

*Ra*

SEVENTEENTH

SEMI-ANNUAL REPORT

# 751

OF THE

Board of Water Commissioners

TO THE

COMMON COUNCIL

OF THE

CITY OF CHICAGO.

---

JANUARY 1st, 1860.

---

CHICAGO:

DUNLOP, SEWELL & SPALDING, BOOK & JOB PRINTERS, 145 LAKE STREET.

1860.

*Compliments of  
E. H. Winter*

SEVENTEENTH

SEMI-ANNUAL REPORT

OF THE

Board of Water Commissioners

TO THE

COMMON COUNCIL

OF THE

CITY OF CHICAGO.

---

JANUARY 1st, 1860.

---

CHICAGO:

DUNLOP, SEWELL & SPALDING, BOOK & JOB PRINTERS, 145 LAKE STREET.

1860.

## Board of Water Commissioners.

GEO. W. DOLE,  
ORRINGTON LUNT,  
NOAH STURTEVANT.

F38LD  
C435a  
1860

### Officers.

SUPERINTENDENT,  
BENJ. F. WALKER.

TREASURER,  
GEO. W. DOLE.

SECRETARY,  
A. W. TINKHAM.

CLERKS,  
JOSIAH H. BROSS.  
W. R. LARRABEE.

COLLECTORS,  
CHAS. R. VANDERCOOK,  
ANTON NIEMAN,  
E. G. REYNOLDS.

ENGINEERS AT PUMPING WORKS,  
D. C. CRRIGER, Chief,  
C. G. FLEETE, Assistant,  
FR. TRAUTMAN, Assistant.

## Commissioners' Report.

WATER COMMISSIONERS' OFFICE,  
Chicago, Ill., Feb. 24, 1860.

To the Honorable the Mayor and Aldermen of the  
City of Chicago, in Common Council assembled:

Sirs: The Water Commissioners respectfully submit herewith, their Report for the year 1859.

The Water Works are in good order, and were probably never in better working condition, and their state financially, as otherwise, is good.

### CHANGES MADE IN THE WORKS DURING 1859.

The principal expenditure during the year, in the way of enlargement, was in extending the water pipes. Some twelve and two-thirds miles of distribution pipe were laid during the year, of various sizes, from four to ten inches internal diameter, but mainly of four and six inches diameter, and in nearly equal quantities of each of those sizes. This extension includes a river pipe, of wrought iron, ten inches diameter, laid below the bed of the North Branch of Chicago River, at Waubansia Avenue.

The total addition to the cost of the Water Works this year, or the extension of the year, amounts to \$77,443. This includes besides the water pipe laid, the completion of the North and West reservoir buildings, sundry additions at the engine house—chiefly of matters connected with the new engine—two permanent coal sheds for the storage of a year's supply of coal, and a wall at the edge of the lake basin.

## DETAILED STATEMENT OF PIPE LAID.

The amount of pipe laid during 1859, as already stated, is large. We give below the amounts laid of each size of pipe:

10 inch pipe, - - - - -	1,094 feet.
8 " " - - - - -	1,050 "
6 " " - - - - -	32,548 "
4 " " - - - - -	32,246 "

Total amount of distribution pipe laid in 1859, 66,938 feet, or 12 miles and 3,578 feet.

Of this total amount, the share laid in each Division is as follows:

North Division, - - - - -	28,734 feet.
West " - - - - -	24,528 "
South " - - - - -	13,676 "
Total, - - - - -	66,938 feet.

## WHOLE AMOUNT OF PIPES LAID IN THE CITY.

The whole amount of main laid is, - - - - -	26,076 feet.
" " " " distribution pipe is, - - - - -	423,144 "

Total of all sizes of pipe laid, - - - - - 449,220 feet. or 85 miles and 420 feet.

During the last two years the demands upon the Board for the extension of the pipes have been very numerous and urgent, and a large amount of pipes have been laid, the distributing pipe laid amounting to 26½ miles. It is not expected that it will be necessary to lay near so much pipe during the present year as in the last two, and it is the intention of the Board to confine the extension of the pipes to cases of positive need.

## PUMPING WORKS.

The pumping power consists, as is generally known, of two large engines. One, the smaller, has been in use since the starting of the works. The other, generally termed the new engine, was first used in August, 1857. But one engine is used at a time, and only for a part of each day. The smaller has

been in use on 143 days, pumping on an average a little less than 15 hours daily; but during December, from the great waste of water from hydrants left running to keep them from freezing, the average running time for the month was 17½ hours per day.

The new engine has been used on 223 days, with an average use of about 12¼ hours for each day run, its highest average for any one month being about 14 hours.

The amount of water pumped by the two engines during the year is reported by the Engineer at 1,415,147,910 gallons, or an average daily amount of 3,877,117 gallons.

No great changes have been made in the pumping works during the year. The building, including the tower, has been kept in good repair, and made more convenient by the addition of an office for the use of the Engineers. The standing column within the tower has been increased in height ten feet, causing thus some increase to the head of water.

The new engine and its two boilers are in thorough working order. The old engine may require some repairs during the year not large in amount. The old boiler in the North wing of the engine house, is being put in complete repair, and is now nearly ready for use. The coal sheds, whose erection during the year has already been noticed, preserve the coal in good order, and prevent its waste.

## LAKE BASIN AND ITS PROTECTING CRIB-WORK.

Early last season the basin was dredged out, some 5000 yards of sand being removed. An opening in the crib-work which has heretofore existed, was then closed up, and over the whole of the protection, stone was filled in to replace what had been washed away or had sunk. It is now in good condition.

## THE NEW RESERVOIR BUILDINGS.

The North and West reservoir buildings, described in our last Annual Report, and there stated to be nearly finished and in use, have been in use the whole year. We have discovered no defects in them, and the work throughout appears to be well done.

THE OLD RESERVOIR BUILDING, ADAMS STREET.

Such changes have been made in this, the South Division reservoir, during the year, that the tank is now supported in the same way as in the other two. The tank—which is of boiler iron, 60 feet in diameter, and 28 feet high—rests on wrought iron beams two feet apart, the ends of the beams lying on the tops of three walls, nearly circular, and about ten feet apart, and about 45 feet high above the street grade, as in the new reservoirs. These walls were formerly so connected with arches as to make a continuous floor of masonry, and as the tank rested on supports a short distance above the masonry, the under side of the bottom was not seen and could not be reached for repairs. By the change made, the bottom is in sight and accessible, and a leak occurring, it is at once noticed and can be readily repaired. Under the original construction, the masonry suffered from the leakage of the tank, and the action of the water and frost together, would soon have seriously injured it. The leakage is now collected and borne off to the reservoir drain, without reaching the walls.

FIRE HYDRANTS.

The Commissioners have made comparatively large expenditures in increasing the number of fire hydrants, and use every proper means to make the works useful for the extinguishing of fires. One hundred and five hydrants have been added to the number reported last year, and eight old ones replaced by as many new. The new hydrants used are all of the patent of Mr. Edward Hamilton, and manufactured in this city.

WASTE COCKS.

During the year, waste cocks have been put in, in different parts of the city, connecting with the Lake or River or sewers in their vicinity, so that the different districts of pipe can be more rapidly and effectually drained of water. This was done to facilitate the making of connections, in additions or repairs, in the different districts, and so to lessen the time of shutting off the water from a district, and also for the occasional flushing and cleansing of the pipes.

FISH IN THE PIPE.

The citizens have for several times during the winter, been annoyed by the presence of small fish in the pipes, sometimes in great numbers. The Board believes that the annoyance will be of short duration at any one time, and have taken and are taking all means to prevent their ingress into the pipes, which occur to them. When the fish have been discovered as particularly numerous at any time, it has been found possible, for a while at least, to free the water from them, by thorough flushing and blowing off through the hydrants and waste cocks, so expelling the water in the pipes. The water, in its passage to the pump-well from the Lake, passes through three brass wire screens, of different degrees of fineness, the openings in one of which are so small, that it is impossible for even the smallest fish to pass through it. It is perhaps true that the fish are floated into the pump-well through the screens, in the state of spawn, and that from the spawn are there produced the minnows, which gradually get drawn up through the valves of the pump, to be sent off through the pipes under the city.

EXTENDING THE INLET PIPE INTO THE LAKE.

The matter of extending the inlet pipe into the lake for a long distance, for the purpose of obtaining water always nearly or quite clear, has had the attention of the Board for a long time, and still has. The undertaking, however, involves an expense, and is attended with risks which can not be estimated by those not familiar with the difficulty of placing and maintaining structures on our lake shore, exposed to the lake storms. The discoloration of the water is almost wholly from the washing of clay, and extends out a great ways. To gain any advantage over the present plan of obtaining a supply within the basin, where we have from ten to twelve feet of water, with almost no trouble from the washing into the pipes of sand, it will be necessary to go a very long distance from the shore.

INCOME OF THE WORKS FOR 1859.

The income of the Works for the year has been as large as was anticipated, and gives a sufficiently large excess over the

cost of repairs and operating, and the interest on the Water Loan Bonds issued. The total income for the year was \$123,600 77; greater by \$20,891 45 than the income of 1858.

Income from Water Rents and assessments, - - - - -	\$122,948 26
Profits tapping distributing pipes, - - - - -	652 51
Total Revenue for 1859, - - - - -	\$123,600 77

## EXPENSES FOR 1859.

Repairs and all operating expenses, - - - - -	\$42,904 45
Interest on Bonds issued and all interest, - - - - -	65,905 03
	<u>\$108,809 48</u>

Excess of income over interest and expenses, - - - - -	\$14,791 29
--	-------------

## REVENUE AND EXPENSES FROM COMMENCEMENT OF OPERATING THE WORKS.

Total revenue from commencement of operating the works, - - - - -	\$481,672 75
Total expenses and interest for same time, - - - - -	458,977 19
Total excess of revenue, - - - - -	\$22,695 56

Water was first supplied from the pipes in 1854. That year and the next there was deficiency of revenue. The receipts gradually approximated to the expenses in amount, but the deficiency of the two years amounted in the aggregate to \$15,632 03. The revenue of 1856 and 1857 paid the expenses and interest, and about extinguished this old deficiency. The revenue continued to exceed the expenses thence forward—the accumulation of the excess of revenue, amounting now to \$22,695 56.

## UNPAID WATER TAXES.

On the first day of January, 1860, there remained unpaid of all water taxes, for all time previous to May 1st, 1860, \$34,841 70. A portion of this from buildings being burned

or removed without the fact being known to the office, and from including more or less of buildings of an old and nearly worthless character, will not be collected. Most of it will be eventually.

## BUILDINGS SUPPLIED WITH WATER.

During 1859, the buildings then for the first time supplied with water, amounted to 1,159.

The buildings in each division, supplied by service pipes attached to the Water Works' pipes, are as stated below:

North Division, - - - - -	2,595
West " - - - - -	2,615
South " - - - - -	3,542

Total of buildings supplied, - - - - - 8,752

In this enumeration, any distinct building without regard to size, as the Tremont House, with its stores and offices underneath, or the Metropolitan Hall building entire, is reckoned as one building only. A more satisfactory statement of the various establishments taxed for water throughout the city, is to be found in the table prepared for that purpose, appended to the Secretary's report.

MEANS BY WHICH THE WATER WORKS HAVE BEEN BUILT, AND BY WHICH THE MATERIALS AND MACHINERY ON HAND FOR REPAIRS AND ADDITIONS AND SUPPLIES, IN PART FOR OPERATING, HAVE BEEN PURCHASED.

The means for the construction of the Water Works, and for the purchase of materials, machinery and supplies as above, have been derived, as follows:

Water Loan Bonds issued, (six per cent.), - - - - -	\$1,030,000 00
Water Loan Bonds issued, (seven per cent.), - - - - -	42,000 00
Bills payable, - - - - -	10,000 00
Due William E. Mortimer, January 1, 1860, - - - - -	716 25
Due McEntee and McHugh, - - - - -	1,113 69
Due C. Reissig & Co., - - - - -	434 35
Excess of income above interest, repairs and expenses, - - - - -	22,695 56
	<u>\$1,106,959 85</u>



## ACCOUNT CONTINUED.

1859.	Amount brought forward, - - -		\$ 12,488 18
Sept. 6	By amount received of Secretary for water rents collected, - - -	1,711 19	
9	" amount received of Secretary for water rents collected, - - -	713 07	
14	" amount received of Secretary for water rents collected, - - -	1,325 20	
23	" amount received of Secretary for water rents, \$1,132 74—permits, \$200, - - -	1,332 74	
27	" amount received of Secretary for water rents, \$721 06—G. & C. U. R. R. Co., \$22 50, - - -	743 56	
27	" amount received on note of Board of Water Commissioners, for \$4,000, (sixty days,) - - -	4,000 00	
			9,825 76
Oct. 5	By amount received of Secretary for water rents, \$1,610 48—permits, \$100—public hyd'ts, etc., \$100, - - -	1,810 48	
8	" amount received of Secretary for water rents, - - -	552 00	
12	" amount received of Secretary for water rents, - - -	684 47	
22	" amount received of Secretary for water rents, \$762 10—permits, \$200, - - -	962 10	
31	" amount received of Secretary for water rents, - - -	1,871 01	
			5,880 06
Nov. 3	By amount received of Secretary for water rents, - - -	2,065 53	
5	" amount received of Secretary for water rents, \$762,—permits, \$100, - - -	862 00	
7	" amount received of Secretary for water rents, - - -	1,043 76	
8	" amount received of Secretary for water rents, - - -	641 50	
	Amounts carried forward,	4,612 79	28,194 00

## ACCOUNT CONTINUED.

1859.	Amounts brought forward, - - -	\$ 4,612 79	28,194 00
Nov 10	By amount received of Secretary for water rents, \$1171 81—R. D. Wood & Co., \$3—Colwell & Co., 85-100. - - -	1,175 66	
11	" amount received of Secretary for water rents, - - -	1,427 65	
12	" amount received of Secretary for water rents, - - -	778 69	
14	" amount received of Secretary for water rents, - - -	752 00	
15	" amount received of Secretary for water rents, - - -	785 13	
16	" amount received of Secretary for water rents, - - -	909 25	
17	" amount received of Secretary for water rents, - - -	1,103 17	
18	" amount received of Secretary for water rents, - - -	529 00	
21	" amount received of Secretary for water rents, - - -	1,271 30	
22	" amount received of Secretary for water rents, \$749 73—permits, \$69, - - -	818 73	
23	" amount received of Secretary for water rents, - - -	1,767 82	
26	" amount received of Secretary for water rents, - - -	1,331 07	
28	" amount received of Secretary for water rents, \$1,550 63—pipe sold G. & C. U. R. R. Co., \$19, - - -	1,569 63	
29	" amount received of Secretary for water rents, - - -	2,333 15	
30	" amount received of Secretary for water rents, - - -	2,921 90	
			24,086 94
Dec. 1	By amount received of Secretary for water rents, - - -	4,949 28	
2	" amount received of Secretary for water rents, - - -	1,878 10	
	Amounts carried forward,	\$ 6,827 38	52,280 94



## ACCOUNT CONTINUED.

1859.	Amounts brought forward,	\$6,827 38	\$52,280 74
Dec. 5	By amount received of Secretary for water rents, - -	2,544 04	
7	" amount received of Secretary for water rents, \$1,560 26—permits, \$100, - -	1,660 26	
8	" amount received of Secretary for water rents, - -	505 80	
10	" amount received of Secretary for water rents, - -	843 98	
12	" amount received of Secretary for water rents, - -	575 90	
14	" amount received of Secretary for water rents, - -	907 01	
16	" amount received of Secretary for water rents, - -	1,100 05	
17	" amount received of Secretary for water rents, - -	347 35	
19	" amount received on agreement of Board of Water Commissioners, due April 1st, 1860, - - -	10,000 00	
24	" amount received of Secretary for water rents, - -	1,827 93	
28	" amount received of Secretary for water rents, - -	775 33	
31	" amount received of Secretary for water rents, - -	1,280 19	
	" amount received of Secretary for water rents, \$691 64—permits, \$27 80—shutting off water, etc., \$42 20—premium on gold and Eastern exchange, \$11 37, - -	773 01	
	" amount received of Secretary for sale of drafts on R. D. Wood & Co., and Colwell & Co., - - -	506 30	
	" amount received of Secretary for water rents, - - -	917 68	
	Amounts carried forward, \$	31,392 21	\$52,280 74

## ACCOUNT CONTINUED.

1859.	Amounts brought forward, \$	31,392 21	\$52,280 74
	By amount received of Secretary for water rents, \$819 91—note H. A. Pitts, \$301 20, —Sewerage Commissioners, \$208 44, - - -	1,329 55	32,721 76
1859.	DEBIT.		\$85,002 70
July 31	To amount paid on the warrants No's 1—42, of A. W. Tinkham, Secretary, - -	7,036 92	
Aug 31	" amount paid on the warrants No.'s 43—77, of A. W. Tinkham, Secretary, - -	5,623 24	
Sept 30	" amount paid on the warrants No.'s 78—146, of A. W. Tinkham, Secretary, - -	10,871 18	
Oct. 31	" amount paid on the warrants No.'s 147—195, of A. W. Tinkham, Secretary, - -	5,686 53	
Nov 30	" amount paid on the warrants No.'s 196—264, of A. W. Tinkham, Secretary, - -	17,536 73	
Dec. 31	" amount paid on the warrants No.'s 265—348, of A. W. Tinkham, Secretary, - -	38,100 35	
	Balance on hand, credited in new account, - - -		\$4,854 95 147 75
			\$85,002 70
1860.	CREDIT.		
Jan. 1	By balance on hand, deposited with Chicago Marine and Fire Insurance Co., - -		147 75

GEO. W. DOLE, Treasurer.

## Secretary's Report.

WATER COMMISSIONERS' OFFICE,  
CHICAGO, ILL., JANUARY 1st, 1860. }

*Board of Water Commissioners of the City of Chicago :*

SIRs:—I have the honor to submit herewith my report, as Secretary, and the usual financial statements for the year 1859.

### INCOME OF THE WORKS FOR 1859.

The revenue from the works for the past year amounts to \$123,600 77; exceeding the interest and expenses of the year by \$14,791 29, and the income of the year 1858 by \$20,891 45.

The items making up this total revenue for the year are as follows:

Cash receipts for water rents and assessments,	\$122,753 50	
“ “ tapping pipes, excess over cost,	652 51	
Water used by Sewerage Commissioners during 1859, and charged them in account,	194 76	
	\$123,600 77	
Interest, operating expenses and repairs, 1859:		
Interest on bonds issued and all interest,	\$65,905 03	
Expenses at the pumping works,	16,452 96	
Repairs and miscellaneous operating expenses,	12,321 59	
Office expenses, clerks, collectors, assessors, office rent, etc.,	7,829 90	
Salaries of Commissioners, Superintendent and Secretary,	6,300 00	\$108,809 48
Excess of revenue over interest and expenses, 1859,	\$14,791 29	

The receipts of last year, as also the amount of surplus revenue, are more than I had estimated.

Total revenue and expenses from beginning of Works—  
The total revenue from the commencement of operating the works, to Jan. 1, 1860, amounts to, \$481,672 75  
The total of interest and operating expenses from the same time, to Jan 1, 1860, is, - - - 458,977 19

Total excess of revenue, - - - - \$22,695 56

### UNCOLLECTED WATER TAXES.

A large amount is still in the hands of the collectors of water rents and assessments, for the year ending May 1st, 1860, and of uncollected warrants for taxes of years before that.

Unpaid water rents and assessments for the year commencing May 1st, 1859, and ending May 1st, 1860—

North Division—			
Water rents,	-	-	\$4,449 24
Assessments,	-	-	3,826 12
Total North Division,	-	-	\$8,275 36
West Division—			
Water rents,	-	-	\$4,591 25
Assessments,	-	-	4,036 67
Total West Division,	-	-	\$8,627 92
South Division—			
Water rents,	-	-	\$8,701 01
Assessments,	-	-	1,867 25
Total South Division,	-	-	\$10,568 26
Total of water rents and assessments for the year commencing May 1st, 1859, and ending May 1st, 1860, unpaid Jan. 1st, 1860,			
			\$27,471 54
The unpaid warrants amount, for the several Divisions, as follows:			
North Division,	-	-	\$1,099 56
West “	-	-	2,777 94
South “	-	-	3,492 66
Total amount rents, assessments and warrants unpaid, Jan. 1st, 1860,			\$7,370 16
			\$34,841 70

## BUILDINGS SUPPLIED WITH WATER AND TAPS PUT IN, 1859.

Buildings into which water was introduced during 1859—

North Division, - - - - -	396
West " - - - - -	441
South " - - - - -	322

Total for the year, - - - - - 1,159

A sum greater by 87 than the number supplied last year.

## TAPPING THE DISTRIBUTING PIPES.

During the year 1859 the number of taps inserted in the distribution pipes, - - - - -	913
or 124 more than in 1858.	
There were inserted previously, - - - - -	5,313
Total number of taps, - - - - -	6,226

## CONTRACTS AND OUTSTANDING ACCOUNTS.

The purchases of pipes this year were made of Messrs. R. D Wood & Co., and Messrs. Colwell & Co., both of Philadelphia, at the price of forty dollars per ton, delivered in Chicago; the payments, by contracts, excepting freight, being made in seven per cent. Water Loan Bonds, at their par value. 1,165 tons were delivered under these two contracts. The contract for trenching and backfilling, for the laying of the pipes, was executed with Mahlon McEntee and John McHugh.

The coal contract was with Messrs. Price, Morris & Co., of this city, at \$4 10 per ton, of Mineral Ridge, and \$3.95 per ton, of Chippewa coal, delivered and weighed at the engine house. 2108 tons were delivered by them.

There are no known unpaid accounts, excepting Wm. E. Mortimer, \$716.25, McEntee & McHugh, 1,113.69, and C. Reissig & Co., for \$434.35.

## CLERKS AND OTHERS EMPLOYED IN THE OFFICE.

The office force consists, at present, of Mr. J. H. Bross and Mr. Wm. R. Larrabee, clerks; Mr. C. R. Vandercook, inspector and collector; Mr. E. G. Reynolds and Mr. Anton Nieman, salaried collectors, and Mr. John Elmer and Mr. Samuel

Polkey, collectors on commission. Mr. Asa F. Bradley was employed for most of the year as assessor and surveyor.

Appended to this report, are the four financial statements usually submitted, showing in various ways all means had for constructing and operating the works, and their application, and in particular and more fully for the year just closed. An interesting and useful table, exhibiting the buildings within the water district, and all sources of water tax, for the year commencing May 1st, next, prepared in the office, by Mr. Bross, is also appended and submitted with this report.

Very respectfully,

Your obedient servant,

A. W. TINKHAM,

*Secretary.*

## STATEMENT No. 1,

OF THE AFFAIRS OF THE CHICAGO CITY HYDRAULIC COMPANY, DEC. 31st, 1859.

		Dr.		
Water Works, their total cost,	\$989,595	23		
Operating expenses and repairs in full to Dec. 31st, 1859, -	193,861	65		
Interest on bonds, coupon pay- ments to July 1st, 1859, and all other interest to Dec. 31st, 1859, inclusive, - - -	232,635	54		
Duncan, Sherman & Co., money in their hands for the pay- ment of coupons of January 1st, 1860, and all unpaid cou- pons of previous dates, -	32,430	00		
Discount on six per cent. bonds,	89,718	54		
Water pipes, for water pipes on hand, - - - - -	15,412	92		
Coal, for coal on hand, - - -	3,227	04		
Stock, for machinery, tools, etc., on hand - - - - -	8,377	50		
Service cocks, for service cocks on hand, . - - - -	152	37		
Office furniture, for office furni- ture on hand, - - - -	157	00		
Sewerage Commissioners, for balance due from them on account, - - - - -	171	50		
Geo. W. Dole, Treasurer, for balance in his hands, - - -	147	75		
			\$1,565,937	04
			Cr.	
Water Loan Bonds (six per cent.) issued, - - - -	\$1,030,000	00		
Water Loan Bonds (seven per cent.) issued, - - - -	42,000	00		
Amount carried forward,			\$1,072,000	00

Amount brought forward,		\$1,072,000	00
Income for all water rents and assessments received, and profits tapping pipe, - - -	481,672	75	
Bills payable, - - - - -	10,000	00	
Wm. E. Mortimer, balance due him, - - - - -	716,	25	
Mahon McEntee, and John McHugh, balance due them,	1,113	69	
C. Reissig & Co., balance due them, - - - - -	434	35	
		\$1,565,937	04

## STATEMENT No. 2.

RECEIPTS AND EXPENDITURES, FROM JULY 1st TO DEC. 31st, 1859, INCLUSIVE.

## RECEIPTS.

Water rents and assessments, received and paid G. W. Dole, Treasurer, - - - - -	\$66,517	25
Cash received for tapping the distributing pipes,	1,296	80
Cash received for shutting off and letting on water, putting up public hydrants, etc., - - - -	142	20
Received of G. & C. U. Railroad Co., for services of calkers, at Dixon, \$29 50, less \$7 00 paid for board, - - - - -	22	50
Received for damage to pipe, of R. D. Wood & Co., \$3 00, for Colwell & Co., 85 cents, - - -	3	85
Pipe sold G. & C. U. Railroad Co., - - - -	19	00
Premium received on gold and Eastern exchange,	11	37
Note of H. A. Pitts,—principal, \$292 00, interest \$9 20, - - - - -	301	20
Proceeds of draft on R. D. Wood & Co., for bal- ance of account, - - - - -	196	65
Proceeds of draft on Colwell & Co., for balance of account,- - - - -	309	65
Amount carried forward,	\$68,820	47

Amount brought forward,	\$68,820 47
Received of Board of Sewerage Commissioners,	208 44
Received for note of Board of Water Commissioners for \$4,000, due Nov. 29, 1859, - -	4,000 00
Received for agreement of Board of Water Commissioners for \$10,000, due April 1st, 1860, -	10,000 00
<hr/>	
Total cash receipts for the half year, ending Dec. 31st, 1859, - - - - -	\$3,028 91
Add balance in hands of Treasurer, July 1st, 1859, - - - - -	1,973 79
<hr/>	
Total cash on hand, July 1st, 1859 and cash receipts from July 1st to Dec. 31, - - -	\$5,002 70
Forty-two seven per cent. Water Loan Bonds, paid R. D. Wood & Co. and Colwell & Co., - -	42,000 00
Accrued interest on above named bonds, - -	604 27
<hr/>	
	\$127,606 97

## EXPENDITURES.

Extension of distributing pipes, - - -	\$ 56,315 99
North and West reservoir buildings, - - -	59 94
Coal sheds, - - - - -	1,133 82
Payments for service cocks, tappers' services and expenses, including cocks on hand, - - -	829 90
Payments for operating expenses, - - -	23,640 90
Interest—coupon payment of Jan. 1st, 1860 and exchange on do; commissions for payment of July interest; and \$70 interest on temporary loan, - - -	32,684 23
Water pipes on hand—increase since July 1st, -	5,196 45
Coal on hand—increase since July 1st, - - -	2,959 29
Stock account—for hydrants, stop cocks, etc., on hand more than on July 1st, - - - - -	128 55
R. D. Wood & Co., - - - - -	199 65
<hr/>	
Amount carried forward,	\$123,148 72

Amount brought forward,	\$123,148 72
Colwell & Co., - - - - -	310 50
Note of Board of Water Commissioners, due Nov. 29th, - - - - -	4,000 00
<hr/>	
	\$127,459 22
Add balance in Treasurer's hands, January 1st, 1860, - - - - -	147 75
<hr/>	
	\$127,606 97

## STATEMENT No. 3,

RECEIPTS AND EXPENDITURES FROM JAN. 1ST TO DEC. 31ST, 1859, INCLUSIVE.

## RECEIPTS.

Water rents and assessments received and paid over to Geo. W. Dole, Treasurer, - - -	\$122,753 50
Tapping distributing pipes—received for permits in gross, - - - - -	2,299 80
Cash received for shutting off and letting on water, putting up public hydrants, etc, - - -	235 81
G. & C. U. R. R.—received of Co. for services of men laying pipe at Dixon, - - - - -	22 50
Sundry sales of materials, - - - - -	35 63
Premium received on gold and Eastern, - - -	28 03
Received, for damage to pipes of R. D. Wood & Co., \$3—on account Colwell & Co., .85, -	3 85
Note of H. A. Pitts, received principal, \$292, interest, \$9 20, - - - - -	301 20
Received of Board of Sewerage Commissioners on account, - - - - -	208 44
Sale of five six per cent. water loan bonds, - -	4,384 08
Note of Board of Water Commissioners for \$4,000, due Nov. 29, 1859, - - - - -	4,000 00
<hr/>	
Amount carried forward,	\$134,272 84

Amount brought forward,	\$134,272 84
Agreement of Board of Water Commissioners for \$10,000, due April 1, 1860, - - -	10,000 00
Proceeds of draft on Messrs. R. D. Wood & Co. for balance of account, - - - -	196 65
Proceeds of draft on Messrs. Colwell & Co. for balance of account, - - - -	309 65
Forty-two seven per cent. water loan bonds, paid Messrs. R. D. Wood & Co. and Messrs. Colwell & Co., - - - -	42,604 27
	<hr/>
	187,383 41
Add balance in Treasurer's hands Jan. 1, 1859,	676 33
	<hr/>
	\$188,059 74

## EXPENDITURES.

Extension of distributing pipes, - - - -	\$59,243 88
Additions to the works besides water pipes, -	12,364 34
Payments for service cocks and tapper's services, and expenses, including service cocks on hand,	1,341 88
Cash payments for operating expenses, - -	37,678 99
Interest—principally the coupon payments of Jan. 1, 1859, and Jan. 1, 1860, - - - -	64,439 38
Water pipes on hand, payments on during the year, - - - -	5,196 45
Coal on hand, payments on during the year, -	2,959 29
Stock on hand, " " " " " -	128 55
Sewerage Commissioners, payments for labor and materials for them during the year, - -	49 08
R. D. Wood & Co., - - - -	199 65
Colwell & Co., - - - -	310 50
Note of Board of Water Commissioners, due Nov. 29, - - - -	4,000 00
	<hr/>
	\$187,911 99
Add balance in Treasurer's hands Jan. 1, 1860,	147 75
	<hr/>
	\$188,059 74

## STATEMENT No. 4.

This statement shows in detail the application of all expenditures, by cash or bonds, during the year 1859. It shows besides, the actual cost during the year, of all extensions, operating expenses, and interest—the actual cost often varying from the monied expenditure, by the use of material previously paid for and from other causes:

EXTENDING THE WATER PIPES.	Expenditures by Money or Bonds.	Actual Cost.
Cast iron pipe, chiefly 4 and 6 inch, - - - -	\$41,890 36	
Trenching and back filling, - - - -	4,763 80	
Labor of laying and testing pipes, and making and placing hydrant and stop cock boxes, - - - -	3,234 40	
Hauling pipes, - - - -	482 19	
Lead, - - - -	3,211 86	
Gasket, - - - -	51 23	
Coal - - - -	32 73	
Repairs of Testing press, scales, and miscellaneous expenditures at the pipe yard, - - - -	77 62	
Stop cocks, - - - -	706 45	
Six 4 inch fire hydrants, - - - -	270 00	
Ninety-three 2½ inch fire hydrants, - - - -	2,929 50	
Lumber for hydrant and stop cock boxes, - - - -	228 17	
Nails, spikes, screws, etc., for do., - - - -	118 01	
Iron covers for stop cock boxes, - - - -	117 32	
Horse feed, \$81 39—shoeing \$11 10—hay, \$5 90, - - -	98 39	
	<hr/>	
Amount carried forward,	\$58,212 03	

Amount brought forward,	\$58,212 03	
Blacksmithing, for repairs, calkers' tools, etc., - -	51 78	
Miscellaneous expenditures,	23 32	
River pipe at Waubansia av., —iron work, - - -	676 75	
Dredging for river pipe at Waubansia avenue, - -	250 00	
Towing dredge, - - -	30 00	
	<u>          </u>	\$59,243 88
For actual cost, add— Am't due McEntee and McHugh for trenching, - -	\$1,113 69	
Pipe used, previ- ously paid for, -	2,997 39	
Hydrants and stop cocks, previ- ously paid for, -	735 00	
	<u>          </u>	4,846 08
Deduct amount re- ceived for pipe sold and labor of men, - - -	174 30	
	<u>          </u>	4,671 78
		63,915 66
COMPLETION OF NORTH RESERVOIR BUILDING.		
Carpentry, - - -	1,444 75	
Painting and glazing, - -	134 39	
Iron work of tank and roof,	2,575 08	
Tin gutters and conductors within the building, -	128 00	
Galvanized iron gutters for roof, - - -	134 12	
Tin roofing of cornice, -	114 27	
	<u>          </u>	
Amounts carried forward,	\$4,530 61	\$59,243 88 \$63,915 66

Amounts brought forward,	\$4,530 61	\$59,243 88	\$63,915 66
Painting tin roofing of cor- nice, - - -	15 83		
Iron window grates, \$14 14, —lead, gasket, and coal, \$34 80, - - -	48 94		
Oak braces for iron beams, and use of derrick hoisting beams, - - -	41 00		
Miscellaneous expenditures,	73 76		
	<u>          </u>	4,710 14	
For actual cost add— Water pipes used, previously paid for, - - -	205 00		
Incidental expens- es attending sale of bonds, - -	85 44		
	<u>          </u>	290 44	
			5,000 58
COMPLETION OF WEST RESERVOIR BUILDING.			
Carpentry, - - -	1,444 75		
Painting and glazing, - -	134 39		
Iron work of tank and roof,	2,575 08		
Tin gutters and conductors, within the building, -	129 03		
Galvanized iron gutters for roof, - - -	134 12		
Tin roof of cornice, \$114 27, painting same, \$15 83 -	130 10		
Iron window gratings, \$14 14 oak braces for iron beams, \$22 25 - - -	36 39		
	<u>          </u>		
Amounts carried forward,	\$4,583 86	\$63,954 02	\$68,916 24

Amounts brought forward, \$4,583 86 \$63,954 02 \$68,916 24  
 Lumber for repairs of sidewalk, \$19 06, miscellaneous, \$27 72, - - - 46 78  
4,630 64

For actual cost add—

Cost of sewers, credited Sewerage Commissioners' account, - \$108 68

Incidental expenses attending sale of bonds, - - - \$5 43

194 11

4,824 75

ADDITIONS AT THE ENGINE HOUSE.

Foot walk, brass railing, extra plunger and valve, suction pipe of well engine, etc., - - -

779 60

Add previous payments to Geo. W. Quintard, - -

878 45

1,458 05

WALL ACROSS ENGINE HOUSE LOT AT EDGE OF LAKE BASIN.

Total cost of masonry, -

514 31

514 31

COAL SHEDS.

Hauling posts, \$20, lumber, \$878 18, - - -

898 18

Services of carpenters, laborers, etc., - - -

458 28

Nails and hardware, \$69 67, patent roofing, \$290 74, -

360 41

Tar for coating sides of sheds, 12 78

12 78

1,729 65 1,729 65

Amounts carried forward,

\$71,608 22 \$77,443 00

Amounts brought forward, \$71,608 22 \$77,443 00  
 Total for additions to the works during 1859, including all items charged to construction or water works account, - - -

71,608 22

77,443 00

OPERATING EXPENSES OF ENGINE HOUSE.

Services of engineer and two assistant engineers, - -

2,600 04

Services of firemen and laborers, - - -

1,698 97

Coal, - - -

5,329 08

Oil, 9 bbls., \$365 44, tallow, 702 lbs., \$93 39, - -

458 83

Cotton waste and wick, \$77 10 grate bars, \$83 28, - -

160 38

Gas, - - -

192 88

Repairs, chiefly of matters connected with the engine,

205 39

Repairs of boilers, - -

951 01

Repairs of tower, roof about tower—repairs of building,

283 86

Painting engine and fire rooms, \$139 36, glazing,

158 90

\$19 54, - - -

115 22

Lightning rod, \$66 40, hardware and tools, 48 82, -

23 42

Blacksmithing, - - -

30 93

Packing \$12 12, white lead, oil, etc., \$18 81, - -

61 39

Stove and pipe, \$31 10, miscellaneous, \$30 29, - -

37 74

12,308 04

Amount carried forward,

12,308 04



Amount brought forward,		12,308 04	
For actual cost add—			
Coal used, previously paid for, -	4,206 85		
Due W. E. Mortimer, for engineer's office, -	81 50		
	<u>4,288 35</u>		
Deduct,—rec'd for materials sold, -	143 43		
	<u>4,144 92</u>	16,452 96	
OPERATING EXPENSES, MISCELLANEOUS AND REPAIRS.			
Dredging Basin at pumping works, and grading engine house lot, - - -	2,207 42		
Repairing and improving crib-work protecting basin, -	461 84		
White-washing fence, wall, etc., at pumping works, -	20 00		
Repairing South reservoir—iron beams, cost delivered, -	2,144 31		
Repairing South reservoir—payments on masonry, -	700 00		
Sheet lead for capping walls South reservoir, - -	146 48		
For gutters and conductors within South reservoir building, - - - -	80 91		
Tinning cornice South reservoir and painting same, -	130 11		
Miscellaneous repairs, North, South and West reservoirs, - - - -	15 80		
Repairs of South reservoir tank, - - - -	155 37		
Amounts carried forward,	<u>\$6,062 24</u>	<u>\$12,308 04</u>	<u>\$16,452 96</u>

Amounts brought forward,	\$6,062,24	\$12,308 04	\$16,452 96
Repairs of hydrant and stop cock boxes,—materials used, - - - -	104 65		
Services of calkers, laborers, carpenters, etc., for operating and repairs, - -	3,425 66		
Repairs of water pipes, fire hydrants and stop cocks, substituting new hydrants for old, and putting in several waste cocks, not including services of parties employed on the work, -	826 11		
Blacksmithing, chiefly for repair of tools, - - -	112 48		
Tools, \$16, new wagon and repairing wagon and buggy, \$86 22, - - - -	102 22		
Harness and repairs of harness, - - - -	42 94		
Hay, \$67 60, Horse feed, \$189 81, Horse shoeing, \$29 23, - - - -	286 64		
Side walk and culvert assessment, West Division, -	61 29		
Ropes and blocks, \$27 88, miscellaneous, \$128 94, -	156 82		
Publishing annual report, -	60 00		
	<u>11,241 05</u>		
For actual cost add—			
Due W. E. Mortimer, for masonry repairs on South reservoir, etc., -	634 75		
Am'ts forwarded,	<u>\$634 75</u>	<u>\$23,549 09</u>	<u>\$16,452 96</u>

Am'ts forwarded, \$634 75	\$23,549 09	\$16,452 96
Due C. Reissig & Co., iron work repairs, South reservoir, - - -	434 35	
Credited Sewerage Commissioners for sundry repairs, - - -	24 13	
Water pipes and hydrants used, previously paid for, - - -	223 12	
	<u>1,316 35</u>	
Deduct, paid G. W. Dole, Treasurer, for receipts, shutting off and letting on water for public hydrants, etc., - - -	235 81	
	<u>1,080 54</u>	12,321 59
OPERATING EXPENSES,—OFFICE.		
Office rent, - - -	1,200 00	
Services of Clerks, - - -	1,995 04	
Services of Collectors, - - -	2,951 64	
Services of Assessor and Surveyor, - - -	777 84	
Labor, care of office, etc., - - -	182 50	
Stationery, - - -	110 51	
Printing water bills, permits, etc., \$211 50, tax books, \$45 00, - - -	256 50	
Advertising May and Nov. water rents, \$83 70, newspapers, \$17, - - -	100 70	
Amounts carried forward.	\$7,574 73	\$23,549 09
	\$28,774 55	

Amounts brought forward, \$7,574 73	\$23,549 09	\$28,774 55
Gas, \$20 44, Ice, \$12, Coal, \$35 69, miscellaneous, \$68 76 - - - -	136 89	
Hay, \$22 55, horse feed, \$54 22, horse shoeing, \$18 41, repair of buggy, \$23 10, - - - -	118 28	
	<u>7,829 90</u>	7,829 90
OPERATING EXPENSES,—SALARIES.		
Services of Water Commissioners, at \$1,000 each, - - -	3,000 00	
Services of Superintendent, - - -	1,800 00	
Services of Secretary, - - -	1,500 00	
	<u>6,300 00</u>	6,300 00
TOTAL OPERATING EXPENSES FOR 1859.		
	\$37,678 99	\$42,904 45
INTEREST.		
Interest on Water Loan Bonds, due July 1st, 1859, - - -	30,900 00	
Interest on Water Loan Bonds, due Jan. 1st, 1860, - - -	32,055 00	
Exchange on July and January interest, - - -	1,253 33	
Commissions paid Duncan, Sherman & Co., for payment of July and January interest, - - -	156 34	
Interest on temporary Loan, \$70 00, —miscellaneous, \$4 71, - - - -	74 71	
	<u>64,439 38</u>	
For actual cost add—		
Am't charged over to interest from discount account July 1, 1859, and Jan. 1, 1860, - - -	2,175 35	
Am'ts forwarded, \$2,175 35	\$64,439 38	\$102,118 37
	\$42,904 45	

Am'ts forwarded, \$2,175 35	\$64,439 38	\$102,118 37	\$42,904 45
Deduct,—premium rec'd on gold and Eastern ex. sold, \$28 03, interest rec'd on note of H.A. Pitts, \$9 20, accrued interest on Bonds sold, \$672 47, - - -	709 70		
	<u>1,465 65</u>	<u>65,905 03</u>	
Total interest and operating expenses, 1859, - - -		102,118 37	\$108,809 48
Brought forward—additions to the works, in 1859, -		71,608 22	77,443 00
<b>SERVICE COCKS.</b>			
Tapper's services, one year,	496 31		
Service cocks, - - -	475 39		
Cast iron boxes, - - -	278 80		
Sharpening and repairing tapper's tools, - - -	44 20		
Horse feed, - - -	13 00		
Repairing tapper's wagon, -	32 00		
Repairing harness, - - -	2 18		
	<u>1,341 88</u>		
Add—service cocks used previously paid for, - - -	\$457 78		
Deduct,—receipts for tapping pipes, \$2,299 80,—ser- vice cocks on hand, Jan. 1st, 1860, \$152 37, -	2,452 17		
Balance to be de- ducted, - - -	<u>1,994 39</u>		
Showing a profit of	652 51		
Amount carried forward,		<u>\$173,726 59</u>	

Amount brought forward,	\$173,726 59
<b>WATER PIPES.</b>	
Water pipes on hand, Jan. 1st, 1860,—payments on during the year, - - -	5,196 45
<b>COAL ACCOUNT.</b>	
Coal on hand, Jan. 1st, 1860, —payments on during the year, - - - - -	2,959 29
<b>STOCK.</b>	
Additions to stock on hand, during the year, of hy- drants, stop cocks, etc., -	128 55
<b>SEWERAGE COMMISSIONERS.</b>	
Money paid on account for them, for sundry repairs, 1859, - - - - -	49 08
<b>R. D. WOOD &amp; CO.</b>	
Payment to them of money received by draft etc. on their account, - - - -	199 65
<b>COLWELL &amp; CO.</b>	
Payment to them of money received, draft, etc., on their account, - - - -	310 50
<b>BILLS PAYABLE.</b>	
Note of Board of Water Commissioners, \$4,000,— due Nov. 29, - - - -	4,000
Total of money and bonds expended by Chicago City Hydraulic Co., during the year 1859, - - - -	<u>\$187,911 99</u>

## Superintendent's Report.

WATER COMMISSIONERS' OFFICE, }  
CHICAGO, ILL., JANUARY 1ST, 1860. }

*Board of Water Commissioners of the City of Chicago :*

GENTLEMEN: I herewith present to your Honorable Board, the present condition and progress of the works under your charge, and such other matters as are deemed of importance in relation thereto.

It will be seen by reference to the table of pipe extension which is appended to this report, that we have laid the past season, a little over twelve and two-thirds miles of distribution pipes, of the following sizes, viz:

Of 10 inch,	- - - - -	1,094 feet.
" 8 "	- - - - -	1,050 "
" 6 "	- - - - -	32,548 "
" 4 "	- - - - -	32,246 "
Making a total of,	- - - - -	66,938 "

or, 12 <sup>3678</sup>/<sub>5280</sub> miles.

### FIRE HYDRANTS.

One hundred and five additional fire hydrants have been connected to the works the past season, making the whole number now in use, three hundred and eighty-eight. On some of the principal streets which are being brought up to grade and paved, the number of hydrants has been doubled, which adds very much to the facility for extinguishing fires. All the hydrants purchased the past year are of Hamilton's patent. The location and size of the hydrants inserted the past season, will be found in the appropriate table.

### STOP COCKS.

We have now in use stop cocks of four different patterns. Those used the past year are of a new pattern, and superior we think to the others in use. Fifty of these cocks have been made, about one-fourth of which are now in use, and work well. The size, location and number of cocks inserted the past season, will be found in the annexed table.

### RIVER PIPES.

A ten inch river pipe has been laid across the North Branch of the River, at Waubansia Avenue, which cost \$956 75.

The eight inch main, at Kinzie street, was damaged by building the new bridge at that place, and has been disconnected, the cocks on either side of the river being now used for blow-offs. This pipe was only put in for temporary use, while the State street pipe was being enlarged, and its discontinuance does not effect the circulation.

### INCREASE IN THE AMOUNT OF WATER USED.

It will be seen by the running time of the engines, as furnished by the Engineer in charge at the pumping works, and appended to this report, that during the months of July and August, and also in some of the coldest winter months, the pumps of the small engine have to be run about twenty-one out of the twenty-four hours of each day. It must therefore be apparent that if we continue to add to our distributing mains, or if the consumption of water continues to increase in the same ratio for the year to come, that it will be as much as we can do at all times, to give a good and generous supply. This being the condition of things, it becomes necessary that we adopt measures to prevent the great waste of water, by the use of metres and other restrictions, and also to increase the supply from the pumping works. This may be accomplished to a limited extent, by increasing the size of the main on Wolcott and State streets to twenty-four inch, our engines being capable of furnishing a much larger supply, were the mains of sufficient size to receive and conduct it to the reservoirs. This enlarge-

ment may perhaps with safety be deferred for another year, provided suitable precautions are used to prevent waste. Many of our citizens allow their hydrants to run all the time during the coldest weather to prevent freezing. I think they should be required to so protect them that this would not be necessary, which they would be likely to do, provided they had to pay for all the water wasted in this way. Would it not be well to have every hydrant inspected before another winter, and require every water taker to have them suitably protected against frost. It is evident, however, that the time is not far distant, if our city continues to prosper, when we shall have to look to and adopt some plan for materially increasing our facility for supplying water to our city. The large amount of water used for sprinkling the streets, for cleansing the sewers, for fountains, and other purposes of luxury, all of which are increasing in a four-fold ratio, together with the immense increase in the amount which will be required for machinery and other mechanical purposes, demonstrate the necessity of preparing our minds and the minds of our citizens generally, for the adoption of some important and permanent improvement in that direction.

#### BASIN IN THE LAKE.

We have made some important improvements in the basin, the past season. A good and substantial wall has been built across the east end of our engine house lot, at the water's edge, which prevents the sand from being washed from the lot into the basin.

About 4,737 yards of sand has been dredged out and placed upon the lot, and gives us an average depth of about ten feet in the basin. The opening on the south-east corner has been closed up, and a gate put in. The protection has also been well repaired, and about thirty-six cords of stone added, and it is now in a better condition than ever before. There is, however, some indications of decay in the tops of a portion of the piles, which will require strict attention, for should a breach be made in the protection, it might occasion considerable incon-

venience. The whole amount expended on the basin the past season, is as follows:

Dredging,	- - - - -	\$2,207.42
Wall,	- - - - -	514.31
Filling up space and Gate,	- - - - -	283.58
Cost of stone and placing,	- - - - -	258.50
Total,	- - - - -	<u>\$3,263.81</u>

#### AQUEDUCT.

The aqueduct leading from the basin to the pump well is still in good order, and has required no material repairs.

#### ENGINE HOUSE.

There has been a small amount expended in painting and repairing the engine house. The tower was struck by lightning, near the top, on the 17th day of April. The injury, however, was not very great; a few bricks were thrown out, breaking the sky-light, and a small stone corbel passed through the main roof, near the east end, falling inside, near the crank of the new engine. Fortunately, no one was injured. The zinc cornice to the tower, had become very much impaired, and has been taken off and a brick cornice substituted, with a stone coping. A lightning rod has also been attached to the tower. The amount expended in repairs of engine house is \$500.33. We have for a long time, felt the need of a comfortable and convenient office for the engineers, which has been supplied by a good, substantial brick addition at the east end of the building, being entered through the window opening, in the rear of the new engine. The office fixtures, &c., cost \$119.24.

#### ENGINES AND BOILERS.

The amount expended in repairs of the engines, the past year, is \$205.39. For repairs of the two boilers in the south wing, \$67.32. The old boiler in the north wing, which had been in use since the commencement of the works, was found to be so much worn that it was necessary to take out a portion of the flues, and to make thorough and general repairs throughout. An agreement was made with John McArthur, to make

these repairs for the sum of \$1,525. There will, however, be some extra charges. This work will not be completed until some time in February. When these repairs are made I think our boilers will be good, with some trifling repairs, for some time.

The smoke-pipe leading from the tower, will require some attention very soon; some of the joints having given way by reason of the expansion and contraction of the iron.

Some important repairs will be required soon, on the north engine. It has been in constant use ever since the works were started, and the repairs have been very trifling. The steam piston and rod are now much worn, and will soon need to be replaced by a new one. It may need repairs to the amount of five or six hundred dollars, within the next twelve months. I think we may consider ourselves very fortunate with our machinery, no accident of note having occurred since the works were started, now nearly six years, and but a very small amount has been expended for repairs. Much credit is due to the engineer and his associates for their vigilance and care in this regard.

#### COAL SHEDS.

Two large and commodious coal sheds, capable of storing about twelve hundred tons of coal each, have been erected the past season. They are 44 by 109 feet, extending east from east boiler room. In the east end of one is a stable and store room, and in the other a forge and carpenter shop, in which many of our repairs can be made. The whole amount expended for these accommodations is \$1,729 65.

#### ENGINE HOUSE LOT.

The engine house lot has been very much improved by using the material which was dredged out of the basin, for grading the lot, and also by the wall on the east side. The board fence has also been repaired and white-washed. Amount expended on the lot, \$147 00.

#### NORTH RESERVOIR.

The north Reservoir, located on the corner of Chicago Avenue and Sedgwick street, has been filled nearly every day since it was completed. Three times the water has been drawn off, for the purpose of cleaning and caulking some small leaks, but there has been very little occasion for repairs, and no leaks of importance have made their appearance. The lot needs some grading to give it a finished look, and some kind of protection is needed to keep the boys from defacing the building, breaking the windows, &c. A recommendation in regard to this subject, together with estimates, was made in my report of last year.

#### WEST RESERVOIR.

The Reservoir on the corner of Monroe and Morgan streets, is also in good condition, and I have not been able to detect the least appearance of weakness in either of the new structures since they were completed. This Reservoir has also been used constantly since my last report.

#### SOUTH RESERVOIR.

The Reservoir on Adams street, in the South Division, has leaked so badly that it was feared that the masonry might be injured in consequence.

These leaks were occasioned by the bearings being placed too far apart, under the bottom of the tank, consequently bringing too great strain upon the joints. In some instances the pressure was so great that the iron was torn asunder, causing immense leaks.

It was finally decided to take out the brick arch under the tank, and substitute iron beams of the same pattern and placed in the same way as those in the West and North Reservoirs.

A contract for taking out the masonry, furnishing the stone copings for the tops of the walls, and completing the masonry ready for the iron beams, was made with William Mortimer, on the 6th day of October, for the sum of \$1,200. The cost of the iron beams was \$2,144 31; placing beams, \$125; sheet

lead used for gutters, joints, &c., \$146 48; conductors and tin work, \$80 91; extra mason work, \$6 50; paid C. Reissig, for repairing tank, \$434 35; John Clark, for grates for windows, \$14 14; P. Neff, for repairing windows, \$3 50. Total cost of repairs, \$4,155 19. The old railroad iron taken out will sell for about \$275, which will leave \$3,880 19, as the total cost of repairs and alterations of this Reservoir. The cost of the changes made in the masonry, of the iron beams as placed, and of all incidentals growing out of the substitution of the iron beams for the brick arching, amounts to \$3,428 20.

The Reservoir is now in good order, there being no leaks of any account. I think it would be well to clean and point up the masonry early in the spring, it having been very much defaced by the leakage. The expense will be trifling, and it will add much to the appearance of the building.

We have been annoyed occasionally with quantities of small fish, which get into the pipes and pass through, and sometimes obstruct the hydrants. We have taken great pains to prevent this, but it is impossible always to keep the pipes free from them. We now have three brass wire strainers, one of very fine texture, through which the water has to pass before it reaches the well, but still we cannot expect to keep the pipes entirely free from them.

Appended to this report, will be found the statistics of the Engineer at the pumping works, which will be found interesting and satisfactory. All of which is respectfully submitted.

B. F. WALKER,  
*Superintendent.*

PIPE EXTENSION.  
DISTRIBUTION PIPES HAVE BEEN LAID THE PAST SEASON AS FOLLOWS:

SOUTH DIVISION.

Size of Pipe.	Street.	Between what Streets.	No. of Ft.
6 inch	Michigan Avenue,	Twelfth and Bridge,	4,043
4 "	Eldredge Court,	Wabash to Michigan Av.,	410
4 "	Cottage Gro. Av.,	City Limits north to connect,	1,686
4 "	Wentworth Av.,	Archer Road and Alexander,	536
4 "	Alexander,	Wentworth Av. to Bradley,	750
6 "	South	" and Archer Road,	812
6 "	Wabash Avenue,	Old and Ringold Avenue,	1,766
8 "	Ringold "	State and Indiana Avenue,	1,050
6 "	" "	Cot. Gr. Av. to Calumet Av.,	893
6 "	Michigan "	Monterey and Buena Vista,	650
4 "	Lasalle,	Archer Road and South,	514
4 "	For hydrants,	In South Division,	566
Total number of feet,			13,676

WEST DIVISION.

Size of Pipe.	Street.	Between what Streets.	No. of Ft.
4 inch	Mather,	Canal east to Planing Mill,	433
4 "	Mitchell,	Canal and Stewart Avenue,	568
4 "	Stewart Avenue,	Mitchell and Wright,	230
4 "	Harrison,	Jefferson and Clinton,	412
6 "	Van Buren	Morgan and Aberdeen,	740
4 "	Aberdeen,	Van Buren and William,	206
4 "	William,	Aberdeen and Rucker,	668
6 "	Rucker,	William and Van Buren,	206
4 "	May,	Lake and Fulton,	436
4 "	Fulton,	May and Ann,	333
6 "	Halsted	Mitchell north to Alley,	1,150
4 "	Alley bet. Mitchell and Maxwell,	Canal and Halsted,	2,096
4 "	Lake,	Reuben and Paulina,	670
4 "	Paulina,	Lake and Park Avenue,	384
4 "	Park Avenue,	Paulina and Woods,	663
4 "	Wood	Park Avenue and Warren,	734
4 "	Warren	Wood and Samuel,	339

Number of feet carried forward, 10,268

## WEST DIVISION—(CONTINUED.)

Size of Pipe.	Street.	Between what Streets.	No. of Ft.
		No. of feet brought forward,	10,268
6 inch	Monroe,	Morgan and Throop,	2,078
6 "	Halsted,	Jackson and Van Buren,	460
4 "	Price Place,	Desplains and Halsted,	887
4 "	Peoria,	Monroe and Adams,	491
6 "	Jackson,	Rucker and Throop,	685
6 "	Fulton,	Jefferson and Peoria,	1,935
6 "	Halsted,	Milwaukie Av. and Third,	893
4 "	Third,	Halsted and Green,	329
4 "	Gurley,	Blue Island Av. and Silver,	270
4 "	Silver,	Gurley and Harrison,	500
4 "	Hubbard,	Green and Milwaukie Av.,	797
4 "	Sangamon,	Madison and Washington,	579
6 "	Milwaukie Av.,	Carpenter and Cornell,	1,922
4 "	Cornell,	Milwaukie Av. and Gurrier,	500
4 "	Gurrier,	Cornell and Front,	326
4 "	Rucker,	Milwaukie Av. and Front,	222
4 "	Front,	Rucker and Gurrier,	672
6 "	Waubansia Av.,	From the River west,	75
4 "	Ann,	North of Fulton,	42
4 "		Thirty-one hydrants,	597

Total number of feet, 24,528

## NORTH DIVISION.

Size of Pipe.	Street.	Between what Streets.	No. of Ft.
4 inch	Pearsons,	Pine and the Lake,	100
4 "	Superior,	" and Rush,	360
4 "	Kingsbury,	Kinzie and Indiana,	994
4 "	Michigan,	Pine to $\frac{1}{2}$ block east of Sand,	600
4 "	Indiana,	Kingsbury and Market	774
4 "	Oak,	Franklin and Wells, }	815
4 "	"	Clark and Lasalle, }	
6 "	North Avenue,	Orchard and Clybourne Av.,	1,000
6 "	Clybourne Av.,	North Av. and Racine road,	3,289
6 "	Ellis,	Clybourne Av. and N. Branch,	625
10 "	Ontario,	Wells and Market,	864
4 "	Erie,	Franklin and Market,	406

Number of feet carried forward, 9,827

## NORTH DIVISION—(CONTINUED.)

Size of Pipe.	Street.	Between what Streets.	No. of Ft.
		No. of feet brought forward,	9,827
4 inch	Whitney,	From Green Bay east,	645
4 "	White,	" " " "	436
4 "	Hinsdale,	" " " "	450
4 "	Granger,	Wells and Sedgwick,	1,064
6 "	Clark,	Elm and North Avenue,	2,893
4 "	Dearborn,	Chicago Av. and Division,	2,677
6 "	Sedgwick,	Green and Wisconsin Av.,	3,642
6 "	Wells,	North Av. and Winona,	1,391
6 "	Division,	Clybourne and Larrabee,	985
6 "	Larrabee,	Division and Vedder,	415
4 "	Vedder,	Larrabee and Halsted,	1,350
4 "	Halsted,	Vedder and Rees,	500
4 "	Rees,	Halsted and Clybourne Av.,	1,295
6 "	Blackhawk,	From Clybourne Avenue,	40
6 "		Forty-five hydrants,	894
10 "	Waubansia Av.,	River pipe,	230
Total number of feet,			28,734

## FIRE HYDRANTS.

HAVE BEEN LOCATED THE PAST SEASON, AS FOLLOWS:

## SOUTH DIVISION.

4 inch,	S. W. corner of Randolph and Wells.
4 "	N. W. " " " Clark.
3 "	S. W. " Wells and Madison.
3 "	S. E. " Dearborn and Alley No. 2.
3 "	S. E. " State and Alley south of South Water.
3 "	S. E. " " " " bet. Lake and Randolph.
3 "	N. W. " Clark and Adams.
3 "	N. W. " " " Van Buren.
3 "	S. W. " " " Harrison.
3 "	On Clark, between Polk and Taylor.
3 "	" " " Twelfth and Taylor.
3 "	" Cottage Grove Avenue, at city limits.
3 "	" " " " at Sherman House.
3 "	" " " " at Cattle yard.
3 "	N. W. corner of Ringold and Calumet Avenue.



3 inch, S. W. corner of Ringold and Prairie Avenue.  
 3 " N. W. " " " Cottage Grove Avenue  
 3 " S. W. " " " Wabash Avenue.  
 3 " S. W. " Michigan Avenue and Buena Vista.  
 3 " N. W. " South Street and Wentworth Avenue.  
 3 " N. W. " Alexander " " "  
 3 " N. E. " " " Bradley Street.  
 3 " S. W. " Wabash Avenue and Old "  
 3 " On Wabash Avenue, between Old and Cross Streets.  
 3 " N. W. corner of Old and Cross Streets.  
 3 " S. W. " Michigan Avenue and Liberty Street.  
 3 " On Michigan Avenue, between Liberty and North "  
 3 " " " " near Bridge Street.  
 3 " N. W. corner of Michigan Av. and Old St. (old hyd.)  
 Number of Hydrants, twenty-nine.

## WEST DIVISION.

3 inch, N. W. corner of Lake and Ann Streets, (old hyd.)  
 3 " S. W. " Halsted and Maxwell Streets, " "  
 3 " S. W. " " " Mitchell " " "  
 3 " N. W. " " " Wilson " " "  
 3 " S. W. " Green and Union " " "  
 3 " S. W. " " " Jefferson " " "  
 3 " Center of block on Price Place, between  
 Des Plaines and Halsted Streets, " "  
 3 " S. W. corner of Mitchell Street and Stewart  
 Avenue, (Hamilton "  
 3 " N. W. corner of Milwaukee and Chicago Av. " "  
 3 " N. W. " " Av. and Rucker St. " "  
 3 " N. W. " Cornell and Caroline Sts. " "  
 3 " N. E. " Front " " " " "  
 3 " N. E. " Halsted " Third " " "  
 3 " N. E. " " " Fourth " " "  
 3 " N. W. " Gurley " Silver " " "  
 3 " N. W. " Harrison " " " " "  
 3 " S. W. " Jackson " Rucker " " "  
 3 " N. W. " Warren " Page " " "

3 inch S. W. corner of Warren and Wood Sts., (Hamilton hyd.)  
 3 " S. W. " Park Avenue and Wood Sts., " "  
 3 " N. W. " " " and Paulina " " "  
 3 " N. W. " Ann and Fulton " " "  
 3 " N. E. " Reuben and William " " "  
 3 " S. W. " Van Buren and Aberdeen " " "  
 3 " N. W. " Monroe and Aberdeen Sts. " " "  
 3 " N. W. " Monroe and Rucker " " "  
 3 " N. E. " Lake and Paulina " " "  
 3 " End of pipe on Mather Street " " "  
 3 " N. W. corner of May and Fulton " " "  
 3 " N. W. " Ann and Fulton " " "  
 3 " N. E. " Harrison and Jefferson " " "  
 Number of Hydrants, thirty-one.

## NORTH DIVISION.

3 inch, N. W. corner of Franklin and White Streets.  
 3 " N. W. " Franklin and Oak " "  
 3 " N. W. side of Townsend, at Wesson's Park.  
 3 " N. W. corner of Clark and Oak Streets.  
 3 " N. W. " Dearborn and Oak "  
 3 " N. W. " " Maple Street.  
 3 " N. W. " " Elm "  
 3 " N. W. " " Whitney "  
 3 " N. W. " " Chestnut "  
 3 " N. W. " " Washington Park.  
 3 " N. W. " " Chicago Avenue.  
 3 " N. W. " Michigan and St. Clair Street.  
 3 " S. W. " Indiana and Market "  
 3 " S. E. " " and Kingsbury "  
 3 " N. E. " Kinzie and Kingsbury "  
 3 " N. W. " Division and Mohawk "  
 3 " N. W. " " Larrabee "  
 3 " N. W. " Larrabee and Vedder "  
 3 " On Granger, between Sedgwick and Wells Streets.  
 3 " N. E. corner of Clark and Goethe " "  
 3 " N. E. " " Schiller "

- 3 inch, S. E. corner of Clark and North Avenue.  
 3 " On Clark Street, between Schiller and North Avenue.  
 3 " South end of engine house.  
 3 " Wells, between Eugenie and North Avenue.  
 3 " N. E. corner of Wells and Florimond Streets.  
 3 " N. W. " Sedgwick and Wisconsin Streets.  
 3 " N. W. " " Menomence "  
 3 " N. W. " " Leonard "  
 3 " N. W. " Clybourne and North Avenues.  
 3 " N. W. " " Avenue and Walnut Street.  
 3 " N. W. " " " Sheffield "  
 3 " On Clybourne Avenue at junction of Racine Road.  
 3 " N. E. corner of Rees and Halsted Streets.  
 3 " On Rees Street, between Orchard and Halsted Streets.  
 3 " " " " " Clybourne Av.  
 3 " N. W. corner of Halsted and Vedder Streets.  
 3 " N. W. " Orchard " "  
 3 " N. W. " Otis " "  
 3 " N. W. " Sedgwick and Schiller "  
 3 " On Sedgwick, between North Avenue and Schiller St.  
 3 " On Whiting, at the east end of pipe.  
 3 " On Hinsdale, " "  
 3 " On Whitney, " "  
 3 " N. E. corner of Superior and Rush Streets. (old hyd.)  
 4 " N. W. " Market and Ontario "

Number of Hydrants, forty-six.

Old Hydrants have been taken out and replaced by Hamilton's, as follows:

- N. E. corner of Market and Ohio Streets.  
 N. W. " Franklin and Kinzie "  
 N. E. " Clinton and Randolph "  
 N. E. " Washington and Market Streets.  
 N. W. " Madison and Wabash Avenue.  
 " Lake and State Streets.  
 " Randolph and Wabash Avenue.  
 " South Water and Franklin Streets.

#### LIST AND LOCATION OF STOP COCKS.

INSERTED IN THE SOUTH DIVISION, IN 1859.

- 4 inch, on corner State and Old Streets, N. Y.  
 4 " " North Street and Michigan Av. Hamilton.  
 4 " " Twelfth Street and " "  
 6 " " Twelfth and State Street. "  
 4 " " Twelfth and Buffalo " "  
 4 " for Blow-off on Twelfth Street, at the Lake. "  
 4 " " Michigan Av. and Peck Court. "  
 4 " " Adams Street, at the Lake. "  
 4 " " Washington St., at the Lake. N. Y.  
 4 " " Lake Street, at the Lake. "  
 4 " " Alley, between Clark and LaSalle. "  
 4 " " " Wells " "  
 8 " " Adams St., east of river. Hamilton.

#### NORTH DIVISION.

- 6 inch, corner of North and Clybourne Avenues. Hamilton.  
 8 " " North Av. and Sedgwick Street. "  
 8 " " " Wells " "  
 4 " " " " " "  
 8 " East side of the river at Waubansia Avenue. N. Y.  
 8 " West " " "  
 4 " Corner of Wells and Granger Streets. Hamilton.  
 6 " " " Division " "  
 8 " " Clark " "  
 4 " " Wells and Oak Streets. Walker.  
 4 " " Division and Dearborn Streets. N. Y.  
 4 " " Chicago Avenue and Dearborn St. "  
 4 " " Illinois and Kingsbury Streets. "  
 6 " " Division and Wolcott " Hamilton.  
 8 " " " Larrabee " N. Y.  
 4 " " " Mohawk " Walker.

## WEST DIVISION.

4 inch, corner of Halsted and Third Streets.	Walker.
4 " " " Hubbard "	"
4 " " " Kinzie "	Hamilton.
6 " " " Milwaukee Avenue.	"
6 " " " Union Streets.	Walker.
6 " " " Adams "	"
4 " " Randolph and Jefferson Streets.	"
4 " " " Curtiss "	Hamilton.
4 " " Park Avenue and Paulina "	N. Y.
4 " " Polk and Jefferson "	Hamilton.
6 " " " Canal "	"
4 " " Adams and Jefferson "	"
6 " " Chicago and Milwaukee Avenues.	Walker.

## BLOW OFFS.

6 inch, Kinzie Street, west side of the river.	Walker.
4 " Corner of Monroe and Canal.	Hamilton.
8 " Adams, west side of the river.	"

## Engineer's Report.

ENGINE HOUSE, WATER WORKS,  
CHICAGO, ILL., JANUARY 1st, 1860.

*To the Superintendent Chicago Water Works :*

SIR:—I respectfully present the following statement of matters pertaining to the department under my charge:

Throughout the past year the engines, boilers, etc., as a general thing, have performed in a satisfactory manner, and remain, up to the present date, with but few exceptions, in good order; and I am pleased to add, that on no occasion within the past year has the City been deprived of water.

A tabular statement is herewith appended, showing the operation of pumping, etc., for each month throughout the past year.

## LARGE ENGINE.

The large engine has been used a greater portion of the time than the small one, in which time it has performed in a highly satisfactory manner. The whole number of hours run by this engine is 2,837, and 13 minutes, being an average of 12 hours and 44 minutes per. day. The revolutions performed are 1,114,521, consuming 2,740,004 pounds of bituminous coal, and delivering 909,454,136 gallons of water. This engine, throughout the past year, has not received any repairs beyond the usual repacking, etc., which of course has been done by the engineers. The longest day run by this engine, was on Sunday, September 12th, being 16 hours and 33 minutes. The shortest day run, was on Sunday, January 16th, 7 hours and 12 minutes. The largest amount pumped in any one day by this engine, was on the 15th of October, 5,261,568 gallons.

## SMALL ENGINE.

This engine has been used nearly as much as the large one, as will be seen by the number of hours run. Although this engine has operated well, there are, nevertheless, parts of it which need replacing by new ones. Like the large engine, it has received no repairs whatever the past year. It will be recollected that this engine's term of service dates from the starting of the works, (1853,) which service has been quite constant, and that too, without any important outlay. For the past year, this engine has been used 2,115 hours and 41 minutes, being an average of 14 hours and 48 minutes per day, performing in that time 974,737 revolutions, consuming of bituminous coal, 1,701,615 pounds, and delivering 595, 693, 774 gallons of water. The longest day run by this engine was on December 31st, 20 hours and 45 minutes. The shortest days run were March 6th and 20th, and April 10th, 10 hours each. The greatest amount of water pumped any one day, was on the 31st of December, 5,026,134 gallons.

## BOILERS.

The two Boilers in the south wing are in excellent order, one or the other of which have been in use nearly the whole time. They have received some slight repairs, on one or two occasions, not on account of actual wear, but owing to the peculiarity of the iron to "blister." The Boiler in the north wing, which was reported last year, as being in a very bad condition, has been used but a small portion of the time, on account of its condition. On the 10th of October Mr. John McArthur commenced repairing this Boiler, a contract having been made with him for that purpose. The repairs and additions which it is to receive, consist in twelve new lower flues, part of the front new, and new inside connections; also the repair of ten of the upper flues. The work on this boiler has so far progressed at present time as to enable me to look for its completion about the last of February next. The character of the work and material used on this boiler, I think,

when finished, will make it nearly as good as new. In making these alterations to the boiler, it will be necessary to lower the floor of the boiler room thirteen inches.

The smoke pipe attached to this boiler, is at present in fair condition, but being exposed, it is of course liable to fail under the influence of the weather.

## STANDING COLUMN.

The Standing Column remains as permanent as usual. On the 17th of May last, it was increased in height, by the addition of ten feet of pipe, thereby increasing the "head of water." The Tower also is in good condition, since the repairs in April last, rendered necessary by the damage it sustained by lightning, on the 17th of the same month.

Accompanying this, will be found a schedule of tools and property, remaining at the engine house.

Respectfully,

DEWITT C. CREGIER,

*Engineer.*

Operation of the SMALL ENGINE.		Operation of the LARGE ENGINE.	
FOR EACH MONTH OF 1859.		FOR EACH MONTH OF 1859.	
MONTHS.	Number of days run.	Number of hours run per month.	Whole number of revolutions per month.
JANUARY,	11	156.25	63,979
FEBRUARY,	2	22.25	10,190
MARCH,	16	189.25	84,284
APRIL,	26	337.08	146,674
MAY,	2	31.40	14,367
AUGUST,	30	470.50	229,816
SEPTEMBER,	14	219.02	109,334
NOVEMBER,	11	172.00	79,666
DECEMBER,	31	516.43	230,417
Totals,	143	2,115.41	974,737
MONTHS.	Number of days run.	Number of hours run per month.	Whole number of revolutions per month.
JANUARY,	19	220.38	90,335
FEBRUARY,	26	315.33	123,915
MARCH,	15	183.45	71,949
APRIL,	4	45.25	17,034
MAY,	29	334.20	132,154
JUNE,	30	365.34	138,601
JULY,	31	421.11	163,971
AUGUST,	1	13.00	4,826
SEPTEMBER,	17	233.28	91,890
OCTOBER,	31	431.36	173,440
NOVEMBER,	20	252.41	103,406
Totals,	223	2,837.13	1,114,521
MONTHS.	Number of days run.	Number of hours run per month.	Whole number of revolutions per month.
JANUARY,	11	156.25	63,979
FEBRUARY,	2	22.25	10,190
MARCH,	16	189.25	84,284
APRIL,	26	337.08	146,674
MAY,	2	31.40	14,367
AUGUST,	30	470.50	229,816
SEPTEMBER,	14	219.02	109,334
NOVEMBER,	11	172.00	79,666
DECEMBER,	31	516.43	230,417
Totals,	143	2,115.41	974,737

RECAPITULATION.

Whole number of Days run by both Engines,	366
“ “ Hours “ “	4,952.82
“ “ Revolutions made by both Engines,	2,089,258
“ “ Gallons Water Pumped “ “	1,415,147.910
“ “ Pounds Coal consumed “ “	4,648,094

TABLE

Showing the number of Dwellings, Stores, Manufacturing Establishments, etc., in the City of Chicago, subject to Water Rents and Assessments; also showing the annual rates on same, for the year commencing May 1st, 1860, and ending May 1st, 1861.

1,023 Dwelling Houses,	\$5 00	\$5,115 00
914 “ “	6 00	5,484 00
938 “ “	7 00	6,566 00
1,651 “ “	8 00	13,208 00
1,478 “ “	9 00	13,302 00
2,255 “ “	10 00	22,550 00
444 “ “	11 00	4,884 00
492 “ “	12 00	5,904 00
180 “ “	13 00	2,340 00
183 “ “	14 00	2,562 00
125 “ “	15 00	1,875 00
107 “ “	16 00	1,712 00
66 “ “	17 00	1,122 00
82 “ “	18 00	1,476 00
39 “ “	19 00	741 00
47 “ “	20 00	940 00
37 “ “	21 00	777 00
17 “ “	22 00	374 00
15 “ “	23 00	345 00
16 “ “	24 00	384 00
14 “ “	25 00	350 00
6 “ “	26 00	156 00
9 “ “	27 00	243 00
5 “ “	28 00	140 00
3 “ “	29 00	87 00
2 “ “	30 00	60 00

10,148 Amount carried forward, \$92,697 00

10,148	Amounts brought forward,			\$92,697 00
8	Dwelling Houses,	\$31 00	248 00	
2	"	32 00	64 00	
1	"	33 00	33 00	
4	"	34 00	136 00	
1	"	35 00	35 00	
1	"	36 00	36 00	
1	"	37 00	37 00	
1	"	42 00	42 00	
48	"	Sundry	321 50	
10,215			\$93,649 50	

## RECAPITULATION.

## NUMBER OF DWELLINGS CONTAINING WATER.

South Division,	3,057 Dwellings,	\$31,616 50	
West	" 2,401 "	22,536 00	
North	" 2,319 "	22,112 00	
	7,777 "	\$76,264 50	

## NUMBER OF DWELLINGS WITHOUT WATER.

South Division,	395 Dwellings,	\$3,032 00	
West	" 998 "	7,233 00	
North	" 1,045 "	7,120 00	
	2,438 "	17,385 00	
	7,777 "	76,264 50	
10,215	"	\$93,649 50	\$93,649 50

362	Stores,	\$6 00	\$2,172 00
5	"	8 00	40 00
256	"	9 00	2,304 00
22	"	10 00	220 00
2	"	11 00	22 00
37	"	12 00	444 00
4	"	13 00	52 00

688 Amounts carried forward, \$5,254 00 \$93,649 50

	Amounts brought forward,	\$5,254 00	\$93,649 50
1	Store,	\$14 00	\$14 00
6	"	15 00	90 00
1	"	18 00	18 00
1	"	21 00	21 00
1	"	26 00	26 00
1	"	31 00	31 00
1	"	33 00	33 00
700			5,487 00
84	Offices,	3 00	252 00
3	"	5 00	15 00
108	"	6 00	648 00
1	"	9 00	9 00
2	"	10 00	20 00
198			944 00
2	Banks,	9 00	18 00
1	"	12 00	12 00
3			30 00
1	Church,	3 00	3 00
1	"	4 00	4 00
4	"	6 00	24 00
1	"	9 00	9 00
1	"	10 00	10 00
1	"	12 00	12 00
1	"	20 00	20 00
10			82 00
4	Buildings,	15 00	60 00
2	"	16 00	32 00
5	"	17 00	85 00
5	"	18 00	90 00
16	Amounts carried forward,	\$267 00	\$100,192 50

16	Amounts brought forward,	\$267 00	\$100,192 50
3	Buildings,	\$20 00	60 00
2	"	21 00	42 00
5	"	22 00	110 00
1	"	23 00	23 00
4	"	24 00	96 00
2	"	25 00	50 00
4	"	26 00	104 00
2	"	27 00	54 00
3	"	28 00	84 00
3	"	30 00	90 00
1	"	31 00	31 00
1	"	32 00	32 00
3	"	33 00	99 00
2	"	34 00	68 00
2	"	37 00	74 00
1	"	38 00	38 00
1	"	40 00	40 00
1	"	42 00	42 00
1	"	44 00	44 00
1	"	45 00	45 00
1	"	46 00	46 00
1	"	48 00	48 00
1	"	50 00	50 00
1	"	51 00	51 00
2	"	52 00	104 00
2	"	53 00	106 00
2	"	54 00	108 00
1	"	55 00	55 00
3	"	60 00	180 00
1	"	62 00	62 00
1	"	67 50	67 50
1	"	76 00	76 00
1	"	80 00	80 00
1	"	83 00	83 00
78	Amounts carried forward,	\$2,609 50	\$100,192 50

78	Amounts brought forward,	\$2,609 50	\$100,192 50
1	Building,	89 00	89 00
1	"	94 00	94 00
1	"	99 00	99 00
1	"	106 00	106 00
1	"	115 00	115 00
1	"	119 00	119 00
1	"	132 00	132 00
1	"	145 00	145 00
1	"	146 00	146 00
87			3,654 50
1	Hall,	10 00	10 00
2	"	20 00	40 00
1	"	22 00	22 00
4			72 00
2	Schools,	5 00	10 00
1	"	6 25	6 25
1	"	24 00	24 00
1	"	30 00	30 00
1	"	33 00	33 00
1	"	38 00	38 00
1	"	40 50	40 50
1	"	41 00	41 00
4	"	43 00	172 00
2	"	50 00	100 00
1	"	56 00	56 00
1	"	80 00	80 00
17			630 75
1	Theatre,	6 00	6 00
1	"	31 00	31 00
2			37 00
	Amount carried forward,		\$104,586 75

60

Amount brought forward,		\$104,586 75
130 Hose,	5 00	650 00
2 Market Stalls,	3 00	6 00
8 " "	6 00	48 00
1 " "	10 00	10 00
1 " House,	25 00	25 00
1 " "	42 00	42 00
1 " "	51 00	51 00
<hr/>		
14		182 00
4 Fountains,	15 00	60 00
4 " "	60 00	240 00
<hr/>		
8		300 00
2 Barber & bath'g sal's,	6 00	12 00
3 " " "	8 00	24 00
7 " " "	10 00	70 00
1 " " "	20 50	20 50
3 " " "	24 00	72 00
1 " " "	36 00	36 00
2 " " "	40 00	80 00
1 " " "	44 00	44 00
1 " " "	46 00	46 00
<hr/>		
21		404 50
1 Soap and Candle M'y,	4 00	4 00
1 " " "	8 00	8 00
1 " " "	10 00	10 00
1 " " "	12 00	12 00
1 " " "	15 00	15 00
1 " " "	30 00	30 00
<hr/>		
6		79 00
Amount carried forward,		\$106,202 25

61

Amount brought forward,		\$106,202 25
25 B'dg H's and Hotels,	10 67	266 75
1 " "	11 50	11 50
25 " "	12 00	300 00
1 " "	12 33	12 33
6 " "	12 50	75 00
3 " "	12 66	37 98
6 " "	13 00	78 00
61 " "	13 33	813 13
4 " "	13 50	54 00
7 " "	14 00	98 00
4 " "	14 25	57 00
2 " "	14 50	29 00
7 " "	14 66	102 62
11 " "	15 00	165 00
2 " "	15 50	31 00
3 " "	15 83	47 49
17 " "	16 00	272 00
1 " "	16 50	16 50
7 " "	17 00	119 00
3 " "	17 34	52 02
1 " "	17 50	17 50
2 " "	17 84	35 68
7 " "	18 00	126 00
2 " "	18 50	37 00
6 " "	18 66	111 96
5 " "	19 00	95 00
3 " "	19 50	58 50
14 " "	20 00	280 00
2 " "	21 00	42 00
1 " "	21 33	21 33
2 " "	21 50	43 00
12 " "	22 00	264 00
3 " "	23 00	69 00
3 " "	23 50	70 50
<hr/>		
259	Amounts carried forward,	\$3,909 79
		\$106,202 25



259	Amounts brought forward,	\$3,909 79	\$106,202 25
5	B'dg H's and Hotels, 24 00	120 00	
5	" " 25 00	125 00	
1	" " 26 00	26 00	
3	" " 27 00	81 00	
4	" " 28 00	112 00	
2	" " 29 50	59 00	
8	" " 30 00	240 00	
3	" " 31 00	93 00	
3	" " 32 00	96 00	
1	" " 33 00	33 00	
3	" " 34 00	102 00	
2	" " 35 00	70 00	
1	" " 36 00	36 00	
1	" " 39 00	39 00	
2	" " 40 00	80 00	
1	" " 44 00	44 00	
2	" " 45 00	90 00	
1	" " 47 00	47 00	
2	" " 50 00	100 00	
1	" " 51 00	51 00	
1	" " 55 00	55 00	
1	" " 56 00	56 00	
2	" " 60 00	120 00	
1	" " 68 00	68 00	
3	" " 70 00	210 00	
1	" " 74 00	74 00	
1	" " 75 00	75 00	
1	" " 79 00	79 00	
1	" " 84 00	84 00	
1	" " 85 00	85 00	
1	" " 87 00	87 00	
1	" " 96 00	96 00	
1	" " 100 00	100 00	
2	" " 108 00	216 00	
1	" " 120 00	120 00	
<u>329</u>	Amounts carried forward,	<u>7,078,79</u>	<u>\$106,202 25</u>

329	Amounts brought forward,	\$7,078 79	\$106,202 25
2	B'dg H's and Hotels, 125 00	250 00	
1	" " 129 00	129 00	
1	" " 166 00	166 00	
1	" " 194 00	194 00	
1	" " 200 00	200 00	
1	" " 204 00	204 00	
1	" " 252 00	252 00	
1	" " 283 00	283 00	
1	" " 287 00	287 00	
1	" " 420 00	420 00	
1	" " 412 00	412 00	
1	" " 658 00	658 00	
<u>342</u>			<u>10,533 79</u>
19	Saloons,	4 00	76 00
5	" "	5 00	25 00
188	" "	6 00	1,128 00
9	" "	8 00	72 00
3	" "	9 00	27 00
21	" "	10 00	210 00
1	" "	11 00	11 00
2	" "	12 00	24 00
1	" "	15 00	15 00
1	" "	16 00	16 00
1	" "	18 00	18 00
1	" "	20 00	20 00
2	" "	22 00	44 00
<u>254</u>			<u>1,686 00</u>
132	Stables,	1 00	132 00
159	" "	2 00	318 00
14	" "	3 00	42 00
56	" "	4 00	224 00
<u>361</u>	Amounts carried forward,	<u>\$716 00</u>	<u>\$118,422 04</u>

361	Amounts brought forward,	\$716 00	\$118,422 04
5	Stables,	5 00	25 00
15	"	6 00	90 00
11	"	8 00	88 00
8	"	10 00	80 00
5	"	12 00	60 00
1	"	13 00	13 00
5	"	14 00	70 00
1	"	16 00	16 00
7	"	20 00	140 00
1	"	24 00	24 00
1	"	26 00	26 00
2	"	28 00	56 00
4	"	30 00	120 00
2	"	32 00	64 00
1	"	34 00	34 00
1	"	40 00	40 00
1	"	44 00	44 00
5	"	50 00	250 00
2	"	60 00	120 00
1	"	75 00	75 00
1	"	86 00	86 00
2	"	88 00	176 00
2	"	100 00	200 00
1	"	120 00	120 00
446			2,733 00
1	Laundry,	120 00	120 00
1	Stone Yard,	3 00	3 00
1	" "	6 00	6 00
1	" "	10 00	10 00
1	" "	12 00	12 00
1	" "	50 00	50 00
5			81 00
	Amount carried forward,		\$121,356 04

	Amount brought forward,		\$121,356 04
1	Dye House,	20 00	20 00
1	Bakery,	2 00	2 00
2	"	3 00	6 00
1	"	3 50	3 50
1	"	6 00	6 00
3	"	7 00	21 00
1	"	8 50	8 50
1	"	8 75	8 75
1	"	9 00	9 00
1	"	10 00	10 00
2	"	10 50	21 00
1	"	11 00	11 00
1	"	12 50	12 50
1	"	19 00	19 00
1	" and Engine,	24 00	24 00
1	" "	31 00	31 00
1	" "	32 00	32 00
1	" "	35 00	35 00
1	" "	49 00	49 00
1	" "	140 00	140 00
23			449 25
41	Ware Houses,	6 00	246 00
1	" "	9 00	9 00
1	" "	10 00	10 00
4	" "	12 00	48 00
1	" "	16 00	16 00
1	" " and Eng.	35 00	35 00
49			364 00
1	Printing Office,	7 00	7 00
1	"	8 00	8 00
2	Amount carried forward,	\$15 00	\$122,189 29

1	Amounts brought forward,	\$15 00	\$122,189 29
1	Printing Office,	12 00	12 00
1	" and Eng.	20 00	20 00
1	"    "	24 00	24 00
1	"    "	32 00	32 00
1	"    "	34 00	34 00
1	"    "	48 00	48 00
1	"    "	50 00	50 00
1	"    "	51 00	51 00
1	"    "	51 75	51 75
1	"    "	120 00	120 00
<u>12</u>			457 75
1	Hospital,	32 50	32 50
1	"	50 00	50 00
1	"	89 00	89 00
<u>3</u>			171 50
2	Wood Yards & Eng.	10 00	20 00
1	"    "	15 00	15 00
1	"    "	16 00	16 00
1	"    "	32 00	32 00
<u>5</u>			83 00
1	Packing House,	8 00	8 00
1	"    "	9 00	9 00
2	"    "	10 00	20 00
1	"    "	12 00	12 00
1	"    "	15 00	15 00
3	"    "	18 00	54 00
1	"    "	20 00	20 00
1	"    "	200 00	200 00
<u>11</u>			338 00
2	Cattle Yards,	200 00	400 00
	Amount carried forward,		\$123,639 54

	Amount brought forward,		\$123,639 54
1	Flouring Mill,	22 00	22 00
1	"    "	100 00	100 00
1	"    "	102 50	102 50
<u>2</u>	"    "	120 00	240 00
<u>5</u>			464 50
62	Shops and Engines,	3 00	186 00
5	"    "	5 00	25 00
58	"    "	6 00	348 00
1	"    "	7 00	7 00
2	"    "	8 00	16 00
4	"    "	10 00	40 00
4	"    "	12 00	48 00
2	"    "	13 00	26 00
1	"    "	14 00	14 00
4	"    "	15 00	60 00
4	"    "	16 00	64 00
1	"    "	17 00	17 00
1	"    "	18 00	18 00
1	"    "	23 00	23 00
2	"    "	24 00	48 00
1	"    "	25 50	25 50
1	"    "	25 75	25 75
2	"    "	26 00	52 00
1	"    "	27 50	27 50
2	"    "	28 00	56 00
5	"    "	30 00	150 00
2	"    "	35 00	70 00
1	"    "	36 50	36 50
1	"    "	41 00	41 00
1	"    "	43 00	43 00
2	"    "	45 00	90 00
3	"    "	50 00	150 00
<u>2</u>	"    "	52 00	104 00
176	Amounts carried forward,	\$1,811 25	\$124,104 04

		68			
176	Amounts brought forward,	\$1,811 25		\$124,104 04	
1	Shop and Engine,	55 50	55 50		
3	" "	56 00	168 00		
1	" "	58 00	58 00		
1	" "	59 50	59 50		
1	" "	60 00	60 00		
1	" "	63 00	63 00		
1	" "	69 00	69 00		
1	" "	75 00	75 00		
1	" "	78 00	78 00		
1	" "	80 00	80 00		
1	" "	125 00	125 00		
<hr/>					
189				\$2,702 25	
1	Soda Manufactory,	15 00	15 00		
1	" "	20 00	20 00		
1	" "	35 00	35 00		
1	" "	40 00	40 00		
<hr/>					
4				110 00	
1	Passenger Depot,	10 00	10 00		
1	" "	21 00	21 00		
1	" "	70 00	70 00		
1	" "	75 00	75 00		
1	" "	368 00	368 00		
2	Freight Depots,	15 00	30 00		
1	" "	21 00	21 00		
1	" "	64 00	64 00		
1	R. R. Co. (loco'tives)	272 00	272 00		
1	" "	300 00	300 00		
1	" "	400 00	400 00		
1	" "	470 00	470 00		
1	" "	600 00	600 00		
1	" "	675 00	675 00		
1	" "	732 75	732 75		
<hr/>					
16				4,108 75	
Amount carried forward,				\$131,025 04	

		69			
		Amount brought forward,		\$131,025 04	
1	Vinegar Factory,	3 00	3 00		
1	" "	8 00	8 00		
2	" "	10 00	20 00		
1	" "	12 00	12 00		
1	" "	15 00	15 00		
1	" "	20 00	20 00		
1	" "	25 00	25 00		
1	" "	36 00	36 00		
<hr/>					
9				139 00	
1	Porter Cellar,	6 00	6 00		
1	" "	7 00	7 00		
1	" "	10 00	10 00		
<hr/>					
3				23 00	
1	Distillery,	10 00	10 00		
1	" "	12 00	12 00		
3	" "	27 00	81 00		
1	" "	29 00	29 00		
1	" "	30 00	30 00		
1	" "	60 00	60 00		
1	" "	150 00	150 00		
1	" "	213 50	213 50		
1	" "	1,000 00	1,000 00		
<hr/>					
11				1,585 50	
2	Breweries,	12 00	24 00		
1	" "	20 00	20 00		
1	" "	25 00	25 00		
1	" "	27 00	27 00		
1	" "	37 00	37 00		
1	" "	38 00	38 00		
1	" "	39 00	39 00		
<hr/>					
8	Amounts carried forward,	\$210 00		\$132,772 54	

S	Amounts brought forward,	\$210 00	\$132,772 54
1	Brewery	47 00	47 00
1	"	49 00	49 00
2	"	80 00	160 00
1	"	100 00	100 00
1	"	143 00	143 00
1	"	235 00	235 00
1	"	326 00	326 00
1	Malt House,	24 00	24 00
<hr/>			
17			1,294 00
1	Candy Manufactory,	5 00	5 00
1	" "	14 00	14 00
1	" "	16 00	16 00
<hr/>			
3			35 00
1	Foundry,	12 00	12 00
1	"	25 00	25 00
1	"	30 00	30 00
1	"	31 00	31 00
1	"	39 00	39 00
1	"	69 00	69 00
1	"	200 00	200 00
<hr/>			
7			406 00
13	Fire Eng's and Hose,	6 00	78 00
3	" "	11 00	33 00
1	" "	18 00	18 00
1	" "	32 00	32 00
<hr/>			
18			161 00
2	Daguerrean Galleries,	6 00	12 00
2	" "	8 00	16 00
<hr/>			
4	Amounts carried forward,	\$28 00	\$134,668 54

4	Amounts brought forward,	\$28 00	\$134,668 54
1	Book Bindery,	4 00	4 00
1	" "	8 00	8 00
1	Hide and Leather Co.	22 50	22 50
1	Convent,	20 00	20 00
1	"	41 00	41 00
1	Type Foundry,	20 00	20 00
1	Broom Manufactory,	12 00	12 00
1	Lard Oil "	5 00	5 00
1	Chair "	41 50	41 50
1	Lead Works,	56 00	56 00
1	White Lead Works,	65 00	65 00
1	Gas and Coke Co.,	300 00	300 00
<hr/>			
16			623 00
	Armory,	50 00	
	Dearborn Seminary,	30 00	
	Telegraph Office,	13 00	
	Home,	19 00	
	St. Mary's College,	33 00	
	Rush Medical College,	18 00	
	American Transportation Co.,	28 00	
	Illinois Stone Dressing Co.,	19 00	
	Post Office,	40 00	
	City Bridewell,	47 00	
	Mechanics' Institute,	12 00	
	Roofing Manufactory,	18 00	
	City Hall,	204 00	
	Water Cartman,	75 60	
	Special Purposes,	96 80	
	Building Purposes,	367 95	
	Street Sprinklers,	919 13	
<hr/>			
	Amounts carried forward,	\$1,990 48	\$135,291 54

Amounts brought forward,	\$1,990 48	\$135,291 54
Chicago Refinery,	500 00	
Barrel Manufactory,	50 00	
	<hr/>	2,540 48
Total Water Rents and Assessments,		<hr/> \$137,832 02

Total Rents and Assessments of each Division of the City :

South Division,	\$62,113 25	
West     “	39,384 32	
North,   “	36,334 45	
	<hr/>	\$137,832 02