

# THE CITY RECORD.

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### DEPARTMENT OF PUBLIC WORKS.

#### Report for the Quarter ending December 31, 1879.

DEPARTMENT OF PUBLIC WORKS,  
COMMISSIONER'S OFFICE, ROOM 19, CITY HALL,  
NEW YORK, February 9, 1880.

Hon. EDWARD COOPER, Mayor :

SIR—Herewith I have the honor to submit to you a report of the transactions of this Department for the three months ending December 31, 1879, together with a brief review of the work of the Department for the year 1879.

#### EXPENDITURES.

Amount of Requisitions drawn on the Comptroller during the three months ending December 31, 1879.

On account of appropriations raised—	
By taxation, of 1879.....	\$537,560 41
of 1878.....	23,815 33
	\$561,375 74
On account of assessment fund, for street improvements.....	128,056 91
On account of funded debt, for improvement and extension of water supply.....	108,970 84
Total.....	\$798,403 49

The amount of requisitions drawn on the Comptroller during the corresponding quarter for the preceding five years is as follows :

Fourth quarter of 1874.....	\$2,028,553 46
“ 1875.....	1,651,926 28
“ 1876.....	997,663 37
“ 1877.....	901,960 90
“ 1878.....	870,986 47

#### Expenditures for the Year 1879.

Requisitions drawn on the Comptroller—	
On appropriation account of 1879.....	\$1,445,645 22
On assessment fund.....	364,559 25
On funded debt account.....	300,710 62
Liabilities, including all outstanding accounts against appropriations of 1879 (estimated).....	229,848 48
Total expenditures for 1879.....	\$2,340,763 57

#### Expenditures for the past nine years.

For the year 1871.....	\$8,727,085 97
“ 1872.....	5,826,113 67
“ 1873.....	7,754,454 88
“ 1874.....	7,534,590 22
“ 1875.....	5,929,814 49
“ 1876.....	4,374,860 73
“ 1877.....	3,113,789 43
“ 1878.....	2,826,718 47
“ 1879 (as above).....	2,340,763 57

The total expenditure for the four years 1876, 1877, 1878, and 1879, was..... \$12,656,132 20  
The total expenditure for the preceding four years was..... 27,044,973 26

#### BUREAU OF CHIEF ENGINEER OF THE CROTON AQUEDUCT.

During the past three months 852 lineal feet of the aqueduct was repaired and strengthened on the plan heretofore described in these reports. About the 5th of November the means available for this purpose were exhausted, the balance of the appropriation being required for ordinary maintenance and repairs, and the work was suspended.

The tank and stand pipe for the new high service work at Ninth avenue and Ninety-eighth street have been completed, and the work on the building, boilers, engines, etc., is sufficiently advanced to have the whole completed and in operation next spring.

The laying of Croton pipes under contracts has continued without interruption, 39,273 lineal feet of pipes being laid, and 235 fire hydrants set. Contracts have been made for furnishing all the water pipes required to carry out the resolutions of the Common Council, passed up to December, 6th ult. Contracts have also been made for furnishing and laying pipes to supply the high grounds in the Riverdale and Spuyten Duyvil districts from the Yonkers water works, in accordance with an act passed by the Legislature of 1879.

Four hundred and seventy-six water meters were placed on various establishments, including 144 on hotels, 73 on slaughter and packing houses, 60 on breweries and malt houses, 40 on bottling establishments, and 168 on miscellaneous places. The average daily quantity of water furnished through the 1,398 meters now in use is 7,712,000 gallons, of which

Breweries, malt houses and bottlers' (153 meters) use.....	1,579,000 gallons
Hotels (282 meters).....	1,362,000 “
Railroads (103 meters).....	1,032,000 “
Docks, or shipping (93 meters).....	1,065,000 “
Gas companies (33 meters).....	548,000 “
Stables (204 meters).....	472,000 “

During the quarter the rainfall at the Boyd's Corners reservoir was 7 70-100 inches ; it was very light in October, viz. : 95-100 of an inch.

The draft on the reservoirs to supply the deficiency in the flow of the Croton river was 720,000, - 000 gallons for the three months.

The long pending claim for alleged damages to the Tilly Foster iron mine, located partly under the new storage reservoir on the middle branch of the Croton will probably soon be brought to a close. Daily observations have been made at the mine, since the reservoir was filled, by one of the Engineers of the Department, to ascertain whether any damage to the mine had been caused by leakage from the reservoir. These observations prove that no percolation of water from the reservoir into the mine has taken place. The ownership of this mining property has recently changed hands.

Steady progress has been made in the surveys and plans for an additional supply of water from the Bronx river. The reservoir at Kensico and a portion of the conduit line have been permanently located, and the Counsel to the Corporation has been requested to institute legal proceedings to acquire the necessary lands and water rights.

The construction of the bridge across the railtracks on Fourth avenue at One Hundred and Sixteenth street, required by an act of the Legislature of 1879, is under the supervision of the Chief Engineer of the Croton Aqueduct. The abutments are completed, ready to receive the iron superstructure, which is expected to be delivered at an early day.

#### BUREAU OF WATER PURVEYOR.

In consequence of the favorable weather the work under the several contracts for repaving streets, and for paving new streets, was steadily continued.

The following works were completed :

#### REPAVING.

Great Jones street, from Bowery to Broadway.  
Ninth street, between Second and Third avenues.  
Seventeenth street, between Broadway and Fifth avenue.  
Nineteenth street, between Third and Fourth avenues, and between Fifth and Sixth avenues.  
Mercer street, between Bleecker and Eighth streets.  
Clarkson street, from Varick street to North river.  
Fifteenth street, between Sixth and Seventh avenues.  
University place, between Eighth and Fourteenth streets.  
New street, between Beaver and Wall streets.  
Church street, between Vesey and Chambers streets.  
Exchange place, between Broadway and William street.  
Front street, between Fulton street and Maiden Lane.  
White street, between Broadway and West Broadway.  
Centre street, between Chambers and Canal streets.  
Water street, between Fulton and Market streets.  
Madison street, between Fulton and Clinton streets.  
Twenty-first street, between Seventh and Eighth avenues.  
Twenty-sixth street, between Seventh and Eighth avenues.  
Thirty-seventh street, between Sixth and Seventh avenues.  
Forty-fifth street, between Lexington and Fourth avenues.  
Forty-fifth street, between Madison and Fifth avenues.  
Seventh avenue, between Forty-seventh and Fifty-ninth streets.

#### PAVING.

Fifty-eighth street, between Ninth and Tenth avenues.  
Fourth avenue, between Sixty-seventh and Seventy-second streets.  
Lexington avenue, between Seventy-ninth and Eighty-fifth streets.  
Forty-fourth street, between Second and Third avenues.

The following repaving works remain uncompleted :  
Tenth avenue from Thirty-first to Forty-second streets.  
Fifty-sixth street, between Fifth and Sixth avenues, and between Seventh and Eighth avenues.  
Fifty-eighth street, between Sixth and Ninth avenues.  
Twenty-fourth street, between Lexington avenue and East river.  
First avenue, between Thirtieth and Thirty-sixth streets.

The area of pavements laid during the three months is :

For repaving.....	77,591 square yards
For assessment work.....	11,430 “ “
Total.....	89,021 “ “

An average force of 125 men and carts was employed in repairing pavements in October and November, after which (the appropriation being nearly exhausted) a few gangs only were retained, to make such repairs as required immediate attention.

#### BUREAU OF STREET IMPROVEMENTS.

The following works under the charge of this Bureau were completed during the past three months :

Regulating, grading, etc., Ninety-third street, from Second avenue to East river.  
Regulating, grading, etc., One Hundred and Twenty-ninth street, from Seventh to Eighth avenue.

Grading and paving Fort Gansevoort property for use as a public market.  
Work is in progress on twelve contracts for grading, curbing, guttering, and flagging various streets.

The aggregate quantities of work done are as follows :

33,543 cubic yards earth excavated.  
12,267 cubic yards rock excavated.  
94,165 cubic yards filling put in embankment.  
4,918 lineal feet curb-stone set.  
2,600 lineal feet gutter-stone set.  
21,356 square feet flagging laid.  
2,046 lineal feet picket fence built.  
6,013 square yards pavement laid.  
6,440 cubic yards rubble retaining wall built.  
6 receiving basins built.

#### BUREAU OF SEWERS.

Under the several contracts for the construction of sewers, 6,168 lineal feet of sewers, 315 lineal feet of culverts, and 22 receiving basins were built.

The following streets were provided with new sewers :

Second avenue, between Seventy-fifth and Seventy-sixth streets.  
One Hundred and Thirtieth street, between Sixth and Seventh avenues.  
One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.



Eleventh avenue, between Fifty-ninth and Sixtieth streets.  
 One Hundred and Thirteenth street, between Fourth and Fifth avenues.  
 One Hundred and Thirteenth street, between Ninth and Tenth avenues.  
 Madison avenue, between One Hundred and Thirteenth and One Hundred and Fourteenth streets.  
 Lexington avenue, between Seventy-second and Seventy-third streets.  
 Lexington avenue, between One Hundred and Twenty-fifth and One Hundred and Twenty-sixth streets.  
 Sylvan place, between One Hundred and Twentieth and One Hundred and Twenty-first streets.  
 Morningside avenue, west, between One Hundred and Sixteenth and One Hundred and Twenty-second streets.  
 In repairing and cleaning sewers 2,773 cart loads of dirt were removed, 227 lineal feet of sewers and culverts rebuilt, 117 lineal feet of spur pipe laid, 5 receiving basins rebuilt, 26 receiving basins and 209 manholes repaired.

## BUREAU OF STREETS.

The necessary repairs on the unpaved streets and country roadways in the upper part of the city, and the sprinkling of the more frequented roads in dry weather, have received proper attention. The comparatively rapid increase of buildings and population in the suburban districts call for greater facilities of travel in these localities, and until the streets and avenues are regularly paved, it will be the care of this Bureau to keep the present means of communication in serviceable condition, so far as its small appropriation will permit.

## BUREAU OF LAMPS AND GAS.

The number of public lamps lighted in the streets, parks, and places of the city was increased during the quarter from 21,924 to 22,160.  
 Since the city pays for the gas consumed in the several armories and drill-rooms, under chapter 275, Laws of 1878, the cost of lighting them has largely increased, while the price of gas has diminished 25 per cent. This shows carelessness and waste in the use of gas, which should be avoided.

## BUREAU OF REPAIRS AND SUPPLIES.

The following are some of the principal items of work done during the quarter in the care and repairs of public buildings and offices:  
 Restoring the roof of Essex Market, after the removal of the bell tower.  
 Putting a new boiler in the Ninth Regiment Armory.  
 Connecting the County Clerk's offices with the heating apparatus in the New Court-house.  
 Fitting up new offices and rooms for the Surrogate's Court and the Collector of Assessments.  
 Taking down awnings and fitting up stoves in various buildings and offices.  
 A new public bath, to be located next season at the foot of East Seventeenth street, and increasing the total number of free baths to eight, was completed last November. The baths are moored in Gowanus Bay for safe keeping until next season.

## BUREAU OF INCUMBRANCES.

This Bureau received during the quarter 843 complaints of obstructions on streets and sidewalks, which were promptly attended to by the service of notices requiring the removal of the obstructions. In 106 cases the articles complained of were seized, the owners having paid no attention to the notices. The Bureau also removed 663 cart loads of stone and other refuse material from streets, and issued 1,334 permits for temporarily placing building materials on streets, and 119 notices to property owners to repair their sidewalks.

## BUREAU OF WATER REGISTER.

The total amount collected and paid into the City Treasury during the quarter, for water rent, penalties, and permits to tap Croton pipes, is \$236,274.82.

## REVIEW OF THE WORK OF THE DEPARTMENT FOR THE YEAR 1879.

## THE WATER SUPPLY.

As I have repeatedly explained in my reports, the Croton Aqueduct was not designed by its constructors to carry water to a greater depth than to the springing line of the arch, giving a maximum daily delivery of about 71,000,000 gallons, while for the past eleven years the consumption has exceeded that quantity, and for six years past it has averaged more than 90,000,000 gallons per day. Owing to defects in the method of construction where the aqueduct crosses low grounds on stone embankments, leaks in the masonry occurred from time to time since the water was first introduced, and when it was subjected to the additional strain of carrying water to within a few inches of its roof, the danger of large ruptures at these weak points became imminent. Excepting the mere stoppage of leaks, nothing was done to permanently strengthen these parts of the structure until 1876, when a general plan for their reinforcement was adopted, consisting in increasing the thickness of the arch and the side embankments, raising the spandrel walls, and lightening the top covering. As the Department had no other means than the usual maintenance appropriation, and some small transfers from surplus balances of other appropriations of the Department, the progress of this work for the past three years has been necessarily slow. At the beginning of last year the improvement had been made on 3,000 lineal feet of the structure; and during 1879 it was further extended 4,781 lineal feet, including some of the weakest points, at one of which a large leak occurred in August last, making it necessary to shut off the water until the leak was repaired. For 1880 the Board of Estimate and Apportionment wisely granted the sum of \$150,000 asked by the Department for strengthening the aqueduct, enabling us to extend the improvement about 14,000 lineal feet, leaving about 22,000 lineal feet to be provided for after this year.

The Board of Estimate and Apportionment has also granted the Department's estimate of \$60,000 for replacing the 6-foot pipes laid in 1866-7 in Ninetieth street and in Eighth avenue, in place of the masonry aqueduct, by new 4-foot pipes. The 6-foot pipes are insecure, being liable to frequent breakage, and have cost over \$90,000 for repairs since 1872.

The ordinary maintenance and repairs of the aqueduct, storage and distributing reservoirs, Croton dam, bridges, culverts, retaining walls, fences, gates and gate-houses, high service works, pipes laid within the city in place of masonry conduit, etc., have received careful attention.

The new storage reservoir on the middle branch of the Croton has been in use since the early summer of 1878, and the work has proven to be of ample solidity. The face of the dam, covering 17,510 square yards, was sodded last year, and at the Boyd's Corners reservoir a keeper's house and some additional retaining walls were built, and the abutments of a bridge, injured by a freshet, were repaired. The rainfall at that reservoir for the year 1879 was 47.3-10 inches, and was so well distributed that a draft of 1,257,000,000 gallons upon the two reservoirs (being less than one-fifth of their capacity) was sufficient to keep the aqueduct running to its full capacity throughout the year.

For the extension and improvement of the distribution of water the Department laid, in 1879, 84,625 lineal feet, or 16 miles, of pipes, and placed 473 new fire-hydrants. The distributing system now comprises 480 miles of pipes and 5,497 hydrants.

Under chapter 480, Laws of 1879, a contract was made with the City of Yonkers last November for a water supply for the high grounds in the Riverdale and Spuyten Duyvil districts, which are partly above the level of the Croton supply, and contracts have also been made for furnishing and laying a portion of the necessary distributing pipes to the extent of the appropriation of \$12,500 for 1879. The pipes will be further extended out of a like appropriation for 1880.

The new high service works at Ninth avenue and Ninety-eighth street were put under contract in February, 1879, after two years' endeavor to obtain the requisite authority for their construction. The stand-pipe and tank are finished; the engine-house is nearly completed; the connections with the distributing pipes are made, and the pumping engines are nearly ready to be placed in position. The whole work will be ready for use next spring.

Until we can get more water by new conduits, a fair distribution to all points can only be kept up by suppressing waste. The house inspections to detect leaks and waste, and the application of

meters along the water-front and at other places where large quantities of water are used and wasted, have been effective to a certain extent, but the continued extension of the water supply, and the consequent decrease of pressure, make the general use of water meters on all business establishments necessary. During the past year 797 meters were placed, and the number now in use is 1,398. The meter registers show that in large institutions and hotels, where many servants are employed, the daily consumption is more than 100 gallons, and in some cases more than 200 gallons, for each inmate. Stringent laws should be enacted for the suppression of the pernicious custom of letting the water run from faucets day and night in freezing weather, to prevent freezing in the pipes; owners and tenants should be required to protect their pipes by other means.

The surveys and general plans for obtaining a daily supply of about 20,000,000 gallons of water from the Bronx and Byram rivers have been completed; the maps showing the location of the reservoir at Kensico and a part of the conduit line have been filed, and as soon as the necessary lands are acquired these works can be commenced. The Counsel to the Corporation is taking steps for the appointment of commissioners to appraise the lands and water rights to be acquired. Unless unforeseen delays occur, the whole work can be completed within three years.

When the new conduit from the water-sheds of the Bronx and Byram is completed according to the plans fully set forth in my report for the second quarter of 1879 on the water supply, it will increase by eighteen to twenty million gallons the quantity of water received daily in the city. This of itself will be a very considerable reinforcement, but when the meter system commenced a few months ago is carried out as contemplated, by which meters are to be placed upon all business establishments using water in large quantities, it is estimated that the suppression of waste thus effected will amount to at least ten million gallons daily, which is an equivalent to that extent for effective and useful purposes, making a total gain from the combined effect of the Bronx conduit and the suppression of waste of thirty millions of gallons daily. If we carry the suppression of waste still further by controlling within proper bounds the amount of water now consumed and wasted in private houses, by the means suggested in my previous reports, the total effective supply of water for useful and necessary purposes will be increased probably not less than forty per cent. over the present system of supply and distribution; and this important result, attainable at a cost comparatively small, may be the means of postponing the necessity for a new and expensive aqueduct for some years, when the city will be better able to bear the expenditure for that purpose.

I beg to call your attention to the annexed report of Mr. George W. Birdsall, Chief Engineer of the Croton Aqueduct, which contains some interesting facts and details in reference to the work of that Bureau and the water supply.

## THE FORTY-SECOND STREET RESERVOIR.

In my report for the first quarter of 1877, I called attention to the subject of the small reservoir situated at Fifth avenue and Forty-second street, and stated that in the opinion of the Chief Engineer of the Croton Aqueduct in which I concurred, this structure, occupying five and a quarter acres of valuable ground, was unnecessary as a part of the water system of the city. Such being the case, I recommended its removal and suggested the use to which in my opinion its site should be devoted in the following language:

"The reservoir occupies a space four hundred and fifty feet wide on Fifth avenue, by five hundred feet deep, measured on Fortieth and Forty-second streets, for about five and a quarter acres. If Forty-first street should be opened westerly from Fifth avenue to Reservoir Square, there would remain eighty lots of twenty-five by one hundred feet belonging to the city and available for building purposes which may be valued at \$1,500,000.

"Should it be decided to remove the reservoir, the ground should in my opinion be added to Reservoir Square, and the whole plat reserved as a public park. The dimensions of such a park would be 920 feet by 460 feet, having an area of nearly ten acres. It is situated on elevated ground, about midway between Madison Square and the Central Park, and would become an appropriate and conspicuous place for the erection of monuments and statuary. Unfortunately some of the parks in the lower part of the city have been built upon, thereby destroying their usefulness in the promotion of health and pleasure. While opportunity offers, it is well to increase rather than to diminish these green spots, the lungs of the city, and, once having been set apart for such use, to preserve them with jealous care for all future time."

On the 23d of October, 1877, in response to a resolution of the Common Council, calling upon me for information in regard to this small reservoir, the cost of its removal, the value of the land occupied, etc., I made a report giving the desired information, and again expressed the opinion that the public interests would be best promoted by converting the site of the reservoir into a public park.

Having thus in two official reports given my views upon the subject, and the question of the removal of the reservoir having recently been brought before the Legislature and the Commissioners of the Sinking Fund, I deem it due to the importance of the subject, and the true interests of the city, to repeat the opinion heretofore expressed, which has been fully confirmed by later observation, and to make such further statements as will give a clear understanding of the case. This, like every other proposed improvement, should be considered without prejudice and simply upon its merits, and with reference only to the true and permanent interests of the city at large.

The two questions upon which a correct decision must rest are:

- First—Is the reservoir no longer required in connection with the water supply; and
- Second—What steps are required for its removal, and to what uses shall the land be applied.

As to the first question—At the time of the construction of the Croton Aqueduct, about forty years ago, the Water Commissioners and the Chief Engineer located two reservoirs within the city limits, a receiving-reservoir near Seventh avenue and Eighty-fifth street, and a distributing reservoir at Fifth avenue and Forty-second street. The site of even the latter was at that time on unimproved property, and far beyond the bounds of the city proper. In reference to the subject of storage of water and the capacity of the reservoirs, the Water Commissioners, in their report of December 31, 1838, said: "It is estimated also that the Croton reservoir (now called Croton lake, at the head of the aqueduct in Westchester county) will contain about one hundred millions of gallons to each foot in depth from the surface. The dam may be drawn down five or six feet, say five hundred million gallons, and in addition to this we have 158,000,000 gallons in the receiving reservoir (Eighty-fifth street), and 19,000,000 gallons in the distributing reservoir (Forty-second street), making a total of 177,000,000 gallons, exclusive of the running water and what may be drawn from the Croton reservoir (Croton lake), providing a surplus in cases of drought sufficient for any emergency either probable or possible."

From motives of economy, or because it was not deemed necessary at the time, the upper or receiving reservoir was not excavated to its full depth throughout its entire area, and its capacity was reduced to about 130,000,000 gallons, and it remains in that condition at the present day. Thus it will be seen that the whole storage on Manhattan Island was at that time 149,000,000 gallons (imperial measure), of which the small reservoir at Forty-second street would contain 19,000,000 gallons, or about one-eighth (a considerable factor) of the total amount. It was the original design to construct the Forty-second Street Reservoir of larger dimensions, so that it should cover the whole plat of ground bounded by Fifth and Sixth avenues and Fortieth and Forty-second streets, embracing an area of nearly ten acres, all of which had been acquired for water purposes, but the engineer abandoned the plan of occupying the whole area, and confined the structure to its present dimensions.

The rapid increase of population, and the vast consumption of water beyond the original estimates, demanded, in a very few years, that additional storage capacity should be provided, and accordingly the great reservoir in the Central Park was commenced in 1858, and completed in 1862. Its capacity is one thousand million gallons (standard measure), so that the combined capacity of the old and new reservoirs in the Central Park is in round numbers 1,150,000,000 gallons (standard measure). The small reservoir at Forty-second street (capacity 23,000,000 gallons, standard measure), which originally constituted one-eighth of the whole storage in the city, is now less than one-fiftieth part of the total storage capacity in all the reservoirs, without taking into account the large quantity of water in the great mains throughout the city. It has, in fact, for purposes of



storage, become an insignificant fraction, and at the present rate of consumption, would only afford a supply to the city for six or eight hours.

At the time of construction the Forty-second street reservoir, being far north of the inhabited portion of the city, all the water furnished was for some years distributed from it. With the growth of the city, however, additional mains were, from time to time, laid from the Central Park reservoirs to the lower part of the city without connecting with the Forty-second street reservoir, until the aggregate capacity or area of such mains is now equal to the capacity or area of the aqueduct.

The following is a table of the mains leading directly from the Central Park reservoirs :

One 36-inch main through Eighty-first street to Eighth avenue, to Forty-second street, to Ninth avenue, to Thirty-eighth street, and then reduced to a 24-inch main extending to Fourteenth street.

One 30-inch main through Seventy-ninth street to Third avenue, to Fourteenth street.

One 48-inch main through Seventy-fifth street to Tenth avenue, to Thirty-eighth street.

One 48-inch main through Seventy-ninth street to Madison avenue, to Forty-second street, and then reduced to a 36-inch main, extending through Madison avenue, Twenty-sixth street, Third avenue, Bowery, Bleecker street, Mott street, Chatham street, New Bowery to Chambers street.

One 36-inch main extending through the park to Fifth avenue at One Hundredth street, and there connecting with 20-inch mains for distribution.

One 36-inch main extending through the park to Eighth avenue at One Hundredth street, also connecting with 20-inch mains for distribution.

Two 36-inch mains extending through the park to Fifth avenue, to the Forty-second street reservoir ; from which one 36-inch main extends through Fifth avenue and Broadway to Fourteenth street, and another 36-inch main extends through Fifth avenue, Fourteenth street, Avenue A to Eighth street. One of these mains thus passing through the Forty-second street reservoir can be fed independently of that reservoir.

One 48-inch main through Eightieth street to First avenue to Fourteenth street ; thence reduced to a 36-inch main through First avenue, Houston, Orchard, Division, and Pike streets, to East Broadway.

To equalize the distribution, a 48-inch main is laid in Forty-second street, from Fourth to Tenth avenue, connecting with the mains in Tenth, Eighth, Madison and Third avenues.

From the foregoing it will be seen that as the main in First avenue is completed, water is carried directly from the Park Reservoirs past the Forty-second Street Reservoir through three 48-inch mains, one 36-inch main, two 30-inch mains, and one 20-inch main. Add to these the 36-inch main now necessarily passing through the Forty-second street Reservoir, and to be changed, the aggregate area or capacity of the large mains carrying water south of Fortieth street will be greater than the area of the Aqueduct.

Thus it will be seen that with the lapse of time, the growth of the city, and the necessary rearrangement of the water supply, the small reservoir at Forty-second street has entirely lost its original character, both with respect to storage and distributing purposes. The Central Park Reservoirs are now both receiving and distributing reservoirs, and as to storage, the small quantity which the Forty-second Street Reservoir can hold could be retained in the Central Park reservoirs, as it would amount to less than six inches in depth over the area of these immense basins.

An additional amount of storage capacity may be provided, greater than that of the Forty-second street reservoir, by excavating the old reservoir in the Central Park to the depth as originally planned, at a cost of \$100,000, while the ground on which the Forty-second street reservoir stands is worth from one and a half to two millions of dollars.

With respect to the question of pressure there is practically no advantage from the existence of the Forty-second street reservoir, the large mains leading directly from the Central Park reservoirs towards Forty-second street (with the 48-inch main across that street) affording all the pressure attainable. This is established by the fact that the Forty-second street reservoir has recently been disconnected for the period of twenty-four days, performing no duty whatever in the water supply, and this without any appreciable effect as to pressure at Forty-second street and points below. The pressures at the level of the street surface at several points were taken by the Engineer :

- First—On the 29th of November last, when the reservoir was in full use ;  
Second—While the reservoir was disconnected, from January 7 to February 4 ; and  
Third—From February 5 to 7, after it was again connected and in use.

The following table shows the pressures :

LOCATION.	Pressure in lbs. per sq. inch, Nov. 29, 1879. Reservoir in use.	Pressure in lbs. per square inch, January 7 to February 4, Reservoir shut off.			Pressure in lbs. per square inch, February 5 to 7. Reservoir again in use.		
	10 A. M.	10 A. M.	Midnight	Average	10 A. M.	Midnight	Average
At Tenth street and Broadway.....	7	11	18	14½	11	18	14½
At Twenty-sixth street and Fifth avenue....	11	14	21	17½	15	19	17
At Thirty-fourth street and Fifth avenue....	13	14	19	16½	15	18	16½
At Forty-second street and Fifth avenue....	9	11	14	12½	11	12	11½

Depth of water in Central Park reservoir November 29, 1879, 31 feet 3½ inches.  
Depth of water in Central Park reservoir February 1, 1880, 33 feet 7½ inches.  
Difference, 2 feet 4 inches, equal to 1 pound in pressure.

It is thus shown that in respect to storage, distributing uses, and pressure, the Forty-second street reservoir is practically useless. In this view of the subject the present Chief Engineer and his two immediate predecessors have all concurred.

Such being the case, we are led to consider :

Secondly, the question : To what use should the land occupied by the useless reservoir be applied, and what steps are necessary for its removal ?

All will agree that it would be a waste of this immensely valuable land, worth at least \$1,500,000, perhaps more, to permit it to be occupied by a structure which serves no useful purpose, and yields no return in revenue.

Two methods have been suggested for utilizing this property, viz., to sell it for building sites and apply the avails to the Sinking Fund, or to convert it into a public park, in connection with the adjacent ground, known as Reservoir Square, the whole plat embracing an area of nearly ten acres. In my former reports I expressed the opinion that the permanent interests of the city would be best promoted by devoting the land to use as a public park. I am still of the same opinion, but if the Legislature or the city authorities should deem it more advisable to sell the property for building purposes, then that course can be adopted.

As bearing upon this question, I make the following extract from my report to the Common Council, dated October 23, 1877 :

"In conclusion I repeat the opinion that the reservoir—being no longer necessary—should be removed from the valuable ground it now occupies, and that the whole space between Fifth and Sixth avenues, and Fortieth and Forty-second streets, embracing nearly ten acres, should be reserved as a public park. The whole property, if sold, would yield the city \$2,700,000, and that part covered by the reservoir alone is valued at \$1,700,000. The argument in favor of the sale of the property is that the avails, covered into the treasury, would help to reduce the debt of the city, and alleviate the taxes at a time when taxation is so onerous. Under existing laws any sum realized from the sale of reservoir ground must be paid into the Sinking Fund, and cannot be applied directly to the reduction of taxes, the annual interest only on such sum being available as a credit on the taxation account. In my opinion the benefit thus to be gained is small in comparison with the lasting advantages of health, ornament and increased valuation of taxable property adjacent to

the proposed park ; and it must not be forgotten that, while our debt and taxes may and will decrease with an economical administration of the city government, the opportunity of securing for all time another park in the heart of the city, once lost, can never be supplied."

At the time I was requested by the Common Council to report upon the subject of the removal of the Forty-second street reservoir, I applied to the Corporation Counsel for his opinion upon the legal points connected with the matter.

His reply deals with the question of the title to the land, and the authority to remove the reservoir and sell the land or convert it into a park. As this important document was never published, I deem it proper to give it here in full :

LAW DEPARTMENT, OFFICE OF THE COUNSEL TO THE CORPORATION,  
NEW YORK, September 17, 1877.

Hon. ALLAN CAMPBELL, Commissioner of Public Works :

SIR—In a communication some time since received by me, you state that you have arrived at the conclusion that the old distributing reservoir at Fifth avenue and Fortieth street is no longer necessary to the Croton water system, and that the ground which it occupies can be made otherwise available to the city ; that there is a diversity of opinion as to the authority and manner of disposing of the property, it being held by some that legislative action is required to authorize the city to dispose of the land on which the reservoir stands, or to convert it to other uses, and that there are also different views as to what branch of the city government is authorized to act in the matter. You therefore request my opinion upon the following questions :

1. Has the city the right to convert land into a public park, or to sell it at public auction for the benefit of the Sinking Fund, and if not, what measures are necessary to obtain such authority ?
- 2d. If this authority exists or is obtained, what branch of the city government has the power to decide whether the land shall be converted into a public park, or for other use, or sold ?
- 3d. When the question of the disposition of the property has been determined, what measures are necessary to carry out the conversion or sale, and by whom are such measures to be taken ?

The parcel of land lying between Fortieth and Forty-second streets, and Fifth and Sixth avenues, was part of the common lands held by the city under its old charters, except a small parcel which was purchased from William Wright, May 11, 1847. The city now owns all said land in fee.

The following resolutions were adopted by the Common Council, September 20, 1837. \* \* \*

"Resolved, That the ground between the Fifth and Sixth avenues, and Fortieth and Forty-second streets, be and the same is hereby appropriated for a reservoir.

"Resolved, That the Water Commissioners may use the same for the erection of the public works thereon when necessary."

It seems that the Water Commissioners decided that it was not necessary to construct a reservoir which would occupy the whole of said land, and they accordingly constructed one which occupies only about one-half of the same, and which was constructed as an essential part of the permanent water system of the city.

The Croton Aqueduct and its appurtenances, including the reservoir in question, were built under an act of the Legislature, passed May 2, 1834, as amended, by five Water Commissioners, appointed by the Governor of the State, with consent of the Senate ; and by the terms of said original act the work was not to be commenced until the question had been submitted to a popular vote, and the enterprise had been approved by a majority of electors of the city. Neither the aqueduct nor said reservoir could have been built without the authority of the Legislature, because the city had no power to borrow the money necessary for these purposes, nor could it have acquired the land needed for the aqueduct if it had not been authorized by the Legislature to take the same, under the right of eminent domain.

Under these circumstances I am inclined to think that the reservoir cannot lawfully be removed except by authority of the Legislature. Even if the Common Council possessed at the present time the same extensive powers in regard to the management of the affairs of the city which it had when the reservoir was built, I should still very much doubt whether it would have the power to discontinue the use of the reservoir and direct its removal. The power to demolish the reservoir would imply the power to take down "High Bridge," or even to discontinue the Aqueduct, which latter powers were certainly never possessed by the Common Council.

Since the construction of the Aqueduct and the Reservoir, the powers of the Common Council in relation thereto have been very much curtailed by acts of the Legislature. After the completion of those works, they were at first entirely under the control of the Common Council, and, even after they were placed in charge of the Croton Aqueduct Board, the Common Council still had some jurisdiction and control over them. They are now, however, under the exclusive charge and control of the Department of Public Works, and I do not think the Common Council could discontinue the use of the reservoir, nor direct its removal.

With regard to the powers of the Department of Public Works, the charter 1873 devolves upon that Department cognizance and control of all structures and property connected with the supply and distribution of Croton water, and the collection of the revenues arising from the sale or use of Croton water. I doubt very much, however, whether this statute would authorize the Commissioner of Public Works to discontinue the use of the reservoir, and make the changes in the water system which such discontinuance would involve.

Under the charter of 1873, the Commissioners of the Sinking Fund are authorized to sell or lease any city property, except wharves and piers. This provision is a very remarkable one, so far as the extent of the powers thereby conferred is concerned ; for if it is valid, the Commissioners of the Sinking Fund have the power to sell the reservoir, the Croton Aqueduct, the Central Park, and the City Hall Park with the various buildings thereon. I believe this provision was inserted in the charter of 1873 through inadvertence, or under a misapprehension of what its effect would be if literally interpreted. I should certainly be unwilling to advise the Commissioners of the Sinking Fund to exercise some of the very extraordinary powers which this statute seems to confer upon them, and I am decidedly of the opinion that they ought not to act in so important a matter as the discontinuance and sale of the reservoir without first obtaining the approval of the Legislature to their proposed action.

It seems to me that, if you are of the opinion that it is advisable to discontinue the use of the reservoir for the purposes for which it was built, it would be advisable to apply to the next Legislature for an act authorizing such discontinuance, the removal of the reservoir itself, and the disposal of the material. If it should be concluded to be best that the land on which the reservoir stands should be sold, the Commissioners of the Sinking Fund will have abundant power under existing laws, after the removal of the reservoir, to make such sale. If, on the other hand, it is deemed advisable that the land should be devoted to the purposes of a public park, I think it would be desirable, that the act to be so applied for should contain a provision declaring that the whole block bounded by Fortieth and Forty-second streets and Fifth and Sixth avenues should be one of the public parks of the city, and placing the same under the control of the Department of Public Parks.

I am, sir, yours respectfully,

(Signed) WILLIAM C. WHITNEY,  
Counsel to the Corporation.

#### PAVEMENTS.

The disgraceful condition of the street pavements, arising from the perishable nature of the materials—wood and poullice—and the rude coverings of cobble and small stone blocks, led to the adoption of the law of 1875, which authorizes the city to expend \$500,000 annually from taxation for repavements. In each of the departmental estimates for the past four years I called for the whole amount authorized by the law, deeming it sound economy to expend that sum from year to year until the streets should be in proper condition to answer the requirements of local transportation and public health and comfort. The Board of Estimate and Apportionment, however, made no appropriation



for 1875 and 1876, and limited the amount to \$200,000 for 1877, and \$300,000 for each of the succeeding years. The amount of repaving covered by these appropriations is:

For 1877.....	105,634 square yards.
For 1878.....	174,206 "
For 1879.....	163,840 "
Total.....	443,680 square yards.

As the authority from the Common Council to proceed with this work last year was withheld until July 12, and considerable time was necessarily consumed after that in advertising, letting, approval of sureties, and execution of contracts, some of the contracts (about 50,000 square yards) remain uncompleted.

An improvement in the specifications for stone pavements, made in 1876, has produced work which is much superior to the old block pavements. There are still over eighty miles of cobble-stone pavements and many miles of the inferior stone block pavements unfit for the streets of a great city, in regard to the conveniences of travel and the requirements of public health. It is impossible to keep them in decent repair at a reasonable expense. The absence of any bond or equality of bearing in the ill-shaped and irregular stones, laid on poor foundations, causes constant irregularities in the surface, which are conducive to the accumulation of dirt and obstructive to travel and street cleaning. The annual appropriation for "Repairs" of pavements, amounting for several years past to \$150,000, is not sufficient to keep over 300 miles of pavements in good condition until the work of replacing the bad pavements is further advanced, and some of the abuses to which our pavements are now subjected are prohibited. These abuses consist in the careless and unworkmanlike manner in which the pavements are replaced over the numerous excavations made by plumbers, builders, and others in making and repairing house connections with sewers, gas-pipes, and water-pipes. Under the surface of our streets there are 371 miles of sewers, 480 miles of water-pipes, and 860 miles of gas-pipes, exclusive of the house connections, and new franchises are granted from time to time for laying gas-mains and steam-pipes. The number of permits annually applied for and issued for opening the pavements in connection with the gas and water service and sewerage is more than 15,000, and the number of excavations more than 20,000. It is impossible to exercise a strict supervision over all these and to see that the pavements are properly replaced, and the only effective method of enforcing proper repavement is to hold the parties pecuniarily responsible therefor. To this end I caused an ordinance to be drafted, which received the approval of the Counsel to the Corporation, and has been introduced in the Board of Aldermen, requiring persons obtaining permits for excavations to pay a certain sum of money, sufficient to restore the pavement, the work to be done by skilled workmen employed by the Department. The adoption and enforcement of this ordinance would produce a great improvement in the appearance and condition of the streets.

The pavement of compressed asphalt laid in the Fifth avenue, between Twenty-sixth and Twenty-seventh streets in July last, has now been in use about seven months, and has attracted much notice. Its smooth and almost noiseless character is apparent, and as it is equal in construction to pavements of the same kind in London and Paris, which have been laid for several years, there seems no reason to doubt that it will prove equally durable.

About the same time the block in Fifth avenue, between Twenty-fourth and Twenty-fifth streets, near the Worth monument, which was covered with the Grahamite asphalt in 1873, and had become much worn, was entirely relaid with a mastic asphalt, also affording a smooth and noiseless surface to passing vehicles. It is not claimed that this kind of pavement will last nearly as long as that composed of compressed asphalt, but it can be laid at much less cost.

As the time is not distant when the Fifth avenue, from Washington square to Fifty-ninth street, should be relaid with a first-class pavement, of a kind best suited to this great drive to the Central Park, the trial of the specimens of asphalt above mentioned will furnish useful information in regard to a style of street pavement which is now extensively used in the great cities of Europe, as well as in Washington and other cities of this country.

#### SEWERAGE AND DRAINAGE.

During the past year 12,723 lineal feet of sewers and culverts, and 35 receiving basins, were constructed, increasing the extent of the sewerage system to 371 6-10 miles of sewers, culverts, and drains, with 4,524 receiving basins.

The expense of repairing and cleaning sewers and basins for 1879 was \$62,100; about one-third of that of 1875, and less than half of that of 1868.

A large share of the work of the Bureau of Sewers is directed to the correction of defects in the sewers built prior to 1865—about 194 miles—when there was no comprehensive plan or system in the construction of sewers. This absence of general plan or system led to the construction of too many outlets, polluting the water in slips and basins. Many outlets, built on insecure foundation in ground reclaimed from the water by loose filling of earth and dirt, are settled out of grade and broken, and few of the old sewers in the lower part of the city are of proper size, shape, and construction to answer the requirements of sewerage and drainage in a large and densely populated city. Last year alterations and improvements were made on the outlets at West Forty-fourth and Forty-fifth streets, and in the district drained by them, extending east to Seventh avenue, thus relieving it from the flooding of cellars during heavy rains, and improving its sanitary condition. Similar improvements were made in the district drained by the East Houston street sewer, the outlet of which has been extended to the end of the pier.

The system of collective sewers along the water front, alluded to in my previous reports, which will remedy the evil of too many and imperfect outlets, will be extended as rapidly as possible. The section on West street, from Eleventh to Canal street, with two outlets, one at Eleventh street and one at Clarkson street, is under contract, and will be commenced early in the spring. Another section, from Canal to Murray street, will soon be advertised and let.

Along the East river there are many obstacles to the progress of this work. The marginal street is narrow, having not yet been widened as contemplated by the Dock Department. The construction of the sewers would therefore greatly interfere with the business traffic. On a large portion of the water-front there is no marginal street, and the bulkheads and piers are of a temporary character, and some of them are under control of private individuals or corporations.

In the upper part of the city sewers have been completed in First and Second avenues and intersecting streets, from Ninety-second to One Hundred and Tenth street; in Eleventh avenue, from Sixty-sixth to Seventy-sixth street, and in Morningside avenue west, from One Hundred and Sixteenth to One Hundred and Twenty-second street. An outlet into Harlem river at One Hundred and Thirty-fifth street is in course of construction, which will prevent the deposit of sewage on the salt meadows flooded at high tide, and the foul odors arising therefrom.

Some interesting details in regard to the sewerage of the city will be found in the report of Mr. Towle, the Engineer of the Bureau of Sewers, to which I would respectfully call your attention.

#### GASES IN SEWERS.

In reference to some recent explosions in sewers there is an erroneous impression that they were caused by gases generated in the sewers in consequence of insufficient ventilation. The explosions are caused by the ignition of illuminating gas, which finds its way into sewers from leaky gas-pipes.

The principal gases generated in sewers are carbonic acid gas, sulphuretted hydrogen, ammoniacal compounds, and fetid organic vapor, and are not explosive. The latter, which is always found in sewers, is the most dangerous to health and life. Carbonic acid gas, when in large quantities, is a deadly poison, and extinguishes light; but the admission of fresh air destroys its poisonous effects. Carbonic acid gas may be generated in sewers in such small quantities only that it cannot cause an explosion, but when augmented by leaks from gas-pipes, and mixed with a certain quantity of atmospheric air, it will suddenly ignite and cause an explosion. Sulphuretted hydrogen is found in old sewers, where sewage has become stagnant and putrid, from faulty design or construction; it is distinguished by its very disagreeable odor, is very poisonous and may take fire, but not explode. This dangerous and offensive element in the old sewers is being gradually removed by alterations and improvements, and by frequent cleaning of sewers.

All new sewers are designed and constructed to secure such rapid flow that the sewage is discharged before decomposition and generation of gases can take place. The admission of air through perforated manhole covers to a great extent prevents the formation, and destroys the evil effects of sewer gases, and such gases as may escape through the covers are sufficiently diffused to become harmless. The perforated covers are applied as rapidly as the appropriation will admit.

The explosion at Forty-second street and Sixth avenue, on the 4th of January last, was from illuminating gas. At this point there is a perfect labyrinth of pipes; five lines of gas-mains on the avenue crossed by five lines on the street, and several lines of water-pipes both on the avenue and street—some recently laid. Large excavations were made here for the foundations of the elevated railroad and station. These many excavations (some made in winter) and structures have left the ground in a very porous condition, and settlement has caused leaks in gas-pipes. The damage by the explosion was not near as great as reported in some newspapers, being confined to the breaking of some manhole covers and panes of glass, and slight derangement of the pavement. A recent explosion in Dover street was caused by leakage from an old gas-pipe. The gas companies should be required to use greater care in laying and maintaining their pipes to prevent leaks.

#### OTHER STREET IMPROVEMENTS.

Among the more important works of regulating and grading streets, completed within the past year, are—

Ninety-third street, from Second avenue to East river.  
Ninety-ninth street, from First avenue to Harlem river.  
Forty-second street, from Second avenue to East river.  
Twelfth avenue, from One Hundred and Thirtieth to One Hundred and Thirty-third street.  
Of those in progress and nearly completed, I will mention—  
Madison avenue, from Ninety-ninth to One Hundred and Fifth street.  
One Hundred and Second street, from Fifth avenue to Harlem river.  
One Hundred and Third street, from First to Fifth avenue.  
Seventy-third street, from Third avenue to East river.  
The Boulevard and Eleventh avenue, from One Hundred and Fifty-fifth street to Kingsbridge road.

The Forty-second street arch and retaining walls.

The following are the principal items of work done—

48,369 cubic yards earth excavated.  
38,794 cubic yards rock excavated.  
289,386 cubic yards filling put in embankment.  
13,581 lineal feet curb stone set.  
5,692 lineal feet gutter stone set.  
54,505 square feet flagging laid.  
7,500 cubic yards rubble retaining wall built.  
3,991 lineal feet picket fence built.

With your approval, and that of your predecessors, the policy of confining expenditures for assessment work to works of immediate necessity, and to those asked for by the property-owners to be assessed, has been successfully carried out during the past four years. As a rule, the wishes of those who pay for the work by assessments should be considered in the prosecution of improvements, except where the public health, or some manifest general benefit is at stake. The revival of business prosperity, and of activity in the erection of new buildings, will call for a larger rate of expenditure and a more rapid progress of works of this class in the immediate future.

#### LIGHTING THE CITY.

The number of public lamps in use December 31, 1879, was 23,136, being an increase of 969 lamps during the year. The expenditure for lighting and maintaining the lamps, and furnishing gas for public buildings, markets, armories, etc., for 1879, is \$482,911.65.

In 1864, with 16,109 lamps, the expenditure was.....	\$512,051 00
In 1871, with 18,900 lamps, the expenditure was.....	1,176,468 00
In 1874, with 20,047 lamps, the expenditure was.....	757,009 00
In 1879, with 23,136 lamps, the expenditure was, as above.....	482,911 00

In view of the present moderate cost of gas, and the fact that New York City is very poorly lighted—not near as well as other large American and European cities—it was proposed in my estimate for 1880 to increase the light of all street-lamps south of Seventy-ninth street nearly fifty per cent. by the substitution of four-foot burners for three-foot burners, at an annual expense of about \$53,000, but the proposition was not approved by the Board of Estimate and Apportionment.

#### PUBLIC BUILDINGS.

The preservation of the public buildings has received careful attention, and with the exception of the old markets they are all in good condition. The unsightly and dilapidated jumbles of buildings which are dignified by the names of Washington, Fulton, Clinton, and Jefferson Markets, are discreditable to the city, and require continual expense for repairs to keep them in tenable condition.

#### FREE FLOATING BATHS.

Two new baths were constructed last year, one of which was finished and put in use at the Battery early in the bathing season. The other was finished in November. The city now owns eight floating baths. The large attendance last season, numbering 2,881,279, shows their usefulness and popularity.

#### INCUMBRANCES ON STREETS AND SIDEWALKS.

The Department has endeavored to discharge its duty in reference to the suppression and removal of obstructions in the public streets, but has been greatly impeded in consequence of conflicting opinions as to the authority for granting permission for certain classes of obstructions, being in several instances enjoined by the courts from removing structures put on streets for private use and benefit, under resolutions of the Common Council. By a decision of Judge Van Vorst, of the Supreme Court, rendered in August last, and by Judge Van Brunt, January 17, 1880, the laws on this subject have at last received such interpretation as to render the efforts of the Department more effective, enabling it to remove many objectionable encroachments. Owing to small appropriations, the progress of this work is necessarily slow, but will be pursued with proper diligence.

#### ELEVATED RAILROADS.

These works, which have already effected such favorable results in the rapidity and convenience of transit, and which, when fully carried out according to proposed plans, will so materially enhance the values of property and promote the growth of the city, particularly in its northern districts, were commenced a little more than two years ago, except the old line on the Ninth avenue, built several years since. The construction of the roads was carried on with great activity, and necessarily caused for a time considerable inconvenience and obstruction in the streets where located, by the derangement of pavements, the temporary deposit of materials, and other causes incident to such work in crowded thoroughfares. When the work was commenced I required of the companies that the inconvenience to the public should be made as little as possible, and that pavements, sewers, pipes, etc., should be restored to good condition. I must do them the justice to say that in the main these conditions were observed, and in view of the anticipated benefits to travel, the public made due allowance for temporary inconveniences. The natural desire both on the part of the public and the companies to have the roads opened at the earliest possible day led to the commencement of operations before depots for cars and engines on grounds outside the streets could be erected, so that the rolling stock, when not actually in use, has for a time found standing room on side tracks over and within the bounds of the public streets. This seemed to be a necessity, as sections of the roads were opened from time to time as completed. This state of things has, however, been continued longer than is necessary or proper. The grants to these corporations do not, in my opinion, authorize the



use of the streets for such purpose, any more than the grants to surface roads authorize the storing of their cars in the public streets; nor do the companies, as I understand it, claim such right. The standing of cars and engines over the streets depreciates the value of adjacent property, and has caused annoyance by the dropping of water, oil and coal upon the pavements and passing travelers. I called the attention of the companies several months since to this matter, requiring that they should provide without delay the necessary depots for their rolling stock, fuel, etc., on their own grounds, outside the public streets, and that provision should be made to prevent the dropping of water, oil, coal, etc., upon the walks and pavements. On the 30th of December last, one of the officers of the company (the roads being now under one management) answered that the necessary property had been secured, and that depots would be erected without unnecessary delay. The elevated roads are of immense importance and advantage to the city, and while their proprietors should be protected in their just rights and franchises, they should be held to a strict observance of public rights, and be compelled to operate their roads with the least possible injury to property, and inconvenience to the public.

Besides the matter of depots, etc., to which I have alluded, there is another point to which, under a resolution of the Common Council, I long since directed the attention of these companies, viz.: the placing of proper lights on the pillars which stand in the middle of some of the streets crossed by their roads. With this order they have not complied, and I have no power to enforce it. I deem it a necessary protection, and it seems to me that the companies should place these lights without further delay.

ALTERING THE MAP OF THE CITY.

By an act of the Legislature, passed June 16, 1879 (chap. 518), the Commissioner of Public Works is authorized to alter the map of the city in the district comprised within One Hundred and Forty-fifth and One Hundred and Fifty-fifth streets, and the Eighth avenue and the Hudson river. The land within these boundaries rises very abruptly west of the Eighth avenue, attaining a general elevation of about 140 feet above tide level, when it again falls with great abruptness to the Hudson river. Very few of the transverse streets, as laid down upon the map, have been regulated and graded, and the established grades of nearly all of them are so steep (varying from 10 to 17 feet per 100) as to render them impracticable for heavy traffic. It is difficult at this time to make any radical change, as lots have been sold, and in part built upon, according to the original plan. A street has, however, been traced out from the intersection of Eighth avenue with One Hundred and Fifty-fifth street, westerly to the intersection of Ninth avenue and One Hundred and Fifty-fifth street, which by adaptation to the contour of the ground, and an elongation of the distance, secures a gradient not exceeding 5½ feet per 100, without any material change in the existing plan of streets, and with moderate cutting and filling. There is no other transverse street laid out, leading westerly, for long distances, either north or south of One Hundred and Fifty-fifth street, so that in view of its present connection with the wards north of Harlem river by means of Central Bridge, and of the anticipated improvement of the Harlem river, it seems very desirable that at least one street should be located in this neighborhood with grades adapted to heavy traffic. This object will be attained by the projected street above described, the plan of which being laid down upon the map of the city, the regulating and grading may be done, and this street opened for use, as provided by law, when required.

Some other slight changes of the map may be made at a few points within the limits defined by the Law of 1879, and when the whole is completed, maps according to the provisions of said law will be filed in the proper offices.

REVENUE.

The revenue from the use of Croton water, collected during the year 1879, is \$1,618,722.50.

The Department also collected—

For sewer permits.....	\$20,095 28
For vault permits.....	33,127 79
From sale of old materials and other items.....	6,246 42

Total revenue collected for the year.....\$1,678,191 99

The Department also turned over to the Clerk of Arrears, for collection, unpaid water rents for the year ending April 30, 1879, amounting to \$69,219.35, which are liens on the respective properties.

By putting on a large number of meters last autumn a considerable amount of charges that would otherwise fall due in 1879 do not become payable until 1880. If this amount is included the revenue from Croton water for 1879 shows an increase of about \$70,000 over the previous year.

By the death of Thomas Addis Emmett, a Civil Engineer of long experience, and connected with the Croton Bureau, the Department has lost one of its most useful and devoted officers, who for several years had immediate charge under the Chief Engineer of the reservoirs and other water rights of the city in Putnam County, and more recently of various surveys for increasing the water supply. He leaves to his associates a good record, and an example of duty well and faithfully performed.

Respectfully,

ALLAN CAMPBELL, Commissioner of Public Works.

Document "A."

Showing Titles of Appropriations; Appropriations, including Transfers of 1879; Requisitions, First Nine Months, 1879; Requisitions, Fourth Quarter, 1879; Total Requisitions for 1879; Balances of 1879 on December 31; and the Titles and Conditions of the "Trust Accounts;" also, Memoranda of Balances of 1878 on December 31, 1879.

TITLES OF APPROPRIATIONS.	Appropriations and Transfers, 1879.	Requisitions, First Nine Months, 1879.	Requisitions, Fourth Quarter, 1879.	Total Requisitions for 1879.	Balances December 31, 1879.	Balances of 1878 on December 31, 1879.
Aqueduct—Repairs and Maintenance.....	\$112,000 00	\$72,735 85	\$36,834 33	\$109,570 18	\$2,429 82	\$4 22
Aqueduct—Repairs and Maintenance—Salaries.....	13,760 00	9,106 98	4,586 64	13,693 62	66 38	.....
Boulevard, Roads, and Avenues—Maintenance.....	32,200 00	26,072 28	5,312 73	31,385 01	814 99	31 91
Boulevard, Roads, and Avenues—Maintenance—Salaries.....	3,400 00	2,340 85	1,026 39	3,367 24	32 76	.....
Bridge across Fourth avenue at One Hundred and Sixteenth street.....	12,500 00	.....	2,821 41	2,821 41	9,678 59	.....
Contingencies—Department of Public Works.....	2,000 00	871 92	1,031 67	1,903 59	96 41	71 05
Croton Water-main Fund—From Taxation.....	150,000 00	.....	34,118 62	34,118 62	115,881 38	.....
Expenses—Altering Map of City west of Eighth avenue.....	1,700 00	339 97	999 00	1,338 97	361 03	.....
Expenses—Grading, Paving, etc., Fort Gansevoort Property.....	25,000 00	10,137 94	12,697 59	22,835 53	2,164 47	.....
Expenses—Providing Supply of Water for Twenty-fourth Ward.....	12,500 00	.....	.....	.....	12,500 00	.....
Flagging Sidewalks and Fencing Vacant Lots, etc.....	1,000 00	852 97	139 80	992 77	7 23	18 01
Free Floating Baths.....	2,150 00	1,343 30	313 35	1,656 65	493 35	12 72
Free Floating Baths—Additional.....	4,446 82	4,182 49	249 10	4,431 59	15 23	.....

TITLES OF APPROPRIATIONS.	Appropriations and Transfers, 1879.	Requisitions, First Nine Months, 1879.	Requisitions, Fourth Quarter, 1879.	Total Requisitions for 1879.	Balances December 31, 1879.	Balances of 1878 on December 31, 1879.
Free Floating Baths—Battery.	\$9,400 00	\$8,655 24	\$625 00	\$9,280 24	\$ 119 76	.....
Free Floating Baths—Foot of East Seventeenth street.....	7,800 00	.....	7,163 73	7,163 73	636 27	.....
Free Floating Baths—Salaries..	11,000 00	6,907 44	4,021 50	10,928 94	71 06	.....
Janitors—Civil and Police Courts—Salaries.....	3,600 00	.....	3,600 00	3,600 00	.....	.....
Lamps and Gas.....	483,000 00	311,019 36	134,715 47	445,734 83	37,265 17	\$8 03
Lamps and Gas—Salaries.....	5,700 00	3,664 00	2,008 00	5,672 00	28 00	.....
Public Buildings—Construction and Repairs.....	28,700 00	20,179 34	6,496 26	26,675 60	2,024 40	73 48
Public Buildings—Construction and Repairs—Salaries.....	2,000 00	1,240 50	706 62	1,947 12	52 88	.....
Public Drinking Hydrants.....	4,200 00	3,709 66	285 96	3,995 62	204 38	78
Removing Obstructions in Streets and Avenues.....	1,500 00	825 55	674 45	1,500 00	.....	1 77
Removing Obstructions in Streets and Avenues—Salaries.....	2,000 00	1,445 00	554 32	1,999 32	68	.....
Repairing and Renewal of Pipes, Stop-cocks, etc.....	73,000 00	51,782 44	20,722 57	72,505 01	494 99	8 95
Repairing and Renewal of Pipes, Stop-cocks, etc.—Salaries.....	25,000 00	19,964 45	4,893 00	24,857 45	142 55	.....
Repairs and Renewal of Pavements.....	159,800 00	142,507 12	17,147 22	159,654 34	145 66	212 78
Repaving, under chapter 476, Laws 1875.....	.....	.....	.....	.....	.....	8,494 99
Repaving Streets and Avenues, under chapter 476, Laws 1875	298,000 00	22,679 54	149,695 54	172,375 08	125,624 92	.....
Repaving, under chapter 476, Laws 1875—Salaries.....	5,700 00	1,955 65	3,549 80	5,505 45	194 55	.....
Roads and Avenues and Sprinkling.....	18,000 00	13,528 36	4,235 12	17,764 48	235 52	11 58
Salaries—Department of Public Works.....	92,000 00	64,795 61	26,988 41	91,784 02	215 98	85 57
Sewers—Repairing and Cleaning.....	53,200 00	38,008 26	14,327 06	52,335 32	864 68	66 59
Sewers—Repairing and Cleaning—Salaries.....	9,300 00	5,539 68	3,758 53	9,298 21	1 79	.....
Sewerage System—Salaries... Street Improvements — For Street Signs, etc.....	4,700 00	1,682 84	3,016 89	4,699 73	27	.....
Supplies for and Cleaning Public Offices.....	300 00	228 66	45 00	273 66	26 34	72 00
Supplies for and Cleaning Public Offices—Salaries.....	65,734 00	43,824 09	20,249 94	64,074 03	1,659 97	42 96
Supplying Water to Shipping, etc.—Salaries.....	15,816 00	10,604 52	5,126 14	15,730 66	85 34	.....
Wells and Pumps—Repairing and Cleaning.....	8,000 00	5,174 04	2,815 00	7,989 04	10 96	10 00
.....	300 00	178 91	7 25	186 16	113 84	41 36
	\$1,760,406 82	\$908,084 81	\$537,560 41	\$1,445,645 22	\$314,761 60	\$9,268 75
Requisitions drawn in 1879 for liabilities of 1878.....	.....	\$94,673 83	\$23,815 33	\$118,489 16	.....	.....

TRUST ACCOUNTS.	Amounts authorized by Board of Estimate and Apportionment.	Amounts called for by Collector of Public Works.	Amount of Requisitions, First Nine Months, 1879.	Amount of Requisitions, Fourth Quarter, 1879.	Amount of Requisitions for the Year 1879.	Total Amount of Requisitions drawn against each Trust Account.	Amount Available on January 1, 1880.
Additional Alterations of Aqueduct, Ninety-third to One Hundred and Thirtieth street..	\$3,554,000 00	\$3,600,000 00	\$3,089 40	.....	\$3,089 40	\$3,599,829 49	\$170 51
Additional Alterations of Aqueduct, One Hundred and Eighteenth to One Hundred and Forty-second street... Boulevard, Roads, etc.—Assessment Fund.....	65,165 57	100,000 00	.....	.....	.....	57,515 93	42,484 07
.....	.....	.....	22,347 05	\$16,141 37	38,488 42	.....	.....
Croton Water Fund.. Croton Water-main Fund.....	1,310,000 00	1,460,000 00	33,929 59	18,458 49	52,388 08	1,331,453 87	128,546 13
Croton Water-main Fund No. 2.....	3,625,000 00	3,750,000 00	.....	10,532 03	10,532 03	3,713,469 83	36,510 17
.....	1,500,000 00	1,500,000 00	154,347 99	75,654 08	230,002 07	1,370,387 04	129,612 96
Meter Stock.....	11,500 00	25,000 00	372 80	4,326 24	4,699 04	14,806 02	10,193 98
Street Improvement Fund.....	.....	.....	214,155 29	111,915 54	326,070 83	.....	.....

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

Statement showing all Revenues of the City received through the Department of Public Works during the Year 1879.

SOURCE OF REVENUE.	FIRST QUARTER, 1879.	SECOND QUARTER, 1879.	THIRD QUARTER, 1879.	FOURTH QUARTER, 1879.	TOTAL FOR 1879.
Water Rents.....	\$103,146 17	\$463,393 75	\$800,878 34	\$231,784 64	\$1,599,202 00
Water Penalties.....	2,011 25	1,355 80	3,189 35	5,907 45	12,523 85
Pipe-tapping.....	804 00	2,044 50	2,325 00	2,831 00	8,004 50
Sewer Permits.....	2,361 60	6,166 37	5,570 10	5,997 21	20,095 28
Vault Permits.....	3,491 20	8,109 50	12,016 43	9,510 60	33,127 79
Work done for and material furnished to citizens..	552 23	554 36	933 88	174 93	2,215 40
Redemption of street obstructions.....	35 00	18 00	17 25	33 00	103 25
Sales at Corporation Yards, etc.....	372 42	91 60	250 53	.....	1,013 53
Rent of derricks, etc.....	.....	.....	435 00	.....	435 00
Services of Inspector, R. K. construction.....	346 50	.....	.....	.....	346 50
Vitrified stoneware pipe.....	239 40	281 80	166 15	211 03	898 38
Totals.....	\$113,359 77	\$482,615 74	\$825,824 03	\$256,766 84	\$1,678,566 38
Amount of Special "Meter Stock Deposited," cash.....	.....	.....	.....	.....	\$31 20
Amount of Unpaid Croton Water Rents (Regular) in Arrears, 1878, as per receipt of Clerk of Arrears..	.....	.....	.....	.....	69,219 35
Total Croton Water Rents and Penalties collected in 1879, as per Chamberlain's receipts, and Returns in Arrears of 1878, as per Clerk of Arrears' receipt.....	.....	.....	.....	.....	1,680,946 10
Total cash deposits with City Chamberlain in 1879, for which the Department of Public Works holds receipts.....	.....	.....	.....	.....	1,678,597 58
The First Bookkeeper holds receipt of Chamberlain for Water Rents, Penalties, and Pipe-tapping, 1879..	.....	.....	.....	.....	\$1,620,331 25
To which add collections in 1879 deposited in 1880: Water Rents, \$1,527.56, and Taps, \$101.....	.....	.....	.....	.....	1,628 56
From which deduct collections in 1878 deposited in 1879: Water Rents, \$3,237.31.....	.....	.....	.....	.....	3,237 31
Which will give Water Register's collections for 1879.....	.....	.....	.....	.....	1,618,722 50

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



## Document "B."

A detailed Statement of Expenditures, for which Requisitions were drawn on the Comptroller, during the Quarter ending December 31, 1879.

## APPROPRIATIONS.

## Aqueduct—Repairs and Maintenance—

Brick, cement, and sand.....	\$3,183 01
Coal.....	1,845 90
Cotton and rope.....	66 09
Lumber.....	143 96
Oil, etc.....	636 27
Pay-rolls, Laborers, etc.....	27,716 88
Rebuilding sewer.....	802 40
Repairing engine.....	40 56
" tools.....	407 22
" waste weir.....	120 20
Spikes.....	158 00
Stone.....	967 50
Stove and pipe.....	37 40
Supplies.....	107 27
Taxes.....	108 61
Tools.....	104 30
Traveling expenses.....	324 18
Wire rope.....	64 58
Total.....	\$36,834 33

## Aqueduct—Repairs and Maintenance (Salaries)—

Pay-rolls, Officers, etc.....	\$4,586 64
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## Boulevard, Roads, and Avenues, Maintenance of—

Coal.....	\$15 00
Horseshoeing.....	12 00
Lumber.....	23 45
Pay-rolls, Laborers, etc.....	5,219 66
Repairing harness.....	7 60
" monitors.....	24 77
Tools.....	10 25
Total.....	\$5,312 73

## Boulevard, Roads, and Avenues, Maintenance of (Salaries)—

Pay-rolls, Engineers, etc.....	\$1,026 39
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## Bridge across Fourth Avenue, at One Hundred and Sixteenth Street—

Building bridge.....	\$2,562 75
Pay-rolls, Engineers.....	166 00
" Inspector.....	92 00
Total.....	\$2,821 41

## Contingencies—Department of Public Works—

Auctioneer's fees.....	\$23 75
Incidentals.....	300 00
Pay-roll.....	285 70
Traveling expenses.....	422 22
Total.....	\$1,031 67

## Croton Water-main Fund—Taxation—

Cast iron pipe.....	\$12,193 97
Laying mains in Eighty-seventh street, etc.....	5,071 18
" One Hundred and Fifty-first street, etc.....	3,420 48
Pay-rolls.....	5,250 90
Stop-cocks, boxes, and hydrants.....	8,182 09
Total.....	\$34,118 62

## Expense, Altering Map of City, West of Eighth Avenue—

Drawing implements.....	\$4 00
Pay-roll, Engineers.....	995 00
Total.....	\$999 00

## Flagging Sidewalks and Fencing Vacant Lots in front of City Property—

Fencing at Fifty-eighth and Fifty-ninth streets and East river.....	\$49 80
Flagging at City Prison.....	90 00
Total.....	\$139 80

## Fort Gansevoort Property, Grading, etc.—

Paving.....	\$12,697 59
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## Free Floating Baths—

Building bath.....	\$6,911 73
Pay-rolls.....	799 50
Supplies.....	9 50
Towing baths.....	301 00
Traveling expenses.....	55 35
Unmooring bath.....	25 00
Total.....	\$8,102 08

## Free Floating Baths, Additional—

Dockage on bath.....	\$230 00
Supplies.....	19 10
Total.....	\$249 10

## Free Floating Baths (Salaries)—

Pay-rolls, Attendants.....	\$4,021 50
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## Janitors, Civil and Police Courts (Salaries)—

Pay-rolls.....	\$3,600 00
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## Lamps and Gas—

Atlas of the City of New York.....	\$15 00
Crossheads.....	130 00
Gas-pipes, etc.....	239 44
Glass.....	74 00
" street-signs.....	456 75
Lamp-brackets.....	60 00
Lamp-globes.....	400 00
Lamp-irons.....	336 00
Lamp-posts.....	1,578 50
Lamps.....	1,943 00
Lettering lamps.....	73 50

## Lamps and Gas—

## Lighting Armory, 3d Regiment.....

" 5th.....	\$66 31
" 7th.....	109 00
" 8th.....	251 75
" 9th.....	25 34
" 11th.....	576 46
" 12th.....	102 03
" 22d.....	258 02
" 69th.....	521 36
" 71st.....	134 71
" Battery B.....	217 74
" " K.....	8 17
" Separate Troop A.....	12 35
" " B.....	47 31
" Bath at Battery.....	52 25
" Bethune street.....	22 42
" Gouverneur street.....	28 69
" Fifth street.....	27 74
" Thirty-fifth street.....	17 48
" Thirty-seventh street.....	8 65
" One Hundred and Fourteenth street.....	16 38
" Brown Stone Building.....	21 00
" City Hall.....	58 90
" Clock at 3d District Court-house.....	857 28
" County Jail.....	184 30
" Court, Civil, 2d District.....	661 58
" " 4th.....	29 45
" " 5th.....	3 61
" " 6th.....	6 08
" " 8th.....	1 52
" " 9th.....	6 65
" Police, 1st District.....	2 40
" " 2d.....	310 84
" " 3d.....	73 34
" " 4th.....	91 96
" " 5th.....	49 53
" Marine District.....	19 80
" Special Sessions.....	12 22
" Department of Buildings.....	2 28
" Engine-house, High Bridge.....	9 69
" Market, Catharine.....	158 80
" Centre.....	76 57
" Clinton.....	393 87
" Essex.....	264 10
" Fulton.....	137 94
" Jefferson.....	730 55
" Tompkins.....	148 58
" Union.....	213 18
" Washington.....	44 84
" New Court-house.....	817 95
" Office Collection Arrears Personal Taxes.....	1,404 48
" Corporation Attorney.....	5 89
" Engineers—Boulevard.....	55 48
" Receiver of Taxes.....	40
" Rooms, Photometrical.....	339 34
" Rivington Street Yard.....	29 88
" South Gate-house.....	5 89
" Streets, Central Gas-light Co.....	15 40
" Harlem.....	19,678 41
" Manhattan.....	20,686 09
" Metropolitan.....	21,925 83
" New York.....	26,121 12
" N. Y. Mutual.....	11,772 01
" Northern.....	4,114 87
" Yonkers.....	13,582 60
" Map of Public Parks.....	540 00
" Painting lamp-posts.....	75 00
" Pay-rolls, Lighters.....	350 75
" Photometer.....	400 00
" Rent of Photometer rooms.....	32 50
" Repairing candelabras.....	162 50
" Supplies.....	110 24
" Traveling expenses.....	27 73
Total.....	\$134,715 47

## Lamps and Gas (Salaries)—

Pay-rolls, Inspectors.....	\$2,008 00
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## Public Buildings—Construction and Repairs—

Armory, 9th Regiment.....	\$933 00
" Separate Troop A.....	65 70
Brown Stone Building.....	175 16
Bureau Repairs and Supplies.....	326 82
City Arsenal.....	5 76
" Hall.....	963 80
" Prison.....	34 56
County Jail.....	37 20
Court, Civil, 1st District.....	56 58
" 6th.....	11 25
" Police, 3d.....	6 31
Court-house, 3d.....	217 07
" 5th.....	18 30
" 7th.....	172 06
" 9th.....	72 08
" New.....	2,489 99
Department of Buildings.....	19 60
Little Twelfth street and Tenth avenue.....	3 80
Market, Catharine.....	49 65
" Centre.....	62 30
" Clinton.....	67 31
" Essex.....	43 22
" Fulton.....	227 58
" Gouverneur.....	60 00
" Jefferson.....	101 11
" Tompkins.....	49 80
" Washington.....	220 25
Office of Corporation Counsel.....	5 00
Total.....	\$6,496 26

## Public Buildings—Construction and Repairs (Salaries)—

Pay-rolls.....	\$706 62
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## Public Drinking Hydrants—

Repairing hydrants.....	\$285 96
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## Removing Obstructions in Streets and Avenues—

Traveling expenses.....	\$62 50
Trucking and labor.....	611 95
Total.....	\$674 45

## Removing Obstructions in Streets and Avenues (Salaries)—

Pay-rolls, Inspectors.....	\$554 32
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## Repairing and Renewal of Pipes, Stop-cocks, etc.—

Brass seals.....	\$42 00
Curbing.....	30 00
Horse feed.....	220 37
Horseshoeing.....	35 50
Hydrant boxes.....	375 00
Meter counters.....	15 00
Pay-rolls.....	18,912 64
Repairing gates.....	64 56
“ stop-cocks.....	270 00
Supplies.....	38 40
Tapping cocks and boxes.....	719 10
Total.....	\$20,722 57

## Repairing and Renewal of Pipes, Stop-cocks, etc. (Salaries)—

Pay-rolls Inspectors, etc.....	\$4,893 00
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## Repairs and Renewal of Pavements—

Bridge stone.....	\$258 18
Broken stone.....	652 40
Granite blocks.....	89 57
Laying Asphalt pavement.....	110 88
“ Belgian.....	236 34
“ crosswalks.....	1,089 64
Oil.....	38 80
Pay-rolls.....	14,331 11
Repairing tools.....	340 30
Total.....	\$17,147 22

## Repaving under Chapter 476, Laws of 1875—

Paving Great Jones, Ninth, Seventeenth, and Nineteenth streets.....	\$26,359 71
“ Mercer, Clarkson, and Fifteenth streets and Union place.....	27,540 19
“ New and Church streets and Exchange place and Front, White, and Centre streets.....	31,692 43
“ Water and Madison streets.....	22,082 50
“ Twenty-first, Twenty-sixth, Twenty-seventh, and Forty-fifth streets.....	9,750 65
“ Fifty-sixth and Fifty-eighth streets.....	3,260 60
“ Fifth avenue, between Seventy-second and Ninetieth streets.....	4,890 48
“ Seventh avenue, between Forty-seventh and Fifty-ninth streets.....	18,059 43
“ Tenth avenue, between Thirty-second and Forty-second streets.....	5,534 55
Sand.....	525 00
Total.....	\$149,695 54

## Repaving under Chapter 476, Laws of 1875 (Salaries)—

Pay-rolls.....	\$3,549 80
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## Repaving under Chapter 476, Laws of 1875, for 1878—

Paving Second avenue, between Twenty-third and Forty-second streets.....	\$18,645 62
“ Seventh avenue, between Fourteenth and Forty-third streets.....	4,237 41
“ Waverly place, Broadway, and Christopher street.....	932 30
Total.....	\$23,815 33

## Roads and Avenues and Sprinkling—

Lumber.....	\$18 75
Pay-rolls.....	3,958 77
Repairing tools.....	196 10
Traveling expenses.....	62 50
Total.....	\$4,236 12

## Salaries—Department of Public Works—

Pay-rolls.....	\$26,988 41
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## Sewers—Repairing and Cleaning—

Basin head.....	\$43 00
Candles.....	15 62
Cement, sand, and brick.....	196 75
Cleaning basins and culverts.....	2,100 00
Horsekeeping.....	84 00
Manhole heads and covers.....	830 47
Pay-rolls, Mechanics, etc.....	10,064 03
Repairing drain.....	19 29
“ manholes.....	431 30
“ sewer.....	114 09
Revising maps.....	115 00
Surveying instruments.....	122 80
Traveling expenses.....	190 71
Total.....	\$14,327 06

## Sewers—Repairing and Cleaning (Salaries)—

Pay-rolls, Engineers, Inspectors, etc.....	\$3,758 53
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## Sewerage System (Salaries)—

Pay-rolls, Engineers, etc.....	\$3,016 89
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## Street Improvements—For Street Signs, etc.—

Correcting map.....	\$45 00
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## Supplies for and Cleaning Public Offices—

Armory, Battery B.....	\$19 50
“ “ Gatling E.....	41 20
“ Separate Troop A, Cavalry.....	61 95
“ 3d Regiment.....	70 00
“ 5th “.....	47 88
“ 7th “.....	63 95
“ 8th “.....	20 00
“ 11th “.....	43 20
“ 12th “.....	60 00
“ 22d “.....	114 70
“ 69th “.....	40 00
“ 71st “.....	74 70
Brown Stone Building.....	438 35
Bureau Repairs and Supplies.....	512 14
City Hall.....	543 30
Court, Civil, 1st District.....	15 00
“ “ 3d “.....	4 00
“ “ 4th “.....	11 90
“ “ 5th “.....	48 49
“ “ 6th “.....	46 65
“ “ 7th “.....	6 75
“ “ 8th “.....	53 77
“ “ 9th “.....	5 00
“ Police 1st “.....	47 86
“ “ 2d “.....	22 48
“ “ 3d “.....	113 42
“ “ 4th “.....	1 75
“ “ 5th “.....	61 30
“ Common Pleas.....	620 06

## Supplies for and Cleaning Public Offices—

Court, General Sessions.....	\$29 70
“ Marine.....	32 00
“ Special Sessions.....	74 55
“ Superior.....	319 56
“ Supreme.....	1,259 72
Court-house, New.....	1,188 68
“ 3d District.....	37 43
“ 7th “.....	91 39
“ 9th “.....	20 86
“ 10th “.....	86 38
Department of Buildings.....	67 86
“ Finance.....	19 00
“ Public Works.....	127 69
“ Taxes and Assessments.....	9 50
Dispensary Building.....	29 33
Gansevoort Street Yard.....	4 25
No. 49 Beekman street.....	13 58
No. 27 Chambers street.....	28 20
Office Board of Assessors.....	5 00
“ Commissioner of Accounts.....	17 75
“ “ Jurors.....	18 00
“ Corporation Attorney.....	28 50
“ “ Counsel.....	122 85
“ County Clerk.....	3 00
“ City Record.....	9 75
“ District Attorney.....	77 35
“ Engineers—Boulevard.....	3 74
“ Mayor.....	56 25
“ Public Administrator.....	20 60
“ Surrogate.....	265 57
Pay-rolls, Cleaners, etc.....	12,954 00
Rivington Street Yard.....	18 60
Total.....	\$20,249 94

## Supplies for and Cleaning Public Offices (Salaries)—

Pay-rolls, Janitors, etc.....	\$5,126 14
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## Supplying Water to Shipping and for Building Purposes (Salaries)—

Pay-rolls, Superintendents, etc.....	\$2,815 00
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## Wells and Pumps—Repairing and Cleaning—

Cleaning and repairing pump.....	\$7 25
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## RECAPITULATION OF APPROPRIATIONS.

Aqueduct—Repairs and Maintenance.....	\$36,834 33
“ “ Salaries.....	4,586 64
Boulevard, Roads, and Avenues—Maintenance.....	5,312 73
“ “ Salaries.....	1,026 39
Bridge across Fourth Avenue, at One Hundred and Sixteenth Street.....	2,821 41
Contingencies—Department of Public Works.....	1,031 67
Croton Water-main Fund—Taxation.....	34,118 62
Expense Altering Map of City, West of Eighth Avenue.....	999 00
Flagging Sidewalks and Fencing Vacant Lots.....	139 50
Fort Gansevoort Property—Grading, etc.....	12,697 59
Free Floating Baths.....	8,102 08
“ Additional.....	249 10
“ Salaries.....	4,021 50
Janitors, Civil and Police Courts—Salaries.....	3,600 00
Lamps and Gas.....	134,715 47
“ Salaries.....	2,008 00
Public Buildings—Construction and Repairs.....	6,496 26
“ “ Salaries.....	706 62
Public Drinking Hydrants.....	285 96
Removing Obstructions in Streets and Avenues.....	674 45
“ Salaries.....	554 32
Repairing and Renewal of Pipes, Stop-cocks, etc.....	20,722 57
“ Salaries.....	4,893 00
Repairs and Renewal of Pavements.....	17,147 22
Repaving under Chapter 476, Laws of 1875.....	149,695 54
“ “ Salaries.....	3,549 80
“ “ for 1878.....	23,815 33
Roads and Avenues and Sprinkling.....	4,236 12
Salaries—Department of Public Works.....	26,988 41
Sewers—Repairing and Cleaning.....	14,327 06
“ Salaries.....	3,758 53
Sewerage System—Salaries.....	3,016 89
Street Improvements—For Street Signs, etc.....	45 00
Supplies for and Cleaning Public Offices.....	20,249 94
“ Salaries.....	5,126 14
Supplying Water to Shipping and for Building, etc.—Salaries.....	2,815 00
Wells and Pumps—Repairing and Cleaning.....	7 25
Total.....	\$561,375 74

## TRUST ACCOUNTS.

## CROTON WATER FUND.

Bridge abutments.....	\$790 00
Building house and barn.....	2,996 00
Coal, etc.....	43 50
Drawing implements.....	100 96
Horsekeeping.....	136 33
Incidental expenses.....	179 24
Legal services.....	2,035 64
Oakum.....	14 25
Pay-rolls.....	5,954 00
Printing.....	879 47
Putting up stove.....	19 45
Rent of mill seat.....	375 00
“ offices.....	120 00
Repairing tools.....	11 00
Retaining wall.....	4,573 10
Stenographing, etc.....	146 92
Traveling expenses.....	67 88
Tools.....	15 75
Total.....	\$18,458 49

## CROTON WATER-MAIN FUND NO. 1.

Horsekeeping.....	\$27 50
Pay-rolls.....	10,504 53
Total.....	\$10,532 03

## CROTON WATER-MAIN FUND NO. 2.

Building engine and boiler-house.....	\$19,464 40
“ foundation, engine-house.....	2,771 62
Castings.....	216 00
Cast iron water-pipes.....	17,102 64
Changing taps.....	331 41
Coal and wood.....	132 00
Horsekeeping.....	60 50
Hydrants.....	2,024 00



Laying mains across High Bridge, J. P. Cummings, Jr.	\$2,327 14
“ in Boston avenue, etc., G. Palmer.	167 25
“ in First avenue, etc., J. Everard.	618 91
“ “ “ M. H. Moore.	908 78
“ in Ninety-eighth street, etc., M. Baird.	6,459 64
“ in One Hundred and Seventy-seventh street, etc., J. Cornwall.	1,212 40
Pay-rolls.	18,171 84
Pipe-yarn.	142 30
Repairing damage.	197 15
“ instrument.	24 50
Sand.	1,950 00
Stop-cock boxes and covers.	1,053 00
Supplies.	60 20
Traveling expenses.	152 83
Tools.	105 57

Total. \$75,654 08

## METER STOCK.

Furnishing water meters.	\$3,233 80
Placing “.	1,092 44
Total.	\$4,326 24

## STREET IMPROVEMENT FUND.

Crosswalks—	
Fourth avenue, at One Hundred and Seventh, One Hundred and Eighth, and One Hundred and Ninth streets, P. J. Masterson.	\$50 00

Fencing—	
Between Seventy-second and Seventy-third streets, Fifth and Madison avenues, G. Palmer.	\$206 42
South side Seventy-ninth street, between Fourth and Lexington avenues, M. Mahoney.	78 33
Between Eightieth and Eighty-first streets, Fifth and Madison avenues, R. A. Cunningham.	413 32
	698 07

Flagging—	
Sixtieth street, between Ninth avenue and Boulevard, J. Reilly.	141 25

Paving—	
Lexington avenue, between Seventy-ninth and Eighty-fifth streets, J. Slattery.	\$7,350 00
Ninth avenue, between Seventy-second street and Boulevard, Assawasse Granite Co.	1,960 00
Forty-fourth street, between Second and Third avenues, J. Slattery.	4,058 34
Fifty-third street, between Broadway and Seventh avenue, T. Gearty.	70 60
Fifty-eighth street, between Ninth and Tenth avenues, J. Slattery.	4,092 00
Sixty-fifth street, between First and Third avenues, T. Gearty.	429 20
Seventy-fourth street, between Avenue A and East river, D. Eagan.	242 80
Seventy-seventh street, between Avenue A and Third avenue, J. M. Shannon.	639 16
Eighty-first street, between Fourth and Fifth avenues, D. McGrath.	286 60
Eighty-fourth street, between Boulevard and Riverside Drive, J. M. Shannon.	337 90
One Hundred and Eighth street, between Fourth and Madison avenues, D. McGrath.	138 20
One Hundred and Twentieth street, between Second and Third avenues, D. McGrath.	209 50
	19,814 30

Receiving Basins—	
Corner Beaver and Pearl streets, B. Maloney.	\$127 00
“ Bloomfield street and Tenth avenue, C. Devlin.	25 20
“ First street and Extra place, C. Devlin.	7 80
“ Eleventh street and Dry Dock street, M. H. Moore.	111 30
“ Fifty-fourth street and Avenue A, P. T. Masterson.	7 80
“ Sixtieth street and Fifth avenue, J. B. Healy.	171 25
Fifth avenue, between Sixty-first and Sixtieth streets, M. H. Moore.	123 55
Corner One Hundred and Fifteenth street and Avenue A, B. Maloney.	114 50
	688 40

Regulating, Grading, etc.—	
Madison avenue, between Ninety-ninth and One Hundred and Fifth streets, J. Slattery.	\$7,087 50
Sixty-sixth street, between Eighth avenue and Boulevard, J. Mulholland.	1,073 80
Seventy-third street, between Third avenue and East river, P. Farley.	1,061 90
Ninety-third street, between Second avenue and East river, M. Maguire.	4,830 25
One Hundred and Second street, between Fifth avenue and Harlem river, J. Walsh.	8,575 00
One Hundred and Third street, between First and Fifth avenues, J. C. Dowling.	3,192 00
One Hundred and Twenty-ninth street, between Seventh and Eighth avenues, J. F. Gallagher.	499 75
	26,320 20

Retaining Wall—	
Forty-second street, between First and Second avenues, E. Freel.	6,668 20

Sewers—	
Greenwich avenue, between Thirteenth street and Eighth avenue, P. T. Masterson.	\$53 20
Lexington avenue, between Seventy-second and Seventy-third streets, J. H. McCabe.	2,278 10
Lexington avenue, between One Hundred and Twenty-fifth and One Hundred and Twenty-sixth streets, P. T. Masterson.	918 53
New avenue, west of Morningside Park, J. Everard.	5,135 60
First avenue, between Ninety-second and One Hundred and Tenth streets, J. C. Dowling.	4,232 40
Second avenue, between Seventy-fifth and Seventy-sixth streets, J. Baird.	2,104 90
Eleventh avenue, between Fifty-ninth and Sixtieth streets, M. H. Moore.	332 80
Eleventh avenue, between Sixty-sixth and Seventy-sixth streets, Crimmins & Dowdney.	1,524 00
Sylvan place, between One Hundred and Twentieth and One Hundred and Twenty-first streets, J. B. Healy.	278 85
Houston street, at East river, J. Baird.	3,475 27
Laight street, between West and Washington streets, J. S. Masterson.	375 69
West street, between Barclay street and Park place, C. Devlin.	41 60
Fifty-ninth street, at East river, P. T. Masterson.	21 40
Sixty-eighth street, between Fourth and Madison avenues, B. Maloney.	243 90
Sixty-ninth street, between Boulevard and Ninth avenue, Butler & Reilly.	2,952 70
Seventieth street, between First and Second avenues, Devlin & McKim.	119 00
Seventy-third street, between Eighth and Tenth avenues, J. G. Smith.	4,096 54
Ninety-fourth street, between Third and Fourth avenues, E. Bradburn.	228 40
One Hundred and Tenth street, between Madison and Fifth avenues, M. H. Moore.	2,571 27
One Hundred and Tenth street, between New and Ninth avenues, M. Noonan.	2,544 50
One Hundred and Thirteenth street, between Tenth avenue and Summit east, W. E. & W. M. Dean.	2,699 65
One Hundred and Nineteenth street, between Fifth avenue and Summit west, J. H. McCabe.	90 80

## Sewers—

One Hundred and Twenty-seventh street, between Seventh and Eighth avenues, James Reilly.	\$1,879 13
One Hundred and Thirtieth street, between Sixth avenue and Summit east, W. E. & W. M. Dean.	1,445 83
	\$39,644 06
Miscellaneous expenses.	1 80
Pay-roll, Inspectors Paving.	738 50
“ “ Regulating, Grading, etc.	2,698 00
“ “ Sewers.	5,494 00
“ Engineers.	7,569 06
Surveyors' fees.	1,389 70
Total.	\$111,915 54

## STREET IMPROVEMENTS ABOVE FIFTY-NINTH STREET.

Morningside Avenue, West—	
Filling.	\$304 50
Lumber.	20 68
Oil.	14 00
Pay-rolls.	7,844 46
Powder and fuse.	73 00
Rope.	22 64
	\$8,279 28

Eleventh Avenue, between One Hundred and Fifty-fifth Street and Kingsbridge Road—	
Pay-rolls, Engineers.	\$1,030 00
Regulating, grading, etc.	6,832 09
	7,862 09

Total. \$16,141 37

## RECAPITULATION OF TRUST ACCOUNTS.

Croton Water Fund.	\$18,458 49
Croton Water-main Fund No. 1.	10,532 03
“ “ “ 2.	75,654 08
Meter Stock.	4,326 24
Street Improvement Fund.	111,915 54
Street Improvements above Fifty-ninth Street.	16,141 37

Total. \$237,027 75

## GENERAL SUMMARY.

Appropriations.	\$561,375 74
Trust Accounts.	237,027 75
Grand Total.	\$798,403 49

## Document “C.”

Revenues from Croton Water, from its Introduction into the City in 1842.

First.—Amounts collected by the Department and its predecessor the Croton Aqueduct Board :

From Oct. 5, 1842, to May 1, 1843.	\$32,053 74
“ May 1, 1843, “ 1, 1844.	84,444 68
“ “ 1, 1844, “ 1, 1845.	117,227 86
“ “ 1, 1845, “ 1, 1846.	163,900 52
“ “ 1, 1846, “ 1, 1847.	193,346 24
“ “ 1, 1847, “ 1, 1848.	219,416 72
“ “ 1, 1848, “ 1, 1849.	250,081 51
“ “ 1, 1849, Dec. 31, 1849.	259,532 97
“ Jan. 1, 1850, “ 31, 1850.	458,951 87
“ “ 1, 1851, “ 31, 1851.	458,789 78
“ “ 1, 1852, “ 31, 1852.	578,426 48
“ “ 1, 1853, “ 31, 1853.	650,021 20
“ “ 1, 1854, “ 31, 1854.	703,730 83
“ “ 1, 1855, “ 31, 1855.	790,077 70
“ “ 1, 1856, “ 31, 1856.	778,202 77
“ “ 1, 1857, “ 31, 1857.	823,156 35
“ “ 1, 1858, “ 31, 1858.	840,928 08
“ “ 1, 1859, “ 31, 1859.	855,261 47
“ “ 1, 1860, “ 31, 1860.	868,843 58
“ “ 1, 1861, “ 31, 1861.	891,430 81
“ “ 1, 1862, “ 31, 1862.	893,896 82
“ “ 1, 1863, “ 31, 1863.	982,031 26
“ “ 1, 1864, “ 31, 1864.	1,006,191 77
“ “ 1, 1865, “ 31, 1865.	1,056,772 49
“ “ 1, 1866, “ 31, 1866.	1,125,605 96
“ “ 1, 1867, “ 31, 1867.	1,261,600 30
“ “ 1, 1868, “ 31, 1868.	1,312,093 05
“ “ 1, 1869, “ 31, 1869.	1,315,676 13
“ “ 1, 1870, Apr. 9, 1870.	77,641 95
“ Apr. 11, 1870, “ 10, 1871.	1,296,383 79
“ “ 11, 1871, “ 10, 1872.	1,353,591 59
“ “ 10, 1872, “ 30, 1873.	1,439,349 39
“ “ 30, 1873, Dec. 31, 1873.	1,386,132 41
“ Jan. 1, 1874, Jan. 1, 1875.	1,477,277 06
“ “ 1, 1875, “ 1, 1876.	1,444,256 71
“ “ 1, 1876, “ 1, 1877.	1,478,281 00
“ “ 1, 1877, “ 1, 1878.	1,470,329 60
“ “ 1, 1878, “ 1, 1879.	1,606,509 29
“ “ 1, 1879, “ 1, 1880.	1,618,722 50

Total amount collected to date by Department. \$33,620,258 23

Second.—Arrears of Croton Water Rents turned over for collection to the Clerk of Arrears, being liens on the respective properties :

For year ending April 30, 1853.	\$22,230 66
“ “ 1854.	35,032 45
“ “ 1855.	47,382 34
“ “ 1856.	57,670 46
“ “ 1857.	57,671 60
“ “ 1858.	62,892 92
“ “ 1859.	55,410 05
“ “ 1860.	48,005 51
“ “ 1861.	50,836 98
“ “ 1862.	62,738 23
“ “ 1863.	55,331 11
“ “ 1864.	50,536 18
“ “ 1865.	49,478 75
“ “ 1866.	41,219 45
“ “ 1867.	45,023 65
“ “ 1868.	42,436 15
“ “ 1869.	39,844 05
“ “ 1870.	49,155 60
“ “ 1871.	51,223 30
“ “ 1872.	49,428 15
“ “ 1873.	50,660 25
“ “ 1874.	48,039 53
“ “ 1875.	57,721 38
“ “ 1876.	66,652 10
“ “ 1877.	67,677 50
“ “ 1878.	73,995 18
“ “ 1879.	69,219 35

Total arrears (liens on property) 1,407,512 88

Total revenues to January 1, 1880. \$35,027,771 11



## Cost of Croton Water Works,

Including all expenditures for construction and maintenance of works, structures, aqueducts, reservoirs, pipes, etc., connected with the Croton water supply, from its inception to January 1, 1880.

To January 1, 1865	\$20,030,221 93
During the year 1865	224,337 27
" 1866	442,628 05
" 1867	581,794 80
" 1868	726,437 40
" 1869	804,628 19
" 1870	1,172,078 48
" 1871	2,784,440 72
" 1872	1,836,847 68
" 1873	2,049,850 51
" 1874	1,465,708 03
" 1875	882,777 64
" 1876	1,066,645 50
" 1877	859,670 58
" 1878	802,014 68
" 1879	610,399 26

Total cost to January 1, 1880..... \$36,430,480 72

From Document "C," accompanying this report, I take the following figures, showing the total revenue from Croton water since its introduction, and the total expenditures for the Croton water system to the close of the year 1879.

Amounts collected by the Department and by the Croton Aqueduct Board, from October 5, 1842, to January 1, 1880.....	\$33,620,258 23
Amounts turned over to the Clerk of Arrears for collection from year to year (being liens on property).....	1,407,512 88

Total revenue to January 1, 1880..... \$35,027,771 11

Amounts expended for construction and maintenance of all works, structures, pipes, etc., connected with the Croton water system since its inception to January 1, 1880.....	\$36,430,480 72
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## Document "D."

Contracts entered into during the Three Months ending December 31, 1879.

DATE.	NATURE AND LOCATION OF WORK.	CONTRACTOR.	SURETIES.	ESTIMATED COST.
<i>Sewers.</i>				
1879. Oct. 2	Sewers in West street, between Spring and West Eleventh streets, with connections to present sewers, and alterations and improvements to existing sewers in Sewerage District No. 20.....	James Baird, 410 E. 57th street....	William Baird, 310 E. 57th street.... Matthew Baird, 306 E. 57th street....	133,485 00
Nov. 1	Sewers in Sixty-eighth, Sixty-ninth and Seventieth streets, between Avenue A and First avenue....	John T. McDonald, 316 E. 63d street....	Sheridan Shook, 243 W. 34th street.... James Everard, 223 W. 34th street.... William T. McEntee, 218 E. 105th street.... Timothy Donovan, 412 E. 12th street.... John J. McQuade, Lex. av. and 89th st.... Charles J. Jones, 163d st. & Prospect av.	13,244 00 962 50 1,509 00
" 10	Sewer in One Hundred and Thirtieth street, between Fourth and Madison avenues.....	Jeremiah D. Moore, 220 E. 105th street....	Thomas Pierson, 10 E. 84th street.... Edward C. Sheehy, 1453 Third avenue....	30,379 00
" 10	Sewer in Fifty-eighth street, between First and Second avenues, from end of present sewer in First ave.	James J. Jones, 243 E. 84th street....	Thomas Pierson, 10 E. 84th street.... Edward C. Sheehy, 1453 Third avenue....	2,459 50
" 13	Sewer in Tenth avenue, east side, between Eighty-third and Ninety-second streets, between Eighth and Tenth avenues, and in Ninth avenue, west side, between Eighty-fourth and Eighty-sixth streets....	Peter T. Masterson, 7th ave. and 127th st.	Timothy Donovan, 412 E. 114th street.... James Petit, Manh'tan st. bet. 10th av. and B'way.... Sheridan Shook, 243 W. 34th street.... Charles Guidet, 41 Park avenue....	18,211 60 6,918 50
" 13	Sewer in Twelfth avenue, between One Hundred and Thirty-first and One Hundred and Thirty-third streets.....	Peter T. Masterson, 7th ave. and 127th st.	Timothy Donovan, 412 E. 114th street.... James Petit, Manh'tan st. bet. 10th av. and B'way.... Sheridan Shook, 243 W. 34th street.... Charles Guidet, 41 Park avenue....	6,918 50
" 18	Outlet sewer in One Hundred and Thirtieth street, between Harlem river and Fifth avenue, with connections to present sewer....	Edward Bradburn, 349 E. 86th street....	Timothy Donovan, 412 E. 114th street.... James Petit, Manh'tan st. bet. 10th av. and B'way.... Sheridan Shook, 243 W. 34th street.... Charles Guidet, 41 Park avenue....	18,211 60 6,918 50
Dec. 2	Sewer in Forty-third street, between Second and Third avenues.....	James Everard, 243 W. 34th street....	Timothy Donovan, 412 E. 114th street.... James Petit, Manh'tan st. bet. 10th av. and B'way.... Sheridan Shook, 243 W. 34th street.... Charles Guidet, 41 Park avenue....	6,918 50
<i>Paving.</i>				
Oct. 1	Paving Sixty-fifth street, from Eighth to Ninth avenue, with trap-block pavement.....	William A. Cumming, 5 Dey street....	J. G. Peck, foot of West 30th st.... John J. Sinclair, 115 W. 49th street.... Charles Guidet, 41 Park avenue.... John White, 536 W. 40th street.... Charles Guidet, 41 Park avenue.... John White, 536 W. 40th street.... Matthew Baird, 306 E. 57th street.... William C. Traphagen, 14 E. 63d street.... Edward C. Sheehy, 1453 Third avenue.... John McDermott, 9 Chambers street....	\$4,461 23 4,507 00 4,510 00 17,360 00 8,090 00
Dec. 5	Paving Forty-second street, from First avenue to the East river, with trap-block pavement.....	P. H. Fitzgerald, 534 W. 35th street....	John White, 536 W. 40th street.... Charles Guidet, 41 Park avenue.... John White, 536 W. 40th street.... Matthew Baird, 306 E. 57th street.... William C. Traphagen, 14 E. 63d street.... Edward C. Sheehy, 1453 Third avenue.... John McDermott, 9 Chambers street....	4,510 00
" 5	Paving One Hundred and Fifteenth street, from Third to Fourth avenue, with trap-block pavement	P. H. Fitzgerald, 534 W. 35th street....	John White, 536 W. 40th street.... Charles Guidet, 41 Park avenue.... John White, 536 W. 40th street.... Matthew Baird, 306 E. 57th street.... William C. Traphagen, 14 E. 63d street.... Edward C. Sheehy, 1453 Third avenue.... John McDermott, 9 Chambers street....	4,510 00
" 31	Paving One Hundred and Twenty-eighth street, from Second to Sixth avenue, with trap-block pavement	John M. Shannon, 102 Palisade avenue....	Matthew Baird, 306 E. 57th street.... William C. Traphagen, 14 E. 63d street.... Edward C. Sheehy, 1453 Third avenue.... John McDermott, 9 Chambers street....	17,360 00
" 8	Paving Sixty-ninth street, from First to Third avenue, with trap-block pavement.....	Charles Devlin, 311 E. 57th street....	Matthew Baird, 306 E. 57th street.... William C. Traphagen, 14 E. 63d street.... Edward C. Sheehy, 1453 Third avenue.... John McDermott, 9 Chambers street....	8,090 00
<i>Awarded under Chapter 476, Laws of 1875.</i>				
Oct. 1	Paving Fifty-sixth street, from Fifth to Sixth avenue, Fifty-sixth street, from Seventh to Ninth avenue, and Fifty-eighth street, from Sixth to Ninth avenue, with trap-block pavement.....	Joseph F. Hayden.....	John Nesbit, 165 Lexington ave.... J. S. Peck, foot of W. 30th street	\$27,285 00
" 2	Paving Tenth avenue, from Thirty-first street to Forty-second street, with trap-block pavement.....	Denis McGrath, Weehawken, N.J....	Valentine Loewer, 529 W. 41st street.... Joseph Kersir, 553 W. 41st street....	28,833 10
<i>Croton Water Mains.</i>				
Dec. 19	Laying Croton water mains in the Twenty-fourth Ward.....	John Cornwell, Jr., 304 E. 116th street....	George Borstman, 228 E. 32d street.... P. M. Wilson, 86 Barns street....	\$4,958 20
" 27	Laying Croton water mains in Sixth avenue, One Hundred and Thirty-second, One Hundred and Forty-first, One Hundred and Forty-fourth, Seventy-sixth, Seventy-second and Seventy-fifth streets..	Gilbert Palmer, 49 E. 78th street....	Theo. Russell, 159 E. 64th street.... Francis McCabe, 725 Lexington avenue	3,179 50

DATE.	NATURE AND LOCATION OF WORK.	CONTRACTOR.	SURETIES.	ESTIMATED COST.
<i>Miscellaneous Contracts.</i>				
1879. Oct. 11	Constructing an iron bridge at Fourth avenue and One Hundred and Sixth street, with the necessary abutments and retaining walls, etc.	John Beattie, of Leet's Island, Conn.	Michael Duff, 1st av., 123d & 124th sts Cornelius J. Ryan, 312 E. 125th street.... J. Graff, 520 E. 46th street.... Felix Campbell, 73 John street.... Robert Campbell, 5 Madison avenue.... Joseph Richardson, 110 E. Houston st.... Robert Campbell, 5 Madison avenue.... Joseph Richardson, 110 E. Houston st....	\$20,590 00 1,684 28 5,181 40 6,742 00
Dec. 12	Furnishing stop-cocks, stop-cock boxes, hydrants, and hydrant-boxes, etc.....	Guy C. Hotchkiss, Field & Co., 622 E. 14th street.	John P. Higgins, 129 Chambers street. O. Zollikoffer, 210 W. 46th street....	1,000 00
" 6	Furnishing cast-iron water-pipes, branch-pipes, and special castings	Warren Foundry and Machine Company..	Moses Taylor, 122 Fifth avenue.... Samuel Sloan, 21 W. 17th street....	6,000 00
" 13	Furnishing cast-iron water-pipes, branch-pipes, and special castings	Warren Foundry and Machine Company..	Samuel Sloan, 21 W. 17th street.... Percy R. Pyne, 25 E. 22d street....	10,000 00
" 13	For furnishing and lighting with illuminating gas, the public markets, buildings and offices in the City of New York, mentioned in contract for the year 1880.....	The Metropolitan Gas Light Company.....		\$51,197 68
" 13	For furnishing and lighting with illuminating gas the public markets, buildings and offices in the City of New York, mentioned in contract for the year 1880.....	The Manhattan Gas Light Company.....		\$377 35
" 13	For furnishing and lighting with illuminating gas the public markets, buildings and offices in the City of New York, mentioned in contract for the year 1880.....	The New York Gas Light Company.....		126 50
Nov. 5	Sewer in Sylvan Place, between One Hundred and Twentieth and One Hundred and Twenty-first streets	John B. Healy, 246 E. 105th street....		192 50
" 11	Receiving basin on the northwest corner One Hundred and Fifteenth street and Avenue A.....	Bernard Maloney, 123 E. 116th street....		602 10
" 11	Receiving basin at the junction of Beaver and Pearl streets.....	Bernard Maloney, 123 E. 116th street....		75 60
Dec. 13	Curb, gutter and flagging Seventy-sixth street, between Fourth and Madison avenues.....	John Mulholland, 73d street, between 1st and 2d avenues		601 64
" 19	Flagging on the south side of Seventieth street, between Madison and Fifth avenues.....	Thomas Pierson, 10 E. 84th street....		228 60
" 19	Flagging sidewalks on the east side Fourth avenue, between Sixty-second and Sixty-fifth streets....	John Mulholland, 73d st. bet. 1st & 2d aves		274 50
Nov. 6	Fencing vacant lots on block bounded by Fifth avenue and Seventy-second street and Madison avenue	Gilbert Palmer, 49 E. 78th street....		100 64
Dec. 9	Fencing vacant lots in Seventy-seventh street, between Fourth and Fifth avenues.....	M. Mahoney, 65th street and 1st ave.		\$2,599 43
Nov. 25	Laying a crosswalk across Lexington avenue, at the northerly and southerly intersection of One Hundred and Twenty-fifth street.	M. A. Kellogg, 135th street and Alexander avenue....		

## RECAPITULATION.

Eight sewer contracts.....	\$207,169 10
Five paving contracts.....	39,028 73
Two paving contracts (under chapter 476, Laws of 1875).....	56,118 10
Three curb, gutter and flagging contracts.....	1,279 34
Two fencing contracts.....	523 10
One crosswalk contract.....	100 64
Three receiving basin and sewer contracts.....	696 35
Seven miscellaneous contracts.....	51,197 00

Thirty-one contracts..... \$356,112 36

Contracts Completed during the Three Months ending December 31, 1879.

DATE.	NATURE AND LOCATION OF THE WORK.	COST.
1879. Oct. 4	Fencing vacant lots..... On block bounded by Eightieth and Eighty-first streets, Madison and Fifth avenues.....	\$484 76 2,582 05
" 7	Sewer..... In Second avenue, between Seventy-fifth and Seventy-sixth streets	
" 14	Receiving basin..... On the northwest corner of Sixtieth street and summit west of Sixth avenue.....	259 60
" 14	Sewer..... In One Hundred and Thirtieth street, between Sixth avenue and summit west of Sixth avenue.....	1,832 21
" 24	Regulating, grading, etc.. Ninety-third street, from Second avenue to the East River.....	5,744 49
" 30	Receiving basin..... On southwest corner of Eleventh and Dry Dock streets.....	178 89
Nov. 3	Sewers..... One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.....	2,345 80
" 3	"..... In Eleventh avenue, west side, between Fifty-ninth and Sixtieth streets.....	582 42
" 3	Fencing vacant lots..... South side Seventy-ninth street, between Fourth and Lexington avenues.....	93 22
" 5	Paving..... Fifty-eighth street, between Ninth and Tenth avenues, with trap-block pavement.....	4,627 07
" 5	Sewers..... In One Hundred and Thirtieth street, between Madison and Fifth avenues, and in Madison avenue, between One Hundred and Thirtieth and One Hundred and Fourteenth streets.....	3,203 73
" 17	Receiving basin..... On the west side of Fifth avenue, between Sixtieth and Sixty-first streets.....	262 34
" 17	Sewer..... In One Hundred and Thirtieth street, between Tenth avenue and summit east of Tenth avenue.....	3,235 12
" 17	Paving..... Forty-fourth street, between Second and Third avenues, with trap-block pavement.....	4,432 40
" 21	Sewer..... In Sixty-ninth street, between Boulevard and Ninth avenue.....	3,794 49
" 25	"..... In Lexington avenue, between One Hundred and Twenty-fifth and One Hundred and Twenty-sixth streets.....	1,322 64
Dec. 1	"..... In Lexington avenue, between Seventy-second and Seventy-third streets.....	2,692 85
" 1	"..... In Sylvan place, between One Hundred and Twentieth and One Hundred and Twenty-first streets.....	409 56
" 1	Receiving basin..... On the northwest corner of One Hundred and Fifteenth street and Avenue A.....	136 91
" 5	Fencing vacant lots..... On block bounded by Fifth avenue and Seventy-second street, Madison avenue and Seventy-third street.....	243 58
" 19	Sewer..... In New avenue, west of Morningside Park and One Hundred and Twenty-second street, between One Hundred and Sixteenth and One Hundred and Tenth streets.....	17,428 16
" 19	Receiving basin..... At the intersection of Beaver and Pearl streets.....	180 73
" 19	Regulating, grading, etc.. One Hundred and Twenty-ninth street, from Seventh to Eighth avenue.....	999 99
" 24	Sewer..... In One Hundred and Thirtieth street, between Fourth and Madison avenues.....	1,057 77
" 29	Laying a crosswalk..... Across Lexington avenue, at the northerly and southerly intersection of One Hundred and Twenty-fifth street.....	141 20
Oct. 7	Paving..... Twenty-first street, from Seventh to Eighth avenues; Twenty-sixth street, from Seventh to Eighth avenues; Forty-fifth street, from Lexington to Fourth avenue, and Forty-fifth street, from Madison to Fifth avenue, with trap-block pavement.....	16,366 56
" 25	"..... Seventh avenue, from Forty-seventh to Fifty-ninth street, except the horse-path of the Seventh avenue Railroad, with Granite block pavement.....	32,212 77
Dec. 5	"..... Water street, from Fulton to Market street, and Madison street, from Market to Clinton street, with trap-block pavement.....	23,450 91







## AMOUNT OF PIPE LAID DURING THE YEAR 1879.

48-inch pipe.....	607 lineal feet.
36 ".....	3,536 "
30 ".....	353 "
20 ".....	889 "
12 ".....	14,207 "
6 ".....	65,033 "

Total..... 84,625 lineal feet.

137 large hydrants placed.  
336 small hydrants placed.

Exhibit "A" will show the location of pipe and hydrants placed during the year 1879.  
There are now 480 miles of Croton mains in the city of New York, and 5,497 hydrants.

## SUPPLY OF WATER TO THE TWENTY-FOURTH WARD FROM YONKERS.

November 18, 1879, a contract, under Chapter 480, Laws of 1879, was entered into by the Commissioner of Public Works with the Yonkers Water Board for a supply of water for the Twenty-fourth Ward of the city of New York, embracing the high lands in the Riverdale and Spuyten Duyvil districts. A plan of the Riverdale district was made, and of the pipes necessary to supply same. Contracts for these pipes and the laying of same have been entered into, which exhausts the appropriation for 1879. Under the appropriation for 1880 the pipes will be completed in the Riverdale district and extended as far as possible with the moneys appropriated in the Spuyten Duyvil district.

## BRIDGE ACROSS FOURTH AVENUE AT ONE HUNDRED AND SIXTEENTH STREET.

A contract was entered into to build the necessary abutments and retaining walls, and for an iron bridge at this place.

Work was commenced on October 14, and has progressed rapidly. The abutments are completed, ready for the iron bridge, which is expected to arrive and be placed in position in January, 1880. The retaining walls north and south of the abutments are progressing as fast as the weather will allow.

The Harlem R. R. Co., who, under the act of the Legislature, pay one-half the expense of this bridge, agreed to pay for the necessary work on bridge, abutments, and retaining walls. This leaves the filling necessary to make the roadways of the approaches of the bridge to be provided for, and an order has been given for the filling necessary to make the One Hundred and Sixteenth street approaches, on both sides of Fourth avenue, leaving the Fourth avenue approaches to be provided for when the retaining walls are completed.

The inspection of the pipes, etc., along the wharves, piers, or bulkheads, and of the use of water along the river fronts and for building purposes, has been continued. During the last quarter there has been issued:

14 Permits for Engines on Wharves, amounting to.....	\$383 60
221 Permits for Shipping, amounting to.....	7,265 26
Water measured by Meters, amounting to.....	14,837 07
162 Permits for Building Purposes, amounting to.....	4,571 00

Total..... \$27,056 93

## And for the year 1879:

61 Permits for Engines, amounting to.....	\$2,515 65
943 Permits for Shipping, amounting to.....	31,010 20
702 Permits for Building Purposes, amounting to.....	18,687 34
Water measured by Meter, amounting to.....	73,688 70

Total..... \$125,901 89

The examination of buildings throughout the city has been continued with a small force, and Exhibit "B" shows the number of leaks found for the quarter and for the year 1879.

## EXHIBIT "A."

## PIPE LAID IN 1879.

## 48-Inch.

In First avenue, between Twentieth and Twenty-fourth streets.

## 36-Inch.

In Orchard street, between Grand and Division.  
In Ninety-eighth street, between Eighth avenue and Boulevard.

## 30-Inch.

In Orchard, Division and Pike streets, between Canal and East Broadway.

## 20-Inch.

In Pike street, between Division and East Broadway.  
In Ninth avenue, between Ninety-seventh and One Hundredth street.

## 12-Inch.

In Madison avenue, between One Hundred and Tenth and One Hundred and Fifteenth streets, and between One Hundred and Twenty-first and One Hundred and Twenty-third streets.  
In Boston avenue, between One Hundred and Sixty-fifth and One Hundred and Sixty-ninth streets.

In One Hundred and Seventy-seventh street, between Madison and Fourth avenues.  
In Fourth avenue, between Seventy-fifth and Seventy-seventh, and between One Hundred and Twenty-first and One Hundred and Twenty-third, and between Seventy-second and Seventy-third streets.

In Riverside avenue, between Seventy-ninth and Eighty-fifth streets.  
In Boulevard, between Eighty-sixth and One Hundredth streets.  
In Manhattan street, between Boulevard and Twelfth avenue.  
In Courtland avenue, between One Hundred and Fifty-fourth and One Hundred and Fifty-eighth streets.

In Ninth avenue, between Sixty-ninth and Seventy-third streets.

## 6-Inch.

In Forty-third street, between Second and Third avenues.  
In One Hundred and Sixty-ninth street, between Boston and Third avenues, across High Bridge, and in Aqueduct avenue and MacComb's Dam Road, between High Bridge and Fordam Church.

In Seventy-sixth street, between Madison and Fourth avenues.  
In Seventy-third street, between First and Second avenues.  
In One Hundred and Fifty-second street, between Third and Courtland avenues.  
In One Hundred and Eighth street, between Boulevard and Riverside avenue.  
In One Hundred and Forty-sixth street, between Willis and Brook avenues.  
In One Hundred and Nineteenth street, between Fifth and Sixth avenues.  
In Seventy-ninth street, between Boulevard and Hudson river.  
In One Hundred and Fifty-third street, between Third and Courtland avenues.  
In Ninety-ninth street, between Boulevard and Tenth avenue.  
In Sixth avenue, between Thirty-fifth and Fifty-first streets.  
In Lexington avenue, between Thirty-fourth and Fortieth streets.  
In Avenue A, between Fifty-eighth and Fifty-ninth streets.  
In Terrace place, between Fifty-eighth and Fifty-ninth streets.  
In Fifty-ninth street, between Avenue A and Terrace place.  
In Eighty-fifth street, between Avenues A and B.  
In Avenue A, between Seventy-first and Seventy-fourth streets.  
In Washington avenue, between Third avenue and One Hundred and Seventy-seventh street.  
In One Hundred and Fifty-seventh street, between Courtland and Elton avenues.  
In Elton avenue, between One Hundred and Fifty-seventh and One Hundred and Fifty-eighth streets.

In One Hundred and Fifty-eighth street, between Third and Courtland avenues.  
In One Hundred and Fifty-fifth street, between Courtland and Morris avenues.  
In Ninety-fourth street, between Fourth and Lexington avenues.  
In Eighty-seventh street, between Boulevard and Riverside avenues.  
In One Hundred and Thirty-second street, between Seventh and Eighth avenues.  
In Boulevard, between One Hundred and Tenth and One Hundred and Thirteenth streets.  
In Sixty-ninth street, between Ninth and Tenth avenues.  
In Seventy-third street, between Ninth and Tenth avenues.  
In One Hundred and Thirteenth streets, between Boulevard and Morningside avenues.

In One Hundred and Twenty-first street, between Fourth and Madison avenues.  
In Seventy-second street, between Fourth and Lexington avenues.  
In One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.  
In Forty-sixth street, between Eleventh avenue and River.  
In Tenth avenue, between Fifty-fifth and Fifty-seventh streets.  
In Eighth avenue, between One Hundred and Forty-first and One Hundred and Fifty-eighth streets.

## A—HYDRANTS SET IN 1879.

1 northwest corner Ninth avenue and Ninety-eighth street.  
1 northeast corner Sixth avenue and Forty-fourth street.  
1 northeast corner Sixth avenue and Forty-seventh street.  
1 Lexington avenue, between Thirty-seventh and Thirty-eighth streets.  
1 northeast corner Eighty-fifth street and Avenue A.  
1 Eighty-fifth street, between Avenues A and B.  
1 northeast corner Seventy-first street and Avenue A.  
1 east side Avenue A, between Seventy-first and Seventy-second streets.  
1 west side Avenue A, between Seventy-first and Seventy-second streets.  
1 northwest corner Seventy-second street and Avenue A.  
1 southwest corner Seventy-second street and Avenue A.  
1 northwest corner Eighty-seventh street and Boulevard.  
1 northwest corner Eighty-eighth street and Boulevard.  
1 northwest corner Ninety-second street and Boulevard.  
1 northwest corner Ninety-third street and Boulevard.  
1 northwest corner Ninety-sixth street and Boulevard.  
1 northwest corner Ninety-ninth street and Boulevard.  
1 Ninth avenue, between Sixty-ninth and Seventieth streets.  
1 Ninth avenue, between Seventieth and Seventy-first streets.  
1 Ninth avenue, between Seventy-first and Seventy-second streets.  
1 Ninth avenue, between Seventy-second and Seventy-third streets.  
1 northeast corner Eighty-seventh street and Eleventh avenue.  
1 Eighty-seventh street, between Eleventh avenue and Riverside drive.  
1 northeast corner Eighty-seventh street and Riverside drive.  
1 northeast corner One Hundred and Thirty-second street and Seventh avenue.  
1 One Hundred and Thirty-second street, between Seventh and Eighth avenues.  
1 northeast corner One Hundred and Thirty-second street and Eighth avenue.  
1 northeast corner Sixty-ninth street and Boulevard.  
1 northwest corner Sixty-ninth street and Ninth avenue.  
1 One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.  
1 northeast corner One Hundred and Twenty-seventh street and Eighth avenue.  
1 Ninety-fourth street, between Lexington and Fourth avenues.  
1 northeast corner Ninety-fourth street and Fourth avenue.  
1 northeast corner Seventy-second street and Fourth avenue.  
1 southeast corner Seventy-second street and Fourth avenue.  
1 northeast corner One Hundred and Twelfth street and Boulevard.  
1 northeast corner One Hundred and Thirteenth street and Boulevard.  
1 northwest corner One Hundred and Thirteenth street and Tenth avenue.  
1 northeast corner One Hundred and Thirteenth street and Tenth avenue.  
1 One Hundred and Thirteenth street, between Tenth avenue and Morningside Drive.  
1 northwest corner One Hundred and Thirteenth street and Morningside Drive.  
1 northeast corner One Hundred and Twenty-first street and Madison avenue.  
1 northwest corner One Hundred and Twenty-first street and Fourth avenue.  
1 Eighth avenue, between One Hundred and Forty-first and One Hundred and Forty-second streets.

1 Eighth avenue, between One Hundred and Forty-third and One Hundred and Forty-fourth streets.

1 Eighth avenue, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.

1 Eighth avenue, between One Hundred and Forty-fifth and One Hundred and Forty-sixth streets.

1 Eighth avenue, between One Hundred and Forty-seventh and One Hundred and Forty-eighth streets.

1 Eighth avenue, between One Hundred and Forty-ninth and One Hundred and Fiftieth streets.

1 Eighth avenue, between One Hundred and Fifty-first and One Hundred and Fifty-second streets.

1 Eighth avenue, between One Hundred and Fifty-third and One Hundred and Fifty-fourth streets.

2 Eighth avenue, between One Hundred and Fifty-fifth street and Harlem river.

1 northeast corner Seventy-third street and Tenth avenue.  
1 northwest corner Seventy-third street and Ninth avenue.

1 northeast corner Forty-sixth street and Twelfth avenue.  
1 One Hundred and Sixty-ninth street, between Third and Fulton avenues.

1 northwest corner One Hundred and Sixty-ninth street and Franklin avenue.  
1 One Hundred and Sixty-ninth street, between Fulton and Clinton avenues.

1 Boston avenue, between One Hundred and Sixty-eighth and One Hundred and Sixty-ninth streets.

1 northeast corner Boston avenue and One Hundred and Sixty-eighth street.

3 Boston avenue, between One Hundred and Sixty-seventh and One Hundred and Sixty-eighth streets.

1 northwest corner Boston avenue and One Hundred and Sixty-seventh street.

1 Boston avenue, between Spring place and One Hundred and Sixty-seventh street.

1 northeast corner Boston avenue and George street.  
2 Boston avenue, between One Hundred and Sixty-fifth street and Spring place.

1 northeast corner Madison avenue and One Hundred and Eleventh street.  
1 Madison avenue, between One Hundred and Eleventh and One Hundred and Twelfth streets.

1 northeast corner Madison avenue and One Hundred and Twelfth street.  
1 Madison avenue, between One Hundred and Thirteenth and One Hundred and Fourteenth streets.

1 Madison avenue, between One Hundred and Fourteenth and One Hundred and Fifteenth streets.

1 northeast corner Forty-third street and Third avenue.

1 northwest corner Forty-third street and Second avenue.

1 northwest corner Fifty-ninth street and River View Terrace.  
1 northeast corner Seventy-third street and Third avenue.

1 Seventy-third street, between Second and Third avenues.  
1 northwest corner Seventy-third street and Second avenue.

1 northeast corner One Hundred and Nineteenth street and Sixth avenue.  
1 One Hundred and Nineteenth street, between Fifth and Sixth avenues.

1 northwest corner One Hundred and Nineteenth street and Fifth avenue.  
1 northwest corner One Hundred and Seventy-seventh street and Washington avenue.

1 northeast corner One Hundred and Seventy-seventh street and Railroad avenue.  
1 northwest corner One Hundred and Fifty-third street and Elton avenue.

1 Mott avenue, between One Hundred and Fifty-eighth and One Hundred and Sixty-first streets.

1 Mott avenue, between One Hundred and Sixty-first street and Ellis place.

2 Mott avenue, between Ellis place and One Hundred and Sixty-fifth street.

1 Washington avenue, between One Hundred and Fifty-ninth and One Hundred and Sixtieth streets.

1 Washington avenue, between One Hundred and Sixty-first and One Hundred and Sixty-second streets.

1 Washington avenue, between One Hundred and Sixty-second and One Hundred and Sixty-third streets.

1 Washington avenue, between One Hundred and Sixty-third and One Hundred and Sixty-fourth streets.

1 Washington avenue, between One Hundred and Sixty-fourth and One Hundred and Sixty-fifth streets.

1 Washington avenue, between One Hundred and Sixty-fifth and One Hundred and Sixty-sixth streets.

2 Washington avenue, between One Hundred and Sixty-sixth and One Hundred and Sixty-seventh streets.

1 Washington avenue, between One Hundred and Sixty-seventh and One Hundred and Sixty-eighth streets.

2 Washington avenue, between One Hundred and Sixty-eighth and One Hundred and Sixty-ninth streets.

2 Washington avenue, between One Hundred and Sixty-ninth and One Hundred and Seventieth streets.

3 Washington avenue, between One Hundred and Seventieth and One Hundred and Seventy-first streets.

2 Washington avenue, between One Hundred and Seventy-first and One Hundred and Seventy-second streets.

1 Washington avenue, between One Hundred and Seventy-second and One Hundred and Seventy-third streets.



- 1 Washington avenue, between One Hundred and Seventy-third and One Hundred and Seventy-fourth streets.  
 2 Washington avenue, between One Hundred and Seventy-fourth and One Hundred and Seventy-fifth streets.  
 1 Washington avenue, between One Hundred and Seventy-fifth and One Hundred and Seventy-sixth streets.  
 1 Washington avenue, between One Hundred and Seventy-sixth and One Hundred and Seventy-seventh streets.  
 1 Courtland avenue, between One Hundred and Fifty-fifth and One Hundred and Fifty-sixth streets.  
 1 Courtland avenue, between One Hundred and Fifty-sixth and One Hundred and Fifty-seventh streets.  
 1 northwest corner One Hundred and Fifty-fifth street and Courtland avenue.  
 1 northeast corner One Hundred and Fifty-fifth street and College avenue.  
 1 northwest corner One Hundred and Fifty-fifth street and Morris avenue.  
 1 northeast corner One Hundred and Fifty-seventh street and Courtland avenue.  
 1 northwest corner One Hundred and Fifty-seventh street and Melrose avenue.  
 1 northwest corner One Hundred and Fifty-seventh street and Elton avenue.  
 1 One Hundred and Fifty-third street, between Elton and Melrose avenues.  
 1 northwest corner One Hundred and Fifty-third street and Melrose avenue.  
 1 northeast corner One Hundred and Fifty-third street and Courtland avenue.  
 1 northwest corner One Hundred and Fifty-second street and Melrose avenue.  
 1 northeast corner One Hundred and Fifty-second street and Courtland avenue.  
 1 northwest corner One Hundred and Fifty-second street and Courtland avenue.  
 1 northeast corner One Hundred and Forty-sixth street and Willis avenue.  
 1 northwest corner One Hundred and Forty-sixth street and Brook avenue.  
 1 northeast corner Seventy-sixth street and Madison avenue.  
 1 northwest corner Seventy-sixth street and Fourth avenue.  
 1 northeast corner One Hundred and Eighth street and Riverside Drive.  
 1 northwest corner Ninety-ninth street and Tenth avenue.  
 1 northwest corner Seventy-ninth street and Boulevard.  
 1 northwest corner Seventy-ninth street and Eleventh avenue.  
 1 northeast corner Seventy-ninth street and Riverside Drive.  
 1 northeast corner Seventy-ninth street and Twelfth avenue.  
 1 Aqueduct avenue, near High Bridge.  
 1 Aqueduct avenue, between High Bridge and Under Cliff avenue.  
 1 southwest corner Aqueduct avenue and Under Cliff avenue.  
 1 Aqueduct avenue, between Under Cliff and Ogden's.  
 3 on Croton aqueduct, between Ogden's and McComb's Dam road.  
 4 McComb's Dam road, between Aqueduct and High Bridge road.  
 1 southwest corner McComb's Dam road and High Bridge road.  
 1 McComb's Dam road, between High Bridge road and Croton avenue.  
 1 Croton avenue, between McComb's Dam road and Aqueduct.  
 3 McComb's Dam road, between Croton avenue and Kingsbridge road.  
 1 west side Elton avenue, between One Hundred and Fifty-seventh and One Hundred and Fifty-eighth streets.  
 1 northwest corner One Hundred and Fifty-eighth street and Third avenue.  
 1 northeast corner One Hundred and Fifty-eighth street and Elton avenue.  
 1 northwest corner One Hundred and Fifty-eighth street and Elton avenue.  
 1 northeast corner One Hundred and Fifty-eighth street and Melrose avenue.  
 1 northeast corner of One Hundred and Fifty-eighth street and Courtland avenue.

"A."—Single Nozzle  $3\frac{1}{2}$ -inch Barrel Hydrants.

- 1 on west side of Forsyth street, 100 feet south of Canal street.  
 1 on west side of Forsyth street, 100 feet south of Hester street.  
 1 on west side of Forsyth street, 100 feet south of Grand street.  
 1 on west side of Forsyth street, 100 feet south of Broome street.  
 1 on west side of Forsyth street, 100 feet south of Delancey street.  
 1 on west side of Forsyth street, 100 feet south of Rivington street.  
 1 on east side of Forsyth street 100 feet north of Stanton street.  
 1 on east side of Eldridge street 100 feet north of Stanton street.  
 1 on east side of Eldridge street 100 feet south of Stanton street.  
 1 on east side of Eldridge street 100 feet south of Rivington street.  
 1 on east side of Eldridge street 100 feet north of Broome street.  
 1 on east side of Eldridge street, 100 feet south of Broome street.  
 1 on east side of Eldridge street, 100 feet south of Grand street.  
 1 on east side of Eldridge street, 100 feet south of Hester street.  
 1 on west side of Allen street, corner Canal street.  
 1 on west side of Allen street, between Canal and Hester streets.  
 1 on southeast corner of Canal and Orchard streets.  
 1 on southwest corner of Canal and Orchard streets.  
 1 on northeast corner of Hester and Orchard streets.  
 1 on northwest corner of Hester and Orchard streets.  
 1 on northeast corner of Broome and Orchard streets.  
 1 on northeast corner of Ludlow and Canal streets.  
 1 on east side of Ludlow street, between Hester and Canal streets.  
 1 on east side of Ludlow street, between Hester and Grand streets.  
 1 on east side of Ludlow street, between Grand and Broome streets.  
 1 on east side of Ludlow street, between Delancey and Rivington streets.  
 1 on east side of Ludlow street, between Rivington and Stanton streets.  
 1 on east side of Ludlow street, between Stanton and Houston streets.  
 1 on southeast corner of Pitt and Broome streets.  
 1 on east side of Pitt street, between Broome and Delancey streets.  
 1 on east side of Pitt street, between Delancey and Rivington streets.  
 1 on east side of Pitt street, between Rivington and Stanton streets.  
 1 on west side of Pitt street, between Stanton and Houston streets.  
 1 on east side of Columbia street, between Grand and Broome streets.  
 1 on east side of Columbia street, between Broome and Delancey streets.  
 1 on east side of Columbia street, between Delancey and Rivington streets.  
 1 on east side of Columbia street, between Rivington and Stanton streets.  
 1 on east side of Cannon street, between Grand and Broome streets.  
 1 on west side of Cannon street, between Broome and Delancey streets.  
 1 on west side of Cannon street, between Delancey and Rivington streets.  
 1 on east side of Cannon street, between Stanton and Houston streets.  
 1 on east side of Lewis street, between Grand and Broome streets.  
 1 on east side of Lewis street, between Broome and Delancey streets.  
 1 on east side of Lewis street, between Delancey and Rivington streets.  
 1 on west side of Lewis street, between Stanton and Houston streets.  
 1 on west side of Goerck street, between Broome and Delancey streets.  
 1 on west side of Goerck street, between Delancey and Rivington streets.  
 1 on east side of Mangin street, between Grand and Broome streets.  
 1 on west side of Mangin street, between Delancey and Rivington streets.  
 1 on west side of Mangin street, between Rivington and Stanton streets.  
 1 on northeast corner of Cherry and Corlears streets.  
 1 on southeast corner of Cherry and Corlears streets.  
 1 on south side of Dey street, between Greenwich and New Church streets.  
 1 on south side of Corlandt street, between Greenwich and New Church streets.  
 1 on east side of Water street, between Pike and Rutgers streets.  
 1 on east side of Water street, between Pike and Rutgers street.  
 1 on east side of Monroe street, between Rutgers and Jefferson streets.  
 1 on east side of Henry street, between Jefferson and Clinton streets.  
 1 on west side of Monroe street, between Jefferson and Clinton streets.  
 1 on southwest corner of Jefferson and Monroe streets.  
 1 on northeast corner of Montgomery and South streets.  
 1 on southwest corner of Montgomery and Water streets.  
 1 on northeast corner of Montgomery and Monroe streets.  
 1 on east side of Front street, between Montgomery and Gouverneur streets.  
 1 on east side of Water street, between Montgomery and Gouverneur streets.  
 1 on west side of Monroe street, between Montgomery and Gouverneur streets.  
 1 on southeast corner of Jackson and Monroe streets.  
 1 on south side of Twelfth street, between Second and Third avenues.  
 1 on east side of Mulberry street, between Bayard and Canal streets.  
 1 on east side of Mulberry street, between Grand and Hester streets.  
 1 on west side of Mulberry street, between Houston and Bleecker streets.  
 1 on east side of Mulberry street, between Broome and Spring streets.  
 1 on west side of Thompson street, between Grand and Canal streets.  
 1 on west side of Thompson street, between Grand and Broome streets.  
 1 on east side of Thompson street, between Broome and Spring streets.  
 1 on east side of Thompson street, between Spring and Prince streets.

- 1 on east side of Thompson street, between Prince and Houston streets.  
 1 on east side of Thompson street, between West Houston and Bleecker streets.  
 1 on east side of McDougal street, between West Houston and Bleecker streets.  
 1 on east side of McDougal street, opposite Minetta Lane.  
 1 on southeast corner of Minetta street and Minetta lane.  
 1 on northwest corner of Sixth avenue and Minetta lane.  
 1 on south side of Fourth street, between McDougal and Thompson streets.  
 1 on north side of Clarkson street, between Hudson and Varick streets.  
 1 on south side of Downing street, between Bedford and Varick streets.  
 1 on southwest corner of Downing and Bedford streets.  
 1 on south side of Downing street, between Bedford and Bleecker streets.  
 1 on east side of Cottage place, corner of Bleecker street.  
 1 on west side of Cottage place, corner of West Houston street.  
 1 on south side of King street, between Hudson and Varick streets.  
 1 on south side of King street, corner of Congress street.  
 1 on southeast corner of King and Varick streets.  
 1 on north side of Charlton street, between Hudson and Varick streets.  
 1 on south side of Charlton street, between McDougal and Varick streets.  
 1 on north side of Charlton street, corner of Varick street.  
 1 on south side of Vandam street, between Hudson and Varick streets.  
 1 on south side of Vandam street, corner of Varick street.  
 1 on south side of Vandam street, between McDougal and Varick streets.  
 1 on south side of Spring street, between Hudson and Varick streets.  
 1 on north side of Dominick street, between Hudson and Varick streets.  
 1 on south side of Dominick street, between Clark and Varick streets.  
 1 on south side of Broome street, between Hudson and Varick streets.  
 1 on south side of Broome street, between Clark and Varick streets.  
 1 on south side of Watt street, between Sullivan and Varick streets.  
 1 on north side of Morton street, between Hudson and Bedford streets.  
 1 on north side of Morton street, between Bedford and Bleecker streets.  
 1 on south side of Leroy street, between Bedford and Bleecker streets.  
 1 on south side of Commerce street, between Bedford and Bleecker streets.  
 1 on south side of Barrow street, between Bedford and Bleecker streets.  
 1 on south side of Barrow street, between Bleecker and Fourth streets.  
 1 on north side of Grove street, between Bleecker and Bedford streets.  
 1 on north side of Grove street, between Bleecker and Fourth streets.  
 1 on south side of Cornelia street, between Bleecker and Fourth streets.  
 1 on south side of Jones street, between Bleecker and Fourth streets.  
 1 on south side of Charles street, between Bleecker and Fourth streets.  
 1 on south side of Charles street, between Fourth street and Waverley place.  
 1 on south side of Charles street, between Greenwich avenue and Waverley place.  
 1 on south side of Perry street, between Greenwich avenue and Waverley place.  
 1 on south side of Perry street, between Fourth street and Waverley place.  
 1 on south side of Perry street, between Fourth and Bleecker streets.  
 1 on south side of Bank street, between Fourth and Bleecker streets.  
 1 on north side of Bank street, between Fourth street and Waverley place.  
 1 on south side of West Twelfth street, between Fourth street and Greenwich avenue.  
 1 on southeast corner of West Thirteenth street and Ninth avenue.  
 1 on south side of West Thirteenth street, between Ninth and Tenth avenues.  
 1 on southwest corner of Little West Twelfth street and Ninth avenue.  
 1 on west side of Bridge street, between Whitehall and Broad streets.  
 1 on west side of Bridge street, between Whitehall and State streets.  
 1 on southeast corner of One Hundred and Twenty-fourth street and Eighth avenue.  
 1 on west side of Tompkins street, between Delancey and Rivington streets.  
 1 on northwest corner of Manhattan street and Eleventh avenue.

"B."—Double Nozzle, 5-inch Barrel Hydrants.

- 1 on northeast corner of Clinton and Water streets.  
 1 on northeast corner of Cherry and Montgomery streets.  
 1 on south side of Cherry street, between Montgomery and Gouverneur streets.  
 1 on southeast corner of Cherry and Jackson streets.  
 1 on northeast corner of Jackson and Front streets.  
 1 on northeast corner of Jackson and Water streets.  
 1 on southeast corner of Willet and Broome streets.  
 1 on east side of Willet street, between Broome and Delancey streets.  
 1 on east side of Willet street, between Delancey and Rivington streets.  
 1 on east side of Willet street, between Rivington and Stanton streets.  
 1 on east side of Willet street, between Stanton and Houston streets.  
 1 on north side East Broadway, between Jefferson and Rutgers streets.  
 1 on State street, between Battery place and Bridge street.  
 1 on State street, between Bridge and Pearl streets.  
 1 on State street, between Pearl and Whitehall streets.  
 1 on State street, between Pearl and Whitehall streets.  
 1 on east side of Baxter street, north of Canal street.  
 1 on west side of Baxter street, south of Hester street.  
 1 on east side of Baxter street, north of Hester street.  
 1 on west side of Baxter street, south of Grand street.  
 1 on east side of Centre street, north of Hester street.  
 1 on west side of Centre street, south of Grand street.  
 1 on east side of Greene street, between Bleecker and West Third streets.  
 1 on west side of Sullivan street, between Canal and Grand streets.  
 1 on west side of Sullivan street, between Grand and Broome streets.  
 1 on east side of Sullivan street, between Grand and Broome streets.  
 1 on east side of Sullivan street, between Broome and Spring streets.  
 1 on southeast corner of Sullivan and Prince streets.  
 1 on west side of Sullivan street, between Prince and West Houston streets.  
 1 on east side of Sullivan street, between Bleecker and West Third streets.  
 1 on southwest corner of Sullivan street and West Third street.  
 1 on Carmine street, corner of Bedford street.  
 1 on Carmine street, corner of Varick street.  
 1 on Carmine street, corner of Bedford street.  
 1 on Carmine street, corner of Bleecker street.  
 1 on Bedford street, corner of Downing street.  
 1 on Bedford street, corner of West Houston street.  
 1 on west side of Hudson street, opposite Broome street.  
 1 on west side of Hudson street, opposite Dominick street.  
 1 on northeast corner of Christopher street and Bleecker street.  
 1 on northwest corner of Christopher street and West Fourth street.  
 1 on Christopher street, corner of Gay street.  
 1 on south side of West Eleventh street, between Fourth and Bleecker streets.  
 1 on south side of West Eleventh street, between Fourth and Waverley place.  
 1 on south side of Gansevoort street, between Greenwich and Hudson streets.  
 1 on northeast corner of Gansevoort and Hudson streets.  
 1 on southwest corner of Gansevoort and Fourth streets.  
 1 on Battery place, between West and Washington streets.  
 1 on northwest corner of Battery place and Broadway.  
 1 on north side of Pearl street, opposite Moore street.  
 1 on northwest corner of Pearl street and Broad street.  
 1 on east side of South Fifth avenue, 100 feet north of Canal street.  
 1 on west side of South Fifth avenue, 100 feet south of Grand street.  
 1 on east side of South Fifth avenue, 100 feet north of Grand street.  
 1 on west side of South Fifth avenue, 100 feet south of Broome street.  
 1 on west side of South Fifth avenue, 100 feet north of Broome street.  
 1 on east side South Fifth avenue, 100 feet south of Spring street.  
 1 on east side South Fifth avenue, 100 feet north of Spring street.  
 1 on east side South Fifth avenue, 100 feet south of Prince street.  
 1 on west side South Fifth avenue, 100 feet north of Prince street.  
 1 on west side South Fifth avenue, 100 feet south of Houston street.  
 1 on east side South Fifth avenue, 100 feet north of Houston street.  
 1 on east side South Fifth avenue, 100 feet south of Bleecker street.  
 1 on west side South Fifth avenue, 100 feet north of Bleecker street.  
 1 on east side South Fifth avenue, 100 feet south of Amity street.  
 1 on southeast corner of Seventh street and Avenue A.  
 1 on southeast corner of Twenty-eighth street and Fifth avenue.  
 1 on northwest corner Broadway and Twenty-third street.  
 1 on west side of Broadway, between Twenty-second and Twenty-third streets.  
 1 on northeast corner Broadway and Twenty-second street.  
 1 on east side of Broadway, between Twenty-first and Twenty-second streets.  
 1 on west side of Broadway, between Twenty-first and Twenty-second streets.  
 1 on west side of Broadway, between Twentieth and Twenty-first streets.  
 1 on northwest corner Broadway and Twentieth street.



- 1 on southeast corner Broadway and Twentieth street.  
1 on northwest corner Broadway and Nineteenth street.  
1 on southeast corner Broadway and Nineteenth street.  
1 on northeast corner Broadway and Eighteenth street.  
1 on southwest corner Eighteenth street and Broadway.  
1 on southeast corner Broadway and Eighteenth street.  
1 on northwest corner Broadway and Seventeenth street.  
1 on west side of Broadway, between Sixteenth and Seventeenth streets.  
1 on east side of Broadway, opposite Sixteenth street.  
1 on west side of Broadway, between Fifteenth and Sixteenth streets.  
1 on northwest corner of Broadway and Fifteenth street.  
1 on east side of Broadway, opposite Fifteenth street.  
1 on northwest corner Broadway and Fourteenth street.  
1 on east side of Broadway, between Thirteenth and Fourteenth streets.  
1 on northwest corner Broadway and Thirteenth street.  
1 on southeast corner Broadway and Thirteenth street.  
1 on northeast corner Broadway and Twelfth street.  
1 on southwest corner Broadway and Twelfth street.  
1 on east side of Broadway, between Eleventh and Twelfth streets.  
1 on east side of Broadway, opposite Eleventh street.  
1 on southwest corner of Broadway and Eleventh street.  
1 on south side of Fourteenth street, between Broadway and Fourth avenue.  
1 on northeast corner of Fourteenth street and Fourth avenue.  
1 on northwest corner of Fourteenth street and Irving Place.  
1 on south side of Fourteenth street, opposite Irving Place.  
1 on south side of Fourteenth street, near Third avenue.  
1 on southwest corner of Fourteenth street and Third avenue.  
1 on southwest corner of Pike and Division streets.  
1 on south side of Division street, between Orchard and Ludlow streets.  
1 on east side of Orchard street, between Division and Canal streets.  
1 on east side of Orchard street, between Canal and Hester streets.  
1 on east side of Orchard street, between Canal and Hester streets.  
1 on west side of Orchard street, between Hester and Grand streets.  
1 on east side of Orchard street, between Hester and Grand streets.  
1 on northwest corner of Grand and Orchard streets.  
1 on east side of Orchard street, between Grand and Broome streets.  
1 on west side of Orchard street, between Grand and Broome streets.  
1 on east side of Essex street, between Houston and Stanton streets.  
1 on east side of Essex street, between Houston and Stanton streets.  
1 on east side of Essex street, between Stanton and Rivington streets.  
1 on east side of Essex street, between Stanton and Rivington streets.  
1 on east side of Essex street, between Rivington and Delancey streets.  
1 on west side of Essex street, between Rivington and Delancey streets.  
1 on east side of Essex street, between Delancey and Broome streets.  
1 on west side of Essex street, between Delancey and Broome streets.  
1 on east side of Essex street, between Broome and Grand streets.  
1 on east side of Essex street, between Grand and Hester streets.  
1 on west side of Essex street, between Grand and Hester streets.  
1 on east side of Essex street, between Hester and Canal streets.  
1 on northeast corner of Essex and Canal streets.  
1 on southwest corner of Chambers and Chatham streets.  
1 on northeast corner of Chambers street and City Hall place.  
1 on north side of Chambers street, between Church street and West Broadway.  
1 on southeast corner of Chambers street and College place.  
1 on south side of Chambers street, between College place and Hudson street.  
1 on south side of Chambers street, between College place and Hudson street.  
1 on north side of West Tenth street, between Hudson and Bleeker streets.  
1 on north side of West Tenth street, between Bleeker and Fourth streets.  
1 on north side of West Tenth street, between Fourth street and Waverley place.  
1 on east side of Hudson street, between Thirteenth and Fourteenth streets.  
1 on southwest corner of Ninety-eighth street and Eighth avenue.  
1 on north side of Ninety-eighth street, between Ninth and Tenth avenues.

*Victor Hydrants, No 2, Set in 1879.*

- 1 on east side of Allen street, between Hester and Grand streets.  
1 on west side of Allen street, between Hester and Grand streets.  
1 on east side of Allen street, between Grand and Broome streets.  
1 on east side of Allen street, between Broome and Delancey streets.  
1 on east side of Allen street, between Delancey and Rivington streets.  
1 on east side of Allen street, between Rivington and Stanton streets.  
1 on east side of Allen street, between Stanton and Houston streets.  
1 on east side of Norfolk street, between Hester and Grand streets.  
1 on west side of Norfolk street, between Grand and Broome streets.  
1 on east side of Norfolk street, between Broome and Delancey streets.  
1 on east side of Norfolk street, between Delancey and Rivington streets.  
1 on east side of Norfolk street, between Rivington and Stanton streets.  
1 on east side of Suffolk street, between Hester and Grand streets.  
1 on east side of Suffolk street, between Grand and Broome streets.  
1 on east side of Suffolk street, between Broome and Delancey streets.  
1 on east side of Suffolk street, between Delancey and Rivington streets.  
1 on east side of Suffolk street, between Rivington and Stanton streets.  
1 on east side of Suffolk street, between Stanton and Houston streets.  
1 on east side of Clinton street, between Broome and Delancey streets.  
1 on east side of Clinton street, between Delancey and Rivington streets.  
1 on east side of Clinton street, between Rivington and Stanton streets.  
1 on east side of Clinton street, between Stanton and Houston streets.  
1 on east side of Attorney street, between Grand and Division streets.  
1 on southeast corner of Attorney and Broome streets.  
1 on east side of Attorney street, between Broome and Delancey streets.  
1 on west side of Attorney street, between Delancey and Rivington streets.  
1 on east side of Attorney street, between Rivington and Stanton streets.  
1 on east side of Attorney street, between Stanton and Houston streets.  
1 on southeast corner of Ridge and Broome streets.  
1 on east side of Ridge street, between Broome and Delancey streets.  
1 on west side of Ridge street, between Delancey and Rivington streets.  
1 on east side of Ridge street, between Stanton and Houston streets.  
1 on northwest corner of Sheriff and Broome streets.  
1 on east side of Sheriff street, between Broome and Delancey streets.  
1 on east side of Sheriff street, between Delancey and Rivington streets.  
1 on east side of Sheriff street, between Rivington and Stanton streets.  
1 on east side of Sheriff street, between Stanton and Houston streets.

*No. 2 Hydrants.*

- 1 on southwest corner of South and Oliver streets.  
1 on South street, between Pike and Rutgers streets.

*No. 1 Hydrants.*

- 2 on bulkhead foot of East Seventeenth street.

## EXHIBIT "B."

Report of Examinations made by Inspectors relative to Leaky Fixtures and Waste of Water from October 1 to December 31, 1879.

DISTRICT.	Whole Number of Buildings Inspected.	Number in which Plumbing was Defective or Water Wasted.	FAUCETS.		WATER CLOSETS OR URINALS.		HYDRANTS IN YARDS.		PIPES BURST.	BALL-COCKS WANTED.
			Leak.	Waste.	Leak.	Waste.	Leak.	Waste.		
First .....	277	59	33	37	..	..	..	..	..	1
Fifth .....	623	50	36	13	..	6	1	..	..	..
Seventh .....	696	35	35	..	4	1	3	..	..	..
Tenth .....	537	210	96	..	..	20	94	..	..	..
Twelfth .....	107	14	..	..	..	..	..	..	1	..
Thirteenth .....	608	48	51	..	3	..	..	..	..	..
Sixteenth .....	897	231	177	3	83	5	20	12	3	..
Eighteenth .....	954	143	84	63	19	10	4	5	..	..
Twenty-first .....	669	177	311	1	28	12	7	1	..	..
Total .....	5,458	967	843	117	137	54	129	18	6	1

## Summary for the Year 1879.

	Whole Number of Buildings Inspected.	Number in which Plumbing was Defective or Water Wasted.	FAUCETS.		WATER CLOSETS OR URINALS.		HYDRANTS IN YARDS.		PIPES BURST.	BALL-COCKS WANTED.	WASTING WATER WITH HOSE.
			Leak.	Waste.	Leak.	Waste.	Leak.	Waste.			
March 31 .....	20,028	3,816	4,581	157	471	304	296	150	73	43	....
June 30 .....	17,622	3,550	3,518	199	462	300	219	53	37	43	1,228
September 30 .....	3,199	512	557	13	45	11	23	1	..	1	....
December 31 .....	5,458	967	843	117	137	54	129	18	6	1	....
Total .....	46,307	8,845	9,499	486	1,115	669	667	222	116	88	1,228

## METERS.

The placing of meters on hotels, breweries, slaughter-houses and other places has been continued as fast as the force employed could attend to same.  
Meters have been placed during the quarter as follows:

	%	3/4	1	1 1/2	2	3	4	TOTAL.
Hotels .....	5	22	73	22	17	4	1	144
Breweries .....	..	5	15	10	15	6	..	51
Malt-houses .....	..	..	2	2	3	2	..	9
Buttlers .....	..	19	21	..	..	..	..	40
Stables .....	..	1	3	..	..	1	1	6
Slaughter-houses .....	..	1	3	..	..	..	..	4
Miscellaneous .....	..	15	42	11	5	..	..	73
Total .....	6	73	221	92	65	15	4	476

## Water Meters in use December 31, 1879.

	%	3/4	1	1 1/2	2	3	4	TOTAL.
Hotels .....	7	40	121	56	40	14	4	282
Breweries and malt-houses .....	1	13	42	31	55	11	..	153
Stables .....	2	1	180	5	11	5	..	204
Slaughter-houses .....	2	17	52	15	5	..	..	91
Gas-light companies .....	..	..	10	2	3	11	..	33
Railroads .....	3	28	28	4	8	18	7	103
Docks .....	..	4	11	..	14	35	20	93
Miscellaneous .....	11	31	217	55	93	24	8	439
Total .....	26	134	661	168	229	118	62	1,398

On December 1 a general order was made to property-owners and plumbers to place meters on all places authorized by law.

The cold weather will, to a great extent, stop the placing of meters, on account of the great expense and trouble of digging up the streets, etc., when the ground is frozen.

## Average Number of Gallons of Water used per day through Meters.

NUMBER OF METERS.	WHERE USED.	GALLONS.
282	Hotels .....	1,361,933
153	Breweries and bottlers .....	1,579,395
42	Slaughter-houses .....	226,072
204	Stables .....	472,290
33	Gas companies .....	548,475
10	Sugar-houses .....	103,718
74	Stone yards, packing-houses, skin dressers, and soapmakers .....	205,478
103	Railroads .....	1,032,000
404	Miscellaneous .....	1,117,973
93	Docks .....	1,065,000
1,398	Total .....	7,712,334

## THE USE OF WATER.

The supply of water to the city by the Aqueduct having in 1874 reached the maximum quantity possible, the Reservoirs in Central Park have since been more or less full, according to the uses of water; and as the number of buildings, manufactories, and railroads have largely increased, the same amount of water has had to serve for all, at the expense and inconvenience of lower pressure throughout the city.

It has been known for several years that certain kinds of business, large institutions, hotels, etc., etc., were using large quantities of water and largely out of proportion to the rest of the city and in excess of any reasonable amount required. To convince others, as well as to furnish the facts in the several cases, this Department has had meters placed in a number of large establishments, and the amounts used by meter measurements has shown that large institutions, hotels, etc., where servants are numerous, use more than 100 gallons per day for each person in same, and in several cases more than 200 gallons per day for each person. The amounts per day used in the several kinds of business, in hotels, by railroads, etc., shown in the table of quantities now passing through meters, show the absolute necessity of placing meters on all places where water is used.

No other way has been found to effectually stop waste.

The charitable institutions which have now become very numerous in the city, complain of the increased amount which they will have to pay when the water is measured by meter. This shows that they use an excessive amount per capita, as the former estimates were based on 50 gallons per day for each inmate. The city had better give away 50 gallons per day, for each inmate than to have a much larger quantity wasted.

In all large cities every inducement is given to consumers of water to place meters and pay for the water used by measurement.

Chicago reduced the meter rate to 7 48-100 cents per 100 cubic feet.

Brooklyn last year reduced their meter rates 25 per cent.

In view of the fact that the water now furnished the city costs for interest on amount expended and for maintenance five cents per 100 cubic feet, I would recommend the reduction of meter rates so as to induce all consumers to use meters. The amount collected would be at least the same as was formerly estimated and the amount of water saved would go far towards supplying the increased demands for new buildings, etc., etc. The waste of water by parties letting it run to keep their pipes from freezing commenced on the 26th of December, with the cold weather, and still continues to a greater or less extent, the largest amount being about 7,000,000 gallons per day. An examination of all the buildings in the city with regard to the position of their service pipes and their danger from frost has been commenced, and will be fully carried out, and notice given to protect or shut off their pipes where so exposed.

Respectfully yours,

G. W. BIRDSALL,  
Chief Engineer of the Croton Aqueduct.



## Document "F."

DEPARTMENT OF PUBLIC WORKS,  
WATER PURVEYOR'S OFFICE, No. 4 CITY HALL,  
NEW YORK, January 5, 1880.

Hon. ALLAN CAMPBELL, Commissioner of Public Works:

SIR—The following is the report of the transactions of this Bureau for the three months ending December 31, 1879, and a brief statement for the year 1879:

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

This work has received careful attention under the usual force of three companies, and the Croton pipes, stop-cocks, and fire hydrants throughout the city have been kept in good order during the quarter. No serious break in the line of pipes has occurred.

## PLACING LARGE HYDRANTS AND REPAVING OVER CROTON MAINS.

A small force has been employed in placing large hydrants where required by the Fire Department, principally in the business portion of the city, and in repaving over Croton water mains.

## REPAVING STREETS AND AVENUES UNDER CHAPTER 476, LAWS OF 1875.

Under this head the work of repaving has progressed speedily, and much good work has been done in the substitution of stone block pavement of granite, or trap-rocks, for the old cobble, concrete, and wooden pavement. A portion of the balance of the appropriation has been expended in relaying the pavement in Third avenue, between One Hundred and Thirty-fifth and One Hundred and Forty-second streets, where the grade of the avenue had been raised by the Department of Parks.

## REPAIRS TO STREET PAVEMENTS.

During the past quarter I have been unable to do much work under this head, owing to the condition of the appropriation, which was largely expended in the early part of the season. All dangerous places and such others as it was possible to repair have received prompt attention, and the pavements throughout the city are generally in good order.

## BOULEVARDS, ROADS, AND AVENUES—MAINTENANCE OF.

For a report of the business of this part of my Bureau I respectfully refer you to the statement of Mr. J. K. Choate, Engineer in Charge, hereto appended.

Number of men employed under charge of Bureau of Water Purveyor, during the months of October, November, and December, 1879, paid from different appropriations, with amounts of pay-rolls:

MONTHS.	REPAIRING AND RENEWAL OF PIPES, STOP-COCKS, ETC.		CROTON WATER MAIN FUND, No. 2.		CROTON WATER MAIN FUND, No. 1.		REPAIRS AND RENEWAL OF PAVEMENTS.	
	No. Men.		No. Men.		No. of Men.		No. Men.	
October .....	57	\$3,611 87	229	\$8,276 84	145	\$4,597 54	151	\$3,058 18
November .....	59	3,481 96	...	...	145	5,906 99	100	2,662 21
December .....	61	3,920 00	...	...	142	...	19	800 60
Totals .....	177	\$11,013 83	229	\$8,276 84	287	\$10,504 53	270	\$6,520 99

## Recapitulation.

Amounts of pay-rolls for October, November, and December, 1879:

Repairing and renewal of pipes, stop-cocks, etc. ....	\$11,013 83
Croton Water-main Fund, No. 2 .....	8,276 84
Croton Water-main Fund, No. 1 .....	10,504 53
Repairs and renewal of pavements .....	6,520 99
	\$36,316 19

## Statement of Contracts for Paving done in 1879.

LOCATION OF WORK.	NAME OF CONTRACTOR.	KIND OF PAVEMENT.	NUMBER OF SQUARE YARDS PAVEMENT.	NUMBER OF SQUARE FEET BRIDGE STONE.	TOTAL COST OF CONTRACTS.	REMARKS.
Fifty-third street, between Broadway and Seventh avenue.	Thomas Gearty.....	Trap-block.....	766	.....	\$861 32	
Eighty-first street, between Fourth and Fifth avenues.	Denis McGrath.....	Trap-block.....	2,866	112	3,309 58	
Seventy-fourth street, from Avenue A to the East river.	Denis Eagan.....	Trap-block.....	2,528	281	3,162 81	
Vesey street, from Broadway to West street.	John F. Broderick.....	Granite-block.....	4,900.3	1,579.6	11,119 03	
Water street, between Corlears and East streets.	James Pollock.....	Granite-block.....	609.3	132	2,028 91	
Intersection of Fourth avenue with Eighty-third, Eighty-fourth, Eighty-fifth, and Eighty-sixth streets.	Denis McGrath.....	Trap-block.....	2,291	1,154	3,548 23	
One Hundred and Fourth street, between Second and Third avenues.	Denis McGrath.....	Trap-block.....	2,092.5	168.3	2,769 64	
Twenty-first street, from Seventh to Eighth avenue; Twenty-sixth street, from Seventh to Eighth avenue; Thirty-seventh street, from Sixth to Seventh avenue; Forty-fifth street, from Lexington to Fourth avenue; and Forty-fifth street, from Madison to Fifth avenue.	Owen Fitzpatrick.....	Trap-block.....	10,159.1	112	16,366 56	
Seventh avenue, from Forty-seventh to Fifty-ninth street, except the horse-path of Seventh Avenue Railroad Co.	Leonard W. Johnson.....	Granite-block.....	17,178.47	222.6	32,212 77	
New street, from Beaver to Wall street; Church street, from Vesey to Chambers street; Exchange place, from Broadway to William street; Front street, from Fulton street to Maiden lane; White street, from Broadway to West Broadway; and Centre street, from Chambers to Canal street except where paved with Belgian pavement.	Thomas Gearty.....	Granite-block.....	18,057.68	2,522.6	38,134 93	
Water street, from Fulton to Market street, and Madison street, from Market to Clinton street.	John M. Shannon.....	Trap-block.....	13,684.15	3,278	23,450 91	
Intersection of Sixty-eighth street with Fourth avenue.	John D. Crammins.....	Granite-block.....	473	170	878 75	
Mercer street, from Bleecker to Eighth street; Clarkson street, from Varick street to North river; Fifteenth street, from Sixth to Seventh avenue; and University place, from Eighth to Fourteenth street, except where paved with Belgian pavement.	Thomas Gearty.....	Granite-block.....	15,827.7	1,420	29,122 96	
Fifty-eighth street, between Ninth and Tenth avenues.	John Slattery.....	Trap-block.....	2,728	.....	4,364 80	
Forty-fourth street, between Second and Third avenues.	John Slattery.....	Trap-block.....	2,102.17	142.7	4,268 55	
Fifty-sixth street, from Fifth to Sixth avenue; Fifty-sixth street, from Seventh to Ninth avenue; and Fifty-eighth street, from Sixth to Ninth avenue.	Joseph F. Hayden.....	Trap-block.....	2,740	.....	4,658 00	Contract not completed.
Great Jones street, from Bowers to Broadway; Ninth street, from Second to Third avenue; Seventeenth street, from Broadway to Fifth avenue; Nineteenth street, from Third to Fourth avenue; and Nineteenth street, from Fifth to Sixth avenue.	Thomas Gearty.....	Granite-block.....	14,726.1	.....	27,832 32	
Lexington avenue, from Seventy-ninth to Eighty-fifth street.	John Slattery.....	Trap-block.....	5,000	.....	10,500 00	Contract not completed.
Ninth avenue, from the westerly line of the Boulevard to the southerly line of Seventy-seventh street.	Assawasse Granite Co.....	Granite-block.....	1,600	.....	2,800 00	Contract not completed.
Tenth avenue, from Thirty-first to Forty-second street.	Denis McGrath.....	Trap-block.....	5,000	2,300	7,906 50	Contract not completed.
Fifth avenue, from Seventy-second to Ninetieth street.	William Everard.....	Macadam.....	4,920	.....	6,986 40	Contract not completed.

## Statement of Contracts for Crosswalks Laid in 1879.

Lexington avenue, at the northerly and southerly intersection of One Hundred and Twenty-fifth street.....	Montgomery A. Kellogg.....	.....	294	\$99 96	
Total number of square yards of granite block pavement laid during the year 1879 was.....					73,371.95
Total number of square yards of trap-block pavement laid during the year 1879 was.....					51,896.92
Total number of square yards of Macadam pavement laid during the year 1879 was.....					4,920
					130,188.87
Total number of square feet of bridge stone laid in contracts for paving during the year 1879 was.....					13,194.8
Total number of square feet of bridge stone laid in contracts for crosswalks during the year 1879 was.....					294
					13,488 8

BUREAU OF WATER PURVEYOR,  
NEW YORK, January, 1880.

DANIEL O'REILLY, Esq., Water Purveyor:

SIR—Agreeably to your instructions, I respectfully submit the following report of the work done during the past three months; also, a resumé of what has been done during the past year within the jurisdiction of the Water Purveyor under the immediate care of the Engineer-in-Charge of Roads and Avenues.

The appropriation for the maintenance during 1879 of all macadamized and gravel boulevards, streets, and avenues, was—

For labor, materials, etc. ....	\$31,000 00
By transfer.....	1,200 00
	\$32,200 00
For supervision (salaries).....	\$4,000 00
Transferred.....	600 00
	3,400 00
Total appropriation.....	\$35,600 00
Amount expended to April 1st, 1879.....	\$5,699 17
Amount expended from March 31st to July 1st.....	12,735 87

## VAULT PERMITS.

The number of vault permits issued during the quarter was thirty (30). Amount received for same during same period was eight thousand six hundred and twenty-one dollars and ninety-eight cents (\$8,621.98).

## BRIEF STATEMENT OF THE BUSINESS OF THE BUREAU OF WATER PURVEYOR FOR THE YEAR 1879.

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

The Croton pipes, stop-cocks, and fire-hydrants throughout the city have been kept during the year in good order under the three foremen and their companies of men.

The many complaints from the police and from citizens have received, in all cases, immediate attention, and no serious damage or interference with business or traffic has occurred.

## REPAIRS TO STREET PAVEMENTS.

This work was begun in the latter part of April, with a larger force than usual, and was thus continued for five months, when the condition of the appropriation made necessary a reduction in the number of men employed. A great deal of the money of the appropriation has been expended in the purchase of stone blocks for repairs, the old paving stones on the streets to be repaved were not available until about September 1, owing to the delay of the Board of Aldermen in passing the resolution for repaving, under chapter 476, Laws of 1875. Much good work has been done by dividing many of the regular companies into small parties, and employing them in repairing holes and the smaller irregularities and depressions in the pavement. All dangerous places throughout the city have received the prompt attention of these small parties, and thus the possibilities of accidents resulting from such places precluded. The old paving-stones from the streets repaved, referred to above, have been piled at such places as to give the least inconvenience to the public. They can be used during the coming season for repairs.

## REPAVING STREETS AND AVENUES UNDER CHAPTER 476, LAWS OF 1875.

The resolution of the Board of Aldermen did not pass until the 12th of July, when the contracts were advertised and let. Ten contracts were made, nine for stone-block, and one for macadam pavement, of which six have been completed, and about one-half the work of the others has been done. In consequence of the cold weather the work on these was suspended until spring, when it will be resumed and hastened to completion. The two contracts which were uncompleted in 1878 have both been finished during the past season. Much excellent pavement has been laid during the year, and in streets where the business portion of the community will be greatly benefited.

## WELLS AND PUMPS.

The wells and pumps, when reported out of order, have been examined and promptly repaired. They have been kept in good order during the year and at an expenditure of a less amount than heretofore. Some of the wells, where not needed, have been filled in and the pumps removed.

## PUBLIC DRINKING HYDRANTS.

The public drinking-hydrants have been kept in as good repair during the year as the limited appropriation would allow. It has been necessary to purchase four new hydrants for man and beast, two of which were to replace those broken down by trucks, and also several small hydrants to supply water to families living in neighborhoods where the houses have not the Croton water introduced.

## VAULT PERMITS.

During the year the total number of vault permits issued was one hundred and twenty-two (122). Received for vault permits during same period thirty-two thousand four hundred and ninety-nine dollars and seventy-seven cents (\$32,499.77).

Respectfully submitted,

DANIEL O'REILLY, Water Purveyor.

Amount expended from June 30th to October 1st.....\$11,415 90  
Amount expended from September 30th to January 1st, 1880..... 4,969 41  
Estimated outstanding liabilities..... 721 88

\$35,542 23

Estimated balance..... \$57 77

Balance on labor, etc., \$0.17.

Balance on salaries, etc., \$57.60.

Expenses during the past three months are specified as follows:

Sprinkling.....	\$739 67
Cleaning roads and gutters.....	1,220 97
Spreading material for road surfacing.....	49 19
Repairing roads.....	905 88
Cleaning basins.....	103 25
Repairing monitors.....	312 75
Maintaining trees.....	127 88
Material.....	161 47
General expenses, including supervision, foreman's time, watchman, repairing tools, etc..	1,348 35
Total .....	\$4,969 41



The labor was thus distributed with reference to the various boulevards:

Avenue St. Nicholas, One Hundred and Tenth to One Hundred and Twenty-fifth street.	\$161 51
Avenue St. Nicholas, One Hundred and Twenty-fifth to One Hundred and Fifty-fifth street.	525 69
Boulevard, south of Manhattan street.	554 76
Boulevard, north of Manhattan street.	245 27
Sixth avenue, One Hundred and Tenth street, north.	191 73
Seventh avenue, One Hundred and Tenth street, north.	480 46
Fifth avenue, Fifty-ninth to Seventy-second street.	863 31
Fifth avenue, One Hundred and Twenty-fourth to One Hundred and Thirtieth street.	15 15
Other avenues and streets.	729 46
Total.	\$3,767 34

For the entire year the various items of expenditure were as follows:

Sprinkling.	\$7,915 33
Cleaning roads and gutters.	8,042 68
Spreading material for road surfacing.	710 63
Repairing roads.	2,204 74
Cleaning basins.	1,527 49
Repairing monitors.	2,087 76
Maintaining trees.	960 38
Removing snow.	186 63
Material.	4,622 58
General expenses, including supervision, foreman's time, watchman, repairing tools, etc., and other necessary expenses.	6,562 13
Total.	\$34,820 35

The labor for the year was apportioned with reference to various boulevards as follows:

Avenue St. Nicholas, One Hundred and Tenth to One Hundred and Twenty-fifth street.	\$1,543 07
Avenue St. Nicholas, One Hundred and Twenty-fifth to One Hundred and Fifty-fifth street.	2,575 55
Boulevard, south of Manhattan street.	3,793 27
Boulevard, north of Manhattan street.	1,066 33
Sixth avenue, One Hundred and Tenth street, north.	1,858 65
Seventh avenue, One Hundred and Tenth street, north.	3,148 75
Fifth avenue, Fifty-ninth to Seventy-second street.	2,026 28
Fifth avenue, One Hundred and Twenty-fourth to One Hundred and Thirtieth street.	551 57
Other streets and avenues.	6,533 38
Total.	\$23,096 85

Amount expended in repairing Fifth avenue (Sixty-fifth to Seventy-second street), from Appropriation for Repairing, including furnishing of materials, supervision, and inspection, during the year 1879, \$19,725.47.

Fifth avenue, from Fifty-ninth to Seventy-second street, was opened to the public about April 10, 1879, 15,600 square yards of pavement and 585 square feet of bridge stone having been laid.

As soon as this section of Fifth avenue was opened it was subjected to a much more severe trial than had been expected (probably on account of heavy trucks and wagons being forced off Third avenue on account of the construction of elevated road), and the fine top-dressing did not stand such a test as was hoped. This, however, is being corrected as fast as possible by removing the fine stone as it wears out and replacing it with a coarser size, which, I believe, with proper care, will always present a good smooth surface.

It is evidently appreciated, as a great many of the light carriages which formerly entered the Central Park at Fifty-ninth street now go up Fifth avenue to Seventy-second street and enter there.

The covering of Avenue St. Nicholas and Seventh avenue, from One Hundred and Tenth street north, with land and clay, giving them many of the properties of an earth road, has been a great success, and I would respectfully suggest that, as soon as the season opens, they be repaired (which can be done at a very small expense) in the same manner.

I would also suggest that the west drive of the Western Boulevard be treated in like manner.

As it seems necessary that at least one avenue should be kept in condition for heavy travel, I would recommend a light coat of Roa Hook gravel for Sixth avenue, which would bind and keep the stone from picking up, and insure a good roadway in wet weather.

The same treatment would apply equally well to Seventy-second, One Hundred and Tenth, One Hundred and Twenty-fourth, and One Hundred and Fifty-fifth streets.

It seems well that before the summer months come a number of new watering-trucks or monitors should be built, as the present number is inadequate to extent of roadway to be sprinkled.

The tree-planting is now nearly completed. They will require careful cultivating and pruning for some years to come, which, in competent hands, will result in fine trees and a great ornament to the various avenues and streets.

The present force consists of 2 foremen, 3 skilled laborers, 1 blacksmith, 1 carpenter, 1 watchman, 3 carts, 3 two-horse teams, 15 laborers.

The extent and description of the various roadways maintained during the year are exhibited in the following table:

STREETS AND AVENUES.	KIND OF ROADWAY.	Width of Roadway in Feet.	Area in Square Yards.	Length in Miles.
Boulevard, from Circle at Fifty-ninth street to One Hundred and Fifty-fifth street.	Telford-Macadam.	80 & 102	256,181	4.894
Sixth avenue, from One Hundred and Tenth street to Harlem river.	Telford-Macadam.	80	84,835	1.807
Seventh avenue, from One Hundred and Tenth street to Harlem river.	Telford-Macadam.	80	103,313	2.201
Avenue St. Nicholas, from One Hundred and Tenth to One Hundred and Forty-fifth street.	Gravel.	55	75,505	2.346
Tenth avenue, from One Hundred and Fifty-fifth to One Hundred and Ninety-fourth street.	Macadam 50 and earth 20.	70	79,283	1.930
One Hundred and Fifty-fifth street, from Ninth avenue to Hudson river.	Telford-Macadam and gray-wacke.	60	17,506	0.485
Manhattan street, from Avenue St. Nicholas to One Hundred and Twenty-fifth street.	Telford-Macadam.	70	6,709	0.130
Avenue A, from Fifty-seventh to Eighty-sixth street.	Telford-Macadam.	60	52,528	1.458
Avenue A, from One Hundred and Sixteenth to One Hundred and Twenty-fourth street.	Telford-Macadam.	60	8,791	0.248
Seventy-second street, from Avenue A to Fifth avenue.	Telford-Macadam.	40	18,836	0.779
Seventy-second street, from Eighth avenue to Riverside Drive.	Telford-Macadam.	60	19,933	0.605
One Hundred and Tenth street, from First avenue to Riverside Drive.	Telford-Macadam.	30 & 40	54,794	1.734
One Hundred and Sixteenth street, from Avenue A to Seventy-second street.	Telford-Macadam.	40 & 60	32,382	1.115
One Hundred and Twenty-fourth street, from Avenue A to Seventy-second street.	Telford-Macadam.	30	14,961	0.840
One Hundred and Forty-fifth street, from Sixth avenue to the Boulevard.	Telford-Macadam.	60	27,923	0.809
One Hundred and Twenty-second street, from Tenth avenue to Riverside Drive.	Telford-Macadam.	42	6,255	0.275
One Hundred and Twenty-third street, from Avenue west of Mount Morris square to Eighth avenue.	Telford-Macadam.	30	6,903	0.431
Ninth avenue, from One Hundred and Twenty-third to One Hundred and Twenty-sixth street.	Telford-Macadam.	60	4,441	0.113
One Hundred and Fifty-second street, from Avenue St. Nicholas to Boulevard.	Macadam.	30	5,018	0.269
First avenue, from Ninety-second to One Hundred and Sixteenth street.	Telford-Macadam.	60	12,252	0.348
Avenue B, from Seventy-ninth to Eighty-sixth street.	Earth.	60	11,935	0.339
Fifth avenue, from One Hundred and Twenty-fourth to One Hundred and Thirtieth street.	Telford-Macadam.	40	6,996	0.293
Fifth avenue, from Fifty-ninth to Seventy-sixth street.	Telford-Macadam.	40	19,911	0.849
Total.			906,191	24.307

Respectfully submitted,

JOSEPH K. CHOATE, Assistant Engineer.

## Document "G."

DEPARTMENT OF PUBLIC WORKS,  
BUREAU OF STREET IMPROVEMENTS, ROOM 11, CITY HALL,  
New York, January 20, 1880.

Hon. ALLAN CAMPBELL, Commissioner of Public Works:

Sir—In submitting the annexed statements showing the operations of the Bureau of Street Improvements for the three months of October, November, and December, as well as for the year 1879. I would state that on January 1, 1879, there remained uncompleted twelve regulating and grading contracts. During the year thirty new ones were entered into, at an estimated cost of \$165,585.42. During the same period twenty-six contracts have been completed, at a cost of \$78,824.76, and the Assessment Lists for the same transmitted to the Chief Clerk's Office.

### CONTRACTS COMPLETED.

Twelfth avenue, from One Hundred and Thirtieth to One Hundred and Thirty-third street, a work which was very much desired by and which has improved the neighborhood, was finished in May last.

Forty-second street, from Second avenue to the East river, the regulating, grading, curb, gutter, and flagging has been completed, and besides other advantages has opened a valuable dock property at the foot of the street at the East river.

Ninety-third street, from Second avenue to the Harlem river, and Ninety-ninth street, from First to Third avenue, have been filled up to the grade; curb and gutter-stones set and flagging laid. These two streets cross part of what is known as the Harlem Flats, and the grading of the same has been of much advantage for public through travel in this section of the city, and tends to reduce the marsh land area of this neighborhood.

Ninety-ninth street, from First avenue to the Harlem river, has been graded by the property owners at their own expense, under a permit from this Department, so that this street is now opened from Third avenue to the Harlem river.

The block bounded by Gansevoort street, Little West Twelfth street, Washington street, West street, and Tenth avenue, known as "Gansevoort Market Property," set apart for the use of farmers' wagons, was regulated, graded, curbed, flagged, and paved at an expense of \$24,997.58, and is now used for the purposes for which it was designated.

### WORKS UNDER CONTRACT.

Madison avenue, from Ninety-ninth to One Hundred and Fifth street.—The grading of the Madison avenue has been well advanced during the year, the contractor having placed over 112,000 cubic yards of filling in the avenue. The embankment is a heavy one, at some points measuring 40 feet. The completion of this work, which will in all probability take place during May or June, will open Madison avenue for through travel up to the Harlem river.

One Hundred and Second street, from Fifth avenue to Harlem river.—This is another heavy work. The contractor has excavated about 8,000 cubic yards of rock, and placed besides about 85,000 cubic yards of filling in the street. The completion of this work may be looked for by May or June, and will also furnish increased wharf facilities for the neighborhood.

One Hundred and Third street, from First to Fifth avenue, and One Hundred and Sixth street, from Fourth to Madison avenue, are very near completion.

Seventy-third street, from Third avenue to East river.—Work on this street has lately been commenced and is progressing favorably.

Forty-second street retaining-walls, etc., between First and Second avenues.—The old contract with Jeremiah R. Byron having been declared abandoned, a new one was entered into on April 17, 1879, with Edward Freely, under which the work was progressed up to about July last, when, in consequence of some delay in payments, the contractor ceased active work for about six weeks. When recommenced, it was continued up to nearly the end of the year, and is now so far advanced as to promise its full completion in the early part of the coming season, at which time some arrangement will need to be made whereby the sidewalks on the upper roadway can be placed at an uniform width, in order that the several lines of curb may present a proper appearance, as well as afford reasonable accommodations for through travel.

Boulevard and Eleventh avenue, from One Hundred and Fifty-fifth street to Kingsbridge road.—This work is now in progress; the same is important in that, besides affording opportunities for improvement by lot owners, it will also present largely increased through travel facilities when completed in the early part of the coming season.

On the west side the following contracts have been commenced, and are progressing favorably: Sixty-sixth street, from Eighth avenue to Boulevard; Seventieth street, from Eighth to Tenth avenue, and Eighty-first street, from Eighth to Ninth avenue.

### APPROPRIATIONS.

The Bureau has charge of two appropriations, one for "Flagging Sidewalks and Fencing Vacant Lots in Front of City Property," and the other for "Street Improvements, for Street Signs, etc."

Flagging Sidewalks and Fencing Vacant Lots in Front of City Property.—The Bureau had last year an appropriation of \$1,000, which was used for the necessary repairs to the sidewalks around the markets and other city property. The appropriation was not large enough to allow all the repairs to be made for which requisitions were made on the Department. The appropriation for 1880 has been doubled, which will enable the Bureau to make the necessary improvements required.

Street Improvements, for Street Signs, etc.—Very little work was done on this account during the year. The appropriation having been increased for 1880, a most necessary work of renumbering the avenues and streets can be reasonably advanced.

This Bureau has also charge of numbering and renumbering of streets, which work has been performed under a new map system without expense.

On a careful review of the present condition of the various streets and avenues, mainly between Fifty-ninth and One Hundred and Fifty-fifth streets, and of the large amount of vacant property which is at present rendered altogether unavailable for improvements in consequence of said streets and avenues not being regulated and graded, whilst in many instances the title thereto has not yet been even acquired by the city, I am forced to the conclusion that a true political economy, one looking for the best future interests of the metropolis, demands the inauguration and carrying out of a clear, decisive policy in regard thereto. First, as to all parts of streets and avenues (at least below One Hundred and Fifty-fifth street) to which the city has no present title proceedings should be at once instituted and vigorously pressed for the acquisition thereof at the earliest practical moment. The advantages arising from such preliminary course are self-evident. The present road, which it is legally necessary to follow in having a street (or part of one) declared opened, is so cumbersome that, at the best, much time is consumed thereon, whilst in a number of cases the proceedings have taken years before their final completion. This state of uncertainty hangs like a pall over all the districts involved; and though there may be some changes of ownership, they are mostly of a purely speculative character or occur from sheer inability on the part of holders to carry them any longer, thus, in either case, adding nothing whatever to either their owners or the general wealth of the city.

The location of the business centre of the city upon its lower portion, near the confluence of the two rivers which wash its shores, and the peculiar longitudinal shape of Manhattan Island, were the probable main superinducing causes of the creation and growth of the large number of suburban villages with which it is surrounded. With the completion of the Erie Canal and the rapid building up of the Western States, came an aggregation of business here, to accommodate which residences had to be abandoned and family homes sought for elsewhere. Soon the means of local transportation for citizens became taxed to their utmost capacity, the loss of time consumed, together with the personal discomfort arising therefrom, drove thousands of our citizens to cross the rivers and seek residences in neighboring districts. It is true the stage has been superseded by the horse cars, but still the accommodations were not sufficient to prevent the exodus. But now that in the course of progress steam rapid transit lines traverse each side of the city from the Battery to the Harlem river, this difficulty no longer exists. Thus ice and fog on the rivers, together with many discomforts attached to houses in outside districts, are operating largely towards turning attention to a residence in this city, and as the influx is already quite perceptible, it seems that such proper rudimentary preparations should be made to receive them as are embodied in the regulating and grading of such streets and avenues as a fair proportion of the property-holders thereon may desire, and thus furnish them with reasonable facilities to provide for our rapidly increasing population. This being done the demand for accommodations will stimulate improvements, the wealth of the city be largely increased, and the wants of this additional population furnish more activity to local and indirectly to general trade.

In contracts for regulating, grading, setting curb and gutter stones, and flagging of streets over hereto undisturbed natural surfaces the work to be done is often of an entirely different character. In some places deep rock cutting is required, whilst in others heavy embankments have to be created, and when the work has thus far progressed and the street or avenue finally brought to the grade required, curb and gutter stones are set in order to form sidewalks and provide for the ordinary flow of water. Along these sidewalks it has been the custom to lay one course of flagging for the convenience of pedestrian travel, and afterwards, when the street or avenue commenced to be improved, an additional course has been directed by the Common Council (generally on petition of owners and residents) in the laying of which all the waste caused either by storms or settlements, have been restored, and the public convenience thus fully provided for. A recent decision of the Court of Appeals on this subject prevents any further action in this direction, in so far at least as the laying of this additional course is concerned. The result, as this waste and displacement of parts of streets and avenues, especially those newly graded, do from time to time occur, will be an alarming increase of dangerous sidewalks, for the outcome of which the city is held to be responsible, and yet is deprived under judicial rulings on existing laws from being able to remedy the evil in the absence



of some clearly definite statute, under the provisions of which all property on any street or avenue may be compelled to furnish the public with a safe pedestrian pathway in front thereof. The office business of the Bureau is now as completely arranged for the convenience and accommodation of the public, as the space it occupies, will at all allow. Every map record or statistic of whatever character contained therein is properly indexed and numbered, thus furnishing the maximum of rapid service. Lawyers, real estate owners, and searchers generally experience no delay in having at once put before them (on inquiry) all the information on the subject desired that it is in the power of the Bureau to furnish. In addition to which such general information as the legal opening or cession of streets and avenues, together with all the work done thereon by the city, so far as the records at command show, have been carefully collected in a book expressly arranged for the purpose, the constant handling of which shows that its value is fully appreciated.

Respectfully submitted,

GEORGE A. JEREMIAH,  
Superintendent Street Improvements.

Statement showing the Amount of Work Done in 1879.

NATURE OF WORK.	FROM OCTOBER 1 TO DECEMBER 31.	FROM JANUARY 1 TO DECEMBER 31.
Earth excavation.....cubic yards.	33,543	48,369
Rock excavation....."	12,267	38,794
Filling furnished....."	94,165	289,386
Pavement laid.....square yards.	6,013.67	14,413.67
Curbstones masonry.....cubic yards.	5	16
Rubble range masonry....."	1,100	1,480
Brick masonry....."	180	320
Concrete....."	66	66
Curbstones set.....lineal feet.	2,318	7,889.92
Curbstones reset....."	745.70	852.70
Curb and gutter stones set....."	2,600	5,692.67
Curb and gutter stones reset....."	1,427.50	1,644.93
Flagging laid.....square feet.	21,350.69	54,595.39
Flagging relaid....."	8,891.67	11,025.40
Fence built.....lineal feet.	2,046.67	3,991.82
Dry culverts built....."	182.50	442
12-inch vitrified pipe laid....."	624	983
15-inch vitrified pipe laid....."	30	50
18-inch vitrified pipe laid....."	30	118
Foundation blank, B. M....."	.....	8,500
Manholes....."	3	5
Receiving-basins....."	6	11
Dry rubble retaining wall built.....cubic yards.	6,440	7,500

WORKS COMPLETED DURING OCTOBER, NOVEMBER, AND DECEMBER, 1879.

Regulating, Grading, Paving, etc.—	
Fort Gansevoort Market Property.....	\$24,997 58
Ninety-third street, from Second avenue to East river.....	5,744 49
One Hundred and Twenty-ninth street, from Seventh to Eighth avenue.....	999 99
Total.....	\$31,742 06

Fencing Vacant Lots—	
South side of Seventy-ninth street, from Fourth to Lexington avenue.....	\$93 22
Block bounded by Seventy-second and Seventy-third streets, Fifth and Madison avenues.....	243 58
Block bounded by Eightieth and Eighty-first streets, Fifth and Madison avenues.....	484 76
Total.....	\$821 56

Total.....\$32,563 62

AMOUNT OF VOUCHERS DRAWN.

On account of Regulating, Grading, etc.....	\$36,441 94
" Boulevard and Avenues.....	15,807 37
" Street Improvements—For Street Signs, etc.....	45 00
" Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	139 80
" Contingencies—Department of Public Works.....	335 70
" Salaries—Department of Public Works.....	454 40
" Expenses of Grading, Fencing, etc.—Fort Gansevoort Market.....	12,697 59
Total.....	\$65,921 80

AMOUNT OF VOUCHERS DRAWN DURING 1879.

On account of Regulating, Grading, etc.....	\$104,205 73
" Boulevard and Avenues.....	38,488 42
" Street Improvements—For Street Signs, etc.....	273 66
" Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	992 77
" Contingencies—Department of Public Works.....	385 70
" Salaries—Department of Public Works.....	752 00
" Expenses of Grading, Paving, etc., Fort Gansevoort Market.....	22,835 53
Total.....	\$167,933 81

PERMITS ISSUED DURING 1879.

Eight (8) permits to property-owners to regulate, grade, etc., in front of their premises.

APPROPRIATIONS FOR 1879.

Expenses of Grading, Paving, etc., Fort Gansevoort Market.....	\$25,000 00
Amount of Vouchers drawn.....	\$22,835 53
" retained as Security for Pavement.....	2,162 05
" of balance on December 31, 1879.....	2 42
Total.....	25,000 00
Street Improvements—For Street Signs, etc.....	\$1,000 00
Amount of Vouchers drawn.....	\$273 66
" balance on December 31, 1879.....	726 34
Total.....	1,000 00
Flagging Sidewalks and Fencing Vacant Lots in front of City Property.....	\$1,000 00
Amount of Vouchers drawn.....	\$992 77
" balance on December 31, 1879.....	7 23
Total.....	1,000 00
Salaries—Department of Public Works—	
Amount of Vouchers drawn.....	\$752 00
Contingencies—Department of Public Works—	
Amount of Vouchers drawn.....	\$385 70

STATEMENT OF WORKS COMPLETED DURING THE YEAR 1879, AND THEIR TOTAL COST.

Regulating and Paving, etc.—	
Fort Gansevoort Market.....	\$24,997 58
Regulating, Grading, etc.—	
Ninth avenue, From Sixty-third street to Boulevard.....	\$788 11
Twelfth avenue, from One Hundred and Thirtieth to One Hundred and Thirty-third street.....	\$3,441 46
Elm street, from Pearl to Worth street.....	474 65
Forty-second street, from Second avenue to East river.....	23,417 11
Ninety-third street, from Second avenue to East river.....	5,744 49
Ninety-ninth street, from First to Third avenue.....	15,131 11
One Hundred and Twenty-ninth street, from Seventh to Eighth avenue.....	999 99
Total.....	\$49,996 92

Curb, Gutter, and Flagging—

Forty-fifth street, between First and Second avenues.....	\$252 89
Flagging—	
East side of Madison avenue, between Eightieth and Eighty-seventh streets.....	\$167 40
West side of First avenue, between Fifty-ninth and Sixtieth streets.....	55 50
East side of Fourth avenue, between Sixty-fifth and Sixty-sixth streets.....	218 56
North side of Fifty-first street, from Broadway to Eighth avenue.....	34 39
North side of Fifty-ninth street, from Madison to Fifth avenue.....	371 09
North side of Sixtieth street, from Boulevard to Ninth avenue.....	785 32
North side of Seventy-second street, from Lexington to Third avenue.....	340 21
South side of Eighty-fifth street, 100 feet west of Lexington avenue.....	70 49
Total.....	\$2,042 96

Fencing Vacant Lots—

East side Madison avenue, Eightieth and Eighty-first streets, and Eightieth street, between Madison and Fourth avenues.....	\$189 47
Southeast and southwest corners of Madison avenue and One Hundred and Twenty-seventh street.....	159 35
East side Sixth avenue, between One Hundred and Twenty-fourth and One Hundred and Twenty-fifth streets.....	113 09
Block bounded by Sixty-ninth and Seventieth streets, Lexington and Fourth avenues.....	143 84
Block bounded by Seventy-second and Seventy-third streets, Madison and Fifth avenues.....	243 58
Block bounded by Eightieth and Eighty-first streets, Madison and Fifth avenues.....	484 76
Forty-fourth street from Tenth to Eleventh avenue.....	21 79
South side Seventy-ninth street, from Fourth to Lexington avenue.....	93 22
Southwest corner of Seventy-fourth street and Fourth avenue.....	85 31
Total.....	\$1,534 41

RECAPITULATION

OF CONTRACTS COMPLETED DURING 1879.

1 contract for regulating, paving, etc.....	\$24,997 58
7 contracts for regulating, grading, etc.....	49,996 92
1 contract for curb, gutter, and flagging.....	252 89
8 contracts for flagging sidewalks.....	2,042 96
9 " fencing vacant lots.....	1,534 41
26 contracts, amounting to.....	\$78,824 76

Document "H."

DEPARTMENT OF PUBLIC WORKS,  
BUREAU OF SEWERS, ROOM NO. 21, CITY HALL,  
NEW YORK, January 5, 1880.

Hon. ALLAN CAMPBELL, Commissioner of Public Works:

SIR—In submitting my report for the quarter ending December 31, 1879, I beg leave, in compliance with your instructions, to give a brief review of the work of this Bureau for the year.

The past year has been one of much activity in the operations of this Bureau, an unusual number of sewers having been applied for, and new contracts entered into; while the improvements and repairs to the old sewers were carried on to the full extent of the regular appropriation, and beyond it, as it became necessary to ask for transfers to meet the necessary expenditures for the repairs.

Of the more important contracts in progress during the year 1879, the following have been completed, to the great benefit of the districts in which they are situated, namely: Sewers in First and Second avenues, and most of the intersecting streets, from Ninety-second to One Hundred and Tenth street; sewer in Eleventh avenue, between Sixty-sixth and Seventy-sixth streets, with branches in Sixty-sixth, Sixty-seventh, Sixty-eighth, Sixty-ninth, Seventy-first, Seventy-second, and Seventy-third streets; sewer in New avenue, west of Morningside Park, north of One Hundred and Sixteenth street; extension of sewers in Forty-fourth and Forty-fifth streets, with alterations and improvements to existing sewers in Sewerage District No. 2.

The last-named work, it is believed, has accomplished all that was hoped, in the complete relief of overflowed cellars, so long complained of during heavy storms, in the region of Seventh and Eighth avenues and Forty-fourth, Forty-fifth, Forty-sixth, Forty-seventh, and Forty-eighth streets.

Several severe storms, occurring at unwonted periods, have afforded a fair test of the value of the work, and a manifest improvement in the health of the neighborhood has been observed. Improvements of a similar character constructed during previous years have fully demonstrated their value, and remained in perfect working order up to the present time.

There have also been completed a large number of minor local sewers during the year.

WORK IN PROGRESS.

The important and extensive contracts in progress, and remaining uncompleted at the close of the year 1879, are sewers in the New avenue, west of Morningside Park, south of One Hundred and Sixteenth street, and in One Hundred and Tenth street, between New avenue and Ninth avenue; Seventy-third street, between Eighth and Tenth avenues; Sixty-ninth and Seventieth streets, between Second and Third avenues; Sixty-eighth, Sixty-ninth, and Seventieth streets, between Avenue A and First avenue; Twelfth avenue, between One Hundred and Thirty-first and One Hundred and Thirty-third streets; extension of sewer at foot of Houston street, East River, etc.

These, and other minor sewers, are all making fair progress, and will probably be completed during the current year, although most of them require a large amount of excavation through solid rock, in which progress is necessarily slow.

The extension of sewer foot of Houston street requires about two hundred and fifty-five linear feet of brick sewer of four feet interior diameter, laid in Portland cement mortar, and two hundred and thirty linear feet of iron sewer of four feet interior diameter.

The iron sewer is of wrought boiler plate, one-half an inch thick, in sections of four feet, joined by sleeves fitting over the joints, and double riveted, there being three compensating joints to allow for expansion and contraction.

The tube is held in position under the pier, and rests on wrought-iron straps placed beneath it, and bolted to the piles on either side.

A timber foundation extends under the pipe from the bulkhead to the end of the pier, and is bolted to the piles.

The whole is held down by diagonal braces resting on the top of the pipe and bolted to the piles. All the iron work is galvanized.

In laying the iron sewer the tube is made up into sections sixty feet long, and lowered by shears and tackle into the trench excavated for the brick sewer; the pipe is then filled with empty barrels, which at high tide float the section through an opening in the bulkhead to its position under the pier, and it is then joined by a sleeve to the section previously laid and riveted.

There is a longitudinal opening at the end of the pipe, opening downward and allowing the sewer to discharge at all times, the extreme end of the pipe being closed by a cap bolted on; this acts as a hood, and prevents back pressure of wind in the interior of the sewer.

Formerly the contents of the Houston street sewer were carried by a box drain from Mangin street to the bulkhead and there discharged into the slip, its offensive nature causing much annoyance at the ferry situated at the foot of the street.

The new work will effectually remedy the nuisance.

The construction of this sewer inaugurates a new system of outlet sewers, designed to discharge the sewage at the ends of the piers (where it may readily be swept away by the river currents instead of remaining in the slips), until it shall be found advisable to make a different disposition of the sewage.

This contract is now within a few weeks of completion, and besides the extension of the Houston street outlet, it includes the improvement of much of the existing adjacent sewerage.

ONE HUNDRED AND THIRTY-FIFTH STREET OUTLET.

The extensive salt meadow land, partly covered at high tide, bordering on the Harlem River between Third avenue and High Bridge, during the past summer at times gave off very offensive odors at extreme low tide. This was caused by a portion of the sewage discharged at the main outlets foot of One Hundred and Forty-seventh street and foot of One Hundred and Thirty-sixth



street, and into a large tidal creek remote from the river, being carried over these meadow lands at flood tide, and left there by the falling tide to be acted on by the hot sun.

Particularly was this the case from Fourth to Sixth avenues, and with the view of lessening this nuisance immediately, it was determined on collecting the several temporary outlets into a single one, discharging at foot of East One Hundred and Thirty-fifth street.

This work has been put under contract, and will be completed before the coming summer; it will discharge the sewage of a large and rapidly-growing district directly into the swift tideway of the Harlem River, until such time as it may be advisable for the public health to intercept the sewage that is now or may be discharged in the Harlem River, from not only the Twelfth Ward, but from the Twenty-third and Twenty-fourth Wards, and carry it to other points of disposal, . . . the meadow lands will continue to be offensive until filled in, which work, however, cannot precede the opening of Spuyten Duyvel Creek and the improvement of Harlem River to the Hudson; but when this is done, these many hundred acres of tidal meadows will no longer be required to produce the current necessary to maintain the natural depth of water in the channel.

The improvement of Harlem River by the National Government will be a great sanitary as well as commercial advantage to this city; the current will then sweep rapidly through this channel from the Sound to the Hudson River, and many hundred acres of these now necessary tidal flats can then be filled to the exterior line of the city and improved.

In view of the rapid growth of this part of the city, these improvements should not be delayed a single day.

Several contracts entered into during the year have not been commenced, on account of the advance of the season before the necessary preliminaries could be effected, but work under them will be commenced at an early date and vigorously prosecuted. Among these contracts may be mentioned the "sewers in West street, between Spring and West Eleventh streets, etc.," which was prevented by some litigation from proceeding last year, until it became more advantageous to defer commencing until winter is past. These sewers are part of the general system of intercepting sewers, and have an outlet through the pier at the foot of Clarkson street, Hudson River, collecting the drainage of some six hundred and forty-one acres, and discharging it at the end of the pier into the rapid current of the river.

Plans have been made for additional sections of the intercepting sewer in West street, between Beach and Canal streets, and between Murray and Beach streets, with its outlet through Pier new 21, foot of Duane street. They can be placed under contract as soon as the plan for the improvement of West street, when widened, is determined upon. This information is necessary in order to make provision for the surface drainage of the street, and the placing of sewer openings so as to avoid street crossings and railways where they may be located in the future.

The dilapidated condition of the mouths or outlets of the old sewers now discharging into the slips, and the rapid accumulation of mud in these slips makes the building of these sewers in advance of the building of the new bulkhead and street, by the Department of Docks, an imperative necessity.

The work, when confined to so narrow a street as old West street, cannot be done except at great inconvenience to business and travel, but the preservation of the public health must be the first consideration.

As in the contracts already made, the plans for these and other sections of the intercepting sewers and their outlets will include extensive alterations and improvements to the existing sewers of the several districts.

The mouths or outlets of the old sewers discharging into the East River slips, from Roosevelt street to the Battery, require much substantial and expensive work to put them in fair order, very little having been done to them in the way of repairs, as this Department has been anticipating the building, at an early date, of the collective or intercepting sewers, in connection with the building of the new bulkhead and river street by the Department of Docks.

No definite time is fixed by the Department of Docks to commence these improvements at this point, and as the old outlets are rapidly growing worse, it would be advisable to commence the preparation of a plan for improving and extending the sewers, and proceed with their construction in advance of the operations of the Department of Docks. South street is but seventy feet wide, and the sewer must be placed so as to interrupt business and travel as little as possible.

#### REPAIRS AND CLEANING.

A large amount of repairing to the old sewers and their appurtenances has been done during the year, and a great improvement is noticeable in their general condition, but few dangerous breaks having occurred in the past year.

There are, however, still remaining a very large number of defective sewers, which may give way at any moment, and to which attention has been repeatedly called from year to year in asking for the appropriations for their repair; notwithstanding which a most inadequate allowance has generally been made, not always sufficient to tide over with temporary repairs the constantly occurring breaks in old and worn-out work.

It is of the greatest importance that a sufficient amount should at once be applied to putting in order all the sewers which are known to be in bad condition, and to that end I would earnestly recommend the re-enactment of the law repealed in 1875, known as the "Sewer Repair Stock" law, which, properly and judiciously employed, would be of great and lasting benefit.

As far as possible with the means at hand the improvement and repair of the old sewers will be carried on during the coming year in the order of the urgency of the cases requiring attention.

The cleaning of the sewers, culverts, and receiving basins has been carried on by skilled and experienced men directly attached to this Bureau, with economic and effective results; but there is a great deal of dirt and various substances which ought to be removed from the streets that is thrown into or washed into the receiving basins and sewers, from where the cost to remove is vastly greater than would be a proper disposition of such matter in the first place.

During heavy storms much of this material is carried into the slips and harbor, in proportion to which the legitimate solids of the sewage is quite inconsiderable.

#### NEW WORK.

It is anticipated that much new work will be demanded and done during the next year, on account of the general revival of the building interest; but the construction of sewers and other street improvements are often obstructed by the fact that the streets where they are necessary are not opened according to law, even when built upon and the houses occupied.

There are thickly-populated districts that are supplied with Croton water and all modern improvements, with no sewer to carry off the waste; and particularly is this the case with Carmansville, where streets through which the sewers are to run remain unopened, owing to the active opposition of the large property-owners, who have for several years succeeded in deferring, through legal forms, the acquiring by the city of the land for the public streets.

The refuse waste from these houses now runs into the natural water-ways, to the great injury of the health of the neighborhood. I have referred to this subject in several of my former reports.

It would be a great advantage to the public, and to the property-owners themselves, if the opening of all streets on this island be done in one proceeding. Then the necessary public improvements could be carried out systematically, and at a greatly reduced cost to the property-owners.

#### WEST SIDE IMPROVEMENT.

The general sewerage plans of the district lying west of the Central Park, filed previous to 1870, not having been made with a view to subsoil drainage, these plans have been modified from time to time, so as to comprehend both sewerage and subsoil drainage, and to correspond to altered street grades.

The surveys you directed to be made of the natural waterways and topography of this district are nearly completed, the principal main outlet sewers are already built, and plans for the other mains are in progress, and can be placed under contract this coming year. The branch sewers can then be built as the property-owners apply for them.

#### RIVERSIDE AVENUE SEWERS.

The construction of sewers in Riverside avenue must precede those in the intersecting side streets, whose sewers empty into the Riverside avenue sewers, but plans for these latter sewers cannot be completed until the plan of the drains and basins laid down for surface drainage in the improvement of the avenue be furnished by the Department of Public Parks. It is very desirable that as much as possible of these drains and basins as can be made available be incorporated in the sewerage plan of the avenue.

#### HOUSE CONNECTIONS.

Particular attention has been given to restoring street pavements when removed for connecting premises with the sewer. Plumbers are required to keep the pavement in repair for six months, or failing so to do their licenses are revoked.

During the past year ten hundred and thirty-five permits have been granted to connect with the sewers, and nine hundred and forty-three have been granted to make repairs.

The inspection of house drains within the street, and their connection with the public sewers has been most rigid, and must result in great benefit to health, while frequent disturbance of the pavement for repairs to defective house-drains is rendered unnecessary.

#### GASES IN SEWERS.

The several explosions that have taken place in the public sewers is that of illuminating gas that has found its way into the sewer from defective gas-pipes, and not from sewer gas, which is not explosive.

The gases usually found in sewers are carbonic acid, carburetted hydrogen, sulphuretted hydrogen, ammoniacal compounds, and fetid organic vapor.

This latter gas is always found in sewers, and is the most dangerous of any gas; its exact composition and nature is but little known, and it is in no way explosive.

Carbonic acid gas is usually present in sewers, and when in large quantities is very deadly, causing speedy death; it is not explosive, but instantly extinguishes light; the admission of fresh air destroys its poisonous effects.

The presence of carburetted hydrogen or illuminating gas is due in a great measure to leakage from defective gas-pipes, and when mixed with a certain proportion of atmospheric air is explosive, but unless there is some leakage from a gas-pipe, it will not accumulate in a sewer in sufficient quantity to allow of an explosion.

Sulphuretted hydrogen is present in old sewers, in which the sewage has become putrid by remaining in the sewer, from faulty design or construction; it is distinguishable by its disagreeable odor. It is very poisonous, and, when in sufficient quantity, I have known it to take fire and burn, but not to explode; it is much heavier than common air, and remains at the bottom of the sewer.

It was the presence of this gas that had rendered so many of our old sewers so offensive and dangerous to health; thorough cleaning and the general improvement of defects favorable to its formation has had marked effect on the sanitary condition of the neighborhood formerly affected.

In the present system of sewers, and in all well-constructed ones, the flow is so rapid that decomposition cannot set in before the sewage has left the sewer; the time that it remains in the sewer is too short to allow of its decomposition, which must first take place before the gases are evolved.

When atmospheric air is admitted into the sewer through ventilation provided by perforated manhole covers, sulphuretted hydrogen is seldom found. Pure air has the power of destroying organic compounds, and as sewer gas escaping into streets is readily dissipated, or combines with large quantities of atmospheric air, it is rendered almost harmless.

The quarterly report of the transactions of this Bureau for the quarter ending December 31st, 1879, is herewith transmitted, to which is attached a statement of the amount of work done during the whole year, and showing the total extent of the sewerage of the city to be three hundred and seventy-one and sixty one hundredth miles, including sewers, culverts, and land drains, with forty-five hundred and twenty-four receiving basins.

Respectfully,  
STEVENSON TOWLE,  
Engineer in Charge of Sewers.

#### Report of the Transactions of the Bureau of Sewers for the Quarter ending December 31, 1879.

Credits to General Fund—	
Amount received for 289 permits for sewer connections. . . . .	\$6,257 21
Vitrified Stoneware Pipe—	
Amount received for pipe sold to contractors and credited to Street Improvement Fund. . . . .	\$211 03
Engineers' Fees—	
Amount of Engineers and Surveyors' fees assessed on property benefitted; charged in Assessment Lists, and credited to Street Improvement Fund. . . . .	\$2,850 15
Sewer Repair Stock—	
Unexpended balance, March 31, 1876 . . . . .	\$563 03
Sewers—Repairing and Cleaning—1878 account—	
Unexpended balance April 30, 1879. . . . .	\$66 59
Salaries—Sewers—Repairing and cleaning—	
Unexpended balance September 30, 1879. . . . .	\$2,290 94
Board of Estimate and Apportionment, November 29, 1879 . . . . .	500 00
	\$2,790 94
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Inspectors, etc. . . . .	\$2,789 15
Balance December 31, 1879. . . . .	1 79
	\$2,790 94
Sewers—Repairing and cleaning—	
Unexpended balance September 30, 1879 . . . . .	\$11,708 65
Board of Estimate and Apportionment, November 26, 1879. . . . .	700 00
	\$12,408 65
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls Mechanics and Laborers. . . . .	\$7,409 74
Thomas Barrington, cleaning basins, etc. . . . .	2,100 00
Special repairs to sewers, etc. . . . .	564 68
Materials and sundries. . . . .	1,469 55
Balance December 31, 1879. . . . .	864 68
	\$12,408 65
Salaries—Sewerage system—	
Unexpended balance September 30, 1879. . . . .	\$2,336 43
Vouchers transmitted to the Commissioner of Public Works—	
Pay-rolls of Engineers, etc. . . . .	\$2,336 16
Balance December 31, 1879. . . . .	27
	\$2,336 43
Contingencies—Department of Public Works—	
Vouchers transmitted to the Commissioner of Public Works. . . . .	\$89 33
Transportation expenses Assistant Engineers, etc. . . . .	89 33
Street Improvement Fund—	
Vouchers transmitted to the Commissioner of Public Works. . . . .	\$50,436 79
Pay-rolls of Engineers, etc. . . . .	\$5,342 68
Pay-rolls of Inspectors on Sewers. . . . .	3,938 00
On contracts for sewers. . . . .	41,156 11
	\$50,436 79
Work done by Mechanics and Laborers, William Webb, Foreman—	
1,518 receiving basins and culverts cleaned.	
4,230 lineal feet of sewer cleaned.	
210 lineal feet of sewer rebuilt.	
17 lineal feet of culvert rebuilt.	
117 lineal feet of spur pipe laid.	
5 receiving basins rebuilt.	
26 receiving basins repaired.	
2 new basin heads put on.	
13 basin heads reset.	
15 new basin covers put on.	
2 new manholes built.	
209 manholes repaired.	
76 new manhole heads and covers put on.	
192 manhole heads reset.	
30 new manhole covers put on.	
357 cubic yards of earth excavated and refilled.	
36 square feet of sidewalk relaid.	
228 square yards of pavement relaid.	
2,773 cart loads of dirt removed.	
Work done by contract—	
6,168 lineal feet of sewer built.	
315 lineal feet of culvert built.	
22 receiving basins built.	
27 new basin heads put on.	
2,475 lineal feet of piles driven.	



NATURE OF EXPENDITURE.	1875.	1876.	1877.	1878.	1879.
For Gas to and Lighting Public Lamps...	\$686,258 73	\$620,934 64	\$576,462 84	\$441,490 72	\$420,677 73
Supplies and Maintenance of Public Lamps	31,049 34	37,270 66	33,874 13	35,725 29	36,111 47
Supply of Gas to Public Buildings.....	23,842 45	21,143 80	22,239 27	21,585 55	26,122 45
Totals.....	\$741,150 52	\$679,349 10	\$632,576 24	\$498,801 56	\$482,911 65



Showing an excess over 1864 of.....	540
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Less than 1871.....	\$693,557 09
" 1872.....	349,135 42
" 1873.....	263,704 69
" 1874.....	274,097 95
" 1875.....	258,238 87
" 1876.....	196,437 45
" 1877.....	149,604 59
" 1878.....	15,889 91

The following statement will show the prices now paid the several gas-light companies, under the existing contracts for supplying the gas to, and lighting, extinguishing, cleaning, repairing, etc., the public lamps for the year ending April 30, 1880:

The following will show the prices named in the several proposals for furnishing gas to such of the public buildings as are under the care of the Department of Public Works, for the year 1880, also the illuminating power of the gas each Gas Company proposes to furnish :

Contracts have been executed with the New York Gas Company for supplying the buildings south of Grand street; with the Manhattan Gas Company, for the buildings between Grand and Thirty-fourth streets; with the Metropolitan Gas Company, for the buildings between Thirty-fourth and Seventy-ninth streets; and with the Harlem Gas Company, for the buildings on Manhattan Island north of Seventy-ninth street.

BY WHAT GAS COMPANY.	For Consump- tion of less than 10,000 cu. ft. per Mo.	For 10,000 and less than 20, 000 cu. ft. per Mo.	For 20,000 and less than 75, 000 cu. ft. per Mo.	For Consump- tion of 75,000 cu. ft. per Mo.
	Price per 1,000	Price per 1,000	Price per 1,000	Price per 1,000
New York Gas-light Co.....	\$1 50	\$1 25	\$1 00	\$0 75
Manhattan Gas-light Co.....	1 50	1 25	1 00	75
Municipal Gas-light Co.....	1 50	1 25	1 00	75
N. Y. Mutual Gas-light Co.....	1 50	1 25	1 00	75
Metropolitan Gas-light Co.....	1 50	1 25	1 00	75
Harlem Gas-light Co.....	1 50	1 25	1 25	1 25
Knickerbocker Gas-light Co.....	1 50	1 50	1 50	1 50
*Central Gas-light Co.....	2 50	2 50	2 50	2 50
†Northern Gas-light Co.....	2 50	3 00	3 00	3 00
Yonkers Gas-light Co.....	2 50	2 50	2 50	2 50

† After the first day of February next this Company will charge \$2.50 per thousand.

The Yonkers Gas Company supplies gas to a small section of the Twenty-fourth Ward, formerly in town of Kingsbridge.

	Feet.	Total miles laid to December 31, 1879..	Miles.	Feet.
By New York Gas-light Co.....	1,753..		110	4,069
By Manhattan " .....	2,848..	" "	173	3,342
By Metropolitan " .....	17,184..	" "	130	4,812
By N. Y. Mutual " .....	22,034..	" "	118	4,475
By Municipal " .....	103,251..	" "	77	4,055
By Harlem " .....	25,621..	" "	115	4,840
By Knickerbocker " .....	62,649..	" "	61	2,200
By Central " .....	11,413..	" "	42	2,323
By Northern " .....	16,830..	" "	24	4,950
By Yonkers " .....		" "	4	1,161

Total taken up during the year..... 7,353 feet.

Harlem Gas-light Company, " .....

New York Gas-light Company,	455 to 473
Manhattan Gas-light Company, "	460 to 485
New York Mutual Gas-light Company, "	689 to 749
Metropolitan Gas-light Company, "	618 to 642
Harlem Gas-light Company, "	454 to 470

The following will show the average maximum and minimum pressure on the mains of the above companies during the quarter, as recorded on the pressure registers in the photometrical rooms of this Department, this average being made for the time during which the public lamps are required to be kept lighted, and hence does not include the day pressure :

OF WHAT COMPANY.	AVERAGE MAXIMUM PRESSURE.	AVERAGE MINIMUM PRESSURE.	WHERE TAKEN.	DISTANCE FROM GAS-WORKS.
	Inches.	Inches.		Miles.
New York Gas-light Co.....	2.02	1.42	Grand and Centre streets.....	2 4-100
Manhattan Gas-light Co.....	1.88	1.33	" " .....	1 33-100
New York Mutual Gas-light Co....	2.20	1.48	" " .....	1 79-100
Metropolitan Gas-light Co.....	1.90	.90	{ Seventy-ninth street, between Second and Third avenues..	3 33-100
Harlem Gas-light Co.....	3.08	1.34	{ Seventy-ninth street, between Second and Third avenues..	1 75-100



No tests or records have been made of the gases supplied by the other gas companies of this city, inasmuch as there are no mains in the vicinity of the photometrical rooms from which the gas could be obtained. During the past month, however, the Municipal Gas Company has introduced a service into Odd Fellows' Hall, so that this gas will, in future, be regularly tested at this place.

In accordance with the act of the Legislature (chapter 478 of the Laws of 1879), this Bureau, on the first day of July last, assumed supervision of the lighting and maintenance of the lamps on the public parks and places of the city, which work, prior to said date, had been done by the Department of Parks, and toward the expense thereof said Department consented to a transfer of \$4,000 from its maintenance account to the appropriation for "Lamps and Gas" of this Department. The total cost of the work, however, for the six months amounted to over \$8,000. On making an examination of the lamps on the several parks and places it was found that all the posts and lanterns were in a very unsightly condition. While the contracts of the Department of Public Works require that the lamp-posts and lanterns shall be painted annually, this specification had been omitted from the contracts made by the Department of Parks, and hence the park lamps and posts had not been painted for a number of years. In consequence of this omission all the lamp-posts were found very much discolored, and the tops of the globe lamps were in a bad state on account of the rust, while the square tin lamps on the Battery Park were so worn out and dilapidated that they were unfit for repairs. In order, therefore, that the appearance of the lamps might be improved, and also as a measure of protection, all the lamp-posts and lanterns have been thoroughly painted and new tops placed on the globes where required, while all the old tin lamps were removed from the Battery, and new Boulevard lamps substituted therefor.

The total number of lamp-posts and lamps turned over by the Department of Parks on July 1, was 1,128, of which 623 were supplied with lanterns and were lighted, while 491 were without lanterns and not lighted. In compliance with the request of citizens, and in consequence of articles in the public press calling attention to the inadequate lighting of several of the parks, personal visits were made to each during the night and the dark spots noted, after which the necessary orders were given and 117 of the lamp-posts were furnished with new globes and relighted, thereby adding very materially to the comfort and protection of the people who had occasion to visit these popular places of resort during the night.

The number of lamps on each of the parks and places on July 1, 1879, and the changes made therein since said date, are as follows:

**Battery Park.**—Total number of lamps, 227; of which there were lighted, 130; not lighted, 97; since relighted, 13; one lamp removed and discontinued, and one vacant post removed in consequence of excavations for new government building. Leaving a total lighted on December 31, 1879, of 142.

**Bowling Green Park.**—On railing of: 5 square tin lamps lighted, and no change.

**City Hall Park.**—Total number of lamps, 139; of which there were lighted, 78; not lighted, 61; since relighted, 28. Total lighted December 31, 106.

**Franklin Statue.**—In Printing House Square: 4 lamps, each containing 2 burners; total, 8. None of these lamps were lighted, but all have since been relighted.

The ornamental lanterns on these posts are nearly worn out, and new ones will probably be required during the ensuing year.

**Oriental Park.**—At junction of East Broadway and Grand street: 5 lamps, none of which were lighted, but all since relighted.

**Cooper Institute Park.**—One lamp lighted, and no change.

**Jackson Square.**—Junction of Eighth avenue and Greenwich avenue: lamps lighted, 3; not lighted, 3; total, 6. No change.

**Lincoln Statue.**—Union Square, west, and Fourteenth street: number of lamps, and both lighted, 2. An additional burner has since been placed in each lamp, making a total of 4.

**Madison Park.**—Lamps lighted, 67; not lighted, 39; total, 106; relighted, 24. Making the number lighted December 31, 91.

**Madison Square and Fifth Avenue.**—2 candelabras, each containing 8 lamps with double capacity burners, all lighted, making a total of 32 lamps.

The brackets of these candelabras each contained two 1/4-inch tubes originally placed therein for the burning of the oxyhydrogen gas in connection with the ordinary coal gas. These small tubes were found very much obstructed by sediment, and several destroyed by rust, and as a consequence, several of the lamps were nightly extinguished. It was therefore a difficult matter to keep them in burning order. The old tubing has since been removed from all the brackets, and new 1/2-inch brass tubing with drip-cocks placed therein. The paintings and gildings on the standards of both candelabras are quite dingy and discolored, and they will require to be refinished during the ensuing year.

**Park Avenue Parks.**—On railing of: Lamps lighted, 2; not lighted, 24; total, 26. Relighted, 16. The iron shafts, which were set on granite posts, were found in a very bad condition, with 6 broken and useless. Those remaining are liable to fall at any time under the weight of the cleaner's ladder. 24 new shafts of a much more secure and ornamental design have been procured and these will be fitted during the ensuing spring, and then all the lamps can be lighted.

**Reservoir Park.**—Lamps lighted, 20, all on sidewalk; not lighted, 67, all inside. Total, 87. No change made. This park is enclosed by an iron railing, the gates of which are shut at 9 p. m., and I find that the lamps within the park have not been lighted during the past two years. The surrounding neighborhood mostly consists of first-class residences, is quite populous, and the park grounds are much frequented at night. Several requests have been made for the relighting of these lamps, but inasmuch as access to the park is not permitted after 9 p. m., it was deemed inexpedient and unwise to do so.

**Tompkins Park.**—Number of lamps, and all lighted, 13; new lamps since erected and lighted, 146. Total lighted December 31, 159. The mains in this park were laid at the expense and under the direction of the Department of Parks, and as they consist of but two-inch pipe, of which over one-third was old pipe, there is a possibility of trouble in the future in consequence of some portion of these mains getting trapped.

**Union Park.**—Lamps lighted, 29; not lighted, 23; total, 52. Since relighted, 9. Total lighted December 31, 38.

**Washington Statue.**—Union Square, east, and Fourteenth street: 2 lamps with 3 burners each; total 6, all lighted and no change. The ornamental lamps on these posts are very old and worn out and new lamps are required.

**Washington Park.**—Lamps lighted, 96; not lighted, 89; total, 185. Relighted, 2.

**Worth Monument.**—Fifth avenue opposite Madison Park: 4 lamps on railing, all lighted; no change.

**Worth Plaza.**—5 lamps, all lighted, and no change.

**Central Park.**—Fifth avenue and Fifty-ninth street entrance: Lamps lighted 18; not lighted 14; total 32; relighted, 10. Eighth avenue and Fifty-ninth street entrance: Lamps lighted, 17; not lighted, 15; total, 32; relighted, 12. Sixth avenue and One Hundred and Tenth street and Seventh avenue and One Hundred and Tenth street entrances: 1 each, lighted; total, 2; no change. At Mount St. Vincent: 5 lamps, all lighted, and no change. In Transverse road, No. 1: Lamps lighted, 17; not lighted, 14; total, 31; no change. In Transverse Road, No. 2: Lamps lighted, 13; not lighted, 20; total, 33; no change. In Transverse Road, No. 3: Lamps lighted, 20; not lighted, 18; total, 38; no change. The lamps in the above transverse roads are on brackets, and the brackets are in bad condition, several are broken, and from some the gas-pipes are missing and nearly all the globes broken. In Transverse Road, No. 4: In this road there appear to have been 41 brackets, but 9 have disappeared, leaving 32. There are no gas mains or piping in this road, and consequently no light.

**Central Bridge.**—Over Harlem river: 8 lamps, all lighted, and no change.

**Harlem River.**—At Third avenue and Harlem river: 14 lamps, each with double capacity burners; total, 28; no change.

In my report for the quarter ending December 31, 1878, allusion was made to chapter 275 of the Laws of 1878, which requires the city to defray the expense of lighting the armories of the National Guard located here. My opinion was therein expressed that inasmuch as the city was to pay these bills, and the regiments thereby relieved from such disbursements, there would be no incentive on the part of the persons in charge of these buildings to exercise proper economy in the use of the gas, and consequently that its consumption would be largely increased. That this opinion was well founded is shown by the figures of the past year. We find that the cost of lighting seven of the armories during the year 1879 exceeds, by over eighteen hundred dollars, the cost of lighting the same seven during the year 1877, when the expense was defrayed by the several regiments out of their regimental funds. In 1877 the price of gas was \$2.50 per thousand feet, while in 1879 the price was \$1.90, hence the increased consumption is shown to be so much the greater, and it is therefore quite evident that proper care is not taken in its use. While this Bureau can exercise the necessary control over the lighting and maintenance of the public lamps, it cannot control the burning of the gas in the armories and public buildings, and hence we find an increase of \$4,536.90 for gas used in 1879 over the amount expended in 1878. It is therefore to be hoped that the persons in charge of these buildings will, in future, exercise more prudence and economy in the use of the gas, so that the cost of the lighting may be somewhat reduced.

On December 9 last, a resolution of the Board of Aldermen was approved by the Mayor, which directs "that the glass on the top of every lamp on street corners, and the glass on tops of the lamps in the streets and avenues nearest every fire-alarm box shall be of a red color, in order to indicate more clearly the location of each fire-alarm box throughout the city." This resolution, however, cannot be carried into effect until after the first day of May next, on which date our lamp contracts will have expired. The existing contracts require the gas companies to furnish the glass for and to reglaze the public lamps, and, as the specification was intended for plain glass only, the companies cannot be compelled to furnish the more costly colored glass. When the specifications are prepared for the contracts to commence on May 1, then a clause can be inserted covering the work.

In my report for the quarter ending December 31, of 1878, reference was made to the propriety of substituting a four-foot burner in the public lamps, or at least in a portion of them, in lieu of the existing three-foot burner, in order that our streets might be more brilliantly lighted. As the appropriation for lamps and gas for 1879 was insufficient to admit of the change during that year, it was hoped that

the Board of Estimate and Apportionment would appropriate a sufficient amount for 1880 to enable the improvement to be effected during this year. If this had been done, we could then have obtained an increase of over 40 per cent. in the light at an increase in the cost of from 22 1/2 to 26 per cent., because the light emitted from a gas-jet increases in proportion to the capacity of the burner at a much greater ratio than the cost of consumption of gas. The additional cost would have been chargeable to the gas alone, inasmuch as the expense of lighting, extinguishing, cleaning, etc., would remain the same with a four-foot burner as with a three. Contrary to expectation, however, the Board of Apportionment has failed to appropriate a sufficient amount to permit of the change, and hence every effort must be made to get all the light obtainable from the present three-foot burner. In order that this result may be accomplished, we must see that the burners are of the proper capacity; that they are constantly kept clear and unobstructed, and all burning in a normal condition and under adequate pressure. We must also insist that the lanterns shall be kept thoroughly clean, because these are the important factors in artificial illumination, to wit: good gas, and this we have, a proper burner, the right pressure, and a clean and clear globe or lantern.

To the matter of cleaning the attention of the gas companies has repeatedly to be called, but notwithstanding the most persistent efforts on my part, the work has not been done in an entirely satisfactory manner. A dirty street-lamp presents a shabby, neglectful appearance, causes a loss of from 10 to 20 per cent. of the light, brings discredit upon the officials having them in charge, and reflects injuriously upon the company furnishing the gas. In this case, it seems to me, the gas official does not study the true interests of his company, because we occasionally hear complaints of poor street lights, the cause of which is ascribed to the bad quality of the gas, while, in fact, the gas may be of excellent quality and the diminished light and poor-looking gas is caused by an unclean lantern, although sometimes by a defective burner, and hence the gas company is accused of manufacturing a poor quality of gas.

In the city of Paris, which is noted for its well-lighted streets, the public lamps are cleaned daily, while here they are required to be cleaned semi-weekly, and as this question is an important element in street-lighting, it seems that something should be done to insure better results.

In consequence of the construction of the elevated railways on the east and west sides of the city, certain portions of the thoroughfares have been very materially darkened, and this is notably the case at the several localities where the railway stations have been erected; such, for instance, as at the South Ferry, Hanover square, Franklin square, Chatham square, the lower end of the Bowery, Canal street, Grand street, etc., on the east side; and Rector street, Cortlandt street, Park place, Chambers street, Franklin street, and Eighth, Fourteenth, and Twenty-third streets, etc., on the west side. As the platforms and station buildings cover the entire street, the roadways and crosswalks are rendered very dark and somewhat dangerous, and the open space beneath the station stairs affords a convenient lurking-place for persons maliciously inclined. On the streets under all the principal stations of these railways the cars of the various surface lines are continually passing in diverse directions, and hence the constant throng of pedestrians crossing these dark street intersections are in frequent danger of accident. It seems to me, therefore, that in order to afford proper protection to the people, something should be done to improve the present inadequate lighting of these localities. By a resolution of the Common Council, approved February 25, 1878, the Commissioner of Public Works was authorized to compel the elevated railway companies to place proper lights on the columns which stand in the roadways at the intersections of cross streets, and in accordance therewith the companies were notified and directed to cause such work to be done, but thus far no action appears to have been taken toward a compliance, and there is no law or authority by which the Commissioner of Public Works can compel the companies to do so. At the sessions of the Legislature, 1878-9, bills were introduced which directed these companies to place proper lights on their columns, under a penalty for their failure to do so, but these bills failed to become a law. In the absence, therefore, of any authority which would cause the companies to do this work, and on account of their refusal, an improvement can be made in the lighting by erecting two additional lamps at these intersections, thereby making a lamp on each of the four corners instead of lamps on two corners, as at present.

All of which is respectfully submitted,  
S. McCORMICK,  
Superintendent Lamps and Gas.

#### EXHIBIT "A."

Statement showing the Amounts on Vouchers drawn for Gas to the various Public Markets, Armories, Offices, etc., and for Fitting up, Repairing and Lighting the Public Lamps, etc., for the First, Second, Third, and Fourth Quarters of the year 1879, with the Totals for the whole year.

	First Quarter ending March 31.	Second Quarter ending June 30.	Third Quarter ending September 30.	Fourth Quarter ending December 31.	Total.
Washington Market.....	\$600 97	\$489 63	\$485 83	\$639 92	\$2,215 35
Catharine Country Market.....	38 95	29 83	26 98	30 29	135 05
Catharine Meat Market.....	25 08	20 90	13 95	24 32	90 25
Fulton Meat Market.....	172 71	117 42	136 23	171 00	597 36
Fulton Country Market.....	370 50	264 10	256 69	388 17	1,279 46
Essex Market.....	120 84	88 35	78 85	110 20	398 24
Centre Market.....	294 50	211 66	188 29	325 28	1,019 73
Clinton Market.....	278 24	204 25	174 61	210 60	874 00
Union Market.....	93 29	67 45	37 24	34 01	231 99
Tompkins Market.....	178 41	120 84	100 06	180 50	580 81
Jefferson Market.....	111 72	87 02	84 55	117 04	400 33
First District Police Court.....	239 40	209 19	199 69	239 59	887 87
Second District Police Court.....	60 50	34 77	34 77	64 00	200 04
Third District Police Court.....	71 25	44 27	39 14	76 38	231 04
Fourth District Police Court.....	81 01	51 30	25 38	39 03	195 72
Fifth District Police Court.....	25 00	12 00	6 00	17 00	60 00
Court of Special Sessions.....	2 85	1 33	1 14	1 90	7 22
Second District Civil Court.....	21 09	15 39	16 53	22 80	75 81
Fourth District Civil Court.....	1 71	2 09	1 90	3 04	8 74
Fifth District Civil Court.....	8 17	3 61	2 66	4 94	19 38
Sixth District Civil Court.....	19	19	75	1 52	2 66
Eighth District Civil Court.....	3 61	3 80	3 99	4 94	16 34
Ninth District Civil Court.....	3 60	2 80	80	2 20	9 40
Marine Court.....	8 17	6 84	5 70	9 88	30 59
Court Room, Brown-stone Building.....	32 11	28 88	23 18	48 45	132 62
New Court-house.....	987 62	856 52	714 59	1,115 49	3,674 22
City Hall.....	672 79	512 05	462 08	685 14	2,332 06
Receiver of Taxes' Office.....	268 47	150 86	78 28	309 70	807 31
Assessors of Personal Taxes Office.....	5 32	3 99	1 14	5 13	15 58
Corporation Attorney's Office.....	47 50	44 84	28 31	49 74	167 39
Pipe Yard, Rivington street.....	4 56	2 66	1 71	4 94	13 87
Department of Buildings.....	7 60	6 84	4 75	7 98	27 17
County Jail.....	523 07	460 18	367 84	528 77	1,879 86
South Gate-house.....	19 60	9 60	7 60	14 00	50 80
Engineer of Boulevards' Office.....	60	20	.....	40	1 20
Engine-house, High Bridge.....	142 20	104 80	99 40	123 80	470 20
Clock, Third District Court-house Tower.....	.....	.....	49 40	138 51	187 91
Photometrical Rooms, Grand street.....	28 57	32 81	8 36	21 87	91 71
Photometrical Rooms, Seventy-ninth street.....	22 17	27 63	9 8	5 80	50 58
Armory, Fifth Regiment.....	94 62	62 70	51 87	83 41	292 60
Armory, Seventh Regiment.....	277 59	170 81	42 75	230 85	722 00
Armory, Eighth Regiment.....	58 05	38 70	16 65	19 88	133 28
Armory, Ninth Regiment.....	595 40	372 02	124 33	512 43	1,604 24
Armory, Eleventh Regiment.....	93 10	64 03	45 03	80 13	282 34
Armory, Twelfth Regiment.....	182 97	173 09	45 41	234 08	635 55
Armory, Twenty-second Regiment.....	278 16	330 60	235 60	435 67	1,280 03
Armory, Sixty-ninth Regiment.....	99 37	67 45	48 07	108 68	323 57
Armory, Seventy-first Regiment.....	171 00	128 82	60 23	190 95	551 00
Armory, Third Regiment, Cavalry.....	61 94	32 30	19 19	57 75	171 19
Armory, Separate Troop "A," Cavalry.....	42 75	39 33	10 07	43 32	135 47
Armory, Separate Troop "B," Cavalry.....	44 95	17 29	16 02	44 84	123 69
Armory, Battery "B," Artillery.....	4 94	6 46	6 65	5 89	23 94
Armory, Battery "K," Artillery.....	6 84	8 74	2 85	11 40	29 83
Public Bath, Gouverneur Slip.....	.....	6 45	50 16	9 50	66 12
Public Bath, Battery.....	.....	.....	28 12	7 41	35 53
Public Bath, Bethune street.....	.....	7 60	48 64	6 46	62 70
Public Bath, Fifth street, E.R.....	.....	7 22	37 43	4 75	49 40
Public Bath, Thirty-fifth street, N.R.....	.....	6 52	21 35	2 35	30 22
Public Bath, Thirty-seventh street, E.R.....	.....	6 53	31 96	5 60	44 09
Public Bath, One Hundred and Fourteenth street, E.R.....	.....	4 40	39 20	7 00	50 60
Lighting Public Markets (Pay Rolls).....	285 00	285 00	285 00	285 00	1,140 00
Cleaning Photometrical Room (Pay Rolls).....	15 00	15 00	15 00	15 00	60 00
Lamp-posts.....	.....	1,329 25	1,155 25	1,842 50	4,327 00
Lamp-stands, Twenty-third and Twenty-fourth Wards.....	369 50	369 50	739 00	.....	1,478 00
Street Lamps.....	450 00	1,500 00	935 00	1,350 00	4,235 00
Street Lamps, Twenty-third and Twenty-fourth Wards.....	300 00	.....	300 00	.....	600 00
Boulevard Lamps.....	942 50	200 00	2,085 00	895 00	5,022 50
Crossheads.....	.....	186 00	227 50	40 00	453 50
Crossheads, Twenty-third and Twenty-fourth Wards.....	93 00	.....	45 00	90 00	228 00
Lamp-irons.....	.....	185 00	216 00	396 00	797 00
Lamp-irons, Twenty-third and Twenty-fourth Wards.....	74 00	.....	.....	.....	74 00



	First Quarter ending March 31.	Second Quarter ending June 30.	Third Quarter ending September 30.	Fourth Quarter ending December 31.	Total.
Lamp Brackets.....				\$60 00	\$60 00
Glass.....		\$27 50			27 50
Street Signs, Twenty-third and Twenty-fourth Wards.....	\$111 00		\$92 50	74 00	277 50
Street Signs, Twenty-third and Twenty- fourth Wards.....	35 00		951 78	78 26	1,065 04
Tracing-paper, etc.....	140 00				140 00
Supplies for Photometrical Rooms.....	4 40	2 00	6 80	1 00	14 20
Lamp Maps.....	3 50	179 72	332 64	79 95	595 81
Iron Bolts.....		12 00	234 00	90 00	336 00
Gansevoort square, laying gas-mains.....			11 25		11 25
Granite Base.....			425 00		425 00
Metal Frames for House-numbers in Lamps.....			73 00		73 00
Painting Park Lamps.....			10 00		10 00
Candleabras, Fifth avenue, repairing, etc.....			350 75		350 75
Temporary Lamps for One Hundred and Fifty-fifth street.....			110 24		110 24
Photometrical Rooms, Grand street—Rent.....	87 50	87 50	87 50	34 12	34 12
Photometrical Rooms, Seventy-ninth street—Rent.....	75 00	75 00	75 00	350 00	350 00
Traveling Expenses.....	77 50	75 00	79 90	77 70	313 60
Fitting up New Lamps.....	414 00	364 00	766 00	2,549 96	4,093 96
Fitting up New Lamps, Twenty-third and Twenty-fourth Wards.....	270 00	490 00	350 00	806 00	1,916 00
Resetting and Replacing Lamp-posts.....	314 50	1,450 00	1,638 50	2,984 00	6,387 00
Resetting and Replacing Lamp-posts, Twenty-third and Twenty-fourth Wards.....		114 00	70 50	621 00	805 50
Lighting Public Lamps.....	49,517 94	72,893 76	65,625 52	104,591 82	292,629 04
Lighting Public Lamps, Twenty-third and Twenty-fourth Wards.....	20,859 73	31,471 52	31,968 83	43,748 61	128,048 69
Totals.....	\$82,030 85	\$117,197 21	\$114,449 30	\$169,234 29	\$482,911 65

## RECAPITULATION.

Gas to Public Buildings.....	\$7,591 78	\$5,881 96	\$4,757 83	\$7,890 88	\$26,122 45
Supplies for Public Lamps, etc.....	1,975 40	4,162 47	8,095 62	5,879 02	20,111 51
Supplies for Public Lamps, etc., Twenty- third and Twenty-fourth Wards.....	1,087 50	369 50	1,176 50	164 00	2,797 50
Resetting and Repairing Lamp-posts.....	314 50	1,450 00	1,638 50	2,984 00	6,387 00
Resetting and Repairing Lamp-posts, Twenty-third and Twenty-fourth Wards.....		114 00	70 50	621 00	805 50
Fitting-up New Lamps.....	414 00	364 00	766 00	2,549 96	4,093 96
Fitting-up New Lamps, Twenty-third and Twenty-fourth Wards.....	270 00	490 00	350 00	806 00	1,916 00
Lighting Public Lamps.....	49,517 94	72,893 76	65,625 52	104,591 82	292,629 04
Lighting Public Lamps, Twenty-third and Twenty-fourth Wards.....	20,859 73	31,471 52	31,968 83	43,748 61	128,048 69
Totals.....	\$82,030 85	\$117,197 21	\$114,449 30	\$169,234 29	\$482,911 65

## EXHIBIT "B."

Summary of the Appropriations for "Lamps and Gas for 1879," showing the Amount of Expenditures during the year, with the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Lamps and Gas, 1879,".....	\$524,000 00
Amount of vouchers drawn in first quarter ending March 31.....	\$82,030 85
Amount of vouchers drawn in second quarter ending June 30.....	117,197 21
Amount of vouchers drawn in third quarter ending September 30.....	114,449 30
Amount of vouchers drawn in fourth quarter ending December 31.....	169,234 29
Total expenditures for the year 1879.....	482,911 65
Balance.....	\$41,088 35
Add amount transferred by Board of Apportionment, as follows:	
July 18. From appropriation "Maintenance and Government of Parks and Places —for Supplies, etc.".....	4,000 00
	\$45,088 35
Deduct amounts transferred by Board of Apportionment, as follows:	
May 20. To appropriation "Aqueduct, Repairs and Maintenance".....	\$20,000 00
Aug. 1. To appropriation "Expenses, Altering Map of the City west of Eighth avenue, between One Hundred and Forty-fifth and One Hundred and Fifty-fifth streets".....	2,000 00
Sept. 30. To appropriation "Repairs and Renewal of Pavements".....	6,000 00
" 30. To appropriation "Repairing and Renewal of Pipes and Stop-cocks".....	6,000 00
" 30. To appropriation "Sewers, Repairs and Cleaning".....	6,300 00
" 30. To appropriation "Salaries, Sewerage System".....	4,700 00
Total transfers.....	45,000 00
Surplus balance.....	\$88 35

## EXHIBIT "C."

Summary of the Appropriation for "Salaries—Lamps and Gas, for 1879," showing the Amount of Expenditures during the Year, with the Balance standing to the Credit of the Appropriation.

Amount appropriated for "Salaries, Lamps and Gas, 1879".....	\$6,000 00
Amount of vouchers drawn in first quarter ending March 31.....	\$1,304 00
Amount of vouchers drawn in second quarter ending June 30.....	1,352 00
Amount of vouchers drawn in third quarter ending September 30.....	1,512 00
Amount of vouchers drawn in fourth quarter ending December 31.....	1,504 00
Total expenditures for the year 1879.....	5,672 00
Balance.....	\$328 00
Deduct amount transferred by Board of Apportionment, viz.:	
Nov. 29. To appropriation "Boulevard, Roads, and Avenues, Maintenance of".....	300 00
Surplus balance.....	\$28 00

## EXHIBIT "D."

Summary of the "Lamp Account," showing the Number of New Lamps Lighted, Old Lamps Relighted, and Number Discontinued by each Gas Company during the Quarter ending December 31, 1879, with a Recapitulation for the Year.

NEW YORK GAS-LIGHT COMPANY.	
Number of lamps burning September 30, 1879.....	3,265
Number of new lamps lighted during the quarter.....	19
Number of old lamps relighted during the quarter.....	3
Less lamps discontinued during the quarter.....	7
Number of lamps burning December 31, 1879.....	3,280
MANHATTAN GAS-LIGHT COMPANY.	
Number of lamps burning September 30, 1879.....	6,706
Number of new lamps lighted during the quarter.....	74
Number of old lamps relighted during the quarter.....	2
Less Lamps discontinued during the quarter.....	2
Number of lamps burning December 31, 1879.....	6,780

## METROPOLITAN GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	4,038
Number of new lamps lighted during the quarter.....	48
Number of old lamps relighted during the quarter.....	5
Less lamps discontinued during the quarter.....	5
Number of lamps burning December 31, 1879.....	4,086

## NEW YORK MUTUAL GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	587
Number of new lamps lighted during the quarter.....	2
Number of old lamps relighted during the quarter.....	
Less lamps discontinued during the quarter.....	589
Number of lamps burning December 31, 1879.....	586

## HARLEM GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	4,463
Number of new lamps lighted during the quarter.....	55
Number of old lamps relighted during the quarter.....	35
Less lamps discontinued during the quarter.....	4,553
Number of lamps burning December 31, 1879.....	4,546

## CENTRAL GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	1,783
Number of new lamps lighted during the quarter.....	12
Number of old lamps relighted during the quarter.....	1
Less lamps discontinued during the quarter.....	1,796
Number of lamps burning December 31, 1879.....	1,795

## NORTHERN GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	1,010
Number of new lamps lighted during the quarter.....	80
Number of old lamps relighted during the quarter.....	
Less lamps discontinued during the quarter.....	1,090
Number of lamps burning December 31, 1879.....	1,090

## YONKERS GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	72
Number of new lamps lighted during the quarter.....	
Number of old lamps relighted during the quarter.....	
Less lamps discontinued during the quarter.....	72
Number of lamps burning December 31, 1879.....	72
Total burning on streets, avenues, and piers, December 31, 1879.....	22,235

## RECAPITULATION FOR QUARTER.

Number of lamps burning September 30, 1879.....	21,924
Number of new lamps lighted during the quarter.....	290
Number of old lamps relighted during the quarter.....	46
Less lamps discontinued during the quarter.....	22,260
Total number of lamps burning on streets, avenues, and piers, December 31, 1879.....	22,235

## PUBLIC PARKS LAMP ACCOUNT.

## NEW YORK GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	270
Number of old lamps relighted during the quarter.....	2
Number of lamps burning December 31, 1879.....	272

## NEW YORK MUTUAL GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	439
Number of new lamps lighted during the quarter.....	2
Number of lamps burning December 31, 1879.....	441

## METROPOLITAN GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	116
Number of lamps burning December 31, 1879.....	116

## HARLEM GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	56
Number of lamps burning December 31, 1879.....	56

## CENTRAL GAS-LIGHT COMPANY.

Number of lamps burning September 30, 1879.....	16
Number of lamps burning December 31, 1879.....	16
Total burning on Public Parks and Places December 31, 1879.....	901

## RECAPITULATION FOR QUARTER.

Number of lamps burning September 30, 1879.....	897
Number of new lamps lighted during the quarter.....	2
Number of old lamps relighted during the quarter.....	2
Total burning on Public Parks and Places December 31, 1879.....	901

## RECAPITULATION FOR YEAR.

Number of lamps burning December 31, 1878.....	21,539
Number of new lamps lighted during the year.....	660
Number of old lamps relighted during the year.....	197
Number of lamps transferred from Department of Parks, July 1.....	637
Number of new lamps lighted on Parks.....	150
Number of old lamps relighted on Parks.....	117
Less lamps discontinued during the year.....	23,300
Less Park lamps discontinued.....	3
Total number of lamps burning December 31, 1879.....	23,136



## EXHIBIT "E."

Statement giving the Illuminating Power of the Gas supplied by the several Gas-light Companies during the Quarter ending December 31, 1879, 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.	NEW YORK GAS CO.			MANHATTAN GAS CO.			NEW YORK MUTUAL GAS CO.			METROPOLITAN GAS CO.			HARLEM GAS CO.		
	ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.		
During the Week Ending	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.
Oct. 4...	15.98	16.45	16.16	16.40	16.90	16.70	19.09	20.56	19.74	16.88	17.62	17.21	16.11	16.72	16.38
" 11...	15.42	16.12	15.88	16.62	17.24	16.89	18.80	19.80	19.22	16.74	18.09	17.33	16.11	17.03	16.61
" 18...	15.64	16.93	16.30	16.02	17.32	17.44	18.52	20.90	19.57	16.55	17.12	16.82	15.88	16.52	16.24
" 25...	16.36	16.64	16.34	16.84	17.84	17.40	20.21	21.27	20.53	16.42	17.35	17.08	15.66	16.58	16.25
Nov. 1...	16.26	16.78	16.57	16.66	17.51	16.97	18.93	20.56	19.91	16.44	17.99	17.21	15.76	16.86	16.22
" 8...	16.25	17.01	16.66	16.70	17.48	17.01	18.40	20.30	19.01	16.59	17.73	17.00	16.48	16.66	16.58
" 15...	16.68	17.38	17.11	17.02	17.27	17.15	18.92	20.68	19.92	16.42	17.46	16.87	15.48	16.47	15.83
" 22...	17.06	17.69	17.34	17.05	17.40	17.27	18.92	20.75	19.69	16.33	16.95	16.64	15.68	16.22	16.03
" 29...	16.88	17.32	17.07	16.97	17.46	17.17	19.44	21.64	20.13	16.34	17.97	17.05	15.70	16.70	16.19
Dec. 6...	17.05	17.38	17.23	16.41	17.19	16.94	18.64	21.64	19.68	16.53	17.04	16.89	16.08	16.35	16.22
" 13...	16.91	17.19	17.03	16.53	17.13	16.90	18.51	19.36	18.94	16.41	17.12	16.69	15.98	16.53	16.20
" 20...	15.57	16.70	16.27	15.81	16.61	16.13	17.93	19.24	18.53	16.84	17.21	16.94	16.23	16.48	16.37
" 27...	16.00	16.80	16.41	16.42	17.31	16.83	17.52	19.56	18.82	16.54	16.94	16.71	15.79	16.34	16.18

## Average Illuminating Power, in Candles, for the Year 1879.

FOR WHAT TIME.	NEW YORK GAS CO.			MANHATTAN GAS CO.			NEW YORK MUTUAL GAS CO.			METROPOLITAN GAS CO.			HARLEM GAS CO.		
	ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.			ILLUMINATING POWER IN CANDLES.		
MONTH.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.
January...	15.05	17.49	16.60	15.30	17.04	15.65	17.41	19.10	18.40	16.02	17.68	16.71	15.28	17.07	16.41
February...	15.02	16.78	16.26	16.35	17.97	17.37	17.76	20.28	19.08	15.24	17.71	16.50	15.39	16.62	16.08
March...	15.56	16.92	16.10	15.88	18.02	16.99	16.89	19.34	18.56	16.32	17.54	16.80	16.04	17.15	16.50
April...	16.13	17.24	16.19	16.19	17.35	16.97	18.38	20.46	18.87	16.05	17.13	16.73	15.92	17.03	16.57
May...	15.92	16.99	16.40	16.68	17.91	17.20	18.00	19.32	18.57	16.20	17.70	17.03	14.84	17.01	16.28
June...	15.93	17.27	16.70	15.88	17.57	17.01	17.71	18.32	18.19	17.21	16.62	16.07	16.03	17.71	16.62
July...	15.98	17.07	16.55	15.70	17.36	17.19	17.63	18.50	17.81	16.59	16.65	17.92	15.35	17.06	16.33
August...	16.01	17.29	16.73	16.51	17.74	17.15	17.57	19.78	18.55	16.98	18.47	17.67	15.98	17.19	16.29
September...	16.13	17.19	16.54	16.29	17.73	16.97	17.82	20.72	19.46	16.78	18.09	17.11	15.66	17.03	16.37
October...	15.42	16.93	16.22	16.02	17.84	17.01	18.52	21.27	19.76	16.42	18.09	17.11	15.66	17.03	16.37
November...	16.25	17.60	16.95	16.66	17.51	17.11	18.20	20.75	19.73	16.33	17.99	16.95	15.48	16.80	16.19
December...	15.57	17.38	16.73	15.81	17.31	16.70	17.52	21.06	18.99	16.41	17.21	16.81	15.79	16.53	16.24
Year....	Average....	16.56	Average....	16.94	Average....	18.83	Average....	17.15	Average....	16.35	Average....	16.35	Average....	16.35	Average....
Dist'ce from Gas Works	2 4-100 Miles.			1 83-100 Miles.			1 79-100 Miles.			3 33-100 Miles.			1 75-100 Miles.		

The tests for the foregoing were made according to the rules of the London Board of Gas Referees, on a 60-inch bar "Bunsen Photometer," and with a "Sugg-Letheby" burner, having 15 holes and a 7-inch chimney.

## EXHIBIT "F."

## AGREEMENT.

This agreement, made, entered into and concluded, this sixteenth day of April, in the year one thousand eight hundred and seventy-nine, by and between the Mayor, Aldermen and Commonalty of the City of New York, parties of the first part, by the Commissioner of Public Works of said city, acting in conjunction with the Mayor and Comptroller thereof, and the New York Gas-light Company of said city, party of the second part:

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

In the District lying south of the centre of Grand street, from the East river to Sullivan street, through Sullivan street to Canal street, and through Canal street to the Hudson river, for and during the term of one year, commencing on the first day of May, A. D. 1879, and ending on the 30th day of April, A. D. 1880, both days inclusive. And during the same period to repair and paint the lamp-posts and lanterns of such lamps, and replace the cocks, tubes and burners, crossheads, lamp-irons, and lanterns thereof, and clean and reglaze such lanterns; and to fit up, light and extinguish such new lamps as may be required by the said parties of the first part in said portion of said city, and to repair, paint, clean, reglaze, and replace such new lamps and the appurtenances thereof.

B. And it is further agreed that the said parties of the first part shall have the right to order the pipes or gas-mains of the party of the second part to be extended and new lamps to be erected in and along all the streets, avenues, and public places within the limits aforesaid or adjacent thereto, providing the lamps lighted by the said parties of the second part shall be lighted by the material commonly called illuminating gas.

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

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

E. If the proposal or bid of the party hereto of the second part included any lamps with which the pipes or mains of said party of the second part were not connected at the time of the making such proposal or bid, thirty days from the date of the execution of this agreement, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner of Public Works, will be allowed the party of the second part in which to connect such pipes or mains with such lamps: Provided, the said party of the second part have or shall procure a grant or franchise from the Mayor, Aldermen and Commonalty, authorizing the laying of gas-mains in the streets or parts of streets in which the said lamps are located.

F. But no payment on account of any such lamps will be made to the party of the second part for the time so allowed, nor until the same shall have been connected with the mains of the party of the second part, nor will payment be made on account of any lamp except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the following

## Specifications.

1. Lighting.—The lamps shall be lighted during such times as the public lamps throughout the City of New York may be required to be lighted by the regulations of the said parties of the first part, in accordance with a Time-table to be furnished by the Commissioner of Public Works. Also, the Department of Public Works may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times during the continuance of this contract; and the said party of the second part shall and will light the same, and continue them burning, in accordance with any and every direction of the Department of Public Works to that effect: Provided that, if in compliance with the direction of the Department of Public Works, the whole number of hours during which the said lamps, or a portion of them, are kept burning, shall exceed the number of hours specified in the time-table to be furnished by the Commissioner of Public Works, which time-table shall aggregate a total of four thousand hours for the term, then, in that case, the said party of the second part shall be entitled to claim and receive, for such additional number of hours during which the public lamps, or such portion of them in the district aforesaid, are kept burning in accordance with such direction of the said Department of Public Works, an additional compensation, equivalent to a pro rata increase of the compensation hereinafter allowed, proportioned to the increased number of hours beyond the said number, and the number of lamps so kept burning. And also, provided, that if, in compliance with the direction

of the said Department of Public Works, the number of hours during which the said lamps, or any portion of them, are kept burning, shall be less than the aforesaid number of four thousand per term, then, in that case, there shall be deducted an amount equivalent to a pro rata decrease of the compensation hereinafter allowed, proportioned to the decrease of the number of hours below the said number, and to the decrease of the number of lamps so kept burning. And also, provided, that said Department of Public Works shall have the right at any time to increase or diminish the number of lamps awarded to be lighted by the party of the second part under this contract. It is expressly agreed that the lamps shall be lighted either by the means of a torch, or the use of a ladder, and that the lamp-lighters will not be permitted to climb the lamp-post for such purpose. The party of the second part to keep the service-pipes and stand-pipes (if any are used) of said lamps cleared of all obstructions and in good order, at its own cost and expense, except such service-pipes as shall have been broken or removed by the construction of sewers.

2. Illuminating Material, Quality of.—If the material to be used under this agreement shall be illuminating gas, then such gas shall be of such an illuminating power, by photometrical test made at a distance of not less than one mile from the place of manufacture, that an Argand burner having fifteen holes and a seven-inch chimney, and consuming at the rate of five cubic feet of gas per hour, shall give a light equal to the light of sixteen sperm candles, of six to the pound, and each burning at the rate of one hundred and twenty grains of spermaceti per hour, and as regards purity, free, within limits not injurious to public health, from ammonia, sulphuretted hydrogen, and other sulphur or noxious compounds. In case the illuminating material shall be other than what is commonly known as illuminating gas, then the quantity of light produced by such material shall be equal to the quantity (by photometrical test) produced by sixteen candle coal gas consumed by the gas-burners called for in this agreement.

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

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

4. Cleaning.—All the lamps shall be kept in a cleanly condition, and they shall be thoroughly cleaned at least twice in each week, and oftener if the Department of Public Works shall direct or require the same.

5. Repairing and Reglazing.—The lamps to be reglazed within twenty-four hours after the same shall be broken. The glass and putty for that purpose to be furnished by the party of the second part without cost to the city. The lanterns to be repaired and kept in repair by the party of the second part at its own cost and expense.

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

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

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

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

10. Fitting up New Lamps.—New lamps are to be fitted up on any street, avenue, pier or public place, wherever the same may be required by the Department of Public Works. The butts and columns are to be placed in a strictly perpendicular position, the socket of the butt to be caulked with yarn gasket and melted lead, the lead to be tamped and then trimmed even with rim of butt. The service-pipe and stand-pipe to be of three-quarter inch wrought-iron pipe, the service-pipe to have a direct fall to the main, the service-pipe and bend on bottom of stand-pipe to rest on solid earth to prevent the same from settling and forming a trap; the earth is to be thoroughly tamped about the butt as the same is thrown into the excavation. Bracket-lamps are to be fitted up in lieu of lamp-posts, when required, the brackets and stand-pipes to be fastened to the wall in a firm and secure manner. The service-pipes, stand-pipes and fittings are to be furnished and connected by the party of the second part; the lamp-posts, lamp-irons, lanterns, and brackets will be furnished by the parties of the first part, through the Department of Public Works, to the party of the second part. New lamps, which may be required to burn any other material than illuminating gas, to be fitted up without service-pipes or stand-pipes. All new lamp-posts are to be painted immediately after the same shall have been erected.

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

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

13. Street Signs.—The glass street-signs to be placed and retained in their proper places and positions in the lantern. The signs to be furnished by the Department of Public Works to the party of the second part.

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

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

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

For furnishing the aforesaid illuminating material for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, crossheads, lamp-irons, and lanterns thereto, for the aforementioned period of one year, the sum of twelve dollars (\$12).

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

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

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

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

For each lamp-post reset, the sum of ten dollars (\$10).

For each new lamp fitted up, the sum of ten dollars (\$10).

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

I. And it is further agreed, that the said party of the second part shall have the right to lay pipes at any time between May 1, 1879, and April 30, 1880, upon giving forty-eight hours' written notice to the Department of Public Works of its intention to break up or open any street, avenue, or public place, or part thereof, or to remove any part of the pavement thereof, for the purpose of laying or repairing the pipes to conduct the said gas. And the party of the second part shall, whenever it shall break up or open any street, avenue, or public place, replace the earth which may be removed in so doing before sunset of the day on which such opening shall be made (the earth to be thoroughly tamped as the same is thrown into the trench or excavation), and replace the pavement, and repave and repair the same in such reasonable time and manner as the Department of Public Works may direct, and in as good and firm a manner as such street, avenue, or public place, or part thereof, was in before being broken up for the purpose aforesaid, and shall, from time to time, as required by the Department of Public Works, readjust and fill and finish the same as long as, in the opinion of the Department of Public Works, may be necessary on account of



the settling of the earth or pavement caused by the opening. Also, all such repairs as shall at any time become necessary to said pavement, by reason of laying the said pipe or conductors, shall be made and done by said party of the second part, at its own cost and expense. And no such street, avenue, or public place, or part thereof, shall or will be so broken up or opened, or the pavement thereof removed, or be again filled up or repaired, except under the direction and supervision of a competent person, to be appointed by the Department of Public Works; but the said party of the second part shall not be called upon to pay any sum, to any party or parties, for the inspection of any pavement which it may have occasion to replace. And it is further agreed, that the said party of the second part shall and will so conduct the manufacture and manufactories of gas as not to create a nuisance, and that it will in all things be governed by such reasonable rules and regulations as the said Department of Public Works may from time to time establish or direct, relative to the opening of such streets, avenues, or public places, or parts thereof, and laying down the pipes and conductors, and for lighting, cleaning, and protecting the lamps and street signs aforesaid. And it is hereby expressly provided, that nothing herein contained shall be construed or deemed as granting to the said party of the second part, any sole or exclusive right or privilege, or as preventing the said parties of the first part from granting the like privileges as are hereby given to the said party of the second part, to any other company, persons, or parties whatsoever, or as preventing any person or persons residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas, his or their own house, store, or manufactory, or premises.

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

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

L. And it is further agreed, that on or after the first day of each and every month, from the month of June, 1879, to the month of May, 1880, both months inclusive, the party of the second part shall furnish proof, to the satisfaction of the Commissioner of Public Works, that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid, during the preceding month, and particularly that it has furnished the illuminating material of the quality hereinbefore specified; upon so doing, the Commissioner shall certify the fact, and in his certificate state the amount to which the party of the second part shall be entitled for all the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the party of the second part therefor the sum to which it shall be so entitled; and without such proof, to the satisfaction of the Commissioner of Public Works, he shall not make any certificate nor requisition on the Comptroller; and the party of the second part shall also furnish proof to the satisfaction of the Comptroller that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid, and without such proof the said party of the second part shall not be or become entitled to any payment in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of the city, he shall, within twenty days thereafter, pay to the party of the second part the amount thereof in lawful money.

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

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

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

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

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

Witness:

(Signed) JOHN S. ROUTH,	(Signed) EDWARD COOPER,	[SEAL].
	Mayor of the City of New York.	
	(Signed) JOHN KELLY,	[SEAL].
	Comptroller of the City of New York.	
	(Signed) ALLAN CAMPBELL,	[SEAL].
	Commissioner of Public Works.	
Attest: (Signed) SAMUEL CARTER,	(Signed) THE NEW YORK GAS-LIGHT COMPANY,	[SEAL].
Secretary.	THOMAS K. LEES, President.	

EXHIBIT "G."

Time Table for Lighting and Extinguishing the Public Lamps for the Year 1880.

DATE.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.	DATE.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.
January 1.....	H.M. 4.30	H.M. 6.30	July 2.....	H.M. 7.30	H.M. 3.15
" 8.....	4.40	6.30	" 9.....	7.30	3.15
" 15.....	4.50	6.25	" 16.....	7.20	3.15
" 22.....	5.00	6.25	" 23.....	7.20	3.15
" 29.....	5.05	6.15	" 30.....	7.10	3.30
February 5.....	5.10	6.10	August 6.....	7.10	3.45
" 12.....	5.20	5.55	" 13.....	6.55	4.00
" 19.....	5.30	5.55	" 20.....	6.45	4.10
" 26.....	5.30	5.45	" 27.....	6.30	4.20
March 5.....	5.40	5.35	September 3.....	6.15	4.30
" 12.....	5.50	5.20	" 10.....	6.05	4.40
" 19.....	6.00	5.10	" 17.....	5.55	4.50
" 26.....	6.10	4.55	" 24.....	5.40	5.00

DATE.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.	DATE.	BEGIN TO LIGHT.	BEGIN TO EXTINGUISH.
April 2.....	H.M. 6.15	H.M. 4.40	October 1.....	H.M. 5.30	H.M. 5.00
" 9.....	6.25	4.30	" 8.....	5.20	5.10
" 16.....	6.30	4.20	" 15.....	5.10	5.20
" 23.....	6.40	4.10	" 22.....	5.00	5.30
" 30.....	6.45	4.00	" 29.....	4.45	5.35
May 1.....	6.45	4.00	November 5.....	4.40	5.45
" 7.....	6.55	3.40	" 12.....	4.30	6.00
" 14.....	7.00	3.30	" 19.....	4.25	6.00
" 21.....	7.10	3.15	" 26.....	4.20	6.10
" 28.....	7.15	3.15			
June 4.....	7.25	3.15	December 3.....	4.20	6.15
" 11.....	7.25	3.15	" 10.....	4.20	6.20
" 18.....	7.30	3.15	" 17.....	4.20	6.20
" 25.....	7.30	3.15	" 24.....	4.20	6.25

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; all the glass must be thoroughly cleaned at least twice in each week, and oftener if necessary. Lighters must bear in mind that with clean glass a greater brilliancy is obtained from the flame. In the winter season the snow must be brushed from the lanterns after each snowfall. Dirty and disordered lamps will be considered as evidence of a careless and incompetent lamp-lighter.
- III. The glass street signs must be kept in their proper positions. The sign bearing the name of any avenue or a 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.
- V. If a lighter, on extinguishing the 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. If he should find the tin worn out or broken, he must take the lantern to his superintendent for repairs.
- VI. The burners must be kept in condition to burn with a full, clear, steady flame, and not with a single or forked jet.
- 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, 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-post taken down or broken.
- X. Lighters must not break the lamp bottoms, nor the sheet-iron 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.

Document "K."

CITY OF NEW YORK, DEPARTMENT OF PUBLIC WORKS,  
BUREAU OF REPAIRS AND SUPPLIES,  
SUPERINTENDENT'S OFFICE, ROOM 18, CITY HALL,  
NEW YORK, January 10, 1880.

ALLAN CAMPBELL, Esq., Commissioner of Public Works:

SIR—In compliance with your request, I submit a report of the transactions of this Bureau for the three months ending December 31, 1879, and a summary of the principal work of the year.

The exhibits marked "A," "B," and "C," hereto annexed, show the number and amount of certified vouchers drawn during the three months, also the condition of the appropriations upon which they have been drawn and where the money has been applied. The other exhibit shows the number and amount of vouchers drawn during the year.

During the quarter the iron railings, window guards, etc., of City Hall have been repaired and painted, and the gutters on roof repaired. The roof of Essex Market, where bell tower stood, has been restored, a new boiler has been put in, and a number of closets built in Ninth Regiment Armory. The boiler has been repaired and a dangerous chimney made secure at Seventh District Court-house.

In the New County Court-house the County Clerk's offices have been connected with the heating apparatus in basement; chandeliers have been put up in office of Commissioner of Jurors, the Surrogate's Court and offices have been removed to the new addition and fitted up with new carpet, linoleum shades, etc., the office of Collector of Assessments has been removed to part of the Surrogate's old quarters, which has been fitted up for the purpose, a safe in County Clerk's office has been fitted up with new pigeon-holes.

At Armory of Troop A, Nos. 9 and 13 West Thirteenth street, a number of closets have been built.

Numerous repairs were made in the markets. The awnings were taken down and stowed away. The stoves were repaired and put up and the usual supply of fuel furnished.

In pursuance to act of Legislature, a new floating bath, to be located at East Seventeenth street, was built, and is now on storage at Gowanus basin. The other 7 floating baths were towed to Gowanus Basin about October 15.

The principal items of work during the year were: Completing the cleaning of the marble fronts and restoring the brown stone ashlar and back stoop of the City Hall, rebuilding the dog pound, building an iron fence at county jail, providing means for illuminating clock dials at Third District Court-house, repairing Fulton Market after two fires, fitting up offices and moving in the Commissioner of Jurors, Collector of Assessments, and Surrogate, building two new floating baths, overhauling and altering part of the heating apparatus in New County Court-house so as to improve its efficiency and save fuel, the usual work of caring for the buildings and offices, supplying fuel, etc., 1,894 tons anthracite and 42 tons of canal coal, 104¼ cords pine and 15½ cords hickory wood were purchased.

Respectfully submitted,  
THOMAS KEECH,  
Superintendent of Repairs and Supplies.

EXHIBIT "A."

Showing the Number and Amount of Vouchers drawn on account of the Appropriations therein named, from October 1 to December 31, 1879, inclusive.

TITLE OF APPROPRIATION.	NUMBER OF VOUCHERS.	AMOUNT.
Supplies for and Cleaning Public Offices.....	66	\$16,691 44
Salaries—Supplies for and Cleaning Public Offices.....	3	3,913 34
Public Buildings—Construction and Repairs.....	55	6,214 96
Salaries—Public Buildings—Construction and Repairs.....	3	550 62
Free Floating Baths.....	2	313 35
Free Floating Baths—Battery.....	5	250 00
Free Floating Baths—East Seventeenth street.....	4	7,163 73
Additional Free Floating Baths.....	4	249 10
Salaries—Free Floating Baths.....	3	1,734 00
Salaries—Janitors Civil and Police Courts.....	4	3,600 00
Totals.....	149	\$40,680 54



EXHIBIT "B."

*Showing the Amount of Expenditures for which Certified Vouchers have been drawn on account of the several Appropriations therein named, and also showing the Buildings, Courts, Departments, etc., to which the same has been charged, from October 1 to December 31, 1879, inclusive.*

[illegible]

## EXHIBIT "C."

*Showing the condition of the Appropriations of 1879, and Special Fund upon which Vouchers have been drawn, from October 1 to December 31, 1879, inclusive.*

Supplies for and Cleaning Public Offices—		
Balance September 30, 1879.....	\$12,658 21	
Transferred.....	5,500 00	
Vouchers drawn.....		\$18,158 21
		16,691 44
Liabilities (estimated).....		\$1,466 77
		1,459 23
Available balance.....		\$7 54
Salaries—Supplies for and Cleaning Public Offices—		
Balance September 30, 1879.....	\$3,548 68	
Transferred.....	450 00	
Vouchers drawn.....		\$3,998 68
		3,913 34
Available balance.....		\$85 34
Public Buildings—Construction and Repairs—		
Balance September 30, 1879.....		\$12,476 86
Transferred.....	\$4,300 00	
Vouchers drawn.....	6,214 96	
		10,514 96
Liabilities.....		\$1,961 90
		1,919 32
Available balance.....		\$42 58
Salaries—Public Buildings—Construction and Repairs—		
Balance September 30, 1879.....		\$603 50
Vouchers drawn.....		550 62
Available balance.....		\$52 88

Free Floating Baths—		
Balance September 30, 1879 .....		\$1,156 70
Transferred .....	\$350 00	
Vouchers drawn .....	313 35	
		663 35
Liabilities .....		\$493 35
		470 00
Available balance .....		\$23 35
Free Floating Baths (Battery)—		
Balance September 30, 1879 .....		\$469 76
Transferred .....	\$100 00	
Vouchers drawn .....	250 00	
		350 00
Liabilities .....		\$119 76
		80 00
		\$39 76
Free Floating Baths (East Seventeenth street)—		
Appropriation .....		\$9,000 00
Transferred .....	\$1,200 00	
Vouchers drawn .....	7,163 73	
		8,363 73
Liabilities .....		\$636 27
		16 00
Available balance .....		\$620 27
Additional Free Floating Baths—		
Balance September 30, 1879 .....		\$264 33
Vouchers drawn .....		249 10
		\$15 23
Liabilities .....		
Available balance .....		\$15 23
Salaries—Free Floating Baths—		
Balance September 30, 1879 .....		\$1,805 06
Vouchers drawn .....		1,734 00
		\$71 06
Available balance .....		



Showing the Number and Amount of Vouchers Drawn during the Year 1879.

TITLE OF APPROPRIATION.	No. of Vouchers.	Amount.
Supplies for and Cleaning Public Offices, 1878.....	13	\$1,208 13
Supplies for and Cleaning Public Offices, 1879.....	273	64,267 23
Salaries for and Cleaning Public Offices, 1879.....	12	15,730 66
Public Buildings—Construction and Repairs, 1878.....	10	308 69
Public Buildings—Construction and Repairs, 1879.....	223	26,738 10
Salaries—Public Buildings—Construction and Repairs, 1879.....	12	1,947 12
Free Floating Baths, 1879.....	2	150 00
Free Floating Bath, Battery, 1879.....	13	1,656 65
Free Floating Bath, Seventeenth street, 1879.....	19	9,280 24
Salaries—Free Floating Baths, 1879.....	4	7,163 73
Additional Free Floating Baths.....	12	10,928 94
Salaries—Janitors Civil and Police Courts, 1879.....	17	4,431 59
Contingencies—Department of Public Works, 1879.....	4	3,600 00
	1	34 30
	615	\$147,450 78

## Document "L."

DEPARTMENT OF PUBLIC WORKS,  
BUREAU OF INCUMBRANCES, ROOM 13, CITY HALL,  
NEW YORK, January 5, 1880.

Hon. ALLAN CAMPBELL, Commissioner of Public Works:

SIR—I submit herewith a quarterly report of the operations of this Bureau for the quarter ending December 31, 1879, as also a condensed statement of the entire business during the year 1879:

Complaints received against obstructions and incumbrances on streets and sidewalks, 843— which in every case was followed by the service of an official notice to the offending party for the removal of such obstruction or incumbrance.

The number of removals to the Corporation Yard, or other suitable place, of merchandise, trucks, wagons, stands, stones, dirt, etc., etc., 106.

The expense of such removals (including 663 loads of stones, dirt, etc., from various parts of the city, was \$438.35.

The total expenses for the quarter, \$807.34.

Amount received from owners for redemption of articles seized..... \$33 00  
Amount received at sale at Corporation Yard, held November 10, 1879..... 256 98

Total amount received..... \$289 98

—which was duly paid over to the City Chamberlain.

Number of builders' permits issued, 1,334.

Number of permits to cut down trees, 10.

Number of special permits, 148.

Number of notices to repair sidewalks, 119.

During the year 1879 the total number of complaints received and for which notices were issued, 3,618.

Removals to Corporation Yard, etc., 275.

Removals of loads of stones, dirt, etc., 1,807.

Builders' permits issued, 6,106.

Permits to cut down trees, 35.

Permits for special purposes, 463.

Notices to repair sidewalks, 701.

Notices to repair vault covers, 7.

Total expenditure for the year, \$3,499.32.

Receipts from sales at Corporation Yard of merchandise, trucks, wagons, stands, etc., etc.,..... \$323 58

Received from owners for seizures redeemed..... 103 75

Received from sale of old iron, August 1, 1879..... 292 53

Total..... \$719 86

—which was all paid over to the City Chamberlain.

Within the last six months strenuous efforts have been made, with considerable success, to rid the sidewalks and streets approaching and contiguous to the Washington Market of the many stands and obstructions which in that locality had become a serious detriment to business and a nuisance and inconvenience to the large number of persons passing thereon. It is my intention, which I know will meet with your wishes, to extend the operations of this Bureau with the incoming year to other parts of the city, and to clear the sidewalks of the principal avenues and streets of the unsightly and obstructing stands, signs, etc., now encumbering them. There can be no doubt that there is room for great improvement in that direction, and public opinion, as well as the proper condition of our thoroughfares, demands the enforcement of such regulations as will render them passable and free for the public purposes for which they are intended. The law, duty, and necessity all point the way, and it is to be sincerely hoped that the different branches of the city government will be in accord and lend their aid, to the end that so desirable a result may be attained.

Yours respectfully,

JOSEPH BLUMENTHAL,  
Superintendent of Incumbrances.

## Document "M."

BUREAU OF WATER REGISTER,  
ROOM NO. 10, CITY HALL,  
NEW YORK, December 31, 1879.

Hon. ALLAN CAMPBELL, Commissioner of Public Works:

SIR—I herewith transmit statement showing the number of permits issued for Taps, the receipts for same, and for Building purposes, and Street openings for the year 1879:

The general collections for the nine months ending September, 1879, amounted to... \$1,382,274 08  
For the quarter ending December 31, 1879..... 236,448 42

Total for the year..... \$1,618,722 50

## TAPS.

Number of permits issued to tap the Croton-main..... 2,051  
Amount received for Taps..... \$8,705 50

## BUILDING PURPOSES.

Number of permits issued for Building purposes..... 705  
Amount received for building purposes..... \$18,687 34

## STREET OPENINGS.

The number of permits for street openings to repair water pipes..... 5,301

The water-rent for six thousand two hundred and fifty-three bars, exclusive of hotels, have been paid from May 1, to December 31, 1879.

For the same period of time, twelve hundred and twenty-six permits have been issued for using hose, for which \$12,882.30 was received, being an increase over last year of \$3,986.80.

In addition to the usual work, three thousand examinations have been made for extra families, bars, restaurants, saloons, etc., etc., during the past season; and two thousand complaints of various character have been received and adjusted.

All of which is respectfully submitted.

J. H. CHAMBERS, Water Register.

## EXECUTIVE DEPARTMENT.

It appearing by the application made to me on the first day of March, 1880, by fifty reputable householders and taxpayers of the City and County of New York, in the State of New York, certified upon oath before a Justice of the Supreme Court, that there is need in said city and county of a steam railway or railways for the transportation of passengers, mails, and freight, and thirty days not having expired since said application, now, in pursuance of the provisions of the act entitled "An act further to provide for the construction and operation of a steam railway or railways in counties of the State," passed June 18, 1875, I, Edward Cooper, Mayor of the City of New York, do hereby certify that I have this day appointed the following five persons, residents of said city and county, namely: Richard M. Hoe, John J. Crane, Gustav Schwab, Charles L. Perkins, and William M. Olliffe, to be Commissioners, under and in pursuance of the provisions of said act.

In witness whereof I have hereunto signed my name, and caused the seal of the Mayorality to be affixed, this sixth day of March, 1880.  
[SEAL.] EDWARD COOPER, Mayor.

## LAW DEPARTMENT.

The following schedules form a report of the transactions of the office of the Counsel to the Corporation for the week ending March 6, 1880.

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 re petition Hopper vs. Mott et al. to vacate assessment for Fifty-fourth street paving from Tenth to Eleventh avenues, confirmed October 2, 1874; and also in Fifty-first street, etc.

People ex rel. Thomas F. Relyea vs. The Board of Police Commissioners of N.Y. Certiorari to review removal of relator, a patrolman, from the force.

People, ex rel. Wm. W. Kinnaird vs. Board of Police Commissioners—Certiorari to review removal of relator from the force.

In re petition Franklin A. Paddock to vacate assessment for One Hundred and Twenty-third street paving, curbing, and flagging, from New avenue to Eighth avenue.

In re petition Caroline A. McCready to vacate assessment for regulating, paving, etc., One Hundred and Sixteenth street, from Avenue A to Sixth avenue (Eastern Boulevard).

John Cavanagh—Salary as Alderman for November and December, 1879, at \$4,000 per annum, \$666.66.

In re petition of Fanny M. Robinson to vacate assessment for underground drains, One Hundred and Seventy-third to One Hundred and Eighty-third streets, between Kingsbridge road and Harlem river.

In re petition of Douglas Robinson to vacate assessment for underground drains, One Hundred and Seventy-third to One Hundred and Eighty-third streets, between Kingsbridge road and Harlem river.

In re petition of Besson J. Austin—To vacate assessment for regulating and grading of Concord avenue, from Home street to Westchester avenue.

In re petition of John Franley—do do do

In re petition of Margaret Geraghty—do do do

In re petition of Francis McCabe—do do do

In re petition of John Tyrell—do do do

In re petition of Margaret Deering—do do do

In re petition of Bridget O'Hara—do do do

In re petition of L. Dere—do do do

In re petition of Peter P. Decker, trustee—do do do

In re petition of William Openhym to vacate assessment for regulating, grading, and paving One Hundred and Twenty-third street, from westerly line of New avenue to Eighth avenue, confirmed July 12, 1877.

People ex rel. John H. Emerick against The Board of Fire Commissioners of City of New York—Certiorari to review removal of relator, Superintendent of Telegraph in the Department.

In re Edward Roberts et al., executors, to vacate assessment for regulating, grading, curbing and flagging Second avenue, from Ninety-second to One Hundred and Eighth street.

In re Alicia Dempsey to vacate assessment for regulating, grading, curbing, guttering and flagging, and superstructure of Eastern Boulevard, One Hundred and Sixteenth street, from Avenue A to Sixth avenue.

Thomas Carroll—Salary as Alderman, for December, 1879, at \$4,000 per annum, \$333.33; summons only served.

Joseph P. Strack—Salary as Alderman, for December, 1879, at \$4,000 per annum, \$333.33; summons only served.

Michael Burns—Salary as Alderman, for December, 1879, at \$4,000 per annum, \$333.33; summons only served.

Nicholas Houghton—Salary as Alderman, for December, 1879, at \$4,000 per annum, \$333.33; summons only served.

Bernard Kenney—Salary as Alderman, for December, 1879, at \$4,000 per annum, \$333.33; summons only served.

## SUPERIOR COURT.

Frank Brown, Assignee of Terence Farley—To recover back amount of reduction of assessment for regulating, etc., Seventy-seventh street, from Ninth avenue to the Boulevard, \$1,348.58

George W. Morton (No. 2)—Balance of salary as Excise Commissioner, \$7,083.33.

## COURT OF COMMON PLEAS.

George A. Hoyt, to vacate and set aside a sale made for non-payment of assessment for Twelfth avenue opening, Ward Nos. 9, 10, 11, 12, 13, 14, 15, Block 1244, Twelfth Ward (\$191)—\$320.98.

Alexander D. Jarvis, Assignee of Joseph W. Fiske—Repairing and rebronzing drinking fountain West Broadway and Beach street, and East Broadway and Canal streets, \$19.25.

## SCHEDULE "B."

JUDGMENTS ENTERED AND ORDERS OF THE GENERAL AND SPECIAL TERMS.

George Caulfield—Order entered discontinuing action.

Allen R. Seaman—Order on remittitur entered.

Michael Finn—Order entered dismissing appeal with costs.

Isaac Sternberg—Judgment entered in favor of plaintiff for \$533.72, by consent.

Langstaff N. Crow—Judgment entered in favor of plaintiff for \$259.85 by consent.

James M. Crossman—Order entered discontinuing action without costs.

Mayor, etc., vs. James Slattery—Order entered discontinuing action without costs.

People ex rel. Mary A. Anderson—Order entered denying motion without costs.

In re Joshua C. Sanders—Order entered denying motion to vacate sales.

In re Wm. Austin—Order entered denying motion to vacate sales.

Petition Mechanics and Traders' National Bank—Order entered that Comptroller pay the award (\$851) into Court, and referring to Chas. P. Miller to ascertain title.

People, ex rel. John Hogan, vs. The Board of Police Commissioners of the Police Department of the City of New York—Order entered quashing writ of certiorari with \$10 costs.

People, ex rel. Louis F. Hess, do do do

People, ex rel. James A. Stevens, do do do

People, ex rel. Herman L. Palmer, do do do

People, ex rel. Robert Murphy, do do do

People, ex rel. Henry W. Ball, do do do

People, ex rel. William H. Tuite, do do do

People, ex rel. Edward F. Mangin, do do do

People, ex rel. Charles Flood, do do do

People, ex rel. John J. Munson, do do do

People, ex rel. Walter Sandford, do do do

People, ex rel. Thomas Lyons, do do do

People, ex rel. Stephen Shea, do do do

People, ex rel. William F. McKenna, do do do

People, ex rel. Joseph W. Girard, do do do

People, ex rel. John Constant, do do do

People, ex rel. Robert Bonner, do do do

People, ex rel. Andrew Byrne, do do do

People, ex rel. James T. Mahoney, do do do

People, ex rel. John Lawler, do do do

People, ex rel. Michael Caffrey, do do do

People, ex rel. Jacob N. Haight, do do do

People, ex rel. Patrick Gilmore, do do do



In re Wm. Rost—Order entered vacating assessment.  
 In re Frederick W. Eger—Order entered vacating assessment.  
 People, ex rel. Elizabeth P. Robbins vs. Mayor, etc., New York—Order on remittitur entered.  
 In re Edward Colegrove, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re James M. Tytler, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Simon Wormser, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Andrew V. Stout, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Henry J. Newton, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Charles Hubner, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Julia A. Caffin, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Anna Maria Tytler, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Catharine Loew, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Asel Lundy, One Hundred and Twenty-third street regulating, etc.—Order entered to vacate the assessment.  
 In re Huldah Eisenprice, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Thomas Monaghan, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re John E. Sandman, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Henry Bullenkamp, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Anne Maher, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Frederick W. Boehlk, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Peter J. Mathers, Fourth avenue regulating, One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re John Ward (1), One Hundred and Forty-fifth street paving, etc.—Order entered to vacate the assessment.  
 In re John Ward (2), One Hundred and Forty-fifth street paving, etc.—Order entered to vacate the assessment.  
 In re Robert C. Ferguson— } To vacate assessment for regulating, etc., Fourth avenue, from One Hundred and Sixteenth to One Hundred and Twenty-fourth street—Order entered to vacate the assessment.  
 In re Hugh Cassidy— } do do do  
 In re Patrick F. Ferrigan— } do do do  
 In re William H. Beadleston and ano.— } do do do  
 In re H. A. Robert— } do do do  
 In re Abraham Michelbecker— } do do do  
 In re Charles E. Miller— } do do do  
 In re Theodore Burgoyne— } do do do  
 In re S. L. M. Barlow— } do do do  
 In re Josephine Wilson— } do do do  
 In re Marselus Pryor— } do do do  
 In re Louis Brosi— } do do do  
 In re John W. Burnton— } do do do  
 In re Nathaniel Thurston— } do do do  
 In re Mark Findlay— } do do do  
 In re John McCloskey— } do do do  
 In re Timothy Donovan— } do do do  
 In re Mary A. Donovan— } do do do  
 In re John Cawood— } do do do  
 In re Patrick Farrell— } do do do  
 In re George Chesterman— } do do do  
 In re Caroline A. McCready— } do do do  
 In re Cornelius Donovan— } do do do  
 In re Bernard Hamburger and others— } do do do  
 In re John Townshend— } do do do  
 In re Henry Gieschen— } do do do  
 In re Margaret C. Smyth— } do do do  
 In re Jane McEvers— } do do do  
 In re Thomas L. Watt— } do do do  
 In re Esther Moses, et al., regulating, etc., Ninth avenue—Order entered to vacate the assessment.  
 In re Richard C. Combes, regulating, etc., Ninth avenue— } do do do  
 In re Harriet A. Walter, regulating, etc., Ninth avenue— } do do do  
 In re Edward Brazil, regulating, etc., Ninth avenue— } do do do  
 In re Harriet L. Bell, regulating, etc., Ninth avenue— } do do do  
 In re George R. Schieffelin, regulating, etc., Ninth avenue— } do do do  
 In re Thomas H. Walters, regulating, etc., Ninth avenue— } do do do  
 In re Mary H. Mahan, Fifty-sixth street sewer—General Term order of affirmance, with \$10 costs and disbursements entered.  
 In re August Belmont, paving Seventy-second street—General Term order of affirmance, with \$10 costs and disbursements entered.  
 In re Ruth Ann Wallace—Order entered to vacate the sales.

## SCHEDULE "C."

## SUITS AND SPECIAL PROCEEDINGS TRIED OR ARGUED.

In re George A. Robbins—Argued at General Term; decision reserved.  
 In re Thomas H. Walter—Motion for re-argument submitted at General Term.  
 George M. Miller, Guardian—Reference proceeded and closed.  
 In re David Babcock—Motion to vacate assessment submitted to Daniels, J.  
 In re Walter Webb— } do do do  
 Horatio N. Gray—Tried before Donohue, J., without a jury; decision reserved.  
 Angus P. McIntyre vs. Frederick Raduns—Argued at General Term; decision reserved.  
 In re Franklin H. Churchill—Argued at General Term; decision reserved.  
 In re Chas. Tiffany—Submitted at General Term.  
 Wm. R. Syme, receiver—Trial begun at Special Term; plaintiff and defendants stipulating in court not to ask for judgment against the city for more than \$1,882.  
 Patrick Keefe Horgan—Reference proceeded.  
 John Gundrum vs. Catharine Gundrum—Reference proceeded and closed.  
 In the matter of opening One Hundred and Thirty-eighth, etc., streets (Twenty-third Ward)—Motion made before Daniels, J., to tax costs; Court took the papers.

WILLIAM C. WHITNEY, Counsel to the Corporation.

## APPROVED PAPERS.

Resolved, That the report of the Commissioner of Jurors be received and printed in full in the CITY RECORD, as required by section 1118, chapter 448, Laws of 1876.

Resolved, In pursuance of the requirements of section 1093, chapter 448, Laws of 1876, the Comptroller of the City and County of New York is hereby authorized and directed to pay to Thomas Dunlap, Commissioner of Jurors, the sum of \$1,038.12, the amount of deficiency as therein set forth.

Adopted by the Board of Aldermen, February 17, 1880.

Approved by the Mayor, March 1, 1880.

Resolved, That permission be and the same is hereby given to Henry Reman to place and keep a watering-trough on the sidewalk in front of No. 155 Franklin street, provided the work be done and the water 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 17, 1880.

Approved by the Mayor, March 2, 1880.

## DEPARTMENT OF BUILDINGS.

DEPARTMENT OF BUILDINGS,  
 OFFICE, No. 2 FOURTH AVENUE,  
 NEW YORK, March 8, 1880.

Changes of Salaries, to take effect March 1, 1880.

John K. Perley, Assistant Clerk Bureau Fire

Escapes and Iron Work, \$1,000 per annum.

John J. McCloskey, Messenger, \$600 per annum.

Joseph McNamara, Fire Escape Examiner,

\$1,200 per annum.

Philip Emrich, Temporary Clerk, \$1,000 per

annum.

HENRY J. DUDLEY,

Superintendent of Buildings.

## OFFICIAL DIRECTORY.

STATEMENT OF THE HOURS DURING WHICH all the Public Offices in the City are open for business, and at which each Court regularly opens and adjourns, as well as of the places where such offices are kept and such Courts are held; together with the heads of Departments and Courts.

## EXECUTIVE DEPARTMENT.

## Mayor's Office.

No. 6 City Hall, 10 A. M. to 3 P. M.

EDWARD COOPER, Mayor; JAMES E. MORRISON, Secre-

tary; John Tracey, Chief Clerk.

## Mayor's Marshal's Office.

No. 7 City Hall, 10 A. M. to 3 P. M.

JOHN TYLER KELLY, First Marshal.

## Permit and License Bureau Office.

No. 1 City Hall, 10 A. M. to 3 P. M.

DANIEL S. HART, Registrar.

## Sealers and Inspectors of Weights and Measures.

No. 7 City Hall, 10 A. M. to 3 P. M.

WILLIAM EYERS, Sealer First District; ELIJAH W.

ROE, Sealer Second District; JOHN MURRAY, Inspector

First District; JOSEPH SHANNON, Inspector Second

District.

## LEGISLATIVE DEPARTMENT.

## Office of Clerk of Common Council.

No. 8 City Hall, 10 A. M. to 4 P. M.

JOHN J. MORRIS, President Board of Aldermen.

FRANCIS J. TWOMEY, Clerk Common Council.

## DEPARTMENT OF PUBLIC WORKS

## Commissioner's Office.

No. 19 City Hall, 9 A. M. to 4 P. M.

ALLAN CAMPBELL, Commissioner; FREDERICK H

HAMLIN, Deputy Commissioner.

## Bureau of Water Register.

No. 10 City Hall, 9 A. M. to 4 P. M.

JOHN H. CHAMBERS, Register.

## Bureau of Incumbrances.

No. 13 City Hall, 9 A. M. to 4 P. M.

JOSEPH BLUMENTHAL, Superintendent.

## Bureau of Lamps and Gas.

No. 21 City Hall, 9 A. M. to 4 P. M.

STEPHEN MCCORMICK, Superintendent.

## Bureau of Streets.

No. 19 City Hall, 9 A. M. to 4 P. M.

JAMES J. MOONEY, Superintendent.

## Bureau of Sewers.

No. 21 City Hall, 9 A. M. to 4 P. M.

STEVENSON TOWLE, Engineer-in-Charge.

## Bureau of Chief Engineer.

No. 11½ City Hall, 9 A. M. to 4 P. M.

GEORGE W. BIRDSALL, Chief Engineer.

## Bureau of Street Improvements.

No. 11 City Hall, 9 A. M. to 4 P. M.

GEORGE A. JEREMIAH, Superintendent.

## Bureau of Repairs and Supplies.

No. 18 City Hall, 9 A. M. to 4 P. M.

THOMAS KEECH, Superintendent.

## Bureau of Water Purveyor.

No. 4 City Hall, 9 A. M. to 4 P. M.

DANIEL O'REILLY, Water Purveyor.

## Keeper of Buildings in City Hall Park.

JOHN F. SLOPER, City Hall.

## FINANCE DEPARTMENT.

## Comptroller's Office.

Nos. 19 and 20 New County Court-house, 9 A. M. to 4 P. M.

JOHN KELLY, Comptroller; RICHARD A. STORIS,

Deputy Comptroller.

## Bureau for the Collection of Taxes.

First floor, Brown-stone Building, City Hall Park.

MARTIN T. MCMAHON, Receiver of Taxes; ALFRED

VREDENBURG, Deputy Receiver of Taxes.

## Bureau of the City Chamberlain.

No. 18 New County Court-house, 9 A. M. to 4 P. M.

J. NELSON TAPPAN, City Chamberlain.

## Auditing Bureau.

No. 19 New County Court-house, 9 A. M. to 4 P. M.

DANIEL JACKSON, Auditor of Accounts.

## Bureau of Arrears.

No. 5 New County Court-house, 9 A. M. to 4 P. M.

ARTEMAS CADDY, Clerk of Arrears.

## Bureau for the Collection of Assessments.

No. 16 New County Court-house, 9 A. M. to 4 P. M.

EDWARD GILON, Collector.

## Bureau of City Revenue.

No. 6 New County Court-house, 9 A. M. to 4 P. M.

EDWARD F. FITZPATRICK, Collector of City Revenue.

## Bureau of Markets.

No. 6 New County Court-house, 9 A. M. to 4 P. M.

JOSHUA M. VARIAN, Superintendent of Markets.

## LAW DEPARTMENT

## Office of the Counsel to the Corporation

Staats Zeitung Building, third floor, 9 A. M. to 4 P. M.

WILLIAM C. WHITNEY, 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.

ALGERNON S. SULLIVAN, Public Administrator.

## Office of the Corporation Attorney.

No. 49 Beekman street, 9 A. M. to 4 P. M.

WILLIAM A. BOYD, Corporation Attorney.

## Attorney to Department of Buildings' Office.

Corner Cortlandt and Church streets.

JOHN A. FOLEY, Attorney.

## POLICE DEPARTMENT.

## Central Office.

No. 300 Mulberry street, 9 A. M. to 4 P. M.

Chief Clerk. President: SETH C. HAWLEY

## DEPARTMENT OF CHARITIES AND CORREC-

## Central Office.

Third avenue, corner Eleventh street, 9 A. M. to 4 P. M.

TOWNSEND COX, President; JOSHUA PHILLIPS, Secre-

tary.

## FIRE DEPARTMENT.

## Headquarters.

Nos. 153, 155, and 157 Mercer street, 9 A. M. to 4 P. M.

VINCENT C. KING, President; CARL JUSSEN, Secretary.

## HEALTH DEPARTMENT.

No. 301 Mott street, 9 A. M. to 4 P. M.

CHARLES F. CHANDLER, President; EMMONS CLARK,

Secretary.

## DEPARTMENT OF PUBLIC PARKS

No. 36 Union square, 9 A. M. to 4 P. M.

JAMES F. WENMAN, President; EDWARD P. BARKER,

Secretary.

## Civil and Topographical Office.

Arsenal, 64th street a d 5th avenue, 9 A. M. to 5 P. M.

Office of Superintendent of 23d and 24th Wards.

Fordham 9 A. M. to 5 P. M.

## DEPARTMENT OF DOCKS.

Nos. 117 and 119 Duane street, 9 A. M. to 4 P. M.

EUGENE T. LYNCH, Secretary.

## DEPARTMENT OF TAXES AND ASSESSMENTS

Brown-stone Building, City Hall Park, 9 A. M. to 4 P. M.

JOHN WHEELER, President; ALBERT STORER, Secretary.

## BOARD OF ASSESSORS.

Office, No. 114 White street, 9 A. M. to 4 P. M.

THOMAS B. ASTEN, President; WM. H. JASPER,

Secretary.

## DEPARTMENT OF BUILDINGS.

No. 2 Fourth avenue, 8:30 A. M. to 4 P. M.

HENRY J. DUDLEY, Superintendent.

## BOARD OF EXCISE.

Corner Mulberry and Houston streets, 9 A. M. to 4 P. M.

RICHARD J. MORRISON, President; J. B. ADAMSON,

Chief Clerk.

## SHERIFF'S OFFICE.

Nos. 3 and 4 New County Court-house, 9 A. M. to 4 P. M.

PETER BOWE, Sheriff; JOEL O. STEVENS, Under Sheriff.

## COMMISSION FOR THE COMPLETION OF THE

NEW COUNTY COURT-HOUSE.

No. 28 New County Court-house, 9 A. M. to 5 P. M.

WYLLIS BLACKSTONE, President; ISAAC EVANS, Secre-

tary.

## REGISTER'S OFFICE.

East side City Hall Park, 9 A. M. to 4 P. M.

FREDERICK W. LOEW, Register; AUGUSTUS T.

DOCHARTY, Deputy Register.

## COMMISSIONERS OF ACCOUNTS.

No. 27 Chambers street, 9 A. M. to 4 P. M.

WM. PITT SHEARMAN, JOHN W. BARROW,

Commissioners.

## COMMISSIONER OF JURORS.

No. 17 New County Court-house, 9 A. M. to 4 P. M.

THOMAS DUNLAP, Commissioner; ALFRED J. KEEGAN,

Deputy Commissioner.

## COUNTY CLERK'S OFFICE.

Nos. 7 and 8 New County Court-house, 9 A. M. to 4 P. M.

WILLIAM A. BUTLER, County Clerk; J. HENRY FORD,

Deputy County Clerk.

## DISTRICT ATTORNEY'S OFFICE.

Second floor, Brown-stone Building, City Hall Park,

9 A. M. to 4 P. M.

BENJAMIN K. PHELPS, District Attorney; MOSES P.

CLARK, Chief Clerk.

## THE CITY RECORD OFFICE.

And Bureau of Printing, Stationery, and Blank Books.

No. 2 City Hall, 8 A. M. to 5 P. M.

THOMAS COSTIGAN, Supervisor; R. F. H. ABELL, Book-

keeper.

## CORONERS' OFFICE.

No. 40 East Houston street.

MORITZ ELLINGER, GERSON N. HERRMAN, THOMAS

KNOX, and JOHN H. BRADY, Coroners.

## RAPID TRANSIT COMMISSIONERS.

RICHARD M. HOE, 504 Grand street.

JOHN J. CRANE, 138th street, Morrisania.

GUSTAV SCHWAB, 2 Bowling Green.

CHARLES L. PERKINS, 23 Nassau street.

WILLIAM M. OLLIFFE, 6 Bowery.

## SUPREME COURT.

Second floor, New County Court-house, 10½ A. M. to 3 P. M.

General Term, Room No. 9.

Special Term, Room No. 10.

Chambers, Room No. 11.

Circuit, Part I., Room No. 12.

Circuit, Part II., Room No. 13.

Circuit, Part III., Room No. 14.

Judges' Private Chambers, Room No. 15.

NOAH DAVIS, Chief Justice; WILLIAM A. BUTLER,

Clerk.

## LEGISLATIVE DEPARTMENT.



DEPARTMENT OF PUBLIC WORKS.

DEPARTMENT OF PUBLIC WORKS,  
COMMISSIONER'S OFFICE, ROOM 19, CITY HALL,  
NEW YORK, February 26, 1880.

TO CONTRACTORS.

PROPOSALS, INCLOSED IN A SEALED ENVELOPE, with the title of the work, the name of the bidder, and the number of the work as in the advertisement indorsed thereon, will be received at this office until Thursday, the 11th day of March, 1880, at 12 o'clock M., at which hour they will be publicly opened by the Head of the Department and read, for the following works:

- No. 1. SEWER in Fifth avenue, east side, between Fifty-fifth and Fifty-ninth streets.
- No. 2. SEWER in Lexington avenue, between Sixty-ninth and Seventieth streets, from end of present sewer in Seventieth street.
- No. 3. SEWERS in Ninth avenue and the New avenue east of Morningside Park, between One Hundred and Fifteenth street and Manhattan street, and in One Hundred and Sixteenth street, between the new avenues next east of Morningside Park.
- No. 4. SEWER in Madison avenue, between One Hundred and Tenth and One Hundred and Thirtieth street.
- No. 5. SEWERS in Ninety-sixth and Ninety-seventh streets, between Third and Fourth avenues; in Ninety-eighth street, between Third and Lexington avenues; and in Lexington avenue, between Ninety-fifth and Ninety-eighth streets.
- No. 6. SEWER in One Hundred and Second street, between Third and Lexington avenues.
- No. 7. SEWER in One Hundred and Twenty-eighth street, between Second and Third avenues.
- No. 8. SEWER in One Hundred and Thirty-second street, between Seventh avenue and a point three hundred feet west of Seventh avenue.
- No. 9. REGULATING AND GRADING Lexington avenue, from Ninety-sixth to Ninety-seventh street.
- No. 10. REGULATING, GRADING, AND SETTING CURB AND GUTTER STONES in Ninety-seventh street, between Eighth avenue and the Boulevard.
- No. 11. REGULATING, GRADING, AND SETTING CURB AND GUTTER STONES in Ninety-eighth street, between Eighth avenue and the Boulevard.
- No. 12. REGULATING, GRADING, AND SETTING CURB AND GUTTER STONES AND FLAGGING sidewalks four feet wide in One Hundred and First street, from Ninth avenue to New Avenue.
- No. 13. REGULATING, GRADING, AND SETTING CURB AND GUTTER STONES AND FLAGGING SIDEWALKS in One Hundred and Fourteenth street, between Tenth avenue and Morningside Park.
- No. 14. SETTING CURB AND GUTTER STONES AND FLAGGING SIDEWALKS in Sixty-first street, between Tenth and Eleventh avenues.

Blank forms of proposals, the specifications and agreements, the proper envelopes in which to inclose the bids, and any further information desired, can be obtained for each class of work at the following offices: Sewers, Room 21 City Hall, and Regulating, Grading, etc., at Room 11 City Hall.

The Commissioner of Public Works reserves the right to reject any or all proposals, if, in his judgment, the same may be for the best interests of the city.

ALAN CAMPBELL,  
Commissioner of Public Works.

RAPID TRANSIT COMMISSION.

COMMISSIONERS OF RAPID TRANSIT,  
CITY OF NEW YORK, 54 EXCHANGE PLACE,  
March 1, 1880.

BY DIRECTION OF THE BOARD OF COMMISSIONERS appointed by the Mayor of the City of New York, August 30, 1879, under and in pursuance of the provisions of Chapter 606 of the Laws of 1875, public notice is hereby given that the said Commissioners will cause a book of subscription to the capital stock of the company to be incorporated and organized under the provisions of said Act, and to be known as the Harlem River and Portchester Rapid Transit Company, to be opened on Saturday, March 6, 1880, at 10 o'clock A. M., at the banking offices of the Central Trust Company of the City of New York, at No. 15 Nassau street, New York City.

The amount of said capital stock is fixed at two hundred thousand dollars, divided into two thousand shares of the par value of one hundred dollars each, subject to the right to increase the capital stock from time to time as is by said act provided. The whole capital stock is to be subscribed by not less than twenty-five persons, and on subscribing each subscriber is required to pay in cash five per centum of the par value of the number of shares subscribed by him.

The Commissioners reserve to themselves the right to reject any subscriber to the capital stock, and any and all subscriptions thereto which are not in compliance with the conditions to the granting of said franchise.

The Commissioners also reserve to themselves the right to distribute to any subscriber a number of shares less than the number by him subscribed for.

When the whole of the capital stock is subscribed the book will be closed.

WILLIAM G. TULLER,  
Secretary.

POLICE DEPARTMENT.

POLICE DEPARTMENT OF THE CITY OF NEW YORK,  
300 MULBERRY STREET,  
NEW YORK, March 9, 1880.

PUBLIC NOTICE IS HEREBY GIVEN THAT the following property of this Department, viz.: four two-horse sweeping machines, one phaeton, and a quantity of cart harness, will be sold at public auction at the stables of the Bureau of Street Cleaning, on Saturday, March 20, 1880, at 10 o'clock A. M.

By order of the Board,

S. C. HAWLEY,  
Chief Clerk.

POLICE DEPARTMENT OF THE CITY OF NEW YORK,  
300 MULBERRY STREET,  
NEW YORK, March 3, 1880.

PUBLIC NOTICE IS HEREBY GIVEN THAT "City Scows Nos. 16 and 23," now lying at the foot of East Seventeenth street, East river, and a quantity of scrap iron and old rope, the property of this Department, will be sold at public auction at the stables of the Bureau of Street Cleaning, foot of East Seventeenth street E. R., on Tuesday, March 16, 1880, at 10 o'clock A. M., by Van Tassel & Kearney, auctioneers.

By order of the Board,

S. C. HAWLEY,  
Chief Clerk.

POLICE DEPARTMENT OF THE CITY OF NEW YORK,  
PROPERTY CLERK'S OFFICE,  
No. 300 MULBERRY STREET, Room No. 39,  
NEW YORK, February 25, 1880.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of the City of New York, 300 Mulberry street, Room No. 39, for the following property now in his custody without claimants: Boots, rope, iron, leather, boots, shoes, male and female clothing, watches, robes, trunk and contents, bags, etc., revolvers, cloth; also small amount of cash found and taken from prisoners.

C. A. ST. JOHN,  
Property Clerk.

COLLEGE OF THE CITY OF NEW YORK.

A STATED SESSION OF THE BOARD OF Trustees of the College of the City of New York, will be held at the Hall of the Board of Education (corner Grand and Elm streets), on Tuesday, March 16, 1880, at 4 o'clock P. M.

LAWRENCE D. KIERNAN,  
Secretary.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,  
No. 66 THIRD AVENUE,  
NEW YORK, March 6, 1880.

IN ACCORDANCE WITH AN ORDINANCE OF the Common Council, "In relation to the burial of strangers or unknown persons who may die in any of the public institutions of the City of New York," the Commissioners of Public Charities and Correction report as follows:

At Homoeopathic Hospital, Ward's Island—Mary Kane; aged 29 years; 5 feet 1 inch high; brown eyes and hair. Had on when admitted, dark dress, gray sacque, plaid shawl. Nothing known of her friends or relatives.

Robert Conway; aged 45 years; 5 feet 10 inches high; blue eyes; gray hair. Had on when admitted black suit of clothes. Nothing known of his friends or relatives.

By Order,

JOSHUA PHILLIPS,  
Secretary.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,  
No. 66 THIRD AVENUE.

PROPOSALS FOR LUMBER, HARDWARE, FITTINGS, ETC.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES FOR FURNISHING

LUMBER, ETC.

6 pieces Spruce Lumber, 4 x 8 x 21.	
3 " " " " " " " " " " " "	4 x 8 x 26.
2 " " " " " " " " " " " "	4 x 8 x 15.
1 " " " " " " " " " " " "	4 x 8 x 17.
7 " " " " " " " " " " " "	3 x 8 x 15.
2 " " " " " " " " " " " "	4 x 6 x 15.
1 " " " " " " " " " " " "	4 x 6 x 17.
80 " " " " " " " " " " " "	3 x 7 x 10.
76 " " " " " " " " " " " "	4 x 6 x 13.
50 Hemlock Joists, 3 x 4.	
1,000 lineal feet 2 x 3 Spruce Strips.	
50 Wall Strips, 2 x 4 x 13.	
2,500 square feet 4-inch Yellow Pine Flooring.	
800 feet 1 1/2-inch Clear White Pine.	
600 " 3/4-inch " "	
250 " 1 1/2-inch " "	
650 pieces 3-inch Ceiling, beaded.	
2,600 feet 6-inch Rabeted Pine Siding, the lumber all to be of prime quality and delivered at Blackwell's Island, where it will be discharged by the Department.	

MISCELLANEOUS.

21 pair 18-light 9 x 12 Sash.	
84 pounds Sash Weights.	
84 Axle Pulleys, 2-inch.	
2 gross Screws, 1 x 10.	
1 " " " " " " " " " " " "	1 1/2-12.
1 gross screws, 1 1/4-10.	
14 pounds Hemp Sash Cord.	
3 kegs 10d Nails.	
1 keg 8d Nails.	
1 " 40d Nails.	
1 " 3d Fine Nails.	
4 pair 4 x 4 Cast Butts.	
4 " 3-inch Butts.	
10,000 Lath.	
15 barrels Rockland Lime.	
3 " " " " " " " " " " " "	Jointa Lime.
3 " " " " " " " " " " " "	Plaster.
5,000 prime Haverstraw Hard Brick.	
300 pounds Pure White Lead (in oil).	
5 bushels Plasterer's Hair.	
20 gallons Boiled Linseed Oil.	
10 " " " " " " " " " " " "	Raw Linseed Oil.
10 " " " " " " " " " " " "	Spirits Turpentine.
10 pounds Patent Dryer.	
40 " " " " " " " " " " " "	Putty.
4 6-inch City Rim Locks.	
2 dozen Closet Locks (Knob Latch).	
6 Doors, 4 panel 1 1/2, 7 ft. by 2 ft. 10 in.	
4 Fanlights.	

FITTINGS, ETC.

1 1 1/2-inch Rough Water Stop and Waste Stop, on Key T Handle, for iron pipe.	
40 1/2-inch Plain Bibbs (iron pipe).	
36 3/4-inch Plain Bibbs (iron pipe).	
1 1-inch Steam Stock-cock.	
1 8-inch Ball and Lever for Cistern-cock.	
4 1-inch Globe Valves.	
10 2-inch Elbows.	
16 1 1/2-inch " "	
30 1-inch " "	
18 3/4-inch " "	
3 1 1/2-inch by 1-inch elbows.	
8 3/4-inch Tees.	
8 1-inch " "	
18 1 1/2-inch Tees.	
2 1 1/2 x 1 inch Tees.	
4 3/4 x 1 " "	
48 3/4 x 3/4 inch Malleable Iron Tees.	
10 1 1/2 x 3/4 " "	
36 1 x 3/4 " "	
6 1 x 3/4 inch Reducers.	
4 1 1/2 x 1 " "	
6 1-inch Caps.	
2 2-inch " "	
6 3/4-inch " "	
12 1-inch Locknuts.	
6 3/4-inch " "	
6 2-inch " "	
2 2-inch Union Coupling.	
2 1 1/2-inch " "	
4 1-inch " "	
4 3/4-inch " "	
4 1 1/2 x 1 inch Bushings.	
6 1 x 3/4 " "	
8 1-inch Shoulder Nipples.	
8 3/4-inch " "	
4 2-inch " "	
6 3/4-inch Close Nipples.	
6 1-inch " "	
120 feet 2-inch Iron Steam-pipe.	
350 " 1-inch " "	
280 " 1 1/2-inch " "	
100 " 3/4-inch " "	
20 " 1 1/2-inch " D " Lead Pipe.	
20 sheets BB Galvanized Iron.	
5 bushels Charcoal.	
50 pounds Resin.	
50 " Black Roofing Nails.	
—papers Galvanized Tacks.	

—or any part thereof, will be received at the office of the Department of Public Charities and Correction, in the City of New York, until 9 o'clock A. M. of Thursday, the 18th day of March, 1880. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Lumber, Hardware, Fittings, etc.," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the head of said Department and read.

The Department of Public Charities and Correction reserves the right to decline any and all bids or estimates it deemed to be for the public interest, and to accept any bid or estimate as a whole, or for any one or more articles included therein. No bid or estimate will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, at such times and in such quantities as may be directed by the said Department, but the entire quantity will be required to be delivered on or before thirty (30) days after the date of the contract.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect; and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the penal amount of fifty (50) per cent. of the estimated amount of the contract.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; 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 in the City of New York, with their respective places of business or residence, to the effect, that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance; and that if he shall omit or refuse to execute the same, they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion, and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent 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 section 27 of chapter 8 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.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept to contract within forty-eight (48) hours 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 re-advertised and re-let as provided by law.

The quality of the articles, supplies, goods, wares, and merchandise must conform in every respect to the samples of the same respectively 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.

Payment will be made by a requisition on the Comptroller, issued on the completion of the contract, or from time to time, as the Commissioners may determine.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instruction of the Commissioners of Public Charities and Correction.

The Department of Public Charities and Correction reserves the right to decline any and all bids or estimates if deemed to be for the public interest, and to accept any bid or estimate as a whole, or for any one or more articles included therein. No bid or estimate will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The form of the agreement, including specifications, and showing the manner of payment, can be obtained at the office of the Department.

Dated New York, March 5, 1880.

TOWNSEND COX,  
THOMAS S. BRENNAN,  
JACOB HESS,  
Commissioners of the Department of Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,  
No. 66 THIRD AVENUE.

PROPOSALS FOR GROCERIES, DRY GOODS, AND CROCKERY.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES FOR FURNISHING

GROCERIES.

3,000 barrels Flour.	
500 " " " " " " " " " " " "	Fine Flour.
5,000 gallons Molasses.	
5,000 " " " " " " " " " " " "	Syrup.
1,200 barrels good sound Irish Potatoes, to weigh 168 lbs. net to the barrel.	
500 bags Coarse Yellow Meal.	
500 " " " " " " " " " " " "	Fine Yellow Meal.
30,000 Fresh Eggs, all to be candled.	
12,000 pounds Dairy Butter, sample of which will be on exhibition March 16 and 17.	
500 bales long bright Rye Straw.	
200 boxes (halves) Sardines.	
50 barrels Hominy.	

DRY GOODS.

4,000 yards Linen Drills.	
1,000 " " " " " " " " " " " "	Butchers' Linen, Dowls.
2,000 " " " " " " " " " " " "	Huckabuck.
5,000 " " " " " " " " " " " "	Cottonades.
200 pounds dark blue Machine Thread, 16 ounces per pound.	
100 pieces Oiled Muslin.	

CROCKERY.

1 gross Bed Pans.	
1 " " " " " " " " " " " "	Feed Cups.
1 " " " " " " " " " " " "	Soap Dishes.
1 " " " " " " " " " " " "	Tumblers.
2 " " " " " " " " " " " "	Spit Cups.

—or any part thereof, will be received at the office of the Department of Public Charities and Correction, in the City of New York, until 9 o'clock A. M. of Thursday, the 18th day of March, 1880. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Groceries, Dry Goods, and Crockery," and with his or their name

or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the head of said Department and read.

The Department of Public Charities and Correction reserves the right to decline any and all bids or estimates if deemed to be for the public interest, and to accept any bid or estimate as a whole, or for any one or more articles included therein. No bid or estimate will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, at such times and in such quantities as may be directed by the said Department; but the entire quantity will be required to be delivered on or before thirty (30) days after the date of the contract.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect; and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, in the penal amount of fifty (50) per cent. of the estimated amount of the contract.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; 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 in the City of New York, with their respective places of business or residence, to the effect, that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance; and that if he shall omit or refuse to execute the same, they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion, and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent 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 section 27 of chapter 8 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.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept to contract within forty-eight (48) hours 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 re-advertised and re-let as provided by law.

The quality of the articles, supplies, goods, wares, and merchandise must conform in every respect to the samples of the same respectively 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.

Payment will be made by a requisition on the Comptroller, issued on the completion of the contract, or from time to time as the Commissioners may determine.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instruction of the Commissioners of Public Charities and Correction.

The Department of Public Charities and Correction reserves the right to decline any and all bids or estimates if deemed to be for the public interest, and to accept any bid or estimate as a whole, or for any one or more articles included therein. No bid or estimate will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The form of the agreement, including specifications, and showing the manner of payment, can be obtained at the office of the Department.

Dated New York, March 5, 1880.

TOWNSEND COX,  
THOMAS S. BRENNAN,  
JACOB HESS,  
Commissioners of the Department of Public Charities and Correction.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,  
No. 66 THIRD AVENUE,  
NEW YORK, March 2, 1880.

IN ACCORDANCE WITH AN ORDINANCE OF the Common Council, "In relation to the burial of strangers or unknown persons who may die in any of the public institutions of the City of New York," the Commissioners of Public Charities and Correction report as follows:

At Morgue, Bellevue Hospital, from Twenty-eighth Precinct Station-house—Unknown man; aged about 50 years; 5 feet 6 inches high; sandy hair; whiskers and moustache mixed with gray. Had on black coat, brown overalls, flesh colored undershirt and drawers, brogan shoes.

At Homoeopathic Hospital, Ward's Island—John Daly; aged 27 years; 5 feet 7 inches high; blue eyes; brown hair. Had on when admitted dark suit of clothes, check shirt, gaiters. Nothing known of his friends or relatives.

At Branch Insane Asylum, Randall's Island—James Cahay. Nothing known of his friends or relatives.

By Order,

JOSHUA PHILLIPS,  
Secretary.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION,  
No. 66 THIRD AVENUE,  
NEW YORK, February 29, 1880.



## DEPARTMENT OF BUILDINGS.

DEPARTMENT OF BUILDINGS,  
OFFICE OF SUPERINTENDENT, No. 2 FOURTH AVENUE,  
NEW YORK, December, 1879.

## NOTICE TO PROPERTY OWNERS AND BUILDERS.

FOR THE PROTECTION OF THEIR INTERESTS, property owners and builders are requested to refuse admission into their buildings to any officer of this Department who does not show his proper badge of office on demand.

All badges issued from this office are shield shaped, with the title of the officer, the name of this Department, and the number engraved thereon, and are numbered from 1 to 50. The following badges are lost or stolen: Inspectors, badges Nos. 4, 8, 9, 11, 12, 21, 22, 23, 35, 38, 39, 42, 43, 45, 46, 48, 49, and 50. Fire Escape Examiners, badges Nos. 3 and 8, and Messenger's badge No. 7. All parties professing to be officers of this Department not provided with badges of the above description, or who attempt to use badges of the above named missing numbers, or an oval shaped badge, formerly used in the Department, are impostors, and the public are cautioned against recognizing such persons, and are requested to report the same to this office in any case that may come to their notice.

HENRY J. DUDLEY,  
Superintendent of Buildings.

## CORPORATION NOTICE.

NOTICE IS HEREBY GIVEN BY THE BOARD of Street Opening and Improvement, in accordance with the provisions of section 105 of chapter 335 of the Laws of 1873, entitled "An Act to reorganize the local government of the City of New York," passed April 30, 1873, that they deem it to be for the public interest to lay out and open, and they propose to lay out and open a street to extend from the northerly side of Little West Twelfth street to the southerly side of West Fourteenth street, the easterly line of such street to be parallel with the Ninth avenue, and four hundred and twenty-five (425) feet west of the westerly line of Ninth avenue, and the westerly line of such street to be five hundred (500) feet west of the westerly line of Ninth avenue, and parallel thereto; and that their proposed action relative thereto was laid before the Board of Aldermen on the 17th day of February, 1880.

A meeting of the Board of Street Opening and Improvement will be held at the Mayor's office, in the City Hall, at 2 P. M. on the 23d day of March next, to lay out and open the same.

Dated New York, February 26, 1880.

EDWARD COOPER, Mayor.

JOHN KELLY, Comptroller.

ALLAN CAMPBELL, Commissioner of Public Works.

JAMES F. WENMAN, President of the Department of Public Parks.

JOHN J. MORRIS, President of the Board of Aldermen.

RICHARD J. MORRISON, Secretary.

NOTICE IS HEREBY GIVEN BY THE BOARD of Street Opening and Improvement, in accordance with the provisions of section 105, chapter 335 of the Laws of 1873, entitled "An Act to reorganize the local government of the City of New York," passed April 30, 1873, that they deem it to be for the public interest to lay out and open West Fifty-third street, as laid down on the map or plan of the City of New York, from the Tenth avenue to the Eleventh avenue, and to lay out and open West Fifty-fourth street, as laid down on said map, from Tenth avenue to the established bulkhead line on the Hudson river; and that they propose to lay out and open the same; and that their proposed action relative thereto was laid before the Board of Aldermen on the 10th day of February, 1880.

A meeting of the Board of Street Opening and Improvement will be held at the Mayor's office, in the City Hall, on the 23d day of March next, at 2 P. M., to lay out and open the same.

New York, February 26, 1880.

EDWARD COOPER, Mayor.

JOHN KELLY, Comptroller.

ALLAN CAMPBELL, Commissioner of Public Works.

JAMES F. WENMAN, President of the Department of Public Parks.

JOHN J. MORRIS, President of the Board of Aldermen.

RICHARD J. MORRISON, Secretary.

NOTICE IS HEREBY GIVEN THAT THE FOLLOWING Assessment Lists have been received by the Board of Assessors from the Commissioner of Public Works

1. Fencing Fifth and Madison avenues and Seventy-second and Seventy-third streets.....	\$243 58
2. Basin at the junction of Beaver and Pearl streets.....	180 73
3. Regulating, grading, resetting curb and gutter, One Hundred and Twenty-ninth street, from Seventh to Eighth avenue.....	999 99
4. Sewer in New avenue, west of Morningside Park, and in One Hundred and Twenty-second street, between One Hundred and Sixteenth street and Tenth avenue.....	17,428 16
5. Crosswalk at the northerly and southerly intersections of Lexington avenue and One Hundred and Twenty-fifth street.....	141 20
6. Sewer in One Hundred and Thirtieth street, between Fourth and Madison avenues.....	1,057 77
7. Sewer in Fifty-eighth street, between First and Second avenues, from end of present sewer.....	1,562 70
	\$21,614 13

WM. H. JASPER, Secretary.

OFFICE BOARD OF ASSESSORS,  
No. 114 WHITE STREET (COR. OF CENTRE),  
NEW YORK, January 13, 1880.

## FIRE DEPARTMENT.

HEADQUARTERS  
FIRE DEPARTMENT, CITY OF NEW YORK,  
155 AND 157 MERCER STREET,  
NEW YORK, March 5, 1880.

NOTICE IS HEREBY GIVEN THAT FOUR (4) Horses will be sold at public auction, to the highest bidder for cash, on Tuesday March 9, 1880, at 12 o'clock M., by Van Tassel & Kearney, Auctioneers, at Nos. 110 and 112 East Thirtieth street.

VINCENT C. KING,  
JOHN J. GORMAN,  
CORNELIUS VAN COTT,  
Commissioners.

HEADQUARTERS  
FIRE DEPARTMENT, CITY OF NEW YORK,  
155 AND 157 MERCER STREET,  
NEW YORK, November 7, 1878.

NOTICE IS HEREBY GIVEN THAT THE Board of Commissioners of this Department will meet daily at 10 o'clock A. M., for the transaction of business.

By order of the Board,  
VINCENT C. KING, President,  
JOHN J. GORMAN, Treasurer,  
CORNELIUS VAN COTT, Commissioners.  
CARL JUSSEN, Secretary.

NOTICE IS HEREBY GIVEN THAT THE FOLLOWING Assessment Lists have been received by the Board of Assessors from the Commissioner of Public Works.

No. 1. Sewer, Fifty-second street, between Third and Lexington avenues, from end of present sewer to near Lexington avenue.....	\$1,166 75
No. 2. Paving Lexington avenue, from Seventy-ninth to Eighty-fifth street.....	12,185 39
No. 3. Fencing vacant lots in Seventy-seventh street, between Fourth and Fifth avenues.....	367 10
	\$13,719 24

WM. H. JASPER, Secretary.

OFFICE BOARD OF ASSESSORS,  
No. 114 WHITE STREET (COR. OF CENTRE),  
NEW YORK, February 28, 1880.

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.:

- No. 1. Regulating, grading, setting curb and gutter stones, and flagging in One Hundred and Fifty-second street, from the Boulevard to the Hudson river.
- No. 2. Paving intersections of Fourth avenue with Eighty-third, Eighty-fourth, Eighty-fifth, and Eighty-sixth streets, with Belgian pavement.
- No. 3. Paving One Hundred and Fourth street, between Second and Third avenues, with Belgian pavement.
- No. 4. Sewer in One Hundred and Fourth street, between Ninth and Tenth avenues.
- No. 5. Fencing vacant lots on the southeast and southwest corners of Madison avenue and One Hundred and Twenty-seventh street.
- No. 6. Sewer in One Hundred and Twenty-ninth street, between Seventh and Eighth avenues.
- No. 7. Sewer in One Hundred and Fourth street, from 650 feet east of Tenth avenue to 75 feet west of Ninth avenue.
- No. 8. Sewer in Sixty-eighth street, between Fourth and Madison avenues, from end of present sewer to near Fourth avenue.
- No. 9. Sewer in Seventy-second street, between First and Second avenues, from end of present sewer to near Second avenue.
- No. 10. Sewer in Lexington avenue, between One Hundred and Third and One Hundred and Fourth streets.
- No. 11. Sewer in Laight street, between Washington and West streets.
- No. 12. Fencing vacant lots on block bounded by Eightieth and Eighty-first streets, Madison and Fifth avenues.
- No. 13. Sewer in Second avenue, between Seventy-fifth and Seventy-sixth streets.
- No. 14. Basin on the northeast corner of Sixtieth street and Fifth avenue.
- No. 15. Sewer in One Hundred and Thirtieth street, between Sixth avenue and summit west of Sixth avenue.
- No. 16. Regulating, grading, curb, gutter, and flagging on Ninety-third street, from Second avenue to East river.
- No. 17. Basin on the southwest corner of Eleventh and Dry Dock streets.
- No. 18. Fencing vacant lots on the south side of Seventy-ninth street, between Fourth and Lexington avenues.
- No. 19. Sewer in Eleventh avenue, west side, between Fifty-ninth and Sixtieth streets.
- No. 20. Sewer in One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.
- No. 21. Sewer in One Hundred and Thirtieth street, between Madison and Fifth avenues; and in Madison avenue, between One Hundred and Thirtieth and One Hundred and Fifteenth streets.
- No. 22. Basin on the west side of Fifth avenue, between Sixtieth and Sixty-first streets.
- No. 23. Sewer in One Hundred and Thirtieth street, between Tenth avenue and summit east of Tenth avenue.
- No. 24. Basin on the northwest corner of One Hundred and Fifteenth street and Avenue A.

The limits embraced by such assessment include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

- No. 1. Both sides of One Hundred and Fifty-second street, between the Boulevard and Hudson river.
- No. 2. Both sides of Fourth avenue, between Eighty-second and Eighty-seventh streets, and to the extent of half of the block in Eighty-third, Eighty-fourth, Eighty-fifth, and Eighty-sixth streets.
- No. 3. Both sides of One Hundred and Fourth street, between Second and Third avenues, and to the extent of half the block at the intersection of Second and Third avenues.
- No. 4. Both sides of One Hundred and Fourth street, between Ninth and Tenth avenues.
- No. 5. Both sides of Madison avenue, between One Hundred and Twenty-sixth and One Hundred and Twenty-seventh streets, also south side of One Hundred and Twenty-seventh street, extending one hundred and ten feet east of and eighty-five feet west of Madison avenue.
- No. 6. Both sides of One Hundred and Twenty-ninth street, between Seventh and Eighth avenues.
- No. 7. Both sides of One Hundred and Fourth street, from six hundred and fifty feet east of Tenth avenue to Ninth avenue.
- No. 8. Both sides of Sixty-eighth street, extending one hundred feet west of Fourth avenue.
- No. 9. Both sides of Seventy-second street, extending one hundred feet east of Second avenue.
- No. 10. Both sides of Lexington avenue, between One Hundred and Third and One Hundred and Fourth streets.
- No. 11. Both sides of Laight street, between West and Washington streets.
- No. 12. Block bounded by Eightieth and Eighty-first streets, Madison and Fifth avenues.
- No. 13. Both sides of Second avenue, between Seventy-fifth and Seventy-sixth streets.
- No. 14. East side of Fifth avenue, between Sixtieth and Sixty-first streets.
- No. 15. Both sides of One Hundred and Thirtieth street, between Sixth and Seventh avenues.
- No. 16. Both sides of Ninety-third street, between Avenue A and Second avenue.
- No. 17. West side of Dry Dock street, between Tenth and Eleventh streets.
- No. 18. South side of Seventy-ninth street, between Fourth and Lexington avenues.
- No. 19. West side of Eleventh avenue, between Fifty-ninth and Sixtieth streets.
- No. 20. Both sides of One Hundred and Twenty-seventh street, between Seventh and Eighth avenues.
- No. 21. Both sides of One Hundred and Thirtieth street, between Madison and Fifth avenues; and both sides of Madison avenue, between One Hundred and Thirtieth and One Hundred and Fifteenth streets.
- No. 22. Central Park.
- No. 23. Both sides of One Hundred and Thirtieth street, between Ninth and Tenth avenues.
- No. 24. West side of Avenue A, between One Hundred and Fifteenth and One Hundred and Sixteenth streets, and south side of One Hundred and Sixteenth street, extending 187 feet 6 inches west of Avenue A, and north side of One Hundred and Fifteenth street, extending 166 feet 6 inches west of Avenue A.

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 Board of Assessors, at their office, No. 114 White street, within thirty days from the date of this notice.

The above described list will be transmitted as provided by law to the Board of Revision and Correction of Assessments for confirmation on the 17th day of February ensuing.

THOMAS B. ASTEN,  
JOHN MULLALLY,  
EDWARD NORTON,  
DANIEL STANBURY,  
Board of Assessors.

OFFICE BOARD OF ASSESSORS,  
No. 114 WHITE STREET (CORNER CENTRE),  
NEW YORK, January 16, 1880.

## HEALTH DEPARTMENT.

HEALTH DEPARTMENT,  
No. 301 MOTT STREET,  
NEW YORK, February 10, 1880.

## BOVINE VACCINE VIRUS.

AT A MEETING OF THE BOARD OF HEALTH, held this day, the following resolution was adopted: Resolved, That pursuant to the provisions of chapter 635, Laws of 1874, entitled "An act to secure effective vaccination in the City of New York and the collection of pure vaccine lymph or virus," the Board of Health authorizes the sale of such surplus lymph or virus whenever the quantity on hand exceeds the amount required in the proper performance of its duties, at the following rates, and that orders for the same be addressed to Dr. J. B. Taylor, Inspector of Vaccination:

One quill slip.....	\$0 25
Eight quill slips.....	1 00
Crust one remove from the calf.....	1 50

Dispensaries and distributors of large amounts may be supplied at wholesale rates.

(A true copy.)

EMMONS CLARK, Secretary.

## THE CITY RECORD

COPIES OF THE CITY RECORD CAN BE obtained at No. 2 City Hall (northwest corner basement). Price three cents each.

## FINANCE DEPARTMENT.

DEPARTMENT OF FINANCE,  
BUREAU FOR COLLECTION OF ASSESSMENTS,  
FIRST FLOOR, ROOM NO. 1, NEW COURT-HOUSE,  
CITY HALL PARK,  
NEW YORK, February 25, 1880.

## NOTICE TO PROPERTY-HOLDERS.

PROPERTY-HOLDERS ARE HEREBY NOTIFIED that the following assessment list was received this day in this Bureau for collection:

CONFIRMED FEBRUARY 13, ENTERED FEBRUARY 21, 1880.

Bronx River road opening, from Grand avenue to the north line of the City of New York.

All payments made on the above assessment on or before April 26, 1880, will be exempt (according to law) from interest. After that date interest will be charged at the rate of seven (7) per cent. from the date of entry.

The Collector's office is open daily, from 9 A. M. to 2 P. M., for the collection of money, and until 4 P. M. for general information.

EDWARD GILON,  
Collector of Assessments.

DEPARTMENT OF FINANCE,  
BUREAU FOR COLLECTION OF ASSESSMENTS,  
FIRST FLOOR, ROOM NO. 1, NEW COURT-HOUSE,  
CITY HALL PARK,  
NEW YORK, February 18, 1880.

## NOTICE TO PROPERTY-HOLDERS.

PROPERTY-HOLDERS ARE HEREBY NOTIFIED that the following assessment list was received this day in this Bureau for collection:

CONFIRMED FEBRUARY 14, ENTERED FEBRUARY 18, 1880.

82d street opening, from 1st avenue to Avenue B.

All payments made on the above assessment on or before April 18, 1880, will be exempt (according to law) from interest. After that date interest will be charged at the rate of seven (7) per cent. from the date of entry.

The Collector's office is open daily, from 9 A. M. to 2 P. M., for the collection of money, and until 4 P. M. for general information.

EDWARD GILON,  
Collector of Assessments.

DEPARTMENT OF FINANCE,  
BUREAU FOR COLLECTION OF ASSESSMENTS,  
FIRST FLOOR, ROOM NO. 1, NEW COURT-HOUSE,  
CITY HALL PARK,  
NEW YORK, February 4, 1880.

## NOTICE TO PROPERTY-HOLDERS.

PROPERTY-HOLDERS ARE HEREBY NOTIFIED that the following assessment list was received this day in this Bureau for collection:

CONFIRMED JANUARY 30 AND ENTERED FEBRUARY 4, 1880.

10th street opening, from 3d avenue to 5th avenue.

All payments made on the above assessment on or before April 5, 1880, will be exempt (according to law) from interest. After that date interest will be charged at the rate of seven (7) per cent. from the date of entry.

The Collector's office is open daily, from 9 A. M. to 2 P. M., for the collection of money, and until 4 P. M. for general information.

EDWARD GILON,  
Collector of Assessments.

FINANCE DEPARTMENT—COMPTROLLER'S OFFICE,  
NEW YORK, January 22, 1880.

NOTICE TO OWNERS OF REAL ESTATE IN THE TWENTY-THIRD AND TWENTY-FOURTH WARDS OF THE CITY OF NEW YORK.

THE COMPTROLLER OF THE CITY OF NEW YORK hereby gives notice to owners of real estate in the Twenty-third and Twenty-fourth Wards, that pursuant to an act of the Legislature of the State of New York, entitled "An act to provide for the adjustment and payment of unpaid taxes due the county of Westchester by the towns of West Farms, Morrisania, and Kingsbridge, lately annexed to the city and county of New York," passed May 22, 1878, the unpaid taxes of said town have been adjusted and the amount determined as provided in said act, and that the accounts, including sales for taxes levied prior to the year 1874, by the Treasurer of the County of Westchester, and bid in on account of said towns, and also the unpaid taxes of the year 1873, known as Rejected Taxes, have been filed for collection in the Bureau of Arrears in the Finance Department of the City of New York.

Payments for the redemption of lands so sold for taxes by the Treasurer of the County of Westchester, and bid in on account of said towns, and payments also of said Rejected Taxes of the year 1873, must be made hereafter to the Clerk of Arrears of the City of New York.

N. B.—Interest at the rate of twelve per cent. per annum is due and payable on the amount of said sales for taxes and said rejected taxes.

JOHN KELLY,  
Comptroller.

## REAL ESTATE RECORDS.

THE ATTENTION OF LAWYERS, REAL Estate Owners, Monetary Institutions engaged in making loans upon real estate, and all who are interested in providing themselves with facilities for reducing the cost of examinations and searches, is invited to these Official Indices of Records, containing all recorded transfers of real estate in the City of New York from 1653 to 1857, prepared under the direction of the Commissioners of Records.

Grantors, grantees, suits in equity, insolvents and Sheriffs' sales, in 61 volumes, full bound, price, \$100 00

The same, in 25 volumes, half bound, price, 50 00

Complete sets, folded, ready for binding, price, 15 00

Records of Judgments, 25 volumes, bound, price, 10 00

Orders should be addressed to "Mr. Stephen Angell, Comptroller's Office, New County Court-house,"

JOHN KELLY,  
Comptroller.

## SUPREME COURT.

In the matter of the application of the Department of Public Works, for and in behalf of the Mayor, Aldermen, and Commonalty of the City of New York, relative to the opening of One Hundred and Eighth street, from the easterly line of Fifth avenue to the Harlem river.

PURSUANT TO STATUTES IN SUCH CASE made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held in Chambers in the Court-house, in the City of New York, on the 26th day of March, 1880, at the opening of the Court on that day, or as soon thereafter as counsel can be heard, for the appointment of Commissioners of Estimate and Assessment in the above-entitled matter. That the nature and extent of the improvement hereby intended is the acquisition of title, in the name and on the behalf of the Mayor, Aldermen, and Commonalty of the City of New York, to all the lands and premises, with the buildings thereon, and the appurtenances thereto belonging, required for the opening of One Hundred and Eighth street, from Fifth avenue to the Harlem river, being the following described pieces or parcels of land:

Beginning at a point on the easterly line of Fifth avenue two hundred and one feet ten inches (201' 10") northerly from the point formed by the intersection of the easterly line of Fifth avenue with the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street four hundred and twenty (420') feet to the westerly line of Madison avenue; thence northerly and along the westerly line of Madison avenue sixty (60') feet; thence westerly four hundred and twenty (420') feet to the easterly line of Fifth avenue; thence southerly and along the easterly line of Fifth avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of Madison avenue two hundred and one feet ten inches (201' 10") northerly from the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street four hundred (400') feet to the westerly line of Fourth avenue; thence northerly and along the westerly line of Fourth avenue sixty (60') feet; thence westerly four hundred (400') feet to the easterly line of Madison avenue; thence southerly and along the easterly line of Madison avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of Fourth avenue two hundred and one feet ten inches (201' 10"), northerly from the northerly line of One Hundred and Seventh street, and running parallel to said street four hundred and five (405') feet to the westerly line of Lexington avenue; thence northerly and along the westerly line of Lexington avenue sixty (60') feet; thence westerly four hundred and five (405') feet to the easterly line of Fourth avenue; thence southerly and along the easterly line of Fourth avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of Lexington avenue two hundred and one feet ten inches (201' 10") from the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street four hundred and twenty (420') feet to the westerly line of Third avenue; thence northerly and along the westerly line of Third avenue sixty (60') feet; thence westerly four hundred and twenty (420') feet to the easterly line of Lexington avenue; thence southerly and along the easterly line of Lexington avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of Third avenue two hundred and one feet ten inches (201' 10") from the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street six hundred and ten (610') feet to the westerly line of Second avenue; thence northerly and along the westerly line of Second avenue sixty (60') feet; thence westerly six hundred and ten (610') feet to the easterly line of Third avenue; thence southerly and along the easterly line of Third avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of Second avenue two hundred and one feet ten inches (201' 10") from the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street six hundred and fifty (650') feet to the westerly line of First avenue; thence northerly and along the westerly line of First avenue sixty (60') feet; thence westerly six hundred and fifty (650') feet to the easterly line of Second avenue; thence southerly and along the easterly line of Second avenue sixty (60') feet to the point or place of beginning.

Also, beginning at a point on the easterly line of First avenue two hundred and one feet ten inches (201' 10") from the northerly line of One Hundred and Seventh street, and running easterly and parallel to said street seven hundred and twenty-six (726') feet to the bulkhead line, Harlem river; thence northerly and along said bulkhead line sixty feet and one-quarter of an inch (60' 0 1/4"); thence westerly seven hundred and twenty-five feet and three and three-quarters of an inch (725' 3 3/4") to the easterly line of First avenue; thence southerly along the easterly line of First avenue sixty (60') feet to the point or place of beginning.

Said street being sixty (60') feet wide between the easterly line of Fifth avenue and the bulkhead, East river.

Dated New York, March 1, 1880.

WM. C. WHITNEY,  
Counsel to the Corporation.

## DEPARTMENT OF DOCKS.

DEPARTMENT OF DOCKS,  
Nos. 117 AND 119 DUANE STREET,  
NEW YORK, January 17, 1880.

## NOTICE.

PURSUANT TO THE PROVISIONS OF SUB-DIVISION 7 of section 6 of chapter 574, Laws of 1871, the following regulation was unanimously adopted by the Board of the Department of Docks, at a meeting held on the 14th instant, to wit:

## REGULATION 16.

The owners, lessees, and occupants of every pier, wharf, and bulkhead in the City of New York shall keep the same in good repair, and the slips adjacent thereto properly dredged, and whenever, in the judgment of the Board of the Department of Docks, it shall be necessary so to do, written notices, signed by the President or Secretary of said Board, shall be served upon the owners, lessees, or occupants, or collector of wharves of any such pier, wharf, or bulkhead, or the slip adjoining the same, on which repairs or dredging are required by said Board, specifying the nature and extent of the repairs or dredging so required, and the time within which such repairs must be made or such dredging done; and in case of failure of the owners, lessees, or occupants so notified to comply with the terms and requirements of such notice, they shall be liable to a penalty of \$50 per day for every day they shall neglect to comply with such notice.

By order of the Board,  
EUGENE T. LYNCH,  
Secretary.

## DEPARTMENT OF TAXES AND ASSESSMENTS.

DEPARTMENT OF TAXES AND ASSESSMENTS,  
No. 32 CHAMBERS STREET,  
NEW YORK, January 12, 1880.

NOTICE IS HEREBY GIVEN THAT THE BOOKS of Annual Record of the assessed valuation of Real and Personal Estate of the City and County of New York for the year 1880, will be opened for inspection and revision, on and after Monday, January 12, 1880, and will remain open until the 30th day of April, 1880, inclusive, for the correction of errors and the equalization of the assessments of the aforesaid real and personal estate.

All persons believing themselves aggrieved must make application to the Commissioners during the period above mentioned, in order to obtain the relief provided by law.

By order of the Board,  
ALBERT STORER,  
Secretary.