

May 1.	Point Pleasant Park—S. Venner	30 00	
8.	Jno. Steadman, et al	50 00	
			80 00
May 1.	Citizens' Library—L. A. Affleck	12 00	
	Edith Lydiard	13 50	
	D. A. Shiers	30 34	
15.	John Bowes	9 55	
	T. C. Allen & Co.	3 54	
	A. & W. Mackinlay	1 93	
	F. W. Green	2 00	
	R. R. Bowker	5 28	
17.	S. F. Huestis	29 52	
July 22.	Library Ac., 1899.	113 90	
			221 56
May 15.	Industrial School—H. P. Burton, Secy.		233 32
May 15.	St. Patrick's Home—Brother Lawrence	60 00	
	Brother Lawrence	171 78	
			231 78
May 15.	Truants—Industrial School	136 65	
	St. Patrick's Home	271 97	
			408 62
May 17.	Victoria School of Art—F. H. Oxley, Treas.		500 00
May 1.	Board of Health—John North	40 00	
	A. J. Penny.	56 00	
	John A. Watters	25 00	
	N. Meagher, Sec'y.	250 00	
	G. P. Henry	40 00	
6.	S. Cunard & Co.	71 55	
8.	Cragg Bros. & Co.	7 85	
	Brander, Morris & Co.	20 50	
	Charles Putman	3 75	
	Blackadar Bros.	13 59	
	John North	27 02	
	J. F. Kelly	3 50	
	Imperial Oil Co.	8 84	
	T. C. Allen & Co.	6 15	
15.	Longard Bros.	9 55	
23.	Power & Co.	100 00	
29.	John Borton	40 00	
	Walter Busch	40 00	
June 9.	John Jones	33 45	
12.	T. C. Allen & Co.	13 50	
	Wm. Cassidy	6 25	
	Power & Co.	48 00	
	T. Robinson	16 01	
	A. & W. Mackinlay	4 88	
July 31.	J. Hillis & Son	33 75	

TREASURER'S REPORT.

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June 8.	Interest Sewerage—H. H. Fuller	25 00	150 00
May 1.	Interest Consols—J. S. Stevens	7 50	¾¼
	Rev. E. Ansell	20 00	
	Merchants' Bank	25 00	
June 6.	J. C Mackintosh	45 00	
July 5.	Bank of N. S.	20 00	
12.	Merchants' Bank		142 50
			3623 73
June 24.	Bank of B. N. America—School Rates Deposited..		97 10
May 1.	Cogswell Bequest—School Commissioners		93 00
July 4.	1889 acct.—Elevator Balance Transferred		40830 26
			<hr/>
			Cr.
1899.		5202 03	
May 31.	City Rates—Rec. from City Collector.....	6320 44	
June 30.	Rec. from City Collector	4211 67	
July 31.	Rec. from City Collector		
		\$15734 14	
	Interest on same	961 18	
			16695 32
May 31.	County Rates—Rec. from City Collector	234 35	
June 30.	Rec. from City Collector	284 70	
July 31.	Rec. from City Collector	176 22	
			695 27
May 1.	School Rates—Rec. from City Collector	2066 96	
June 30.	Rec. from City Collector	2520 45	
July 31.	Rec. from City Collector	1562 83	
			6150 24
July 10.	Fire Department—Rec. from T. Spelman		99 95
May 17.	Liquor License Fund, 1898-9—Rec. from Lic. Ins.....		63
May 3.	Fines and Fees—Rec. from City Clerk		381 00
May 1.	Rents of City Property—Rec. from City Collector..		205 00
June 30.	Current Interest—Rec. from Merchants' Bank		54 05
May 5.	Poor's Asylum Maintenance—Rec. from B. Mulcahy		25 00
May 2.	Public Gardens and Common—Rec. from W .F. Pickering Sec'y..		50 92
			18 50
May 2.	Citizens' Library—Rec. from Miss J. Warren		10 00
May 5.	Truants—Rec. from City Clerk.....		1000 00
July 12.	Board of Health—Rec. from 1899 acct. Special Loan		
May 22.	1897-8 acct.—On acct. Balance Due	2000 00	
June 24.	On acct. Balance Due	1600 00	
July 21.	On acct. Balance Due	2300 00	
			5900 00
May 3.	Bank of B. N. A.—Cash to pay interest		653 77
May 9.	Loan Public Baths—Rec. from Ald. Mitchell		158 91
	Balance Due Bank	9506 50	
	Less Cash on Hand	774 80	
			8731 70
			<hr/>
			\$40830 26

CONDENSED STATEMENT

of Cash received and paid by the City Treasurer (including Transfers between Departments) for the Civic Year 1898-9, from 1st May, 1898 to 31st July, 1899.

CASH RECEIVED.

City Rates	\$195967 76
Less discounts net	2212 86
	—————
	\$193754 90
County Rates	7592 93
School Rates	67221 80
Salaries	16536 00
Rockhead Prison	773 62
Streets	1310 03
Internal Health	22 08
Horses and Drivers	1280 05
City Property	175 01
Fire Department	551 48
Liquor License Fund, 1898-9	5682 20
Hack and other Licenses	2334 09
Fines and Fees	5106 00
Rents of City Property	1384 72
Dog Tax	1326 00
Current interest	5875 90
+ Halifax Electric Tramway, 4 per cent. on gross fares	4778 72
Poor's Asylum Maintenance	11234 29
Public Gardens and Common	786 81
Citizens' Library	176 51
Truants under Compulsory School Act	10 00
Board of Health	1559 18
Dry Dock Subsidy	5000 00
Interest—Short Loans	14 90
Interest—Consols	60 25
Water Department—Interest account	44092 00
Unexpended Balances	10451 23
1897-8 Account	15100 00
Steam Roller	443 21
Bank of B. N. America	95341 61
Nicholas Power, advance	659 00
Liquor License Fund, 1899-1900	9341 00
Sinking Fund \$15,000	253 49
Sinking Fund, \$100,000	3115 31
Sinking Fund, 1896	6406 02
Consols—Loan Account	114 840 00
Consols—Premium Account	4114 62
Harbor Championship Fund	50 00
Sales Market House	1014 97

St. Patrick's Home	829 77
Infants' Home, Tower Road	300 00
Infants' Home, Brunswick Street	300 00
R. C. Home for Girls	600 00
Truants under Compulsory School Act	1493 06
Dalhousie University	500 60
Courty Rifle Association	50 00
Victoria School of Art	500 60
Halifax Electric Tramway—Deposit Returned	500 00
Board of Health	4532 84
Court of Appeal	300 00
Dry Dock Subsidy	10000 00
R. Motton, Superannuation	583 32
Short Loans Repayment	5060 00
Interest Short Loans	1537 06
Interest Public Gardens	900 00
Interest Sewerage	4200 00
Interest Exhibition Building	1200 00
Interest City Hall	2125 00
Interest Consols	123136 38
Unexpended Balances	01
Halifax Banking Company—Loan Returned	15000 00
Steam Roller	1022 67
Bank of B N. A.—School Board Account	63138 52
Liquor License Fund, 1899-1900	129 92
1899-1900 Account	93 00
Investments	16889 29
Consols—Loan Account	114840 00
Consols—Premium Account	4091 61
Camp Hill Cemetery	613 10
Revision and Printing City Charter	320 00
Special Loan	10859 00
Common Commutation Fund	66 58
Dr. Cogswell Bequest	195 34
Loan Exhibition Building	10000 00
Loan—Citadel Improvement	233 67
Land on Young Avenue	16 78
Young Street Extension	125 00
Loan—Widening Lockman Street	4363 35
Loan—Public Baths	5657 07
Grain Elevator Vote	51838 51
Young Avenue Sewer	11633 98
Permanent Pavements	20195 99
Sewerage	29710 73
Cash on hand	774 80

\$844190 29

Balance Sheet of Civic Year 1898-99, as at July 31st, 1899.

ASSETS.

Cash on hand	\$ 774 80	
City Rates uncollected	66796 76	
County Rates uncollected	3157 07	
School Rates uncollected	26778 20	
Due by 1879-8 Account	4698 83	
		102205 66

LIABILITIES.

Due Merchants' Bank of Halifax	\$ 9506 50	
" County of Halifax	3333 29	
" Bank of British N. America—School Account	32203 09	
" 1899-1900 Account, Balances carried forward	55145 79	
Salaries Appropriation—Accounts unpaid	131 18	
Fire Department Appropriation—Accounts Unpaid	150 00	
		100469 85

Surplus..... \$ 1735 81

GAINS.

Amount Unexpended—Police Appropriation	\$ 416 86	
City Prison Appropriation	173 15	
Streets Appropriation	81	
Internal Health Appropriation	179 66	
Fuel Appropriation	3 93	
Lighting City Hall Appropriation ..	487 06	
Lighting Streets Appropriation	295 91	
City Property Appropriation	3 88	
Insurance Appropriation	143 50	
Fire Department Appropriation	197 46	
Printing & Stationery Appropriation ..	389 34	
Contingent Appropriation	16 71	
P. Asylum Appropriation	26 57	
School for the Blind Appropriation..	75 00	
Prot. Home for Girls Appropriation ..	300 00	
Truants Appropriation	1516 94	
R. Motton-Superan. Appropriation..	416 68	
Recd. in Excess of Estimate—Liquor License Fund	1509 48	
Rents of City Property	384 72	
Dog Tax	54 97	
Halifax Electric Tramway ..	278 72	
Water Dept.—Interest Ac.	500 00	
Unexpended Balances	451 22	
		7422 57

TREASURER'S REPORT.

LOSSES.

Amount Overdrawn—Current Interest	\$ 490 39	
Deaf & Dumb Institution	75 00	
Industrial School	229 72	
St. Patrick's Home	229 77	
Board of Health	23 66	
Interest Short Loans	335 81	
Interest, Consols	939 45	
Nicholas Power, Advance	9 10	
Recd. Short of Estimate—Hack & Other Licenses	166 00	
Fines & Fees	975 00	
Rebate Allowed on Taxes	2212 86	
		5686 76
Surplus		<u>\$1735 81</u>

**Sinking Fund to pay off Loan of \$100,000 under
Chapter 5 of the Acts of 1882.**

1899.

INVESTMENTS.

April 30. City of Halifax Consolidated Fund:		
Permanent Stock, 5 p. c.	\$ 16000 00	
Debentures, 4 p. c.	22000 00	
Debentures, 4½ p. c.	7500 00	
		45500 00
Bank Deposit Receipt, 4 p. c.		29347 10
Cash in Bank, Current Ac.		1008 75
		<u>\$75855 85</u>

E. F.,

W. L. BROWN, City Treasurer.

Sinking Fund under Chapter 47, Acts of 1896.

INVESTMENT.

1899.
 April 30. Bank Deposit Receipt, 4 p. c. \$25629 96

E. E.,

W. L. BROWN, City Treasurer.

Statement of Police Superannuation Fund.

1898.
 May 1. Amount on hand as per Statement \$ 17534 81
 June 2. Received from City Marshal\$ 104 65
 30. Interest on Bank Balances, 6 mos. 343 40
 July 4. Received from City Marshal 125 55
 Aug. 3. Received from City Marshal 114 95
 Sept. 13. Received from City Marshal 129 01
 Oct. 10. Received from City Marshal 100 58
 Nov. 4. Received from City Marshall 131 85
 Dec. 3. Received from City Marshal 133 80
 31. Interest on Bank Balances, 6 mos. 370 58
 1899.
 April 10. Received from Chief of Police 311 33
 May 3. Received from Chief of Police 74 00
1940 10

\$19474 91

LESS.

1899.
 April 1. Amount Refunded Unexpended Balances Ac.
 (Resolution of Council, 28th Dec. 1898). 1763 07

Balance on hand \$17711 84

E. E.,

W. L. BROWN, City Treasurer.

WATER DEPARTMENT.

MAINTENANCE.

CASH STATEMENT OF CITY TREASURER FOR MAY, 1898.

1898.	Dr.	
May 11. Paid Dept. of City Works	\$ 217 83	
26. Dept. of City Works	224 73	
30. Dept. of City Works	75 00	
		517 56

CONSTRUCTION.

11. Paid Dept. of City Works	375 59	
16. Dept. of City Works	3745 33	
26. Dept. of City Works	743 57	
30. Dept. of City Works	7 01	
		4871 41
Balance		15056 38
		\$20,445.35

Cr.

May 1. Balance from April	10777 04
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MAINTENANCE.

31. Recd. from City Collector	9668 31
	\$20445 35

CASH STATEMENT OF CITY TREASURER FOR JUNE, 1898.

1898.

Dr.

MAINTENANCE.

June 6. Paid Dept. of City Works	\$ 56 65	
Dept. of City Works	33 93	
8. Dept. of City Works	217 91	
14. Dept. of City Works	30 20	
23. Dept. of City Works	231 90	
		570 59

TREASURER'S REPORT.

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CONSTRUCTION.

1898.			286 50	
June 6.	Paid Dept. of City Works.....		657 66	
8.	Dept. of City Works		749 10	
23.	Dept. of City Works			1693 26
	Balance			22391 59
				<u>\$24655 44</u>

Cr.

1898.			15036 38
June 1.	Balance from May		

MAINTENANCE.

		35 59	
1	Rec. from Department of City Works	173 50	
30.	Received from Bank—Int. on Balances	9361 42	
	Rec. from City Collector		9570 51

CONSTRUCTION.

		28 55	
1.	Recd. from Dept. of City Works		
			<u>\$24655 44</u>

CASH STATEMENT OF CITY TREASURER, JULY, 1898.

1898.

Dr.

INTEREST.

July 2.	Paid 1898 Ac., Proportion of Interest	\$ 21796 00	
	H. R. King	30 00	
	J. C. Mackintosh	60 00	
	People's Bank	60 00	
	R. Uniacke	90 00	
	Bank of N. S.	90 00	
4.	Union Bank	105 00	
	Bank of N. S.	225 00	
6.	R. B. Seeton & Co.	90 00	
	Union Bank	30 00	
7.	Bank of N. S.	30 00	
8.	Kellogg, W. B.	30 00	
12.	Bank of B. N. A.	30 00	
13.	Union Bank	85 00	
19.	Bank of N. S.	120 00	
25.	R. T. Braine	150 00	
26.	Union Bank	210 00	
27.	Union Bank	30 00	
			<u>23261 00</u>

MAINTENANCE.

1898.			
July 4.	Paid Dept. of City Works.....	55 85	
6.	Dept. of City Works	230 33	
20.	Dept. of City Works	457 45	
26.	Steam Roller Ac.	11 50	
	Streets	123 23	
	Permanent Pavements	11 20	
	Dept. of City Works	20 02	
			909 58

CONSTRUCTION.

1898.			
July 4.	Paid Dept. of City Works	\$ 253 54	
6.	Dept. of City Works	678 79	
18.	Dept. of City Works	6 83	
20.	Dept. of City Works	314 65	
27.	Dept. of City Works	24 75	
			1278 66

BOND REDEMPTION.

2.	Paid H. R. King	1000 00	
	J. C. Mackintosh	2000 00	
	R. Unlacke	3000 00	
	Bank of N. S.	3000 00	
8.	W. B. Kellogg	1000 00	
16.	Bank of N. S.	3000 00	
			13000 00
	Balance		17826 22
			<u>\$56275 46</u>

1898.

Cr.

July 1.	Balance from June	\$22391 59
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MAINTENANCE.

July 6.	Rec. from Dept. of C. Works	15 13	
14.	Rec. from Dept. of C. Works	25 12	
30.	Rec. from City Collector	7600 69	
			7640 94

CONSTRUCTION.

2.	Rec. from 1898 Ac. Loan	10000 00	
6.	Rec. from Dept. of City Works	43 85	
14.	Rec. from Dept. of City Works	1199 08	
			11242 93

BOND REDEMPTION.

2.	Rec. from 1898 Ac. Loan	15000 00	
			<u>\$56275 46</u>

WATER DEPARTMENT.

CASH STATEMENT OF CITY TREASURER FOR AUGUST, 1898.

1898.

Dr.

INTEREST.

Aug. 1. Paid J. N. Ritchie	\$ 240 00	
Union Bank	60 00	
Bank of Montreal	150 00	
Est. D. Cronan	300 00	
		750 00

MAINTENANCE.

1. Paid Dept. of City Works	103 78	
Sinking Fund, 1896	2000 00	
3. Dept. of City Works	578 62	
11. Dept. of City Works	74 00	
17. Dept. of City Works	446 40	
30. Dept. of City Works	7 79	
31. Dept. of City Works	334 92	
		3545 45

CONSTRUCTION.

1. Paid Dept. of City Works	252 06	
3. Dept. of City Works	89 19	
17. Dept. of City Works	322 32	
31. Dept. of City Works	431 05	
		1095 22
Balance		18577 87
		\$2396 54

Cr.

Aug. 1. Balance from July	17826 22
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MAINTENANCE.

1. Recd. from Dept. of City Works	10 56	
31. Recd. from City Collector	6110 06	
		6120 62

CONSTRUCTION.

1. Recd. from Dept. of City Works	21 70	
		\$23963 54

WATER DEPARTMENT.

CASH STATEMENT OF CITY TREASURER FOR SEPTEMBER, 1898.

1898. Dr.

INTEREST.

Sept. 6. Paid Bank of Nova Scotia 1920 00

CONSTRUCTION.

6.	Paid Dept. of City Works	208 85	
	Dept. of City Works	5 60	
14.	Dept. of City Works	394 09	
28.	Dept. of City Works	411 64	
			1050 18

MAINTENANCE.

6.	Paid Dept. of City Works	172 70	
14.	Dept. of City Works	321 38	
28.	Dept. of City Works	111 25	
			605 33
	Balance	18298 09	
			\$21873 60

Cr.

Sept. 1. Balance from August 18577 87

MAINTENANCE.

1.	Rec. from Dept. of City Works	22 90	
30.	Rec. from City Collector	3079 69	
			3102 59

CONSTRUCTION.

1.	Rec. from Dept. of City Works	193 14	
			\$21873 60

WATER DEPARTMENT.

CASH STATEMENT OF CITY TREASURER FOR OCTOBER, 1898.

1898. Dr.

INTEREST.

Oct. 6. Paid J. C. Mackintosh 30 00

MAINTENANCE.

1898.

Oct. 3.	Paid Dept. of City Works	153 61	
10.	Paid Dept. of City Works	60	
12.	Paid Dept. of City Works	503 02	
18.	Paid Dept. of City Works	75 64	
24.	Paid Dept. of City Works	41 92	
26.	Paid Dept. of City Works	363 37	
			1266 48

CONSTRUCTION.

12.	Paid Dept. of City Works	32 70	
24.	Paid Dept. of City Works	76 15	
26.	Paid Dept. of City Works	153 61	
			962 46

Balance \$22039 85

Cr.

Oct. 1. Balance from Septemehr \$18298 09

MAINTENANCE.

3.	Rec. from Dept. of City Works	316 36	
31.	Rec. from City Collector	4890 89	
			5207 25

CONSTRUCTION.

3.	Rec. from Dept. of City Works		93 45
			<u>\$23598 79</u>

WATER DEPARTMENT.

CASH STATEMENT OF CITY TREASURER FOR NOVEMBER 1898.

1898.

Dr.

MAINTENANCE.

Nov. 4.	Paid Dept. of City Works	137 23	
	Paid Dept. of City Works	75 00	
	Paid Dept. of City Works	109 31	
	Paid Dept. of City Works	86 43	
9.	Paid Dept. of City Works	497 51	
9.	Transfer to Streets	54 33	
	Transfer to Sewerage	4 53	
	Transfer to Permanent Pavements	8 40	
23.	Paid Dept. of City Works	375 07	
			1347 81

CONSTRUCTION.

1898.			
Nov.	1.	Paid Dept. of City Works	28 25
	7.	Paid Dept. of City Works	496 74
	9.	Paid Dept. of City Works	217 67
	23.	Paid Dept. of City Works	325 15
			1067 81
		Balance	27312 71
			\$29728 33

Cr.

Nov.	1.	Balance from October	22039 85
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MAINTENANCE.

	1.	Rec from Dept. of City Works	117 43
	30.	Rec. from City Collector	7522 39
			7639 82

CONSTRUCTION.

	1.	Rec. from Dept. of City Works	48 66
			\$29728 33

WATER DEPARTMENT.

CASH STATEMENT OF CITY TREASURER, DECEMBER, 1898.

1898.

Dr.

MAINTENANCE.

Dec.	5.	Paid Dept. of City Works	352 51
		Paid Dept. of City Works	5 61
	7.	Paid Dept. of City Works	380 23
	21.	Paid Dept. of City Works	282 52
			1023 87

CONSTRUCTION.

	5.	Paid Dept. of City Works	170 10
	7.	Paid Dept. of City Works	259 23
	21.	Paid Dept. of City Works	307 48
			736 81
		Balance ..	29325 02
			\$31085 70

Cr.

Dec.	1.	Balance for November	\$27312 71
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MAINTENANCE.

1898.		
Dec. 1.	Rec. from Dept. of City Works	29 60
31.	Rec. from Dept. of City Works	3276 89
	Rec. from Dept of City Works	409 85
		3716 34

CONSTRUCTION.

1.	Rec. from Dept .of City Works	56 65
		331085 70

CASH STATEMENTS OF CITY TREASURER FOR JANUARY 1899.

WATER DEPARTMENT.

1899.

Dr.

INTEREST.

Jan. 3.	Paid Proportion of Interest on Conso's	22296 00
	R. B. Seeton	90 00
	Union Bank	105 00
4.	Bank of N. S.	255 00
	Union Bank	30 00
	Eastern Trust Co.	55 00
6.	Mrs. E. S. Rose	30 00
	Bank of B. N. A.	30 00
19.	Union Bank	210 00
23.	R. T. Braine	150 00
	Bank of N. S.	30 00
24.	Bank of N. S.	240 00
25.	Union Bank	60 00
		23581 00

MAINTENANCE.

3.	Paid Salaries	6576 00
4.	Dept. of City Works	307 40
9.	Dept. of City Works	519 88
	Dept .of City Works	90
18.	Dept. of City Works	294 49
		7698 67

CONSTRUCTION.

4.	Paid Dept. of City Works	68 87
9.	Dept. of City Works	115 54
		184 41

TREASURER'S REPORT.

BOND REDEMPTION.

1899.		
4.	Paid Eastern Trust Co.	2000 00
	Balance	244 87
		<u>\$33708 95</u>

Cr.

1.	Balance from December	29325 02
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MAINTENANCE.

3.	Rec. from Dept. of City Works	15 23
31.	Rec. from City Collector	4343 25
		<u>4358 48</u>

CONSTRUCTION.

3.	Rec. from Dept. of City Works	25 45
		<u>\$33708 95</u>

CASH STATEMENT OF CITY TREASURER FOR FEBRUARY, 1899.

WATER DEPARTMENT.

1899.

Dr.

INTEREST.

Feb. 1.	Paid J. N. Ritchie	240 00
4.	Est. D. Cronan	300 00
6.	Halifax Banking Co.	60 00
9.	Bank of N. S.	150 00
	Union Bank	60 00
		<u>810 00</u>

MAINTENANCE.

1.	Paid Dept. of City Works	288 49
6.	Dept. of City Works	125 95
15.	Dept. of City Works	322 83
		<u>737 27</u>

CONSTRUCTION.

6.	Paid Dept. of City Works	117 91
28.	Balance	2676 52
		<u>\$4341 70</u>

1899.

Cr.

Feb. 1.	Balance from January	244 87
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MAINTENANCE.

1.	Rec. from Dept. of City Works	38 56
32.	Rec. from City Collector	4041 02
		<u>4079 58</u>

CONSTRUCTION.

1899.		
Feb. 1.	Recd. from Dept. of City Works	17 25
		4341 70

CASH STATEMENT OF CITY TREASURER, MARCH, 1899.

1899.

Dr.

MAINTENANCE.

Mar. 1.	Paid Dept. of City Works	\$ 499 85	
6.	Dept. of City Works	124 23	
15.	Dept. of City Works	351 96	
29.	Dept. of City Works	285 86	
31.	Merchants' Bank—Interest	5 57	
		1267 47	
1.	Paid Dept. of City Works	5 36	
15.	Dept. of City Works	138 12	
29.	Dept. of City Works	183 65	
		327 13	
	Balance		9476 45
			\$11071 05

Cr.

Mar. 1.	Balance from February		2676 52
		
	MAINTENANCE.		
1.	Recd. from Dept. of City Works	39 83	
31.	Recd. from City Collector	8352 00	
		8391 83	

CONSTRUCTION.

1.	Recd. from Dept. of City Works		2 70
			2 70
			\$11071 05

WATER DEPARTMENT.
CASH STATEMENT OF CITY TREASURER FOR APRIL, 1899.

1899.	Dr.		
Apl. 4.	Paid Dept. of City Works	\$	102 68
12.	Dept. of City Works		341 15
24.	Dept. of City Works		773 85
	Dept. of City Works		1 41
	Dept. of City Works		16 15
27.	Dept. of City Works		5 39
29.	Dept. of City Works		265 00
	Dept. of City Works		30 00
	Dept. of City Works		119 33
			1654 96

CONSTRUCTION.

4.	Paid Dept. of City Works		266 80
12.	Dept. of City Works		107 12
21.	Dept. of City Works		183 90
22.	Dept. of City Works		619 38
27.	Dept. of City Works		284 59
29.	Dept. of City Works		137 65
	Dept. of City Works		94 75
			1694 19
	Balance		11344 68
			\$14693 83

Cr.

Apl. 1.	Balance from March		9476 45
---------	--------------------------	--	---------

MAINTENANCE.

4.	Recd. from Dept. of City Works		11 50
29.	Recd. from Dept. of City Works		39 68
	Recd. from City Collector		4345 45
			4396 63

CONSTRUCTION.

24.	Recd. from Maintenance Ac.		773 85
29.	Recd. from Dept. of City Works		46 90
			820 75
			\$14693 83

**Condensed Statement, Water Department, from 1st May,
1898, to 30th April, 1899.**

RECEIPTS.

1898.
May 1. Cash on Hand \$10777 04

MAINTENANCE.

Water Rates Recd. from City Collector	\$72592 06	
Interest on Bank Balances	583 35	
Sundries from Dept. of City Works	717 49	
		<u>73892 90</u>

CONSTRUCTION.

Amount of Loan	10000 00	
Sundries from Dept. of City Works	2551 23	
		<u>12551 23</u>

BOND REDEMPTION.

Amount of Loan	15000 00	
		<u>\$112221 17</u>

EXPENDITURE.

Interest on Bonds and Consolidated Fund	50352 00
Maintenance Account	21589 89
Construction Account	13934 60
Bond Redemption—Old Bonds Paid Off	15000 00
Balance—Cash in Bank	11344 68
	<u>\$112221 17</u>

**Total Amount of Stock and Debentures Outstanding July
31st, 1899, and Memo. of Yearly Interest on same.**

Old Water Debentures	\$ 68000 00
Old Sewerage Debentures	70000 00
Public Gardens Debentures	15000 00
City Hall Debentures	50000 00
Consolidated Fund (\$1,000,000 for water)	2878590 00
	<hr/> \$3081590 00

MEMO. OF INTEREST.

Water Debentures 6 per cent	4080 00
Old Sewerage Debentures, 6 per cent	4200 00
Public Gardens Debentures, 6 per cent	900 00
City Hall Debentures, 4½ per cent	2125 00
	<hr/> 11305 00

CONSOLIDATED FUND.

Permanent Stock.	Debentures.	Total.	
\$166900 00	\$695990 00	\$ 862890 00	at 4 per cent 34515 60
387200 00	756500 00	1143700 00	at 4½ per c. 51466 50
588700 00	216300 00	805000 00	at 5 per cent 40250 00
	67000 00	67000 00	at 3½ per cent 2345 00
			<hr/> 128577 10
<hr/> \$1142800 00	<hr/> \$1735790 00	<hr/> \$2878590 00	
		Total Interest	\$139882 10

Total Funded Debt, \$3,081,590.00, of which \$1,069,000 is for Water.

Total Interest, \$139,882.10, of which \$39,022 is paid by Water Department.

The above memorandum does not include the City's liability for Public Schools Debt, which is managed by the School Commissioners and amounts to \$271,600.

Memo. of Consolidated Fund Debentures, and Dates when due for payment.

1906	Jany. 1.....	\$ 26000 00
1907.....	July 1.....	93300 00
1908.....	July 1.....	54000 00
1910.....	July 1.....	43000 00
1913.....	July 1.....	39500 00
1914.....	Jany. 1.....	30000 00
	..... July 1.....	27000 00
1915.....	July 1.....	30000 00
1916.....	Jany. 1.....	2500 00
	..... July 1.....	223000 00
1917.....	Jany. 1.....	200000 00
	..... July 1.....	60000 00
1918.....	Jany. 1.....	50000 00
	..... July 1.....	54000 00
1919.....	Jany. 1.....	11000 00
	..... July 1.....	130000 00
1920.....	Jany. 1.....	662490 00
		<u>\$1735790 00</u>

NEW CONSOLIDATED FUND—PERMANENT STOCK

Can be called in at dates mentioned.

1904	\$ 74600 00
1905	27800 00
1906	195100 00
1907.....	101000 00
1908.....	123600 00
1909.....	32000 00
	<u>554100 00</u>

CONSOLIDATED FUND.

Permanent Stock Irredeemable	583700 00
	<u>\$2878590 00</u>

Due Dates of Debentures other than Consolidated Fund.

1900.....	Jany. 1.—Old Water Debentures	8000 00
	July 1.—Old Water Debentures	30000 00
	July 10.—Public Gardens Debentures	15000 00
	July 15.—Old Sewerage Debentures	40000 00
1902.....	June 4.—Old Sewerage Debentures	10000 00
	Sept 19.—Old Sewerage Debentures	20000 00
1903.....	July 1.—Old Water Debentures	30000 00
1908.....	July 1.—City Hall Debentures	50000 00
		\$203000 00

Statement Showing Conversion of Old City Bonds into Consolidated Fund.

DEBT OUTSTANDING 1st MAY 1880.

See City Reports 1879-80, p. 143, Dominion Currency	\$585253 53
Less Building on Market Slip, not paid out of Consolidated Fund, Dominion Currency	7786 67
	\$577466 66
Water Debentures, see City Report 1879-80, p. 144, Dominion Currency	740973 33
Total	\$1318459 99

PAID OUT OF CONSOLIDATED FUND UP TO 31st OCT., 1898.

Sidewalks	\$ 48000 00	
Old Funded Debt	24000 00	
Poor Asylum and Hospital	30000 00	
Lockman Street Extension	132000 00	
Central Engine House	11000 00	
	\$245000 00	\$238466 55
Halifax Currency		
Engine House Gerrish Street		12000 00
Repairs City Property		5000 00
Old Street Loan		35000 00
Fire Alarm Telegraph		8000 00
Sewerage		40000 00
Extension Queen Street		5000 00
New Hospital (Contagious)		10000 00
Poor's Asylum and Hospital		2500 00

TREASURER'S REPORT.

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New Funded Debt	44000 09
Rockhead Prison	36500 00
Poor's Asylum	36000 00
	<u>\$472466 63</u>
Water Debentures	672973 33
	<u>1145439 99</u>

OUTSTANDING AT 31st OCTOBER, 1898

Water Bonds	\$ 68000 00
Sewerage	70000 00
Exhibition Building	20000 00
Public Gardens	15000 00
	<u>173000 00</u>
	<u>\$1318439 99</u>

MEMO. showing reduction in Debt and Interest effected by Conversion of Old Bonds into Consolidated Fund, from May 1st, 1880, to October 31st, 1899.

City Debentures paid off to date	472466 66
Consols issued to pay same	457800 00
	<u>\$ 14666 66</u>
Reduction	
Water Debentures paid off to date	672973 33
Consols issued to pay same	668900 00
	<u>4073 33</u>
Reduction	
Total reduction in debt	<u>\$ 18739 99</u>
Interest payable by City 1st May 1880	27791 33
Interest payable on Consols issued in place	22377 00
	<u>\$ 5414 33</u>
Reduction	
Interest payable on Water 1st May 1880	39518 98
Interest payable on Consols issued in place	30310 50
	<u>\$ 9208 48</u>
Reduction	
Total annual reduction in interest	<u>\$ 14622 81</u>

REPORT OF CITY CLERK.

Office of City Clerk,

Halifax, N. S., May 31st, 1899.

To His Worship the Mayor and City Council :

Gentlemen,—I have the honor to submit herewith tables for the civic year 1898-99 showing the number of writs issued out of the City Civil Court, and summary of amounts received in my office for fines, fees, exhibition licenses, &c.

Respectfully submitted,

H. TRENAMAN,

City Clerk.

Returns of Civil Processes issued during the Civic year, 1898-99.

MONTHS.	Summonses.	Capiases.	Executions (to levy.)	Executions (to arrest.)	Appeal Bonds.	Subpoenas.	Totals.
1898.							
May	65	7	29	2	.....	6	109
June	78	4	19	4	.....	2	107
July	88	3	23	1	.....	7	122
August	108	8	1	7	.....	8	152
September	76	14	30	2	1	8	131
October	112	7	31	2	.....	5	157
November	107	4	33	2	.....	5	151
December	68	8	27	1	.....	4	108
1899.							
January	103	5	16	2	1	5	132
February	88	6	33	1	.....	.....	128
March	81	6	23	.....	.....	4	114
April	84	8	24	.....	.....	6	122
Totals... ..	1058	80	309	24	2	60	1533

*Summary of Amounts Received in the City Clerk's Office for Fines, Fees, Exhibition Licenses, &c.,
during the Civic year ended 30th April, 1899.*

MONTHS.	Fines in Police Court.	Fees in Police Court.	Process Fees City Court.	Judgment Fees City Court.	Exhibition Licenses.	Bankers License	City Seals.	Totals.
1898.								
May	\$ 261 00	\$ 39 70	\$ 73 40	\$ 29 00	\$ 6 00	.....	.....	\$ 409 10
June	411 75	26 25	70 70	19 00	24 00	.....	.....	551 70
July	263 00	41 55	81 20	22 00	87 00	.....	.....	494 75
August	487 20	59 70	104 85	31 00	6 00	\$25 00	\$1 50	715 25
September	308 75	21 05	97 00	30 00	.....	.....	.....	456 80
October	244 00	21 65	85 55	32 00	229 98	.....	.....	613 18
November	198 24	34 02	72 40	32 00	.....	.....	.....	336 66
December	251 00	29 31	71 15	29 00	6 00	.....	.....	386 46
1899.								
January	146 00	18 90	55 90	13 00	12 00	.....	.....	245 80
February	148 50	15 55	65 65	13 00	.....	.....	.....	242 70
March	150 00	29 80	69 50	20 00	.....	.....	.....	269 30
April	247 00	27 15	84 85	22 00	.....	.....	.....	381 00
Totals	\$3116 44	\$364 63	\$932 15	\$292 00	\$370 98	\$25 00	\$1 50	\$5102 70

CITY ENGINEER'S REPORT.

CITY WORKS DEPARTMENT.

OFFICERS, 1898-9.

MAYOR.

ALEXANDER STEPHEN.

CITY ENGINEER.

F. W. W. DOANE, M. CAN. SOC. C. E.

ENGINEERING STAFF.

Assistant City Engineer H. W. JOHNSTON, JR., M.
CAN. SOC. C. E.
Assistant Engineer..... W. P. MORRISON, ASSOC. M.
CAN. SOC. C. E.
Assistant Engineer W. A. MACDONALD, STUD.
CAN. SOC. C. E.

OFFICE.

Clerk of Works W. F. REILLY.
Assistant Clerk JAMES J. HOPEWELL.
Stenographer, etc. MISS MINNIE HUNTER.

WATER WORKS.

Foreman EWEN MORRISON.
Meter and Plumbing Inspector..... CLAUDE DONOVAN.
Water Inspector JOHN E. BURNS.
Workshop Foreman..... J. B. SCRIVEN.

STREETS, SEWERS, ETC.

Foreman JOHN McDONALD.
Inspector of Buildings }
Caretaker of City Property } THOMAS SPELMAN.

CITY ENGINEER'S OFFICE, CITY HALL,

*Halifax, N. S., May 1, 1899.**To His Worship the Mayor:*

Sir,—I beg to submit the report of the Department of City Works for the year ending April 30th, 1899, my eighth annual report and the fifth from this Department.

WATER WORKS.

Amount of funded debt on Water Account	\$1,059,600 00		
Amount transferred from revenue	16,000 00		
			\$1,075,600 00
Amt. expended to April 30th, 1898	\$1,061,402 77		
Amount expended			
May 1, 1898 to			
April 30, 1899 ...	\$13,934 60		
Less amount repaid ..	2,551 23	11,383 37	1,072,786 14
			\$2,813 86
Balance on hand, May 1, 1899			

COST OF MAINTENANCE 1898-9.

Interest	\$50,357 57
Sinking Fund	2,000 00
Maintenance of System	19,584 32
	\$71,941 89

NEW MAINS, &c.

Fifteen petitions for the extension of main distribution pipes were received and eleven orders were passed by the Council. Six were to be made, provided the petitioners would pay a special rate, and Lucknow Street and Young Avenue mains were laid on the side of the sewer trench.

Sixteen pipe extensions were made, thirteen of which were in the high service district.

The total length of pipe laid was 6314 feet, the total now in use being 65 miles.

Twenty-two stop valves were placed in position, making a total of 702 in use.

Eleven old hydrants were replaced with improved frost jacket hydrants and five new hydrants were put in service, making the total 402.

6299 ft. of pipe was laid for 183 new services and 877 feet of old service pipe was renewed.

229 curb-cocks were put in where permanent sidewalks were laid and 1532 feet of old pipe between curb and street line renewed. The total length of excavation as shown by the above figures was 15088 feet or 2.86 miles.

CLEANING MAINS.

The high service supply main was cleaned twice during the season with the Kennedy-Keating scraper. On July 12th the 20 inch pipe, 6712 feet in length was cleaned in 27 minutes, starting at 11.02 a. m., passing blow-off at 11.08, air valve (Scotch Hill) at 11.20 and emerging at reducer at 11.29. The fifteen inch scraper traversed the 29,628 feet of pipe in 1 hour and 35 minutes, leaving the hatchbox at 2.24 p. m., passing blow-off at Upper Chain Lake at 2.56, Chain Lake pipe house 3.14, Arm 3.28, Industrial School 3.39, Oxford Street 3.48, Monastery 3.52 and reaching St. Andrew's Cross at 3.59.

The second cleaning, November 11, was made immediately after a heavy rain and we were unable to follow the route of the 20 inch pipe, the cuttings being full of water. The scraper was started on its trip at 12.22 and came out about 15 minutes later. It was 3.22 p. m. before the 15 inch scraper was ready for its journey. It passed the blow-off at 3.53, Pipe House 4.10, Arm 4.25, Industrial School 4.36, Oxford Street 4.45, Monastery 4.52 and arrived at its destination, St. Andrew's Cross, at 4.56, making the run of 29,628 feet from the hatch box in one hour and thirty-four minutes.

The 24 inch low service pipe was cleaned on November 29th, starting from Pipe House at 10.57 a. m. reaching Arm at 11.08, Quinpool Road 11.16, St. Andrew's Cross 11.38—13,400 feet in 41 minutes.

Several distributing mains were cleaned as shown in the appendix. Although they had not been scraped for several years the oper-

ation was performed with comparative ease except in the case of the 6 inch Gottingen Street main. This pipe was thickly encrusted and stopped the scraper several times, necessitating pipe cutting to remove it.

DAMS.

Frost and rain had done some injury to the small dams at Spruce Hill Lakes. The damage to these structures was made good and some repairs made on the road at a cost of \$104.11.

RAINFALL.

The total precipitation in the City recorded by the Dominion Government Meteorological Agent was 60.48 inches. The City employee at Spruce Hill Lakes recorded 74.48 and the returns from the Chain Lakes show 74.93 inches or about 14 inches more than the City rainfall. Although they agree, we hesitate to accept them as thoroughly reliable. If correct, the total exceeds the maximum quantity recorded previously by about 4 inches.

In the City rain or snow fell on 196 days during 1898. By months the record is January 17 days, February 17, March 12, April 20, May 12, June 16, July 16, August 16, September 12, October 16, November 21, December 21.

Long Lake fell on the seventh day of January 1898, 4 feet 5 1-2 inches below the waste weir. Water ran over the dam in March, April, May, June, August, October, November and December.

Spruce Hill Lakes reached their lowest level for the year on February 12th 1898, 2 ft. 2 in. below the waste weir. Water ran over the waste weir in April, May, June, July, August, September, November and December.

HIGH SERVICE.

The condition of that portion of the water system supplying the high service district is becoming worse every year, and it is certain to continue to grow worse until stringent means are adopted to reduce the consumption or increase the supply.

The length of high service main laid each year now averages about a mile, and if there were nothing else to reduce the pressure the increased consumption through these new lines would bring it down gradually. While water users on the lower levels of the high

service district do not fail to get a supply for ordinary household purposes they are unable to use hose as they could a few years ago, while on the highest levels complaints are becoming louder and more frequent, and the supply at times fails entirely. This means that so much water is being drawn from the mains in the lower part of the system where they can get it that the pipes cannot fill up on the high ground. The first remedy that suggests itself is a larger pipe from the lakes, and if the necessary quantity of water were available there is no doubt that a new pipe would have been laid long ago.

If we were crossing the Desert of Sahara with a quantity of water sufficient only for the journey it is very unlikely that we should allow any of it to be used unnecessarily. It would be served out at a regular daily rate so that it would last until we could replenish our supply.

The circumstances in which we find ourselves in the high service district are similar. Our quantity of water is only what we can collect in the Spruce Hill Lakes. Our journey is through a dry year. We keep careful daily records of the quantity of rain or snow that falls and the quantity of water collected. We know from long experience that we do not collect as much water in a dry year as we use and if we did not store the surplus water that falls in the wet years we should not have enough to supply the high service district through a dry season.

It may be asked "why not raise the dams so that more water may be stored?" The answer to that question is that the water does not come there to store. Water never runs over the waste weir of Spruce Hill Lakes except in a very wet year.

Under these circumstances it would be folly to put in a larger pipe and allow a correspondingly greater daily supply to be drawn from the lakes. A water famine would be faced in the next dry season, for the effect of the increased flow and pressure would be that more water would be used and a much greater quantity wasted.

There is no source in the vicinity of Spruce Hill Lakes from which the supply could be augmented except Ragged Lake, and that is very small and 60 feet lower. A wise solution of the question would be to bring the water from a new source in large aqueducts, but the adoption of this plan would involve an expenditure so heavy that it should not be considered seriously until it becomes an absolute necessity.

Under more favorable conditions a reservoir or stand pipe would be recommended to equalize the pressure. In order to supply the whole district it must be constructed on a level higher than Willow Park, and as the water fails to rise to the level of the latter in very cold weather and at times during the Summer, it certainly would not reach the reservoir.

If all the water brought into the City by the high service main is used legitimately, and every gallon required to satisfy our daily needs, then we have no alternative but to bring in water from a new source. Such however, is not the case, and without wasting words over the inefficiency which everybody realizes, we must seek the cause and the remedy.

The immediate cause of the reduction in pressure and flow in recent years is the annual extension of street mains. More water is used for domestic purposes, a greater quantity is used for street sprinkling in Summer and the waste in Winter is increased.

We do not want to stop the growth of the City, prevent the increase in assessment or discourage building in the suburbs by refusing to make any more water extensions, nor is it desirable that street sprinkling shall be prohibited where water is available. Neither remedy will be recommended until all others fail.

A second cause is the enormous consumption of water in some of the large buildings in this district. In the Cotton Factory, May's Brewery and the Monastery of the Good Shepherd the quantity of water used last year was respectively 7,387,200, 754,050 and 1,022,350 gallons, a total of 9,163,600 gallons, or sufficient to supply from 350 to 400 dwelling houses. If used for street sprinkling it would fill 18327 carts, while the quantity used by the Cotton Factory alone would have filled a street sprinkler 50 times a day.

With a reservoir this water could be stored at night and the pressure kept up during the day, and I can see no reason why a large consumer like the Cotton Factory should not provide its own reservoir and be supplied only at night. We are supplying the I. C. R. at their Richmond yard by a similar system.

A third cause which may affect the pressure is the possibility of undiscovered leaks in the pipes. There is no doubt that there are many in the low service district where there are so many old drains to carry off the water. While we do not find many in the high service it would be wise to authorize an expenditure sufficient to examine and test the system thoroughly. We cannot hope to supply any por-

tion of the present high service district from the low service mains, as any improvement in the latter will be required to meet the increased demand as the service is extended North and South.

The fourth and greatest cause of the present condition of the high service is the unnecessary waste of water. There is no doubt that if the waste were stopped the capacity of the works would be doubled. It is not at all unusual to find taps running at the rate of one gallon a minute and 3500 at that rate would consume almost the entire available supply to the whole City.

The principal causes of waste are bad plumbing, pipes and fixtures exposed outside buildings, water closets supplied through hopper cocks, buildings poorly constructed with no provision to prevent freezing of water in pipes, and carelessness of consumers.

While it must be admitted that the prevention of waste is a difficult problem in our climate, it is by no means impossible to make a great improvement. In a great measure the solution of this matter is with the people.

A system of metering that will in no wise prevent a necessary and sufficient use, but will provide against excessive and extravagant waste, must sooner or later be adopted if we are to depend upon our present supply.

Where meters are in use now the consumer does not pay by meter until the value of the quantity of water used exceeds the rate by the ordinary assessment plan. This encourages the use of an ample supply for domestic and sanitary purposes while it discourages waste. By the use of meters the waste will be reduced to the minimum amount required to prevent the pipes from freezing, and it will become a question to the water taker whether it is economy to waste water or remodel his fixtures so that the water can be drawn entirely from the pipes when liable to freeze. Water should be on the same footing as gas and electric current, neither of which is permitted to escape from its conductor unnecessarily.

All new services are being metered, but it is principally through the old pipes that the waste is going.

I would recommend the placing of a meter on every service pipe in the high service district.

If this course is not followed, in my opinion the time is near when we must resort to the most expensive remedy—additional supply.

The reports of the Foreman and Plumbing and Meter Inspector are appended.

SEWERS

Unlike water extensions the demand for sewers is decreasing every year. The length of new sewers constructed by the Works Department was in the year—

1894	.....	17,509	feet, or 3.31 miles.
1895	.....	16,855	“ 3.19 “
1896	.....	11,053	“ 2.09 “
1897	.....	5,492	“ 1.04 “
1898	.....	4,324	“ 0.82 “

The total length of sewers constructed under the Act is about 19 miles.

The average cost for the year was \$3.15 per lineal foot—19 cents cheaper than the work done in 1897. The most expensive work was on Clifton and Willow Streets. The cheapest construction was a nine inch crock pipe sewer on Birmingham Street at a cost of \$1.31 per foot. Three sewers, Prince Street, Birmingham Street and Lucknow Street cost less than the amount assessed on the property owners, the profit to the City being \$68.77, \$118.28 and \$179.44 respectively. The total cost of sewers was \$13623.92 of which \$9151.23 was assessed on abutting properties.

Forty-nine concrete catchpits were constructed, making a total of 660.

The most important work which the Department had to deal with in this service was the

YOUNG AVENUE SEWER.

A petition for a sewer in Atlantic Street and Young Avenue was referred to the City Engineer in 1892 and on April 15th of that year a report was submitted. There were at that time no houses on Young Avenue and only five on Atlantic Street which would be benefited. While admitting the desirability of the improvement, the report claimed that it was not a necessity and under the existing circumstances I declined to recommend its construction.

Nothing more was heard of the matter until 1896. A citizen had purchased two lots on Young Avenue and was erecting a small house and shop. A member of the Council called the attention of that body to the building and urged that as a large sum of money had been ex-

pended in constructing and grading the Avenue and in order to carry out the purpose of Sir William Young (who had provided the money) it would be desirable to have a better class of houses erected along this street. The Council had an Act prepared to carry out these views but were met before the Legislature by some of the property owners who opposed the passing of the bill unless they were given a quid pro quo. The Amended Act (Chap. 28 Acts of 1896) was the result. It provides that no house shall be erected on the Avenue to cost less than \$5000, but adds the condition that the City must construct a sewer and extend the water as soon as four houses are in course of erection. This latter condition was not submitted to the City Council nor had the City Engineer any knowledge of it until it became law, nor was he consulted in reference to the sewer from the date of his refusal to recommend it in 1892 until the Act was passed in 1896 compelling the City to build it.

In November 1898 the property owners submitted a petition to the City Council asking for the sewer and it was referred to the City Engineer for report. Under the terms of the Act it is the duty of that officer to determine the route along which it is necessary to locate the outlet for the drainage of Young Avenue.

The report made April 15th, 1892, states that the "sewer on Young Avenue will find an outlet down Atlantic Street. The original design was for an outlet at the foot of Atlantic Street. It would be advisable, however, to avoid new outlets wherever possible and in this instance it would be better to connect along Pleasant Street with the outlet at the foot of Inglis Street."

At the time of making that report I had been less than a year in the service of the City. The opinion quoted above was based on the data contained in the records of the City Engineer's office. The design for the City sewerage system was made in 1876. The heaviest rain storm on record at that time was at the rate of .38 inches per hour and of short duration (about half an hour only). The capacity of our sewers was made sufficient to carry off what was supposed to be the heaviest rainfall. Finding that the sewers were overtaxed during heavy rains we made careful detailed daily records showing the quantity of water falling and the duration of each storm. In one year (1896) we had one storm lasting

9.5	hours	with an average rainfall of	.33	inches per hour, another
7.5	"	"	.52	" " "
3.8	"	"	.92	" "

In the latter storm the quantity of water to be discharged into the harbor was two and one-half times greater than the sewers were designed to carry and the surplus found its way over the surface and through natural channels, many cellars suffering in consequence.

Under such conditions it would be madness to think for one moment of emptying more sewerage through the Esplanade outlet or to expect it to carry 30,000 gallons more per minute which would be discharged by the Young Avenue and Atlantic Street sewer. To enlarge the old outlet or build a new one would involve additional heavy expense as the existing outlet cost \$14000.00.

The Avenue could not be drained through the Inglis Street sewer, first, because it is not low enough to drain cellars on Young Avenue, and second, because it is entirely too small.

The proposed location at the foot of Atlantic Street was next considered. It had the sole advantage of minimum length. It would be necessary to acquire the extension of Atlantic Street through Robert Miller's property. The plan upon which he proposes to divide his land lays out the street with a bend presumably for his private benefit, certainly not in the interests of the City. As such a course would not agree with our City street plan we should have to expropriate. Heavy cutting must be made through solid rock and a new outlet located within a stone's throw of the Esplanade. The new outlet would drain a limited area; it would make an extra sewer discharging into the harbor; it would aggravate the nuisance and annoyance to residents in the neighbourhood; it would discharge into a cove in front of valuable residential property and would render valueless the Miller property East of Pleasant Street below the Distillery. Further, another outlet farther South will be unavoidable in order to drain the remainder of the property North of the Park. This latter outlet will accommodate the whole district between Inglis Street and the Park, and it is not advisable to multiply such nuisances where it can be avoided. The sewer appropriation is for permanent work and the construction of an outlet at Atlantic Street would be a temporary work only as there is no question that the sewage emptied there would be diverted farther South at the first opportunity. In such important works we should look to the future. We are face to face with the question of dredging the deposit of sewage in docks at some outlets; we are threatened with actions for damages caused by pollution of the harbor front and the air in the neighbourhood of other outlets. There is no question that we shall in time be obliged to carry the sewage of the whole city to one outlet or

place of disposal at a location south of all residential property and as far away as possible. Under these circumstances, I did not feel justified in recommending the expenditure of the sum necessary to make an outlet at Atlantic Street.

In a report dated November 29th, 1898, an outlet down Atlantic, Plover and Owen Street was recommended, as being permanent work, less expensive than the Esplanade route, and yet capable of draining a larger district. It would also do less damage to private interests and thereby cause an additional saving. Work was commenced early in January and at the date of this report (May 1, 1899) the sewer on Young Avenue was completed and the work on Plover Street and Atlantic Street well advanced.

HOUSE DRAINS AND PLUMBING.

223 Permits were issued for laying drains and all drains were inspected by the Engineering staff.

386 permits were granted under the plumbing law, making a total of 1541, and 320 certificates were issued for satisfactory completion of work. Few violations were reported.

About the first of October the City Health Board appointed John Borton, Master Plumber, and Walter Busch, Architect, Members of the Board of Plumbing Examiners (of which the City Engineer is Chairman). Eight Meetings were held during the year at which the Board recommended the renewal of twenty Master Plumbers' licenses, and the granting of one new license. They also considered twenty-nine applications for registration as Journeymen Plumbers and declared twenty-two applicants competent to work at the business of plumbing as journeymen under the rules and regulations of the City Health Board.

INTERNAL HEALTH.

The contract for the removal of Ashes and Garbage was awarded to David Elliot at \$44.90 per week. The service was continued from May 23rd until December 17th, the contract extending over thirty weeks and about three weeks later than usual. The contractor and price were the same as last year, but the conditions of the contract were changed somewhat. Formerly the householder was obliged to place the ashes and garbage on the sidewalk. Last year the contractor was required to remove everything placed inside within ten feet of the gate or entrance.

The extra street sprinkler was operated by George Harvey at \$2.75 per day.

The regular street cleaning work was begun March 29th and continued until December 3rd. During the season 15729 loads of dirt and 1290 bags of paper were collected and removed.

Main squad 12683 loads

Section-men 3046 „

Patrol-man (paper, &c.) 1290 bags

In 1897 two men were employed on the principal streets to sweep daily and keep as clean as possible the crossings and gutters in their section, the middle of the street being cleaned with the horse sweeper as often as required. Last year the number of sections and section-men was increased to four and a patrol man was detailed to collect paper, tins, iron hoops, &c. The men were informed that they and their work would be closely watched and each man paid accordingly. The system has been a great improvement and would be extended if the appropriation would permit.

PERMANENT PAVEMENT.

In this service 784.67 square yards of concrete sidewalk, 12348.28 square yards of tar concrete sidewalk, and 82.72 square yards of brick sidewalk were laid. The work performed with details of cost is shown in Appendix.

STREETS.

The usual work was performed in this service. The survey for the official plan was completed in the district bounded by North Street, Robie Street, South Street and Oxford Street.

A survey was made for renumbering North Street and the numbers will be changed when the next directory is being prepared.

The extension of Agricola Street to Duffus Street was completed by acquiring that portion through the Hennessy property.

A strip of land was purchased from J. J. Scriven & Sons opposite Cunard's Wharf to straighten Water Street, and a piece of land on the East side of Kempt Road was obtained from G. P. Henry to widen the road.

Creighton, Maynard, Black and Ontario Streets (North of North Street) were accepted from the Black Estate after grading was completed.

LOCKMAN STREET.

The cost of this work to date is shown by the following statement:—

Loan	\$125,000.00
Sales of property	4,612.00
Rents, &c.....	318.50
	129,930.50
Expenditure to April 30th, 1898	\$125,529.48
Labor and materials paid 1898-9	4,258.33
Advertising, &c.....	11.27
Insurance.....	13.75
Getting awards out of Court.....	30.00
W. A. Shanks, land on west side.....	50.00
	129,892.83

Balance on hand April 30th, 1899.....\$37.67

A strip of land was purchased from W. A. Shanks on the West side North of the Waddell Estate.

Tar concrete sidewalks were laid on the East side from North Street to Cornwallis Street and on the West side between Artz Lane and Gerrish Street.

STREET RAILWAY.

Double track was laid on South Park Street from Spring Garden Road to the School for the Blind and the turnout between South Street and Fenwick Street was removed and relaid on Pleasant Street between South Street and Tobin Street.

Double track was laid on Barrington Street, from Duke Street to Salter Street, and on Hollis Street, from Morris Street to Bishop Street.

New tracks were laid on Lower Water Street to reach the new car house.

Electrolysis is reported in many cities, caused by leakage of currents from the trolley service. Unless prevented by the adoption of a proper system it destroys the iron and lead pipes underground. Such a condition has been avoided in Halifax by carrying out to the letter the regulations approved by this Department and enforced by its zealous inspectors. We have yet to find the first symptom of Electrolysis.

PUBLIC BATHS.

This service makes its first appearance in the Annual Report. The organization was in the hands of a committee of the City Council. Construction work was directed by this Department.

It was the intention of the Committee to construct two floating baths, one to be located at the north end of the city, the other at the south.

Some years ago a floating bath went to pieces in a gale and there was much opposition to the proposal to construct another. However, the committee decided to proceed, and plans were made and a contract awarded to John McInnes & Son for one bath for the North end. It was built very substantially to resist the rough usage of fall gales, and came through the season without injury.

The frame is securely braced with haematac knees and the whole structure roofed, a portion being latticed to admit light and air. On one side and end are 24 dressing rooms, 4 ft. x 4 ft. 6 in. The other end is occupied by office and store rooms, while the remaining side is reserved for boys, a seat running the entire length and hooks being provided for clothes. The swimming pool, 60 ft. x 20 ft., occupies the centre, one end being railed off and a false floor put in for children. A railing and promenade surrounds the pool on all sides, and steps are placed at each end for the convenience of bathers. The pool is lined with slats closed at the top to prevent the admission of floating matter, but open below the surface. The whole structure is floated on barrels by which the depth of water may be regulated.

The City Dock, at the North Ferry, afforded the only suitable location, and by agreement with the War Department the bath was moored there on completion.

No site for a floating bath was available on the harbor front in the South end, and the committee decided to construct a pier at Green Bank. A club of bathers had erected a pier a few years ago by private subscription, but it had failed to withstand the assaults of south-east storms.

The new pier was constructed of crib work well ballasted and sheathed vertically and has received no damage to date. A shelter for bathers was erected at the inner end. The contractor was D. W. B. Reid, Musquodoboit.

The proposal to place a floating bath in the Arm was abandoned and a beach bath adopted instead.

Plans were made for 27 dressing rooms, 4 ft. x 4 ft 6 in., and office and store room, with promenade veranda in front roofed over. No tenders were received and the work was performed by days work. The beach north of Chain Battery was cleared of boulders and weeds. The water deepens gradually from the shore and the natural gravel on the bottom has been made pleasant for bare feet by depositing several schooner loads of sand. The beach was fenced, and protected on the seaward side by a swimming float covered with canvas and provided with diving spring boards. Board walks were laid down the centre of the bathing area and clothes hooks placed on front railing for boys. Translucent fabric was substituted for glass in windows. A boat was moored near the float ready for instant service, and life preservers, &c., secured within easy reach in case of emergency.

NINE HOUR DAY.

In September, 1897, a petition was sent to the Council from representatives of labor asking that the time for a day's labor for the workmen employed by the city be reduced to nine hours. At the meeting of Council held October 12th, 1897, a resolution was passed granting the prayer of the petition, the order to take effect May 1, 1898.

THE COST OF WORK.

was further reduced last year. As already noted, the sewer work cost \$3.15 per lineal foot in 1898, while in 1897 it was \$3.34. Foreman McGillivray completed one sewer for \$1.31. Concrete sidewalks, which we thought could not be laid for less than \$1.69, the record of 1896, were constructed by Foreman James Downie in one instance for \$1.49.

In conclusion, I trust that the work performed may meet with the approval of Your Worship and the City Council.

I have the honor to be, Sir,

Your obedient servant,

F. W. W. DOANE,
City Engineer.

WATER WORKS, FOREMAN'S REPORT.

CITY HALL, May 1st, 1899.

F. W. W. DOANE, Esq.,

City Engineer.

SIR,—The Annual Schedule of Stock belonging to the Water Department and length of main and service pipes laid, with length of pipes cleaned and re-leaned, also location of houses supplied with water during the summer of 1898, are herewith

Respectfully submitted,

E. MORRISON,

Foreman Water Department.

NEW MAINS, 1898-9.

STREETS.			CAST IRON MAIN PIPE.			HYD'NTS			COST PER FOOT IN CENTS.							Total Cost.					
IN	FROM	To	High or Low Service.	4 Inch Pipe—feet.	6 Inch Pipe—feet.	8 Inch Pipe—feet.	Joints.	Number of Valves.	Length of Pipe—feet	Size of Pipe—Inches.	Number.	Number of Valves.	Percentage of Rock.	Pipes and Specials.	Valves and Hydrants		Labor and Cartage.	Lead, Gasket, etc.	Dynamite and Fuse.	Incidentals.	Total cost per Foot in Cts.
North	Windsor	468 feet W	H	468			T & B.	1					100	64.9		97.6		9.0		171.5	\$ 802.84
Oakland	South	580 " S	H	580				1	26	6	1	1	15	61.6	17.6	61.6	0.7	5.4		146.8	889.73
Windsor	End of pipe	Young	H			45	H & S.							109.7		76.8	4.3		190.8	85.85	
Young	Windsor	144 feet W	H	144			T & B.	1					10	60.0		15.0	0.4		75.4	308.38	
Edwick	Queen	To connect	L	409									5	78.6		37.7	0.5	1.0	117.8	190.75	
Edward	End of pipe	162 feet S	H	162					10	6	1	1	75	61.7	16.6	77.1	0.5	10.2	166.1	1062.91	
Charles	to connect	10 connect	H	630					1				10	64.5	19.0	65.2	1.7	3.0	153.4	161.06	
Preston	Cedar	W. Harvey	H	105					1				2	60.0	5.8	42.3	0.3	1.4	109.8	374.26	
W. Harvey	Preston	341 feet W	H	341									1	43.5	4.6	54.4	2.9	0.5	105.9	415.48	
Laundry Lane	Pleasant	392 " W	L	392					1				40	61.6	15.0	63.3	0.3	4.4	143.6	1019.72	
Clifton	North	700 " N	L	700					1	6	1	1	100	60.0		109.5	1.0	8.7	179.2	129.1	
LeMarchant	End of pipe	72 " S	H	72					1	20	6	2	40	60.8	16.7	62.0	0.5	3.1	143.1	1653.77	
W. Young	Windsor	1136 " E	H	1136					1	60	6		60	60.0	8.5	104.2	0.3	4.3	177.3	416.66	
Summit	Windsor	235 " W	H	235					1				100	60.0	9.6	120.5	1.0	10.2	201.3	420.70	
Jubilee Road	Maple	209 " E	H	209					1				30	60.0		101.7	0.1	3.0	168.8	212.71	
Lawrence	End of pipe	126 " W	H	126					2					46.0	6.2	22.7	1.5		76.4	370.67	
Lucknow	Victoria Road	Fenwick	L	485					2					42.0		50.7	2.0		94.7	34.0J	
Welsford	End of pipe	36 feet E	H	36					2												
N. Park	Main pipe	Drill Shed	H	39					2												
				952	5317	45			14	66			5								\$8742.59

CITY ENGINEER'S REPORT.

**Total Length in Feet of Cast Iron Water Mains in the Water Supply System
of the City of Halifax.**

	SIZE OF PIPES IN INCHES.											Total.
	27"	24"	20"	15"	12"	9"	8"	6"	4"	3"	Less than 3"	
Length on April 30th, 1898....	14560	20524	6712	44236	37201	42401	370	196513	16926	47473	898	337814
Laid during 1898-9.....	.....	.....	.....	.....	.....	.....	45	5383	952	.....	.....	6380
Total on April 30th, 1899 ...	14560	20524	6712	44236	37201	42401	415	111896	17878	47473	898	344194

= $65\frac{994}{5280}$ Miles.

Pipes Cleaned by Mechanical Scrapers. 1898.

DATE.	Time occupied.	LOCATION.	Diameter of Pipe in inches.	Length Cleaned in feet.	COST.	REMARKS.
July 12.	0 H. 27 M.	High Service	20	6712	\$19 59	.....
" 12.	1 H. 35 M.	" "	15	29628		
" 13.	.....	From St. Andrew's Cross to Sackville St	12	2240	28 33	.....
" 15.	.....	From St. Andrew's Cross to South St. on S. Park St..	15	4890	14 13	.....
" 18.	.....	Cogswell from St. Andrew's Cross to Brunswick St ...	15	3220	15 79	.....
" 19.	.....	Cogswell from St. Andrew's Cross to Brunswick St ...	12	3220	17 60	.....
" 20.	.....	Brunswick from Cogswell to North Street	12	3793	18 73	.....
" 22.	.....	Sackville from Wanderers' Gds. to Albermarle St....	6	1765	61 21	.....
" 25.	.....	Albermarle from Sackville to Jacob Street	6	1970	21 34	.....
" 28.	.....	Gottingen from Cogswell to North Street	6	3565	132 58	.....
Aug. 3.	.....	Argyle St. S. of Buckingham to opp. Cumberland House	3	290	19 95	.....
" 4.	.....	Gerrish between Gottingen and Brunswick St.	6	520	12 18	.....
" 8.	.....	Buckingham from Granville to Grafton Street	3	500	21 14	.....
" 11.	.....	Grafton from George to Buck- ingham Street	3	750	29 80	.....
Nov. 29.	0 H. 41 M.	Low Service Main	24	13400	13 52	.....
" 11.	.....	High Service	20	6712	21 86	Recleaned.
" 11.	1 H. 34 M	" "	15	29628		"

Pipes Cleaned by Mechanical

LOCATION.	Diameter	Length Cleaned in feet.	Cost				
			1880	1881	1882	1883	1884
St. Andrew's Cross to Cogswell Street.....	12	1400					
Cogswell Street from St. Andrew's Cross to Brunswick Street	12	3220	\$454 00				
Brunswick St. Cogswell to North St.....	12	3793					
Cogswell Street from St. Andrew's Cross to Brunswick Street.....							\$ 9.03
Brunswick St. Cogswell to North Street.....							6 46
Gottingen St. Cogswell to North Street.....	6	3565		†	\$247.11		16.75
Cogswell Street from St. Andrew's Cross to Brunswick Street.....	15	3220					5.91
Low Service Main	24	13400			9.33		8.23
High " "	15	29628			8.69	10.60	17.24
High " "	20	6712					
Park St., St. Andrews Cross to South St.....	15	4890			188.81		6.75
Main, St. Andrew's Cross to Sackville St.....	12	2350			210.83		
Summer St., Spring Garden Road to Hospital.....		625			40.01		
Pleasant St., Morris St., South		525			26.13		
Pleasant St., South St. to Distillery.....		1725					
Morris St., Queen St. East.....		365			9.32		
North St., Gottingen St. to Brunswick St.....		525				5.60	
Granville St., Prince to Buckingham St.....		1200				20.87	
Granville St., Salter to Sackville St.....		675					
Lockman St., Cornwallis to North Street.....		2550					78.08
Gerrish St., Creighton to Brunswick Street.....	6	900					228.78
Sackville St., from main pipe to Albermarle St.....	6	1800					133.17
Sackville St., from Water to Granville St.....	3	525					
Cornwallis St., St. Andrew's Cross to Water St.....	12	3750					6.40
Albermarle St., Sackville to Jacob St.....	6	1989					
Spring Garden Rd., Tower Rd. to Summer St.....	6	875					
Spring Garden Road, 40 feet E. and 300 feet W. from Summer St.....	3	700					
Church St., from Morris to South St.....	3	350					
Barrington St., from Buckingham to George St.....	3	760					
Creighton St., Cornwallis to Falkland St.....	3	413					
Creighton St., Cornwallis to Cunard St.....	3	600					
Water St., North St. to Naval Hospital Gate.....	3	1050					
Grafton St., Sackville to George St.....	3	750					
George St., Grafton to Argyle St.....	3	165					
Victoria Lane, Pleasant to South Hollis St.....	3	300					
Queen St., Rottenburg St. to Spring Garden Rd.....	3	450					
George St., Water St. to Ferry.....	3	180					
Birmingham St., Spring Garden Road to Morris St.....	3	975					

† 295 feet cleaned.

‡ Cleaned to Gerrish Street only, 1425 feet.

* Cleaned, but cost not published.

|| Cost of connecting with 9 inch pipe at Buckingham Street included.

NOTE:—The first cost of cleaning each pipe includes hatchboxes and contingent expenses.

183 New Service Pipes, 1898.

$\frac{1}{2}$ inch. Feet.	$\frac{3}{4}$ inch. Feet	1 inch. Feet.	Total Feet.
5856	244	199	6299

House Services Renewed. 1898.

$\frac{1}{2}$ inch. Feet.	$\frac{3}{4}$ inch. Feet.	1 inch. Feet.	Total Feet.
877			877

Service Curb Stopcocks put in Sidewalk and Pipe Renewed from Curb Stone to Line of Street.

No. of Curb Stopcocks.	$\frac{1}{2}$ inch. Feet.	$\frac{3}{4}$ inch. Feet.	Total Feet.
229	1520	12	1532

NEW HYDRANTS, 1898.

STREET.	LOCATION.	Kind.	Service.	Size of Pipe in		No. of Nozzles.	Distance Valve		Pressure—lbs.
				inches.	Length of Pipe in feet.		from Hydrant.		
Charles	Corner Clifton.....	City	H	6	12	3	5	6	22
Clifton	387 ft. N. of North St..	"	H	6	10	3	5	3	14
Oakland.....	Corner Murray Place ...	"	H	6	26	3	5	2	32
Young	450 ft. E. of Windsor St	"	H	6	10	3	4	10	15
Young	900 ft. E. of Windsor St	"	H	6	10	3	6	9	20

OLD HYDRANTS RENEWED, 1898.

STREET.	LOCATION.
Blowers	Corner Argyle.
"	" Granville.
Creighton	" North.
Maynard	" "
Morris	" Pleasant.
"	Opposite Church.
"	Between Church and Pleasant.
Inglis.....	West Side Victoria Road.
Salter	Corner Hollis.
Robie	250 feet North Quinpool Road.
Victoria Road	Corner Lucknow.

SUMMARY OF HYDRANTS.

Number of Hydrants on Streets 30th April, 1898	347
" " Wharves, 30th April, 1898	23
" " Military and Naval Property	18
" " Private Property	9
Total number in use April 30th, 1898	397
Number set on Street during 1898	5
Total number in use April 30th, 1899	402

LOCATION AND SIZE OF VALVES SET DURING 1898.

STREET.	LOCATION.	Size.	Service.
North	34' 3" from S. W. corner of Windsor St. 1' 10" East of west line of Windsor street.	6	H
Oakland	20' 2" from S. E. corner of South St. 36' 3" from S. W. corner of South street.	6	H
West Young.....	22' 0" from W. corner of Windsor St. 0' 6" East of west line of Windsor street.	6	H
Charles	28' 4" from N. W. corner of Robie St. 42' 4" from S. W. corner of Robie street.	6	H
Preston	21' 0" from N. E. corner of Cedar St. North line of Cedar street	6	H
West Harvey ...	25' 10" from S. W. corner of Preston St. 40' 5" West from east line of Preston street.	6	H
Laundry	14' 2" from S. W. corner of Pleasant St. West line of Pleasant street.	4	L
Clifton.....	27' 4" from N. E. corner of North St. North line of North street.	6	H
West Young.....	22' 0" from S. E. corner of Windsor St. East line of Windsor street	6	H
Maynard	19' 5" from N. E. corner North St. North line of North street	6	H
Creighton	19' 4" from N. E. corner of North St. North line of North street.	6	H
Summit	25' 7" from N. W. corner of Windsor St. 0' 6" East of west line of Windsor street.	6	H
Lucknow.....	27' 6" from N. W. corner of Victoria Road. North line of Victoria Road.	4	L
Lucknow	29' 0" from S. W. corner of Fenwick St. South line of Fenwick street.	4	L
HYDRANT VALVES.			
Oakland.....	Corner of Murray Place 5' 2" from hydrant	6	H
Clifton	387 ft. north of North St 5' 3" "	6	H
Charles	West side of Clifton St. 5' 6" "	6	H
West Young.....	450 ft. E. of Windsor St. 4' 10" "	6	H
"	900 ft. E. of Windsor St. 6' 9" "	6	H
Maynard	North side of North St. 5' 9" "	6	H
Creighton	" " " " 4' 7" "	6	H
Morris	West side of Pleasant St. 5' 6" "	6	L

Total Number of Valves, Main and Distribution Service, April 30th, 1899.

	27"	24"	20"	15"	12"	9"	6"	4"	3"	1½"	1¼"	1"	¾"	Hydrant. 6"	Total.
In use April 30th, 1898..	1	7	1	29	55	65	269	50	148	1	9	2	11	32	680
Set during 1898-9.....	.....	.....	.....	.....	.....	.....	11	3	.....	.....	.....	.....	.....	8	22
Total in use Apl. 30, 1899	1	7	1	29	55	65	280	53	148	1	9	2	11	40	702

PIPE STOCK ON HAND DECEMBER 31, 1898.

No. of Pieces.	Diameter in inches.	Weight of one, in lbs.	Total weight in lbs.	Val. per lb. in cts.	Total Value.	REMARKS.
1	27	3658	3658	1¼	\$ 64 01	T. & B. 12 feet.
1	27	2651	2651	2¼	59 65	" 12 feet.
2	24	2555	5110	1¾	89 42	" 12 feet.
4	24	.....	9698	1¾	169 72	" 11 feet.
1	20	1263	1263	2¼	28 42	
9	15	1200	10800	2¼	243 00	
4	12	680	2720	2¼	61 20	
13	10	550	7150	2¼	160 87	
173	9	500	86500	2¼	1946 25	
37	8	386	14282	2¼	321 34	
14	6	380	5320	2¼	119 70	
103	6	280	28840	2¼	648 90	
18	5	222	3996	2¼	89 91	
84	4	156	13104	2¼	294 84	
47	3	130	6110	2¼	137 47	
105	1½	26	2730	2¼	61 43	Stand Pipes.
124	.....	12	1488	2¼	33 48	Plates.
290	.....	6	1740	2¼	39 15	Caps.
250	.....	2	500	2¼	11 25	Thimbles.
237	.....	18	4266	2¼	95 99	Sleeves for Service
270	.....	4	1080	2¼	24 30	Caps for Sleeves.
.....	.....	.....	216980	.....	\$4700 30	

PIPE-SPECIALS.

No of Pieces,	Diameter in inches	DESCRIPTION.	Weight of one in lbs.	Total weight, lbs.	Value per lb. in cents.	Total value.
2	27	Bell Mouth.....	831	1662	2½	37 39
2	27	Plain Thimbles.....	624	1248	"	23 08
3	27	Saddles 27"x6".....	81	243	"	5 47
13	27	Bevel Collars.....	795	10335	3	310 05
1	27	Plain special 2 feet long, Class A.....	404	404	1¾	7 07
1	27	" 2 " " " " B.....	460	460	"	8 05
1	27	" 3 " " " " ".....	700	700	"	12 25
1	27	" 4 " " " " ".....	920	920	"	16 10
1	27	" 5 " " " " ".....	1248	1248	"	21 84
2	27	" 5 " " " " ".....	1144	2288	"	40 04
1	27	" 6 " " " " ".....	1360	1360	"	23 80
1	27	" 6 " " " " ".....	1472	1472	"	25 76
1	27	" 3 " " " " C.....	820	820	"	14 35
1	27	" 3 " " " " ".....	930	930	"	16 27
1	27	" 4 " " " " ".....	1068	1068	"	18 69
1	27	" 5 " " " " ".....	1332	1332	"	23 31
1	24	Bevel Collar.....	688	688	3	20 64
12	24	Thimbles.....	396	4752	2½	106 92
1	24	Cap.....	290	290	"	6 52
6	24	Split Thimbles.....	620	3720	2½	93 00
1	24	Y. Branch 24"x24".....	2372	2372	2½	53 37
4	20	Thimbles.....	230	920	"	20 70
1	20	Split thimbles.....	453	453	2½	11 32
3	15	4 way branches.....	896	2688	2½	60 48
3	15	4 " " 15"x6".....	660	1980	"	44 55
1	15	3 " " ".....	812	812	"	18 27
2	15	Y's.....	1012	2024	"	45 54
5	15	Thimbles.....	234	1170	"	26 32
1	15	Reducing to 6".....	400	400	"	9 00
1	15	Saddle 15"x6".....	122	122	"	2 74
9	15	Split Thimbles.....	260	2340	2½	58 50
1	12	Four way branches.....	615	615	2½	13 84
4	12	" " " 12"x9".....	500	2000	"	45 00
4	12	" " " 12"x6".....	475	1900	"	42 75
2	12	Three " " 12"x12".....	524	1048	"	23 58
3	12	" " " 12"x9".....	494	1482	"	33 34
2	12	" " " 12"x6".....	469	938	"	21 10
2	12	Reducing to 9".....	240	480	"	10 80
8	12	" " 6".....	200	1600	"	36 00
2	12	" " 6" with faucet.....	200	400	"	9 00
2	12	Thimbles.....	160	320	"	7 20
4	12	Caps.....	45	180	"	4 05
4	12	Saddle 12"x4".....	90	360	"	8 10
1	12	" 12"x3".....	86	86	"	1 93
13	12	Split Thimbles.....	222	2886	2½	72 15

PIPE—SPECIALS—(Continued.)

No of pieces	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight lbs.	Value per lb. in cents.	Total value.
2	9	Six way branches 9"x9"x9"x3"	450	900	2 $\frac{1}{4}$	20 25
9	9	Three way branches 9"x6"	335	3015	"	67 84
9	9	Reducing to 6"	157	1413	"	31 79
3	9	Offsets	156	468	"	10 53
12	9	Thimbles	112	1344	"	30 24
7	9	Caps	34	238	"	5 35
1	9	Saddle 9"x4"	45	45	"	1 01
1	9	" 9"x3"	40	40	2 $\frac{1}{4}$	90
20	9	Split Thimbles	139	2780	2 $\frac{1}{2}$	69 50
3	6	Four way branches	255	765	2 $\frac{1}{4}$	17 21
1	6	Three " " 6"x6"	209	209	"	4 70
7	6	" " " 6"x3"	131	917	"	20 63
2	6	Y's branches 6"x6"	250	500	"	11 25
1	6	Y " 6"x4"	240	240	"	5 40
6	6	Reducers to 3" with faucets	114	684	"	15 39
5	6	" " 3" without faucets	105	525	"	11 81
9	6	Thimbles	75	675	"	15 19
13	6	Offsets	140	1820	"	40 95
20	6	Caps	19	380	"	8 55
10	6	Bends	140	1400	"	31 50
7	6	Split Thimbles	92	644	2 $\frac{1}{2}$	16 10
24	4	Four way branches	123	2952	2 $\frac{1}{4}$	66 42
9	4	Three " "	114	1026	"	23 08
1	4	Y " "	96	96	"	2 16
5	4	Reducers with faucets	95	475	"	10 69
6	4	" without faucets	84	504	"	11 34
2	4	Offsets	66	132	"	2 97
4	4	Bends	88	352	"	7 92
16	4	Thimbles	29	464	"	10 44
6	4	Split Thimbles	64	384	2 $\frac{1}{2}$	9 60
6	3	Crosses	90	540	2 $\frac{1}{4}$	12 15
3	3	Three way branches	50	180	"	4 05
15	3	Split thimbles	48	720	2 $\frac{1}{2}$	18 00
22	3	Thimbles	36	792	2 $\frac{1}{4}$	17 82
6	3	Bends	40	240	"	5 40
1	3	Three way branch 3"x2"	55	55	"	1 24
6	2	Four way branches	30	180	2 $\frac{1}{4}$	4 05
2	2	Angle branches	23	46	"	1 03
4	.	Fire hydrants . . . . .	..	..	6550	266 00
4	.	Castings for hydrants	418	1672	3	50 16
4	.	Bases " "	140	560	"	16 80
26	.	Jackets " "	340	8840	"	265 20
9	.	Extension pieces for hydrants	124	1116	2 $\frac{1}{2}$	27 90
67	.	Cast iron caps " "	5	335	3	10 05
20	.	" " for suction hose	9	180	"	5 40
23	.	Brass nozzles for fire hydrants	2 $\frac{1}{2}$	57	60	34 20
..	.	" " suction hose	5 $\frac{1}{2}$	66	"	39 60
..	.	Brass castings all sorts . . . . .	..	90	35	31 50
..	.	Tin Tubing . . . . .	..	345	33	113 85
..	.	Refined iron different sizes . . . . .	..	600	150	9 00
..	.	Lead pipe . . . . .	..	161	4 $\frac{3}{4}$	7 65
..	.	" " . . . . .	..	327	"	15 58
Totals						\$3052 52

JOINT STAVES.

NUMBER OF PIECES.							VALUE.		
For 6 inch pipe.	For 9 inch pipe.	For 12 inch pipe.	For 15 inch pipe.	For 20 inch pipe.	For 24 inch pipe.	Keys.	Each.	Total.	
4000	3000	2800	1000	600	2000	.....	.14	\$167 50
							2000	.04	5 00
								\$172 50	

METERS.

Number.	Size Inches.	DESCRIPTION.	Value of each.	Total Value.
9	6	Siemens' Meters in stock	\$143 42	\$ 1290 78
5	4	" "	86 75	433 75
4	3	" "	65 67	262 68
3	1½	" "	34 42	103 26
10	1¼	" "	29 16	291 60
2	1	" "	21 50	43 00
2	¾	" "	15 50	31 00
103	½	" "	14 50	1493 50
1	½	Trident Meters "	11 97	11 97
1	½	Nash " "	14 49	14 49
1	¾	Empire " "	14 49	14 49
1	¾	Disc " "	12 34	12 34
2	6	Siemens' Meters in use	143 42	286 84
12	4	" "	86 75	1041 00
20	3	" "	65 67	1313 40
8	2	" "	44 65	357 20
3	1½	" "	34 42	103 26
2	1¼	" "	29 16	58 32
14	1	" "	21 50	301 00
38	¾	" "	15 50	389 00
172	½	" "	14 50	2494 00
4	¾	Crown Meters "	37 92	151 68
2	¾	" " "	26 25	52 50
1	½	Starr " "		
1	5/8	Disc (Hersey) Met. "	10 77	10 77
421				\$10761 83