

## Street Fund.

1907.			
Sept. 15.	By Streets, transfer on acct. 1906-7 expenditure	\$ 2725 84	
	Internal Health, " " "	2274 16	
			\$5000 00
	EXPENDITURE.		
	To Streets, transfer for work and material from		
	Jan. 1, 1908, to April 30, 1908	\$ 2023 52	
	Internal Health, for work and material from		
	Jan. 1, 1908, to April 30, 1908	2947 31	
			\$4970 83
	Cr. balance carried forward 1908-9		\$29 17

## Rockhead Insurance (to replace burned buildings).

1907.			
May 1.	By Nova Scotia Fire Insurance Co, proportion loss	\$ 1100 00	
	Ottawa " " "	550 00	
	Independent Cash Mutual " " "	550 00	
	Collections per Works Office	3 74	
	Loan	982 00	
			\$3185 74
	EXPENDITURE.		

Labor	\$ 1066 86
Brookfield Bros., lumber	860 45
F. S. Coombs, 80 squares, 17 rolls Paroid roofing	331 50
H. H. Fuller & Co., hardware supplies	54 65
Geo. Brush, car fare to and from	6 95
G. A. Wooten & Co., stove pipe	2 90
Rockhead Prison, 4000 bushels broken stone	240 00
Teams and Stables, for work done	60 80
Water Maintenance, electric power at shop	7 00
Sewer Loan, sand, gravel, cement, 1 doz. gal. pails	553 23
Exchange on insurance drafts	1 40
	<u>\$3185 74</u>

## Public Baths.

1907.			
May 1.	By Appropriation	\$ 200 00	
	Beach Bath receipts	137 05	
	Floating Bath receipts	13 00	
	City Property, transfer to balance	178 34	
			\$528 39

EXPENDITURE.

*Beach Bath :*

Repairs .....	\$ 92 79	
Caretaker's salary .....	79 35	
Halifax Steam Laundry .....	52 62	
Removing night soil .....	9 58	
Buckley Bros., toilet paper, lime .....	3 20	
H. H. Fuller & Co., hardware .....	5 50	
Brookfield Bros., lumber .....	1 57	
		244 61

*Floating Bath :*

Repairs .....	\$148 71	
Caretaker's salary .....	45 00	
T. P. Mulcahy, cooperage per contract .....	45 00	
Halifax Tow Boat Co., towage .....	30 00	
Blackadar Bros., advertising sale .....	6 45	
Chronicle Pub. Co., .....	7 56	
H. H. Fuller & Co., hardware .....	1 06	
		283 78

\$528 39

*Beach Bath.*

*Floating Bath.*

Expenditure as above.....	\$244 61	Expenditure as above.....	\$283 78
Halifax Fire Insurance Co.....	15 00	Halifax Fire Insurance Co.....	15 00
	<u>\$259 61</u>		<u>\$298 78</u>
Receipts.....	137 05	Receipts .....	13 00
Loss .....	\$122 56	Loss .....	\$275 78

Plumbers' Licenses.

J. G. Crump, Argyle Street .....	\$ 10 00
J. G. O'Toole .....	10 00
Gro. A. Perrier, Granville Street .....	10 00
H. H. Elford .....	1 00
Magnus & Lownds, 165 Lower Water Street .....	1 00
M. F. Burns .....	3 33
	<u>\$35 33</u>

Electric Wiring Licenses.

J. A. Dunn & Co, 197-199 Albemarle Street.....	\$ 10 00
Walsh & Co., corner Blower and Grafton Streets .....	10 00
John Starr, Son & Co., Granville Street .....	10 00
Farquhar Bros., 16 Barrington Street .....	10 00
Harold W. Tremaine, 14 Church Street .....	10 00
	<u>\$50 00</u>

## Bedford Row Engine House.

To Cost brought forward 1906-7.....	\$ 19043 71
Fire Commission for work done on building acct.....	745 00
Carpenter's work, \$81.00 ; labor, laying concrete floor, \$168.28.....	249 28
John Starr, Son & Co., 1 Gamewell gong.....	249 00
Sewer Loan, transfer for material.....	104 31
Streets, " " ".....	22 40
Cost to date.....	<u>\$20413 70</u>

## Streets.

1907.		
May 1.	By Appropriation.....	\$ 25000 00
	Street Fund, transfer from to balance.....	2023 52
	Agricola Street widening, transfer for granite used.....	1268 53
	Barber Asphalt Paving Co., transfer for material diverted.....	198 21
	Water Maintenance, transfer for work done.....	131 13
	Widening Lower Water Street, transfer for work done.....	5 00
	Sewer Loan, transfer for material used.....	47 11
	Permanent Pavement, ".....	1657 51
	Bedford Row Engine House, ".....	22 40
	Public Gardens fence, ".....	9 24
	Permanent Sidewalks, ".....	2587 79
	Internal Health, interest on overdraft Street Fund.....	45 43
	City Works Office, collections for material, etc.....	814 78
		<u>\$33810 65</u>

## EXPENDITURE.

Labor.....	\$ 16685 78
W. D. Yeadon, granite per Engineer's certificate ..	5905 93
Street Fund, refund account 1906-7.....	2274 16
Halifax Association Improving Condition of the Poor, broken stone.....	1436 34
Estate Geo. Harvey, for stone.....	1172 75
Peter Murray, ".....	1445 56
D. McLellan, ".....	686 63
H. B. Clarke & Son, 885 street signs per contract ..	663 75
City Treasurer, 6th installment St. Fund & interest " " street roller interest.....	612 50
S. Cunard & Co., coal crusher and steam rollers ..	522 50
Caritte-Patterson & Co., tar.....	455 93
Farrell Foundry and Machine Co., parts of crusher.....	259 48
Warren Bituminous Paving Co, repairs pavements.....	211 78
Brookfield Bros., lumber.....	198 28
H. H. Fuller & Co., hardware.....	196 44
Douglas & Co., iron castings.....	198 37
Imperial Oil Co., machine oil.....	177 48
Day & Kinsman, connecting down spouts.....	126 23
W. & A. Moir, machinist's work.....	89 00
Wm. McFatrige, old canvass and 1 globe valve ..	77 40
H. W. McFatrige, veterinary service.....	39 20
Registrar of Deeds, fees.....	4 50
	8 70

Farquhar Bros., tinsmithing .....	\$ 4 90
G. C. Bateman, repairs lawn mower .....	3 50
C. McSweeney, cab hire .....	2 00
Richard Graves, " .....	2 00
George Graves, " .....	2 00
Cragg Bros., mower oil .....	25
J. Hogan & Sons, repairs boiler steam roller .....	7 10
Harrison & Co., stationery for City Plan .....	39 90
Hughes, Owens & Co, stationery for City Plan .....	11 98
H. Flowers, for land to widen South Street .....	50 00
Chronicle Pub. Co., advertising City Plan, etc .....	55 29
Blackadar Bros., " .....	26 40
City Prison, transfer for stone .....	99 60
Teams and Stables, transfer for work done .....	47 44
Gauvin & Gentzell, photograph Lockman Street.....	5 00
Sundries, \$2.60, \$1.25, 75c .....	4 60

\$33810 65

### City Property.

1908.		
May 1.	By Appropriation .....	\$2500 00
	Jas. S. Crump, purchase of old fence .....	15 00
	Police Commission, for repairs ped cell .....	23 78
	Contingent Account, transfer to balance .....	11 00

\$2549 78

#### EXPENDITURE.

Town Clock, labor repairing .....	\$494 17
H. H. Fuller & Co., hardware .....	277 79
General work .....	295 61
City Hall, cleaning, etc .....	232 81
Longard Bros, repairs furnaces City Hall .....	212 20
Public Baths, transfer to Balance Account .....	178 34
F. C. Ryan, caretaking City clocks .....	139 50
A. Milne Fraser, 1 typewriter, City Coll. office ..	95 00
H. B. Clarke & Son, cabinet, " " ..	58 50
" " " City Treas. office. ....	34 75
" " " City Clerk's office. ....	153 50
" " telephone bracket City Engineer's office. ....	4 50
Brookfield Bros., lumber .....	91 69
Can. Gen. Elec. Co., electrical supplies City Hall ..	49 71
John Starr, Son & Co, " ..	22 66
Farquhar Bros., " ..	11 15
Jubilee Road wharf, repairs, labor .....	26 83
Brander, Morris & Co., repairs furniture City Hall .....	26 35
G. A. Wooten, tinsmithing at Bindery, etc.....	32 64
G. M. Cullen & Co., glazing, etc .....	27 50
Labor, painting flagstaff .....	5 66
W. H. Brush, 1 handcart .....	6 00
J. Woonacott, locksmithing and keys .....	4 75



N. S. Furniture Co., cleaning carpets City Hall.	\$ 3 50	
Cragg Bros. & Co., grass shears, etc .....	3 63	
Tappers .....	3 75	
Mrs. Spruin, repairs flags.....	3 00	
Registrar of Deeds, for recording Stayner's wharf deed .....	1 70	
N S. Telephone Co., 2 coils.....	1 00	
Halifax Seed Co., 4 lbs. red top.....	80	
National Drug and Chemical Co., $\frac{1}{2}$ gal. benzine.	30	
Jas. Dempster & Co., wood turning.....	30	
		<u>\$2549 59</u>
Unexpended balance .....		<u>\$0 19</u>

### Fire Insurance.

1908.  
May 1. By Appropriation ..... \$1000 00

#### EXPENDITURE.

City Hall .....	\$30000 00
" furniture, fittings.....	10000 00
City Prison .....	2500 00
" outbuildings.....	3000 00
Infectious Disease Hospital .....	5000 00
Small Pox .....	500 00
Machinery Hall .....	1000 00
" contents ..	7100 00
2 Steam Rollers.....	1500 00
Fire Dept. apparatus in South Shed .....	1000 00
Old Exhibition Stables .....	1000 00
" " contents, horses, harness, feed.....	2500 00
West St Engine House .....	4000 00
Central .....	2000 00
Gerrish St. .....	1000 00
Bedford Row .....	5000 00
Queen St. .....	1000 00
Islesville .....	1000 00
Quinpool Road .....	2500 00
Spring Garden Road Engine House .....	1000 00
Grafton St Ladder House .....	1000 00
Keeper's House, Spruce Hill Lakes .....	500 00
" " Chain Lakes .....	500 00
" " Long Lake .....	500 00
	<u>\$85100 00</u>
Nova Scotia Fire Insurance Co., $\frac{1}{4}$ risk....	\$361 68
Independent Cash Mutual, $\frac{1}{4}$ risk....	170 20
Ottawa Insurance Co., $\frac{1}{4}$ risk....	170 20
Halifax .....	
baths, equipment,	
\$3,000 at 1%.....	30 00
Phœnix Insurance Co., Stayner's whf. \$1000	33 00
Independent Cash Mutual Co., \$1000 feed,	
4 mos .....	9 50

Dominion Fire Insurance Co., \$750 feed, 9 mos .....	\$ 12 15	
Dominion Fire Insurance Co., \$750 feed, 6 mos .....	7 97	
A. J. Bell, fire insurance Morris St. Engine House to May 31, 1908 .....	5 25	
Cab hire Account, Rockhead fire .....	4 00	
		805 95
Unexpended balance .....		<u>\$194 05</u>

## Sewerage Loan, 1905.

1907.			
May 1.	By Balance brought forward 1906-7 .....	\$ 21043 78	
	Loan .....	25000 00	
	Water Maintenance, transfer for material used .....	112 89	
	Public Gardens fence, " " .....	63 53	
	Widening Lower Water St., " " .....		
	Permanent Sidewalks " " .....	7831 50	
	Permanent Pavement, " " .....	1429 11	
	Streets, " " .....		
	City Works Office collections .....	1858 06	
	Rockhead insurance, transfer for material .....	553 23	
	Bedford Road Engine House, transfer for material .....	104 31	
			<u>\$57996 41</u>

## EXPENDITURE.

Labor .....	\$31538 11
W. Stairs, Son & Morrow, 8,500 bags, 270 bbls. cement .....	6034 25
Acadia Powder Co., dynamite, fuses .....	864 00
J. C. Calder, 1,327 bbls., 1,520 bags cement .....	3076 02
James Freda, sand, gravel .....	2475 01
Salaries .....	1300 00
Brookfield Bros., drain pipe, lumber .....	1140 85
W. D. Yeadon, granite .....	718 50
Douglass & Co., iron castings .....	739 93
H. H. Fuller & Co., hardware .....	411 88
Wm. Cooley, land taken account Dublin St. sewer .....	275 00
S. Cunard & Co., coal .....	168 02
R. G. Rent, services City Collector's Office .....	150 00
Ferguson & Cox, repairs portable boiler .....	26 50
A. J. McNutt, repairs Foreman Streets waggon .....	22 15
Warren Bituminous Pav. Co., repairs pavement .....	23 20
Pick handles, 22 dozen .....	22 00
Farquhar Bros., repairs blasting machines, wire, etc .....	24 63
F. S. Coombs, 15 gals. metallic paint .....	15 00
Halifax Electric Tram Co., repairs gas pipes .....	11 16
Henry Lovett, leather .....	21 68
Registrar of Deeds, tees .....	5 30
G. A. Wooten & Co., stovepipe concrete shed .....	4 75
Wm. McFatrige, old canvass .....	4 06
City Treasurer, refund .....	4 43
Frank Reardon, glazing .....	2 60
McDonald & Co., 2 couplings .....	2 50

Ritchie & Menger, legal expenses .....	\$ 2 50
Streets, transfer for work done .....	47 11
Teams and Stables, transfer for work done .....	433 60
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	\$49565 74
Cr. balance carried forward 1908-9 .....	\$8430 67
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### Water Maintenance.

1908.		
May 1.	By Balance brought forward .....	\$30138 03
	Water rates, etc, per City Treasurer .....	\$3028 48
	City Works Office, collections deposited .....	1656 87
	Barber Asphalt Co., for damages water pipes .....	158 26
	Rockhead Insurance, work at shop .....	7 00
	Interest on balances .....	146 21
		<hr/>
		\$115134 85

#### EXPENDITURE.

Interest .....	\$47156 66
Labor .....	24646 43
Salaries .....	5528 00
Neptune Meter Co., 300 water meters and parts .....	3239 97
Sinking Fund .....	2625 00
Willis Chipman, engineering report water system .....	1415 00
John Doull's Estate, land purchased Chain Lakes .....	650 00
H. H. Fuller & Co., lead pipe, hardware, etc .....	2674 65
Douglass & Co., iron castings .....	1941 01
Macdonald & Co., brass castings .....	870 96
H. B. Clarke & Son, copy water plans, letter cabinet Engineer .....	527 20
H. B. Clarke & Son, 901 water meters, etc .....	8874 91
D. Y. Stewart & Co., duty, freight, wharfage, water pipe .....	500 67
Longard Bros., iron, brass castings, etc .....	326 44
N. S. Telephone Co., rent telephones, building lake line, etc .....	558 17
Holloway Bros., printing Engineer's Report .....	348 50
Bras d'Or Lime Co., lime .....	175 00
W. & A. Moir, machinist's work .....	128 22
T. C. Allen & Co., stationery supplies .....	398 68
A. & W. MacKinlay, blank books .....	136 60
Halifax Electric Tram Co., motor power, repairs gas mains .....	168 80
W. S. Craig, plumber's work .....	988 70
Streets, transfer for work done .....	131 13
Sewer Loan, transfer for work done .....	112 89
Henry Lovett, leather .....	95 01
Brookfield Bros., lumber .....	126 80
S. Cunard & Co., coal .....	110 35
J. C. Merlin, milling work .....	45 80
Neil Fox, harness, repairs, etc .....	78 05
Warren Bituminous Paving Co., repairs pavements .....	67 26
Acadia Powder Co., dynamite, fuses .....	46 00
Robinson Bros., truckage lime, water pipe .....	67 40

A. J. McNutt, repairs waggons, sleighs.....	\$ 43 80
Harrison & Co., mounted paper, Engineer's office..	37 50
Miss Allison, making duplicate water bills .....	30 00
Herald Publishing Co., advertising, etc.....	34 48
Engineering Publishing Co., advertising, etc .....	26 44
Chronicle Publishing Co., advertising, etc.....	34 43
Hugh Owens & Co., 1 Shaw continuous machine ...	400 00
Blackadar Bros., advertising.....	38 40
Amherst B. & S. Co., 6 pairs rubber boots.....	25 98
M. S. Brown & Co, nickle badges.....	20 40
John McFatridge, Jr., plumbing work.....	80 12
Bentley & Flemming, Oregon pine.....	16 96
W. H. Huggins, stenographic work.....	15 20
N. P. Leahy, ".....	24 40
M. E. Fletcher, ".....	15 30
W. W. Walsh, ".....	3 90
A. Hutcheson, ice City Clerk, City Collector, Alder- men's Room.....	16 00
S. Chittick & Son, ice Works and Engineer's office..	10 00
Builder's Iron Foundry Co., charts, etc., Engineer's office .....	13 50
Renouf Publishing Co, books.....	12 00
New England Water Works Association, books....	6 20
Engineering Record, books.....	4 50
A. G. Cummings, legal work.....	12 50
Canadian Rubber Co., 4 diaphragms, etc.....	11 15
W. C. Knight, harness repairs.....	10 25
C. E. Locke Mfg. Co., balance Locke adding machine	7 50
McAlpine Pub. Co., 2 directories.....	7 00
Howard McFatridge, veterinary service 2 horses...	9 00
Fraser Bros., hack hire.....	9 00
C. McSweeney, ".....	5 00
Smith Premier Co., per A. M. Fraser, repairs type- writer, etc .....	4 50
L. J. Redmond, lunches.....	5 47
Dominion and Canadian Express Co., expressage...	5 15
D. Roche, glazing.....	6 00
W. Stairs, Son & Morrow, 1 firepot.....	5 50
Exchange on drafts and sundries .....	3 77
J. DeWolf, copy water report.....	3 00
J. MacInnes & Son, lumber.....	5 40
R. N. McDonald, 4 bags salt .....	3 00
Baldwin & Co., 1 reflecting lamp, Engineer.....	4 50
J. G. Crump, connecting meter.....	2 00
Donovan & Brennan, ".....	1 35
W. S. Rogers, knee wrap, etc.....	1 50
W. C. Anderson, 2 boxes candles.....	4 00
R. Urquhart & Son, lunches .....	1 71
J. Starr, Son & Co, fuses for motor .....	96
W. U. Telegraph Co., telegrams per Engineer .....	2 03
J. E. Myers, plumbing work.....	1 00
Jas. Hillis & Son, 1 grate .....	35
R. G. Dun & Co., subscription Legal Journal .....	10 00
Teams and Stables, transfer for work done .....	624 00
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	\$106467 96

Cr. balance carried forward 1908-9.....

\$8666 89

## Water Construction.

1907.			
May 1.	By Balance brought forward 1906-7	\$ 28387	11
	Collections per City Works Office	796	66
		<u>\$29183</u>	<u>79</u>

## EXPENDITURE.

Labor	\$ 4254	95
D. Y. Stewart & Co., water pipe	2510	79
Douglass & Co., iron castings	361	47
H. H. Fuller & Co., lead pipe, hardware	304	27
Acadia Powder Co., dynamite, fuses	82	00
A. G. Cummings, legal services	48	80
Andrew Knight, inspecting fees pipe	13	87
Brookfield Bros., lumber	9	90
John Starr, Son & Co, 250 ft. blasting wire	2	94
Longard Bros., gal. pipe, etc.	17	11
City Treasurer, refund on deposits	11	70
Registrar of Deeds, fees	1	80
	<u>\$7619</u>	<u>60</u>
Cr. balance 1908-9	\$21564	17

## COST OF WORK.

	Labor.	Material.	Total cost.
Labor at shop	\$4220 85		\$4220 85
Service repairs on	5353 63		5353 63
Service, extension of	2124 92	\$1182 96	3307 83
Fire plugs, meters, main stopcocks, repairs on	2182 17		2182 17
Repairs, bursts and leaks	1238 64		1238 64
Inspection for waste	706 02		706 02
Cleaning pipes by electricity			
Cleaning mains	34 06		34 06
"    12", from Sp. Garden Rd. to Inglis St.	152 20		152 20
Repairs, etc., at lakes	28 27		28 27
Argyle Street, renew service pipes	37 63		37 63
Redford Row, " "	252 03		352 03
Parade fountain, labor.	9 84		9 84
A J. Matthews, Campbell Road, 2" main	8 05	11 95	20 00
Kline Street, cor. Oak Street, fire plug	34 84	93 30	133 14
"    N. of Quinpool Road. fire plug	57 04	95 52	152 56
"    6" main	546 85	162 32	709 17
Gottingen Street, renew service pipes	687 59		687 59
Bliss Street, 3" main	68 32	63 17	131 49
Vernon St. (Jubilee Rd. to School Street), 6" main	233 08	455 44	689 52
Putting on tappers	3 20		3 20
Bishop St., renew service pipes	23 94		23 94
Pleasant St, " "	662 15		662 15
Allan St., W. of Chebucto Lane, 6" main	65 31	53 70	119 01
Morris St., renew service pipes	259 03		259 03
Gerrish St., " "	70 92		70 92



Hollis St., renew service pipes.....	\$ 295 79		\$ 295 79
Prince William St., "	61 59		61 59
Lockman and Barrington Sts., renew service pipes.	1716 13		1716 13
Lockman St., N. Cornwallis, replacing 6" by 9" main	2055 75		2055 75
Lockman St., cutting 6" main to inspect condition..	24 42		24 42
Cogswell St., renew service pipes .....	67 82		67 82
Pleasant St., cor. Green St., replacing fire plug....	32 98	69 00	101 98
Barrington St., replacing fire plug .....	18 73	66 50	85 23
Monastery of Good Shepherd, 3" main .....	8 99	46 01	55 00
Maynard St., 6" main .....	124 81	46 77	171 58
" 6" main S. from Bloomfield St .....	87 91	71 21	159 12
" N. of Black St., 6" main .....	89 96	84 49	174 45
Arena Club Rink, 4" main .....	31 38	56 92	88 30
Lawrence St., fire plug .....	13 72		13 72
Windsor St., N. of Young, 6" main.....	39 54	45 75	85 29
Infectious Disease Hospital, 4" main.....	343 39	309 88	653 27
" " 3/4" service pipe .....	31 97		31 97
Mitchell's Wharf, replacing 3" pipe by 3/4" pipe.....	23 90	34 50	58 40
Artz St., N. side, new stopcock .....	11 62		11 62
Bishop St., cor. Hollis St., frost jacket fire plug....	37 82	68 24	106 06
Lockman St., N. of Artz St., renewing 6" main.....	312 60	231 13	543 73
" and North St., 12" main .....	216 60	187 76	404 36
Buckingham St., E. of Grafton St., shifting service pipe 3" to 12" and 15" main.....	85 47		85 47
South St., shifting service pipe 3" to 6".....	99 40		99 40
Siliker Car Works, water extension 6" pipe.....	10 44	64 51	74 95
Tobin St., changing service pipe 3" to 6".....	120 13		120 13
Morris St., cor. Pleasant St., replacing 9" by 6" and 9" by 12" .....	460 21	728 77	1188 98
Harvey St., W. of Pleasant St., replacing 3" by 4" and connecting 4" to 12" Pleasant St.....	246 76	200 40	447 16
Barrington St., N. of Proctor St., 4" by 9" & 12" main	387 87	425 52	813 39
Proctor St. E. and W. side Barrington, replacing 6" by 12" .....	65 52	137 84	203 36
Spring Garden Road, W. of Summer St., renew service pipes .....	271 85		271 85
Robie St., cor. Morris, fire plug, replacing with frost jacket .....	18 91	87 79	106 70
Queen St., renew service pipes .....	124 97		124 97
Gerrish St., 9" main .....	352 94		352 94
Gray's Lane to E. side Lockman, 3" main .....	16 29	31 13	47 42
Albro St. School .....	11 88	12 12	24 00
Mulberry Lane, 4" main .....	76 95	130 99	207 94
Creighton St., N. of Black St., 6" main .....	63 96	23 90	87 86
New telephone building, 3" pipe .....	7 38	34 60	41 98
Victoria Gen. Hospital, new pipe to barn, 1 1/2" pipe.	21 15	32 47	53 62
Connecting 6" Prince William St. to 24" Gottingen St	21 47	37 65	59 12
Connecting 6" to 3" Victoria Lane .....	16 55		16 55
South and Hollis St., connecting 6" with 4".....	18 68	11 62	30 30
Morris St., connecting 9" with 4" .....	22 62		22 62
Bedford Row, connecting 9" with 4" .....	94 44	40 68	135 12
Falkland and Gottingen St., connecting 6" with 24"	77 30	11 00	88 30
Gerrish St., W. side Gottingen St., connecting 6" with 24".....	25 28	16 98	42 26
Gerrish St. and Lockman St., connecting 12" to 9" and 12" to 6".....	109 07	72 75	181 82
Gerrish & Lockman St., E. side, connecting 3" to 9"	31 30	21 40	52 79

Lumpy Lane





# CITY ENGINEER'S REPORT.

## CITY WORKS DEPARTMENT.

### COMMITTEE ON WORKS, 1907-1908.

R. T. MACILREITH, MAYOR, *Chairman,*

ALDERMAN G. A. TAYLOR, ALDERMAN A. C. HAWKINS, M. D.

#### OFFICERS:

F. W. W. DOANE M. CAN. SOC. C. E., *City Engineer.*

H. W. JOHNSTON C. E., *Assistant City Engineer.*

T. W. J. LYNCH, *Assistant.*

#### WATER WORKS.

EWEN MORRISON.....*Foreman.*

D. P. O'NEILL.....*Plumbing Inspector.*

JOHN E. BURNS.....*Water and Meter Inspector.*

#### STREETS, SEWERS, &c.

JOHN McDONALD.....*Foreman.*

JAMES DOWNIE.....*Assistant Foreman.*

#### OFFICE.

JAMES J. HOPEWELL.....*Clerk of Works.*

MISS MINNIE HUNTER.....*Stenographer.*

CITY ENGINEER'S OFFICE, CITY HALL,

HALIFAX, N. S., April 30th, 1908.

To His Worship the Mayor:

SIR,—I have the honor to submit my seventeenth annual report dealing with the public works of the City under the supervision of the City Works Department during the civic year ending to-day.

WATER WORKS.

Amount of funded debt on Water Account .....	\$1,111,275.00
“ transferred from revenue .....	36,000.00
“ of funded debt redeemed by sinking fund .....	8,000.00
“ “ “ revenue .....	30,000.00
“ “ “ premium on loans .....	4,073.33
	<u>\$1,189,348.33</u>

Amt. expended to April 30th, 1907.....	\$1,156,286.22
“ “ 1907-8 .....	\$7,619.60
“ repaid 1907-08 .....	796.66

	6,822.94
Discount on Loan .....	4,675.00

Total cost of work to date .....

\$1,167,784.16

Balance on hand .....

\$21,564.17

Amt. paid into Sinking Fund in excess of debt redeemed..

\$20,375.00

COST OF MAINTENANCE, 1907-1908.

Interest .....	\$47,156.66
Sinking Fund .....	2,625.00
Maintenance of System, including renewals .....	56,011.86
	<u>\$105,793.52</u>

or 9 per cent. of the total cost of the system to date, interest and sinking fund being 4.3 per cent.

The cost of maintenance shows an increase of 2.23 per cent., which is due principally to renewal of mains and purchase of meters.

#### CLEANING MAINS.

The high service main was cleaned on June 18th. The Spruce Hill Lakes were almost overflowing, but the pipes were well coated and the progress of the scraper was not rapid. The total time occupied was, however, the shortest on record, due principally to the new hatch-box. The 20-inch scraper made the run in  $26\frac{1}{2}$  minutes; 86 minutes were occupied in replacing the reducer, and the 15-inch scraper passed from end to end of the main in 98 minutes. The total time from Spruce Hill Lake to St. Andrew's Cross was 3 hours 30 minutes, the scraper emerging at 1.58. The cost of this work is shewn in the statement appended.

#### NEW WORK.

There were eight orders passed by the Council for extension of main distribution pipes.

All extensions made, except one of 267 feet, were on the high service district. The high service extensions aggregated 2,717 feet. 3,173 feet of pipe was taken up and replaced with larger pipe and 426 feet renewed. The total length of mains now in use is  $7\frac{3}{4}$  miles. The renewal work was done principally on Lockman, Barrington and Morris Streets where permanent pavement was to be laid. Not only was the capacity of the north and south mains increased, but connections have been laid at Morris Street, Proctor Street, Gerrish Street and North Street, so that eventually 12-inch mains will supply at these points running along these streets east and west.

Six new main stop valves and three hydrant valves were placed in service. The total number in service is eight hundred and fifty-three.

Four new hydrants were installed, making the total four hundred and thirty-seven. Four old hydrants were replaced with improved City design frost jacket hydrants with steamer nozzle.

Three thousand five hundred and thirty-seven feet of pipe was laid for 102 new services and nine thousand seven hundred and twenty-two feet of old service pipe was renewed.

The comparatively large quantity of work done in service renewal was performed principally on the streets to be paved. All service and mains on such streets were thoroughly examined and all defective or worn out material was renewed. Some of the old mains had wooden stave joints, but all new pipe laid has turned and bored joints, as the department has not used any other for pipe above three inches in diameter since 1891.

A contract has been made for the construction of a granite meter house at Chain Lakes, and also a granite building to replace the South gate house.

#### LEGAL ACTION.

Mr. E. L. Fenerty has begun a suit, the purpose of which is to obtain a declaration respecting the riparian rights of the mill owners below Chain Lakes. The question is a most important one for the City, and the case is being prepared very carefully. All the old records are being thoroughly searched, and the necessary surveys, soundings, plans, computations, etc., are being made.

#### WATER SUPPLY.

The service during the first half-year was about the same as usual. As Mr. Chipman had stated in his report that there was a great deal of leakage in the mains, careful investigation was made to determine, if possible, the accuracy of his conclusions. He had not seen any such leakage, but decided that the enormous consumption must prove the existence of defective joints or pipes. The result of our tests and inspections, however, has confirmed the opinion held by your Engineer that the leakage in the Halifax water system is below the average considered normal in other cities.

During the Fall the 27-inch main carrying water to the North End, was tested with the Venturi Meter, the city distribution being shut off at Gottingen Street. This pipe, 14,560 feet long, was perfectly tight. All such tests were made at night. When the 24-inch main was tested, there was leakage through the valve at the Willow Tree, which would not close tightly. The ram from the shutting off of the distribution, developed a leak near the Arm. After the leakage at the Arm had been repaired, the



main was again tested, closing the valve at Gottingen Street on the 12-inch distribution main and the other distribution valves at the Willow Tree. No leakage existed either in the 24-inch main, 13,400 feet long, between Chain Lake and the Common, or in the 12-inch pipe, 2,600 feet long, between Robie and Gottingen Streets. As the latter main has been in service sixty years, and the joints are the much-abused wooden ones, the result was most satisfactory.

In testing the 15-inch high service main the head from Chain Lakes was used so that the pressure would be reduced. It proved too great, however, and caused leaks at the Arm where the pressure is greatest. These leaks were subsequently uncovered and repaired, so that all the supply mains were tight at the close of the season.

In the distribution too, the condition of the mains is most satisfactory. In 1907, old pipe was replaced with new on

Morris St., between Hollis and Pleasant Sts.

Barrington St., between Proctor and Cornwallis Sts.

Lockman St., between North and Cornwallis Sts.

North St., from East side Lockman to West side.

Gerrish St. from East side Lockman to West side.

Proctor St., from East side Barrington to West side.

and in 1906 on Gottingen St., between Cogswell St. and Cunard St. All these pipes were found in good condition, and no leaks were found in mains or service pipes in carrying out this work.

During the last three years about 1300 service pipe connections have been made in laying new pipes and renewing old ones, and not one leak was discovered in mains or at service cocks in connection with this work. The evidence given above must go far to explode the pet theory of those who blame "leakage in the mains" for the extravagant consumption.

A practical test was also made to determine the quantity of water that a  $\frac{1}{2}$ -inch pipe could waste. Under 24 lbs. pressure an eighty gallon tank was filled in five minutes and seventeen seconds. At the same rate 585 half-inch pipes would discharge twelve and three-quarter million gallons in a day—the maximum consumption. The total number of service pipes is 7271. While the inspection and testing were going on, three permanent man-



holes were constructed on Quinpool Road, and all leakage stopped, and in the fields south of Chebucto Road manholes were also built to facilitate future inspection.

#### INSPECTION.

Three inspectors were put on at the beginning of winter, in addition to the regular staff. Their work, assisted by the unusual mildness of the season, made some improvement in the low service, but in the high service, in December, compared with the consumption in the same period of the previous year, there was an increase. By February the consumption had increased again to about the old figure although the inspectors were active, showing the uselessness of inspection as a permanent cure.

#### CONSUMPTION

MONTH.	DAILY AVERAGE IN GALLONS.		Total for Month.
	Low Service.	High Service.	
October, 1907 .....	7,912,000	2,204,000	313,604,000
November .....	8,195,000	2,328,000	315,694,000
December .....	8,173,000	2,301,000	323,794,000
January, 1908 .....	8,024,000	2,231,000	317,901,000
February .....	8,769,000	2,303,000	321,110,000

High Service Consumption, December 1906, daily average, 2,273,000.

The figures for highest consumption recorded by the Venturi meters are, on February 28th, 1907: 15-inch, 2,416,000; 24-inch, 5,139,000; 27-inch, 5,257,000. Total, 12,812,000 gallons. On the first of March, the 24-inch registered 5,159,000, and on April 2nd, the 27-inch recorded 5,351,000.

The high service gauge at the Foreman's house dropped to 24 pounds in February, 1908, while at the beginning of winter it had been 48.

The Inspectors had reported by the middle of February 741 houses wasting water and 490 in which the pipes were liable to freeze.

## METERS.

On the 5th day of March the Council decided to put on meters and the installation was begun in the lower streets. Property owners began at once to get ready for them by repairing leaky fixtures, and by the end of the month a pronounced improvement had been made which continued and increased as the meters were installed. The belief (or fear) that meters would find the waste extended even to the high service and resulted in a small reduction in the consumption in that district. In the low service the consumption dropped in March to July figures; in April 14 per cent. below them, and in May 23 per cent. below them. This improvement caused an increase in pressure, and we have had a new complaint from water takers, namely: that there is too much pressure on their plumbing.

MONTH.	Daily Average Consumption—gals. Low Service.		Decrease per cent.	Daily Average Consumption—gals. High Service.		Decrease per cent.	Total Consumption per month.		Decrease.
	1907.	1908.		1907.	1908.		1907.	1908.	
March.....	9,656,000	7,674,000	20.50	2,299,000	2,140,000	6.91	370,264,000	304,252,000	17.9
April.....	9,150,000	6,591,000	27.96	2,184,000	2,046,000	6.32	340,938,000	259,123,000	23.9
May.....	9,174,000	5,919,000	35.48	2,038,000	.....	.....	347,582,000	.....	.....
July.....	7,667,000	.....	.....	2,129,000	.....	.....	303,672,000	.....	.....

The number of meters in service April 30th, 1907 was 547, or about  $\frac{1}{13}$  of the services. The revenue from them is about one-third of the total receipts (not including fire protection). The total on April 30th, 1908, was 1130.

## PRECIPITATION.

The number of days on which precipitation was recorded was 190, and a trace on 15 days, and the total 54.916 inches, about 98 per cent. of the mean.

Long Lake overflowed in January, February, March, April, May, June, November and December. The surface of the lake on September 28th was 3 feet  $6\frac{3}{4}$  inches below the waste weir. Spruce Hill Lake reached its highest level for the year, 364.09, on May 6th. On September 29th it was 2 feet  $2\frac{1}{4}$  inches below waste weir level.

## SEWERS AND DRAINS.

Twelve sewers were constructed aggregating 6810 feet. The average cost per foot was \$4.55.

The length of sewers constructed under the Sewer Act from 1890 to 1907 inclusive is 1,342.97 feet or 25½ miles.

Cost..... \$656,665.01

Amount assessed on property owners ... 266,091.90

Balance paid by City..... \$390,573.11

When the Dublin Street sewer was constructed a deed of Dublin Street was obtained, the plan shewing the location being made in the City Engineer's office. Subsequently it transpired that William Cooley had previously purchased a lot fronting on Chebucto Road and the sewer ran through it. Mr. Cooley made a claim for damages and offered to sell his lot for \$275.00, which offer was accepted by the Council.

Thirty-three concrete catchpits, and two of brick, were constructed, making the total 838.

Two hundred and thirty-six permits were issued for laying, cleaning or repairing drains.

## INTERNAL HEALTH.

At the beginning of the year a change was made in the system of collection of ashes and garbage. Formerly the six wards were visited once each week, ward one on Monday, ward two on Tuesday, &c. There is considerable difference in the size and population of the wards and consequently in the quantity of ashes and garbage, the quantity being greater in the more thickly built-up wards. In consequence of these conditions some wards did not require all the teams available while in others during some months all the teams working full time could not do the work.

This year the City has been divided into districts, equalized as far as practicable, and the same number of teams employed in each. The change has made a great improvement in the service and it may be possible to still further improve it by readjusting the district boundaries so that any inequality in quantity which still exists may be made uniform.

On the first day of May a patrol squad was organized for the purpose of keeping all paved streets clean. Eight men were employed first, two being located on Water St. and six on the sheet pavements. As new pavements were completed two more men were employed and it is probable that two additional men will be required when the paving contract is completed. The men were provided with white clothing for fine weather and oil clothing for wet weather. Bag carriers or push carts have also been contracted for.

The work done by the patrol squad has been appreciated by citizen and visitor alike, and even the chronic grumbler whom, like the poor, we have with us always, has let that service severely alone. Visitors have been very complimentary in their comparison of "Old Halifax" with the "new", and some have published their opinion that Halifax is the best kept City east of Toronto.

During the winter, while the snow was on the ground, the patrol men have been employed in sprinkling with sand, slippery sidewalks and roadways, removing snow from sidewalks in front of City property and from tramway streets in business districts, keeping crossings and catchpits clear, and Water Street in good, passable condition for the heavy traffic.

#### TEAMS AND STABLES.

Two horses were purchased to replace two of the oldest, and a new team was purchased to be used in the removal of the sweepings collected by the patrol men.

The fodder bill is much higher than usual, as the committee anticipating very high prices on the advice of men of experience, recommended the purchase of a year's supply last Fall. As prices fell again the City would have saved money by waiting.

#### STREETS.

Sidewalk construction was carried on through the whole season, and the greater part of the work ordered by the Council completed. 11,888 square yards of concrete sidewalk was laid, the cost varying from \$1.45 per square yard to \$2.05. Concrete curb and gutter was used on less important streets.



LOCKMAN STREET BEFORE PAVING.



Repairs on tar concrete sidewalks cost \$1,105.09.

A contract was awarded to the Barber Asphalt Paving Co. for asphalt pavement, five-inch base, one-inch binder, and two-inch wearing surface, ten year guarantee and 25 per cent. bond, at \$2.59 per square yard and \$3.50 for scoriæ block, cement grouted at intersections on hills.

The tramway track allowance was also paved with scoriæ, under a contract made by the company with Robert S. Low.

The streets paved are shewn in the attached statements.

All the pavement included in the contract was not completed last season. When cold weather stopped the work the asphalt had been laid on Lockman Street to the south side of Gerrish Street. The contract included Lockman Street to the north side of the King Edward Hotel. Pleasant Street, from South Street to Inglis Street, was also added to the contract, which completes all pavement work contemplated at present.

Buckingham Street, between Granville Street and Barrington Street, was paved with porphyry on a six-inch concrete base, the work being done by the City. The joints were filled with cement grout.

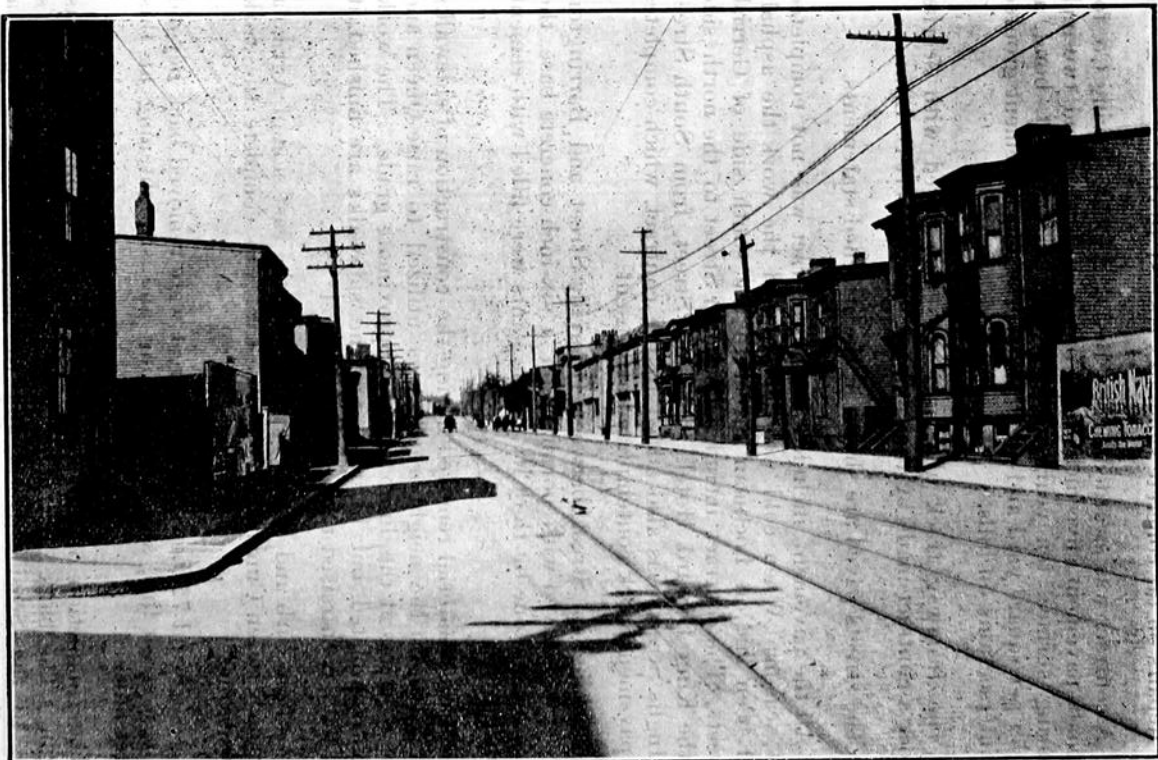
Surplus material removed during the construction of sidewalks and paving in the neighborhood was utilized to raise Queen and Green Streets at the dump to the approximate grade. The work is not completed, but by the time the sidewalks are finished, it will have been raised to the finished level.

Granite curb and gutter was laid on the east side of Agricola Street, between Cunard St. and West St., to complete the work of widening.

No. 70 and 72 Lower Water Street were removed back beyond the new street line, and the widening and straightening at this street finished.

The completion of the work of widening Quin-p-ol Road was begun. The bank on the north side was removed from Flynn's gate to the Seaside Hotel and the material used to make a sidewalk on the south side east of Pinehurst.





LOCKMAN ST. AFTER BEING PAVED WITH ASPHALT AND SCORIÆ BLOCKS

885 street signs were purchased and put up.

A portion of Mr. H. Flowers' lot on South Street, at the corner of Robie Street, was purchased for \$50.00 to widen the former street.

The jib between Longard Road, Duffus Street and Lady Hammond Road was purchased for \$350.00, to make a public square in the future. A jib was also purchased at the corner of Coburg Road and Robie Street, to widen the former street, the price being \$3,750.00.

The sidewalk on the east side of Veith Street, at the Hillis properties between Hanover and Richmond Streets, had caved in and was in a dangerous condition. Messrs. Hillis called on the City to build a retaining wall and offered to construct it for \$1,200.00. Their offer was accepted.

Mr. Wm. Robinson was granted a renewal of his lease of water privileges at the foot of South Street for ten years, and Charles Duggan was granted a similar lease for the foot of Hanover St. for five years.

#### KEMPT ROAD CROSSING.

When the intercolonial Railway began double tracking the branch line to their new yard, the City Works Department immediately took steps to have the grade crossing of Kempt Road abolished and the street depressed so that traffic would cross under the railway. At the request of the Department the matter was investigated not only by the engineering staff of the railway, but also by the Deputy-Minister. The negotiations resulted in two proposals for which Mr. W. B. MacKenzie, Chief Engineer, submitted plans.

In one plan it was proposed to depress Kempt Road from a point about 400 feet south of the old crossing to a point about 400 feet west of it, leaving a clear headway of 14 feet. The railway authorities proposed to make the subway 40 feet wide, leaving about 20 feet on the east and north side at the old grade so that access would be given to the properties where there were houses. The subway would have a retaining wall on each side, and at the bridge carrying the railway the width of the subway would be only 20 feet.

The alternative plan was for a diversion of the street starting at about the same point south of the old crossing and running northwardly to the low ground at the foot of the side hill, then turning westwardly to the old road at about the same point as in the first plan. The railway bridge was to be two spans of 20 feet each.

Both plans were undesirable on account of the curve in the road and the certainty of difficulty with snow, but the railway proposed to retain the grade crossing unless one of the plans submitted were accepted. The narrow span in the first plan was considered too dangerous, and although the bend was sharper in the second plan and the trestle in the centre objectionable, it was chosen as the lesser of two evils. The railway agreed to give the City a right-of-way 60 feet wide and maintain a light on each side of the bridge at the crossing.

#### SANDING HILLS.

A numerously signed petition was received asking the Council to take steps to render the bitulithic on Duke St. and George St. hills more convenient and safer for traffic. When these pavements were petitioned for the property owners asked for bitulithic. It was claimed that bitulithic was not slippery, but our experience has proved that it is only suitable for flat grades, not only along but across the street. Sand is being used on the grades complained of, and it makes them much safer and more convenient for traffic than they would be without it.

#### STREET RAILWAY.

Before the pavement was laid double track was constructed on Pleasant Street, between Morris St. and South St., and on Hollis St., between Salter St. and Bishop St. An unbroken main line cross-over was laid on Barrington Street north of Cornwallis St.

#### ELECTRIC LIGHTING.

A new contract was made with the Halifax Electric Tramway Co., Ltd., for lighting the streets and public buildings for five years from July 1st, 1907, at the same rates as formerly.

Thirty street lamps were added during the year, the total now in service being 360.

## PUBLIC BATHS.

The Beach bath was opened July 11th, and closed August 31st. The expenditure was \$259.61, receipts \$137.05.

The floating bath was opened July 18th, and closed Aug. 31st. Expenditure \$298.78, receipts \$13.00. At the close of the season the floating bath was beached at Africville, and abandoned.

## BUILDING PERMITS ISSUED FROM MAY 1ST, 1907 TO MAY 1ST, 1908.

Month.	NEW BUILDINGS.		ALTERATIONS, ADDITIONS, &C.	
	No.	Value.	No.	Value.
May .....	12	\$173,766	52	\$50,341
June .....	10	60,300	33	5,735
July .....	15	56,100	32	19,180
August .....	20	36,850	38	9,971
September .....	5	5,225	50	21,431
October .....	11	27,175	43	6,953
November .....	16	55,450	33	30,017
December .....	5	13,760	17	1,277
January .....	4	3,325	20	18,619
February .....	4	3,800	18	11,905
March .....	10	11,140	33	17,282
April .....	15	27,970	53	11,208
	127	\$474,861	422	\$203,919

Total 549 permits. Value \$678,780.

The tower clock repairs were completed and the exterior restored in accordance with the original design. The interior was made habitable and Police Officer White was allowed to occupy it temporarily as janitor.

The old wooden fence around the Public Gardens was removed and the new iron fence erected. The main entrance

Violations of the law were reported to the City Solicitor, as follows:—

Date of Report.	OWNER.	LOCATION.	VIOLATION.
1907.			
May 31.	A. P. Calnen . . . .	112 Lower Water St.	Rebuilding a portion without permit.
"	John Tynan . . . .	Kane St. . . . .	Erecting building without permit.
June 4.	G. A. Perrier . . . .	33 Granville St. . . .	Erecting a portion in violation of the Act.
July 5.	R. T. Braine . . . .	124 Tower Road. . . .	Doing work without permit.
Sept. 23.	E. W. O'Donnell. . . .	187 Albemarle St. . . .	Doing work not in accordance with Act.
Oct. 10.	Chas. Andrews. . . .	Cor. Columbus and Creighton Sts . . . .	Erecting building without permit.
Nov. 25.	Alfred King. . . . .	L. Water St. (rear).	Erecting building in violation of the Act.
"	Queen Building Co.	40 Bedford Row, (rear) . . . . .	Erecting building in violation of the Act.
Dec. 4.	Chas. Andrews. . . .	Cor. Columbus and Creighton Sts . . . .	Erecting building without permit. (Second report).
"	H. B. Sellon. . . . .	Columbus St . . . . .	Erecting building without permit.
1908.			
Jan. 11.	Chas. Andrews. . . .	Cor. Columbus and Creighton Sts . . . .	Erecting building without permit. (Third report).
Feb. 19.	Jas. H. Dawes . . . .	Windsor St. . . . .	Erecting building not in accordance with Act.

#### CITY PROPERTY.

The Morris Street fire station was completed, and is occupied by the Fire Department. It is said to be the best fire station in the City.

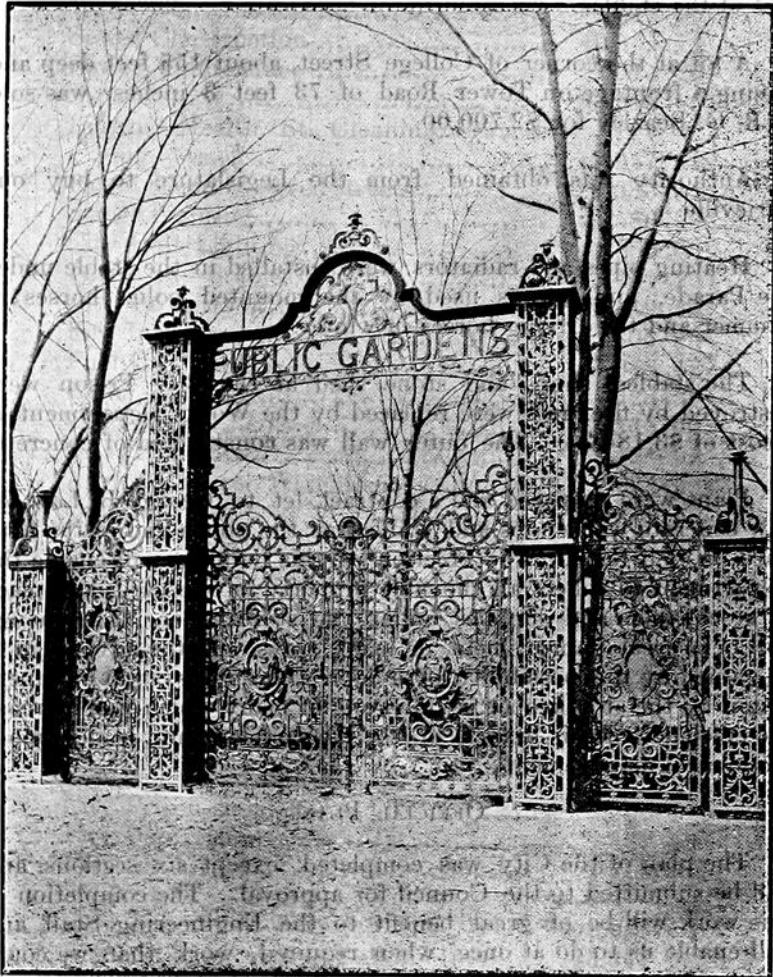
A concrete floor was laid in the basement of the Bedford Row Station.

The town clock repairs were completed, and the exterior restored in accordance with the original design. The interior was made habitable, and Police Officer White was allowed to occupy it, temporarily, as janitor.

The old wooden fence around the Public Gardens was removed, and the new iron fence erected. The main entrance



gates were removed from the Pavilion and re-erected as a part of the new Portal, at the corner of Park Street and Spring Garden Road. A coat of red lead was put on in December to prevent rusting through the winter.



ENTRANCE GATES PUBLIC GARDENS.



The Lord Bishop of Nova Scotia purchased the old exhibition site for the new "All Saints" Cathedral paying \$18,000.00 for the six lots. S. M. Brookfield, Ltd., who have the contract for the Cathedral purchased the old building for \$120.00. The transfer cuts off about fifty feet of the store buildings and ten or twelve feet of the stables.

A lot at the corner of College Street, about 155 feet deep and having a frontage on Tower Road of 73 feet 3 inches, was sold to R. G. Beazley for \$2,700.00.

Authority was obtained from the Legislature to buy out Africville.

Heating pipes and radiators were installed in the stable under the Parade, and it was used by the mounted police horses in summer and the driving horses in winter.

The stables, shops and stone shed at the City Prison were destroyed by fire, and were replaced by the Works Department at a cost of \$3,184.34. The outer wall was constructed of concrete.

Plans were prepared and a contract let to George B. Low for new concrete workshops and stables at the south end of the City Yard on Bell Road. The erection of this building will enable the Department to collect all movable property in one yard, and place all stock, tools and supplies under one storekeeper. The change will be a great improvement in many ways, and the advantage to be gained by the possibility of a more thorough system of supervision by the storekeeper is only one of many which will increase the efficiency of this branch of the Department and lead to more economical management.

#### OFFICIAL PLAN.

The plan of the City was completed, except six sections, and will be submitted to the Council for approval. The completion of this work will be of great benefit to the Engineering Staff, and will enable us to do at once, when required, work that we could not do before until special surveys had been made.

## EXPENDITURE.

The report of the Clerk of Works shows the totals:—

Water Maintenance.....	\$106,467	96
Water Construction .....	7,619	60
Sewer Construction .....	49,565	74
Sewer Maintenance .....	1,014	20
Streets .....	33,810	65
Internal Health, St. Cleaning, Scaven- ging, etc. ....	19,947	31
Patrol cleaning paved streets.....	4,983	96
Street Lighting .....	21,586	99
City Hall Lighting.. ..	856	00
Teams and Stables .....	8,441	26
City Property.....	2,549	59
Fire Insurance .....	805	95
Fuel City Hall .....	1,048	42
Baths .....	528	39
Telephones.....	264	00
City Plan .....	498	09
Agricola Street Widening.....	1,723	66
Quinpool Road " .....	618	17
Lower Water St. " .....	850	00
Bedford Row Fire Station.....	20,413	70
Morris St. " " .....	19,057	27
Parade Stable .....	467	42
Public Gardens Fence .....	10,629	17
Paving .....	59,315	00
Sidewalks .....	32,638	47
Workshops and Stables .....	9	54
Contingent expenditure .....	460	08
City Prison shops and stables.....	2,203	74
Fire Department .....	39	19
Electric Wiring .....	499	01
	<hr/>	
	\$408,912	53
Increase in expenditure above 1906.....	46,667	69
Total labor pay roll.....	132,748	69

I desire to express my sincere thanks to the Works Committee for the generous support and consideration given to the Engineer

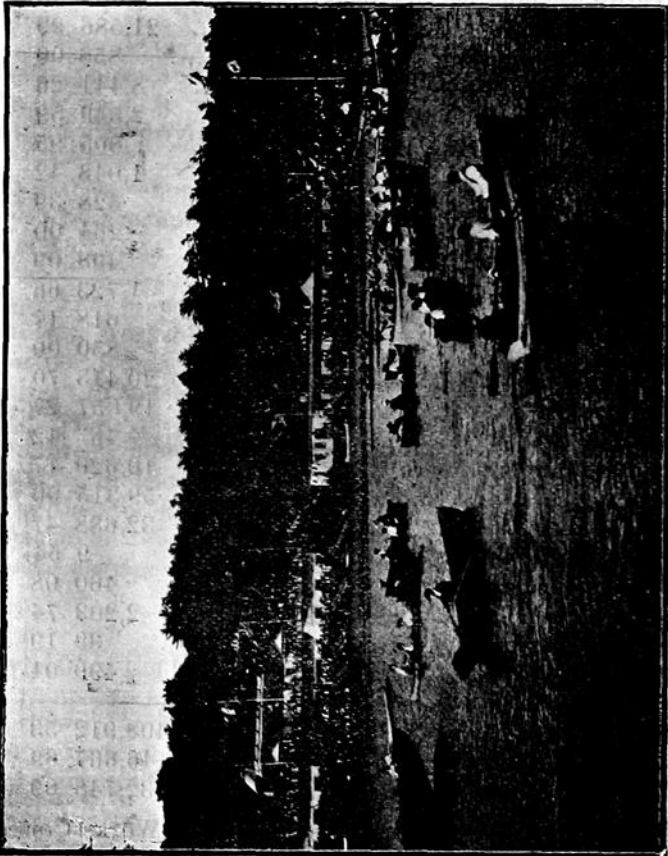
and other officials and employees. The memory of the helpful encouragement and kindly treatment will remain long after the names of the Committee have been withdrawn from the Council roll.

The reports of Foremen and Inspectors, statements of expenditure, etc., are appended.

Respectfully submitted,

F. W. W. DOANE,

*City Engineer.*



REGATTA ON NORTH WEST ARM.

## REPORT FOREMAN WATER DEPARTMENT.

HALIFAX, N. S., April 30th, 1908.

F. W. W. DOANE, ESQ.,

*City Engineer.*

SIR,—I beg to submit for your information, the annual report of stock belonging to the Water Department, length of mains laid and re-laid, mains re-cleaned, and service pipes laid, with location of houses supplied with water, during the year 1907.

Respectfully submitted.

E. MORRISON,

*Foreman Water Department.*





## Street Mains Replaced with Larger Pipe, 1907.

STREET.	From	To	Size in inches.		Length in feet.
			Old Pipe.	New Pipe.	
Harvey .....	Pleasant .....	W. to end 6" pipe ..	3	4	438
Gerrish .....	9" Lockman .....	W. side Lockman ..	9	12	16
Morris .....	E. side Hollis .....	W. side Pleasant ..	9	12	398
Barrington .....	Proctor .....	335 North .....	4	9	335
Proctor .....	E. side Barrington ..	W. side Barrington ..	6	12	59
Lockman .....	Cornwallis .....	Gerrish .....	6	9	1149
Lockman .....	Gerrish .....	367 ft. North .....	6	9	367
Lockman .....	North .....	336 ft. South .....	6	9	336
North .....	W. side Lockman ..	E. side Lockman ..	9	12	75
					3173

## Street Mains Renewed, 1907.

STREET.	From	To	Size in inches.	Length in feet.
Lockman .....	Artz .....	336 ft. North .....	6	336
Gerrish .....	9" Lockman .....	E. side Lockman ..	3	46
Gray's Lane .....	9" Lockman .....	E. side Lockman ..	3	44
				426

### Total Length in feet of Cast Iron Water Mains in the Water Supply System of the City of Halifax.

	SIZE OF PIPE IN INCHES.										Less than 3 in.	Total.
	27	24	20	15	12	9	8	6	4	3		
Length on December 31st, 1906 .....	14560	20524	6712	44236	37201	43962	663	148050	33531	30775	898	381112
Laid during 1907 .....					548	2187		2086	1276	129		6226
Taken up during 1907 .....						489		1911	335	438		3173
<b>Total December 31st, 1907 .....</b>	<b>14560</b>	<b>20524</b>	<b>6712</b>	<b>44236</b>	<b>37749</b>	<b>45660</b>	<b>663</b>	<b>148225</b>	<b>34472</b>	<b>30466</b>	<b>898</b>	<b>384165</b>

Equal to  $72\frac{905}{280}$  miles.

N. B.—45 feet of 20-inch pipe in waste way Chain Lakes and pipes from main to hydrants (except on wharves) laid previous to 1897 not included in above summary.

## Pipe Cleaning by Mechanical Scrapers.

DATE.	LOCATION.	Diameter in Inches.	Length cleaned in Feet.	COST	REMARKS.
1907.					
June 18th...	High Service Main .....	15 20	29628 6712	\$12 91	Re-cleaned.
Sept. 20th ..	High Service Main .....	20	6712		
	Pleasant St., (Spring Garden Road to Inglis St.).....	12	29628	21 15	Re-cleaned.
				152 20	Cleaned.

## New Service Pipes.

$\frac{1}{2}$ inch. Feet.	$\frac{3}{4}$ inch. Feet.	1 inch. Feet.	1 $\frac{1}{2}$ inch. Feet.	2 $\frac{1}{2}$ inch. Feet.	3 inch. Feet.	4 inch. Feet.	6 inch. Feet.	Total Feet.
2933	237	112	90	20	78	45	22	3537

## House Services Renewed.

$\frac{1}{2}$ Inch. Feet.	$\frac{3}{4}$ Inch. Feet.	1 inch. Feet.	2 inch. Feet.	Total Feet.
9484	178	41	19	9722

## New Hydrants.

STREET.	LOCATION.	Design.	Service.	Size of Pipe in		No. of Nozzles.	Distance Valves from Hydrant.	
				Inches.	Length of Pipe in Feet.		FT.	IN.
Kline.....	350 ft. N. of Quinpool Road ..	City.	H.	6	11	3	3	6
Kline.....	Corner Oak .....	"	"	6	14	3	5	0
Lawrence.....	Between Chebucto Lane and Harvard .....	"	"	6	14	3	.....	.....
Lane, west of Gottingen.....	Infectious Diseases Hospital...	"	"	4	30	2	10	0

## Old Hydrants Replaced with Frost Jacket Hvdnants.

STREET.	LOCATION.	Design.	Service.	Size of Pipe in		No. of Nozzles.	Distance Valve from Hydrant.	
				Inches.	Length of Pipe in Feet.		FT.	IN.
Pleasant.....	Cor. Green .....	City.	L	6	.....	3	8	2
Barrington.....	Cor. Hurd .....	"	"	6	.....	3	.....	.....
Bishop.....	Cor. Hollis .....	"	"	6	.....	3	.....	.....
Robie.....	Cor. Morris .....	"	H	6	.....	3	3	2

## Summary of Hydrants.

No of Hydrants on Streets	December 31, 1906 .....	380
" " "	Wharves .....	20
" " "	Military and Naval Property .....	20
" " "	Private Property .....	13
" " "	in use December 31, 1906 .....	433
" " "	set on streets in 1907 .....	4
" " "	in use December 31, 1907 .....	437

## Valves Renewed.

STREET.	ON PIPE.		SIZE IN INCHES.	
	From	To	Old.	New.
Harvey .....	Pleasant .....	Church .....	3	4
Morris .....	" .....	Hollis .....	9	12
Barrington .....	Proctor .....	Northwardly .....	4	9
Lockman .....	Cornwallis .....	Gerrish .....	6	9
" .....	" .....	" .....	6	9
" .....	Gerrish .....	Northwardly .....	6	9
" .....	North .....	Southwardly .....	6	9
Gerrish .....	E. side Lockman .....	" .....	3	3

## New Valves on Mains.

STREETS.	LOCATION.	Size.	Service.
Dublin .....	N. side Chebucto Road, 41' 0" to N. E. cor., 6' 0" S. of manhole .....	6	High.
North .....	E. side Dublin, W. of centre of manhole, 4' 10" .....	6	"
Vernon .....	S. side Jubilee Road, S. E. cor., 28' 0" .....	6	"
" .....	S. side School St., S. E. cor., 23' 10" .....	6	"
Bliss .....	W. side Robie St., S. W. cor., 32' 2" .....	3	"
Pleasant .....	S. side South St., S. E. cor. line, 24' 3" South 4" .....	12	Low.
Water .....	N. end Bedford Row to No. 18, to sill 20' 3" North of S. cor. 18' 0" .....	4	"
Gray's Lane .....	To N. cor. house, No. 84, 19' 6" S. of N. cor. 2' 6" .....	3	"
Lundy's Lane .....	S. W. cor. Wellington, 30' 8" .....	4	"
Harvey .....	N. W. cor. Pleasant, 12' 0" .....	4	"
Morris .....	N. E. cor. Pleasant, 23' 11" .....	12	"
Barrington .....	N. side Proctor, 32' 4", N. E. cor .....	9	"
Lockman .....	N. side Cornwallis, 15' 0", N. W. cor. ....	9	"
" .....	S. side Gerrish, 15' 0", S. W. cor .....	9	"
" .....	N. side Gerrish, 18' 7", N. W. cor., S. of house line 2' 6" .....	9	"
" .....	S. side North St., 24' 11", S. W. cor., N. of corner 1' 0" .....	9	"
North .....	N. W. cor. Lockman, 45' 6", S. W. cor. 31' 8" .....	12	"



## Hydrant Valves.

STREET.	LOCATION.	Size.	Service.
Kline .....	Corner Oak, 5' 0" from hydrant .....	6	High.
" .....	350 ft. N. of Quinpool Road, 3' 6" from hydrant .....	6	"
Lane off Gottingen ....	Infectious Diseases Hospital, 10' 0" N. from hydrant .....	4	"
Morris .....	Corner Hollis, 12' 4" from hydrant .....	6	Low.
" .....	Corner Pleasant, 8' 0" from hydrant .....	6	"
Gottingen .....	Between Cunard and Gerrish Sts., 2 ft. from hydrant .....	6	"

## Total Number of Valves.

	HYDRANT VALVES.										Total.				
	27"	24"	20"	15"	12"	9"	6"	4"	3"	1 1/2"		1"	3/4"	6"	4"
In use Dec. 31st, 1906 ....	1	8	229	55	67	355	106	109	1	9	2	11	89	...	844
Set in 1907 .....	...	...	...	3	5	4	3	2	...	...	...	...	6	1	24
Taken up in 1907 .....	...	...	...	...	1	4	1	1	...	...	...	...	...	...	7
In use Dec. 31st, 1907 ....	1	8	229	58	73	363	110	112	1	9	2	11	95	1	861

## Pipe Stock on Hand December 31, 1907.

No. of pieces	Diameter in inches.	Weight of one in lbs.	Total weight in lbs.	Value per lb. in cents.	Total value.	REMARKS.
3	27	2870	8610	1 $\frac{3}{4}$	\$ 150 67	Class A, T & B 12 ft.
3	27	3206	9618	1 $\frac{3}{4}$	168 10	Class B, T & B 12 ft.
1	27	3653	3653	1 $\frac{3}{4}$	64 10	Class C, T & B 12 ft.
6	24	2360	15150	1 $\frac{3}{4}$	202 12	
4	20	1263	5052	2 $\frac{1}{4}$	113 67	
7	15	1200	8400	2 $\frac{1}{4}$	189 00	
2	12	960	1920	2 $\frac{1}{4}$	43 20	12 ft. long.
13	10	550	7150	2 $\frac{1}{4}$	160 87	9 ft. long.
27	9	672	18144	2 $\frac{1}{4}$	408 24	12 ft. long.
57	9	500	28500	1 $\frac{3}{4}$	427 50	Plain pipes being in use.
45	6	380	17100	2 $\frac{1}{4}$	384 75	12 ft.
138	6	280	38640	2 $\frac{1}{4}$	869 40	9 ft.
67	6	280	18760	1 $\frac{3}{4}$	281 40	Plain pipes were in use.
938	4	156	146328	2 $\frac{1}{4}$	2292 38	
13	4	204	2652	2 $\frac{1}{4}$	59 67	
34	4	156	5304	1 $\frac{3}{4}$	79 56	Pipes taken up good.
14	3	130	1820	2 $\frac{1}{4}$	40 95	
48	2	2	96	2 $\frac{1}{4}$	2 16	Thimbles for service pipes.
156	26	26	4056	2 $\frac{1}{4}$	91 26	Stand pipes, service pipes.
127	12	12	1524	2 $\frac{1}{4}$	34 29	Plates for service pipes.
82	6	6	492	2 $\frac{1}{4}$	11 07	Round caps for service pipes.
360	22	22	7920	2 $\frac{1}{4}$	58 20	Sleeves & caps for service pipes.
8	34	34	272	2 $\frac{1}{4}$	6 12	Sleeves & caps for main stopcocks.
26	54	54	1404	2 $\frac{1}{4}$	31 59	Plates for main stopcocks.
1979	.....	.....	353565	.....	\$6170 27	

## Pipe—Specials.

No. of pieces.	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lbs.	Value per lb. in cents.	Total Value.
12	27	Thimbles	620	7440	21	\$167 40
2	27	Bell Mouths	831	1662	3	37 39
13	27	Bevel Collars	795	10335	3	310 05
1	27	Plain Special, 2 ft. long, Class A	404	404	13	7 07
1	27	" 2 " B	460	460	"	8 05
1	27	" 3 " B	700	700	"	12 25
1	27	" 4 " B	920	920	"	16 10
1	27	" 5 " B	1248	1248	"	21 84
2	27	" 5 " B	1144	2288	"	40 04
1	27	" 3 " C	820	820	"	14 35
1	27	" 3 " C	930	930	"	16 27
1	27	" 4 " C	1068	1068	"	18 69
1	27	" 5 " C	1332	1332	"	23 31
1	24	Bevel Collar	688	688	3	20 64
9	24	Thimbles	396	3564	2 $\frac{1}{2}$	80 19
3	24	Saddles	69	207	"	4 66
1	24	Cup	290	290	"	6 52
3	24	Split Thimbles	620	1860	2 $\frac{3}{4}$	46 50
1	24	Y Branch, 24x24	2372	2372	2 $\frac{1}{4}$	53 37
4	20	Thimbles	230	920	"	20 07
1	20	Split Thimbles	453	453	2 $\frac{1}{2}$	11 32
3	15	Four-way Branches	896	2688	2 $\frac{1}{4}$	60 48
1	15	Three-way Branch	812	812	"	18 27
3	15	Four-way Branches	660	1980	"	44 55
2	15	Ys	1112	2224	"	50 04
3	15	Thimbles	234	702	"	15 79
1	15	Reducing to 12" with 6" Branch	580	580	2 $\frac{1}{4}$	13 05
1	15	Reducing to 6"	400	400	2 $\frac{1}{4}$	9 00
9	15	Split Thimbles	260	2340	2 $\frac{3}{4}$	58 50
4	15	Saddles, 15", 6"	67	268	2 $\frac{1}{4}$	6 03
6	12	Saddles, 12" and 3"	55	330	"	7 42
1	12	Four-way Branch, 12" x 12"	615	615	"	13 84
2	12	Four-way Branches, 12" x 9"	500	1000	"	25 00
4	12	" " 12" x 6"	475	1900	"	42 70
2	12	Three-way Branches, 12" x 9" x 6"	494	988	"	22 23
3	12	" " 12" x 12"	524	1572	"	35 37
1	12	Three-way Branch, 12" x 9"	494	494	"	11 21
4	12	Reducing to 9"	240	960	"	21 60

## PIPE SPECIALS—(Continued).

No. of pieces.	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lbs.	Value per lb. in cents.	Total Value.
3	12	Reducing to 6" without faucet .....	200	600	24	15 50
2	12	" " 6" wih faucet.....	200	400	"	9 00
12	12	Thimbles .....	160	1920	"	43 20
3	12	Caps .....	45	135	"	3 07
7	12	Split Thimbles .....	222	1554	2 $\frac{1}{2}$	18 88
2	9	6-way Branches, 9" x 9" x 9" x 3".....	450	900	2 $\frac{1}{2}$	20 25
5	9	Three-way Branches, 9" x 9".....	355	1775	"	39 94
7	9	" " 9" x 6".....	335	2345	"	52 76
1	9	Angle " 9" x 6".....	335	335	"	7 54
3	9	Reducing 9" to 6", with faucet.....	157	471	"	10 50
1	9	Offset .....	156	156	"	3 51
1	9	Saddle .....	45	45	"	1 01
22	9	Split Thimbles .....	139	3058	2 $\frac{1}{2}$	76 45
4	9	Caps .....	34	136	2 $\frac{1}{2}$	3 06
13	9	Thimbles .....	112	1456	"	32 76
9	6	Four-way Branches .....	255	2295	"	51 64
9	6	Three-way " .....	209	1881	"	19 82
3	6	" " 6" x 4".....	200	600	"	13 50
3	6	" " 6" x 3".....	131	393	"	8 84
4	6	Y Branches.....	209	836	"	18 81
9	6	Reducing to 4" .....	114	1026	"	23 08
12	6	Offsets .....	140	1680	"	37 80
9	6	Reducing to 3" with faucets .....	105	945	"	21 26
2	6	" " 3" without faucets .....	100	200	"	4 50
22	6	Thimbles .....	75	1655	"	37 12
2	6	Bends .....	140	280	"	6 30
13	6	Caps .....	19	247	"	5 56
17	6	Split Thimbles .....	92	1564	2 $\frac{1}{2}$	39 10
22	4	Four-way Branches.....	123	2706	2 $\frac{1}{2}$	60 88
11	4	Three-way " .....	114	1254	"	28 21
6	4	Y " .....	96	576	"	12 96
5	4	Offsets .....	66	330	"	7 42
1	4	Reducing to 3" with faucets .....	90	90	"	2 02
4	4	" " 3" without faucets .....	84	336	"	7 56
2	4	Thimbles .....	29	58	"	1 30
15	5	Caps .....	15	225	"	5 06
5	4	Bends .....	88	440	"	9 90
3	4	Split Thimbles .....	64	192	2 $\frac{1}{2}$	4 32
8	3	Four-way Branches.....	90	720	2 $\frac{1}{2}$	16 20
5	3	Three-way " .....	60	300	"	6 75
10	3	Thimbles .....	29	290	"	6 52
38	3	Split Thimbles .....	48	1824	2 $\frac{1}{2}$	45 60

PIPE SPECIALS—(Continued).

No. of pieces.	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lbs.	Value per lb. in cents.	Total Value.
24	5	Main Stopcock Caps .....	16	384	21	8 64
6	2	Four-way Branches .....	30	180	"	4 10
2	2	Angle " " .....	23	46	"	1 03
5	...	Fire Hydrants .....	...	...	...	332 50
9	...	Castings for Fire Hydrants .....	418	3762	.03	112 86
13	...	Jackets for " " .....	340	4420	.03	132 60
21	...	Bases for " " .....	140	2940	.03	70 20
7	...	Extension pieces for Fire Plugs .....	124	868	.03	26 04
10	...	Cast iron Caps for Suction Hose .....	8	80	.03	2 40
23	...	" " Fire Hydrant .....	5	115	.03	3 45
12	...	Sets Brass fittings for Fire Hydrants .....	...	...	...	144 00
1	...	Base for Fire Hydrant, 6" x 3" .....	150	150	.03	4 50
...	...	Tin Tubing .....	220	200	33	66 00
				111188		\$313894



Valves.

No. of pieces.	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Weight of whole.	Value of each.	Total value.
1	12	Regulating Valves .....				\$206 66
1	6	“ “ .....				103 33
2	15	Stopcocks .....			\$70 00	140 00
1	12	“ “ .....			53 00	53 00
2	9	“ “ .....			25 75	51 50
36	6	“ “ .....			20 00	720 00
24	4	“ “ .....			15 00	360 00
2	3	“ “ .....			12 00	24 00
1	1 1/2	Service Stopcock .....			3 25	3 25
1	1 1/4	“ “ .....			3 00	3 00
26	1	“ “ .....			2 50	65 00
28	3/4	“ “ .....			2 00	56 00
124	3/8	“ “ .....			1 50	186 00
100	3/8	Curb Stopcock .....			1 50	150 00
5	15	Gun Metal Spindles .....	28	140	60	84 00
1	12	“ “ .....	19	19	60	11 40
3	9	“ “ .....	14	42	60	25 20
5	6	“ “ .....	9	45	60	27 00
5	4	“ “ .....	6	30	60	18 00
9	3	“ “ .....	5	45	60	27 00
377						\$2314 34

## Meters in Stock.

No. of pieces.	Diameter.	DESCRIPTION.	Value of each.	Total value.
5	6	Siemen's Meters	\$143 42	\$ 717 10
6	4	"	86 75	520 50
18	3	"	65 67	1182 06
1	1½	"	34 42	34 42
7	1½	"	29 16	194 12
6	1	"	21 50	129 00
5	1	"	15 50	77 50
11	1	"	14 50	159 50
		Trident Meters		
8	2	"	62 60	500 80
7	1½	"	37 60	263 20
11	1	"	21 00	151 00
4	1	"	17 60	70 40
74	1	"	11 97	897 75
2		Buffalo Meters	9 85	19 70
1		Keystone "	15 40	15 40
1		Hersey "	11 95	11 95
1		Worthington Meters	15 00	15 00
2		Nash "	11 98	23 96
1		Lambert "	11 20	11 20
1		Empire "	14 53	14 53
2		Crowns "	25 00	50 00
1		"	17 08	17 08
1		Disc. Pittsburg "	21 00	21 00
1		Standard "	8 75	8 75
1		Niagara "	8 47	8 47
				\$5114 39

## Joint Staves.

For 6 inch pipe.	For 9 inch pipe.	For 12 inch pipe.	For 15 inch pipe.	For 20 inch pipe.	For 24 inch pipe.	Key Wedges	Cost of each.	Total cost.
1000	1350	2800	2000	2500	3500	2000	1½	\$163 87
							4	5 00



## Free Pumps Maintained by City.

No.	LOCATION.
1	Leahyville.
1	Lady Hammond Road.
1	Kempt Road.
1	Duffus Street.
1	Africville.
1	North Kline Street.
1	Mott Street for Haley.
1	Quinn Street.

## Hydraulic Hoists in Operation.

NAME.	BUSINESS.	Size of Service.	How Rated.
Dominion Government .....	Post Office .....	3 inch.....	Meter.
" " .....	Appraiser's Office ..	3 " .....	"
G. M. Smith .....	Dry Goods .....	4 " .....	"
Wm. Stairs, Son & Morrow .....	Hardware .....	4 " .....	"
Dillon Bros .....	Groceries .....	3 " .....	"

## Motors.

NAME.	BUSINESS.	Size of Service.	How Rated.
Brunswick St. Church (Methodist) ..	Organ .....	2 inch.....	Indicator.

## Public Drinking Fountains.

No.	LOCATION.
1	Market Square.
1	St. Paul's Street, near Barrington Street.
1	Park Street, opposite Cogswell Street.
2	Public Gardens.

## Ornamental Fountains.

No.	LOCATION.
3	Public Gardens.
1	Grand Parade.

## Service Pipes Laid 1907.

Number.	Name of Owner or Agent.	Location of Pipes.	No. of Stopcocks.	Size of Pipe.	Purpose for which water is used.
1	W. H. Studd	S. side Chebucto Road	7169	2	Dwelling.
2	Eli Evans	E. side Maynard	7170	"	"
3	Tanner	E. side Maynard	7171	"	"
4	Mich. Maltus	N. side Pepperell	7172	"	"
5	John S. Murcheson	W. side Maynard	7173	"	"
6	I. S. Higgins	S. side Chebucto Road	7174	"	"
7	Chas. H. Lenaghan	E. side Kline	7175	"	"
8	H. C. Elms	W. side Kline	7176	"	"
9	Nora Taylor	W. side Kline	7177	"	"
10	Harry Pepall	W. side Kline	7178	"	"
11	W. Glazebrook	W. side Kline	7179	"	"
12	Mary Glazebrook	W. side Kline	7180	"	"
13	W. E. Hebb	W. side Robie	7181	"	"
14	G. J. Hiseler	E. side Brunswick	7182	"	"
15	W. E. Wellsman	W. side Kline	7183	"	"
16	T. McDonald	W. side Kline	7184	"	"
17	A. Yeadon	W. side Kline	7185	"	"
18	W. Jones	W. side Kline	7186	"	"
19	W. A. Shanks	W. side Kline	7187	"	"
20	J. H. Dawes	S. side North	7188	"	"
21	J. H. Dawes	S. side North	7189	"	"
22	E. Maxwell	N. side Jubilee Road	7190	"	"
23	Willard Kitchen	N. side W. Young	7191	1	Steam Drill.
24	L. W. Temple	E. side Tower Road	7192	1 1/2	Dwelling.
25	J. S. Frame	E. side Tower Road	7193	"	"
26	E. R. Wright	W. side Veith	7194	"	"
27	E. R. Wright	E. side Veith	7195	"	"
28	M. A. Casey	S. side Charles	7196	"	Stables.
29	Wm. Moxner	N. side Willow	7197	"	Dwelling.
30	R. H. Elliott	N. side Bliss	7198	"	"
31	W. H. Hutton	W. side Edward	7199	"	"
32	J. B. Kenny	S. side Coburg Road	7200	2	"
33	H. McC. Hart	E. side Lockman	7201	1 1/2	Tenements.
34	Eliza Langton	S. side W. Young	7202	"	Dwelling.
35	Geo. Pitcher	S. side Lawrence	7203	"	"
36	S. J. Harivel	N. side Lawrence	7204	"	"
37	Wm Carmichael	N. side Allan	7205	"	"
38		N. side Allan	7206	"	"
39	V. B. Beattie	S. side Allan	7207	"	"
40	Carrie Lewis	N. side Lawrence	7208	"	"
41	S. J. Harivel	W. side Clifton	7109	"	"
42	E. A. Wallberg	N. side W. Young	7210	1	Round House.
43	Mahar, manager	E. side Louisburg	7211	4	Arena Skating Rink
44	Monastery Good Shepherd	N. side Quinpool Road	7212	3	Fire purposes.



## SERVICE PIPE LAID 1907—(Continued).

Number.	Name of Owner or Agent.	Location of Pipes.	No. of Stopcocks.	Size of Pipe.	Purpose for which water is used.
45	J. F. Corston	N. side Lawrence	7213	1/2	Dwelling.
46	John McElmon	W. side Gottingen	7214	"	"
47	J. A. Lawson	W. side Preston	7215	"	"
48	Willis Manuel	E. side Maynard	7216	"	"
49	L. Peckham	E. side Maynard	7217	"	"
50	A. McAndrew	S. side W. Young	7218	"	"
51	John W. Brookfield	E. side Young Avenue	7219	"	"
52	Geo S. Lee	S. side Coburg Road	7220	"	"
53	A. H. Davidson	W. side Robie	7221	"	"
54	John Welsh	S. side South	7222	"	"
55	W. Cooley	W. side Windsor	7223	"	"
56	M. O. Crowell	W. side Lorne Terrace	7224	"	Lorne Tennis Club.
57	A. McFatrige	W. side Gottingen	7225	"	Lot.
58	Mark Moors	N. side Duncan	7226	"	Dwelling.
59	W. J. Hubley	S. side E. Young	7227	"	"
60	W. J. Hubley	S. side E. Young	7228	"	"
61	Walter Share	S. side Quinpool Road	7229	"	"
62	Flora Lake	W. side Plover	7230	"	"
63	W. J. Farrell	W. side North Albert	7231	"	"
64	S. J. Harivel	N. side Lawrence	7232	"	"
65	Board of Health	W. side Gottingen St	7233	"	Infectious Dis. Hos
66	G. C. Wittford	W. side Harvard	7234	"	Dwelling.
67	G. W. Fordham	N. side Tobin	7235	"	"
68	D. P. McNeil	S. side Pepperell	7236	"	"
69	Wm. Cooke	N. side Shirley	7237	"	"
70	R. S. Stevens	N. side Shirley	7238	"	"
71	J. A. Massey	N. side Shirley	7239	"	"
72	Silliker Co., Ltd	E. side Windsor	7240	"	Car Works.
73	John Warren	E. side Gottingen	7241	1/2	Dwelling.
74	C. S. Parcell	W. side Clifton	7242	"	"
75	T. G. Zwicker	E. side Lucknow	7243	"	"
76	T. G. Zwicker	E. side Lucknow	7244	"	"
77	J. H. Dawes	W. side Windsor	7245	"	"
78	A. D. Cooke	W. side Windsor	7246	"	"
79	Sarah Hurley	W. side Windsor	7247	"	"
80	S. J. Harivel	E. side Edward	7248	"	"
81	E. L. Newcombe	S. side Duncan	7249	"	"
82	Alice Burgess	S. side Chebucto Road	7250	"	"
83	W. & A. Moir	W. side Barrington	7251	1	Machine Shop.
84	C. A. Barnstead	W. side Barrington	7252	1/2	Lot.
85	M. W. Power	W. side Edward	7253	"	Dwelling.
86	Robert Flinn	W. side Edward	7254	"	"
87	L. W. Temple	E. side Tower Road	7255	"	"
88	Board Fire Wards	E. side Robie	7256	1	Engine House.
89	R. B. Knight	W. side Robie	7257	1/2	Dwelling.
90	Z. Bellfountain	N. side Fenwick	7258	"	Dwelling & Nursery

SERVICE PIPE LAID 1907—(Continued).

Number.	Name of Owner or Agent.	Location of Pipes.	No. of Stopcock.	Size of Pipe.	Purpose for which water is used.
91	W. E. Matheson	E. side Agricola	7259	$\frac{1}{2}$	Dwelling.
92	P. W. Maxner	W. side Creighton	7260	"	"
93	T. G. Zwicker	N. side Lundy Lane	7261	"	"
94	W. Smith	W. side S. Bland	7262	"	"
95	M. T. Foster	E. side LeMarchant	7263	"	"
96	Mrs H. Fulton	N. side Coburg Road	7264	"	"
97	Gray & Flinn	S. side Morris	7265	"	"
98	J. N. McElmon	N. side W. Young	7266	"	"
99	A. Thomson	S. side W. Young	7267	"	"
100	Moirs, Ltd.	W. side Argyle	7268	$2\frac{1}{2}$	Cold Storage.
101	E. Maxwell	N. side Jubilee Road	7269	$\frac{1}{2}$	Dwelling.
102	E. A. Wallberg	N. side West Young	7270	1	New Round House.
103	Thos. Stroud	E. Clifton	7271	$\frac{1}{2}$	Dwelling.

## Total Precipitation for the year 1907.

1907.	CHAIN LAKE.				SPRUCE HILL LAKE.				CITY OF HALIFAX.			
	Snow.	Melted Snow.	Rain.	Total.	Snow.	Melted Snow.	Rain.	Total.	Snow.	Melted Snow.	Rain.	Total.
January .....	20.25	2.58	2.83	5.41	24.75	3.07	2.31	5.38	25.00	2.500	3.686	6.186
February .....	19.75	2.41	2.37	4.78	21.25	2.88	2.37	5.25	25.40	2.540	1.941	4.481
March .....	11.00	1.28	1.82	3.10	13.50	1.60	2.48	4.08	10.30	1.030	2.334	3.364
April .....	5.50	.66	2.26	2.92	8.25	1.02	2.83	3.85	5.20	.520	2.698	3.218
May .....			2.77	2.77	.25	.04	3.67	3.71	.20	.020	3.324	3.344
June .....			3.40	3.40			3.64	3.64			3.723	3.723
July .....			3.79	3.79			4.21	4.21			3.381	3.381
August .....			4.54	4.54			4.88	4.88			4.865	4.865
September .....			3.94	3.94			5.94	5.94			4.260	4.260
October .....	3.00	.38	4.95	5.33	2.50	.19	6.15	6.34	3.00	.300	5.040	5.340
November .....	1.00	.14	5.79	5.93	2.50	.27	6.34	6.61	.13	.130	5.909	6.039
December .....	21.50	2.62	3.58	6.20	17.25	1.87	6.09	7.96	13.40	1.340	5.375	6.715
Total .....	82.00	10.07	42.04	52.11	90.25	10.94	50.91	61.85	82.63	8.380	46.536	54.916