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# City Document-No. 11.

## ANNUAL REPORT

OF THE

# COCHITUATE WATER BOARD,

TO THE

CITY COUNCIL OF BOSTON,

FOR THE YEAR 1855.



 $$\rm B\ O\ S\ T\ O\ N\ :$$  Moore & Crosby, printers,—1 water street.

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### REPORT.

Office of the Cochituate Water Board,

January 15, 1856.

To the CITY COUNCIL.

The Cochituate Water Board respectfully submit to the City Council, their annual report for the year 1855. They also, in compliance with the city ordinance, transmit the Reports of the City Engineer and Water Registrar relating to the same period. They would beg leave to refer the City Council to those reports for detailed statements of all matters relating to the condition and progress of the water works, during the year.

The Water Board have the gratification of again being able to report, that the *general condition* of the water works, in every department, is entirely satisfactory.

The supply of water at the Lake, has been most abundant for all the public, domestic and manufacturing uses, which were had in view on its introduction into the City; and for which it could be required, not only by the present population, but by any probable increase of it for many years to come. Our means of conveying

the same to the City, in any reasonable supply, are also at present, ample. Upon reference, however, to the report of the City Engineer it will be apparent, so great has been the average daily consumption, that there must have been a failure of supply on the more elevated portions of the City, even now, in this early period of the history of the works, whenever the draft much exceeded the average. The daily average drawn from Brookline Reservoir, for consumption in the City, is calculated to have been 10,346,300 wine gallons; near a half a million gallons more than that of the preceding year. Whenever, therefore, the draft exceeded the average, the means from Brookline Reservoir became insufficient for keeping up the supply for the high service, unless one of them was entirely devoted to that object; this was accordingly done, when it was possible, but it could not be persisted in for any considerable time, without the most serious effects being felt in the Reservoirs at South and East Boston, which were at once drained, to supply the low service in the City proper. For the purpose, therefore, of equalizing in some degree, the supply to different parts of the City, it was necessary to keep continually opening and shutting the gates, by which the water was let on or shut off from the high service.

During the past year we have also experienced not only the insufficiency of the mains to Brookline, which, indeed, the experience of previous years had frequently taught us, but the brick aqueduct has, at times, been found inadequate for supplying the enormous draft made upon it. With a head of 7 1-2 feet of water at the Lake, the brick aqueduct is capable of deliver-

ing, at the Brookline Reservoir, fifteen million of gallons in twenty-four hours. So great, however, has been at times the consumption, that with that pressure, the head could not be kept up in the Reservoir, but, on one occasion, fell ten inches in the course of three days. There was a loss at the same time of four feet in the Beacon Hill Reservoir and five feet eight inches in the East Boston, both being nearly drained; the gates in the South Boston Reservoir being shut. The consumption therefore must have been more than 15 million gallons in 24 hours.

We have been brought, during the past year, still nearer, and in fact close upon the time anticipated in former reports, when it will be necessary, in order to keep up an equal supply over the whole territory, to provide some mode of introducing a further quantity; or to restrict its use to merely domestic purposes, and thus lose the income, no inconsiderable amount, which we now derive from its use in manufactories and for other purposes. There does not seem to be any other alternative, except indeed the almost hopeless one, of attempting to produce a greater economy and care in the use of the water, and preventing the reckless waste which seems everywhere to prevail. If this could be done effectually, it would leave, of course, an ample supply of water for all the useful purposes for which it could be required; as it is probable that at least one half of the whole quantity now used, is absolutely and unprofitably wasted.

The Water Board will continue their efforts for this very important object, so intimately connected with the welfare and best interests of the City. For this purpose

they will adhere to the plan heretofore adopted, of examining periodically, all the water fixtures in use; and of causing, at proper seasons, and whenever it is practicable, a daily and nightly inspection, to be made, of the mode of using the water throughout the City. Some good, it is believed, has been already done by this course, in the detection of many cases of wanton and gross waste. They were cases, however, which being obvious to the sight or hearing of the police, were easily detected. The great mass of cases, in which almost the whole evil is involved, take place so secretly and so silently as to be entirely beyond the cognizance of the most sagacious inspector we can employ, and to be known in fact only to those who cause them. We fear that nothing but a more just and universal appreciation, than now prevails, of all the ill consequences which must necessarily follow the present wastefulness; and a very general and serious determination to put a stop to it; each one beginning, for this end, with his own household, will have much effect in correcting the evil.

The foregoing suggestions as to our means of supply, must be understood, however, to have reference to the present population of the City, and its natural increase; and not to an increase of territory and population by the annexation of other towns or parts of towns, as has been from time to time proposed in relation to Roxbury, Charlestown, and Chelsea. The first thing to be done in case of any such annexation, will be to lay at once, an additional main, of 30 or 36 inches to Brookline, at a probable cost of over \$300,000, or the supply of the high service must entirely fail.

And here, in reference to this subject, we deem it our

duty again to ask the attention of the City Council to some sources of great and unnecessary waste, which seem to be more peculiarly subject to the supervision of the Council, and which it is in the power of the Council alone to prevent.

One is the large number of *wrinals* and fixtures of similar character, in and about the *Public Buildings*, constructed generally without much reference to economy in the use of water; and where a continuous flow is kept up, night and day, at all seasons of the year; to an extent probably not realized by any member of the government, and not at all required for any purposes of cleanliness.

The other is the extravagant use of water for watering the streets, (an evil sufficiently obvious to all who have to walk the streets,) by which they frequently are so covered with mud as to be almost impassable, and a vast quantity of water worse than wasted.

The Water Board would also respectfully ask the attention of the City Council to the entire inadequacy of the penalty which the present ordinance prescribes for any waste of water, no matter how gross and reckless it may be. It merely directs that the water shall be cut off from the premises and not let on again except on payment of two dollars. That sum will hardly be sufficient to pay the City the actual expense of shutting off and letting on under the most favorable circumstances; of course, when the ground is frozen and the street encumbered with ice and snow, it becomes entirely inadequate. We would respectfully suggest that the penalty might vary, and be somewhat in proportion

to the difficulties which the different seasons of the year necessarily occasion.

The gates at the outlet dam were closed April 28th, and the water retained being then 8 feet above the flume. It supplied the City during the summer and fall, and gradually fell until the 12th of November, when it stood 2 feet 4 1-2 inches above the flume, its lowest point during the season, and being 3 inches above the lowest point of the last year; subsequently it rose in the lake, and was 7 feet 8 inches above on the 1st of January.

There has been no complaint of any offensive change in the character of the water during the year, similar to that of the previous one. The impurities of that year, so obvious both to the taste and smell, gradually disappeared, and were not perceived any where about the middle of February; leaving their cause and origin in entire obscurity. We still believe that the most plausible suggestion was that made by the Water Board, and confirmed by the opinions and able researches of Drs. Horsford and Jackson, published with the report of last year, that the remote cause of the impurity was to be attributed to the long drought and heat of the summer of that year, and the unusually low state of the water in the Lake, and was the result of vegetable decomposition. If it be so, the evil was one which we must probably contend with again; and it becomes important that the water in different parts of the lake should be continually watched, particularly during the summer months, and the slightest deterioration traced, if possible, to its source.

This has been quite satisfactorily done during the

past season by the Superintendent of the Lake. We regret to state, that for a short period an impurity, similar in character to that of the previous year, but not so intense, was clearly and obviously distinguishable in the Northern division and at the gate house. The water of other parts of the lake was, however, at once examined, and the cause of the impurity traced, without difficulty, to Whitney's meadow, in the Southern division, where it was quite offensive. meadow consists of about 65 acres, and was entirely separated by the Commissioners from the other parts of the lake by a permanent dam, from an apprehension then entertained, of the impurity of the water there; a passage way had, however, been forced on top of the dam, through which the water could flow when at a sufficient height, and at the time mentioned it was running over. This passage way was at once closed, and shortly after, the peculiar taste of the water disappeared.

The water from *Dug Pond* was not admitted into the lake during the season.

The water of *Snake Brook*, also, when raised to such a height as to show no evidence of impurity, was allowed to pass over the dam heretofore built, without any ill consequences.

The extension of the works has been continued during the year, and distributing and service pipes have been laid in new streets, &c., wherever required, and when the water rate to be assessed was equal to the interest on the cost. In one instance, however, the latter requirement was necessarily departed from. The City Council having directed the pipes to be laid in Wash-

ington Village, lately annexed to South Boston, it was accordingly done, at considerable cost. It will be probably some time before there will be a sufficient number of water tenants to pay a water rate equal to the interest of the expenditure.

The length of *Distributing pipes* of 4, 6 and 12 inches diameter, laid during the year, is 13,831 feet, being 4,817 feet more than the last year.

The number of new *Stopcocks* is 19, including one in the branch to the State Prison.

The whole length of distributing pipe now laid, including hydrant branches and bends, is about 113 2-5 miles. The present number of stopcocks is 980.

The number of *Service pipes* laid during the year is 798, the length of which was 26,150 feet. The whole number being 18,797.

The number of *hydrants* established during the year was 42. The whole number is 1,252.

The number of *leaks* repaired in pipes of 4 inches and upwards, was 75. In those of less than 4 inches it was 219.

The very important repairs made upon the upper end of the brick aqueduct recently, particularly in the use of English cement for stopping the leaks in the part which was laid over quicksands and had never been made tight, have been eminently successful; and it is believed all those leaks are now permanently closed. Other leaks, which from time to time occur in other divisions, are more easily closed, and occasion little solicitude.

The leak in the East Boston Reservoir is getting to be of serious importance, and complaints are made on the

subject by the owners of the neighboring estates; all attempts hitherto made to stop it have been ineffectual. An earnest endeavor will be made the ensuing season, to make it tight, either by laying a brick lining in the interior, or in some other more effectual way, involving as we are afraid, considerable expense.

Notice was received last summer from the Commissioners appointed by authority of the Commonwealth, that the part of the twenty inch main, laid under the Warren Bridge, between the draw and Charlestown, was in the way of the alterations and improvements about to be made in the bridge, and requesting the City authorities to remove the same at the expense of the city. As the main was placed in its present position under the supervision of officers appointed by the Commonwealth and paid by the city, its authority to call upon the city to pay the expense of the removal seemed somewhat questionable, and we refused to do it, and protested against the right of the commissioners to interfere with the box in which the main is placed, they having stated that they should remove it. The city solicitor, on application, afterwards gave an opinion as to the rights of the city, similar to that'of the Water Board. The commissioners have since altered their plan so as not to interfere with the present arrangement of the city, and laid a plank sidewalk, stating, however, that an application would be made to the Legislature, at its present session, on the subject. The main referred to, is laid on independent piles, directly under the sidewalk of the bridge, and in case repairs should be required, is in a very inconvenient position both for the public and those having the care of it. Perhaps, therefore, it would be

expedient for the city to be at part of the expense hereafter, of removing it outside of the bridge and placing it upon independent piles, similar to the part on this side of the draw.

The annual report of the Water Registrar contains, as required by the Ordinance, "a statement of the number of water takers, the number of cases where the water has been cut off, the number and amount of abatements, and the expenditures of his department." The list of water takers has been arranged, as usual, into different classes, and the amount of water rate paid by each class given, the water rate being as usual paid to the clerk of the Treasurer in the office of the Water Registrar.

The whole amount received for water rates was \$266,-302 77. In this is included receipts for Janaica Pond, \$2,280 74, and for water used in previous years, \$6,551 97.

The amount received for cutting off and letting on water, for non payment of water rates, \$874. There was also received, for cutting off and letting on water for repairs and unnecessary waste, and also for laying service pipes by the service clerk, \$3,872 20, making the whole amount received from every source during the year, \$271,048 97, or \$48,124 27 more than was received from the same sources the year previous. The number of water takers entered for the present year, is 19,998, being an increase of 805 over the last year.

The water has been shut off in 2,405 instances, and has been let on in 2,716 instances. The estimated receipts for the present year are \$280,000.

The usual condensed classification of the various water

tenants has been prepared, and a statement of the amount of water rate paid by each class; the whole, being collated with similar tables for the two preceding years, is here inserted.

1853.	1854.	1855.		1853.	1854.	1855.
13,682 2,845 283 480 8 8 2 16 932 1 63 3	14,073 3,031 299 518 7 7 3 21 811 1 67	3,263 340 551 7 3 3 31 728 1 81 4	Stores, shops, offices, cellars, &c., Hotels, restaurants, and saloons, Stables, - Railroads, - Ferry companies, - Steamboats, - Hose, - Motive power, { Sugar refineries, distilleries, } Gas companies, - Other manufacturing purposes, City buildings and other city } uses, Public buildings, charitable in- stitutions, &c. Shipping contract with water } men, Street waterers, Building purposes, Other purposes,	\$119,891.18 16,006.93 6,459.57 6,515.38 6,557.20 1,006.53 3,055.81 2,829.00 535.51 6,635.93 514.47 16,247.23 1,053.83 3,900.06 655.88 609.93 1,544.00	18,242.25 10,302.09 6,869.14 5,912.28 2,115.64 3,211.85 2,452.00 783.44 7,303.49 508.76 18,738.22 3,733.50 1,627.92 4,647.08 532.45 917.40 1,479.50	23,587.00 10,895.63 7,578.75 7,523.40 2,608.28 4,370,01 2,205.00 800.00 11,237.20 655.52 18,272.51 4,011.50 1,834.40 4,223.78 973.72 735.05 920.17

The expenditures in this department have been the particulars are given in the report.

A statement of the *Receipts and Expenditures* the past year, by the Clerk of the Water Board, is hereto annexed. The following analysis has been prepared: The whole amount of *Expendi*-

tures was, - - - - - - - \$64, 617 01

From which, deducting rents and sundries received and allowed at Marlboro' and at and near the Lake, amounting to - 750 68

Leaves the amount drawn from the Treasury, - 63,866 33

Amounts carried forward,

\$63,866 33

Amount brought forward, \$63,866 33
Of this there was paid on account of the
permanent extension of the works, 36,553 75
Balance amount of current expenses, 27,312 58  The whole amount of Receipts paid into the  City Treasury, was,
Cash, and notes secured by mort- gage for land sold in Need- ham, 200 00
Do. Brookline, 3,270 05
Do. Wayland 1,400 00 Cash for rents, grass, and sun-
dries, 1,248 13 Cash for service pipe and laying, 1,797 20
Cash for shutting off water, &c., 2,075 00 9,990 38
Balance, \$17,322 26  The amount drawn from the City Treasury has been \$16,316 02 less than the previous year. The amount considered as the current or ordinary expenses, has been
\$6,636 90 less, while the payments on account of the
permanent extension of the works, owing principally to
the laying the pipes for the supply of Washington Village, by direction of the City Council, have been
\$5,034 40 greater.
If we add to the above saving of expense, \$16,316 02
the amount gained on the water rates, or 48,124 27 the amount will be the actual gain to the
treasury, or over the preceding year, 64,440 29
The sales of land during the year have been small.

They consist of an estate in Wayland, embracing of a

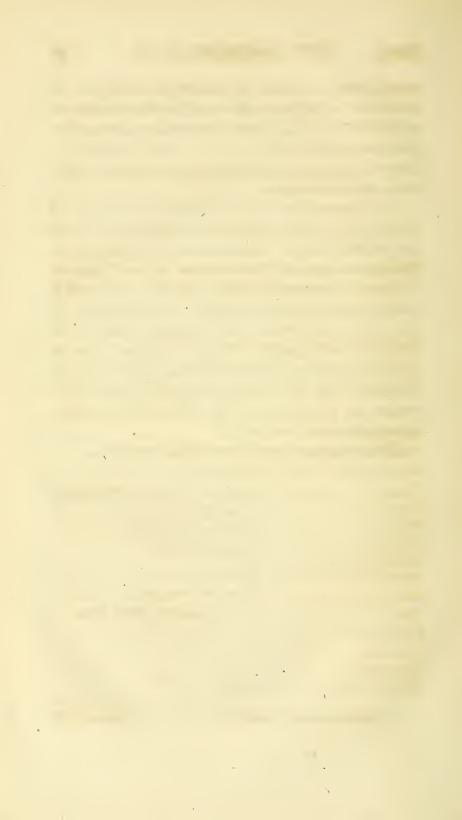
small house and barn, for \$1,400, a lot of land in Needham for \$200, and land near the Brookline Reservoir, for \$3,270 05. In the latter sale an arrangement has been made by which part of the land adjoining the Reservoir is to be kept free from buildings, and merely cultivated for ornament.

The Compensating Reservoir Estates at Hopkinton and Marlboro' have been advertised for sale or to be let, as yet without success. Negotiations are now making for the disposal of the Mill privileges, at Saxonville, and it is believed an arrangement will be made. And there is some prospect that the board will have to propose to the Board of Aldermen or City Council a sale of the Jamaica Pond Aqueduct. It will continue to be the wish of the Water Board to dispose of any part of the property of the City under its control, which is not wanted for the purposes of the Water Works, as often as an opportunity may offer.

The foregoing report is respectfully submitted,

THOMAS WETMORE, President.
ADAM W. THAXTER, JR.,
WILLIAM WASHBURN,
THOMAS SPRAGUE,
SAMUEL HATCH,
CHARLES STODDARD.

Cochituate Water Board.



#### RECEIPTS AND EXPENDITURES.

STATEMENT OF ALL EXPENDITURES MADE BY THE COCHITUATE WATER BOARD, FROM DECEMBER 31st, 1854, TO JANUARY 1st, 1856.

Blacksmith's Shop, for Stock, &c., -	<b>\$</b> 160 52
Plumbing, " " -	62 01
Cartage, Boston,	106 12
"South Boston,	<b>1</b> 50 38
"East Boston,	3 25
Traveling Expenses,	198 24
Salaries,	8,255 57
Office Expenses, for rent, fixtures, &c.,	<b>1,</b> 878 09
Postages,	11 34
Expresses,	1 27
Stationery,	132 08
Printing,	355 98
Advertising,	10 00
Recording Deeds, &c.,	4 31
Miscellaneous Expenses,	65 57
Taxes,	1,123 12
Oil and Wicking,	80 75
Tools,	213 84
Fountains,	372 64
Beacon Hill Reservoir, for labor, &c.,	200 89

Amount carried forward,

\$13,386 07

Amount brough	t forwar	đ,		\$13,386 O7
South Boston, "	"	66	100 15	
East Boston, "	. "	64	91 03	
Brookline, "	66	66	602 43	
Aqueduct Repairs, fo	r labor	and		
materials, -		-	<b>1,646</b> 69	
Lake Cochituate, for la	bor, &c.,	-	333 59	
Lanterns,		-	33 00	
Tolls and Ferriages,		-	85 38	
Service Pipes, -		.=	1,157 28	
Bosto	n, -		. 2,691 58	
u u S. u			1,166 85	
ee ee E. ee	-		2,030 80	
Water Pipes, -		-	17,753 97	
Hydrants,		z <del>-</del>	628 83	
" Boston, -			2 00	
Hydrant Boxes, -			206 98	
" Boston	n,		8 00	
Stop Cocks,		_=	761 46	
" Boston,			396 83	
. " S. "		-	40 00	
ee E. ee			40 00	
Stop Cock Boxes,		-	225 10	
" " Bosto	on, -	-	50	
Union Stop Cocks,		-	933 58	
Laying Water Pipes,	- ` -	-	584 94	
46 66 64	Boston,		195 98	
ce ce cc S	, ee =	-	733 38	
Water Meters, -			65 67	
Laying Service Pipes, l	Boston, -	~ -	21 08	
Repairing Streets,	" -		342 37	
" " S.	-	-	31 68	
Repairing Water Pipes	,		56 63	
" Service "			12 24	32,980 00
Amount carrie	ed forwa	rđ,		\$46,366 Q7

Amount brought forward,			\$46,366 07
Marlboro' Reservoir,	-	18 25	
Rents,	-	79 00	
Land Damages,	-	10 00	
Land and Water Rights, -	-	704 00	
Water Works, East Boston, -	-	389 57	
" Boston,	•	3 50	
Damages, Boston,	-	38 00	
Jamaica Pond Aqueduct, -	-	12 00	
Stable, for grain, &c.,	•	431 95	
Repair Shop, for stock, &c., -	-	220 86	1,907 13
Amount carried forward,			\$48,273 20

### Amount paid for Labor, viz.:

Letting	on and	Shu	tting	r off	Wa	ter.	2,223	92		
Blowing			_	_	_	-	689			
Laying	,				_	-	1,277	16		
"	66		S.	"		-	1,198	84		
66	66	4.6	E.	66	-	-	204	62		
Laying	Service	Pipe	s, Bo	ston	, -	-	2,077	14		
"	66	44	S.	66	-	-	471	32		
66	66	66	E.	66	-	-	652	87		
Blacksn	nith's S	hop,		-	-	-	538	37		
Plumbi	ng,	"		-	-	•	653	01		
Proving	Yard,	Chr		•	-	-	2,274	06		
Repairi	ng Stree	ets, B	ostor	1,	-	-	<b>7</b> 58	03		
44	64	S.	66		-		59	37		
44	64	E.	, "		-	-	79	49		
"	Wat	er Pij	pes,		•	-	802	39		
46	Serv	rice	46		•	-	1,211	14	,	
	Amour	its car	rried	fore	vard	',	\$15,171	04	\$48,273	20

\$63,866 33

Amount brought forward, \$1	.5,171 04 \$4	8,273 20
Repairing Hydrants,	687 09	
" Stop Čocks,	149 81	
Miscellaneous,	165 76	
Jamaica Pond Aqueduct,	82 36	
Water Meters,	87 75 1	6,343 81
	\$6	34,617 01
Cr.		
Marlboro' Reservoir, for rent,	106 00	
Cash of H. Richardson, for rents, &c.,	608 68	
	36 00	750 68
Amount of Expenditures,	\$6	33,866 33

### Cash, &c., paid City Treasurer.

Amount carried forward,

$\mathbf{For}$	Grass at sundry places,	120 00	
66	Land in Needham,	200 00	
"	" " Brookline,	3,270 05	
66	" " Wayland,	1,400 00	
66	Rents of land near the Lake, -	112 00	
66	Labor, Materials, &c.,	1,016 13	
		6,118 18	
For	Service Pipe and laying, 1,797 20	·	
"	Shutting off and letting		
	on water, 1,649 00		
**	Shutting off water for		
		3,872 20	9,990 38
	Balance,		\$53,875 95

Amount brought for	ward,			\$63,866 33
Extension of the I	Work.			
Main Pipes,	-	-	17,753 97	
Service "	_	-	7,046 51	
Hydrants,	-	-	630 83	
Stop Cocks,	-	-	1,238 29	
Labor Laying Main Pipes,	-	-	2,680 62	
Materials, " " "	-	-	1,514 30	
Labor laying Service Pipes,	-	-	<b>3,201</b> 33	,
" at Proving Yard,	-	-	2,274 06	
Tools,	-	-	213 84	36,553 <b>75</b>
Amount of annu	ial Ex	pens	es,	\$27,312 <b>5</b> 8

Statement of the Expenditures and Receipts on account of the Water Works to January 1st, 1856.

Amount	drawn	by the	Commissioners,	\$4,043,718 21
"	66	66	Water Board of 1850,	<b>3</b> 66, <b>1</b> 63 89
66	46	46	C. W. Board of 1851,	141,309 23
" "	"	66	C. W. Board of 1852,	89,654 20
46	"	66	C. W. Board of 1853,	89,854 03
"	66	"	C. W. Board of 1854,	80,182 35
"	"	66	C. W. Board of 1855,	63,866 33

\$4,874,748 24

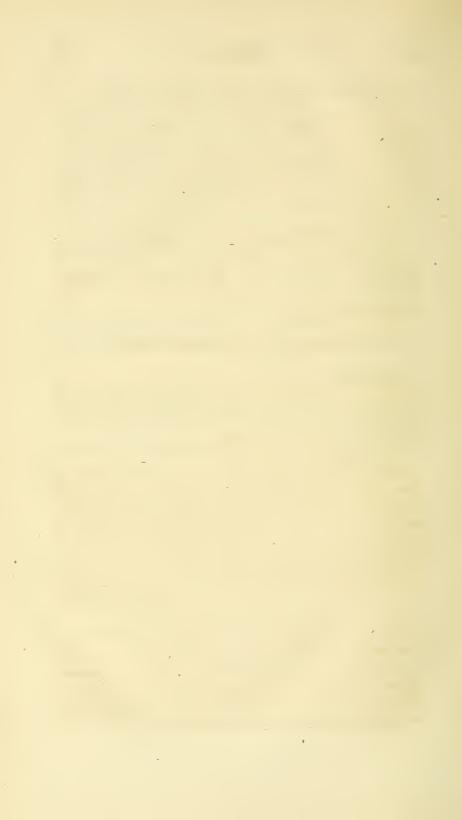
Amount paid into the City Treasury
by the Commissioners, - 47,648 38

Amount paid into the City Treasury
by the Water Board of 1850, - 8,153 52

Amounts carried forward, \$55,801 90 \$4,874,748 24

Amounts brought forward, \$55,801 90 \$4,874,748 24
Amount paid into the City Treasury
by the C. W. Board of 1851, 5,232 38
Amount paid into the City Treasury
by the C. W. Board of 1852, - 15,869 12
Amount paid into the City Treasury
by the C. W. Board of 1853, 4,621 40
Amount paid into the City Treasury
by the C. W. Board of 1854, 12,423 29
Amount paid into the city Treasury
by the C. W. Board of 1855, 9,990 38 103,938 47
\$4,770,809 77
Sundry payments by the City, 45,388 99
Discount and interest on loans, 2,109,975 63 2,155,364 62
#0.000.1EL.00
\$6,926,174 39
Sundry credits by the City, 2,077 17
Amount rec'd for Water Rents, &c., 1,192,925 08 1,195,002 25
A 1 T 1 1056 65 791 179 14
Amount due, January 1st, 1856, \$5,731,172 14





## APPENDIX.

#### CITY ENGINEER'S REPORT.

Boston, January 5, 1856.

THOMAS WETMORE, Esq.,

President of the Cochituate Water Board.

SIR: — The annual report relative to the condition of the various structures of the Water Works, is herewith submitted.

### Lake Cochituate, etc.

During the past summer and fall, the water in the Lake has been of its original purity, and no complaints have been made of bad water in the City, owing in a great measure to the unimpeded circulation of the water through all parts of the Lake and most of its tributaries, and to the care and attention which has been given to the removal of matters tending to impair its purity in the Lake and tributaries. The waters of Snake Brook, and of the meadow south of the Lake, were allowed to flow freely into it a few weeks last fall.

The roads, bridges, dams, etc., connected with the Lake are in their usual good condition.

The Gate Houses at the Lake, and at Brookline Reservoir, the waste weirs and other structures along the line of the Brick Aqueduct, are all in very good condition, not having required repairs of any consequence since their erection.

### Brick Aqueducts and Tunnels.

A personal examination of the interior of the Aqueduct was made during the latter part of December, 1855, in company of Mr. Knowlton. The tunnels have undergone no change since being finished, the rock through which they were made being of such firm texture that exposure to air and water has not had any perceptible effect upon it.

There are still some leaks into the tunnels through seams in the rock, which are not objectionable, as the water is quite pure.

The section of the conduit through the tunnels is somewhat larger than the brick portion, and, as the velocity of the water is less through them than through the other portions of the conduit, more sediment deposits in them, requiring to be cleansed oftener than other parts of the work. The entire line of conduit should be cleansed out early in the spring.

A new crack was discovered last spring near a culvert in West Needham, one in Newton about 50 feet long, near station one; and also another near Dedman's Brook, of about 100 feet in length. All these have, no doubt, been caused by heavy loaded teams passing over the conduit at nearly right angles to its direction, and up very steep grades. It is advisable to change the grades and directions of these roads to prevent more extended damage in future. Other cracks, which have been mentioned in previous reports, remain stationary, with the exception of two or three, which have slightly increased. None of the cracks are sufficient to cause any apprehension of trouble. There are also a few more leaks into the conduit which may be easily stopped at the spring cleansing.

It will be advisable to repair the conduit near Webber's Barn, by taking out and relaying about 25 feet of the top arch. A crack has existed here for some time, and portions near this place have been before renewed.

A piece also of the conduit, in the third division, near Newton Centre, should be coated on the bottom with cement, early in the season. Those portions of the aqueduct, which have been repaired with English cement, remain perfectly tight. By comparing these portions, with others which have been repaired with American cement, the superiority of the English is so very apparent, that it would be advisable to use it in all the repairs to be made hereafter.

The heavy embankment of puddled gravel at Ware's Valley, near Charles River, is, as it has been from the commencement, in excellent condition, never having settled enough to cause any crack in the conduit since the first season of the introduction of water into the City.

But very few of the peculiar vegetable substances heretofore mentioned, were found in the conduit.

#### Brookline Reservoir.

This reservoir is in good order, the grounds and structures having been well attended to. It will be advisable, during the present year, to take the upright screens out of the gatehouse, and replace them with circular ones, similar to the one in the gatehouse at the Lake. The circular screens are very easily cleared of all leaves and rubbish which collect against them, and are not so liable to be broken as the others, and when broken on one side they may be turned on their centres, so as still to be as effectual as the upright single ones in keeping out leaves and fishes.

The two large meters still remain, but have not been used during the past year in determining the amount of water consumed in the city.

### City Reservoirs.

The usual attention has been paid to these Reservoirs during the past year. Neither of them has had any repairs of consequence. The leakages spoken of in previous reports, in the Beacon Hill and East Boston Reservoirs, have increased but little. The old wooden fence has been removed from the South Boston Reservoir, and a substantial and ornamental iron one has been erected in its place.

The lands belonging to the Water Works, the compensating reservoirs, and the Jamaica Aqueduct, have received all necessary care and attention during the year, and are all believed to be in as good condition as at any previous time.

Average Monthly Heights of Water in the Reservoirs at Brookline, Beacon Hill, South Boston and East Boston, 1850-55.

								-		-	-	-							-		COLUMN TO SECURIO		-
;			Brookline.	cline.			1 101		Beacon Hill.	HIII.		1		<b>0</b> 2	South	Boston.				Eas	East Boston.	ton.	
Month.	1850	1851	1852	1853	1854	1855	1850 1851 1852 1853 1854 1855 1850 1851	1851	1852 1853 1854 1855	1853	1854	1855	1850 1851 1852 1853 1854 1855 1851 1852 1853	1851	1852	1853	1854	1855	1851	1852	1853	1854	1855
January, Rebruary, Rebruary, April,	123.17 123.17 122.66 122.96 123.95 123.91 123.95 123.95 123.95 123.95 123.95 123.95 123.95 123.95	124.24 123.66 123.25 123.66 123.66 123.67 123.80 123.80 124.42 123.80	192.77 124.24 123.91 122.46 123.55 124.09	122.46 122.51 122.86 123.12 122.67 123.67 123.67 122.77 122.93	123.55 193.75 193.79 123.07 123.05 123.05 124.37 124.61 124.70 124.70	124.02 123.91 124.30 124.37 123.48 124.05 123.60 123.89 123.89 123.15 123.15 123.15	$\begin{array}{c} 192.77 \left[ 24.24 \right] 23.01 \left[ 122.46 \right] 129.55 \left[ 194.02 \right] & \qquad   117.01 \right  117.73 \right  115.08 \right] 118.94 \\ 123.61 \left[ 123.42 \right] 122.61 \left[ 123.77 \right] 123.91 \right] & \qquad   118.50 \right] 118.23 \right  113.71 \right] 13.71 13.71 13.72 13.72 13.24 \\ 122.56 \left[ 122.55 \right] 124.18 122.61 124.73 \right] & \qquad   120.67 \right  118.29 \right  115.21 16.73 17.14 \\ 122.56 \left[ 122.57 \right] 124.48 125.61 124.77 \right] 124.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.61 126.77 125.67 126.77 125.67 126.77 125.67 125.77 125$	117.91 118.59 120.67 120.11 118.72 119.02 119.28 119.73 119.75 119.75 119.36	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	15.08 115.62 116.64 114.42 114.08 114.08 114.16 115.08 115.08 115.08 115.08 115.08	113:34 117:48 117:34 118:36 116:54 116:29 116:29 114:96 114:96	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	119.68	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	113.87 114.91 115.92 116.41 113.69 113.13 115.48 116.72 115.50 115.50 115.50	114.05 114.05 114.06 115.88 114.12 111.94 111.22 111.22 111.22 111.22 111.22	1.3.87   14.05   108.39   13.41	113,41 114,464 114,431 115,238 114,32 114,32 114,32 111,52 111,52 102,06	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	106.63   107.54   107.54   107.54   107.53   107.03   106.57   106.32   105.30   105.30   105.30   105.30   105.30   103.20   103.20   103.20   103.20   103.20   103.20   103.20   103.20   105.30   105	70.68   105.64   100.22   100.77   100.75   100.	105 64 100.32 106.74 95.43 106.74 92.99 106.50 102.07 104.29 98.33 106.28 99.39 106.28 102.56 106.28 102.56 106.28 102.56 106.28 102.56 106.28 102.56	100.75 98.25 98.25 98.25 98.25 98.25 98.25 98.25 98.25 98.25 98.25 98.25
Average.	123.16	123.36	123,67	122.86	123,65	123.82	123.16123.36123.67122.86123.65122.86123.67129.89119.04119.39116.60114.89115.60117.79119.43116.52114.93112.92115.35105.06104.07104.91	119.39	116,60	114.89	115.69	117.79	119.43	116.52	114.93	112.92	115.24	112.35	105.06	104.07	104.91	99.84	97.49

Norg.—The above average heights are given in feet, and parts, above marsh level. Maximum high water in the Brookline Reservoir is 124.6 feet above marsh level. By deducting the heights in the City Reservoirs from the heights in the Brookline Reservoir, in each month, we find the loss of head in the different sections of the City at that time.

Consumption of Water.

Daily Average Number of Wine Gallons drawn from the Brookline Reservoir.

		Months.	w <sub>o</sub>				1849.	1850.	1851.	1852.	1853.	1854.	1855.
Towns							1 700 000	101 700	002 666 2	000 000	004 040 0	1 7000 000 1001 1000 000 000 000 000 000	002 602 0
February,			1 4	• (	<b>3</b> (		1,100,000	5 214 000	7.921,100	8,790,300	8.643.600	5,181,10017,255,1008,280,3008,090,90010,055,500 3,102,100	10,349,800
March, -		'	•	•		•	1,550,000	4,841,200	6,137,900	8,521,100	8,202,200	$, 550,0004,841,2006,137,9008,521,1008,202,200 \\ 9,582,10010,125,600 \\$	10,125,600
April,	,	•	•	•	,	1		4,961,000	5,365,200	8,048,700	7,903,600	4,961,000 5,365,200 8,048,700 7,903,600 8,738,500 8,540,000	8,540,000
May,	,	•	1	,	•	,	3,600,000	5,346,100	6,238,400	8,350,000	8,123,400	3,600,000 $5,346,100$ $6,238,400$ $8,350,000$ $8,123,400$ $9,685,300$ $9,103,800$	9,103,800
June,	,	٠	•	1	•	,	4,300,000	6,906,500	7,925,000	8,033,100	8,945,900	$4,300,000 \\ 6,906,500 \\ 7,925,000 \\ 8,033,100 \\ 8,945,900 \\ 11,745,200 \\ 9,984,400$	9,984,400
July,	'	•	•	•	•	•	4,800,000	8,514,200	7,180,200	9,608,000	8,809,200	$4,800,000 \\ [8,514,200] \\ 7,180,200\\ 9,608,000 \\ [8,809,200] \\ 10,613,800 \\ \\ 11,056,600$	11,056,600
August, -	,	•	1	•	•	•	4,100,000	8,004,600	7,235,000	9,409,300	8,461,900	, 100,000   8,004,600   7,235,0009,409,300   8,461,900   10,028,100   11,120,800   10,000	11,120,800
September, -	,	•	•		•	•	4,800,000	6,585,500	7,230,600	7,920,000	8,640,700	1,800,000 6,585,500 7,230,600 7,920,000 8,640,700 9,712,400 11,710,800	11,710,800
October, -	,	•	í	•	•	•	4,550,000	4,504,300	6,716,600	6,930,000	8,871,100	4,550,000   4,504,300   6,716,6006,930,000   8,871,100   8,769,800   10,771,200   8,769,800   10,771,200	10,771,200
November, -		•	•	ŧ	•	,	3,800,000	4,960,500	6,473,500	6,637,900	8,624,700	3,800,000   4,960,500   6,473,500   6,637,900   8,624,700   8,030,200   10,383,200   6,8	10,383,200
December, -		•	1	•	•	•	3,600,000	5,037,000	7,663,400	7,195,800	9,228,400	3,600,000 $[5,037,000$ $7,663,400$ $7,195,800$ $[9,228,400$ $10,597,600$ $11,307,200$	11,307,200
Average for the year,	year,	'		•	1	•	3,680,000	5,837,900	6,883,800	8,125,800	8,542,300	9,902,000	3,680,0005,837,9006,883,8008,125,8008,542,3009,9,902,00010,346,300

Monthly Fall of Rain in Inches, in 1855.

							Places	and Ob	servers.		
M	Ionth				Boston, by J. P. Hall.	Cambridge, by W. C. Bond.	Waltham, by E. Hobbs.	Lowell, by Merrimack Man- ufacturing Co.	Lowell, by Locks & Canals Co.	Lake Cochituate by E. F. Knowlton.	Providence, by A. Caswell.
January, -		-	-		7.22	7.26	6.44	-7.81	8.39	4.52	6.45
February, -		-	-		4.67	3.74	3.56	4.48	5.51	3.50	4.05
March, -		-	-		1.18	1.16	0.86	1.12	1.30	1.91	0.85
April, -		-	-		4.28	3.99	4.34	5.04	4.99	2.65	2.50
May, -		-	-		1.20	1.50	0.93	1.07	1.07	0.82	2.55
June, -			-		3.09	3.58	3.58	3.81	3.84	1.98	1.95
July, -			-		4.15	4.84	5.40	3.99	4.76	3.86	3.25
August, -			_		1.46	, 2.27	2.08	2.32	2.42	0.77	2.02
September,		-	_		1.13	1.22	0.79	0.63	0.48	0.75	0.25
October, -			_		4.61	5.51	4.48	5.78	5.89	4.16	5.33
November,			-		5.27	5.33	4.12	3.90	4.21	4.84	3.75
December,			-		5.93	7.19	4.05	4.94	5.55	5.20	6.10
Totals,	-	-		-	44.19	<b>47.</b> 59	40.63	44.89	48.41	34.96	39.05

The above table of Rain Fall has been kindly furnished, as heretofore, by the respective observers, and is inserted as a matter of present interest, and for future reference. The observations which were made in Hopkinton and Marlborough, for a few years, by persons in the employ of the city, have been discontinued.

# Statement of the Location, Size, and Number of Feet of Distributing Pipes laid in the Year 1855.

In what Streets.	Between what Streets.	Diam. of pipe in inches.	Feet laid.
	BOSTON PROPER.		
Clinton, Tremont, Tremont,	Blow off extended, Union Park and Chelsea, Chelsea and Dedham,	$12 \\ 12 \\ 12$	22 268 222
	Total 12 inch in Boston Proper,		512
Camden, Worcester, Milford, Chapman, Mercantile wharf, Union Park, Springfield, Milford, Springfield, Camden, East Chester, Lenox,	Tremont and Suffolk, Shawmut Avenue and Tremont, Bond and Tremont, Washington and Suffolk, - East of Commercial, Shawmut Avenue and Tremont, Shawmut Avenue and Tremont, West of Tremont, Shawmut Avenue and Tremont, Washington and Harrison Avenue Shawmut Av, and Washington,	6 6 6 6 6 6 6 6	627 119 119 76 267 88 406 136 289 102 578 128
20202,	Total 6 inch in Boston proper,		2,935
Lovering Place, Lime, Boylston Place, South St. Place, Van Rensselaer Place,	Connecting with Harrison Av. From River street, West, South of Boylston street, For French's Distillery, West of Tremont, Other places,	4 4 4 4 4 4	266 225 90 51 48 35
	Total 4 inch in Boston proper,		715
Second, Dorchester,	SOUTH BOSTON AND WASHINGTON VILLAGE. South Boston Mercer and North,	12 12	9 621
Boston street,	In Washington Village, Total 12 inch in South Boston, etc	12	909

#### APPENDIX.

## Statement continued.

In what Streets.	Between what Streets.	Diam. of pipe in inches.	Feet laid.
Fifth street,	South Boston,	6	68
Boston street,	Washington Village,	6	1036
North street,	Wash'n Village, Boston & Dor'r.	6	1027
Lewis street.	Washington Village,	6	467
Middle,	Boston and Dorchester Avenue.	, <sub>6</sub>	656
Dorchester Avenue.	Boston and Middle,	6	52 <b>7</b>
Howard.	Dorchester Avenue and Oak	6	331
Plymouth,	Dorchester Avenue and Liberty,	6	935
Seventh.	K and L,	6	455
E.	Eighth and Railroad,	6	552
Old Harbor,	Near the Reservoir.	6	577
Third,	South of P	6	179
IIII'u,	South of 1,		110
	Total 6 inch in South Boston		6,810
Telegraph,	Connecting with Dorchester, -	4	57
Oak.	Howard and Boston	4	187
Liberty,	From Plymouth,	1 4	119
Wendell.	From Plymouth,	4 4	144
··· chacir,	Other places,	4	54
	Other places,	*	
	Total 4 inch in South Boston,		561
	EAST BOSTON.		
Marginal,	Orleans and Cottage,	6	34
Bremen,	Decatur and Porter,	6	160
Marginal,	Jeffries' and Wise's machine shop,	6	170
Prescott,	Chelsea and Bremen,	6	275
,	,		
	Total 6 inch in East Boston,		639
Cunard wharf,	South of Marginal,	4	120

## Recapitulation.

Section.	1855.	Diam	eter in In	ches.
Section.	1000.	12	6	4
Boston proper, South Boston, East Boston,	{Total number of feet laid, Stopcocks in the same, Total number of feet laid, Stopcocks in the same, Total number of feet laid, Stopcocks in the same,	512 1,539 1	2,935 7 6,810 7 639	715 3 561 
Charlestown,	Sums of pipes, Sums of stopcocks, One 20 inch stopcock has been put in.	2,051	10,384	1,396

10

Statement of the Length of different Sizes of Pipes laid, and the Number of Stopcocks put in, to January 1, 1856.

-									
		DIAL	IETER (	OF PIPE	IN INC	HES.			
	36	30	24	20	16	12	6	4	Aggre'te
Feet of pipe laid in Brook- line, Roxbury and Boston proper.	19,355	30,332	5, <b>7</b> 73	• • • •	5,714	49,036	207,554	71,136	
No. of stop- cocks in the same,	4	7	10		12	95	421	181	
Feet of pipe laid in and for South Boston and Dorchester,		4		8,155	••••	12,461	58,287	18,310	
No. of stop- cocks in same }		***	••••	4	• • • •	26	76	24	
Feet of pipe laid in and for East Boston,			·	15,972	1,523	11,364	59,525	2,291	
No. of stop- cocks in same }	••••	• • • •	• • • •	6	3	°17	81	11	
Feet of pipe laid in New- ton and Need- ham,	••••	1,958	• • • •		••••	••••	`****		
No. of stop- cocks in same }			••••	••••		1	1	••••	
Totals.  Length of pipe laid,	 19,355	32,290	5,773	 24,127	<b>7</b> ,237	72,861	325 <b>,</b> 366	91,737	578,746 ft equal 109 miles and 3226 feet.
Number of stopcocks put in,	4	7	10	10	15	139	579	216	980

c Including one in branch for State Prison pipe.

Adding to the above, the length of the hydrant branches and bends, which is about 19,860 feet, or 3 4-5 miles, and we have 113 2-5 miles, nearly, as the total length of pipes of 4 inches and upwards, in diameter, laid down in and for the City of Boston.

Statement of A	Service Pi	pes laid	in 1855.
----------------	------------	----------	----------

	Boston	proper.	South	Boston.	East I	Boston.	Total.		
Diameter in inches.	Number.	Length in feet.	Number.	Length in feet.	Number.	Length in feet.	Number.	Length in feet.	
1 3-4 5-8	10 4 485	670 154 14,510	1 148	22 5,364	1 2 147 Aggregat	74 187 5,169		766 341 25,043 26,150	

During the year 1855, 798 service pipes were put in, as shown in the above table, making the total number to January 1, 1856, 18,797.

Repairs of Pipes during the year 1855.

				Dia	met	er o	f Pi	pe i	n I	nch	es.			
Where,	36	30	24	20	16	12	6	4	2	11/2	1	3/4	5/8	Totals,
Boston proper,	1 2	7		3	1	10	25	16	7	46	17	2	129	265
South Boston,	-						1	10	·	10	-	_	9	11
East Boston,				$\begin{vmatrix} 1\\2 \end{vmatrix}$	1	1						1	8	13
Brookline,	1													1
Roxbury,	.2													2
Chelsea,				2										2
		Ì			Ι,									
Totals,	5	7		8	2	11	26	16	7	46	17	3	146	294

The above table gives the number of leaks and the sizes of the pipes in which they have occurred during the past year. They were caused as follows: 7 by flaws and defects, 4 by settling of earth, 59 by loosening of lead in the joints, 3 by frost, 1 by the firemen, and 1 by a cap blowing off. Total 75, in pipes of 4 inches and upwards.

Of the leaks that occurred in service and two-inch pipes, 98 were caused by flaws and defects, (81 in pipes, 17 in stop-

cocks,) 27 by stiff connections, 5 by loosening of lead in joints 38 by settling of earth, 13 by boxes settling and cutting the pipes, 1 by digging a cellar, 2 by stopcocks blowing out, 2 by bad pipes, 1 by a stopcock broken by a tenant, 2 by pipes broken by tenants, 1 by rust, 6 by rats knawing the lead pipes, 5 by being struck by picks, 2 by sewers, 2 were opened to take out frogs, and 14 were opened to take out fish. *Total*, 219 in service and two-inch pipes.

Statement of the Number of Leaks, 1850-55.

	Leaks in Pipes of	of a Diameter of	
Year.	4 Inches and upwards.	Less than 4 Inches.	Total.
1850	32	72	104
1851	64	173	237
1852	82	241	323
1853	85	260	345
1854	74	280	354
1855	75	219	294

### Hydrants.

During the year, 18 new hydrants were established in the City proper, 22 in South Boston, (including Washington Village) and 2 in East Boston. Altogether there have been established up to the present time,—

-	-								
In	Boston proper	,	-			-	**	-	856
66	South Boston,		-	-	-	-	***	-	216
66	East Boston,	-	-	-	-	-	-	•	157
66	Brookline,	-	-	-	<b>-</b> .	-	-	-	1
66	Roxbury,	-	-	-	-	-	-	-	4
66	Charlestown,	-	-	-	-	-	-	-	11
66	Chelsea,	-	-	-	-	-	-	-	7
									0.110
						To	tal,	1	$.,\!252$

53 hydrants have been taken out and replaced by new, or repaired ones. The decayed hydrant boxes have been replaced by others made of Burnettized lumber, and the new boxes have also been made of the same kind of material.

# Stopcocks.

18 new stopcocks have been set during the past year, and 23 boxes have been renewed. The stopcocks are mostly in good order.

Statement of Pipes and other Stock on hand, exclusive of Tools, January 1, 1856.

			Diameter in Inches										Jamaica
Number of			36	30	24	20	16	12	6	4	2	$1_{\frac{1}{2}}$	Aqueduct.
Pipes,	-			72	9	40	22	65	36	21		36	5
Blow off Branches,	-	-	2						1				
Y Branches, - 3-Way Branches,	-	-	2	1 4 2 9	1	-	5	$\frac{2}{12}$	8	5	6	1	
4-Way Branches,	_	_	-	2			1	6	1	0	0	1	
Flange Pipes, -	-	-	8	9	3	2 5							
Sleeves,	-	-	4	4	3 8 2	5	$\frac{2}{4\frac{1}{2}}$					10	
Clamp Sleeves,	-	-	1	$6\frac{1}{2}$	2		42	9		$25\frac{1}{2}$			3
Caps, Reducers, -	-	-		1	1		1	9 2	8 6	22 4			
Bevel Hubs, -	-	-		1	1			4	8	4			
Curved Pipes, -	_		2	3		2		3		-			
Quarter Turns,	•••					5		3	6	2	-6		2
Double Hubs, -	-	-				5	9		2	1		630	
Offset Pipes, -	-	-			_		-	3	1	4			
Stopcocks, -	-	-	4 4	$\begin{vmatrix} 2\\1 \end{vmatrix}$	2	3					6		$\begin{array}{ccc} & 2 \\ & 1 \end{array}$
Pieces of Pipe,	-	-	4	1		1	1	14	14	18			1

## Hydrants.

3	Kingston,		-	-	-	-	in good	d order,
10	Lowell,	-	-	-	-	-	66	66
1	Wilmarth	,	-	-	-	-	66	66
2	Hoopers,	-	-	-	-	-	66	66
4	long, New	York	patte	ern,	-	-	44	44
3	Lowell,	-	-	-	-	-	need	repairs,
1	Wilmarth	,	-	_	-	-	46	44
3	Ballardva	le,	-	-	-	-	66	44

For Hydrants. 11 bends, 17 lengtheners, 12 nipples, 30 Hooper nipples, 12 wastes, 14 valve seats, 4 Lowell composition screws, 12 old valves, 22 old caps, 256 lbs. rings, straps and washers, 2 wharf hydrants, 8 wharf frames and covers, 24 wharf cocks, 10 extra wharf covers.

For Stopcocks. 20 4-inch cast iron caps, 3 4-inch spare sides, 2 4-inch valves and screws, 3 6-inch composition screws, 2 6-inch composition valves, 1 12-inch composition valve, 2 12-inch copper caps, 2 16-inch copper caps, 2 36-inch composition screws, 1 30-inch composition screw, 9 2-inch cast iron nuts, 6 4-inch cast iron nuts, 5 6-inch cast iron nuts, 1 20-inch composition nut, 4 sets 36-inch rollers, 9 stands and gears for 36 and 30-inch, 366 lbs. bolts, various sizes.

For Service Pipes. 460 square boxes, 95 long boxes, 308 tubes and caps, 20 3-inch flanges, tubes and caps, 10 1-inch aircocks, 3 2½-inch connection couplings, 6 2¼-inch connection couplings, 17 1-inch connection couplings, 21 ¾-inch, 12 5-8 inch, 21 1-inch Union cocks, 27 ¾-inch, 70 5-8 inch, 40 5-8, extra large size, 30 various sizes, 25 1-inch T cocks, 12 ¾-inch, 26 5-8 inch, 2 1-inch unfinished T cocks, 9 5-8 inch unfinished, 8 5-8 inch Y cocks, 30 5-8 inch straight cocks, 50 ¾-inch flange cocks, 194 5-8 inch flange cocks, 38 unfinished castings, 3 couplings for 1-inch cocks, 232 lbs. old composition couplings of various sizes.

Water Meters. 28 large size, (2 out of order,) 24 small size (2 out of order,) one small size, (Philadelphia,) 2 large size power meters, 18 connections, 2 1-inch valve couplings.

Lead Pipe. 1120 lbs. of  $2\frac{1}{2}$ -inch, 690 lbs. of  $1\frac{1}{4}$ -inch, 171 lbs. of 1-inch, 2,943 lbs. of  $\frac{3}{4}$ -inch, 1,777 lbs of 5-8 inch.

Block Tin Pipe. 220 lbs. of 3-4 inch, 104 lbs. of 5-8 inch, 40 lbs. of 3-8 inch.

Pig Lead, 419 lbs. Scrap Lead, 1026 lbs. Sheet Lead, 145 lbs.

Block Tin, 4 lbs. Solder, 25 lbs. Gasket, 47 lbs.

The box containing the pipes leading from Chelsea to East Boston, has been repaired, a portion of it having been destroyed, most probably by the ice of last winter. The pipes had not received any damage. A careful inspection was made of all of them which were uncovered. The amount of external corrosion was much less than had been anticipated.

The plans, showing the pipes in the City, are undergoing revision for the purpose of adding to them the pipes laid in 1855.

An account of the expenditures in this department, will be furnished, as usual, by Mr. Holbrook, the Clerk of the Water Board.

Respectfully submitted,

JAMES SLADE,

City Engineer.

## WATER REGISTRAR'S REPORT.

Water Office,
Boston, January 1st, 1856.

THOMAS WETMORE, Esq.,

President of the Cochituate Water Board.

SIR:-

In compliance with the 16th Section of the Water Ordinance, the Water Registrar has now the honor to submit to the Cochituate Water Board, his Annual Report for the year 1855.

The total number of Water Takers now entered for the year 1856, is 19,998, being an increase since January 1st, 1855, of 805.

The total number of cases where the water has been shut off during the past year, is 2,405. Of these 1,415 were for repairs; 779 were for non-payment of water rates; and 211 were for unnecessary waste of water.

The total number of cases where the water has been let on during the year is 2,716. Of these 1,268 were cases which had been previously shut off for repairs; 468 were those which had been shut off for non-payment of water rates; 181 were those which had been shut off for unnecessary waste of water; and 799 were let on for the first time. Repairs have been made upon the service-pipes, streets, sidewalks, &c., in 257 instances.

There have been no abatements made during the year.

The total amount received from December 31st,

1854, to January 1st, 1856, is - - - \$266,302.77

Of the above, there was received for water used in previous years, the sum of - \$6,551.97

Leaving the receipts for water used

during the year 1855, the sum of 259,750.80

Amount of water rates, - \$266,302.77

Amount brought forward,	\$266,302.77
A detailed statement of the receipts for the year 1855, is included in this Report.	
In addition to the above, there has been received, for letting on water, in cases where it had been shut	`
off for non-payment of water rates, There was also received, and paid to the City	874.00
Treasurer, by the Service Clerk, previous to August	
28th, 1855,—that being the time at which the duties	
of this officer were transferred to the Clerk of the	
Water Board — the following sums, viz:—  For shutting off and letting on water for	
repairs, 1,130.25	
For penalties, and for shutting off,	
and letting on water for unnecessary	
waste, 280.00	1
For service pipe, laying, &c., - 1,797.20	
Received by Service Clerk,	3,207.45
Total amount received during the year, in this	
office,	\$270,384.22
The total amount received during the year for the use of Jamaica Pond Water, is	\$2,280.74
	φμ,μου. τ
This amount is included in the general account.	
The amount of assessments already made for	a
the year 1856, is	\$217,431.63
The estimated amount of income from the sales	
of water, during the year 1856, is	,
The expenditures in my department during the	
1000 1 1	
year 1855, have been	3,360.92

Tł	ne items of this expenditure are as follows, viz	:-	-
Paid	Chas. L. Bancroft, for services as clerk, -	-	\$782.50
46	Wm. F. Davis, " " -	-	652.50
44	Stephen Badlam, for services as inspector,	-	626.00
66	Peter H. Niles, " "	-	626.00
66	Chas. E. Dunham, "	-	190.00
66	John H. Eastburn, for printing,	-	135.35
66	Eayrs & Fairbanks for stationery,	-	131.72
66	Moore & Crosby, for printing,	-	117.01
44	W. A. Pierpont, for distributing bills, -	-	30.00
66	Sam'l N. Dyer, for services,	-	20.00
66	D. W. Dimmock, for distributing bills, -	-	20.00
44	J. G. M. Taylor, " " -	-	14.00
66	O. H. Davenport, " " -	-	12.00
66	Stephen Maddox, for services, -	-	3.84
	Amount,	-	\$3,360.92

STATEMENT, SHOWING THE NUMBER OF HOUSES, STORES, STEAM ENGINES, &c., IN THE CITY OF BOSTON, SUPPLIED WITH CO-CHITUATE WATER, TO THE FIRST OF JANUARY, 1856, WITH THE AMOUNT OF WATER RATES PAID FOR 1855.

1324	Dwell	ing Houses,	\$6.00	\$7,944.00	
1491	66	66	7.00	10,437.00	
1870	. 44	66	8.00	14,960.00	
1860	66	46	9.00	16,740.00	
1692	66	66	10.00	16,920.00	
1324	44	46	11.00	14,564.00	
891	"	"	12.00	10,692.00	
616	6.	66	13.00	8,008.00	
439	66	"	14.00	6,146.00	
379	46	"	15.00	5,685.00	
349	66	44	16.00	5,584.00	
257	66	4.6	17.00	4,369.00	
163	66	<b>44</b> 1./	18.00	2,934.00	
199	66	66	19.00	3,781.00	
133	44	44	20.00	2,660.00	
118	44	- 46	21.00	2,478.00	
86	46	46	22,00	1,892.00	
57	66	46	23.00	1,311.00	
61	44	44	24.00	1,464.00	
60	66	66	25.00	1,500.00	
63	46	46	26.00	1,638.00	
40:	46	44	27.00	1,080.00	
28	66	66	28.00	784.00	
31	66	66	29,00	899.00	
38	46	66	30.00	1,140.00	
212	46	66	31.00	6,572.00	
677	- "	46		3,924.88	
<b>14,</b> 458	-				<b>\$156,106.88</b>
1	Model	House,	13.50	13.50	
	Amo	unts carried f	13.50	156,106.88	

1	Am	ounts brought	forward,	\$13.50	<b>\$156,106.88</b>
1	Mode	l House,	\$15.00	15.00	
1	66	"	16.00	16.00	
1	66	66	17.00	17.00	
1	"	46	20.00	20.00	
2	"	"	27.50	55.00	
2	66	66	30.00	60.00	
1	"	66	31.50	31.50	
2	"	66	36.00	72.00	
1	"	66	39.00	39.00	
•	66	46	42.00	42.00	
1	44	44	48.00	48.00	
1	"	66	54.00	54.00	
3	44	66	60.00	180.00	
2	"	44	66.00	132.00	
1	46	44	72.00	72.00	
2	66	"	75.00	150.00	
1	"	66	195.00	195.00	
			_		
25			_		1,212.00
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			_		1,212.00
1925		s and Shops,	6.00	11,550.00	1,212.00
1925 1	"	"	8.00	8.00	1,212.00
1925 1 19	66	"	8.00 8.50	8.00 161.50	1,212.00
1925 1 19 526	66	 	8.00 8.50 9.00	8.00 161.50 4,734.00	1,212.00
1925 1 19 526 4	«« ««	66 66 66	8.00 8.50 9.00 10.00	8.00 161.50 4,734.00 40.00	1,212.00
1925 1 19 526 4 17	«« «« ««	44 44 44 44	8.00 8.50 9.00 10.00 11.00	8.00 161.50 4,734.00 40.00 187.00	
1925 1 19 526 4 17 8	«« ««	66 66	8.00 8.50 9.00 10.00 11.00 11.50	8.00 161.50 4,734.00 40.00 187.00 92.00	1,212.00
1925 1 19 526 4 17 8 12	«« «« ««	66 66 66 66	8.00 8.50 9.00 10.00 11.00 11.50 12.00	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00	
1925 1 19 526 4 17 8 12	«« « « « « « « « « « « « « « « « « « «	66 66 66 66 66	8.00 8.50 9.00 10.00 11.00 12.00 13.50	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50	
1925 1 19 526 4 17 8 12 1	   	66 66 66 66 66	8.00 8.50 9.00 10.00 11.50 12.00 13.50 14.00	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50 378.00	
1925 1 19 526 4 17 8 12 1 27	« « « « « « « « « « « « « « « « « « «	66 66 66 66 66 66	8.00 8.50 9.00 10.00 11.50 12.00 13.50 14.00 15.00	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50 378.00 60.00	
1925 1 19 526 4 17 8 12 1 27 4 1	   	66 66 66 66 66 66	8.00 8.50 9.00 10.00 11.00 12.00 13.50 14.00 15.00 16.00	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50 378.00 60.00 16.00	
1925 1 19 526 4 17 8 12 1 27	« « « « « « « « « « « « « « « « « « «	66 66 66 66 66 66	8.00 8.50 9.00 10.00 11.50 12.00 13.50 14.00 15.00	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50 378.00 60.00	
1925 1 19 526 4 17 8 12 1 27 4 1	« « « « « « « « « « « « « « « « « « «	66 66 66 66 66 66	8.00 8.50 9.00 10.00 11.00 12.00 13.50 14.00 15.00 16.00 16.50	8.00 161.50 4,734.00 40.00 187.00 92.00 144.00 13.50 378.00 60.00 16.00	

2551	Amounts	brought	forward,	\$17,483.00	\$157,318.88
3	Stores and	Shops,	19.00	57.00	
2	66	66	20.00	40.00	
3	"	"	24.00	72.00	
1	66	"	30.00	30.00	ъ
1	"	66	61.50	61.50	
263	46	66		1,119.50	
2824					18,863.00
111	Offices,		6.00	666.00	
38	66		9.00	342.00	
′ 1	66		10.00	10.00	
1	"		11.00	11.00	
1	"		. 11.50	11.50	
3	"		14.00	42.00	
2	"		15.00	30.00	
24	66			99.00	
181					1,211.50
7	Banks,		6.00	42.00	
8			9.00	72.00	
1			11.00	11.00	
16	,				125.00
. 3	Buildings,		9.00	27.00	
2	"		10.00	20.00	
1	66		11.00	11.00	
17	"		15.00	255.00	
1	. "		16.00	16.00	
1			17.00	17.00	
1			17.50		
1			18.00		
, 1	. "		19.50	19.50	
28	Amounts	s carried	l forward,	401.00	177,518.38

28	Amounts brought	forward,	\$401.00	\$177,518.38
6	Buildings,	\$20.00	120.00	
. 1	"	21.00	21.00	
1	"	22.50	22.50	
11	. "	25.00	275.00	
1	"	27.00	27.00	Í
1	46	28.00	28.00	
9	66	30.00	270.00	
2	. 44	35.00	70.00	
4	46	40.00	160.00	
1	"	44.00	44.00	
1	44	45.00	45.00	
1	66	49.00	49.00	
2	44	50.60	100.00	
2	4.6	55.00	110.00	
1	46	60.00	60.00	
1	46	62.00	62.00	
1	46	112.00	112.00	
1	"	137.50	137.50	
75 —				2,114.00
35	Churches,	6.00	210.00	
1	u .	8.00	8.00	
1	"	19.00	19.00	
2	46 -	20.00	40.00	
39				277.00
1	Hall,	10.00	10.00	
1	66	- 14.00	14.00	
1	-	15.00	15.00	
7	"		71.50	
$^{\cdot}_{2}$	Private Schools,	6.00	12.00	
2	46 46	9.00	18.00	
		,	10.00	•
14	Amounts carried	forward,	140.50	179,909.38

14 Amounts brought for	vard,	<b>\$1</b> 40.50	\$179,909.38
3 Private Schools,	\$12.00	36.00	,
1 " "	13.00	13.00	
2 " "	14.00	28.00	
1 " "	16.00	16.00	
1 "	17.50	17.50	
22	,		251.00
1 Theatre,	10.00	10.00	
1 "	25.00	25.00	
1 "	108.75	108.75	
1 Gymnasium,	15.00	15.00	
1 "	16.00	16.00	>
1 Custom House,	150.00	150.00	
1 Hospital,	21.84	21.84	
1 "	163.75	163.75	
1 Institution for Blind,	40.00	40.00	
1 Eye and Ear Infirmary,	40.00	40.00	
1 Medical College,	30.00	30.00	
1 Post Office,	25.00	25.00	
1 State House,	50.00	50.00	
1 Library,	9.00	9.00	
1 Asylum,	14.00	14.00	
1 "	15.00	15.00	
2 "	25.00	50.00	
. 1 "	35.00	35.00	
1 "	95,57	95.57	
20			913.91
1 Market Stall,	5.00	5.00	
45 " "	6.00	270.00	
5 " "	9.00	45.00	
5 " "	11.00	55.00	
56 Amounts carried foru	vard,	375.00	181,074.29

56	Amounts brought	forward,	\$375.00	\$181,074.29
2	Markets,	\$25.00	50.00	
1	66	65.00	65.00	
 <del></del>				400.00
99				490.00
 70	C-11	0.00	4574.00	
	Cellars,	6.00	474.00	
9	66	9.00	81.00	
10	66	12.00	12.00	
10	••		35.50	
99				602.50
2	Hotels,	35.00	70.00	
1	66	41.00	41.00	
3	66	42.00	126.00	
1	66	46.35	46.35	
1	66	54.00	54.00	
1	46	56.00	56.00	
1	46	57.48	57.48	
3	66	60.00	180.00	
1	66	62.50	62.50	
1	66	63.00	63.00	
1	66	66.60	66.60	
1	66	67.05	67.05	
1	66	69.00	69.00	
1	66	72.00	72,00	
1	66	84.00	84.00	
2	46	90.00	180.00	
1	66	93.00	93.00	
1	46	94.90	94.90	
1	66	105.00	105.00	-
1	66	114.00	114.00	
1	6.6	115.44	115.44	
1	44	115.60	115.60	
28	Amounts carried	forward,	1,932.92	182,166.79

28	Amou	nts brought	forward,	<b>\$</b> 1,932.92	<b>\$</b> 182,166.79
2	Hotels,		120.00	240.00	
1	. "		125.00	125.00	
1	. "		133.80	133.80	
1	. "		134.30	134.30	
1	. "		137.60	137.60	
1	. "		140.00	140.00	
1	46		156.00	156.00	
1			172.00	172.00	
1			210.00	210.00	
1	"		261.00	261.00	
1	66		284.00	284.00	
1	66		330.00	330.00	
1	` 66		354.00	354.00	
1	44		385.00	385.00	
1	66		465.00	465.00	
1	66		535.00	535.00	
1	66	,	672.00	672.00	
1	44		790.00	790.00	
47					7,457.62
1	Boardin	g House,	12.00	12.00	
1	46	"	13.92	13.92	
1	"	46	14.00	14.00	
2	66	66	15.00	30.00	
3	"	66	16.00	48.00	
1	66	44	18.00	18.00	
4	66	66	20.00	80.00	
3	66	66	21.00	63.00	
1	46	66	22.00	22.00	
1	"	66	25.00	25.00	
1	66	66	26.00	26.00	
3	44	66	27.00	81.00	
<b>2</b> 2	Amoun	ts carried fo	rward,	432.92	189,624.41
		4			

	22	Amounts	brough	t forw	ard,	\$432.92	\$189,624.41
		Boarding			29.00	29.00	
	2	"	66		30.00	60.00	
	1	66 >	48		35.00	35.00	
	1	66	44		36.00	36.00	
	1	"	46		39.00	39.00	•
	1	44	46		45.00	45.00	
	1	"	66		54.17	54.17	
-	- 00					****	731.09
	30						,01.00
-	19 ]	Restaura	nts & S	aloons	, 6.00	114,00	
	1	66		66	7.00	7.00	
	141	66		66	9.00	1269.00	
	3	"		66	10.00	30.00	
	15	44		66	11.00	165.00	
	14	- 66		68	12.00	168.00	
	6	"		66	13.00	78.00	
	3	66		66	14.00	42.00	
	13	66		66	15.00	195.00	
	6	66		66	16.00	96.00	
	1	66		66	17.00	17.00	2
	7	66		66	18.00	126.00	
	1	66		66	19.00	19.00	
	2	66		66	25.00	50.00	
	1	66	1	66	26.00	26.00	
	1	"		66	27.50	27.50	
	1	46		66	28.00	28.00	
	2	66		46	35.00	70.00	
	1	"		66	40.00	40.00	1
	25	46		66		139.42	
	263						2,706.92
	200						2,: 00:02
	1	Club H	ouse,		13.00	13.00	)
	1	- Amou	nts ca <b>rr</b>	ied for	rward,	13.00	193,062.42

1	Am	ounts brought	forward,	<b>\$</b> 13.00	\$193,062.42
3 (	Club	Houses,	\$15.00	45.00	
1	66	66	50.00	50.00	
~					100.00
5					108.00
	יוי ת	***	10.00	10.00	
	Batni "	ng Houses,	12.00	12.00	
1	"	"	15.00	15.00	
1	"	"	25.00	25.00	
1	"	"	40.00	40.00	
2		"	50.00	100.00	
1	66		55.00	55.00	
1	66	"	135.00	135.00	
8					382.00
208	Stable	es.	5.00	1,040.00	
21	"	,	6.00	126.00	
30	66		6.25	187.50	
1	66		6.50	6.50	
1	"		6.56	6.56	
28	66		7.50	210.00	
12	66		8.00	96.00	
1	"		8.33	8.33	
20	66		8.75	175.00	
3	66		9.00	27.00	
1	44		9.33	9.33	
28	66		10.00	280.00	
1	66		11.00	11.00	
8	66		11.25	90.00	
1	66		11.98	11.98	
$^2$	66		12.00	24.00	
16	66		12.50	200.00	
1	66	·	12.67	12.67	
1	66		13.25	13.25	
			20,20		
384	Am	ounts carried	forward,	2,535.12	193,552.42

384	Amounts bro	ught forward,	\$2,535.12	\$193,552.42
4 1	Stables,	\$13.75	55.00	
1	66	14.00	14.00	
1,	46	14.17	14.17	
11	46	15.00	165.00	
1	66	16.00	16.00	
1	66	16.25	16.25	
1	46	17.25	17.25	
4	66	17.50	70.00	
1	46	18.00	18.00	
3	66	18.75	56.25	
1	66	19.50	19.50	
3	66	20.00	60.00	
1	46	20.83	20.83	
1	66	20.84	20.84	
2	46	21.25	42.50	
1	66	22.00	22.00	
1	46	22.25	22.25	
1	"	22.50	22.50	
1	66	23.75	23.75	
2	66	24.00	48.00	
1		24.75	24.75	
2	66	25.00	50.00	
1		26.00	26.00	
1	66	27.50	27.50	
4	46	28.00	112.00	
6		30.00	180.00	
1	66	30.54	30.54	
5	44	31.25	156.25	
2	46	32.00	64.00	
2	66	32.50	65.00	
1	46	34.00	34.00	
3	66	35.00	105.00	
455	Amounts car	ried forward,	4,154.25	193,552.42

455	Amounts	brought	forward,	\$4,154.25	\$193,552.42
5	Stables,		36.00	180.00	
1	"		37.50	37.50	
6	66		40.00	240.00	
1	66		40.67	40.67	
2	46		42.00	84.00	
1	"		43.17	43,17	•
1	66		43.75	43.75	
1	46		47.50	47.50	
1	"		48.00	48.00	
. 2	"		50.00	100.00	
1	"		53.00	53.00	
1	"		56.00	56.00	
5	66		60.00	300.00	
5	66		70.00	350.00	
1	"		72.00	72.00	
3	66		75.00	225.00	
2	46		90.00	180.00	
4	44		100.00	400.00	
1	"		106.50	106.50	
1	"		110.00	110.00	
1	"	•	120.00	120.00	
1	"		130,00	130.00	•
1	44		150.00	150.00	
1	46		160.00	160.00	
47	. "			147.41	
<b>5</b> 51					7,578.75
1	Cham and I	7	0.00	0.00	
1 1	Shop and I	rugme,	8.00	8.00	
5	66	66	11.65	11.65	
1	"	"	12.00	60.00	
2	"	"	14.00	14.00	
		••	15.00	30.00	
10	Amounts of	carried f	forward,	123.65	201,131.17

10	Amounts	brought j	forward,	\$123.65	\$201,131.17
1	Shop and	Engine,	16.20	16.20	
1	"	"	18.00	18.00	
1	"	66	19.68	19.68	
1	"	"	20.08	20.08	
1	• 66	66	20.40	20.40	
1	46	66	21.03	21.03	
1	"	66	21.55	21.55	
1	"	66	22.68	22.68	
1	66	44	23.18	23.18	
1	66	"	25.00	25.00	•
1	66	66	27.70	27.70	
1	66	66	28.20	28.20	
1	"	66	29.40	29.40	
1	66	"	29.58	29.58	
1	"	46	29.70	29.70	
3	"	"	30.00	90.00	
1	"	"	30.60	30.60	
1	"	66	31.18	31.18	
1		66	31.50	31.50	
1	"	"	31.92	31.92	
1	"	66	32.86	32.86	_
1	66	66	38.40	38.40	
1	66	66	38.82	38.82	
1	"	66	42.36	42.36	
1	"	66	44.16	44.16	
1	"	66	45.54	45.54	
1	"	66	46.00	46.00	
1	66	66	46.62	46.62	
1	"	46	47.40	47.40	/
1	"	46	48.50	48.50	
1	"	46	48.75	48.75	
1	-	66	50.52	50.52	
44	Amounts	s carried f	orward,	1,221.16	201,131.17

44	Am	ounts brought f	orward,	\$1,221.16	\$201,131.17
1	Shop	and Engine,	52.32	52.32	
1	"	66	52.86	52.86	
1	66	66	54.00	54.00	
1	46	66	54.60	54.60	
1	"	66	54.96	54.96	
1	66	66	55.80	55.80	
1	66	6.6	57.54	57.54	
1	66	46	58.92	58.92	
1	"	66	61.80	61.80	
1	66	46	63.16	63.16	
1	66	66	64.08	64.08	
1	"	"	64.67	64.67	
1	66	4.6	65.70	$65.70\degree$	
1	•6	66	67.33	67.33	
1	66	4.6	74.04	74.04	
1	66	66	79.14	79.14	`
1	66	66	79.92	79.92	
1	66	66	80.00	80.00	
1	66	66	80.40	80.40	ı
1	66	66	81.00	81.00	
1	66	66	84.84	84.84	
1	"	66	91.50	91.50	
1	"	66	94.04	94.04	
1	"	44	97.38	97.38	
. 1	66	66	102.00	102.00	
1	66	66	103.98	103.98	
1	"	66	105.90	105.90	
1	"	66	107.00	107.00	
1	66	66	107.04	107.04	
1	"	66	110.28	110.28	
1	46	66	112.56	112.56	
1	66	66	119.70	119.70	
—					
76	Am	ounts carried j	forward,	3,759.62	201,131.17

76	Amo	nunts brought j	forward,	\$3,759.62	\$201,131.17
1	Shop	and Engine,	131.64	131.64	
1	"	"	138.37	138.37	
1	66	66	159.80	159.80	
1	44	46	169.50	169.50	
1	44	46	171.32	171.32	•
1	66	44	174.66	174.66	
1	44	46	175.22	175.22	
1	66	44	232.78	232.78	
1	44	44	274.02	274.02	
1	66	44	274.92	274.92	
1	44	44	345.60	345.60	
1	46	46	392.76	392.76	
1	44	46	1904.82	1904.82	
					0.00*.00
89					8,305.03
1	Found	ry and Engin	ie, 11.00	11.00	
1	46	"	12.00	12.00	
1	66	66	12.54	12.54	
1	46	44	13.12	13.12	
1	44	66	15.00	15.00	
1	66	48	28.26	28.26	
1	46	66	30.32	30.32	
1	44	46	64.12	64.12	
1	66	66	111.14	111.14	
1	66	66	115.44	115.44	
10					412.94
					222102
1	Printin	g Office & En	gine, 4.17	4.17	
1	"	" "	18.28	18.28	
1	66	"	20.00	20.00	
- 1	44	"	21.00	21.00	
1	"	46 66	23.62	23.62	
5	Amor	ents carried fo	rward,	87.07	209,849.14

5	Amou	ints broug	ht for	ward,	\$87.07	\$209,849.14
1	Printin	g Office	and			
			gine,	23.74	23.74	
1	"	66	"	24.96	24.96	
$\sqrt{1}$	66	66	44	29.74	29.74	
1	"	66	"	32.78	32.78	
1	"	66	"	41.14	41.14	
_ 1	"	66	66	45.62	45.62	
1	"	66	66	99.26	99.26	
1	"	66	"	112.50	112.50	
13						496.81
						490.01
1	Ship Ya	ard & Eng	gine,	76.62	76.62	
1	66	"		175.86	175.86	
$\overline{}_2$						252.48
						404.40
1	Factory	& Engir	ıe,	14.28	14.28	
1	"	66		32.00	32.00	
1	"	"		107.29	107.29	
1	66	"		511.22	511.22	
1	"	66		582.36	582.36	
5					•	1,247.15
	Factory	,		2.25	2.25	
1	66			6.00	6.00	`
1	66			8.00	8.00	
1	66			8.33	8.33	
1	66			10.00	10.00	
1	"			10.32	10.32	
1	66			11.00	11.00	
1	66			11.25	11.25	
2	"			12.00	24.00	
4	"			15.00	60.00	
1	66			16.00	16.00	
15	Amou	nts carrie	d for	vard,	167.15	211,845.58

15	Amounts broug	ht forward,	\$167.15	\$211,845.58
1	Factory,	20.00	20.00	
1	"	21.15	21.15	
1	66	22.50	22.50	
1	66	27.90	27.90	
1	66	29.00	29.00	
1	66	30.00	30.00	
1	66	30.54	30.54	
1	"	40.00	40.00	
1	46	44.13	44.13	
1	66	45.00	45.00	<b>\</b>
2	66	46.44	92.88	
1	66	47.36	47.36	
1	66	48.00	48.00	
1	66	50.00	50.00	
1	66	66.45	66.45	
1	66	72.00	72.00	
1	66	80.20	80.20	
1	66	86.28	86.28	
1	46	88.52	88.52	
1	66	102.66	102.66	
1	46	108.56	108.56	
1	66	111.78	111.78	
1	66 -	. 120.00	120.00	
1	66	125.30	125.30	
1	66	192.00	192.00	
1	66	173.28	173.28	
1	66	360.64	360.64	
1	66	382.92	382.92	
1	66	680.85	680.85	
45		*		3,467.05
1	Sugar Refinery,	3,123.60	3,123.60	
1	Amounts carrie	ed forward,	3,123.60	215,312.63

1	Amounts brought	forward,	<b>\$3,123.6</b> 0	\$215,312.63
1	Sugar Refinery,	\$2,588.67	2,588.67	
1	Rolling Mill,	717.03	717.03	
1	"	695.76	695,76	
1	Grist Mill,	370.72	370.72	
1	44 44	108.56	108.56	
1	Mill,	181.22	181.22	
1	66	135.90	135.90	
1	"	131.00	131.00	
1	Forge,	358.88	358.88	
10				8,411.34
1	Engine,	7.56	7.56	
2	"	15.00	30.00	
1	"	15.48	15.48	
1	44	17.34	17.34	
1	66	18.00	18.00	
1	46	21.80	21.80	
1	66	48.45	48.45	
1	44	70.56	70.56	
1	46	79.62	79.62	
1	46	89.22	89.22	
1	"	89.66	89.66	
1	46	91.68	91.68	
10			-	270 0 <b>7</b>
13				579.37
1	Printing Office,	4.50	4.50	
1	" "	5.50	5.50	
19	"	6.00	114.00	
16	66	9.00	144.00	
3	66 66	13.00	39.00	
1	46 46 ,	13.92	13.92	
1	66 66	14.00	14.00	-
42	Amounts carried	forward,	334,92	224,303.34

42	Amounts brought	forward,	\$334.92	\$224,303.34
4	Printing Offices,	\$17.00	68.00	
1		23.00	23.00	
1	"	28.00	28.00	
48				453.92
1	Distillery,	59.00	59.00	
1	"	60.00	60.00	
1	"	90.00	90.00	
1	46	146.67	146.67	
1	46	169.74	169.74	
1	"	220.92	220.92	
1	"	676,94	676.94	
1	"	600.00	600.00	
1	"	619.92	619.92	
1	46	663.12	663.12	
1	"	945.45	945.45	
1	Brewery,	11.00	11.00	
2	"	15.00	30.00	
1	46	18.00	18.00	
1	66	25.00	25.00	
1	- 66	45.00	45.00	
1	66	45.15	45.15	
1	"	614.28	614.28	
19				5,040.19
$\overline{}_2$	Bacon Works,	15.00	30.00	
1	" "	25.00	25.00	
	,			
3				55.00
4	Bleacheries,	9.00	36.00	
1	46	11.00	11.00	
1	Laundry,	30.00	30.00	
6	- Amounts carried	l forward,	77.00	229,852.45

C Amounto humanit	formand	<i>677</i> 00	\$229.852.45
6 Amounts brought	574.04	74.04	p220.002.±0
1 Laundry,	30.00	30.00	,
1 Pottery,	30.15	30.15	9
1 Dye House,	20.19	50.19	
9			211.19
2 Bakeries,	5.00	10.00	
43 "	6.00	258.00	w
7 "	9.00	63.00	
1 "	* 16.00	16.00	
1 "	21.00	21.00	
1 "	41.60	41.60	
1 "	55.14	55.14	
4 "		20.00	
			484.74
60			404.74
1 Ship Yard,	6.25	6.25	
1 " "	8.75	8.75	
1 " "	12.50	12.50	
1 " "	15.00	15.00	
1 " "	20.00	20.00	
2 Dry Docks,	15.00	30.00	
7			92.50
725 Hose,	3.00	2175.00	
3 "	10.00	30.00	
. 0	10.00	30.00	
728			2,205.00
11 Fountains,	3.00	33.00	
4 "	5.00	20.00	
12 "	6.00	72.00	
1 "	8.00	8.00	
1 "	8.50	8.50	
90 4	7 6 7		-
29 Amounts carried	forward,	141.50	232,845.88

29 Amounts brought	forward,	\$141.50	\$232,845.88
3 Fountains,	\$9.00	27.00	111
1 "	12.15	12.15	
2 "	13.00	26.00	
1 "	15.00	15.00	
1 "	16.52	16.52	
0 11			
37			238.17
2 Packing Houses,	9.00	18.00	
1 "" "	25.00	25.00	
1 "	30.00	30.00	
	30.00	50.00	
4			73.00
1 Railroad Co.,	2,098.56	2,098.56	
1 " "	1,277.70	1.277.70	
1 " "	1,127.64	1,127.64	
1 " "	950.34	,950.34	
1 " "	812.10	812.10	
1 " "	725.66	725.66	
1 " "	531.40	531.40	
7			7,523.40
1 Chelsea Ferry Co.,	1,155.20	1,155.20	
1 E. Boston Ferry Co.,		725.12	
1 People's Ferry Co.,	727.96	727.96	
		`	
3			2,608.28
1 Cunard Steamship C	o., 700.00	700.00	
1 Steamboat,	629.09	629.09	
1 "	416.74	416.74	
1 "	180.00	180.00	
2 "	168.70	337.40	
1 "	130.52	130.52	
	_		
7 Amounts carried for	rward,	2,393.75	243,288.73

7	Amounts brought	forward,	\$2,393.75	\$243.288.73
1	Steamboat,	\$128.10	128.10	-
1	66	126.16	126.16	
1	66	121.11	121.11	
1	66	120.93	120.93	
1	66	120.67	120.67	
1	66	118.66	118.66	1
1	"	117.04	117.04	
1	"	115.89	115.89	· ·
1		113.97	113.97	
1	66	113.49	113.49	
1	66	101.25	101.25	
1	46	99.82	99.82	
1	66	95.00	95.00	
1	66	93.50	93.50	
1	"	87.15	87.15	
1	"	83.30	83.30	
1	. 66	56.25	56.25	
1	46	54.60	54.60	
1	• 66	41.80	41.80	
1	66	23.75	23.75	
1	44	21.90	21.90	
1	66	12.00	12.00	
1		7.92	7.92	
1	. "	2.00	2.00	
31				4,370.01
	T			
	Latin School,	16.00	16.00	
	English High School		16.00	
	Normal School,	16.00	16.00	
	Frammar Schools,	16.00	304.00	
	Primary Schools,	6.00	1,140.00	
3	66 66	11.00	33.00	
215	Amounts ami 7	£ 7	1 505 00	047 050 74
410	Amounts carried	jorwara,	1,525.00	247,658.74

215 A	Amounts brought for	vard,	\$1,525.00	\$247,658.74
	gine Houses,	\$16.00	208.00	
	se Carriage House,	16.00	80.00	
3 Но	ok & Ladder Houses	s, 16.00	48.00	
2 Po	lice Station Houses,	16.00	32.00	
5		11.00	55.00	
1 Cit	y Stable, (Harrison		·	
	Avenue.	77.50	77.50	
1 Cit	y Stable, (Commer-			
	cial street,)	27.50	27.50	
1 Fir	e Alarm Moter,	15.00	15.00	
5 "	66 66	6.00	30.00	
1 Co	art House,	95.00	95.00	
1 Cit	y Hall,	50.00	50.00	
1 Fa	neuil Hall,	40.00	40.00	
1 Cit	y Building,	37.50	37.50	
1 Pro	obate Office,	10.00	10.00	
1 Off	ice at City Scales,	9.00	9.00	
1 De	ad House,	9.00	9.00	
1 Pu	blic Library,	6.00	6.00	•
1 Ho	use of Correction,	462.00	462.00	
1 Lu	natic Hospital,	225.00	225.00	
1 Jai	l for Suffolk Co.,	225.00	225.00	
1 Ho	use of Reformation,	50.00	50.00	
1 Fa	neuil Hall Market			
. (	(for Urinals, &c.)	70.00	70.00	
1 Str	eet Sprinkling,	400.00	400.00	
1 Off	al Station,	150.00	150.00	
1 Con	nmon Sewer (for			
:	making Mortar, &c.,	75.00	75.00	
267				4,011.50
				2,022.00
1 Pro	prietors Boston			,
	Traveller,	800.00	800.00	
	mounts against f	Land	, 000 00	951 670 94
1 2	Imounts carried foru	ara,	800.00	251,670.24

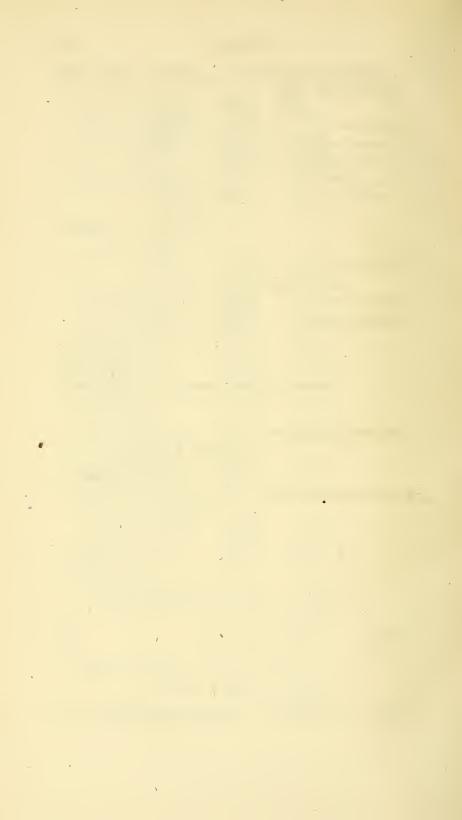
1 Amounts brought forward,		\$800.00	\$251,670.24
1 Massachusetts State	·	7	
Prison,	392.49	392.49	
1 Mill Dam Co.,	300.00	300.00	
1 Boston Gas Light Co.,	374.62	374.62	
1 South Boston Gas Co.,	150.90	150.90	
1 East Boston Gas Co.,	100.00	100.00	
1 Brookline Gas Co.,	30.00	30.00	
7			2,148.01
Contrators for Supply-			
ing Shipping,	4,223.78	4,223.78	
Street Waterers,	973.72	973.72	
Building purposes,	735.05	735.05	,
	P		\$5,932.55
Amount of Water Rates,			\$259,750.80

Respectfully Submitted,

WILLIAM F. DAVIS,

Water Registrar.

Boston, January 1st, 1856.















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