

SIXTH
SEMI-ANNUAL REPORT
OF
The Water Commissioners
FOR THE
CITY OF HAMILTON.

TRANSMITTED TO THE CITY COUNCIL, MARCH 12TH, 1860.



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PRINTED AT THE "SPECTATOR" OFFICE, COURT HOUSE SQUARE.

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R E P O R T :

*To the Mayor, Aldermen and Commonalty
of the City of Hamilton.*

The undersigned, in accordance with the provisions of the 8th Section of the Act 19 and 20 Vic., Cap. 64, beg leave to submit their sixth semi-annual Report.

The Commissioners have been unavoidably delayed in the preparation of the present semi-annual Report, in consequence of the time required to make up the Expenditure and Debenture Accounts, and balance the Secretary's books before publishing any results from them. Upon these the Secretary has been assiduously engaged since 1st of January. In previous Reports, the expenditure for each half year only has been shown, but upon the present occasion it was determined to shew the total expenditure from the commencement.

The Commissioners cannot regret this necessary delay, as they are thus enabled, by the filling of the Reservoir, &c., to report the successful completion of the great work upon which they have been engaged during the past three years. Although there has been nothing in its progress to throw any doubt upon its successful working, it is yet a matter of some satisfaction to be able to state that, in the only untried portion of the work—the pumping machinery—

every thing has been found to answer, to the fullest extent, the expectations formed.

The Reservoir, the Pipes, Valves and Hydrants, and the Filtering Basin, had each been tested previous to the last report; and now that the Engines are in successful operation, there remains only the clearing up of the grounds, and the completion of the tenements for the employees, and some appliances to economise the fuel and diminish the heat in the Engine and Boiler houses—for the details of which, as well as for other matters, the Commissioners refer to the annexed Report of the Engineer.

Recurring to the order adhered to in former reports, the Commissioners beg to state that their first step, at the commencement of the last half year, was to secure a supply of coals for the Engines during midsummer, when freights were lowest. Six hundred tons of "Chippawa" steam coals, from the mines of Messrs Price, Crawford and Morris, of Cleveland, have been purchased and stored at the Engine House, at a cost of five dollars per ton of 2000 lbs. The contract price for this coal was \$4 65 cents, delivered at the Engine House, upon the supposition that the contractor would be allowed to land it at the canal piers, where the stone for the light house was landed, and where some material for the Engine House was also disembarked; but to their surprise the Commissioners were met by a prohibition upon the part of the canal authorities, and although they took the trouble to send a deputation to St. Catharines, expressly to explain to Mr. Woodruff the extent of their wants and that there was nothing unusual or injurious to the work demanded, that gentleman, in his reception of the deputation, not only failed to appreciate the importance of the work for which so small a boon was asked, but also what was due to his own position as well as those who called upon him. The Commissioners were thus compelled to increase the price to cover the risk of discharging upon an open shore.

Notwithstanding the assurance given by the Crown Lands' Department, the Commissioners have been unable, after more than a year of fruitless exertion, to obtain a title to the twelve acres of barren sand and gravel which has been enclosed for the Filtering Basin. They therefore found it necessary to compromise with the squatter in possession, and pay to him the full value set by the Government upon the land. The Commissioners now hope that, since the practical effect of the delay on the part of the Crown Lands' Department has been to enable the occupant to obtain his own terms, the Government will abandon their claim for compensation—a claim, which, considering the public character of the work, the Commissioners are of opinion might justly be waived.

While they regret that in these two instances, the authorities have manifested so little sympathy with an important public work, they rejoice to feel that no injury, beyond a pecuniary one, has resulted therefrom.

The season of the year when the works came into operation for domestic consumption, together with the unsuitableness, for this purpose, of the surface water which has been in the pipes for fire purposes since May last, no doubt has been the cause that at present there are only about one hundred houses taking the water. Advertisements were issued in July; and the Rules and Regulations for the guidance of water tenants were then made public, and in August a canvasser was appointed. While some refuse the water, others have not made up their minds, and the Commissioners have come to the conclusion that the only equitable course is to follow the example of Boston and New York, Quebec and Montreal, and levy a water rate upon all property in front of the pipes. As all parties then would pay for the water whether they used it or not—all would use it, and thus prevent it from stagnating in the pipes, or from being run off to waste through the Hydrants.

The efficiency of these Hydrants has already produced a reduction in the rates of insurance to the extent of twenty per cent. upon buildings, and ten per cent. upon stocks, and a further reduction may confidently be anticipated. In Montreal, it has been stated by a leading paper, that the reduction in the annual premiums paid in the City, in consequence of the New Water Works, amounts to a sum as large or larger than the annual interest upon the cost of those works. It is but right that those persons whose property is thus virtually increased in value, by a reduction of insurance, should pay the water rate. It is not proposed that this rate should make up the whole charge on the works, but that the deficiency should be carried to general account, in consideration of the use of the water for fires, street purposes, and for the promotion of general health and comfort.

The Commissioners have given notice of intention to apply, at the next Session of the Legislature, for the necessary powers to levy a water rate. This has been done because the notice given by the late City Council, of their intention to obtain from the Legislature the control and management of the works, does not cover the question of a water rate. Of course the Commissioners can only press this measure in concert with the Council.

Allusion having been made to an intention expressed by the late Council, of assuming the management of the works, it may be expected that the Commissioners should express some opinion upon this policy. The reasons assigned for the proposed change are understood to be—some anticipated economy in the cost of the future management. Whether the duties to be performed by the permanent employees of the Commissioners can be discharged by existing employees of the City Council, without further remuneration, the Commissioners are unable to say ; or whether a larger body, elected for a short term, for general purposes, and without special reference to the Water Works, are more likely to manage them better than a smaller body with a longer

term of office and elected for this special purpose, is a matter which the Commissioners must leave to the citizens, by whose will they were created, and to whose will, when clearly expressed, they will bow with cheerfulness in resigning a trust which carries no emolument, and which they have not found light, but which they have endeavoured to discharge conscientiously and to the best of their ability.

The Commissioners, however, feel it their duty to the trust assigned them to give some reasons in support of the opinion they hold, that it would not be for the interests of the works that their management should be transferred to the City Council, under the present municipal constitution of the City. They would first remark, that this Commission itself was called into existence by the act of a former City Council, and that members of the late Council, while proposing to assume the management, admitted that they would not have assumed the construction of the works directly under the Council. The first reason which suggests itself is that, as the Council is an annual body, the members are liable to be changed annually, and there would be an equal liability that the employees upon the Water Works would be too frequently changed. This is not always done directly but by means of a general or special reduction of salaries, thereby forcing resignations, which salaries may be afterwards increased when the new appointments are made. On this head the New York Commissioners say, "where there are sudden revolutions there can be no order. To make good officers time and motive must be given. To call into action the most effective sentiment of devotion to the public interests, appointments should be renewed for good behaviour."

Secondly. It is notorious that, as now constituted, our annual corporations lack vigor and efficiency from the fact that for the first half of the year business is postponed on the plea that the new members required time to become familiar with City affairs; and that in the last half year,

members who intend to retire, as well as those who look for a re-nomination, evade responsibility by doing as little as possible—the former to throw the responsibility upon their successors, the latter, because they believe the electors will be more apt to complain of what their representatives *do*, than of anything which they may leave undone.

Thirdly. It is not often that in each ward election all of the successful candidates are such as the electors who sent them would wish to see placed in charge of an important work; yet these electors, having no control over the arrangement of committees, may find their best men excluded from that for which they were most competent.

Lastly. The powers of corporation committees are generally limited to the recommending or otherwise of expenditures, the decision upon which takes place in full council. This body frequently has little opportunity of knowing the merits of questions upon which they are thus called to decide, and are therefore more liable to be influenced by feeling, prejudice, or outside pressure. If every administrative act in the management of large and important works becomes the subject of debate among twenty members, the chances are, either that no prompt action will be taken, or that the wrong conclusion will be arrived at as often as the right one. Had the debenture transactions of the Commissioners been the subject of weekly debate in the Council, and thus reported in the journals, it would have been impossible to have negotiated them; and the Commissioners, throughout these transactions, have felt the untoward influences of the impolitic and unnecessary publications given to former discussions in the Council upon the subject of the Finances. The evils of too frequent meetings, and the public reporting of the same—whereby members are kept in constant excitement by the mutual attacks and recriminations, read and commented upon by their constituents, and which not only lead to much action and discussion which a longer interval would tend to

diminish, but often originate action which a mere lapse of time would show to be unnecessary—are additional reasons why the administration of the water works should be under a different system.

The Commissioners are unanimously and decidedly of opinion that the water works should be managed by persons specially elected for that purpose.

The advanced condition of the work has enabled the Chief Engineer to make a considerable reduction in his staff—and as his engagement expires on 1st May, it is expected that then the expenses will be reduced to the permanent staff required. The interval will be sufficient to close up the settlements with contractors, complete (and test to a certain extent at least,) the additions to the pumping machinery—and the improvements outside the engine house.

The Commissioners refer with much pleasure to the zealous and indefatigable manner in which the engineer, T. C. Keefer, Esq., has performed his important duties.

They have also to report that the Secretary has been assiduous in his duties, and has performed them to the entire satisfaction of the Board.

All of which is respectfully submitted.

ADAM BROWN, *Chairman*.
PETER BALFOUR,
WM. DAVIDSON,
ROBERT WALKER,
MILTON DAVIS.

WATER COMMISSIONERS' OFFICE,
Hamilton, Feb. 18th, 1860.

HAMILTON WATER WORKS,
ENGINEER'S OFFICE, HAMILTON.
15th February, 1860.

JAMES E. DAY, ESQ.,
Secretary Board of Water Commissioners,
Hamilton.

SIR,—My last semi-annual report shewed that the works were so far advanced that their completion for all practical purposes might be relied upon before the year expired. The Filtering Basin, Reservoir and pipes were then ready, and the completion of the engines and conduit wells were all that was required.

THE ENGINES.

The first engine was started upon the 24th October, and upon the 27th the first water was pumped into the Reservoir. Considering that the lift was 180 feet, and the distance about three and a half miles through a pipe of eighteen inches diameter, the fact that water was put into the Reservoir without any alteration of the pumping machinery and connections, within so short a time after steam was first admitted into the cylinders, must be considered a satisfactory test. The second engine was started upon 11th November.

The engines, although in working order, cannot be fairly tested as to their economical working until the cylinders and steam chest are jacketed, and the steam pipes and boiler tops covered.

THE CONDUIT.

As soon as both engines were in fair working order, the surface water, which had been for six months stagnant in the Reservoir, was run off, and upon the 16th November the refilling was commenced. It was then discovered that

the water was much discolored ; although no indication of this had been observed up to this time. This was soon traced to an opening in that portion of the conduit which crosses Lottridge's creek, where the exterior of the conduit is in contact with the water of the creek, and was made apparent only by the particularly turbid state of the water, caused by heavy and continued rains, which occurred just before the refilling of the Reservoir was begun. The quantity coming in, being small, its presence was not detected, as long as the water in the creek was clear. As however a very little coloring matter will color a large body of clear water, the freshet soon discovered the leak, particularly as the operation of pumping drew the filtering basin below the lake level, while the creek, being high, was above that level, thus creating a head of turbid water forcing itself into the conduit.

This portion of the conduit was sunk in one piece of 560 feet in length, and was effected (after some previous ineffectual attempts during the autumn by which it became no doubt more or less impaired) in the winter months amid the ice and when its exact state at the moment of going down could not be well determined. Having been absent in Montreal at this time, on the business of the commission, I am unable to say whether the defect was caused before or after it was sunk : but as the portion in Lottridges' Creek is secured by a crib, which was partly filled after it was sunk, it is probable that some damage has been caused in dropping in the stone, by which a plank of the conduit may have been stove in ; or, the weight of the crib itself in settling down, (or possibly in slightly moving down stream during a freshet) may have opened the seams of the planking.

The Commissioners are aware of my views respecting this work, as expressed in my letter of 18th February, 1858, and of the difficulties attendant upon its execution, as well as the want of power to avert what was not wholly unexpected.

In connection with this subject, I beg to refer to my letter addressed to the contractor on the 5th January, 1859.

The winter setting in at this juncture, and there being neither ice nor boating to be depended upon in the creek, it was deemed advisable not to make any attempt to repair the opening in the conduit, which is concealed by the crib, but, instead of this the creek was diverted inland and carried over that portion of the conduit which was built *in situ*—the tightness of which has been proved. Dams were thrown across the creek, above and below the line of the damaged conduit, secured with sheet piling and clay, and thus the creek has been effectually excluded from all connection with the conduit, and (through it) with the Filtering Basin. The space between the dams is now filled with Lake water, and rises and falls with the Filtering Basin irrespective of the levels or the freshets of the creek.

THE FILTERING BASIN.

The continued pumping which has been required to fill the Reservoir has fully tested the capacity of the filtering basin. Each engine delivers 60,000 gallons of water per hour, and one engine has been run fifteen hours consecutively, in that time withdrawing 900,000 gallons from the filtering basin and putting them into the Reservoir. The length of basin is 1,100 feet parallel with the lake shore, and its depth below present level is nine and a half feet, or seven feet below lowest lake level. The quantity of water which the basin, at the average level of three feet above low water, will feed to the pumps without any supply coming in, and before it becomes too low to flow to the pump well, is about 2,000,000 gallons.

It was found that on starting one engine the level of the water in the filtering basin fell at the rate of one-tenth of a foot per hour ; afterwards, one-twentieth of a foot, until after fifteen hours consecutive pumping the level of the basin was reduced one foot. On re-commencing to pump the following day the basin (which was then one foot ten

inches below lake level) was found to have risen nine inches, giving a quantity equal to 250,000 gallons as the measure of filtration under that head and at that level, during the nine hours in which the engines were standing.

This trial took place at the most unfavourable season of the year, the cold weather of December having formed a bordage of ice of considerable width on the lake shore, and the frost having penetrated the sand on the beach, thereby removing the water line and diminishing the area of filtration.

It is also found that during the most violent storms, when the roll of the waves on the beach raised the level of the basin nearly two feet higher than the water in the bay, and while the water of the lake was thick and discolored as far as the eye could reach, the water coming into the basin was perfectly clear. This was the case even while the water was passing rapidly out of the basin into the bay, through the opening in the conduit at Lottridge's creek.

QUALITY OF THE WATER.

The quality of the water in the city will for a time depend upon the amount consumed or wasted. The coal tar with which the pipes are coated will impart a taste to the water where it is allowed to remain long in the pipes. All new pipes at first affect the water,—and when not coated with tar the taste is of iron rust. This will not occur, however, even with new pipes if the water is frequently changed. At present, during the winter season when no water is used for streets and fountains—and while the number of consumers are so few, the water can only be kept in good condition by frequently opening the hydrants. The hydrants should be opened regularly for their own sake, so as to ensure their serviceableness in case of fire; but a more general consumption of the water is desirable for the purpose of keeping it at all times in good order.

COMPLETION.

The only work which is unfinished, with the exception of what has been alluded to in connection with the engines,

is the completion of the tenements for the engineers and firemen, the coal sheds, and the levelling off of the grounds at the engine house, as well as the trimming up at the diversion of Lottridge's Creek, which is reserved until the frost leaves the ground.

By the terms of the contract for the engines, they were to have been ready to pump on 1st May, 1859, and are to be at the contractor's risk for one year. The guarantee would thus have expired on 1st May, 1860, the same date as the expiration of my engagement as engineer of the works. The delay caused in the construction of the engine house postponed the completion of the engines for six months, which will throw over the expiration of the guarantee of the contractor until November next. In every other respect I anticipate that all important work will have been fully completed before my departure. The extension of the distribution will of course keep pace with the progress of the City.

FIRES.

Up to the date of the last semi-annual report, no fires had occurred at which the efficiency of the hydrants could be tried. During the last half year, however, several fires took place, four of which—at least one in rear of Gurney & Carpenter's, another behind the Anglo-American Hotel, the third at the Roman Catholic Church, and fourth on James Street near the Market—might have been attended with serious consequences but for the prompt manner in which they were extinguished without the aid of Fire Engines.

In conclusion, I beg to state that after deducting the amount paid for interest, discount upon debentures, the cash cost of the works when completed will fall within the estimate, although this cost includes much extra work not embraced in the original estimate.

I have the honor to be, Sir,

Your obed't servant

(Signed)

THOS. C. KEEFER,

Engineer, H. W. W.

Semi-Annual Statement of the Board of Water Commissioners of the City of Hamilton, from 1st July to 31st December, (both inclusive) 1859, in accordance with the Act incorporating the said Commissioners.

Dr.		RECEIPTS.	
		\$ Cts.	\$ Cts.
1859.	To proceeds of sale of \$26000 Debentures, sold at 77 per cent.	20020	00
	Capital Account.	152626	65
July 19	To Debentures received from City Council £7000 cy, at par of exchange, or \$4.	28000	00
" 23	" Debentures received from City Council £1800 stg., at 9½ per cent. p. of e. or \$4,86⅔.	8760	00
" 27	" Debentures received from City Council, £1750 cy., and £1250, cy., at \$4.	13516	67
Aug. 24	" Debentures received from City Council, £1850 stg., at 9½ p. of e. or \$4,6⅔.	9003	33
Sept. 24	" Debentures received from City Council, £2100 stg., at 9½ per cent., p. of e., or \$4,86⅔.	10220	00
Oct. 24	" Debentures received from City Council, £6600 stg., at 9½ per cent. p. of e., or \$4,86⅔. \$32120		
	" Less Debentures returned to City Chamberlain, £6750 cy., at \$4. 27000	5120	00
Nov. 9	" Debentures received from City Council, £5000 stg., at 9½ per cent., p. of e., or \$4,86⅔.	24333	33
" 19	" Debentures received from City Council, £7000 stg. at 9½ per cent. p. of e., or \$4,86⅔.	34066	66
Dec. 3	" Dehenture received from City Council, £200 cy., at \$4.	800	00
" 15	" Debentures received from City Council, £2500 stg., at 9½ per cent., p. of e., or \$4,86⅔.	12166	66
" 7	" Debentures received from City Council, £1200 stg., at 9½ per cent., p. of e. or \$4,86⅔.	5840	00
" 30	" Cash received from City Clerk, being amount collected by him on account of assessment for "Gore" Improvement	800	00
	Bank of Montreal.	6006	98
July	To amount loaned	584	20
August	" " "	2178	70
Sept'r	" " "	250	00
October	" " "	211	20
Dec'r	" " "	2782	88
	Carried forward.	\$178653	63

1859.		Amount brought forward.....	\$ Cts.	\$ Cts.
				178653 63
		Bank Debenture Account.....		80628 49
August	To	proceeds of sale of Debentures, £500 stg., at 85 per cent., £425 at 9½ per cent., p. of e.....	2068 33	
October	"	proceeds of sale of Debentures £750 stg., at 85 per cent., £637 10s. stg., at 9½ per cent., p. of e.....	3102 50	
Dec'r	"	proceeds of sale of Debentures £500 stg., at 85 per cent., £425 at 9½ per cent. p. of e.....	2068 33	
" 21	"	proceeds of sale of Debentures, £18850 stg., at 80 per cent., £15080 at 9½ per cent. p. of e.....	73389 33	
		Pipe Account.....		9 57
Dec. 15	To	Cash from City Chamberlain for repairs to a hydrant pipe.		
		Interest Account.....		2879 64
Dec. 15	To	accrued interest on Debentures as per return of Bank of Montreal.....	10 00	
" 15	"	" " " " "	50 55	
" 15	"	premium on Debenture of £500, paid Edgar, Sharp & Co.....	66 66	
Nov. 10	"	accrued interest on Debentures, as per return of Bank of Montreal.....	48 67	
" 17	"	" " " " "	38 40	
" 19	"	" " " " "	55 20	
" 19	"	premium on sale of draft of £1600 stg., sold Commercial Bank of Canada	124 44	
Dec. 12	"	accrued interest on Debentures, as per return of Bank of Montreal	174 47	
" 15	"	accrued interest on Debentures, as per return of Bank of Montreal.....	27 00	
" 15	"	" " " " "	55 97	
" 15	"	Interest on Sterling Drafts.....	20 80	
" 15	"	premium on Bills of Exchange.....	240 98	
" 15	"	" " " " "	17 78	
" 15	"	accrued interest on Debentures as per return of Bank of Montreal.....	33 34	
" 15	"	" " " " "	1915 38	
		Debenture Account.....		60285 84
Nov. 10	To	proceeds of sale of Debentures, £2000 stg.	7786 67	
" 17	"	" " " " " 1000 "	3893 33	
" 19	"	" " " " " 2000 "	7786 67	
Dec. 12	"	" " " " " 2700 "	10512 00	
" 15	"	" " " " " 2250 "	8760 00	
		" " " " " 5000 "	21547 17	
		Carried forward.....	\$322457 17	

RECEIPTS.—Continued.

1859.		\$ Cts.	\$ Cts.
	Amount brought forward... ..		322457 17
	Edmonstone, Allan & Co.		37 80
	To amount to close account to date		
	Total received.....		322494 97
	To amount received as per statement....	322494 97	
	" " paid " "	277935 38	
	Balance in hand... ..	44559 59	
	as follows:		
	Special deposit in Bank of Upper Canada....	19473 47	
	Balance in Commercial Bank of Canada,.....	\$24785 17	
	Less cheque issued, but not pre- sented.....	6050 37	
		18734 80	
	Debentures on hand.....	5840 00	
	Cash on hand.....	511 32	
		44559 59	

EXPENDITURES.

Cr.			\$	Cts.	\$	Cts.
1859.		Pumping Main Account.....			2000	00
July 9		By Debentures paid Wm. Hendrie in full.				
		Debenture Account.....			72756	66
Nov. 10		By Debentures sold as per contra, £2000 stg.	9733	33		
" 17		" " " " £1000 stg.	4866	67		
" 19		" " " " £2000 stg.	9733	33		
" 21		" " Remitted to Glasgow, £5000 stg.	24333	33		
Dec. 12		" " Sold as per contra... £2700 stg.	13140	00		
" 15		" " " " £2250 stg.	10950	00		
		Interest Account.....			16965	06
July 30		By Cash paid Canada Lead Pipe Works Co., amount due on Sterling Debentures.....	146	00		
		" Cash paid Interest on Sterling Debentures, Bank of Montreal, amount due	73	00		
Aug. 31		on loans as charged in Bank Pass Book...	1165	09		
Sept. 9		" Cash Interest on Sterling Debentures....	73	00		
Nov. 25		" " City Chamberlain, amount to pay Interest due 1st January, 1860, on Sterling Debentures, £1561 19 4 stg.....	7809	83		
Dec. 1		" Cash paid Bank of Montreal amount due on loans as charged in Bank Pass Book...	1331	20		
" 23		" Cash paid " " " " " " " " " "	316	57		
" 31		" " City Chamberlain to pay Interest due 1st Jan., 1860, on Currency Debentures	6050	37		
		Pipe and Pipe Track Account....			38518	89
July 9		By Cash paid Wm. Hendrie on act. of contracts	6808	00		
Aug. 23		" " " " " " " " " "	1787	00		
Sept. 26		" " " " " " " " " "	449	00		
Dec. 22		" " " " " " " " " "	4114	00		
Sept. 27		By Debentures paid Edmonstone, Allan & Co., freight of pipes.....	9246	67		
		By Cash paid tolls on pipes.....	263	48		
Nov. 29		" " Hilton Bros. account for lead..	59	04		
Sept. 17		" " Inspection of pipes at Glasgow..	121	00		
July 27		" Debentures paid Canada Lead Pipe Works Co. for lead and lead pipe.....	8760	00		
Aug. 24		" " " " " " " " " "	6570	00		
" 24		" Cash paid " " balance of account	26	20		
Nov. 2		" " Roger's account for sundries...	14	50		
		Bank of Montreal Account.....			82110	49
		" Paid, from July 1st to Dec. 31st 1859, on account of loans, being amount of proceeds of sales of Debentures as entered in Pass Book.				
		Amount forward.....			\$212351	10

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EXPENDITURES.—Continued.

1859.		\$	Cts.	\$	Cts.
	Amount brought forward.....			226428	41
	Service Cock Account.....			1000	00
	By Cash paid Hiram Broadbent, on account of contract advances made from 1st August to 23rd Dec., secured by deposit of Debentures				
	Pumping Engines Account.....			4250	00
Aug. 5	By Debentures paid J. Gartshore, on account of contract.....	3000	00		
Dec. 21	" " " " " " ..	1250	00		
	Gore Improvement Account. ...			2315	00
	By Cash paid John Taylor, on account of contract, from 26th Sept. to 30th Dec., 1859	1100	00		
	" Cash paid Addison & Leitch, on account of contract, from 15th Oct. to 20th Dec., 1859	1183	00		
	" Cash paid Charles Robb, for professional services rendered, drawing plans, &c. ...	32	00		
	Commission Account.....			2216	58
Aug. 31	To Cash paid Brokerage and Commission on sales of Debentures in Canada.....	1785	63		
	" " " " in Great Britain.....	430	95		
	Stop Cock and Special Castings Account.....			2433	33
Aug. 24	By Debentures paid Bartley & Gilbert, on account of contract, £500 stg., at 9½ per cent. p. of e.				
	Bank Debenture Account.....			28253	33
July 19	By Debentures deposited in Bank of Montreal.....	£7000	cy.	28000	00
Oct. 31	" Debentures " £5600 stg. \$28253 33 and £ 250 cy.				
	Less amount returned £7000 cy., \$28000 00	253	33		
	Distributing Reservoir Furniture Account.....			72	25
Dec. 30	By Cash paid for furniture for Commissioners' and Visitors' Room at the Reservoir.				
	Distributing Reservoir Expense Acc't.....			161	87
Aug. 11	By Cash paid men watering sods, Watchman's wages, mowing grass, taking care of tools, &c.				
	Distributing Reservoir Tool Acc't..			22	36
Oct. 5	By Cash paid Hilton Bros. account for scythe, spade, wheelbarrow, &c.....	8	37		
	Amount forward.....		\$	267153	13

EXPENDITURES.—Continued.

1859.		\$	Cts.	\$	Cts.
	Amount brought forward.....			267	153 13
	<i>Distributing Reservoir Tool Acc't Continued.</i>				
Dec. 21	" Cash paid J. A. Bruce for gardening tools.....	6	25		
	" " Hilton Bros. for tools.....	7	74		
	Distributing Reservoir Land Acc't			62	51
Aug. 11	By Cash paid Squatters for removing their shanties off Reservoir site.....	60	00		
Dec. 11	" Cash paid School Tax.....	0	85		
" 31	" " " and Statute Labor.....	1	66		
	Distributing Reservoir Account...			2935	42
July 9	By Cash paid men employed pulling and removing stumps off Reservoir site	87	25		
" 9	" Cash amount paid men employed on acc't of Contractor.....	363	47		
Aug. 9	" Cash paid men watering sods.....	1	00		
" 19	" " Garnishee order on account of Contractor	212	00		
Oct. 6	" Debentures paid Edgar, Sharp & Co., on account of fencing.....	900	00		
Nov. 2	" Cash paid B. Greening's acc't for brass web	31	02		
Dec. 21	" Cash paid men employed leveling and finishing grounds, paving part of Reservoir, &c.	390	68		
" 21	" Cash paid P. Balfour's account for building Watchman's house, and furnishing materials for same, building rough plank stairs, fencing, laying sidewalks and culverts, furnishing and painting four sign boards.....	950	00		
	Hydrant Account.....			801	92
Dec. 3	By Debentures paid Gurney & Carpenter, on account of contract, £200 cy.....	800	00		
	" Cash paid Rodgers for Caps.....	1	43		
	" " " " "	0	49		
	Salaries Account.....			693	87
	By Cash paid the Secretary, from 20th July, to 20th December, 1859.....	483	37		
	" Cash paid J. B. Minty, junr., Clerk, from 17th July, to 17th December.....	120	00		
	" Cash paid J. B. Minty, senr., Canvasser for Water Tenants, from September to December	90	00		
	Coal Account.....			3033	17
Sept. 26	By Cash paid E. Browne for Coals delivered at Engine House, in full.....	3000	00		
	" Cash paid labourers employed stowing Coals.....	33	17		
	Carried forward.....			\$ 274679	52

EXPENDITURES.—Continued.

1859.		\$	Cts.	\$	Cts.
	Amount brought forward.....			274	679 52
	Printing Account.....			107	30
July 29	By Cash paid S. I. Jones' acc't for printing..	7	50		
" 29	" " Spectator "	23	50		
" 29	" " Times "	10	32		
Aug. 6	" " Spectator "	11	85		
Sept. 1	" " Times, on account, "	30	00		
Nov. 17	" " " balance due.....	24	13		
	Right of Way.....			804	73
Dec. 23	By Cash paid School and other taxes on property in Saltfleet.....	4	73		
Oct. 6	" Cash paid Edgar, Sharp & Co., on account of fencing.....	800	00		
	Office Expense Account.....			196	28
July 29	By Cash paid small accounts as per Vouchers	63	81		
Nov. 10	" " 6 months' rent of offices.....	100	00		
	" Cash paid Messenger's Wages, from 1st July, to 31st December.....	32	47		
	Filtering Basin and Conduit Account.....			32	86
Oct. 12	By Cash paid for handles for strainers in suction well near Engine House, and brass web for same				
	Filtering Basin Tool Account.....			1	80
Dec. 21	By Cash paid Hilton Bros. acc't for Tools				
	Filtering Basin Expense Account.....			1100	00
July 21	By Cash paid G. Lottridge on account of land.....	\$200			
Sept. 21	" Cash paid G. Lottridge in full of land taken.....	100			
		300	00		
Oct. 6	" Debentures paid Edgar, Sharp & Co., on account of fencing.....	800	00		
	Filtering Basin Expense Account.....			53	01
Oct. 10	By Cash paid for removing Ice House.....	15	00		
Nov. 4	" " Thomas Armstrong's wages as Watchman, in full to 28th October.....	12	67		
Dec'r 3	" Cash paid " 28th November.....	12	67		
" 31	" " " 28th December.....	12	67		
	General Expense Account.....			303	33
July 16	By Cash paid expenses negotiating Debentures in Montreal.....	100	00		
	Amount forward.....			\$277	278 83

EXPENDITURES.—Continued.

1859.		\$	Cts.	\$	Cts.
	Amount brought forward.....			277	278 83
	<i>General Expense Account, continued.</i>				
	By Miscellaneous expenses as per Vouchers	116	64		
Aug. 17	" Cash paid expenses to St. Catherines, res- pecting Coals, &c.....	15	90		
Nov. 2	" " Johanna Harrington, (widow of the man Harrington who died from injuries received on pipe trench) and children their railway fare, and for provisions.....	40	00		
" 29	" Cash paid widow of the lato Mr. Brunt, (who was employed at the Press House) as relief	20	00		
" 8	" Cash paid Refreshments to Fire Brigade testing Hydrants, &c.....	10	79		
	Engine and Boiler House Furniture Account			41	95
Nov. 2	By Cash paid for brushes, lanterns, brooms, &c.....\$10 07				
	" Cash paid D. Moore & Co.'s account for Copper Ware, &c..... 25 88				
		35	95		
Dec. 31	" Cash paid account for scrapers.....	6	00		
	Engine and Boiler House Expense Account			301	70
Nov. 2	By Cash paid account for oil, lamp wick, can- dles, tallow, jute packing, &c.....	111	70		
	" " Pay lists of men employed as Engineer and Firemen, for month of No- vember, \$82 00, and December, \$108.....	190	00		
	Lumber Account			101	20
	By Cash paid sundry accounts for Lumber				
	Pipe Yard and Press House Account			211	70
Aug. 11	By Cash paid putting flooring on workshop ceiling.....	10	00		
Oct. 5	" Cash paid P. Balfour's acc't for building and furnishing materials for frame house for storing Lead Pipe at Press House....	201	70		
	Total Paid.....			\$277	935 38

JAMES E. DAY, *Secretary.*

Dr.

GENERAL STATEMENT

Shewing total amount of Cash and Debentures received, and the total amount expended from the commencement of the Works, up to 31st December, 1859, inclusive, also shewing the Cash and Debentures on hand.

	\$	Cts.	\$	Cts.		\$	Cts.	\$	Cts.
Capital Account			66	2152 00	Amount brought forward.....	66	1352 00	66	2152 00
To amount of <i>Cash and Debentures</i> received from City Chamberlain, from January 28th, 1857, to December 31st, 1859.					Cash from City Clerk, being amount collected by him, from persons assessed for improvement of "Gore".....		800 00		
Cash	15	500 00			Pipe Account			9	57
Being proceeds of sales of £5000 ex., at 22½ per cent. discount, negotiated by City Council.					Cash from City Chamberlain, for repairs to Hydrant pipe in Main Street.				
Debentures as per detailed Statement annexed.					Interest Account			42	51 11
Currency Debentures.....£56778					Amount of accrued interest and premium on Debentures, and premium and Interest on drafts.				
Less am't accounted for as above£5000					Canada Lead Pipe Works Co			49	70
Less amount returned Oct. 31st 1859..... 6750					Amount received to close account.				
£11750					Edmonstone, Allan & Co			37	80
£45028	18	0112 00			Amount received to close account to date.				
Sterling Debentures£96200					Bank of Montreal			24	5 08
Less £500, No. 95, returned on 4th October, 1859, as informal..... 500					Amount received.....	13	6514 82		
£95700	46	5740 00			Less do paid.....	13	6269 74		
At 9½ per cent. P. of E.					Total amount received.....		\$ 666745 26		
Amount forward.....\$	66	1352 00	66	2152 00					

Cr.

GENERAL STATEMENT,—Continued.

	\$	Cts.	\$	Cts.		\$	Cts.	\$	Cts.
Right of Way			6634	76	Amount brought forward.....			345435	87
By amount of awards, arbitrators fees, agents					Distributing Reservoir			26233	63
fees and expenses.....	5830	03			Paid on account of fencing, overflow well, &c	1206	78		
" Fencing part of land.....	800	00			" construction of Watchman's house, and			950	00
School and other Taxes.....	4	73			materials for same.....				
Reservoir Land Acc't			1605	17	Paid levelling and finishing ground near Re-			390	68
Paid for site.....	1600	00			servoir.....			23686	17
" School and other Taxes.....	5	17			Paid construction of Reservoir.....				
Pumping Engines			89850	00	Pipe Track and Pumping Main Acc't			18408	00
Paid J. Gairshore on account, Debentures....	89416	66			Paid Wm. Hendrie in full, and on account				
Premium on Debentures	433	34			Pipe Track (City) and Distributing			24639	00
Pipe Acc't			226940	00	Pipe Account				
Debentures remitted to Glasgow, to pay for					Paid Wm. Hendrie on account.				
pipes.....	146000	00			Engine and Boiler House Filtering			45209	52
Paid Edmonstone, Allan & Co, on account of					Basin and Conduit				
freight.....	71913	33			Paid G. Worthington on account of contracts.	45176	66		
Paid for Tolls on pipes, bolts, &c.....	3167	80			" strainer bolts, &c. in suction well.....			32	86
" certificate of general average on ship					Hydrostatic Press Account			3600	00
" "Marion.".....	97	87			D. C. Gunn, on account				
" Wm. Hendrie on account of wharfage,					Pipe Yard and Press House Acc't			3331	83
storage and haulage of pipes.....	5761	00			Paid for Land.....	1200	00		
Lead and Lead Pipe Acc't			20405	94	" J. Addison for constructing and furnish-				
Paid Canada Lead Pipe Works Co., Debentures	20216	67							
Cash.....	189	27							
Amount forward.....			\$345435	87	Amount forward....			\$466857	85

Cr.

GENERAL STATEMENT,—Continued.

	\$	Cts.	\$	Cts.		\$	Cts.	\$	Cts.
Amount brought forward.....			466	85	Amount brought forward.....			485	05
Pipe Yard and Press House Acc't. continued.					General Expenses.....			8	68
ing materials for house.....	1898	63			Paid for advertising and printing.....	766	39		
P. Balfour for building store-house.....	201	70			" Salaries.....	2407	22		
" Sundries.....	31	50			Rent, taxes, room keeper's wages,				
Stop Cocks and Special Castings Acc't			13233	34	books, stationery, coals, gas, &c., &c.....	1841	37		
Paid Bartley and Gilbert on account.....					Paid Law Expenses.....	1966	47		
Hydrant Acc't.....			801	92	" Improvement of Beach Road.....	730	00		
Paid Gurney & Carpenter on account.....	800	00			" Preliminary and other expenses.....	557	98		
" Sundries.....	1	92			" Insurance.....	26	25		
Service Cock Acc't.....			1000	00	Furniture and Tools.....			1719	82
Paid Hiram Broadbent on account.....					Paid Office Furniture.....	604	62		
Gore Improvement Acc't.....			2283	00	" Press House Furniture and Tools.....	976	84		
Paid J. Taylor, and Addison, and Leitch on					" Engine and Boiler House.....	41	95		
account of contracts and including advances					Distributing Reservoir.....	94	61		
to be re-imbursed.....					Filtering Basin Tools.....	1	80		
House Service Acc't.....			458	94	Current Expenses.....			5397	52
Paid wages of men putting in services, &c.....					Coals and stowing.....	3033	17		
Filtering Basin Property Acc't.....			1100	00	Wages of Watchman at Reservoir.....	161	87		
Paid G. Lottridge as a quit claim.....	300	00			Wages of Engineer, Firemen, Lard, Oil,				
" Edgar Sharp & Co. on account of fencing.	800	00			Tallow, &c.....	301	70		
					Wages of Watchman at Filtering Basin.....	53	01		
					Wages of Mechanics at Press House, and other				
					expenses.....	1746	57		
					Lumber.....	101	20		
Amount forward.....			\$485	05	Amount forward.....			\$501	48

Cr.

GENERAL STATEMENT,—Continued

	\$	Cts.	\$	Cts.		\$	Cts.	\$	Cts.
Amount brought forward.....			501148	07	Amount brought forward.....			622185	67
Engineering Department.....			26313	91	<i>Interest Account Continued.</i>				
Paid Staff.....	19501	42			Discount on Debentures negotiated, &c. to 1st				
“ Inspectors and Labor.....	4802	85			January, 1860.....	45449	82		
“ Transport charges..	364	41			Total amount paid.			622185	67
“ Instruments	911	18							
“ Stationery	293	47			Amount Received.....	666745	26		
“ Printing.....	41	07			Less do Paid.....	622185	67		
“ Preliminary expenses.....	399	51							
Brokerage and Commission and Ex-					Balance.....	44559	59		
penses attending sales of Deben-			3533	89	As follows:—				
tures.....			91189	80	Special Deposit in Bank of Upper Canada..	19473	94		
Interest Account.....					Balance in Commercial Bank of Canada,				
Interest on Debentures up to 1st January,					\$24785 17.....				
1860, inclusive.....	40162	72			Less Cheque issued, but not presented,	18734	80		
Interest on loans, and on accounts to 1st					\$6050 37..				
January, 1860.....	5577	26			Debentures on hand	5840	00		
Amount forward.....			\$ 622185	67	Cash on hand.....	511	32		
						44559	59		

JAMES E. DAY, *Secretary.*

STATEMENT OF DEBENTURES

Issued by the Corporation of the City of Hamilton, on account of the Hamilton Water Works; the whole of which, excepting £5000 cy. sold by that body, have been received by the Water Commissioners of said City.

Numbers.	No	Denomi- nation.	Amount Sterling	Amount Cur'ncy.	Numbers.	No	Denomi- nation.	Amount Sterling	Amount Cur'ncy.
		£	£	£					
1 to 8	8	500		4000	Am't bro't forward		£65350		£37328
9 to 13	5	200		1000	342	1	200		200
14 & 15	2	89		178	343 to 347	5	250		1250
16 to 30	15	200		3000	348 to 350	3	100		300
41 to 65	25	100	2500		351	1	100	100	
66 to 85	20	250	5000		352 to 354	3	250	750	
86 to 100	15	500	7500		355 & 356	2	100	200	
101 to 137	37	250		9250	357 to 361	5	250		1250
138 to 157	20	500	10000		362	1	200		200
158 to 167	10	250		2500	363	1	100		100
168 to 187	20	500	10000		364 to 377	14	250		3500
188 to 199	12	250		3000	378 to 390	13	500		6500
200 to 219	20	500	10000		391	1	200		200
220 & 221	2	200		400	392 to 409	18	250		4500
222	1	250		250	410 to 427	18	100	1800	
223 to 238	16	500	8000		428 to 434	7	250	1750	
239 & 240	2	200		400	435 to 439	5	250		1250
241 to 249	9	250		2250	440 to 450	11	100	1100	
250 & 251	2	200		400	451 to 453	3	250	750	
252 to 259	8	250		2000	454 to 456	3	500	1500	
260 & 261	2	200		400	457 to 462	6	100	600	
267 to 269	3	250		750	463 & 464	2	500	1000	
270 to 293	24	250	6000		465 to 480	16	250	4000	
294 to 303	10	500	5000		481 to 496	16	100	1600	
304	1	100	100		497 to 511	15	100	1500	
305 to 307	3	250		750	512 to 539	28	250	7000	
308 & 309	2	100		200	540 to 554	15	100	1500	
310 to 314	5	250		1250	555 to 558	4	500	2000	
315	1	100		100	559	1	200		200
316 to 320	5	250		1250	560 to 569	10	250	2500	
321 to 325	5	250	1250		570 to 576	7	100	700	
326 to 341	16	250		4000	577 & 578	2	250	500	
Amount forward.			£65350	£37328				£96200	£56778

JAMES E. DAY,
Secretary.

STATEMENT OF DEBENTURES RECEIVED.

		\$	Cts.
Amount of Debentures <i>actually</i> received from City Chamberlain from the commencement of the Works, up to 31st December, 1859, as follows:			645852 00
Amount of Currency <i>issued</i>£	56778		
Deduct amount sold by City Council.....£5000			
And amount returned to City Chamberlain, the 31st October, 1859,.....£6750			
	11750		
Actual amount in Currency,.....£	45028		
Equal to at \$4 per £.....\$	180112 00		
Amount of Sterling <i>issued</i>£	96200		
Deduct amount returned to Chamberlain, on 3rd October, 1859.....£	500		
Actual amount in Sterling.....£	95700		
Equal to at 9½ per cent. p. of e.....\$	465740 00		
Currency.....\$	180112 00		
Sterling.....£	465740		
Total.....\$	645852		

STATEMENT OF APPROPRIATION OF DEBENTURES.

	\$	Cts.	\$	Cts.
Paid on account of Right of Way.....		712 00		
" " Pumping Main.....		2000 00		
" " Law Expenses.....		1200 00		
DEBENTURE CONTRACTS.				
Paid on account of Pumping Engines.....	89416	66		
" " Cast I. W. Pipes.....	146000	00		
" " Lead and Lead Pipe.....	20216	67		
" " Engine and Boiler House, and Filtering Basin and Conduit.....	45176	66		
Paid on account of freight of Pipes.....	71913	33		
" " Stop Cock and Special Castings.....	13233	34		
" " Fencing "Reservoir".....	2433	34		
" " "Filtering Basin" & Eng. House" Yard				
Paid on account of Hydrants.....	800	00		
Total Debentures Paid.....			393102	00
Debentures negotiated as per statement herewith:				
£ 6250 cy. = \$25000.				
£ 6500 cy. = \$26000.				
£12750 cy. =			51000	00
£40050 stg. at 9½ per cent.....			194910	00
			\$ 639012	00
Balance,—Debenture in Bank, £250 cy.....			1000	00
" " in Vault, £1200 stg., at 9½ p. of e.....			5840	00
			\$ 645852	00

JAMES E. DAY, *Secretary.*

STATEMENT OF SALES OF DEBENTURES.

		£	s.	d.	£	s.	d.
Sale of £6250 cy., at rates varying from 81½ to 84½ pr. ct. as p. acc., sales rendered by Bank.	Principal	6250	0	0			
	Discount	1064	7	6			
		5185	12	6			
	Broker. £31 5 0						
	Commis. 62 10 0	93	15	0			
					5091	17	6
Sale of £25100 stg., at rates varying from 84½ to 86½ pr. ct. as p. acc. sales rendered by Bank.	Principal	25100	0	0			
	Discount	4661	5	0			
		20438	15	0			
	Brok. £131 11 7						
	Com. 261 0 0	382	11	7			
		20056	3	5			
		equal to in cy at 9½ pr. ct.			24401	13	6
Sale of £6500 cy., at 77 pr. ct.	Principal	6500	0	0			
	Discount	1495	0	0			
					5005	0	0
Sale of £2000 stg., at 80 pr. ct.	Principal	2000	0	0			
	Discount	400	0	0			
		1600 stg. a 9½ p. ct. p. of e.			1946	13	4
Sale of £3000 stg., at 80 pr. ct.	Principal	3000	0	0			
	Discount	600	0	0			
		2400 stg. a 9½ pr. ct. p. of e.			2920	0	0
Sale of 4950 stg., at 80 pr. ct.	Principal	4950	0	0			
	Discount	990	0	0			
		3960 stg. a 9½ pr. ct. p. of e.			4818	0	0
Sale of £5000 stg., £1450 at 85 pr. ct.; £3550 at 90 pr. ct.	Principal	5000	0	0			
	Discount	572	10	0			
		4427	10	0			
	Com'n. £44 5 6						
	Broker. 44 5 6						
	Stamps, &c. 5 11 0						
		94	2	0			
		4333	8	0			
		At 9½ per cent. p. of e..			5272	6	1
					Cy., £ 49455 10 5		

JAMES E. DAY, *Secretary.*

HAMILTON WATER WORKS.

Inventory of Pipes and Special Castings lying in Press House Yard.

95 18-Inch Pipes.	24 6 " "
51 12 " "	16 6 " Dead head for spigot end of Pipe.
136 6 " "	1 12-Inch Dead head for fawcet end of Pipe.
10 2 " "	1 18-Inch Dead head for spigot end of Pipe.
2 18 " Stop Cocks.	3 6-Inch Reverse bends
3 12 " "	18 Hydrants.
6 6 " "	15 Hydrant Chamber Covers.
1 18 " Breeches Pipe.	7 " Caps.
4 18 " Curved Pipe	1 Fire Plug Leadbetter, Glasgow.
1 18 " Bend.	2000 lbs. 1-Inch Lead Pipe.
1 24 " Pipe.	6450 lbs. $\frac{3}{4}$ " "
1 24 to 18-Inch Taper.	18750 lbs. $\frac{3}{8}$ " "
2 4 Way branch 6 off 12-inch.	72050 lbs. $\frac{1}{4}$ " "
1 3 " " " "	36500 lbs. Pig Lead.
3 6 Inch Curved Pipe.	70 Iron Service Plates.
6 4 Way branch 6-inch off 8-inch.	12 Boxes for Services.
23 3 Way " " "	
3 24-Inch Sleeves.	
4 18 " "	
20 12-Inch Sleeves.	

Inventory of Tools, Articles, and Stock in Workshop and Press House.

1 6-Inch Vice.	2 Screw Drivers.
1 Grind Stone.	1 Reamer.
1 Iron Surface Plate.	1 Mallet.
1 Die Stock with taps and dies, $\frac{7}{8}$, 1, 1 $\frac{1}{2}$, 1 $\frac{1}{4}$, dia.	1 Tool Basket.
5 Tap Wrenches.	1 Bench Screw.
1 Brace and 6 Drills.	1 Wood Saw and Horse.
18 S and Straight Wrenches.	1 Branding Iron, H.W.W.
5 Shifting Wrenches.	1 Steel Stamp, H.W.W.
20 Files.	4 Single Letters.
2 Planes.	1 Set of $\frac{1}{4}$ -inch Figures.
4 Saws.	1 " 3-16 "
3 Augers.	1 Lot of Gaskets for proving Pipes.
1 6-Inch Auger, for foot path plates.	3 Plates and Screws "
1 Hand Axe.	2 Clamps for proving brass work.
1 Chopping Axe.	1 Set Brass Nuts, &c., for "
2 Firmer Chisels.	4 12-Inch Stop Cock Keys.
1 Gouge.	4 6 " " " and 2
2 Mortice Chisels.	Sockets for 12-inch do.
1 Brace.	2 Large Keys for Hydrants.
11 Bits.	4 " " "
1 Saw Set.	2 Service Cock Keys.
2 Gimlets.	2 " Plate do.
1 Pair Pincers.	1 Large Weighing Scale.
	1 Small " "
	1 Large Stove and Piping.

Inventory of Tools, Articles, &c.—Continued.

1 Small Stove and Piping.	2 Small Oilers.
1 Desk and Stool.	1 Paint Pot.
1 Ashcroft steam guage (No. 10205)	1 Coil Packing Yarn.
1 Portable Force Pump, Stand and Suction Pipe.	36 lbs. Rubber Packing.
150 Feet of 3-inch Leather Hose.	12 File and Chisel Handles,
12 " 2-inch "	2 Gross 3-inch Screws.
2 Copper Branches, 6 Nozzles and 1 Spreader	1 " 2½ "
1 2-Gallon Oil Can.	3 " 2 "
2 1 " "	1 " 1½ "
	1 " 1 "
	15 lb Cut Nails.

Inventory of Pipe Layers and Service Layers Tools, &c.

27 Picks.	3 Small Steel Pinch Bars.
12 Shovels.	3 " Iron " "
3 Spades.	1 Lead Pipe Flanging Machine, and 4 sets Dies and Punches.
8 Beaters.	1 Drilling Machine for Pipes, and 3 Drills and Taps.
1 Pipe Gin.	1 Tap Wrench.
1 Pair of 4½-inch Iron blocks and fall.	1 Ditch Line.
4 Slings for Pipes.	1 Tape Line.
1 Lead Pot.	4 Lanterns.
2 " Ladles.	4 Wheelbarrows.
18 Cold Chisels.	1 4-Inch Sludge Pump.
5 Caulking Tools.	6 Pails.
2 Packing "	1 Trowel.
2 Hand Hammers.	
3 Sledge "	

Inventory of Brass Work for Services.

13 1-Inch Screwed Nozzles.	42 " Stop Cocks,
17 " Stop Cocks.	53 " Couplings.
3 " Couplings.	7 " Compression Cocks.
6 " Compression Cocks.	70 One ½-Inch Screwed Nozzles.
58 ¾-Inch Screwed Nozzles,	10 " " Tapered Nozzles.
8 " Stop Cocks.	143 " " Stop Cocks.
7 " Couplings.	125 " " Couplings.
12 " Compression Cocks.	38 " " Compression Cock.
58 ½ Inch Screwed Nozzles.	27 Five-eighths to 1 ½ inch Branch.

JAMES. E. DAY, *Secretary.*

