dismissing complaint for lack of prosecution and for \$133.29 costs, after motion before Barrett, J.

Ninth Avenue Railway Company (snow plows)—Entered General Term order of reversal in favor of City and for \$10 costs.

People ex rel. Fredk. Heffernan vs. Police Commissioners—Entered General Term order affirming proceedings of Commissioners, with costs.

People ex rel. Hugh McCormack vs. Police Commissioners—Entered General Term order affirming proceedings of Commissioners, with costs.

Maurice Teahan—Order entered discontinuing action without costs by consent.

James Brooks—Judgment entered in favor of the plaintiff for \$360.78, after trial before Lawrence, J., and jury.

William Buck and another—Order entered discontinuing action without costs by consent.

People ex rel. Myron Allen vs. Board of Police—Order entered affirming proceedings of Commissioners and dismissing writ with costs, after argument at General Term.

People ex rel. Herman H. Koenig vs. Police Commissioners—Order entered affirming proceedings of Commissioners and dismissing writ with costs, after argument at General Term.

People ex rel. David O'Callahan vs. Police Commissioners—Order entered affirming proceedings of Commissioners and dismissing writ with costs, after argument at General Term.

John C. Rogers and another—Order entered dissolving temporary injunction and denying motion to continue same, with \$10 costs.

Henry Collins and another—Order entered dissolving temporary injunction and denying motion to continue same, with \$10 costs.

Alvah Hall—Order entered discontinuing action without costs by consent.

Edward Tracy—Order entered dismissing complaint with costs, after motion made before Patterson, J.

George Winn—Judgment entered in favor of the City dismissing complaint and for \$109.27 costs; non-appearance of plaintiff.

People ex rel. Thomas Sheridan vs. Board of Police—Order entered on remittitur.

John J. Shelly—Judgment entered in favor of plaintiff for \$1,537.14, after trial before Beach, J., and jury.

John H. Strahan—Judgment entered in favor of plaintiff for \$2,500 without trial; letter to Comptroller.

SCHEDULE "C."

SUITS AND SPECIAL PROCEEDINGS TRIED OR ARGUED.

In the matter of John Loftus—Motion for mandamus argued before Patterson, J.; denied; W. A. Sweetser for City.

John Jetter—Tried before O'Gorman, J., and jury; sealed verdict directed; verdict for City; F. L. Wellman and H. B. Twombly for City.

The Mayor, etc., vs. Harris Beaver et al.—Motion to set aside verdict in favor of defendants and for new trial denied; five per cent allowance on \$1,334.69 granted to the defendants; J. J. Townsend for City.

Edward Tracy—Motion to dismiss complaint made before Patterson, J.; granted; W. A. Sweetser for City.

John J. Shelly—Tried before Beach, J., and jury; verdict for plaintiff for \$1,184; H. B. Twombly for City.

Matter People's Rapid Transit Company—Motion made to dismiss as to the City on the ground of no interest; granted; D. J. Dean for City.

New Parks, claim of Ferdinand T. Hopkins—Reference to ascertain title proceeded and adjourned to February 26, at 3 P. M.; C. N. Harris for City.

The Mayor, etc., vs. Nicholas W. Seagrist et al.—Tried before Lawrence, J., and jury; verdict for plaintiff for \$400, and 5 per cent. extra allowance; J. J. Townsend for City.

Matter East River Park—Hearing before the Commissioners proceeded and adjourned to February 21, at 11 A. M.; 21st, proceeded and adjourned to February 24, at 11 A. M.; C. D. Olendorff for City.

Woodbury G. Landon—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned to February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Woodbury G. Landon et al.—Reference, proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Matthew Wilks—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Matthew Wilks and ano.—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Cecilia Nottbeck—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Louisa D. Kane—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Marian Langdon—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Walter Langdon—Reference proceeded, plaintiff rested, and T. P. Wickes opened for the defendants and then adjourned till February 21, at 11.30 A. M.; 21st, proceeded and adjourned to February 25, at 11.30 A. M.

Matter Corlears Hook Park—Hearing before the Commissioners proceeded and adjourned till February 20, at 2 P. M.; 20th, proceeded and adjourned to February 27, at 2 P. M.; Sidney J. Cowen for City.

In re Henry Volkening, Sixty-third and Sixty-fourth street sewers—Reference proceeded and adjourned to February 20; G. L. Sterling for City.

Matter of William Meyer or Fromeyer—Tried before jury, who found Meyer to be insane; W. Hartwell for City.

In re James A. Striker, Fifty-second street sewer—Motion for leave to submit exceptions to findings argued before Lawrence, J.; granted, and motion to confirm report argued; decision reserved; D. J. Dean and G. L. Sterling for City.

In re James A. Striker, Fifty-second and Fifty-third street sewers—Motion for leave to submit exceptions to findings argued before Lawrence, J.; granted, and motion to confirm report argued; decision reserved; D. J. Dean and G. L. Sterling for City.

In re Elsworth L. and James A. Striker, Fifty-second and Fifty-fourth street sewers—Motion for leave to submit exceptions to findings argued before Lawrence, J.; granted, and motion to confirm report argued; decision reserved; D. J. Dean and G. L. Sterling for City.

In re Absalom Alexander, Seventy-second street sewer—Motion for leave to submit exceptions to findings argued before Lawrence, J.; granted, and motion to confirm report argued; decision reserved; D. J. Dean and G. L. Sterling for City.

Dock Department, application for seventy-five feet of bulkhead on the westerly side of West street—Hearing before the Commissioners proceeded and adjourned to February 28, at 3 P. M.; J. J. Townsend for City.

Robert J. Rosenthal vs. Koontz & Harriot—Motion to dismiss complaint made before Steckler, J. granted; E. H. Hawke, Jr., for City.

WILLIAM H. CLARK, Counsel to the Corporation.

POLICE DEPARTMENT.

The Board of Police met on the 25th day of February, 1890.

Present—Commissioners MacLean, McClave, Voorhis and Martin.

Report of the Board of Surgeons, on examination of Patrolman Daniel J. Haggerty, Tenth Precinct, and recommending that the case lie over sixty days, was approved.

Report of the Superintendent, inclosing \$520, mask ball fees, was referred to the Treasurer to pay into the Pension Fund.

Report of the Chief of the Bureau of Elections, on application of Charles L. Merrill for payment for services as Inspector of Election, was ordered on file, and the Chief Clerk directed to answer.

Reports Ordered on File.

Inspector Steers—On suicide of prisoner Richard Collins alias Richard Barrett.

Contagious disease in family of Patrolman John W. McGloin, Sixteenth Precinct.

Contagious disease in family of Patrolman Philip Smith, Nineteenth Precinct.

Application of Captain Gunner, Twenty-fifth Precinct, for change of record as to date of his birth, was referred back to him to procure copy of parish register.

Mask Ball Permits Granted.

Samuel Weill, at Harlem River Casino, March 3. Fee, \$25.

Jacob Unger, at Harlem Turn Hall, March 5. Fee, \$25.

Charles A. Kramer, at New York Turn Hall, March 1. Fee, \$25.

Fred Lubin, at Clarendon Turn Hall, March 1. Fee, \$25.

Alfonso Castaldo, at Beethoven Hall, March 1. Fee, \$25.

Henry Schwenk, at Everett Hall, March 1. Fee, \$25.

Morris H. Lewis, at Everett Hall, March 5. Fee, \$25.

Application of Roundsman Michael Naughton, Thirty-fourth Precinct, for Civil Service examination, was referred to the Superintendent for report.

Applications Denied.

Worth & Huber, for appointment of Andrew H. Corey as Special Patrolman.

Patrolman Thomas J. Dimond, Fourteenth Precinct, for full pay while sick.

Application of Boettger & Hinge, for permission to connect silk factory, No. 738 East One Hundred and Forty-fourth street, by telegraph with Thirty-third Precinct Station-house, was referred to the Committee on Repairs and Supplies.

Application of Captain Hooker, Thirtieth Precinct, for transfer of Roundsman Robinson, Sixteenth Precinct, was ordered on file.

Communications Referred to the Chief Clerk to Answer.

Dr. Charles J. Kane—Complaint against Sergeant Bernard Cahill, Twenty-first Precinct, relative to night medical service.

S. A. Emanuel—Relative to debt claim against Patrolman John C. Henderson, and report of the President thereon.

Gustav Frise—Relative to pistol permit.

H. P. Weil—Inquiry as to certain qualifications.

Communication from the Chief of the Bureau of Elections—Relative to data from the Health Department as to deaths in hospitals, was referred to the President.

Communication from the Chief of the Bureau of Elections, relative to consolidation of Election Districts, was referred to the Counsel to the Corporation with request that he draft a bill for the purpose; also, a bill authorizing the Board of Police to redistrict Election Districts.

Communication from Howe & Hummell, giving notice that George Williams will continue placing money on legalized race tracks, at No. 5 Barclay street, was referred to the Superintendent to enforce the law.

Weekly financial statement of the Comptroller was referred to the Treasurer.

Communication from the Property Clerk relative to claim of G. R. Westerfield on assignment from Chris St. Clair for \$232.18, taken from Miss Wilson, Rector street, was referred to the Counsel to the Corporation for advice.

Transfers, etc.

Sergeant John McNamara, from Twenty-third Sub-Precinct to Eighth Precinct.

Roundsman Patrick Cosgrove, from Twentieth Precinct to Thirtieth Precinct.

Thomas McCormick, from Twenty-third Precinct to Twentieth Precinct.

Thomas Murphy, from Thirty-third Precinct, detail Acting Sergeant three days.

George W. Richards, from Twenty-sixth Precinct to Central Office.

John Harris, from Twenty-eighth Precinct to Twenty-first Precinct.

Patrolman Zabriskie H. Mullen, from Fourth Precinct to Fourteenth Precinct, remand to patrol.

Edward Buttlinger, from Thirty-third Precinct, remand to patrol.

John Ward, from Twenty-sixth Precinct to Twenty-third Sub-Precinct.

William D. Hickey, from Twenty-ninth Precinct to Fifth Court.

Thomas Hill, from Fifth Court to Twenty-ninth Precinct.

John A. Dourigan, from Ninth Precinct to Fifteenth Precinct.

Edward Hagen, from Eleventh Precinct to Third Court.

Charles B. Kerns, from Third Court to Eighth Precinct.

James J. Hart, from First Precinct to Twenty-third Precinct.

John J. Nolan, from Fourth Precinct to Tenth Precinct.

John L. Van Wart, from Ninth Precinct to Fifteenth Precinct.

Michael O'Connell, from Thirteenth to Nineteenth Precinct.

George W. Blonk, from Eighteenth Precinct to Twenty-first Precinct.

James Boyle, from Nineteenth Precinct to Fourth Precinct.

Edward Gallagher, from Twentieth Precinct to Tenth Precinct.

James F. Crowe, from Twenty-sixth Precinct to Central Office.

Edward O'Hara, from Twenty-seventh Precinct to Central Office.

John Tracey, from Twenty-second Precinct to Central Office.

William J. Armstrong, from Twenty-seventh Precinct to Sixth Precinct.

Charles E. Brewer, from Twenty-ninth Precinct, to Central Office.

Charles D. Allaire, from Twenty-ninth Precinct to Tenth Precinct.

Edward McMahon, from Thirtieth Precinct, to Central Office.

John Brown, from Thirty-second Precinct to Third Precinct.

Michael Kirley, from Thirty-second Precinct to Central Office.

Patrick Kenneally, from Thirty-fifth Precinct to Twenty-first Precinct.

Charles Lewz, from Thirty-fourth Precinct to Twenty-fifth Precinct.

William H. Lake, from Twenty-ninth Precinct to Fourth Precinct.

Advanced to Second Grade.

Patrolman John R. Cullen, Eighteenth Precinct, February 20, 1890.

John Horan, Eighteenth Precinct, February 20, 1890.

Resolved, That the Committee of Surgeons be directed to examine the following applicants for appointment as Patrolmen:

John Melville.

Charles J. Beringer.

Albert Bauerschmidt.

Resolved, That the pay rolls of the Police Department and Force, and of the Central Department, for the month of February, 1890, when properly audited and approved, be and are hereby ordered to be paid by the Treasurer—all aye.

Resolved, That the bill of Frank E. Towle, \$10, for surveying lots in West Sixty-eighth street, be and is hereby ordered to be paid by the Treasurer—all aye.

Resolved, That the pistol permit of Richard A. Gaebler be and is hereby revoked, on report of Sergeant Horbelt, Tenth Precinct.

Judgments—Fines Imposed.

Sergeant James J. Brophy, Eighteenth Precinct, neglect of duty, thirty days' pay.

Patrolman Thomas Courtois, Tenth Precinct, neglect of duty, one day's pay.

Zabriskie H. Mullen, Fourteenth Precinct, neglect of duty, etc., fifteen days' pay.

William Wines, Eighteenth Precinct, conduct unbecoming an officer, two days' pay.

George W. Blonk, Eighteenth Precinct, neglect of duty, three days' pay.

Richard J. Clarkson, Eighteenth Precinct, neglect of duty, four days' pay.

Andrew Brennan, Twenty-second Precinct, neglect of duty, five days' pay.

John W. Brophy, Twenty-second Precinct, neglect of duty, one day's pay.

Michael McEntee, Twenty-sixth Precinct, neglect of duty, one day's pay.

Franklin Cooper, Twenty-sixth Precinct, neglect of duty, one day's pay.

John J. Malloy, Twenty-sixth Precinct, neglect of duty, one-half day's pay.

Chris. F. Tautphoeus, Twenty-sixth Precinct, neglect of duty, one-half day's pay.

Joseph E. Burke, Twenty-seventh Precinct, neglect of duty, five days' pay.

Charles E. Garrison, Twenty-ninth Precinct, neglect of duty, three days' pay.

John A. Smith, Twenty-ninth Precinct, neglect of duty, two days' pay.

Richard Walker, Twenty-ninth Precinct, neglect of duty, two days' pay.

James Quinn, Thirtieth Precinct, neglect of duty, two days' pay.

James Masters, Thirty-first Precinct, neglect of duty, two days' pay.

Edgar Voorhees, Thirty-second Precinct, neglect of duty, one-half day's pay.

Andrew O'Neil, Thirty-second Precinct, neglect of duty, one-half day's pay.

John L. Pearce, Thirty-second Precinct, neglect of duty, one-half day's pay.

Edward Buttlinger, Thirty-third Precinct, conduct unbecoming an officer, five days' pay.

Michael J. Tarpey, Thirty-third Precinct, neglect of duty, one day's pay.

Andrew Wood, Thirty-third Precinct, neglect of duty, two days' pay.

John Hanna, Thirty-fourth Precinct, neglect of duty, one-half day's pay.

William J. Nally, Thirty-fourth Precinct, neglect of duty, two days' pay.

William J. Nally, Thirty-fourth Precinct, violation of rules, two days' pay.

George E. Poole, Thirty-fifth Precinct, neglect of duty, one day's pay.

John Oakley, Thirty-fifth Precinct, neglect of duty, one-half day's pay.

Patrick F. Gilmartin, Thirty-fifth Precinct, neglect of duty, one half day's pay.

Louis F. Bayer, Eleventh Precinct, conduct unbecoming an officer, three days' pay.

John McGrath, Twenty-second Precinct, neglect of duty, one day's pay.

Frederick G. Carson, Twenty-seventh Precinct, neglect of duty, one-half day's pay.

John Hale, Thirtieth Precinct, neglect of duty, one-half day's pay.

William J. Duggan, Thirty-second Precinct, neglect of duty, one-half day's pay.

Joseph H. Wooley, Thirty-fourth Precinct, neglect of duty, one-half day's pay.

John Early, Thirty-second Precinct, neglect of duty, one-half day's pay.

Michael Nolan, Twenty-sixth Precinct, neglect of duty, one day's pay.

George V. Reed, Twenty-sixth Precinct, neglect of duty, one-half day's pay.

James S. Flood, Twenty-sixth Precinct, neglect of duty, one day's pay.

John H. Thrall, Thirty-third Precinct, neglect of duty, one day's pay.

Complaints Dismissed.

Patrolman Thomas Jefferson, Eighteenth Precinct, neglect of duty, etc.

John Oakley, Thirty-fifth Precinct, neglect of duty, etc.

George W. Holmes, Thirty-fifth Precinct, neglect of duty, etc.

Adjourned.

WM. H. KIPP, Chief Clerk.

DEPARTMENT OF STREET CLEANING.

DEPARTMENT OF STREET CLEANING—CITY OF NEW YORK,
Nos. 49 AND 51 CHAMBERS STREET,
NEW YORK, February 24, 1890.

In accordance with the provisions of section 51, chapter 410 of the Laws of 1882, the Commissioner of Street Cleaning makes the following abstract of the transactions of this Department for the week ending January 26, 1890:

Streets Swept.

| | Miles. |
|-----------------------------|----------|
| By Department forces | 1,177.12 |
| By contract, lower Broadway | 15.00 |
| Total | 1,192.12 |

Material Collected.

| | Ashes and Garbage. | Street Sweepings. | Total Loads. |
|---------------------------------------|--------------------|-------------------|--------------|
| By Department forces | 22,107 | 9,613 | 31,720 |
| On permit— | | | |
| Bureau of Markets | 171 | ..... | 171 |
| Departments of Public Works and Parks | ..... | 211 | 211 |
| Manufacturers (boiler ashes, etc.) | 3,885 | ..... | 3,885 |
| Totals | 26,163 | 9,824 | 35,987 |

Final Disposition of Material.

| | Loads. |
|--|---------|
| At sea and behind bulkheads— | |
| 43 dumpers at sea | 18,369 |
| 17 deck scows at Jersey City | 6,797 |
| 13 deck scows at Ravenswood | 4,762 |
| 10 deck scows at Newark Bay | 3,733 |
| 1 deck scow at Passaic river | 486 |
| 1 deck scow at Guttenburg | 359 |
| | 34,506 |
| In lots for fertilizing, filling-in, etc.— | |
| At One Hundred and Thirty-eighth street and Fifth avenue | 1,241 |
| At One Hundred and Thirty-sixth street and North river | 476 |
| At various places | 985 |
| | 2,702 |
| Total disposition | *37,208 |

Appointments.

Michael Doyle, Hired Cart, Twenty-seventh Precinct.
Peter Sherry, Hired Cart, Nineteenth Precinct.
Edward Walsh, Hired Cart, Nineteenth Precinct.
Edward A. M. Byrne, Hired Cart, Twenty-seventh Precinct.
William Kiernan, Hired Cart, Twentieth Precinct.
Patrick Sullivan, Department Cart Driver.
E. P. Hagan, Deputy Commissioner of Street Cleaning.
William Robbins, District Superintendent, Fourth District.

Removals.

Philip Dady, Laborer, Second Precinct.
E. Forrest, Laborer, Fourth Precinct.
John Giles, Laborer, Fourth Precinct.
P. Connelly, Laborer, Seventh Precinct.
T. Miles, Laborer, Eighth Precinct.
J. Farrell, Laborer, Tenth Precinct.
B. Sheehan, Laborer, Eleventh Precinct.
James Shea, Laborer, Eleventh Precinct.
P. Cogan, Laborer, Eleventh Precinct.
W. O'Connell, Laborer, Eleventh Precinct.
M. Shreiner, Laborer, Eleventh Precinct.
M. Brennan, Laborer, Twelfth Precinct.
W. T. Manghan, Laborer, Twelfth Precinct.
S. Leis, Laborer, Fourteenth Precinct.
P. Harrison, Laborer, Fourteenth Precinct.
L. Gallagher, Laborer, Sixteenth Precinct.
A. Strickler, Laborer, Eighteenth Precinct.
F. Monahan, Laborer, Eighteenth Precinct.
J. Sheerin, Laborer, Nineteenth Precinct.
T. Supple, Laborer, Nineteenth Precinct.
P. Hayes, Laborer, Twenty-first Precinct.
J. Corey, Laborer, Twenty-second Precinct.
F. Kiernan, Laborer, Twenty-second Precinct.
M. Hopkins, Laborer, Twenty-second Precinct.
H. Kane, Laborer, Twenty-second Precinct.
J. Schmitz, Laborer, Twenty-second Precinct.
T. Heaney, Laborer, Twenty-fifth Precinct.
James McGowan, Laborer, Twenty-sixth Precinct.
J. Andrews, Laborer, Twenty-fifth Precinct (deceased).
Hayward & Duffy, Hired Cart No. 46, Fourth Precinct.
Hayward & Duffy, Hired Cart No. 47, Fourth Precinct.
Hayward & Duffy, Hired Cart No. 48, Fourth Precinct.
Hayward & Duffy, Hired Cart No. 49, Fourth Precinct.
P. Tims, Hired Cart, Fifth Precinct.
John Reilly, Hired Cart, Sixteenth Precinct.
Edward Lloyd, Hired Cart, Sixteenth Precinct.
W. Martin, Hired Cart, Nineteenth Precinct.
A. V. O'Neil, Jr., Hired Cart, Twenty-second Precinct.
A. O'Neil, Hired Cart, Twenty-sixth Precinct.
L. Martin, Hired Cart, Thirty-third Precinct.
H. Drost, Hired Cart, Thirty-third Precinct.
C. R. Geddes, Acting Assistant Dump Inspector, Twenty-second Street Dump.
John Muller, Acting Assistant Dump Inspector, Eightieth Street Dump.
Samuel Kinnaird, Hostler at Stables.
James Idasco, Department Cart Driver.
Hugh Flynn, Hired Cart, Twenty-first Precinct.

Transfers.

Andrew Sheridan, Assistant Dump Inspector to Dump Inspector, Twelfth street.
Patrick Costello, Hired Cart, Fourth to Sixth Precinct.
Thomas F. Kerr, Assistant Foreman, Seventh to Fourth Precinct.

Resigned.

William Robbins, Deputy Commissioner of Street Cleaning.

Bills Audited

—and transmitted to Finance Department:

| | |
|---|----------|
| Schedule No. 3— | |
| Blake Manufacturing Co., Geo. F., valve bolts | \$3 60 |
| Dahlman, I. H., hired horses | 372 00 |
| Dillon, James, hired horses | 198 00 |
| Hopkins & Rossell, oils | 143 80 |
| Hall's Son, Isaac, shackle for stakeboat | 4 50 |
| Negus, T. S. & J. D., binnacle lamp | 4 00 |
| Short & Co., W. G., supplies to harness | 177 53 |
| | \$903 43 |

—chargeable to appropriation for 1890, as follows:

| | |
|---------------------|----------|
| "Sweeping" | \$145 98 |
| "Carting" | 640 36 |
| "Final Disposition" | 111 39 |
| Total | \$903 43 |

Schedule No. 105—

| | |
|--|------------|
| Hill, Thomas, supplies for carts | \$135 00 |
| Moran, Michael, extra towing | 504 00 |
| Stebbins, F., agent, propeller "H. S. Nichols," extra towing | 25 00 |
| Shanley, B. M. & J. F., final disposition | 529 43 |
| Shanley, B. M. & J. F., final disposition | 590 70 |
| Thwaites & Co., George, brass swing lamp | 4 00 |
| | \$1,788 18 |

—chargeable to appropriation for 1889, as follows:

| | |
|---------------------|------------|
| "Carting" | \$135 00 |
| "Final Disposition" | 1,653 18 |
| Total | \$1,788 18 |

*Includes 1,221 loads of material previously left on scows.

Bids for Feed.

| | |
|-------------------------------|----------|
| J. Fitzpatrick, approved..... | \$658 12 |
| J. E. Connolly..... | 660 02 |
| H. Ingersoll..... | 660 87 |
| P. Lenane & Bro..... | 660 88 |
| T. P. Hoffman & Co..... | 668 06 |

HORACE LOOMIS, Commissioner of Street Cleaning.

APPROVED PAPERS.

Resolved, That gas-pipes be laid, lamp-posts erected and street-lamps placed thereon and lighted in Ninetieth street, between First and Second avenues, under the direction of the Commissioner of Public Works.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the flagging and the curb now on the sidewalks on the west side of Tenth avenue, from Eighty-seventh to Eighty-eighth street, be relaid and reset where necessary, and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 321 of chapter 410, Laws 1882, as amended by chapter 569, Laws 1887, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the flagging and the curb now on the sidewalks on the north side of One Hundred and Thirteenth street, from Seventh to Eighth avenue, and east side of Eighth avenue, from One Hundred and Thirteenth to One Hundred and Fourteenth street, be relaid and reset where necessary and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 321 of chapter 410, Laws 1882, as amended by chapter 569, Laws of 1887, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the sidewalks on the north side of Sixty-ninth street, from Ninth avenue to the Boulevard, be flagged full width, where not already done, and that the flagging and the curb now on the sidewalks be relaid and reset where necessary, and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 321 of chapter 410, Laws of 1882, as amended by chapter 569, Laws of 1887, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the flagging and the curb now on the sidewalks on the south side of One Hundred and Third street, from Ninth to Tenth avenue, be relaid and reset where necessary, and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 321 of chapter 410, Laws of 1882, as amended by chapter 569, Laws of 1887, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the carriageway of Little West Twelfth street, from the westerly line of Washington street to the easterly line of Tenth avenue, so far as the same is within the limits of grants of land under water, be repaved with granite-block pavement on concrete foundation, and that the present crosswalks within that space be relaid, using the present bridge-stones where not worn or broken so as to be unfit for use, and using new bridge-stones in place of defective stones, under the provisions of chapter 449, Laws of 1889, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the carriageway of One Hundred and Sixty-first street, or Clifton street, from the easterly crosswalk of St. Ann's avenue to the westerly crosswalk of Cauldwell avenue, be paved with granite-block pavement, and that crosswalks be laid at the terminating or intersecting avenues where not already laid, under the direction of the Commissioners of Public Parks; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the vacant lots on the north side of West Sixty-ninth street, commencing about one hundred and seventy-five feet east of the Boulevard, and extending about seventy-five feet on said Sixty-ninth street, be fenced in under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That a crosswalk of two courses, with a row of paving-blocks between the courses, be laid across Hamilton place, at its intersection with the northerly and southerly sides of One Hundred and Forty-second street, where not already laid; the materials to be used for said work to be bridge-stone of North river blue stone, of the dimensions and according to the specifications now used in the Department of Public Works, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the roadway of One Hundred and Fourteenth street, from Eighth to Manhattan avenue, be paved with granite-block pavement, and that crosswalks be laid at the terminating avenues where not already laid, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That gas-mains be laid, lamp-posts erected and street-lamps placed thereon and lighted in Kirk place, from Ryer to Anthony avenue, under the direction of the Commissioner of Public Works.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That permission be and the same is hereby given to C. W. Rourke to place and keep two ornamental lamp-posts and lamps in front of his premises, Nos. 1231 and 1233 Broadway, near the curb, provided said posts shall not exceed the dimensions prescribed by law (eighteen inches square at the base), that the lamps be kept burning during the same hours as the public lamps, and that the work be done, and gas supplied at his own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That water-pipes be laid in Ninetieth street, between First and Second avenues, as provided in section 356 of the New York City Consolidation Act of 1882.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

Resolved, That the carriageway of Eighty-seventh street, from West End avenue to the Riverside Drive, be paved with asphalt pavement on concrete foundation, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Adopted by the Board of Aldermen, February 11, 1890.
Approved by the Mayor, February 19, 1890.

EXECUTIVE DEPARTMENT.

MAYOR'S OFFICE,
NEW YORK, February 1, 1889.

Pursuant to section 9 of chapter 339, Laws of 1883, I hereby designate the "Daily News" and the "New York Morning Journal," two of the daily papers 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.

HUGH J. GRANT, Mayor.

OFFICIAL DIRECTORY.

STATEMENT OF THE HOURS DURING which all the Public Offices in the City are open for business, and at which the Courts regularly open and adjourn, 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 4 P. M.; Saturdays, 10 A. M. to 12 M.
HUGH J. GRANT, Mayor. LEICESTER HOLME, Secretary and Chief Clerk.

Mayor's Marshal's Office.

No. 1 City Hall, 9 A. M. to 4 P. M.
DANIEL ENGELHARD, First Marshal.
FRANK FOX, Second Marshal.

COMMISSIONERS OF ACCOUNTS.

Rooms 114 and 115, Stewart Building, 9 A. M. to 4 P. M.
MAURICE F. HOLAHAN, EDWARD P. BARKER.

AQUEDUCT COMMISSIONERS.

Room 209, Stewart Building, 5th floor, 9 A. M. to 5 P. M.
JAMES C. DUANE, President; JOHN C. SHEEHAN, Secretary; A. FTELEY, Chief Engineer; J. C. LULLY, Auditor.

BOARD OF ARMOR COMMISSIONERS.

THE MAYOR, Chairman; PRESIDENT OF DEPARTMENT OF TAXES AND ASSESSMENTS, Secretary.
Address M. COLEMAN, Staats Zeitung Building, Tryon Row. Office hours, 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

COMMON COUNCIL.

Office of Clerk of Common Council.

No. 8 City Hall, 9 A. M. to 4 P. M.
JOHN H. V. ARNOLD, President Board of Aldermen.
FRANCIS J. TWOMEY, Clerk Common Council.

City Library.

No. 12 City Hall, 10 A. M. to 4 P. M.
JAMES H. FARRELL, City Librarian.

DEPARTMENT OF PUBLIC WORKS.

Commissioner's Office.

No. 31 Chambers street, 9 A. M. to 4 P. M.
THOMAS F. GILROY, Commissioner; BERNARD F. MARTIN, 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.
JOSEPH RILEY, Register.

Bureau of Street Improvements.

No. 31 Chambers street, 9 A. M. to 4 P. M.
WM. M. DEAN, Superintendent.

Bureau of Sewers.

No. 31 Chambers street, 9 A. M. to 4 P. M.
Engineer-in-Charge.

Bureau of Repairs and Supplies.

No. 31 Chambers street, 9 A. M. to 4 P. M.
WILLIAM G. BERGEN, Superintendent.

Bureau of Water Purveyor.

No. 31 Chambers street, 9 A. M. to 4 P. M.
WM. H. BURKE, Water Purveyor.

Bureau of Lamps and Gas.

No. 31 Chambers street, 9 A. M. to 4 P. M.
STEPHEN MCCORMICK, Superintendent.

Bureau of Streets and Roads.

No. 31 Chambers street, 9 A. M. to 4 P. M.
JOHN B. SHEA, Superintendent.

Bureau of Incumbrances.

No. 31 Chambers street, 9 A. M. to 4 P. M.
MICHAEL F. CUMMINGS, Superintendent.

Keeper of City Hall.

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.
THEODORE W. MYERS, 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.
WILLIAM J. LYON, First Auditor.
DAVID E. AUSTEN, Second Auditor.

Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents.

Nos. 31, 33, 35, 37, 39 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.
D. LOWBER SMITH, Collector of Assessments and Clerk of Arrears.
No money received after 2 P. M.

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 DALY, Collector of the City Revenue and Superintendent of Markets.
No money received after 2 P. M.

Bureau for the Collection of Taxes.

No. 57 Chambers street and No. 35 Reade street, Stewart Building, 9 A. M. to 4 P. M.
GEORGE W. MCLEAN, Receiver of Taxes; ALFRED VREDENBURGH, Deputy Receiver of Taxes.
No money received after 2 P. M.

Bureau of the City Chamberlain.

Nos. 25, 27 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.
THOMAS C. T. CRAIN, City Chamberlain.

Office of the City Paymaster.

No. 33 Reade street, Stewart Building, 9 A. M. to 4 P. M.
JOHN H. TIMMERMAN, City Paymaster.

LAW DEPARTMENT.

Office of the Counsel to the Corporation.

Staats Zeitung Building, third and fourth floors, 9 A. M. to 5 P. M. Saturdays, 9 A. M. to 12 M.
WILLIAM H. CLARK, 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.
CHARLES E. LYDECKER, Public Administrator.

Office of Attorney for Collection of Arrears of Personal Taxes.

Stewart Building, Broadway and Chambers street, 9 A. M. to 4 P. M.
JOHN G. H. MEYERS, Attorney.
SAMUEL BARRY, Clerk.

Office of the Corporation Attorney.

No. 49 Beekman street, 9 A. M. to 4 P. M.
LOUIS STECKLER, Corporation Attorney.

POLICE DEPARTMENT.

Central Office.

No. 300 Mulberry street, 9 A. M. to 4 P. M.
CHARLES F. MACLEAN, President; WILLIAM H. KIPP, Chief Clerk; T. F. RODENBOUGH, Chief of Bureau of Elections.

DEPARTMENT OF CHARITIES AND CORRECTION.

Central Office.

No. 66 Third avenue, corner Eleventh street, 9 A. M. to 4 P. M.
HENRY H. PORTER, President; GEORGE F. BRITTON, Secretary.
Purchasing Agent, FREDERICK A. CUSHMAN. Office hours, 9 A. M. to 4 P. M. Saturdays, 12 M.
Contracts, Proposals and Estimates for Work and Materials for Building, Repairs and Supplies, Bills and Accounts, 9 A. M. to 4 P. M. Saturdays, 12 M. CHARLES BENN, General Bookkeeper.
Out-Door Poor Department. Office hours, 8.30 A. M. to 4.30 P. M. WILLIAM BLAKE, Superintendent. Entrance on Eleventh street.

FIRE DEPARTMENT.

Office hours for all, except where otherwise noted from 9 A. M. to 4 P. M. Saturdays, 12 M.

Headquarters.

Nos. 157 and 159 East Sixty-seventh street.
HENRY D. PURROY, President; CARL JUSSEN, Secretary.

Bureau of Chief of Department.

HUGH BONNER, Chief of Department.

Bureau of Inspector of Combustibles.

PETER SEERY, Inspector of Combustibles.

Bureau of Fire Marshal.

JAMES MITCHELL, Fire Marshal.

Bureau of Inspection of Buildings.

THOMAS J. BRADY, Superintendent of Buildings.

Attorney to Department.

WM. L. FINDLEY.

Fire Alarm Telegraph.

J. ELLIOT SMITH, Superintendent.
Central Office open at all hours.

Repair Shops.

Nos. 128 and 130 West Third street.
JOHN CASTLES, Foreman-in-Charge, 8 A. M. to 5 P. M.

Hospital Stables.

Ninety-ninth street, between Ninth and Tenth avenues.
JOSEPH SHEA, Foreman-in-Charge.
Open at all hours.

HEALTH DEPARTMENT.

No. 301 Mott street, 9 A. M. to 4 P. M.
CHARLES G. WILSON, President; EMMONS CLARK, Secretary.

DEPARTMENT OF PUBLIC PARKS.

Emigrant Industrial Savings Bank Building, Nos. 49 and 51 Chambers street, 9 A. M. to 4 P. M. Saturdays, 12 M.
WALDO HUTCHINS, President; CHARLES DE F. BURNS, Secretary.

Office of Topographical Engineer.

Arsenal, Sixty-fourth street and Fifth avenue, 9 A. M. to 5 P. M.

Office of Superintendent of 23d and 24th Wards.
One Hundred and Forty-sixth street and Third avenue, 9 A. M. to 5 P. M.

DEPARTMENT OF DOCKS.

Battery, Pier A, North river.
EDWIN A. POST, President; AUGUSTUS T. DOCHARTY, Secretary.
Office hours, from 9 A. M. to 4 P. M.

DEPARTMENT OF TAXES AND ASSESSMENTS

Staats Zeitung Building, Tryon Row, 9 A. M. to 4 P. M. Saturdays, 12 M.
MICHAEL COLEMAN, President; FLOYD T. SMITH, Secretary.

DEPARTMENT OF STREET CLEANING.

49 and 51 Chambers street. Office hours, 9 A. M. to 4 P. M.
HORACE LOOMIS, Commissioner; EDWARD P. HAGAN, Deputy Commissioner; R. W. HORNER, Secretary; HENRY W. BEARDSLEY, Chief Clerk.

CIVIL SERVICE SUPERVISORY AND EXAMINING BOARDS.

Cooper Union, 9 A. M. to 4 P. M.
JAMES THOMSON, Chairman of the Supervisory Board; GUNTHER K. ACKERMAN, Secretary and Executive Officer.

BOARD OF ESTIMATE AND APPOINTMENT

Office of Clerk, Staats Zeitung Building, Room 5.
The Mayor, Chairman; CHARLES V. ADAMS, Clerk.

BOARD OF ASSESSORS.

Office, 27 Chambers street, 9 A. M. to 4 P. M.
EDWARD GILON, Chairman; WM. H. JASPER, Secretary

BOARD OF EXCISE.

No. 54 Bond street, 9 A. M. to 4 P. M.
ALEXANDER MEAKIM, President; JAMES F. BISHOP, Secretary and Chief Clerk.

SHERIFF'S OFFICE.

Nos. 6 and 7 New County Court-house, 9 A. M. to 4 P. M.
JAMES A. FLACK, Sheriff; JOHN B. SEXTON, Under Sheriff; JOHN M. TRACY, Order of Arrest Clerk.

REGISTER'S OFFICE.

East side City Hall Park, 9 A. M. to 4 P. M.
FRANK T. FITZGERALD, 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.
EDWARD F. REILLY, County Clerk; P. J. SCULLY, Deputy County Clerk.

DISTRICT ATTORNEY'S OFFICE.

Second floor, Brown-stone Building, City Hall Park, 9 A. M. to 4 P. M.
JOHN R. FELLOWS, District Attorney; THOMAS COSTIGAN, Chief Clerk.

THE CITY RECORD OFFICE.

And Bureau of Printing, Stationery, and Blank Books.
No. 2 City Hall, 9 A. M. to 5 P. M., except Saturdays, on which days 9 A. M. to 12 M.
W. J. K. KENNY, Supervisor; DAVID RYAN, Assistant Supervisor; JOHN J. McGRATH, Examiner.

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. B. MESSEMER, FERDINAND LEVY, DANIEL HANLY, LOUIS W. SCHULTZ, Coroners; EDWARD F. REYNOLDS, Clerk of the Board of Coroners.

SUPREME COURT

Second floor, New County Court-house, opens at 10:30 A. M.
CHARLES H. VAN BRUNT, Presiding Justice; EDWARD F. REILLY, Clerk; P. J. SCULLY, Deputy County Clerk. General Term, Room No. 9, WILLIAM LAMB, Jr., Clerk. Special Term, Part I., Room No. 10, HUGH DONNELLY, Clerk. Special Term, Part II., Room No. 18, WILLIAM J. HILL, Clerk. Chambers, Room No. 11, AMERSE A. McCALL, Clerk. Circuit, Part I., Room No. 12, WALTER A. BRADY, Clerk. Circuit, Part II., Room No. 14, JOHN B. MCGOLDRICK, Clerk. Circuit, Part III., Room No. 13, GEORGE F. LYON, Clerk. Circuit, Part IV., Room No. 15, J. LEWIS LYON, Clerk. Judges' Private Chambers, Rooms Nos. 19 and 20. SAMUEL GOLDBERG, Librarian.

SUPERIOR COURT.

Third floor, New County Court-house, 11 A. M.
General Term, Room No. 35. Special Term, Room No. 33. Equity Term, Room No. 30. Chambers, Room No. 30. Part I., Room No. 34. Part II., Room No. 35. Part III., Room No. 36. Judges' Private Chambers. Naturalization Bureau, Room No. 31. Clerk's Office, Room No. 37, 9 A. M. to 4 P. M. JOHN SEDGWICK, Chief Judge; THOMAS BOESE, Chief Clerk.

COURT OF COMMON PLEAS.

Third floor, New County Court-house, 9 A. M. to 4 P. M. Assignment Bureau, Room No. 23, 9 A. M. to 4 P. M. Clerk's Office, Room No. 21, 9 A. M. to 4 P. M. General Term, Room No. 24, 11 o'clock A. M. to adjournment. Special Term, Room No. 22, 11 o'clock A. M. to adjournment. Chambers, Room No. 22, 10:30 o'clock A. M. to adjournment. Part I., Room No. 26, 11 o'clock A. M. to adjournment. Part II., Room No. 24, 11 o'clock A. M. to adjournment. Equity Term, Room No. 25, 11 o'clock A. M. to adjournment. Naturalization Bureau, Room No. 23, 9 A. M. to 4 P. M. RICHARD L. LARREMORE, Chief Justice; S. JONES, Chief Clerk.

COURT OF GENERAL SESSIONS.

No. 32 Chambers street. Court open at 11 o'clock A. M. FREDERICK SMYTH, Recorder; RANDOLPH B. MARTINE, JAMES FITZGERALD and RUFUS B. COWING, Judges. Terms open, first Monday each month. JOHN SPARKS, Clerk. Office, Room No. 11, 10 A. M. till 4 P. M.

CITY COURT.

City Hall.

General Term, Room No. 20. Trial Term, Part I., Room No. 20. Part II., Room No. 21. Part III., Room No. 15. Part IV., Room No. 11. Special Term Chambers and will be held in Room No. 19, 10 A. M. to 4 P. M. Clerk's Office, Room No. 10, City Hall, 9 A. M. to 4 P. M. DAVID McADAM, Chief Justice; MICHAEL T. DALY, Clerk.

OVER AND TERMINER COURT.

New County Court-house, second floor, southeast corner, Room No. 12. Court opens at 10:30 o'clock A. M. JOHN SPARKS, Clerk. 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. JOHN F. CARROLL, Clerk. Office, Tombs.

DISTRICT CIVIL COURTS.

First District—Third, Fifth and Eighth Wards, and all that part of the First Ward lying west of Broadway and Whitehall street. Court-room, southwest corner of Centre and Chambers streets. PETER MITCHELL, Justice. Clerk's Office open from 9 A. M. to 4 P. M.

Second District—Second, Fourth, Sixth and Fourteenth Wards, and all that portion of the First Ward lying south and east of Broadway and Whitehall street. Court-room, corner of Grand and Centre streets. CHARLES M. CLANCY, Justice. Clerk's Office open from 9 A. M. to 4 P. M.

Third District—Ninth and Fifteenth Wards. Court-room, southwest corner Sixth avenue and West Tenth street. Court open daily (Sundays and legal holidays excepted) from 9 A. M. to 4 P. M. GEORGE B. DEANE, Justice.

Fourth District—Tenth and Seventeenth Wards. Court-room, No. 30 First street, corner Second avenue. Court opens 9 A. M. daily, and remains open to close of business. ALFRED STECKLER, Justice.

Fifth District—Seventh, Eleventh and Thirteenth Wards. Court-room, No. 154 Clinton street. HENRY M. GOLDFOGLE, Justice.

Sixth District—Eighteenth and Twenty-first Wards. Court-room, No. 61 Union place, Fourth avenue, southwest corner of Eighteenth street. Court opens 9 A. M. daily; continues open to close of business. SAMSON LACHMAN, Justice.

Seventh District—Nineteenth Ward. Court-room, No. 151 East Fifty-seventh street. Court opens every morning at 9 o'clock (except Sundays and legal holidays), and continues open to the close of business. JOHN B. MCKEAN, Justice.

Eighth District—Sixteenth and Twentieth Wards. Court-room, southwest corner of Twenty-second street and Seventh avenue. Court opens at 9 A. M. and continues open to close of business. Clerk's office open from 9 A. M. to 4 P. M. each court day. Trial days, Wednesdays, Fridays and Saturdays. Return days, Tuesdays, Thursdays and Saturdays. JOHN IEROLOMAN, Justice.

Ninth District—Twelfth Ward, except all that portion of the said ward which is bounded on the north by the centre line of One Hundred and Tenth street, on the south by the centre line of Eighty-sixth street, on the east by the centre line of Sixth avenue, and on the west by the North river. Court-room, No. 150 East One Hundred and Twenty-fifth street. JOSEPH P. FALLON, Justice.

Tenth District—Twenty-third and Twenty-fourth Wards. Court-room, corner of Third avenue and One Hundred and Fifty-eighth street. Office hours, from 9 A. M. to 4 P. M. Court opens at 9 A. M. ANDREW J. ROGERS, Justice.

Eleventh District—Twenty-second Ward, and all that portion of the Twelfth Ward which is bounded on the north by the centre line of One Hundred and Tenth street, on the south by the centre line of Eighty-sixth street, on the east by the centre line of Sixth avenue, and on the west by the North river. Court-room, No. 619 Eighth avenue. Court open daily (Sundays and legal holidays excepted) from 9 A. M. to 4 P. M. THOMAS E. MURRAY, Justice.

POLICE COURTS.

Judges—MAURICE J. POWER, J. HENRY FORD, JAMES T. KILBRETH, JOHN J. GORMAN, HENRY MURRAY, SOLON B. SMITH, ANDREW J. WHITE, CHARLES WELDE, DANIEL O'REILLY, PATRICK G. DUFFY, DANIEL F. McMAHON, EDW. HOGAN, JOHN COCHRANE, CHARLES N. TANTOR. 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. 69 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.

FIRE DEPARTMENT.

HEADQUARTERS FIRE DEPARTMENT,
157 AND 159 EAST SIXTY-SEVENTH STREET,
NEW YORK, February 19, 1890.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING

4,000 tons egg coal.
1,500 tons stove coal.
300 tons nut coal.
—will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10 o'clock A. M. Wednesday, March 5, 1890, at which time and place they will be publicly opened by the head of said Department and read.

The coal is to be of the best quality of Pittston, Scranton or Lackawanna, to weigh 2,000 pounds to the ton, and be well screened and free from slate.

All of the coal is to be delivered at the various houses, etc., of the Department, in such quantities and at such times as may be from time to time directed, and the same is to be weighed in the presence of an Inspector designated for that purpose by the Department, upon scales furnished by the Department, which are to be transported from place to place by the contractor.

No estimate will be received or considered after the hour named.

The form of the agreement, with specifications, showing the manner of payment for the work, may be seen, and forms of proposals may be obtained at the office of the Department.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the supply to which it relates.

The Fire Department reserves the right to decline any and all bids or estimates if deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof.

The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is 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 its being so awarded, become bound as sureties for its faithful performance in the sums specified in the several forms of contracts, which are as follows:

For the 15,000 feet of 2½-inch Hose \$7,500 00
For the 5,000 feet of 2½-inch Hose 2,500 00
For the 6,000 feet of 3-inch Hose 5,500 00

—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; 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

on its being so awarded, become bound as sureties for its faithful performance, in the sum of thirteen thousand (\$13,000) dollars; and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled 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; the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested.

The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of

the contract, 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 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 upon the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct.

All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

on its being so awarded, become bound as sureties for its faithful performance, in the sum of thirteen thousand (\$13,000) dollars; and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled 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; 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 banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of six hundred and fifty dollars (\$650). Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct.

All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

HENRY D. PURROY,
S. HOWLAND ROBBINS,
ANTHONY EICKHOFF,
Commissioners.

HEADQUARTERS FIRE DEPARTMENT,
157 AND 159 EAST SIXTY-SEVENTH STREET,
NEW YORK, February 18, 1890.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING THE

Hose below enumerated to this Department, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10 o'clock A. M. Wednesday, March 5, 1890, at which time and place they will be publicly opened by the head of said Department and read:

15,000 feet of 2½-inch carbolized, rubber-lined fire-hose, Maltese Cross brand, to weigh not more than fifty (50) pounds per length, including couplings.
5,000 feet of 2½-inch circular woven, seamless, multi-ply, rubber-lined, cotton fire-hose, Fireka Fire-hose brand, to weigh not more than sixty (60) pounds per length, including couplings.
6,000 feet of 3-inch carbolized, rubber-lined fire-hose, Maltese Cross brand, to weigh not more than eighty (80) pounds per length, including couplings.

A separate estimate must be made for each of the three items.

Special attention is directed to the test of the hose by the Fire Department and the guarantee of the hose by the contractor, required by the specifications.

No estimate will be received or considered after the hour named.

For information as to the description of the hose to be furnished, bidders are referred to the specifications which form part of these proposals.

The form of the agreement, with specifications, showing the manner of payment for the work, may be seen, and forms of proposals may be obtained at the office of the Department.

Bidders must write out the amount of their estimate in addition to inserting the same in figures.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired, are fixed and liquidated at the sums specified in the several forms of contracts.

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 hose 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 any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof.

The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is 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 its being so awarded, become bound as sureties for its faithful performance in the sums specified in the several forms of contracts, which are as follows:

For the two third size Steam Fire Engines... \$4,000 00
For the one second size Steam Fire Engine... 2,000 00
For the six Hose Wagons 1,600 00
For the one Hook and Ladder Truck 1,000 00
For the one Water Tower 2,400 00

—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; 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 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 upon the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct.

All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

HENRY D. PURROY,
S. HOWLAND ROBBINS,
ANTHONY EICKHOFF,
Commissioners.

HEADQUARTERS FIRE DEPARTMENT,
157 AND 159 EAST SIXTY-SEVENTH STREET,
NEW YORK, February 18, 1890.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING THE

apparatus below enumerated to this Department, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10 o'clock A. M. Wednesday, March 5, 1890, at which time and place they will be publicly opened by the head of said Department and read:

Two third size Steam Fire Engines, with La France's improved Nest Tube Boiler.
One second size Steam Fire Engine, with M. R. Clapp's improved Sectional Coil Tube Boiler.
Six Hose Wagons.
One Hook and Ladder Truck.
One Hale Water Tower.

A separate estimate must be made for each of the five items.

No estimate will be received or considered after the hour named.

For information as to the description of the apparatus to be furnished, bidders are referred to the specifications which form part of these proposals.

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 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 upon the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct.

All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

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HENRY D. PURROY,
S. HOWLAND ROBBINS,
ANTHONY EICKHOFF,
Commissioners.

HEADQUARTERS FIRE DEPARTMENT,
157 AND 159 EAST SIXTY-SEVENTH STREET,
NEW YORK, February 18, 1890.

TO CONTRACTORS.

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Two third size Steam Fire Engines, with La France's improved Nest Tube Boiler.
One second size Steam Fire Engine, with M. R. Clapp's improved Sectional Coil Tube Boiler.
Six Hose Wagons.
One Hook and Ladder Truck.
One Hale Water Tower.

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For information as to the description of the apparatus to be furnished, bidders are referred to the specifications which form part of these proposals.

The form of the agreement, with specifications, showing the manner of payment for the work, may be seen, and forms of proposals may be obtained at the office of the Department.

Bidders must write out the amount of their estimate in addition to inserting the same in figures.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have

345 pounds Indian Red, in oil, strictly pure.
 470 pounds Chrome Yellow, in oil, strictly pure.
 100 pounds Chrome Green, in oil, strictly pure, dark.
 270 pounds Venetian Red, in oil, strictly pure.
 265 pounds Best Lamp Black, in oil, strictly pure.
 20 pounds Coach Black, in Japan, of approved manufacture.
 3 gallons Best Japan Dryer, strictly pure.
 395 pounds Yellow Ochre, in oil, strictly pure.
 45 pounds English Vermilion, dry, medium shade, strictly pure.
 100 pounds Burnt Umber, in oil, strictly pure.
 200 pounds Raw Umber, in oil, strictly pure.
 135 pounds Burnt Sienna, in oil, strictly pure.
 125 pounds Raw Sienna, in oil, strictly pure.
 1,400 pounds Metallic, in oil, of approved manufacture.
 50 pounds Prussian Blue, in oil, strictly pure.
 25 pounds Potash, strictly pure.
 9 tubs Putty, about 150 pounds each, ground in oil, strictly pure.
 5 reams Sand Paper, No. 2.
 6 reams Sand Paper, No. 1.
 2 reams Sand Paper, No. 1.
 1 barrel Gilder's Whiting, extra.
 5 1/2 barrels Spirits Turpentine, New York barrels.
 6 1/2 barrels Raw Linseed Oil, Calcutta.
 3 1/2 barrels Boiled Linseed Oil, Calcutta.
 28 gallons Best extra Brown Japan.
 10 gallons Best extra White Japan.
 25 gallons Best extra Furniture Varnish.
 25 gallons Superior Outside Varnish, of approved manufacture.
 10 gallons Quick-leveling Varnish, of approved manufacture.
 15 gallons Elastic Gear Varnish, of approved manufacture.
 10 gallons each White and Brown Shellac, grain alcohol.
 5 gallons Alcohol at proof, 95°, grain.
 10 gallons Naphtha.
 3 1/2 dozen Paint Brushes, 6" extra, sample.
 5 dozen Sash Tools, sample.
 5 dozen XX Artist Brushes, flat, each 1/2 in. and 1 in., sample.
 1 dozen each Nos. 3 and 4 silver bound Lettering Pencils, sable, sample.
 1/2 dozen Paint Strainers.

PARTS OF MOWERS FOR REPAIRS.

25 Back Girt Bolts, No. 27.
 20 Bottom Knives, each, Nos. 274 and 275.
 25 Castor Collars, No. 279.
 25 Castors, complete, No. 280.
 10 Clutches, No. 4.
 25 Hanger Bolts, No. 291.
 1 gross Knife Screws, No. 299.
 12 Pawl Holders, No. 17.
 3 Revolving Cutters, each, Nos. 293 and 294.
 25 Revolving Cutter Hanger (left hand), No. 81.
 25 Revolving Cutter Hanger (right hand), No. 80.
 25 Revolving Cutter Hanger Knives, each, Nos. 298 and 299.
 3 Left Side Frames, No. 6.
 3 Right Side Frames, No. 59.
 6 Tool Boxes, No. 23.
 For 30-in. and 35-in. Horse Lawn Mower (Excelsior).
 25 Bottom Knives, No. 128.
 40 Front Rollers, No. 32.
 50 Front Roller Bolts, No. 131.
 50 Handle Bolts, No. 86.
 10 Knife Bars, No. 27.
 25 Knife-bar Screws, No. 136.
 50 Pawls, No. 122.
 25 Pawl Holders, No. 29.
 25 Revolving Cutters, No. 34.
 100 Revolving Cutter Bushing, No. 137.
 25 Left Side Frames, No. 25.
 25 Right Side Frames, No. 24.
 For Hand Lawn Mower 15 in. (Excelsior).
 6 Left Side Frames, No. 45.
 6 Right Side Frames, No. 45.
 6 Revolving Cutters, No. 59.
 24 Revolving Cutter Knives, No. 163.
 6 Knife Bars, No. 62.
 6 Centre Gears, No. 37.
 1 dozen Bottom Knives, No. 101.
 1 Pawl Holder, No. 8.
 10 Revolving Cutter Gears, No. 36.
 12 Front Rollers, No. 7.
 10 Centre Gear Studs, No. 159.
 12 Front Roller Bolts, No. 118.
 15 Pawls, No. 122.
 6 Handles, No. 160.
 For 14 in. Lawn Mowers (Excelsior).

IRON, HORSE SHOES, ETC.

6 bars Ulster Iron, 4 in. x 1/2 in.
 10 bars Ulster Iron, 3 in. x 3/8 in.
 5 bars Ulster Iron, each, 2 in. x 1/2 in., 2 in. x 1/4 in., 1 1/2 in. x 1/2 in., 1 1/2 in. x 1/4 in.
 1 bundle Iron, 1 1/2 in. x 1/4 in.
 1 bundle Iron, 1 1/4 in. x 1/4 in., best refined.
 8 bars Square Iron, 3/4 in., best refined.
 2 bars Square Iron, 3/8 in., best refined.
 2 bundles Square Iron, 1/2 in., best refined.
 1 bundle Iron, 1 x 3/8 in., best refined.
 8 bars Round Iron, 1 1/4 in.
 2 kegs Horse Shoes, No. 5, each front and hind, approved manufacture.
 3 kegs Horse Shoes, No. 6, each front and hind, approved manufacture.
 2 kegs Horse Shoes, No. 7, each front and hind, approved manufacture.
 1 keg Horse Shoes, No. 8, hind, approved manufacture.
 4 bundles Toe Steel, 7/8 in. x 5/8 in.
 2 bundles Toe Steel, 3/4 in. x 1/2 in.
 2 boxes Horse Shoe Nails, each, Nos. 7 and 9, and approved manufacture.
 2 lengths of Steam Pipe, each, 2 in., 1 1/2 in., 1 1/4 in. and 1 in.
 6 lengths of 3/4 in. Steam Pipe.
 1 dozen Bushings, each, 1 1/2 in. to 1 1/4 in., 1 1/4 in. to 1 in., 1 in. to 3/4 in., 3/4 in. to 1/2 in., 1/2 in. to 3/8 in.
 1 dozen Plugs, each, 1 1/2 in., 1 1/4 in., 1 in., 3/4 in., 1/2 in., 3/8 in.
 1 dozen Unions, each, 1 1/2 in., 1 1/4 in., 1 in., 3/4 in., 1/2 in., 3/8 in.
 1 dozen Elbows, each, 1 1/2 in., 1 1/4 in., 1 in., 3/4 in., 1/2 in., 3/8 in.
 6 Globe Valves, 1/2 in., Jenkins Disc.
 2 Globe Valves, each, 1 in. and 2 in.
 1 dozen Tees, each, 1 1/2 in., 1 1/4 in., 1 in., 3/4 in., 1/2 in., 3/8 in.

LUMBER.

2,000 feet, board measure, each, of 1/2 in. and 3/4 in. White Wood, very first quality.
 2,000 feet, board measure, each, of 1 in. and 1 1/4 in. Black Walnut (cabinet).
 2,000 feet, board measure, of 1 1/2 in. Black Walnut (cabinet).
 500 feet, board measure, of 1/4 in. Pine Uppers.
 2,000 feet, board measure, of 3/8 in. Pine Uppers.
 12,000 feet, board measure, of 1/2 in. Pine Uppers.
 8,000 feet, board measure, of 1 1/4 in. Pine Uppers.
 4,000 feet, board measure, of 1 1/2 in. Pine Uppers.
 10,000 feet, board measure, of 2 in. Pine Uppers.
 3,000 feet, board measure, of 3 in. Pine.
 2,000 feet, board measure, each, of 4 in., 6 in., 1 1/2 in. and 2 in. Pine.
 All the above material to be clear, well seasoned, free from sap, checks and knots, planed both sides to hold above thickness when finished, and in width from 12 in. to 24 in., 13 feet and upwards long.
 2,000 feet, board measure, of 3/4 in. Yellow Pine.
 10,000 feet, board measure, of 1 in. Yellow Pine.
 5,000 feet, board measure, of 1 1/4 in. Yellow Pine, kiln dried.
 2,000 feet, board measure, of 2 in. Yellow Pine.
 To be clear, well seasoned, free from sap, knots and checks, planed both sides 10 in. to 16 in. in width, 15 feet

and upwards long, and to hold above thickness when finished.
 4,000 feet, board measure, each, of 1 1/4 x 3 1/2 in. and 1 1/2 x 4 1/2 in. Yellow Pine Flooring, comb grained, kiln dried.
 To be planed one side, tongued and grooved, and to hold above sizes when finished; length from 13 feet upwards.

500 narrow Pine Ceiling Boards, planed one side, tongued, grooved and beaded, to be 3/4 in. thick, 4 1/2 in. wide, 13 feet long. Uppers.
 500 narrow Pine Ceiling Boards, planed both sides, tongued, grooved and beaded, to be 1 in. thick, 4 1/2 in. wide, 13 feet long. Uppers.
 500 wide Pine Fence Boards, planed both sides, tongued, grooved and beaded, to be 1 in. thick, 9 1/2 in. wide, 13 feet long. First selected and uppers.
 500 wide Pine Floor Plank, planed one side, tongued and grooved, to be 1 1/4 in. thick, 9 1/2 in. wide, 13 feet long. Uppers.
 All to be clear, well seasoned, free from sap, knots and checks, and to hold above thicknesses, etc., when finished.

1,000 Hemlock Boards, 1 x 10 in. by 13 feet long.
 1,000 Spruce Plank, 1 1/4 x 9 in. by 13 feet long.
 1,500 Spruce Plank, 2 x 9 in. by 13 feet long.
 1,000 Spruce Joists, 3 x 4 in. by 13 feet long.
 400 Spruce Timbers, 3 x 6 in. by 20 feet long.
 300 Spruce Timbers, 3 x 10 in. by 20 feet long.
 4,000 feet, board measure, of Spruce Timbers, various sizes as specified, 3 x 12 in., 4 x 4 in., 6 x 6 in., etc.
 10,000 square feet, board measure, of Yellow Pine Timbers, various sizes, 4 x 4 in., 3 x 6 in., 3 x 7 in., 4 x 8 in., 4 x 10 in., 4 x 12 in., 5 x 12 in., etc., Georgia or Florida.

SPOKES, SHAFTS, ETC.

6 bundles of Hickory Spokes, very best, each, 1 1/2 in., 1 1/4 in., 1 1/2 in.
 3 bundles of Hickory Spokes, very best, each, 1 1/4 in., 1 1/2 in., 2 in., 2 1/2 in.
 1 bundle of Hickory Light Wagon Shafts, samples to be seen at Department Shops.
 2 bundles of Oak Water Truck Shafts, samples to be seen at Department Shops.
 1 bundle of Oak Lawn Mower Shafts, samples to be seen at Department Shops.
 6 sets, each, 1 1/2 in. and 1 3/8 in. Hickory Rim, from 3 feet to 4 feet wheels, samples to be seen at Department Shops.
 6 sets 1 1/2 in. Oak Rim, from 4 feet wheels, samples to be seen at Department Shops.

SCREWS, BOLTS, FILES, NAILS, ETC.

10 gross Screws, 1/2 in., each, Nos. 5 and 7.
 10 gross Screws, 3/8 in., each, Nos. 5 and 7.
 20 gross Screws, 1/4 in., each, Nos. 8 and 10.
 10 gross Screws, 3/8 in., each, Nos. 12 and 15.
 30 gross Screws, 1 in., each, Nos. 8, 10, 12 and 15.
 20 gross Screws, 1 in., No. 13.
 10 gross Screws, 1 1/4 in., No. 10.
 20 gross Screws, 1 1/2 in., each, Nos. 12 and 13.
 30 gross Screws, 1 1/2 in., No. 15.
 10 gross Screws, 1 3/4 in., each, Nos. 12 and 13.
 40 gross Screws, 1 3/4 in., each, Nos. 12 and 13.
 20 gross Screws, 1 3/4 in., No. 15.
 10 gross Screws, 1 3/4 in., No. 10.
 20 gross Screws, 1 3/4 in., each, Nos. 12 and 13.
 10 gross Screws, 1 3/4 in., No. 15.
 10 gross Brass Screws, 3/4 in., each, Nos. 7 and 8.
 10 gross Brass Screws, 1 in., No. 8.
 5 gross Round Head Brass Screws, each, 3/4 in. and 1 in., No. 8.
 5 gross Round Head Brass Screws, 1 1/4 in., No. 10.
 5 gross Round Head Brass Screws, 1 1/2 in., No. 10.
 5 gross Round Head Brass Screws, 1 3/4 in., No. 10.
 5 gross Round Head Brass Screws, 2 in., No. 12.
 24 pairs narrow, each, 2 in., 2 1/2 in., and 3 in.
 Brass Butts, per sample.
 48 pairs 3 x 2 in. Brass Flap Hinges, per sample.
 12 dozen Tape Saw Files, each, 3 in., 3 1/2 in., 4 in., 4 1/2 in., 5 in., 6 in., per sample.
 2 dozen Flat Bastard Files, each, 3 in., 4 in., 5 in., 6 in., 8 in. and 10 in., Mill Saw Files, per sample.
 2 dozen half round 14 in. Bastard Files, per sample.
 2 dozen Cant Files, each 4 in., 4 1/2 in., 5 in., per sample.
 2 dozen Perforated Chair Bottoms, per sample.
 48 papers Galvanized Carpet Tacks, from 8 to 20 oz. sizes.
 80 papers Steel Wire Brads, assorted sizes from 3/4 to 2 in. long.
 20,000 Oval Head Philadelphia Carriage Bolts, from 3/4 to 1 1/2 in. thickness and from 1 1/4 to 6 in. length (quote discount).
 4,000 Square Head Bolts, from 1/4 to 1 in. thickness, 1 1/2 to 20 in. long.
 15 pounds Iron Washers for, each, 3/8 in., 1/2 in., 3/4 in., 1 in., 1 1/4 in., 1 1/2 in., 1 3/4 in., 2 in., 2 1/2 in., 3 in., 3 1/2 in., 4 in., 4 1/2 in., 5 in., 6 in., 8 in., 10 in., 12 in., 14 in., 16 in., 18 in., 20 in., 22 in., 24 in., 26 in., 28 in., 30 in., 32 in., 34 in., 36 in., 38 in., 40 in., 42 in., 44 in., 46 in., 48 in., 50 in., 52 in., 54 in., 56 in., 58 in., 60 in., 62 in., 64 in., 66 in., 68 in., 70 in., 72 in., 74 in., 76 in., 78 in., 80 in., 82 in., 84 in., 86 in., 88 in., 90 in., 92 in., 94 in., 96 in., 98 in., 100 in., 102 in., 104 in., 106 in., 108 in., 110 in., 112 in., 114 in., 116 in., 118 in., 120 in., 122 in., 124 in., 126 in., 128 in., 130 in., 132 in., 134 in., 136 in., 138 in., 140 in., 142 in., 144 in., 146 in., 148 in., 150 in., 152 in., 154 in., 156 in., 158 in., 160 in., 162 in., 164 in., 166 in., 168 in., 170 in., 172 in., 174 in., 176 in., 178 in., 180 in., 182 in., 184 in., 186 in., 188 in., 190 in., 192 in., 194 in., 196 in., 198 in., 200 in., 202 in., 204 in., 206 in., 208 in., 210 in., 212 in., 214 in., 216 in., 218 in., 220 in., 222 in., 224 in., 226 in., 228 in., 230 in., 232 in., 234 in., 236 in., 238 in., 240 in., 242 in., 244 in., 246 in., 248 in., 250 in., 252 in., 254 in., 256 in., 258 in., 260 in., 262 in., 264 in., 266 in., 268 in., 270 in., 272 in., 274 in., 276 in., 278 in., 280 in., 282 in., 284 in., 286 in., 288 in., 290 in., 292 in., 294 in., 296 in., 298 in., 300 in., 302 in., 304 in., 306 in., 308 in., 310 in., 312 in., 314 in., 316 in., 318 in., 320 in., 322 in., 324 in., 326 in., 328 in., 330 in., 332 in., 334 in., 336 in., 338 in., 340 in., 342 in., 344 in., 346 in., 348 in., 350 in., 352 in., 354 in., 356 in., 358 in., 360 in., 362 in., 364 in., 366 in., 368 in., 370 in., 372 in., 374 in., 376 in., 378 in., 380 in., 382 in., 384 in., 386 in., 388 in., 390 in., 392 in., 394 in., 396 in., 398 in., 400 in., 402 in., 404 in., 406 in., 408 in., 410 in., 412 in., 414 in., 416 in., 418 in., 420 in., 422 in., 424 in., 426 in., 428 in., 430 in., 432 in., 434 in., 436 in., 438 in., 440 in., 442 in., 444 in., 446 in., 448 in., 450 in., 452 in., 454 in., 456 in., 458 in., 460 in., 462 in., 464 in., 466 in., 468 in., 470 in., 472 in., 474 in., 476 in., 478 in., 480 in., 482 in., 484 in., 486 in., 488 in., 490 in., 492 in., 494 in., 496 in., 498 in., 500 in., 502 in., 504 in., 506 in., 508 in., 510 in., 512 in., 514 in., 516 in., 518 in., 520 in., 522 in., 524 in., 526 in., 528 in., 530 in., 532 in., 534 in., 536 in., 538 in., 540 in., 542 in., 544 in., 546 in., 548 in., 550 in., 552 in., 554 in., 556 in., 558 in., 560 in., 562 in., 564 in., 566 in., 568 in., 570 in., 572 in., 574 in., 576 in., 578 in., 580 in., 582 in., 584 in., 586 in., 588 in., 590 in., 592 in., 594 in., 596 in., 598 in., 600 in., 602 in., 604 in., 606 in., 608 in., 610 in., 612 in., 614 in., 616 in., 618 in., 620 in., 622 in., 624 in., 626 in., 628 in., 630 in., 632 in., 634 in., 636 in., 638 in., 640 in., 642 in., 644 in., 646 in., 648 in., 650 in., 652 in., 654 in., 656 in., 658 in., 660 in., 662 in., 664 in., 666 in., 668 in., 670 in., 672 in., 674 in., 676 in., 678 in., 680 in., 682 in., 684 in., 686 in., 688 in., 690 in., 692 in., 694 in., 696 in., 698 in., 700 in., 702 in., 704 in., 706 in., 708 in., 710 in., 712 in., 714 in., 716 in., 718 in., 720 in., 722 in., 724 in., 726 in., 728 in., 730 in., 732 in., 734 in., 736 in., 738 in., 740 in., 742 in., 744 in., 746 in., 748 in., 750 in., 752 in., 754 in., 756 in., 758 in., 760 in., 762 in., 764 in., 766 in., 768 in., 770 in., 772 in., 774 in., 776 in., 778 in., 780 in., 782 in., 784 in., 786 in., 788 in., 790 in., 792 in., 794 in., 796 in., 798 in., 800 in., 802 in., 804 in., 806 in., 808 in., 810 in., 812 in., 814 in., 816 in., 818 in., 820 in., 822 in., 824 in., 826 in., 828 in., 830 in., 832 in., 834 in., 836 in., 838 in., 840 in., 842 in., 844 in., 846 in., 848 in., 850 in., 852 in., 854 in., 856 in., 858 in., 860 in., 862 in., 864 in., 866 in., 868 in., 870 in., 872 in., 874 in., 876 in., 878 in., 880 in., 882 in., 884 in., 886 in., 888 in., 890 in., 892 in., 894 in., 896 in., 898 in., 900 in., 902 in., 904 in., 906 in., 908 in., 910 in., 912 in., 914 in., 916 in., 918 in., 920 in., 922 in., 924 in., 926 in., 928 in., 930 in., 932 in., 934 in., 936 in., 938 in., 940 in., 942 in., 944 in., 946 in., 948 in., 950 in., 952 in., 954 in., 956 in., 958 in., 960 in., 962 in., 964 in., 966 in., 968 in., 970 in., 972 in., 974 in., 976 in., 978 in., 980 in., 982 in., 984 in., 986 in., 988 in., 990 in., 992 in., 994 in., 996 in., 998 in., 1000 in.

The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Supplies," with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department and read.

The Board of Parks reserves the right to reject any or all bids or estimates if deemed for the interest of the City so to do.

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.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will, if the same shall amount to \$1,000 or more, be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the penal amount of fifty (50) per cent. of the amount of the contract.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; also that it is made without any connection with any other person making an esti-

mate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate of \$1,000 or more 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 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; 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 bond 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, of \$1,000 or more, or estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

The quality of the articles, supplies, goods, wares and merchandise must conform in every respect to the samples of the same on exhibition at the office of 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.

Blank forms for proposals and forms of contract which the successful bidder will be required to execute, can be had at the office of the Secretary, and information relative to them can be had at the office of the Department, Nos. 49 and 51 Chambers street.

WALDO HUTCHINS,
 J. HAMPTON ROBB,
 M. C. D. BORDEN,
 ALBERT GALLUP,
 Commissioners of Public Parks.

DEPARTMENT OF PUBLIC PARKS,
 NOS. 49 AND 51 CHAMBERS STREET,
 NEW YORK, February 20, 1890.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES FOR EACH of the following-mentioned work, with the title of the work and the name of the bidder indorsed thereon, also the number of the work, as in the advertisement, will be received by the Department of Public Parks at its offices, Nos. 49 and 51 Chambers street, until eleven o'clock A. M. on THURSDAY, March 6, 1890:

No. 1. FOR CONSTRUCTING A SEWER AND BRANCHES, WITH APPURTENANCES, IN WASHINGTON AVENUE, BETWEEN ONE HUNDRED AND FIFTY-NINTH AND ONE HUNDRED AND SIXTY-SECOND STREETS, AND IN ONE HUNDRED AND SIXTY-SECOND STREET.

No. 2. FOR CONSTRUCTING SEWERS AND APPURTENANCES IN ONE HUNDRED AND FIFTY-SECOND STREET, FROM RAILROAD AVENUE, EAST, TO COURTLAND AVENUE, AND IN MORRIS AVENUE, FROM ONE HUNDRED AND FIFTY-SECOND STREET TO RAILROAD AVENUE, EAST.

No. 3. FOR TAKING UP AND RELAYING GRANITE-BLOCK PAVEMENT, WITH CONCRETE FOUNDATION, AND RESETTING CURB-STONES IN TRANSVERSE ROAD NO. 2, CROSSING THE CENTRAL PARK, FROM THE WESTERLY CURB-LINE OF FIFTH AVENUE, AT EIGHTY-FIFTH STREET, TO THE EASTERLY CURB-LINE OF EIGHTH AVENUE, AT EIGHTY-SIXTH STREET.

No. 4. FOR CONSTRUCTING RAILWAY TRACKS FOR STREET RAILWAY FROM THE EASTERLY LINE OF FIFTH AVENUE, AT EIGHTY-FIFTH STREET, AND CROSSING THE CENTRAL PARK, IN AND THROUGH TRANSVERSE ROAD NO. 3 TO THE EASTERLY CURB-LINE OF EIGHTH AVENUE, AT EIGHTY-SIXTH STREET.

No. 5. FOR THE ALTERATIONS AND ADDITIONS TO LADIES' COTTAGE IN MADISON SQUARE, IN THE CITY OF NEW YORK.

No. 6. FOR FURNISHING AND DELIVERING SOIL, WHERE REQUIRED ON THE CENTRAL AND CITY PARKS, IN THE CITY OF NEW YORK.

Special notice is given that the works must be bid for separately, that is, more than one work must not be included in the same estimate or proposal.

The nature and extent of each of the works, as near as it is possible to state them, in advance, is as follows:

NUMBER 1, ABOVE MENTIONED.

75 linear feet of brick sewer, egg-shaped, 36 inches by 26 inches, including rubble masonry cradle, and exclusive of spurs for house connections.
 200 linear feet of 18-inch pipe sewer, including concrete foundation and covering, and exclusive of spurs for house connections.
 240 linear feet of 15-inch pipe sewer, including concrete foundation and cradle, and exclusive of spurs for house connections.
 260 linear feet of 12-inch pipe sewer, including concrete cradle, and exclusive of spurs for house connections.

65 spurs for house connections, over and above the cost per foot of sewer.
 9 manholes complete.
 1 special manhole complete.
 2 receiving-basins complete.
 25 cubic yards of rock to be excavated and removed.
 5 cubic yards of concrete in place, exclusive of concrete cradle and covering for pipe sewers.
 2,000 feet (B. M.) of timber furnished and laid.
 In addition to the above quantities of work to be done, if sheet piling is required and ordered by the Engineer to be left in the trench, it will be measured and paid for at ONE-HALF of the price bid for lumber.
 The time allowed for the completion of the whole work will be NINETY DAYS.

NUMBER 2, ABOVE MENTIONED.

450 linear feet of brick sewer, egg-shaped, 36 inches by 26 inches, including rubble masonry cradle and exclusive of spurs for house connections.
 250 linear feet of 18-inch pipe sewer, including concrete cradle and exclusive of spurs for house connections.
 970 linear feet of 15-inch pipe sewer, including concrete cradle and exclusive of spurs for house connections.
 680 linear feet of 12-inch pipe-sewer, including concrete cradle and exclusive of spurs for house connections.
 600 linear feet of 6-inch pipe sewer, including concrete cradle.
 255 spurs for house connections, over and above the cost per foot of sewer.
 24 manholes complete.
 8 receiving-basins complete.
 150 cubic yards of rock to be excavated and removed.
 10 cubic yards of concrete in place, exclusive of concrete cradle for pipe sewers.
 3,000 feet (B. M.) of lumber furnished and laid.
 20 cubic yards broken stone in foundation.

In addition to the above quantities of work to be done, if sheet piling is required and ordered by the Engineer to be left in the trench, it will be measured and paid for at ONE-HALF of the price bid for lumber.
 The time allowed for the completion of the whole work will be ONE HUNDRED AND TWENTY-FIVE days.

NUMBER 3, ABOVE MENTIONED.

1,500 cubic yards of concrete in place, including taking up present pavement and crosswalks, piling blocks and bridge-stones, and excavation for foundation, and removal of materials.
 9,100 square yards of granite-block pavement to be relaid, including the furnishing of all materials required to complete the area of pavement disturbed and taken up.
 160 square feet of bridge-stone to be relaid.
 5,050 linear feet of old curb to be adjusted and reset.
 100 linear feet blue-stone curb, 6 inches thick, including circular corners, furnished and laid.
 The time allowed to complete the whole work will be FIFTY DAYS, and the damages to be paid by the contractor for each day that the contract, or any part thereof, may be unfulfilled after the time fixed for the completion thereof has expired, are fixed and liquidated at TWENTY DOLLARS per day.

NUMBER 4, ABOVE MENTIONED.

6,005 linear feet of street railway, single track, including furnishing of all materials, and placing concrete under the rails above the foundation, and in pockets of rails, and the taking up and relaying of the pavement and crosswalks, a distance of eighty-two feet westerly from the easterly line of the

ducer 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

5. The classification by schedule of city employees is as follows :

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 One Hundred and Fifty-sixth street, from Tenth to Eleventh avenue, and to the extent of half the block at the intersecting avenues.

No. 2. Both sides of One Hundred and Thirtieth street, from the Boulevard to the Riverside Drive, and to the extent of half the block at the intersecting avenues.

No. 3. South side of Eighty-fifth street, from Madison to Fifth avenue.

No. 4. West side of Park avenue, commencing about 25 feet northerly from Sixty-eighth street, and extending northerly about 52 feet.

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. 27 Chambers street, 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 22d day of March, 1890.

EDWARD GILON, Chairman,
PATRICK M. HAVERTY,
CHAS. E. WENDT,
EDWARD CAHILL,
Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS,
No. 27 CHAMBERS STREET,
NEW YORK, February 21, 1890.

PUBLIC NOTICE IS HEREBY GIVEN TO THE owner or owners, occupant or occupants of all houses and lots, improved or unimproved lands affected thereby, that the following assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

List 3170, No. 1. Receiving-basins on the southeast corners of Ninety-fifth, Ninety-sixth and Ninety-seventh streets and Madison avenue, and on the southwest corners of Ninety-eighth, Ninety-ninth, One Hundredth, One Hundred and First, One Hundred and Second and One Hundred and Third streets and Madison avenue.

List 3171, No. 2. Receiving-basins on the northeast and northwest corners of One Hundred and Fifty-eighth street and Eleventh avenue.

List 3172, No. 3. Receiving-basins in One Hundred and Nineteenth street, between Pleasant avenue and the Harlem river.

List 3173, No. 4. Receiving-basin on the northwest corner of One Hundred and Fifth street and Park avenue.

List 3174, No. 5. Fencing vacant lots on the north side of One Hundred and Fifteenth street, from Fifth to Lenox avenue.

List 3187, No. 6. Flagging and reflagging, curbing and receding east side of Avenue A, from Eighty-first to Eighty-second street.

List 3201, No. 7. Alteration and improvement to sewer in One Hundred and Twenty-ninth street, between Boulevard and second manhole east of Broadway.

List 3202, No. 8. Sewer in One Hundred and Fifty-third street, between Tenth avenue and summit west of Tenth avenue, with alteration and improvement to curve at One Hundred and Fifty-third street and Tenth avenue.

List 3203, No. 9. Sewer in One Hundred and Fourth street, between Boulevard and West End avenue.

List 3204, No. 10. Extension of sewer in Twenty-sixth street, from fifth manhole east of First avenue to and connecting with sewer built by Department of Docks, with alteration and improvement to existing sewer.

List 3205, No. 11. Sewer in Front street, between Dover street and Peck Slip.

List 3206, No. 12. Sewer in Avenue B, between Eighty-second and Eighty-third streets.

List 3207, No. 13. Sewer in Ninety-fifth street, between Boulevard and Tenth avenue.

List 3208, No. 14. Sewer in One Hundred and Sixty-first street, between Tenth avenue and Eleventh avenue Boulevard.

List 3175, No. 15. Fencing vacant lots on the block bounded by Ninety-third and Ninety-fourth streets, Park and Madison avenues.

List 3188, No. 16. Flagging and reflagging, curbing and receding north side of Thirty-eighth street, from First to Second avenue.

List 3178, No. 17. Paving Seventy-fifth street, from Ninth to Tenth avenue, with granite blocks, and laying crosswalks.

List 3189, No. 18. Flagging and reflagging, curbing and receding west side of First avenue, from One Hundred and Third to One Hundred and Fourth street, and south side of One Hundred and Fourth street, from First to Second avenue.

The limits embraced by such assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Blocks bounded by Ninety-fourth and Ninety-seventh streets, Park and Madison avenues; also blocks bounded by Ninety-seventh and One Hundred and Third streets, Madison and Fifth avenues, excepting the north side of Ninety-ninth street, from Madison to Fifth avenue.

No. 2. West side of Eleventh avenue, from One Hundred and Fifty-eighth street to Fort Washington Ridge road; thence westerly along the southerly side of Fort Washington Ridge road about 300 feet.

No. 3. Both sides of One Hundred and Nineteenth street, from Pleasant avenue to the Harlem river, and east side of Pleasant avenue, from One Hundred and Eighteenth to One Hundred and Nineteenth street.

No. 4. North side of One Hundred and Fifth street, from Madison to Park avenue.

No. 5. North side of One Hundred and Fifteenth street, commencing at the northwest corner of Fifth avenue and extending westerly about 270 feet; also north side of One Hundred and Fifteenth street, commencing 100 feet easterly from Lenox avenue, and extending easterly 25 feet.

No. 6. East side of Avenue A, from Eighty-first to Eighty-second street.

No. 7. Both sides of One Hundred and Twenty-ninth and Lawrence streets, from Tenth avenue to the Boulevard; both sides of Broadway, from Lawrence street to One Hundred and Thirtieth street, and block bounded by One Hundred and Twenty-ninth and One Hundred and Thirtieth streets, Tenth avenue and Broadway.

No. 8. Both sides of One Hundred and Fifty-third street, extending about 250 feet westerly from Tenth avenue.

No. 9. Both sides of One Hundred and Fourth street, from Boulevard to West End avenue.

No. 10. Both sides of Twenty-sixth street, from Second avenue to the East river; both sides of Twenty-seventh street, from First to Second avenue, and east side of Second avenue and west side of First avenue, from Twenty-sixth to Twenty-seventh street.

No. 11. Both sides of Front street, from Dover street to Peck Slip.

No. 12. Both sides of Avenue B, from Eighty-second to Eighty-third street.

No. 13. Both sides of Ninety-fifth street, from Tenth avenue to the Boulevard.

No. 14. Both sides of One Hundred and Sixty-first street, from Tenth to Eleventh avenue.

No. 15. North side of Ninety-third street, extending easterly from Madison avenue about 145 feet south side of Ninety-fourth street, extending easterly about 295 feet, and east side of Madison avenue, from Ninety-third to Ninety-fourth street.

No. 16. North side of Thirty-eighth street, from First to Second avenue.

No. 17. Both sides of Seventy-fifth street, from Ninth to Tenth avenue, and to the extent of half the block at the intersecting avenues.

No. 18. South side of One Hundred and Fourth street, extending westerly from First avenue about 350 feet, and west side of First avenue, from One Hundred and Third to One Hundred and Fourth 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. 27 Chambers street, 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 20th day of March, 1890.

EDWARD GILON, Chairman,
PATRICK M. HAVERTY,
CHAS. E. WENDT,
EDWARD CAHILL,
Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS,
No. 27 CHAMBERS STREET,
NEW YORK, February 19, 1890.

PUBLIC NOTICE IS HEREBY GIVEN TO THE owner or owners, occupant or occupants of all houses and lots, improved or unimproved lands affected thereby, that the following assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

List 3164, No. 1. Paving One Hundred Fifty-ninth street, from the Boulevard to Tenth avenue, with granite blocks, and laying crosswalks.

List 3166, No. 2. Paving One Hundred and Twenty-first street, from Lenox to Mount Morris avenue with Trinidad asphalt pavement.

List 3169, No. 3. Regulating and grading, curbing, flagging and laying crosswalks in St. Ann's avenue, between the northerly curb-line of the Southern Boulevard and the southerly curb-line of Clifton street.

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 One Hundred and Fifty-ninth street, from Tenth avenue to the Boulevard, and to the extent of half the block at the intersecting avenues.

No. 2. Both sides of One Hundred and Twenty-first street, from Lenox to Mount Morris avenue, and to the extent of half the block at the intersecting avenues.

No. 3. Both sides of St. Ann's avenue, from the Southern Boulevard to Clifton street, and to the extent of half the block at the intersecting streets and avenues.

All persons whose interests are affected by the above-named assessments, and who are opposed to the same, or either of them, are requested to present their objections in writing to the Chairman of the Board of Assessors, at their office, No. 27 Chambers street, 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 18th day of March, 1890.

EDWARD GILON, Chairman,
PATRICK M. HAVERTY,
CHAS. E. WENDT,
EDWARD CAHILL,
Board of Assessors.

OFFICE OF THE BOARD OF ASSESSORS,
No. 27 CHAMBERS STREET,
NEW YORK, February 17, 1890.

SUPREME COURT.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to EAST ONE HUNDRED AND SEVENTY-SIXTH STREET (although not yet named by proper authority), extending from Jerome avenue to Tremont avenue and from Carter avenue to Third avenue, in the Twenty-fourth Ward of the City of New York, as the same has been heretofore laid out and designated as a first class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, the Mayor, Aldermen and Commonality of the City of New York hereby give notice that the Counsel to the Corporation will apply to the Supreme Court in the First Judicial District, in the State of New York, at a Special Term thereof, to be held at Chambers of said Court, in the County Court-house in the City of New York, on the 27th day of March, 1890, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, for the appointment of a Commissioner of Estimate and Assessment in the above-entitled proceeding in the place and stead of Fordham Morris, who has declined to serve.

WILLIAM H. CLARK,
Counsel to the Corporation,
No. 2 Tryon Row, New York City.
Dated New York, February 27, 1890.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to CAULDWELL AVENUE (although not yet named by proper authority), extending from the Boston road to East One Hundred and Sixty-third street, and from Clifton street to Westchester avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, the Mayor, Aldermen and Commonality of the City of New York hereby give notice that the Counsel to the Corporation will apply to the Supreme Court in the First Judicial District, in the State of New York, at a Special Term thereof, to be held at Chambers of said Court, in the County Court-house, in the City of New York, on the 27th day of March, 1890, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, for the appointment of a Commissioner of Estimate and Assessment in the above-entitled proceeding in the place and stead of Bowie Dash, who has declined to serve.

WILLIAM H. CLARK,
Counsel to the Corporation,
No. 2 Tryon Row, New York City.
Dated New York, February 27, 1890.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to WALNUT AVENUE (although not yet named by proper authority), extending from the south side of East One Hundred and Thirty-second street to the north side of East One Hundred and Forty-first street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, the Mayor, Aldermen and Commonality of the City of New York hereby give notice that the Counsel to the Corporation will apply to the Supreme Court in the First Judicial District, in the State of New York, at a Special Term thereof, to be held at Chambers of said Court, in the County Court-house, in the City of New York, on the 27th day of March, 1890, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, for the appointment of a Commissioner of Estimate and Assessment in the above-entitled proceeding in the place and stead of Ernest Hall, who has declined to serve.

WILLIAM H. CLARK,
Counsel to the Corporation,
No. 2 Tryon Row, New York City.
Dated New York, February 27, 1890.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of EAGLE AVENUE (although not yet named by proper authority), extending from East One Hundred and Forty-ninth street to East One Hundred and Sixty-third street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the thirty-first day of March, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said thirty-first day of March, 1890, and for that purpose will be in attendance at our said office on each of said ten days at one o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the first day of April, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which, taken together, are bounded and described as follows, viz.: Northerly by the southerly line of East One Hundred and Sixty-third street; easterly by a line extending from the southerly line of East One Hundred and Sixty-third street to the northerly line of East One Hundred and Forty-ninth street and parallel with, and distant 100 feet easterly from, the easterly line of Eagle avenue except where the centre line of the block between Eagle avenue and Terrace place is distant less than 100 feet easterly from the easterly line of Eagle avenue, and in such case said centre line forms the easterly boundary; southerly by the northerly line of East One Hundred and Forty-ninth street; and westerly by a line extending from the northerly line of East One Hundred and Forty-ninth street to the southerly line of East One Hundred and Sixty-third street and parallel with, and distant 100 feet westerly from, the westerly line of Eagle avenue, except where the centre line of the blocks between Eagle avenue and St. Ann's avenue is distant less than 100 feet westerly from the westerly line of Eagle avenue, and in such case said centre line forms the westerly boundary; excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1882, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house in the City of New York, on the eighteenth day of April, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, February 18, 1890.
FRANCIS V. S. OLIVER, Chairman,
NEVIN W. BUTLER,
JOHN H. KITCHEN,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of EAST ONE HUNDRED AND FORTY-FIFTH STREET (although not yet named by proper authority), extending from East One Hundred and Forty-sixth street to St. Ann's avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

NOTICE IS HEREBY GIVEN THAT THE BILL of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court, at the Chambers thereof, in the County Court-house, at the City Hall, in the City of New York, on the fourth day of March, 1890, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said bill of costs, charges and expenses has been deposited in the office of the Department of Public Works, there to remain for and during the space of ten days.

Dated New York, February 17, 1890.
JOHN P. REED,
CHARLES H. LOVETT,
C. C. CLARKE,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of MELROSE AVENUE (although not yet named by proper authority), extending from Third avenue to East One Hundred and Sixty-third street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the twenty-ninth day of March, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said twenty-ninth day of March, 1890, and for that purpose will be in attendance at our said office on each of said ten days at 2 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the thirty-first day of March, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.:

Northerly by the prolongation westerly of the southerly side of East One Hundred and Sixty-seventh street, from Clay avenue to Morris avenue, and the southerly side of East One Hundred and Sixty-seventh street; easterly by the westerly line of the lands of the New York and Harlem Railroad Company, from East One Hundred and Sixty-seventh street to East One Hundred and Sixty-fifth street, and the westerly side of Brook avenue, from East One Hundred and Sixty-fifth street to East One Hundred and Thirty-eighth street; southerly by the northerly side of East One Hundred and Thirty-eighth street, from Brook avenue to Morris avenue; and westerly by the easterly side of Morris avenue, from East One Hundred and Thirty-eighth street to the point where the northerly boundary line, heretofore described, intersects the easterly side of Morris avenue; excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1882, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the eleventh day of April, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, February 12, 1890.
GEORGE F. LANGBEIN, Chairman,
MICHAEL LEVY,
LAMONT McLOUGHLIN,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title wherever the same has not been heretofore acquired to that part of PRISTOW STREET (although not yet named by proper authority), extending from Stebbins avenue to Boston road, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the nineteenth day of March, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said nineteenth day of March, 1890, and for that purpose will be in attendance at our said office on each of said ten days at three o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the twentieth day of March, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by the southerly line of Boston road; easterly by the centre line of the blocks between Bristow street and Stebbins avenue, from Boston road to Stebbins avenue; southerly by the northerly line of Stebbins avenue, the northerly line of Freeman street and the northerly line of Jennings street; and westerly by the centre line of the block between Bristow street and Chisholm street, from Freeman street to Jennings street and the centre line of the block between Bristow street and Prospect avenue, from Jennings street to Boston road; excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares, and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1882, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the fourth day of April, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, February 4, 1890.
AUGUSTUS C. BROWN, Chairman,
HENRY G. CASSIDY,
LAMONT McLOUGHLIN,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to that part of CHISHOLM STREET, (although not yet named by proper authority), extending from Stebbins avenue to Jennings street, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the eighteenth day of March, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said eighteenth day of March, 1890, and for that purpose will be in attendance at our said office on each of said ten days at 3.30 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the nineteenth day of March, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: northerly by the southerly line of Jennings street; easterly by the centre line of the blocks between Chisholm street and Bristow street, from Jennings street to Stebbins avenue; southerly by the northerly line of Stebbins avenue, and westerly by the centre line of the

blocks between Chisholm street and Lyman place and Prospect avenue, from Stebbins avenue to Jennings street, excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1889, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the fourth day of April, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, February 4, 1890.

AUGUSTUS C. BROWN, Chairman,
LAMONT McLOUGHLIN,
JOHN N. EMRA,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title wherever the same has not been heretofore acquired to that part of JENNINGS STREET, (although not yet named by proper authority), extending from Union avenue to Stebbins avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the eighteenth day of March, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said eighteenth day of March, 1890, and for that purpose will be in attendance at our said office on each of said ten days at four o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the nineteenth day of March, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by the centre line of the blocks between Jennings street and Boston road, from Union avenue to a point 100 feet easterly from the easterly side of Stebbins avenue; easterly by a line drawn parallel with and distant 100 feet easterly from the easterly side of Stebbins avenue, and extending from the last mentioned point to the centre line of the block between Freeman street and Lyon street; southerly by the centre line of the blocks between Freeman street and Lyon street, from the easterly limit of the assessment district to the easterly line of Lyman place and by the centre line of the block between Jennings street and Ritter place, from Prospect avenue to Union avenue, and westerly by the easterly line of Lyman place, the easterly line of Prospect avenue, and the easterly line of Union avenue, excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the Laws amendatory thereof, or of chapter 410 of the Laws of 1889, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the fourth day of April, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, February 4, 1890.

AUGUSTUS C. BROWN, Chairman,
THOMAS E. GRACE,
LAMONT McLOUGHLIN,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title wherever the same has not been heretofore acquired to that part of WENDOVER AVENUE (although not yet named by proper authority), extending from Webster to Third avenue, in the Twenty-fourth Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the fourteenth day of February, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said fourteenth day of February, 1890, and for that purpose will be in attendance at our said office on each of said ten days at three o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the fifteenth day of February, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by the centre line of the blocks between Wendover avenue and East One Hundred and Seventy-second street, from Vanderbilt avenue east to Third avenue, and the prolongation easterly of the centre line of said blocks between Wendover avenue and East One Hundred and Seventy-second street to its intersection with a line

parallel with, and distant 100 feet easterly from, the easterly side of Third avenue; easterly by a line parallel with, and distant 100 feet easterly from, the easterly side of Third avenue; southerly by the centre line of the blocks between Wendover avenue and East One Hundred and Seventy-second street, from a point 100 feet east of Third avenue to Webster avenue and the prolongation westerly of the centre line of said blocks to its intersection with a line parallel with, and distant 100 feet westerly from, the westerly side of Webster avenue, and westerly by a line parallel with, and distant 100 feet westerly from, the westerly side of Webster avenue; excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1889, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the third day of March, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, January 3, 1890.

LEONARD J. LANGBEIN, Chairman,
WILLIAM J. LACEY,
HIRAM D. INGERSOLL,
Commissioners.

CARROLL BERRY, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, for and on behalf of the Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title wherever the same has not been heretofore acquired to that part of EAST ONE HUNDRED AND FORTY-SIXTH STREET (although not yet named by proper authority), extending from Railroad avenue, East, to St. Ann's avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road by the Department of Public Parks.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved or unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, No. 200 Broadway (fifth floor), in the said city, on or before the eleventh day of February, 1890, and that we, the said Commissioners, will hear parties so objecting within the ten week-days next after the said eleventh day of February, 1890, and for that purpose will be in attendance at our said office on each of said ten days at one o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited with the Commissioner of Public Works of the City of New York, at his office, No. 31 Chambers street, in the said city, there to remain until the twelfth day of February, 1890.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: Northerly by the centre line of the blocks between East One Hundred and Forty-sixth street and East One Hundred and Forty-eighth street, from Railroad avenue, East, to Third avenue, and the centre line of the blocks between East One Hundred and Forty-sixth street and East One Hundred and Forty-seventh street, from Third avenue to St. Ann's avenue; easterly by the westerly line of St. Ann's avenue; southerly by the centre line of the blocks between East One Hundred and Forty-sixth street and East One Hundred and Forty-fifth street, from St. Ann's avenue to College avenue, and the centre line of the blocks between East One Hundred and Forty-sixth street and East One Hundred and Forty-fourth street, from College avenue to Railroad avenue, East; and westerly by the easterly line of Railroad avenue, East; excepting from said area all the streets, avenues and roads, or portions thereof, heretofore legally opened, and all the unimproved land included within the lines of streets, avenues, roads, public squares and places shown and laid out upon any map or maps filed by the Commissioners of the Department of Public Parks, pursuant to the provisions of chapter 604 of the Laws of 1874, and the laws amendatory thereof, or of chapter 410 of the Laws of 1889, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term thereof, to be held at the Chambers thereof, in the County Court-house, in the City of New York, on the twenty-eighth day of February, 1890, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, December 31, 1889.

ROBERT E. DEVO, Chairman,
MOSES HERRMAN,
HENRY G. CASSIDY,
Commissioners.

CARROLL BERRY, Clerk.

JURORS.

NOTICE OF COMMISSIONER OF JURORS IN REGARD TO CLAIMS FOR EXEMPTION FROM JURY DUTY.

ROOM 127, STEWART BUILDING,
No. 280 BROADWAY, THIRD FLOOR,
NEW YORK, JUNE 1, 1889.

CLAIMS FOR EXEMPTION FROM JURY duty will be heard by me daily at my office, from 9 A. M. until 4 P. M.

Those entitled to exemption are: Clergymen, lawyers, physicians, surgeons, surgeon-dentists, professors or teachers in a college, academy or public school, licensed pharmacists or pharmacists, actually engaged in their respective professions and not following any other calling; militiamen, policemen, and firemen; election officers, jury non-residents, and city employees, and United States employees; officers of vessels making regular trips; licensed pilots, actually following that calling; superintendents, conductors and engineers of a railroad company other than a street railroad company; telegraph operators actually doing duty as such; Grand, Sheriff's, and Civil Court jurors; stationary engineers; and persons physically incapable of performing jury duty by reason of severe sickness, deafness, or other physical disorder.

Those who have not answered as to their liability, or proved permanent exemption, will receive a "jury enrollment notice," requiring them to appear before me this year. Whether liable or not, such notices must be answered (in person, if possible), and at this office only, under severe penalties. If exempt, the party must bring proof of exemption; if liable, he must also answer in person, giving full and correct name, residence, etc., etc. No attention paid to letters.

Persons "enrolled" as liable must serve when called or pay their fines. No mere excuse will be allowed or interference permitted. The fines, if unpaid, will be entered as judgments upon the property of the delinquents. All good citizens will aid the course of justice, and

secure reliable and respectable juries, and equalize their duty by serving promptly when summoned, allowing their clerks or subordinates to serve reporting to me any attempt at bribery or evasion, and suggesting names for enrollment. Persons between sixty and seventy years of age, summer absentees, persons temporarily ill, and United States jurors, are not exempt.

Every man must attend to his own notice. It is a misdemeanor to give any jury paper to another to answer. It is also punishable by fine or imprisonment to give or receive any present or bribe, directly or indirectly, in relation to a jury service, or to withhold any paper or make any false statement and every case will be fully prosecuted.

CHARLES REILLY,
Commissioner of Jurors.

AQUEDUCT COMMISSION.

AQUEDUCT COMMISSIONERS' OFFICE,
ROOM 209, STEWART BUILDING, No. 280 BROADWAY,
NEW YORK, February 14, 1890.

TO CONTRACTORS.

BIDS OR PROPOSALS FOR FURNISHING two complete Portable Hoisting Plants for the use of the New Aqueduct, as called for in the approved forms of contract and specifications on file in the office of the Aqueduct Commissioners, will be received at this office until 3 o'clock p. m. on March 5, 1890, at which place and hour they will be publicly opened by the Aqueduct Commissioners, and the award for doing said work will be made by said Commissioners as soon thereafter as possible.

Blank forms of contract and specifications therefor, and bids or proposals and proper envelopes for their inclosure, can be obtained at the above office of the Aqueduct Commissioners on application to the Secretary.

By order of the Aqueduct Commissioners,
JAMES C. DUANE,
President.

JOHN C. SHEEHAN,
Secretary.

AQUEDUCT COMMISSIONERS' OFFICE,
ROOM 209, STEWART BUILDING, No. 280 BROADWAY,
NEW YORK, February 14, 1890.

TO CONTRACTORS.

BIDS OR PROPOSALS FOR BUILDING THE Gate-house Superstructure, etc., for the New Gate Chambers at Croton Dam, on Section 1 of the New Croton Aqueduct, as called for in the approved forms of contract and specifications on file in the office of the Aqueduct Commissioners, will be received at this office until 3 o'clock p. m. on March 5, 1890, at which place and hour they will be publicly opened by the Aqueduct Commissioners, and the award for doing said work will be made by said Commissioners as soon thereafter as possible.

Blank forms of contract and specification therefor, and bids or proposals and proper envelopes for their inclosure, can be obtained at the above office of the Aqueduct Commissioners on application to the Secretary.

By order of the Aqueduct Commissioners,
JAMES C. DUANE,
President.

JOHN C. SHEEHAN,
Secretary.

DEPARTMENT OF DOCKS.

DEPARTMENT OF DOCKS,
PIER "A," NORTH RIVER.

TO CONTRACTORS.

(No. 324.)

PROPOSALS FOR ESTIMATES FOR FURNISHING SAWED SPRUCE TIMBER.

ESTIMATES FOR FURNISHING SAWED Spruce Timber will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, Pier "A," foot of Battery place, North river, in the City of New York, until 12 o'clock m. of

WEDNESDAY, MARCH 12, 1890.

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance, in the sum of Two Thousand Five Hundred Dollars.

The Engineer's estimate of the quantities is as follows:

| | Feet, B. M. |
|---|----------------|
| Spruce Timber, 12" x 12", 450 pieces, 20 feet 6 inches long, about..... | 110,700 |
| " 12" x 12", 178 pieces, 24 feet long, about..... | 51,264 |
| " 8" x 8", 433 pieces, 19 feet long, about..... | 66,970 |
| " 4" x 12", about 3,437 linear feet, in 15', 18', 21' and 24' lengths, about..... | 13,748 |
| " 4" x 12", about 1,438 linear feet in 12 feet lengths and upwards, about..... | 5,752 |
| " 4" x 10", about 20,913 linear feet in 15', 18', 21' and 24 feet lengths, about..... | 69,710 |
| " 4" x 10", about 2,062 linear feet, in 12 feet lengths and upwards, about..... | 10,873 |
| " 4" x 10", about 230 pieces, 17 feet 9 inches long, about..... | 13,608 |
| " 4" x 10", about 520 pieces, 16 feet 9 inches long, about..... | 29,033 |
| " 4" x 10", about 290 pieces, 25 feet 1 inch long, about..... | 24,244 |
| " 4" x 10", about 290 pieces, 9 feet 4 inches long, about..... | 7,153 |
| " 4" x 10", about 50 pieces, 20 feet long, about..... | 3,333 |
| " 4" x 10", about 45 pieces, 19 feet long, about..... | 2,533 |
| " 3" x 12", about 97 pieces, 17 feet 9 inches long, about..... | 4,302 |
| " 3" x 10", about 254 pieces, 16 feet 9 inches long, about..... | 10,635 |
| " 3" x 10", about 157 pieces, 25 feet 1 inch long, about..... | 9,845 |
| " 3" x 10", about 97 pieces, 9 feet 4 inches long, about..... | 2,262 |
| " 3" x 10", about 50 pieces, 20 feet long, about..... | 2,500 |
| " 3" x 10", about 50 pieces, 19 feet long, about..... | 2,375 |
| Total Spruce Timber, about..... | 440,840 |

N. B.—Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:—1st. Bidders must satisfy themselves by personal examination of the location of the proposed deliveries of the materials, and by such other means as they may

prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not, at any time after the submission of an estimate, dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

(2.) Bidders will be required to complete the entire work to the satisfaction of the Department of Docks, and in substantial accordance with the specifications of the contract. No extra compensation, beyond the amount payable for the work before mentioned, which shall be actually performed, at the price therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

At least 50,000 feet, board measure, of the timber is to be delivered within thirty days, Sundays excepted, from the date of the contract, and all the timber to be delivered under this contract is to be delivered on or before the first day of May, 1890, and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

Bidders will state in their estimates a price per thousand feet, board measure, for the spruce timber to be delivered in conformity with the approved form of agreement and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the receiving of the material by the Department of Docks.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for furnishing this material.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvertised and relet and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein; and if no other persons be so interested the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed to by all the parties interested.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion, and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount, in each case, to be calculated upon the estimated amount of the material to be delivered 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 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 and otherwise; and that he has offered himself as surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited 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.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The right to decline all the estimates is reserved, it deemed for the interest of the Corporation of the City of New York.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

EDWIN A. POST,
JAMES MATTHEWS,
J. SERGEANT CRAM,
Commissioners of the Department of Docks.
Dated New York, February 25, 1890.

DEPARTMENT OF DOCKS,
PIER "A," NORTH RIVER.

TO CONTRACTORS.

(No. 325.)

PROPOSALS FOR ESTIMATES FOR REPAIRING THE PIER AT THE FOOT OF WEST FIFTY-FIFTH STREET, NORTH RIVER.

ESTIMATES FOR REMOVING CERTAIN parts of the Pier at the foot of West Fifty-fifth Street, North river, and for repairing said Pier, will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, Pier "A," foot of Battery place, North river, in the City of New York, until 12 o'clock m. of

WEDNESDAY, MARCH 5, 1890.

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named,

which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract, in the manner prescribed and required by ordinance, in the sum of One Thousand Three Hundred and Forty Dollars.

The Engineer's estimate of the nature, quantities and extent of the work, is as follows:

| | Feet, B. M., measured in the work. |
|---|--|
| 1. Yellow Pine Timber, 12" x 12", 3/4" x 16", and 8" x 8"..... | 5,664 |
| 2. Spruce Timber, 4" x 10"..... | 15,393 |
| Total..... | 8,007 |

| | Feet, B. M., measured in the work. |
|---|--|
| 1. Yellow Pine Timber, 12" x 12", 3/4" x 16", and 8" x 8"..... | 5,664 |
| 2. Spruce Timber, 4" x 10"..... | 15,393 |
| Total..... | 8,007 |

NOTE.—The above quantities of timber, in items 1 and 2, are exclusive of extra lengths required for scarfs, laps, etc., and of waste.

3. White Oak Timber, 8" x 12", squared, six, 14 feet long, 672 feet, B. M.

4. Half Round Fenders, fifteen, 14 feet long, 210 lineal feet.

5. 1/2" x 7", 1/2" x 12", 3/4" x 14", 3/4" x 16",
and 1/2" x 26" square Spike-pointed
Dock Spikes, about.....

6. 1" Wrought-iron Screw-bolts and
Nuts, about.....

7. Cast-iron Washers for 1" Screw Bolts,
about.....

8. Materials for Tarring.

9. Labor of every description required by the specification of this Contract.

N. B.—As the above-mentioned quantities, though stated with as much accuracy as is possible, in advance, are approximate only, bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:

1st. Bidders must satisfy themselves, by personal examination, of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not, at any time after the submission of an estimate, dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Department of Docks, and in substantial accordance with the specifications of the contract. No extra compensation, beyond the amount payable for the work before mentioned, which shall be actually performed, at the price therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

The work to be done under the contract is to be commenced within five days after the date of the contract, and all the work to be done under the contract is to be fully completed on or before the 1st of June, 1890, and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

All the old material taken from the said pier, to be removed under this contract, will be relinquished to the contractor, and bidders must estimate the value of such material when considering the price for which they will do the work under the contract.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of agreement and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing the work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence; the names of all persons interested with them therein; and if no other person be so interested, the estimate shall distinctly state the fact; also, that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair, and without collusion or fraud; and also, that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.*

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled on its completion, and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount, in each case, to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 1, No. 31 Chambers street.

THOMAS F. GILROY,
Commissioner of Public Works.

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.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from or contract awarded to any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The right to decline all the estimates is reserved, if deemed for the interest of the Corporation of the City of New York.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

EDWIN A. POST,
JAMES MATTHEWS,
J. SERGEANT CRAM,
Commissioners of the Department of Docks.
Dated New York, February 18, 1890.

(Work of Construction under New Plan.)

DEPARTMENT OF DOCKS,
PIER "A," NORTH RIVER.

TO CONTRACTORS.

(No. 322.)

PROPOSALS FOR ESTIMATES FOR FURNISHING ABOUT 2,100 PILES.

ESTIMATES FOR FURNISHING ABOUT 2,100 Piles will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, on Pier "A," foot of Battery place, North river, in the City of New York, until 12 o'clock M. of

FRIDAY, FEBRUARY 28, 1890.

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance, in the sum of Five Thousand Five Hundred Dollars.

The Engineer's estimate of the quantities is as follows:

Class I.—About 170 piles, from 75 feet to 85 feet long, not less than 14 inches in diameter at the butt, and not less than 7 inches in diameter at the point, measured exclusive of the bark.

Class II.—About 130 piles, from 70 feet to 75 feet long, not less than 14 inches in diameter at the butt, and not less than 6 inches in diameter at the point, measured exclusive of the bark.

Class III.—About 350 piles, from 65 feet to 70 feet long, not less than 14 inches in diameter at the butt, and not less than 6 inches in diameter at the point, measured exclusive of the bark.

Class IV.—About 1,150 piles, from 60 feet to 65 feet long, not less than 14 inches in diameter at the butt, and not less than 6 inches in diameter at the point, measured exclusive of the bark.

Class V.—About 300 piles, from 55 feet to 60 feet long, not less than 14 inches in diameter at the butt, and not less than 6 inches in diameter at the point, measured exclusive of the bark.

Total, about 2,100 piles.

N. B.—Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:

1. Bidders must satisfy themselves, by personal examination of the locations of the proposed deliveries of the material, and by such other means as they may prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not, at any time after the submission of an estimate, dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2. Bidders will be required to complete the entire work to the satisfaction of the Department of Docks, and in substantial accordance with the specifications of the contract. No extra compensation, beyond the amount payable for the work before mentioned, which shall be actually performed, at the price therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

About 150 of the piles are to be delivered within ten days from the date of the contract, and all the piles to be delivered under this contract are to be delivered on or before the first day of June, 1890, at which time this contract ceases and terminates; and the amounts in each delivery are to be divided between the several classes as directed by the Engineer-in-Chief. The damages to be paid by the Contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at \$50 per day.

Bidders will state in their estimates a price per pile for the piles in each class, to be delivered in conformity with the approved form of agreement and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the completion of the contract, including any claim that may arise through delay, from any cause, in the receiving of the material by the Department of Docks.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for furnishing this material.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation; and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein; and if no other person be so interested, the estimate shall distinctly state the fact; also, that the estimate is made without any connection with any other person making an estimate for the same work, and that it is in all respects fair, and without collusion or fraud; and also, that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.*

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled on its completion, and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount, in each case, to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

said person or persons would be entitled upon its completion, and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the material to be delivered by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as surety in good faith, and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The right to decline all the estimates is reserved, if deemed for the interest of the Corporation of the City of New York.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

EDWIN A. POST,
JAMES MATTHEWS,
J. SERGEANT CRAM,
Commissioners of the Department of Docks.
Dated New York, February 14, 1890.

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 Annual Record of the Assessed Valuations of Real and Personal Estate" of the City and County of New York, for the year 1890, will be open for examination and correction from the second Monday of January, 1890, until the first day of May, 1890.

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,
THOMAS L. FEITNER,
EDWARD L. PARIS,
Commissioners of Taxes and Assessments

DEPARTMENT OF PUBLIC WORKS.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE,
Room 6, No. 31 CHAMBERS STREET,
NEW YORK, February 21, 1890.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at this office until 12 o'clock M. Friday, March 7, 1890, at which place and hour they will be publicly opened by the head of the Department.

No. 1. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SIXTY-FIFTH STREET, from Tenth avenue to the Boulevard.

No. 2. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SIXTY-SIXTH STREET, from Eighth to Ninth avenue.

No. 3. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SIXTY-NINTH STREET, from Eighth to Ninth avenue.

No. 4. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SEVENTIETH STREET, from Eighth to Ninth avenue.

No. 5. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SEVENTY-SEVENTH STREET, from the Boulevard to Riverside Drive.

No. 6. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF SEVENTY-EIGHTH STREET, from the Boulevard to Riverside Drive.

No. 7. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF AVENUE B, from the north side of Seventy-ninth street to the south side of Eighty-sixth street.

No. 8. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF EIGHTIETH STREET, from the Boulevard to West End avenue.

No. 9. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF EIGHTY-EIGHTH STREET, from Park to Madison avenue.

No. 10. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF NINETY-SECOND STREET, from West End avenue to the Boulevard.

No. 11. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDREDTH STREET, from the Boulevard to Riverside avenue.

No. 12. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND SECOND STREET, from Ninth to Tenth avenue.

No. 13. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND EIGHTH STREET, from the Boulevard to Riverside Drive.

No. 14. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND FOURTEENTH STREET, from Eighth to New (now Manhattan) avenue.

No. 15. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND NINETEENTH STREET, from Eighth avenue to Manhattan avenue.

No. 16. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND NINETEENTH STREET, from Manhattan to Ninth avenue.

No. 17. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND TWENTY-SIXTH STREET, from the westerly side of St. Nicholas avenue to the westerly side of Ninth avenue.

No. 18. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND THIRTY-FOURTH STREET, between Fifth and Lenox avenues.

No. 19. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND THIRTY-SIXTH STREET, from Seventh to Eighth avenue.

No. 20. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND FORTY-THIRD STREET, from Seventh to Eighth avenue.

No. 21. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND FORTY-FOURTH STREET, from Eighth avenue to the first new avenue west.

No. 22. FOR REGULATING AND PAVING WITH GRANITE-BLOCK PAVEMENT THE ROADWAY OF ONE HUNDRED AND FORTY-SIXTH STREET, from St. Nicholas to Tenth avenue.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation is directly or indirectly interested in the estimate, or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above 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 State or National banks of the City of New York, drawn to the order of the Comptroller, or money, to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 1, No. 31 Chambers street.

THOMAS F. GILROY,
Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE,
Room 6, No. 31 CHAMBERS ST.,
NEW YORK, February 20, 1890.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at this office until 12 o'clock M. Wednesday, March 5, 1890, at which place and hour they will be publicly opened by the head of the Department.

No. 1. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF SEVENTY-THIRD STREET, from West End avenue to Riverside Drive.

No. 2. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND SEVENTEENTH STREET, from St. Nicholas to Eighth avenue.

No. 3. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND NINETEENTH STREET, between Seventh and St. Nicholas avenues.

No. 4. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND TWENTY-EIGHTH STREET, between St. Nicholas and Eighth avenues.

No. 5. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND THIRTY-FOURTH STREET, between St. Nicholas and Eighth avenues.

No. 6. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND TWENTIETH STREET, between Seventh and Eighth avenues.

No. 7. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND THIRTY-THIRD STREET, between St. Nicholas and Eighth avenues.

No. 8. FOR REGULATING AND PAVING WITH ASPHALT PAVEMENT, ON CONCRETE FOUNDATION, THE ROADWAY OF ONE HUNDRED AND SIXTH STREET, between Eighth avenue and the Boulevard.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 1, No. 31 Chambers street.

THOMAS F. GILROY,
Commissioner of Public Works.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at this office until 12 o'clock M. Wednesday, March 5, 1890, at which place and hour they will be publicly opened by the head of the Department.

No. 1. FOR FURNISHING THE DEPARTMENT OF PUBLIC WORKS WITH FIFTEEN THOUSAND (15,000) LINEAL FEET OF BRIDGE-STONE.

No. 2. FOR FURNISHING THE DEPARTMENT OF PUBLIC WORKS WITH TWENTY-SIX THOUSAND (26,000) CUBIC YARDS OF CLEAN SHARP SAND.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested, it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance; and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety

in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same, within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York, as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at Room 1, No. 31 Chambers street.

THOMAS F. GILROY,
Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE,
No. 31 CHAMBERS STREET,
NEW YORK, August 14, 1889.

TO OWNERS OF LANDS ORIGINALLY ACQUIRED BY WATER GRANTS.

ATTENTION IS CALLED TO THE RECENT act of the Legislature (chapter 449, Laws of 1889), which provides that whenever any streets or avenues in the city, described in any grant of land under water, from the Mayor, Aldermen and Commonalty, containing covenants requiring the grantees and their successors to pave, repave, keep in repair or maintain such streets, shall be in need of repairs, pavement or repavement, the Common Council may, by ordinance, require the same to be paved, repaved or repaired, and the expense thereof to be assessed on the property benefited; and whenever the owner of a lot so assessed shall have paid the assessment levied for such paving, repaving or repairing, such payment shall release and discharge such owner from any and every covenant and obligation as to paving, repaving and repairing, contained in the water grant under which the premises are held, and no further assessment shall be imposed on such lot for paving, repaving or repairing such street or avenue, unless it shall be petitioned for by a majority of the owners of the property (who shall also be the owners of a majority of the property in frontage) on the line of the proposed improvement.

The act further provides that the owner of any such lot may notify the Commissioner of Public Works, in writing, specifying the ward number and street number of the lot, that he desires, for himself, his heirs and assigns, to be released from the obligation of such covenants, and elects and agrees that said lot shall be thereupon liable to be assessed as above provided, and thereupon the owner of such lot, his heirs and assigns shall thereupon be relieved from any obligation to pave, repair, uphold or maintain said street, and the lot in respect of which such notice was given shall be liable to assessment accordingly.

The Commissioner of Public Works desires to give the following explanation of the operation of this act: When notice, as above described, is given to the Commissioner of Public Works, the owner of the lot or lots therein described, and his heirs and assigns, are forever released from all obligation under the grant in respect to paving, repaving or repairing the street in front of or adjacent to said lot or lots, except one assessment for such paving, repaving or repairs, as the Common Council may, by ordinance, direct to be made thereafter.

No street or avenue within the limits of such grants can be paved, repaved or repaired until said work is authorized by ordinance of the Common Council, and when the owners of such lots desire their streets to be paved, repaved or repaired, they should state their desire and make their application to the Board of Aldermen and not to the Commissioner of Public Works, who has no authority in the matter until directed by ordinance of the Common Council to proceed with the pavement, repavement or repairs.

THOS. F. GILROY,
Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE,
No. 31 CHAMBERS STREET,
NEW YORK, June 1st, 1889.

PUBLIC NOTICE AS TO WATER RATES.

PUBLIC NOTICE IS HEREBY GIVEN THAT in compliance with the provisions of chapter 559, Laws of 1887, amending sections 350 and 921 of the New York City Consolidation Act of 1882, passed June 9, 1887, the following changes are made in charging and collecting water rents:

1st. All extra charges for water incurred from and after June 9, 1887, shall be treated, collected and returned in arrears in the same manner as regular rents have heretofore been treated.

2d. In every building where a water meter or meter is now, or shall hereafter be in use, the charge for water by meter measurement shall be the only charge against such building, or such part thereof as is supplied through meter.

3d. The returns of arrears of water rents, including the year 1887, shall be made as heretofore on the confirmation of the tax levy by the Board of Aldermen, and shall include all charges and penalties of every nature.

4th. A penalty of five dollars (\$5) is hereby established, and will be imposed in each and every case where the rules and regulations of the Department prohibiting the use of water through hose, or in any other wasteful manner, are violated, and such penalties will be entered on the books of the Bureau against the respective buildings or property, and, if not collected, be returned in arrears in like manner as other charges for water.

5th. Charges for so-called extra water rents of every nature, imposed or incurred prior to June 9, 1887, will be canceled of record on the books of the Department.

THOMAS F. GILROY,
Commissioner of Public Works.

REGULATIONS ESTABLISHING A SCALE OF WATER RENTS AND RULES GOVERNING THE USE OF WATER, FOR THE CITY OF NEW YORK, BY ORDER OF THOMAS F. GILROY, COMMISSIONER OF PUBLIC WORKS.

UNDER CHAPTER 410, LAWS 1882, SECTIONS 350, 351, 352 and 353, and as amended by chapter 559, Laws 1887, as follows:

"The commissioner of public works shall, from time to time, establish scales of rents for the supplying of water, which rents shall be collected in the manner now provided by law, and which shall be apportioned to different classes of buildings in said city in reference to their dimensions, values, exposure to fires, ordinary uses for dwellings, stores, shops, private stables and other common purposes, number of families or occupants, or consumption of water, as near as may be practicable, and modify, alter, amend and increase such scale from time to

time, and extend it to other descriptions of buildings and establishments. All extra charges for water shall be deemed to be included in the regular rents, and shall become a charge and lien upon the buildings upon which they are respectively imposed, and, if not paid, shall be returned as arrears to the clerk of arrears. Such regular rents, including the extra charges above mentioned, shall be collected from the owners or occupants of all such buildings respectively, which shall be situated upon lots adjoining any street or avenue in said city in which the distributing water-pipes are or may be laid, and from which they can be supplied with water. Said rents, including the extra charges aforesaid, shall become a charge and lien upon such houses and lots, respectively, as herein provided, but no charge whatever shall be made against any building in which a water-meter may have been, or shall be placed as provided in this act. In all such cases the charge for water shall be determined only by the quantity of water actually used as shown by said meters. * * * * *

The said commissioner of public works is hereby authorized to prescribe a penalty not exceeding the sum of five dollars for each offense, for permitting water to be wasted, and for any violation of such reasonable rules as he may, from time to time, prescribe for the prevention of the waste of water; such fines shall be added to the regular water rents."

The regular annual rents to be collected by the Department of Public Works shall be as follows, to wit: Croton Water Rates for Buildings from 16 to 50 feet, and others not specified subject to Special Rates

| FRONT WIDTH. | 1 Story. | 2 Stories. | 3 Stories. | 4 Stories. | 5 Stories. |
|--------------------|----------|------------|------------|------------|------------|
| 16 feet and under. | \$4 00 | \$5 00 | \$6 00 | \$7 00 | \$8 00 |
| 16 to 18 feet.... | 5 00 | 6 00 | 7 00 | 8 00 | 9 00 |
| 18 to 20 feet.... | 6 00 | 7 00 | 8 00 | 9 00 | 10 00 |
| 20 to 22½ feet.... | 7 00 | 8 00 | 9 00 | 10 00 | 11 00 |
| 22½ to 25 feet.... | 8 00 | 9 00 | 10 00 | 11 00 | 12 00 |
| 25 to 30 feet.... | 10 00 | 11 00 | 12 00 | 13 00 | 14 00 |
| 30 to 37½ feet.... | 12 00 | 13 00 | 14 00 | 15 00 | 16 00 |
| 37½ to 50 feet.... | 14 00 | 15 00 | 16 00 | 17 00 | 18 00 |

The rent of all tenements which shall exceed in width fifty feet shall be the subject of special contract with the Commissioner of Public Works.

The apportionment of the regular rents upon dwelling-houses are on the basis that but one family is to occupy the same, and for each additional family, one dollar per year shall be charged.

METERS will be placed on all houses where waste of water is found, and they will be charged at rates fixed by the Department for all the water passing through them.

The extra and miscellaneous rates shall be as follows, to wit:

BAKERSIES.—For the average daily use of flour, for each barrel, three dollars per annum.

BARBERS SHOPS shall be charged from five to twenty dollars per annum each in the discretion of the Commissioner of Public Works; an additional charge of five dollars per annum shall be made for each bathtub therein.

BATHING TUBS in private houses, beyond one, shall be charged at three dollars per annum each, and five dollars per annum each in public houses, boarding-houses, and bathing establishments. Combination stationary wash-tubs, having a movable division in the centre and capable of use for bathing, shall be charged the same as bathing tubs.

BUILDING PURPOSES.—For each one thousand bricks laid, or for stone-work—to be measured as brick—ten cents per thousand. For plastering, forty cents per hundred yards.

COWS.—For each and every cow, one dollar per annum.

DINING SALOONS shall be charged an annual rate of from five to twenty dollars, in the discretion of the Commissioner of Public Works.

FISH STANDS (retail) shall be charged five dollars per annum each.

For all stables not metered, the rates shall be as follows: HORSES, PRIVATE.—For two horses there shall be charged six dollars per annum; and for each additional horse, two dollars.

HORSES, LIVERY.—For each horse up to and not exceeding thirty in number, one dollar and fifty cents each per annum; and for each additional horse, one dollar.

HORSES, OMNIBUS AND CART.—For each horse, one dollar per annum.

HORSE TROUGHS.—For each trough, and for each half barrel or tub on sidewalk or street, twenty dollars per annum; each trough is to be fitted with a proper ball-cock to prevent waste.

HOTELS AND BOARDING HOUSES shall, in addition to the regular rate for private families, be charged for each lodging room, at the discretion of the Commissioner of Public Works.

LAUNDRIES shall be charged from eight to twenty dollars per annum, in the discretion of the Commissioner of Public Works.

LIQUOR AND LAGER BEER SALOONS shall be charged an annual rate of ten dollars each. An additional charge of five dollars per annum shall be made for each tap or wash-box.

PHOTOGRAPH GALLERIES shall be charged an annual rate of from five to twenty dollars, in the discretion of the Commissioner of Public Works.

PRINTING OFFICES, when not metered, shall be charged at such rates as may be determined by the Commissioner of Public Works.

SODA, MINERAL WATER and ROOT BEER FOUNTAINS shall be charged five dollars per annum each.

STREAM ENGINES, where not metered, shall be charged by the horsepower, as follows: For each horse-power up to and not exceeding ten, the sum of ten dollars per annum; for each exceeding ten, and not over fifteen, the sum of seven dollars and fifty cents each and for each horse-power over fifteen, the sum of five dollars.

WATER-CLOSETS AND URINALS.—To each building on a lot one water-closet having sewer connection is allowed without charge; each additional water-closet or urinal will be charged as hereinafter stated. All closets connected in any manner with sewer shall be charged two dollars for each seat per annum, whether in a building or on any other portion of the premises. Urinals shall be charged two dollars per annum each.

WATER-CLOSET RATES.—For hoppers of any form, when water is supplied direct from the Croton supply, through any form of the so-called single or double valves, hopper-cocks, stop-cocks, self-closing cocks, or any valve or cock of any description attached to the closet, each, per year, twenty dollars.

For any pan closet, or any of the forms of valve, plunger, or other water-closet not before mentioned, supplied with water as above described, per year, ten dollars.

For any form of hopper or water-closet, supplied from the ordinary style of cistern fitted with ball-cock, and overflow pipe that communicates with the pipe to the water-closet, so that overflow will run into the hopper or water-closet, when ball-cock is defective, or from which an unlimited amount of water can be drawn by holding up the handle, per year, each, five dollars.

For any form of hopper or water-closet, supplied from any of the forms of waste-preventing cisterns, that are approved by the Engineer of the Croton Aqueduct, which are so constructed that not more than three gallons of water can be drawn at each lift of the handle, or depression of the seat, if such cisterns are provided with an overflow pipe, such overflow pipe must not connect with the water-closet, but be carried like a safe-waste, as provided by the Board of Health regulations, per year, two dollars.

Cistern answering this description can be seen at this Department.

METERS.

Under the provisions of section 352, Consolidated Act 1882, water-meters, of approved pattern, shall be hereafter placed on the pipes supplying all stores, workshops

hotels, manufactories, public edifices, at wharves, ferry-houses, stables, and in all places where water is furnished for business consumption, except private dwellings.

It is provided by section 352, Laws of 1882, that "all expenses of meters, their connections and setting, water rates, and other lawful charges for the supply of Croton water, shall be a lien upon the premises where such water is supplied, as now provided by law." * *

All manufacturing and other business requiring a large supply of water will be fitted with a meter.

Water measured by meter, ten cents per one hundred cubic feet.

Rate Without Meters.

| PER DAY, GALLONS. | PER 100 GALLONS, RATE. | PER ANNUM, AMOUNT. |
|-------------------|------------------------|--------------------|
| 25 | 05 | \$3 75 |
| 50 | 05 | 7 50 |
| 60 | 05 | 9 00 |
| 70 | 05 | 10 50 |
| 80 | 05 | 12 00 |
| 90 | 05 | 13 50 |
| 100 | 05 | 15 00 |
| 150 | 05 | 22 50 |
| 200 | 05 | 30 00 |
| 250 | 04½ | 33 75 |
| 300 | 04 | 36 00 |
| 350 | 03½ | 36 75 |
| 400 | 03½ | 42 00 |
| 500 | 03½ | 52 50 |
| 600 | 03½ | 63 00 |
| 700 | 03½ | 73 50 |
| 800 | 03½ | 84 00 |
| 900 | 03½ | 94 50 |
| 1,000 | 03 | 105 00 |
| 1,500 | 02½ | 150 00 |
| 2,000 | 02½ | 180 00 |
| 2,500 | 02½ | 225 00 |
| 3,000 | 02½ | 280 00 |
| 4,000 | 02½ | 303 75 |
| 5,000 | 02½ | 333 50 |
| 6,000 | 02 | 360 00 |
| 7,000 | 02 | 420 00 |
| 8,000 | 02 | 480 00 |
| 9,000 | 02 | 540 00 |
| 10,000 | 02 | 600 00 |

The rate charged for steam-vessels taking water daily or belonging to daily lines, is one-half cent per ton (Custom House measurement) for each time they take water. Steamers taking water other than daily, one cent per ton (Custom House measurement).

Water supplied to sailing vessels and put on board, twenty-five cents per hundred gallons.

All matters not hereinbefore embraced are reserved for special contract by and with the Commissioner of Public Works.

HYDRANTS, HOSE, TROUGHS, FOUNTAINS, ETC., ETC.

No owner or tenant will be allowed to supply water to another person or persons.

All persons taking water from the City must keep their own service-pipes, street tap, and all fixtures connected therewith, in good repair, protected from frost, at their own risk and expense, and shall prevent all waste of water.

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

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

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

Taps at wash-basins, water-closets, baths and urinals must not be left running, under the penalty of five dollars for each offense, which will be strictly enforced.

Fountains or jets in hotels, porter-houses, eating-saloons, confectioneries or other buildings are strictly prohibited.

The use of hose for washing sidewalks, stoops, areas, house-fronts, yards, court-yards, gardens, and about stables, is prohibited. Where premises are provided with wells, special permits will be issued for the use of hose, in order that the police or inspectors of this department may understand that the permission is not for the use of Croton water.

Opening fire-hydrants to fill hand sprinklers or other vessels will not be allowed.

The penalty for a violation of any of the preceding rules and regulations will be five dollars for each offense, and if not paid when imposed will become a lien on the premises in like manner as all other charges for unpaid water rates.

By order,
THOMAS F. GILROY,
Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS,
COMMISSIONER'S OFFICE,
No. 31 CHAMBERS STREET,
NEW YORK, JUNE 1ST,

NOTICE TO CROTON WATER CONSUMERS.

NUMEROUS APPLICATIONS HAVE BEEN made to this Department by citizens claiming reductions or rebates on bills for water supplied through meters, on the alleged ground of leakage caused by defective plumbing and worn-out service pipes, or by willful waste of water by tenants allowing the faucets to be turned on in full force in water-closets, sinks, etc., without the knowledge or consent of the owners of the premises.

The main object of the use of water-meters is to enable this Department to detect and check the useless and unwarrantable waste of an element so valuable and essential to the health and comfort of all the citizens, and this object can only be accomplished by enforcing payment for the water wasted.

Under the law all charges for water supplied through meters are a lien against the respective premises, and the law therefore holds the owner of the premises responsible for the amount of water used or wasted.

Notice is therefore given to all householders that, in all further applications for reduction of water rents, no allowance will be made on account of waste of water occurring through leaks, from defective service pipes or plumbing, or wasteful use of water by tenants or occupants of buildings, though such leakage or waste may have occurred without the knowledge or consent of the owners of the buildings.

House-owners are further notified that whenever their premises become vacant, and are likely to remain vacant, they must notify this Department in writing, and that unless this requirement is complied with no deductions in extra water rents will be allowed for any portion of one year.

THOMAS F. GILROY,
Commissioner of Public Works.

THE CITY RECORD.

THE CITY RECORD IS PUBLISHED DAILY, Sundays and legal holidays other than the general election day excepted, at No. 2 City Hall, New York City. Price, single copy, 3 cents; annual subscription, \$9.30.

W. J. K. KENNY,
Supervisor.