

3
ANNUAL REPORT

OF THE

WATERING COMMITTEE,

FOR THE YEAR 1841,

(TO WHICH IS ANNEXED A SPECIAL REPORT BY SAID COMMITTEE UPON
THE SUBJECT OF REPAIRS TO FAIR MOUNT DAM)

TO THE

SELECT AND COMMON COUNCILS

OF

THE CITY OF PHILADELPHIA.

January 20, 1842.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.
1842.





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WATERING COMMITTEE.

JOHN PRICE WETHERILL, *Chairman.*

THOMAS G. CONNOR,

MATTHEW NEWKIRK,

CHARLES GILPIN,

CALEB HAND,

ANDREW COCHRAN,

JACOB E. HAGERT,

SAMUEL NORRIS.

ANNUAL REPORT

OF

THE WATERING COMMITTEE,

TO

THE SELECT AND COMMON COUNCILS.

THE Watering Committee, in accordance with the established regulations of Councils, presents its Annual Report, with the Accounts necessary to elucidate its expenditures and proceedings, of the last year.

On the 7th of January, 1841, the Works at Fair Mount were again tested by a heavy ice freshet, without receiving any material damage, compared with the injuries sustained on the Schuylkill and Lehigh rivers, and at the Croton Works in the State of New York, where a new and substantial Dam was entirely swept from its base. Under all considerations, we may deem ourselves fortunate in the location of the Works at Fair Mount, which for a period of nineteen years—since they were erected—have without any intermission, given to the City and Districts a copious supply of wholesome water.

Although extra repairs were made to the planking and backing of the Dam, and an increase of taxes paid upon the Fair Mount property, the Committee has the pleasure to state, that its expenditures are still within the limits of its estimate for the year.

The Estimate for the year 1841, amounted to - - \$23,500 00
 Appropriated by Councils, and ordered to be paid by
 the Watering Committee to the Commissioners of
 the District of Spring Garden, towards building a
 wire bridge over the Schuylkill near Fair Mount, 3,000 00

Together, - - - - - \$26,500 00

Expenditure, as per annexed Account by Mr. Graff, 24,701 75

Balance remaining in the Treasury, Dec'r. 31, 1841, \$1,798 25
 From which should be deducted the sum to be paid
 for 5000 yards of earth, for filling-in the quarry
 hole north of the Reservoirs, now contracted for;
 and for the repairs of the south face of the mound
 dam, washed by the late freshet of 6 feet 2 inches,
 on the night of the 24th of December last, - - - 600 00

Leaving at the disposal of Councils, - - - - - \$1,198 25

The sum appropriated by Councils towards building a Wire Bridge near Fair Mount, will be seen in the Accounts under the head of Fair Mount Bridge.—\$3000.

For the sum appropriated by Councils for the repairs to the Dam in 1842, a distinct account will be kept under the head of Fair Mount Dam, amounting per estimate to \$60,498 36.

Since the Report of the Watering Committee was presented to Councils in relation to the repairs of the Dam, contracts have been entered into with William Carman of this City, for all the timber and lumber that will be required, and every exertion is making to have the iron work and necessary materials provided, in order to commence the work as early in the spring as the state of the river will permit.

During the year the repairs necessary to the Works were made, and the southern face of the embankments of the Reservoirs shaped, preparatory to their being grass sodded and fenced-in early in the spring.

The Committee has purchased iron pipes, lead, &c., for the incidental extension of the distribution, and has caused 1865 feet

of iron pipes to be laid, leaving on hand 172 pipes of 3 inches, 154 of 4 inches, and 182 of 6 inches, which will be sufficient for the year 1842. The wooden pipes which lie in Walnut from Broad to the east side of Twelfth Street, are in a state of decay; this circumstance, with the intention of the City to extend the culvert further west than it now is, and to repave a portion of that street, has induced the Watering Committee to include in its estimate a sum sufficient to relay that street with 12 inch iron pipes, for which the attachment to the 20 inch iron-main at Broad Street is already made.

By referring to the Report of last year, it will be seen that the Navigation Company, by resolution, declined the offers made by the City for raising the Dam 18 inches. In July last, another negotiation took place between the President of the Schuylkill Navigation Company and the Chairman of the Watering Committee, at which time it was believed that the former difficulties had been settled, and that the provisions now agreed upon were fully understood. In accordance with this impression, the Solicitor of the City was instructed to draw up an agreement, which was handed to the Schuylkill Navigation Company for consideration. This paper was returned, with other propositions varying materially from what was understood to have been verbally agreed upon, and could not be acceded to.

In order that Councils may understand the particulars of the negotiation, a copy of the agreement sent to the Navigation Company, and its answers, are herewith annexed. (The points at variance are printed in Italics.)

Agreement sent to the Navigation Company:

“ 1st. The Navigation Company shall grant to the City the privilege of raising the Dam at Fair Mount, 18 inches above the height authorized by former agreements; and if the City shall exercise that privilege, then the *Navigation Company shall pay all damages thereby occasioned on the Western side of the River Schuylkill*, and shall also at their own expense raise the water-level of their Canal, from the Dam at Manayunk to the first Outlet-lock below Manayunk, 18 inches above the present water-level

thereof; and shall permit the respective mill-holders and others who have a right to use the water, to use and enjoy the increased head of water free from all cost or charge therefor, and shall in like manner permit the *said respective mill-holders and others who have a right to use the water, to raise the inlets and apertures supplying their works with water, as much higher than they are now, as they the said mill-holders and others who have a right to use the water, may respectively deem expedient.*

“2d. If the City shall exercise the privilege of raising the Dam as aforesaid, then they shall in like manner raise the guard-lock, guard-pier, and ice-breaker at Fair Mount, and also put new gates to said guard-lock if they shall be necessary; and the City shall also pay all damages which shall be occasioned by said raising of the Dam, on the West side of the River Schuylkill from the Dam at Fair Mount to and including the Mill, formerly Rush’s, now Richardson’s, at Manayunk.

“3d. Nothing in this Agreement shall be taken or construed to alter, impair, or in any other manner affect any former or existing agreements between the City and the Schuylkill Navigation Company, in any particular, except as is herein expressly provided.”

Propositions of the Navigation Company in answer to the above:

“The Navigation Company will grant to the City the privilege of raising the Dam at Fair Mount 18 inches above its present height, on the following terms:

“1st. That the City shall raise the guard-lock and abutment on the west side of Fair Mount Dam, 2 feet above its present height, with new gates, &c.

“2d. *The City to pay all damages in consequence of raising the Dam.*

“3d. That the Navigation Company will raise their own towing paths and canal banks at Manayunk, in such manner as to give the mills at that place a head of water equal to that which is taken from them in consequence of raising the Dam, say not exceeding 18 inches. *And the water of said mills to be taken under the same head as per existing agreements.*

“4th. Nothing in this agreement contained shall be taken or

construed so as to impair or in any other manner affect any former or existing agreements between the City and Navigation Company.

“5th. The Navigation Company’s Loan in possession of the City Authorities, due on the 1st of January next, *to be renewed for ten years from the 1st of June last, at 6 per cent. per annum.*”

The Committee regret that the various offers which have been tendered to the Schuylkill Navigation Company, in order to settle the disputes so long standing, and to come to an amicable agreement by raising the dam 18 inches, have met with such coolness as to induce the Committee to believe, that so long as the Company be permitted to hold the property wrested from the City, and to make use of the weighing-lock (which last summer consumed 5,000,000 gallons of water per day, contrary to agreement), it will not feel any disposition for the reconciliation so much desired by the City.

ESTIMATE FOR THE YEAR 1842.

Incidental Expenses:

For working machinery, for fuel, materials, &c., - - - - -	\$ 3,000 00	
For wages, lumber, castings, pumps, &c., for the distribution, - - -	5,000 00	
For taxes and incidentals, - - -	2,500 00	
For salaries, - - - - -	3,860 00	
	<hr/>	\$ 14,360 00

Permanent Expenses:

For 12 inch main, and connections, to be laid in Walnut Street, - - -	\$ 3,372 00	
For fitting-up work, and laying incidental water pipes, - - - - -	2,628 00	
	<hr/>	6,000 00
Amount carried forward,		<hr/> \$ 20,360 00

Amount brought forward,	\$ 20,360 00
For grass sodding and fencing on south side of Reservoirs, - - - - -	\$1,500 00
For painting buildings, Reservoir fence, railings, &c., - - - - -	690 00
For a flight of granite steps, and iron railing, leading to mill-house, - -	320 00
For carpenter's work, lumber, nails, and renewing trees, - - - - -	630 00
	<hr/>
	3,140 00
	<hr/>
	\$ 23,500 00
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Sum appropriated by Councils for the repairs to the Dam in 1842, - - - - -	\$ 60,498 36
	<hr/>

The iron pipes and fire plugs in the City and Districts, are as follows:

Pipes in the City, 63½ miles.	Fire-plugs in the City, 520
Ditto, Districts, 50 "	Ditto, Districts, 525

The amount of revenue by duplicates for 1841, as per last Annual Report, Register's Account No. 3, without deducting commissions for collection, and loss, was - - - - -

\$ 133,455 00

The amount paid into the Treasury, after deducting \$ 6589 10 for commissions, allowances, &c., as per Balance Sheet prepared by the Register, Account No 1, is - - - - -

\$ 134,634 67

The amount of revenue as per duplicates for 1842, per Register's Statement No. 3, is as follows:

City, - - - - -	\$ 69,982 00
Spring Garden, - - - - -	22,207 75
Northern Liberties, - - - - -	25,208 50
	<hr/>

Amount carried forward, \$ 117,398 25

Amount brought forward,	\$ 117,398 25
Kensington, - - - - -	4,673 75
Southwark, - - - - -	14,903 75
Moyamensing, - - - - -	4,288 75
	<hr/>
	\$ 141,264 50
Rent of Wharf at Fair Mount,	75 00
	<hr/>
Together, - - - - -	\$ 141,339 50
From which deduct annual appropria- tion to Sinking Fund, - - - - -	\$ 17,000 00
And the estimated amount of expenses in 1842, - - - - -	23,500 00
	<hr/>
	40,500 00
	<hr/>
Balance that may be taken in aid of taxes, - -	\$ 100,839 50
	<hr/>

The increase of water rents by new permits, in 1841, is as follows:

City and Distriets, - - - - -	\$ 9,950 75
Deduct rents declined, &c., - -	2,100 00
	<hr/>
Amount of increase, - - -	\$ 7,850 75
	<hr/>

The Committee take pleasure in mentioning that the water-power Works have continued in successful operation since their erection, and that the wheels and other parts composed of wood (although it was supposed they would last but fourteen years,) have already been in constant use for twenty;—and though they are somewhat worn and partially decayed, are found upon examination by your Committee to be sufficient, until the more important work (the repairs of the Dam) shall have been completed, after which it is believed that a general repair of the mill-house wheels and pumps, with the addition of two new wheels and pumps, will be required.—When we look at the reconstruction and repairs that have been made to almost every other Works of the kind that have been erected since the Fair Mount Works, we

may consider ourselves fortunate, more particularly from the circumstance that the increase of revenue, now derived from the water rents, is not only sufficient to pay the interest on the loans for the construction of the Works, but leaves a surplus, to be appropriated annually as Councils may think best for the interest of the City.

JOHN PRICE WETHERILL,
THOMAS G. CONNOR,
M. NEWKIRK,
CHARLES GILPIN,
CALEB HAND,
J. E. HAGERT,
SAMUEL NORRIS.

LIST OF CERTIFICATES FOR MONEYS

DRAWN BY THE

WATERING COMMITTEE

FOR

FAIR MOUNT WATER WORKS,

From December 31, 1840, to December 31, 1841.

<i>No.</i>	<i>1841.</i>				<i>Dolls.</i>	<i>C.</i>
1	Feb'y. 2,	In favour of Frederick Graff, -	-	-	532	55
2	March 1,	Ditto, ditto, -	-	-	1157	09
3	April 1,	Ditto, ditto, -	-	-	1624	55
4	May 1,	Ditto, ditto, -	-	-	856	50
5	June 1,	Ditto, ditto, -	-	-	1132	34
6	July 1,	Ditto, ditto, -	-	-	2174	29
7	13,	Ditto, ditto, -	-	-	3000	00
8	Aug. 2,	Ditto, ditto, -	-	-	2232	77
9	Sept'r. 1,	Ditto, ditto, -	-	-	1073	44
10	Oct'r. 1,	Ditto, ditto, -	-	-	2535	05
11	Nov'r. 1,	Ditto, ditto, -	-	-	1982	61
12	Dec'r. 1,	Ditto, ditto, -	-	-	3038	49
13	17,	Ditto, ditto, -	-	-	1260	50
14	27,	Ditto, ditto, -	-	-	2101	57
					<hr/>	<hr/>
					24701	75

Abstract of Payments made under the foregoing Certificates.

Distribution.

No.	1841.		Dolls.	C.	Dolls.	C.	
1	Feb'y.	1	Wages for January,	-	-	218	80
2	March	1,	Wages for February,	-	-	195	70
		2,	Martha L. Adams, for 6 months' ground rent, due February 1st,	-	-	13	33
			Robert B. Scott, for a new cart in exchange, balance,	-	-	65	00
			Jonathan Shay, for 23 Cwt. of hay,	-	-	15	41
3	April	1,	Wages for March,	-	-	228	85
4	May	1,	Wages for April,	-	-	241	50
			William Taylor, for 69½ lbs. block-tin for solder,	-	-	15	29
5	June	1,	Wages for May,	-	-	210	75
			Benjamin Garrigus, for 20 Cwt. 3 qrs. of hay,	-	-	21	00
6	July	1,	Wages for June,	-	-	220	55
8	August	2,	Wages for July,	-	-	219	50
			Walton & Wickersham, for spades, shovels, and hardware,	-	-	49	12
			Wetherill & Brother, for paints, oils, &c.,	-	-	61	00
9	Sept'r.	1,	Wages for August,	-	-	222	30
			Martha L. Adams, for 6 months' ground rent, due August 1st,	-	-	13	33
			Joseph R. Stout, for 17 Cwt. 3 qrs. of hay,	-	-	13	00
			Taylor & Co., for 60 yards of packing cloth,	-	-	9	00
10	Oct'r.	1,	Wages for September,	-	-	219	05
			Isaac Wilson, for 300 bushels of smiths' coal, delivered,	-	-	95	00
11	Nov'r.	1,	Wages for October,	-	-	92	30
			William Carman, for 12,816 feet 1¼ inch boards, delivered,	-	-	352	43
			C. W. Schreiner, for taxes on shop lot, for 1841,	-	-	31	83

12	Dec'r. 1,	Wages for November,	-	-	-	264	55	
		John Fox, for 15 Cwt. of hay,	-	-	-	12	15	
		Robert Looney, for 1142 bundles of straw for fire-plugs, &c.,	-	-	-	91	22	
		Daniel R. Erdmann, for 24 pumps, and 456 pump nosles and boxes,	-	-	-	177	75	
13	17,	Charles Fox, for 4000 paving bricks,	-	-	-	32	00	
		Hugh English, for shoeing cart-horse,	-	-	-	11	56	
		J. P. & W. Wetherill, for lead pipe,	-	-	-	21	24	
		J. & H. J. Reihlie, for 223 lbs. of pump and fire-plug leather,	-	-	-	64	67	
		Andrew Garrett, for horse feed from January 12th,	-	-	-	49	68	
		Wetherill & Brother, for paints, oils, &c.,	-	-	-	80	00	
		Reeves & Whitaker, for nails and spikes,	-	-	-	30	00	
14	27,	Wages for December,	-	-	-	215	97	
							3874	83
<hr style="border: 1px solid black; width: 50%; margin: 10px auto;"/>								
Fair Mount Works.								
2	March 1,	James Wilson, on account, for a new scow,	-	-	-	150	00	
		James Wilson, balance for a new scow, as per contract,	-	-	-	350	00	
3	April 1,	Wages for March, for repairs to water-wheels, mill-house, &c.,	-	-	-	80	70	
4	May 1,	Wages for April,	-	-	-	162	51	
		James M. Patton, for 350 feet worked floor-boards, for mill-house,	-	-	-	11	70	
		William Ridgway, for 50 cedar tree poles, delivered,	-	-	-	5	00	
		Thomas Evans, for sundries for Corporation and Committee, April 28,	-	-	-	140	00	
5	June 1,	Wages for May, for backing the Dam, and at sundry work,	-	-	-	313	50	
		William Carman, for 3879 feet of plank for the Dam, and mill lumber,	-	-	-	105	59	
							1319	00
							3874	83
							Amount carried forward,	

No.	1841.		Doll's. C.	Doll's. C.
5	June 1,	Robert Kilvington, for 99 select trees, hauling and planting, -	1319 00	3574 83
		Andrew M. Jones, for 200 lbs. of 8 inch spikes for the Dam, -	158 00	
6	July 1,	Wages for June, for repairs to Dam, to masonry, to mill-work, &c., -	14 00	
8	August 2,	Wages for July, - - - - -	660 49	
		Harvey Stokes, for 2 casks of water cement, -	748 00	
		Keyser & Longstreth, for 7979 feet of lumber for the Dam, -	6 50	
		George Jones, for making spoil bank south side of Reservoirs, -	168 05	
		John Helmes, for 162 perches of stone for the Dam, at 50 cents, -	286 00	
		John Dagee, for 2 wheelbarrows, and repairs to old ones, -	81 00	
9	Sept'r. 1,	Wages for August, - - - - -	11 25	
		Andrew M. Jones, for 3 kegs of 8 inch spikes, for the Dam, -	359 38	
10	Oct'r. 1,	Wages for September, - - - - -	21 50	
		Robert Donnell, for sundries for the Committee, - - - - -	404 25	
11	Nov'r. 1,	Wages for October, - - - - -	38 51	
		E. B. Flake, and two Constables at Fair Mount, on Sundays, &c., -	94 02	
		J. P. Morris, for a new crank pin, and valve seats, for wheels and pumps, -	127 50	
12	Dec'r. 1,	Erdmann & Towers, for surveys, estimate, and report on the Dam, -	95 02	
		William Blackburn, for County and State tax on Fair Mount estate, -	140 00	
		Joseph Whisler, for Corporation, Watch and Lamp tax for Fair Mount estate, -	1003 45	
		Isaac Bedford, for Poor tax, for Fair Mount estate, - - - - -	765 00	
13	17,	Wetherill & Brother, for paints, oils, &c., - - - - -	229 50	
		Reeves & Whitaker, for spikes and nails, - - - - -	57 84	
		Owen Sheridan, for hack hire, from January 22, - - - - -	25 00	
		J. P. Morris & Co., for brasses and valve seats, for the pumps, - - - - -	98 00	
14	27,	William Clemins, for 5000 yards of earth, and levelling in Ravine, - - - - -	77 42	
		W. J. Carter & Co., for hack hire, - - - - -	150 00	
			66 00	
				7199 68

Iron Pipes.

1	Feb'y. 2,	Wages for January, for fitting up work, for iron pipes, &c.,	-	135 50
2	March 1,	Wages for February, ditto,	-	126 00
3	April 1,	Wages for March, ditto,	-	146 75
4	May 1,	Wages for April, ditto,	-	108 00
5	June 1,	Wages for May, ditto,	-	131 25
6	July 1,	Wages for June, ditto,	-	130 75
8	August 2,	Wages for July, ditto,	-	145 50
		James Rowland, for wrought iron, for cocks, plugs, &c.,	-	117 69
9	Sept'r. 1,	Wages for August, -	-	215 63
10	Oct'r. 1,	Wages for September, -	-	162 00
		T. L. & A. Fassett, for 3510 lbs. of lead, -	-	160 07
11	Nov'r. 1,	Wages for October, -	-	320 50
		Samuel Richards, for 150 pipes, 3 inch; 6 circular pipes, 16 inch; fire-plugs, &c., -	-	690 76
12	Dec'r. 1,	Wages for November, -	-	162 50
13	17,	George Bumm, for canal sand, and hauling iron pipes, -	-	19 87
		Israel Roberts & Son, for brass work, for stop-cocks, spelter, &c., -	-	58 90
		John Mingle & Son, for 711 lbs. brass ferrules, valve seats, &c., -	-	213 30
		Herbert & Davis, for white pine boards, &c., -	-	40 93
		James Rowland, for wrought iron, -	-	129 29
		Hill & Co., for spades, shovels, and hardware, -	-	48 32
14	27,	Wages for December, -	-	162 00
		William Ker, for spun yarn, &c., -	-	37 76
				3463 27
				14537 78

Amount carried forward,

No.	1841.	Amount brought forward,	Dolls. C.	Dolls. C.
Water Power.				
1	Feb'y. 2,	Wages for January, - - -	178 25	
2	March 1,	Wages for February, - - -	161 00	
		Shober & Bunting, for 35 gallons of lamp oil, - - -	43 75	
3	April 1,	Wages for March, - - -	203 25	
4	May 1,	Wages for April, - - -	172 50	
5	June 1,	Wages for May, - - -	178 25	
6	July 1,	Wages for June, - - -	197 50	
8	August 2,	Wages for July, - - -	180 00	
		Wetherill & Brother, for paints, oils, &c., - - -	115 46	
9	Sept'r. 1,	Wages for August, - - -	178 25	
		Shober & Bunting, for 30½ gallons sperm oil, - - -	33 55	
10	Oct'r. 1,	Wages for September, - - -	197 50	
		Conrad Grove, for 53 tons of coal for mill-house, &c., - - -	265 67	
11	Nov'r. 1,	Wages for October, - - -	178 25	
12	Dec'r. 1,	Wages for November, - - -	172 50	
13	17,	Wetherill & Brother, for paints, oils, &c., - - -	85 00	
		Shober & Bunting, for 33 gallons lamp oil, - - -	39 60	
		Eljah Dallett, for 5 casks of tallow, - - -	97 75	
14	27,	Wages for December, - - -	203 25	
		William Ker, for chandlery, - - -	184 00	
				3065 28

Salaries.

3 April 1,	Samuel W. Rush, for one quarter, due April 1st,	-	375 00
	George W. Harvey, ditto,	-	90 00
	Frederick Graff, ditto,	-	500 00
6 July 1,	Samuel W. Rush, July 1st,	-	375 00
	George W. Harvey, ditto,	-	90 00
	Frederick Graff, ditto,	-	500 00
10 Oct'r. 1,	Samuel W. Rush, October,	-	375 00
	George W. Harvey, ditto,	-	90 00
	Frederick Graff, ditto,	-	500 00
14 Dec'r. 1,	Samuel W. Rush, December 31st,	-	375 00
	George W. Harvey, ditto,	-	90 00
	Frederick Graff, ditto,	-	500 00
			3860 00

Incidentals.

2 March 1,	John Thomason, for repairs in 1840 to stove in Register's office,	-	11 00
	Wright & Hunter, for repairs in 1840 to gas fixtures in Register's office,	-	3 90
	Aaron Wolf, for sundries for Committee,	-	22 00
8 August 2,	James Crissy, for water rent books for Register,	-	25 50
	Isaac M. Moss, for stationary for Register,	-	8 20
	William Daugherty, for serving notices on delinquents,	-	15 00
9 Sept'r. 1,	George W. Harvey, ditto,	-	7 50
			93 10
	Amount carried forward,		21463 06

No.		Dolls. C.	Dolls. C.
1841.		93 10	21463 06
10 Oct'r. 1,	Amount brought forward, Lewis D. Pratt, sundries for Committee from New York, -	20 00	
14 Dec'r. 1,	Joseph R. Chandler, for newspaper for Register's office, - James Crissy, for water rent book and stationary, for Register, - Lydia R. Bailey, for printing and stationary, - Isaac M. Moss, for stationary for the Register, -	8 00 38 75 72 97 5 87	
		238 69	
		21701 75	
7 July 13,	Fair Mount Bridge. Thomas Matlack, sum granted by Councils towards constructing a Bridge across the river Schuylkill, near Fair Mount, which was not included in the estimate of the year, -	3000 00	3000 00
		24701 75	
	Abstract of Payments made by the Watering Committee, <i>From December 31, 1840, to December 31, 1841.</i>		
	Distribution, -	3874 83	
	Fair Mount Works, -	7199 68	
	Iron Pipes, -	3463 27	

Water Power, - - - - -	-	-	-	-	-	3065 28
Salaries, - - - - -	-	-	-	-	-	3860 00
Incidentals, - - - - -	-	-	-	-	-	238 69
Fair Mount Bridge, - - - - -	-	-	-	-	-	3000 00
						24701 75
						944 81
Sums paid into the Treasury,						
<i>From December 31, 1840, to December 31, 1841.</i>						
Jan. 18, For 228 perches, quarry leave,	-	-	-	-	-	28 50
March 9, ditto, ditto,	-	-	-	-	-	79 87
April 16, ditto, ditto,	-	-	-	-	-	115 75
22, ditto, ditto,	-	-	-	-	-	21 18
May 6, ditto, ditto,	-	-	-	-	-	86 37
7, 12 inch stop-cock, sent to New York,	-	-	-	-	-	103 75
June 4, 1026 perches, quarry leave,	-	-	-	-	-	105 49
July 9, 890 ditto, ditto, and a fire-plug case,	-	-	-	-	-	118 74
August 4, 266 ditto, ditto,	-	-	-	-	-	64 30
Sept'r. 3, 363 ditto, ditto,	-	-	-	-	-	45 37
Oct'r. 8, 639 ditto, ditto,	-	-	-	-	-	79 87
Nov'r. 2, 441 ditto, ditto, and for sundries,	-	-	-	-	-	66 37
Dec'r. 1, 299 ditto, ditto, and for piece of pipe,	-	-	-	-	-	29 25
						6747 perches of stone.

Estimate for the Year 1842.

Incidental expenses—

For working the machinery, and for fuel and materials, - -
 For wages, lumber, castings, pumps, and for the distribution, - -
 For salaries, - - - - -
 For the payment of taxes, and incidentals, - - - -

14360 00

Permanent expenses—

For the extension of a 12 inch iron main from Broad to Twelfth street, in
 Walnut street, - - - - -
 For fitting-up stop-cocks, fire-plugs, pumps, &c., and for laying iron pipes
 where they may be wanted, - - - - -

6000 00

For grass sodding and fencing on south side of Reservoirs, - -
 For painting the buildings, stairway up the hill, and Reservoir fence,
 For a flight of granite steps and railing leading to the mill buildings,
 For carpenter's repairs, and for lumber, nails, &c., - - - -

3140 00

	Dolls.	C.
	3000	00
	5000	00
	3860	00
	2500	00
	14360 00	
	3372	00
	2628	00
	6000 00	
	1500	00
	690	00
	320	00
	630	00
	3140 00	
	23500 00	

Account of Iron Pipes.

	Inch.	Feet.	Feet.
Iron pipes laid in former years, commencing October, 1819, to December 31st, 1840, -			334001
<i>Iron pipes laid in 1841—</i>			
Attachment with district pipes in Fair Mount street, to water trees, - - - -	3	34	
Greenleaf court, from Fifth street, eastward, -		214	
Benton street, from High street, southward, -		324	
Olive street, westward, to Schuylkill Eighth street,		184	
Part of Spring street, between Schuylkill Sixth and Seventh streets, - - - -		263	
St. Mary street, from Seventh to Eighth street,		446	
Juniper street, from Pine to Lombard street, -		400	
			1865
Being upwards of 63½ miles, - - - -			335866

Particulars relating to the Fair Mount Water Works.

The consumption of water in the City and Districts, during the year 1841, was as follows:

	Gallons.
From January to April, a term of 13 weeks, the supply averaged, per day, - - - -	3,154,174
From April to July, ditto, ditto,	4,487,751
From July to October, ditto, ditto,	5,677,405
From October to December, ditto, ditto,	4,363,191

Being an average daily supply for the year, of 4,445,630 gallons, and an excess of 410,992 gallons per day over the supply of 1840, and equal to 179 gallons to each tenant per day.

	Tenants.
The above supply of water was distributed to 12,749 tenants, by private hydrants, and to 3300 families by public hy- drants, in the City—together, - - -	16,049
And by private hydrants in Spring Garden, - - -	2,789
Southwark, - - -	1,823
Northern Liberties, - - -	3,124
Moyamensing, - - -	522
Kensington, - - -	521
Together,	24,828

The average increase of the daily supply of water discharged from the Reservoirs at Fair Mount, for the last 5 years, was as follows:

	Gallons.	Tenants.
To tenants, and by public hydrant pumps, in		
the year 1837, - - -	3,456,383	20,462
Ditto, 1838, - - -	3,850,647	21,947
Ditto, 1839, - - -	3,978,357	22,636
Ditto, 1840, - - -	4,034,638	23,482
Ditto, 1841, - - -	4,445,630	24,828

The iron pipes laid in the City to December 31, 1841, amount to upwards of - - - -	63½ miles.
Ditto, ditto, in the Districts, - - -	50 " "

Number of fire-plugs in the City, - - -	520
Ditto, ditto, Districts, - - -	525

The cost for the erection of the Works in 1822, with the permanent additions annually made, up to December 31st, 1841, amounts to - - - - \$1,483,300 40

Since the erection of the Water Power Works at Fair Mount, in 1822, the following high freshets took place:

1822, February 21st, the water rose above the top of the Dam, - - - - -	9 feet 1 inch.
1839, January 26th, ditto, ditto,	10 " 2 "
1841, January 7th, ditto, ditto,	8 " "
1841, December 24th, ditto, ditto,	6 " 2 "

FREDERICK GRAFF,
Superintendent of the Fair Mount Water Works.

December 31, 1841.

Index to the Accounts

Kept in the Department of the Register of the Watering Committee.

- No. 1, Balance sheet of the income and expenditure for the year 1841.
- 2, Fractional rents, &c., from city and districts, year 1841.
- 3, Tabular statement of his accounts.
- 3, Girard water rents in the city.
- 4, Requisitions drawn during the year 1841.
- 5, Annual water rents payable in the office of the Watering Committee.
- 6, Settlement of the city duplicates for the year 1841.
- 7, Settlement of the returns by the city collectors, for 1841.
- 8, Settlement of balance of water rent sued in 1840.
- 9, Settlement in part of rents sued for the year 1841.
- 10, Duplicates of water rents for the year 1842.
- 11, Water rents declined, city and districts, in 1841.
- 12, Number of dwellings, &c., supplied with water in city, year 1841.
- 13, Settlement of rents payable in the office for 1841.
- 14, Settlement of Girard city water rents for 1841.
- 15, Northern Liberty duplicates for the year 1842.
- 16, Settlement of Northern Liberty duplicates for 1841.
- 17, Iron pipes laid and fire-plugs erected in Northern Liberties.
- 18, Southwark duplicates for 1842.
- 19, Settlement of Southwark duplicates for 1841.
- 20, Iron pipes and fire-plugs in the district of Southwark.
- 21, Settlement of Moyamensing duplicates for 1841.
- 22, Moyamensing duplicates for the year 1842.
- 23, Iron pipes and fire-plugs in Moyamensing.
- 24, Settlement of Kensington duplicates, 1841.
- 25, Kensington duplicates for 1842.
- 26, Iron pipes and fire-plugs in Kensington.
- 27, Settlement of Spring Garden duplicates for 1841.
- 28, Iron pipes and fire-plugs in Spring Garden.
- 29, Spring Garden duplicates for 1842.

BALANCE SHEET,

Setting forth the Amount of Revenue received from the sale of Schuylkill Water in the City and Districts, and the Costs of its Collection; also the Appropriations by Councils to the Watering Committee, and the Expenditure for and during the year 1841.

	Dolls. C.		Dolls. C.
Duplicates of Water Rents for the City and Districts, as per last Annual Report, Register's Account No. 3, - - - - -	133455 00	Cash paid by City Collectors, as per Account No. 6, - - - - -	59395 71
<i>To which add, viz. —</i>		Ditto, Northern Liberties, ditto, No. 16, - - - - -	22425 82
Fractional parts of Water Rents, &c., received during the year 1841, as per account No. 2, Discoveries in the collection, as per Account No. 6, - - - - -	5613 08	Ditto, Spring Garden, ditto, No. 27, - - - - -	18795 07
Balance of Water Rent sued for the year 1840, as per Account No. 8, - - - - -	73 00	Ditto, Southwark, ditto, No. 19, - - - - -	12935 11
For cutting off Pipes in the year 1841, as per Account No. 9, - - - - -	262 75	Ditto, Moyamensing, ditto, No. 21, - - - - -	3469 69
Rent of Wharf at Fair Mount, as per Account No. 2, - - - - -		Ditto, Kensington, ditto, No. 24, - - - - -	4175 25
For Water Rents received in advance for 1842, as per Account No. 2, - - - - -		Ditto, Treasurer of the Girard Estates, No. 14, Register of Watering Committee, No. 2, - - - - -	886 00
Moyamensing, for interest, as per Account No. 21, - - - - -	34 69	Amount of cash paid into the City Treasury by the Watering Committee, in the care of the Register, for the year 1841, - - - - -	12552 02
Appropriated by Councils, viz.		Commissions allowed Northern Liberties, as per Account No. 16, Ditto, Spring Garden, ditto, No. 27, - - - - -	1431 43
For Incidental Expenses, - - - - -	16000 00	Ditto, Southwark, ditto, No. 19, - - - - -	1199 68
For Permanent Expenses, - - - - -	7500 00	Ditto, Moyamensing, ditto, No. 21, - - - - -	825 64
For Free Bridge at Fair Mount, - - - - -	3000 00	Ditto, Kensington, ditto, No. 24, - - - - -	219 25
		Ditto, City Collectors, ditto, No. 6, - - - - -	266 50
		Amount paid for collecting the Water Rents, in the City and Districts, for 1841, - - - - -	1887 29
		Amount allowed in settlement of duplicates, as per Account No. 7, Amount returned by Alderman Joel Cook as lost, as per Account No. 8, - - - - -	119 50
		Amount paid to Alderman Cook for fees, as per Account No. 8, - - - - -	182 75
			19 31
			134634 67
			5829 79

SAMUEL W. RUSH,

Register and Secretary.

January 1st, 1842.

Amount in Alderman Cook's hands, sued for 1841, as per Account No. 9, - - - - -	197 25	
Amount in Alderman Davis' hands, sued for 1841, as per Account No. 9, - - - - -	240 50	
Amount received in advance in July, &c., 1840, for 1841, and paid, as per last annual Account No. 2, - - - - -	445 50	1204 81
Amount disbursed by the Watering Committee, for the year 1841, including \$ 3000 paid towards erecting the free Wire Bridge at Fair Mount, as per Account No. 4, - - - - -		24701 75
Balance in hands of City Treasurer, December 31, 1841, - - - - -		1798 25
		<u>168169 27</u>

No. 2. STATEMENT,

Showing the Amount of Cash received and paid by Samuel W. Rush, Register, into the City Treasury, during the year 1841.

DATES.	City water, fractional, for 1841.		Fer- rules.		Repav- ing.		S. G. wa- ter rent, frac-tion- al, 1841.		N. L. wa- ter rent, frac-tion- al.		Mogamen- sing rent, frac- tional, 1841.		Southwark water rent, fractional.		Kensington water rent, fractional, 1841.		Annual wa- ter rents, payable in the Office.		Water rent sued for 1840		Delin- quents paid for 1841.		Debit- quents to be sued for 1841		Water in advance for 1842		Rent of wharf at Fair Mount.		TOTAL.											
	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.		D.	C.									
1841.																																								
Jan. 30,	55	33	6	00	7	50	28	94	28	00	6	96	14	22	7	35																								
Feb. 27,	80	57	12	75	12	00	31	73	41	70	6	75	13	19																										
Mar. 31,	145	71	35	50	30	25	80	25	20	92	21	79	32	81	23	96																								
April 30,	161	64	47	25	39	50	224	28	115	14	64	07	52	13	29	26																								
May 31,	183	40	33	00	33	50	208	69	32	48	13	58	50	88	28	38	550	00																						
June 30,	349	67	83	00	75	50	237	81	91	77	64	17	139	13	16	09	1760	50					1199	50			894	50												
July 31,	114	08	61	75	54	00	85	23	58	58	24	19	109	07	12	16							193	00			152	00												
Aug. 31,	182	12	76	50	46	50	85	55	47	39	8	76	35	72	20	71					30	19			766	75														
Sept. 30,	191	52	71	50	59	25	57	45	36	14	28	49	59	44	15	43					15	50					18	00												
Oct. 30,	171	42	63	50	61	50	73	64	35	60	19	97	18	61	7	05											8	00												
Nov. 30,	134	37	47	50	34	50	20	83	30	82	11	87	14	33	2	77					15	00					291	00												
Dec. 31,	1414		21	50	20	00	39	64	89	26	1	69	7	69	10	85																								
	1783	97	539	75	474	00	1174	04	627	80	272	29	547	22	174	01	2310	50			60	69	2242	25	150	25	2130	25	45	00										

Deduct as follows:

- Water Rents in advance for 1842, - - - - -
- Delinquents sued for 1841, - - - - -
- Rent of Wharf at Fair Mount, - - - - -
- Delinquents sued for 1840, - - - - -
- Delinquents paid for 1841, - - - - -
- Annual Water Rents payable in the Office, - - - - -

This and the above amount of \$12,552 02 are both carried to Account No. 1,

January 1, 1842.

SAMUEL W. RUSH, Register and Secretary.

6938 94
5613 08

No. 3.

The Register submits to the Watering Committee the following Tabular Statement, embracing the Accounts of his Department, setting forth the Appropriations by Councils, and their Expenditure, the Income from Water Rents, the Iron Pipes and Fire Plugs laid, &c., in the Districts, &c., to the 31st of December, 1841.

	Amount of appropriations by Councils for 1841, the Wire Bridge included.		Cash drawn for the expenditure and the Bridge for 1841, see Account No. 4.		Receipts for water rents during the year 1841, see Account No. 1.		Amount allowed the Districts for collecting the water rents, including 1842.		Increase of water rents during the year 1841.		Water rents declined, allowed, &c., during the year 1841.		Number of water takers, City and Districts.		Amount of water rents, City and Districts, for the year 1842.		Miles of Iron Pipes laid, City and Districts.		Fire plugs erected in City and Districts.		Amount of water rents, &c., from the commencement to 1842, inclusive.				
	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.			
City, - - - - -	26500	00	24701	75	13463	467	10010	82	2235	75	1282	25	12749	66752	50	*63½	*520	11605	292	00	63	11605	292	00	
Spring Garden, - - - - -	-	-	-	-	-	-	8068	56	2251	25	283	50	2789	22207	75	16	155	16596	0	50	16	16596	0	50	
Southward, - - - - -	-	-	-	-	-	-	1432	491	1143	00	180	00	1823	14903	75	11¾	132	13377	3	82	11¾	13377	3	82	
Northern Liberties, - - - - -	-	-	-	-	-	-	1351	25	1351	25	142	75	3124	25208	50	14¾	147	25406	7	62	14¾	25406	7	62	
Moyamensing, - - - - -	-	-	-	-	-	-	1315	00	634	50	37	50	522	4288	75	3½	41	21731	37	-	3½	21731	37	-	
Kensington, - - - - -	-	-	-	-	-	-	1367	18	232	00	174	00	521	4673	75	5	50	22370	07	-	5	22370	07	-	
Girard Water Rents in the City, Water Rents payable in the Office of the Watering Committee, 1st of June, 1841, as per Account No. 5, - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reut of Wharf at Fair Mount, Families by public lamps, - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	3300	2250	50	-	-	7831	00	-	-	7831	00	-	
	26500	00	24701	75	13463	467	35086	47	7850	75	2100	00	24828	141339	50	113½	1045	177218	438	-	-	177218	438	-	

* The Iron Pipes and Fire Plugs (of the City proper) in the above Table, are taken from the Account kept by the Superintendent.

CITY.

No. 4.

Statement, showing the amount of the different heads of accounts, embracing all the accounts, as registered by Samuel W. Rush, Register, and paid by requisitions on the Mayor, being signed by John Price Wetherill, Chairman, and countersigned by Samuel W. Rush, Secretary.

	<i>Dolls.</i>	<i>C.</i>
Distribution, - - - -	3874	83
Incidentals, - - - -	238	69
Water power, - - - -	3065	28
Iron pipes, - - - -	3463	27
Fair Mount Works, - - - -	7199	68
Salaries, - - - -	3860	00
Wire bridge at Fair Mount, - - - -	3000	00
Carried to Balance Sheet, - - - -	24701	75

No. 5.

Statement, showing the list of Water Rents payable to the Register, in the Office of the Watering Committee, City Hall, on the 1st of June, 1842.

	<i>Dolls.</i>	<i>C.</i>
Joseph S. Lovering & Co., No. 27 Church alley, -	750	00
Trustees of the Philadelphia Gas Works, - -	400	00
Thomas Hewit, Zane street, - - - -	150	00
Police Committee, Filbert, east of Schuylkill Eighth street,	10	00
Ditto, Cherry, between Fourth and Fifth sts.,	10	00
Committee on City Property, - - - -	5	00
Ditto, - - - -	5	00
Ditto, - - - -	11	00
William Swaim, Seventh and George streets, -	300	00
E. Vansyckel, Ashton street near Vine, - -	125	00
T. Elmes, Vine street, west of William street, -	117	00
Naval Asylum, Gray's Ferry road, - - - -	140	00
James Maxwell, Cedar, west of Twelfth street, -	112	50
Committee on City Property, at the High street Bridge,	5	00
Robert Harmer, No. 48 North Third street, -	110	00
Carried to Account No. 3, - - - -	2250	50

CITY.

No. 6.

Statement, showing the settlement of the duplicates of the City water rents, for the year 1841.

	Dolls.	C.	Dolls.	C.
Amount of duplicates of water rents, -	64104	25		
Add, discoveries in the collection, -	73	00		
			64177	25
From which deduct—				
Collectors' commissions, - -	1887	29		
Amount ordered to be sued, as per Account No. 7,	532	50		
Amount allowed, as per Account No. 7,	119	50		
			2539	29
Amount paid into the City Treasury, -			61637	96
Of which was received—				
By James Hickey, Collector, - -	15329	28		
By Thomas Millar, Collector, - -	16179	65		
By George W. Gillingham, Collector, -	15490	42		
By George Hacker, Collector, - -	12396	36		
Amount paid by Collectors, carried to Account No. 1, - - - -			59395	71
By Samuel W. Rush, as per Account No. 2,			2242	25
			61637	96

No. 7.

Statement, showing the settlement of the amount of water rents returned, by J. Hickey, T. Millar, G. W. Gillingham, and G. Hacker, Collectors, for the year 1841, as not paid, and allowed to them by the Committee in the settlement of the duplicates of water rents for said year.

	Dolls.	C.	Dolls.	C.
Amount by J. Hickey, - - -	558	50		
Amount by T. Millar, - - -	733	50		
Amount by G. W. Gillingham, - -	594	25		
Amount by G. Hacker, - - -	1008	00		
			2894	25
Accounted for, to wit—				
Received and paid into the City Treasury by the Register, as per Account No. 2, -	2242	25		
Allowed by Committee, carried to Account No. 1,	119	50		
Amount ordered by Committee to be sued, for settlement of which see Account No. 9,	532	50		
Making the above amount returned not paid,			2894	25

CITY.

No. 8.

Statement, showing the settlement of the water rents remaining in the hands of Alderman Joel Cook, as per statement of last year, Account No. 10.

	Dolls.	C.	Dolls.	C.
Balance in Alderman Cook's hands, as per last year's Account No. 10, - -			262	75
Settled, as follows—				
The Alderman's return in August last, as lost, - - - \$213 25				
From which deduct, received from persons taking the water, since his return, 30 50				
	182	75		
Amount paid the Alderman for fees, -	19	31		
Cash received from Alderman in August last, - - - \$30 19				
Cash received from persons, as stated above, - - - 30 50				
Received by Register, and paid, as per Account No. 2, - - -	60	69		
Making the aforesaid balance of -			262	75

No. 9.

Statement, showing a settlement in part of the water rents ordered to be sued for the year 1841.

	Dolls.	C.	Dolls.	C.
Water rent ordered to be sued, - -	532	50		
Add, for cutting off pipes, - -	55	50		
			588	00
From which deduct—				
Amount received by Register without suit, and paid, as per Account No. 2, - -			150	25
Balance in suit, - - -			437	75
As follows—				
In the hands of Alderman Cook, -	197	25		
In the hands of Alderman Davis, -	240	50		
Together, -			437	75

CITY.

No. 10.

*Statement, showing the amount of the duplicates of water rents
for the year 1842.*

<i>First District.</i>		<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
North Mulberry ward, &c.,	- -	6251	00		
Locust and Dock wards,	- -	9262	25		
Walnut and South wards,	- -	7214	00		
				22727	25
<i>Second District.</i>					
Upper Delaware ward,	- - -	3826	25		
Lower Delaware and South Mulberry wards,		9254	50		
High Street and North wards,	- -	8268	00		
				21348	75
<i>Third District.</i>					
Chestnut ward,	- - -	3096	50		
Middle ward,	- - -	3606	00		
New Market, Pine and Cedar wards,	- -	13843	75		
				20546	25
Amount to be collected for the year 1842,				64622	25
The Register received in advance, on account of the above duplicates, and paid, as per Account No. 2,				2130	25
Carried to Account No. 3,				66752	50

CITY AND DISTRICTS.

No. 11.

Statement, showing the amount of water rents taken from the water rent books of the city and districts, for and during the year 1841.

City—	Dolls.	C.	Dolls.	C.
Amount ordered to be sued, - \$532 50				
Deduct amount continued on the books, 106 00				
	426	50		
Amount allowed by Committee, - -	119	50		
Amount declined, - - -	736	25		
			1282	25
Districts—				
Kensington, - - - -	174	00		
Northern Liberties, - - -	142	75		
Spring Garden, - - - -	283	50		
Southwark, - - - -	180	00		
Moyamensing, - - - -	37	50		
			817	75
Amount taken from the books, carried to Account				
No. 3, - - - -			2100	00

It will be perceived, that the increase of water rents during the year 1841, by new permits, is decreased to the amount of the afore-said deduction.

CITY.

		Dolls.	C.	Dolls.	C.
12725	Amount brought forward,			66615	50
2	Hotels, &c., &c.,	at	60	120	00
1	Hotel,		61	61	50
6	Breweries, &c.,		75	450	00
1	Distillery,		80	80	00
1	Hotel,		86	86	00
1	Hotel,		88	88	00
2	Laboratories, &c.,		90	180	00
1	Hotel,		96	96	50
1	Bath house,		110	110	00
1	Water wheel,		112	112	50
1	Hattery, &c.,		117	117	00
1	Distillery,		125	125	00
1	Naval Asylum,		140	140	00
1	Sugar house,		150	150	00
1	Bath house,		300	300	00
1	Gas Works,		400	400	00
1	Sugar house,		750	750	00
12749				69982	00

The above Account No. 12, is composed of the following water rents—

Duplicates, as per Account No. 10,	-	-	-	-	\$ 66752	50
Girard water rents, as per Account No. 3,	-	-	-	-	979	00
Water rents payable in the office, as per Account No. 5,	-	-	-	-	2250	50
					\$ 69982	00

No. 13.

Statement, showing the settlement of the water rents payable to the Register of the Watering Committee, as per last year's Report, Account No. 5.

	Dolls.	C.
Amount payable to Register, on the 1st of June, 1841,	2310	50
Received and paid by Register, as per Account No. 2,	2310	50

No. 14.

Statement, showing the settlement of the water rents charged to the Girard Estate in the City, as per last year's Report, Account No. 3.

	Dolls.	C.
Amount of bill of water rent,	886	00
Cash paid City Treasurer, by the Treasurer of the Girard Trusts, carried to Account No. 1,	886	00

NORTHERN LIBERTIES.

No. 15.

An account, showing the amount of the water rents due and payable to the City, by the incorporated district of the Northern Liberties, on the 1st of June, 1842, after 6 per cent. shall have been deducted, as per agreement—also the number of dwellings, &c., supplied therein with the Schuylkill water, to the 31st of December, 1841.

	Dolls. C.	Dolls. C.
46 Horses, - - - - -	at 1 50	69 00
1 Horse, &c., - - - - -	2 50	2 50
15 Wash pavements, - - - - -	3 00	45 00
64 Tenements, - - - - -	3 75	240 00
250 Baths, - - - - -	4 50	1125 00
2 Stands for horses, - - - - -	5 00	10 00
78 Dwellings, - - - - -	6 00	468 00
2356 Dwellings, - - - - -	7 50	17670 00
1 Stable, - - - - -	8 00	8 00
1 Stable, &c., - - - - -	8 75	8 75
9 Dwellings, - - - - -	9 00	81 00
7 Factories, - - - - -	10 00	70 00
2 Stables, &c., - - - - -	10 50	21 00
76 Dwellings, &c., - - - - -	11 25	855 00
66 Curriers, &c., - - - - -	12 00	792 00
4 Stables, &c., - - - - -	13 50	54 00
53 Curriers, morocco factories, &c., - - - - -	15 00	795 00
1 Factory, - - - - -	16 00	16 00
1 Steam engine, &c., - - - - -	16 50	16 50
2 Morocco factories, - - - - -	17 00	34 00
1 Court, - - - - -	18 00	18 00
13 Taverns, &c., - - - - -	18 75	243 75
1 Brewery, &c., - - - - -	19 50	19 50
2 Soap factories, - - - - -	20 00	40 00
1 Tavern, &c., - - - - -	21 00	21 00
1 Tavern, &c., - - - - -	21 25	21 25
25 Taverns, &c., - - - - -	22 50	562 50
3 Morocco factories, &c., - - - - -	25 00	75 00
1 Stable, - - - - -	25 50	25 50
2 Courts, - - - - -	26 25	52 50
1 Steam engine, - - - - -	29 25	29 25
13 Soap factories, - - - - -	30 00	390 00
1 Morocco factory, - - - - -	33 00	33 00
9 Taverns, - - - - -	33 75	303 75
3 Morocco factories, - - - - -	37 50	112 50
1 Court, - - - - -	39 00	39 00
1 Hay market, - - - - -	40 00	40 00
1 Court, - - - - -	41 25	41 25
1 Turpentine factory, - - - - -	42 75	42 75
2 Turpentine distilleries and morocco factories, - - - - -	50 00	100 00
2 Tanneries, - - - - -	52 50	105 00
1 Morocco factory, - - - - -	75 00	75 00
1 Brewery, &c., - - - - -	87 25	87 25
1 Brewery, - - - - -	150 00	150 00
1 Gas Works, - - - - -	200 00	200 00
3124	Carried to Account No. 3,	25208 50

NORTHERN LIBERTIES.

No. 16.

Statement, showing the settlement of the duplicates of water rent charged to the Board of Commissioners of the incorporated district of Northern Liberties, as per last Annual Report, Account No. 16.

	Dolls.	C.	Dolls.	C.
Amount of duplicates, - - -	23857	25		
From which deduct 6 per cent., as per agreement,	1431	43		
Settled, viz.—			22425	82
Amount paid to the City Treasurer, by the Treasurer of the district of Northern Liberties, carried to Account No. 1, - - -			22425	82

No. 17.

Statement, showing the quantity of iron pipes laid, and the number of fire plugs erected in the district of Northern Liberties, from the year 1826 to the year 1841, both inclusive.

	Feet.	In	Feet.	In
Iron pipes laid to and including the year 1840,			72457	
Iron pipes laid in the year 1841, viz.—				
6 inch, Apple street, between George and Franklin streets, - - -	666			
10 inch, Poplar street, between Old York Road and Sixth street, - - -	391			
6 inch, Laurel street, between Second and Budd streets, - - -	470			
4 inch, Rachel street, between Poplar Lane and Laurel street, - - -	462			
			1989	
Say 14 $\frac{1}{8}$ miles, carried to Account No. 3,			74446	

Fire plugs erected in the district of Northern Liberties.

No. 146, Rachel street, south of Laurel street.

No. 147, Apple street, south of Franklin street.

147 plugs erected in the district—carried to Account No. 3.

SOUTHWARK.

No. 18.

An account, showing the amount of water rents due and payable to the City, on the 1st of June next, by the incorporated district of Southwark, for the year 1842, after 6 per cent. shall have been deducted, as per agreement—also an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1841.

	Dolls.	C.	Dolls.	C.	
1 Horse, - - - -	at	1	50	1	50
9 Bake houses, &c., - - -		3	00	27	00
28 Tavern licensed houses, - - -		3	75	105	00
69 Baths, - - - -		4	50	310	50
1 Commissioners' Hall, - - - -		5	00	5	00
14 Dwellings, - - - -		6	00	84	00
1601 Dwellings, - - - -		7	50	12007	50
2 Dwellings, - - - -		9	00	18	00
24 Taverns, &c., - - - -		11	25	270	00
10 Dwellings, &c., - - - -		12	00	120	00
1 Hattery, &c., - - - -		12	75	12	75
26 Hatteries, &c., &c., - - - -		15	00	390	00
3 Soap factories, - - - -		18	00	54	00
5 Courts, &c., - - - -		18	75	93	75
1 Steam engine, - - - -		20	00	20	00
11 Sugar houses, &c., - - - -		22	50	247	50
1 Livery stable, - - - -		25	00	25	00
3 Courts, - - - -		26	25	78	75
1 Court, &c., - - - -		30	00	30	00
1 Steam engine, - - - -		36	00	36	00
4 Courts, &c., - - - -		37	50	150	00
1 Brewery, - - - -		45	00	45	00
1 Court, &c., - - - -		52	50	52	50
1 Foundry, - - - -		70	00	70	00
2 Navy yards, &c., &c., - - - -		75	00	150	00
1 Vagrant apartment, County Prison,		100	00	100	00
1 County Prison, - - - -		400	00	400	00
1823	Carried to Account No. 3,			14908	75

SOUTHWARK.

No. 19.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the district of Southwark, for the year 1841, as per last Annual Report, Account No. 19.

	<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
Amount of duplicates, - - -	13760	75		
From which deduct 6 per cent., as per agreement,	825	64		
			12935	11
Settled, viz. —				
Amount paid to the City Treasurer by the Treasurer of the district of Southwark, carried to Account No. 1, - - -			12935	11

No. 20.

Statement, showing the quantity of iron pipes laid, and the number of fire plugs erected in the district of Southwark, from the year 1826 to the year 1841, both inclusive.

	<i>Feet.</i>	<i>In</i>	<i>Feet.</i>	<i>In</i>
Iron pipes laid in the district, to and including the year 1840, - - -			56508	00
4 inch, Moyamensing road, from Carpenter to Prime street, - - -	504	00		
3 inch, Clark street, from Third to Fourth street,	455	00		
4 inch, Marriott's lane, from Moyamensing road to Third street, - - -	429	00		
4 inch, Marriott's lane, from Third to Fourth st.,	454	05		
6 inch, Wharton, from Moyamensing road to Third street, - - -	116	00		
6 inch, Wharton, from Third to Fourth street,	450	00		
6 inch, Wharton, from Fourth to Fifth street,	419	10		
6 inch, Fourth st. from Wharton to Johnson's lane,	177	00		
6 inch, Third, from Washington to Wharton st.,	250	00		
8 inch, Third street, included in the above distance, - - -	500	00		
6 inch, Seventh street, from Carpenter to Prime or Washington street, - - -	461	00		
			4216	03
11 $\frac{3}{4}$ miles—carried to Account No. 3, -			60724	03

Fire plugs laid in the district of Southwark.

- No. 123, Moyamensing road, south of Carpenter street.
 124, Clark, east of Fourth street.
 125, Marriott's lane, east of Third street.
 126, Marriott's lane, east of Fourth street.
 127, Wharton, east of Fourth street.
 128, Wharton, east of Fifth street.
 129, Fourth street and Johnson's lanc.
 130, Third, opposite Prime street.
 131, Third, south of Federal street.
 132, Seventh, opposite Hallowell street.
 132 plugs in the district—carried to Account No. 3.

MOYAMENSING.

No. 21.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the township of Moyamensing, in the year 1841, as per last Report, Account No. 23.

	Dolls.	C.	Dolls.	C.
Amount of duplicates for 1841, - -	3654	25		
From which deduct 6 per cent., as per agreement,	219	25		
			3435	00
Add, interest for delay in payment, -			34	69
Amount paid City Treasurer, by the Treasurer of the township of Moyamensing, carried to Account No. 1, - - -			3469	69

No. 22.

An account, showing the amount of water rents due and payable to the City, on the 1st of June next, by the Commissioners of the township of Moyamensing, for the year 1842, after 6 per cent. shall have been deducted, as per agreement—also the number of dwellings, &c., supplied therein with the Schuylkill water, to the 31st of December, 1841.

	Dolls.	C.	Dolls.	C.
2 Water closets, - - - - -	at	1 50		3 00
1 Wash pavement, - - - - -		3 00		3 00
4 Tenements, - - - - -		3 75		15 00
46 Baths, - - - - -		4 50		207 00
1 Commissioners' Hall, - - - - -		5 00		5 00
425 Dwellings, - - - - -		7 50		3187 50
1 Factory, - - - - -		10 00		10 00
12 Taverns, - - - - -		11 25		135 00
10 Dwellings and baths, - - - - -		12 00		120 00
6 Taverns, - - - - -		15 00		90 00
2 Courts, - - - - -		18 75		37 50
1 Public school, - - - - -		20 00		20 00
1 Court, - - - - -		21 00		21 00
4 Courts, - - - - -		22 50		90 00
1 Court, - - - - -		24 00		24 00
1 Factory, - - - - -		30 00		30 00
1 Court, - - - - -		33 75		33 75
1 Bleaching yard, - - - - -		40 00		40 00
1 Court, - - - - -		42 00		42 00
1 Water wheel and factory, - - - - -		175 00		175 00
			4288	75

MOYAMENSING.

No. 23.

Statement, showing the quantity of iron pipes laid, and the number of fire plugs erected in the township of Moyamensing, from the year 1832 to the year 1841, both inclusive.

	<i>Feet.</i>	<i>In</i>	<i>Feet.</i>	<i>In</i>
Iron pipes laid in the Township, from the year 1832 to the year 1840, both inclusive,			15672	04
Pipes laid in the year 1841—				
10 inch, in Seventh, from Fitzwater to Catherine street, - - - -	449	00		
10 inch, Catherine, between Sixth and Seventh streets, - - - -	160	00		
			609	00
Say 3½ miles of pipes, - - -			16281	04

Fire plugs erected in the township of Moyamensing, from the year 1832 to the year 1840, inclusive, - - - - 39
 No. 40, in Seventh, between Fitzwater and Catherine streets.
 No. 41, in Catherine, between Sixth and Seventh streets.
 Say 41 fire plugs in the Township—carried to Account No. 3.

KENSINGTON.

No. 24.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the district of Kensington, for the year 1841, as per last Annual Report, Account No. 26.

	<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
Amount of duplicates, - - -	4441	75		
Deduct 6 per cent., as per contract, -	266	50		
			4175	25
Amount paid City Treasurer, by the Treasurer of the district, carried to Account No. 1,			4175	25

KENSINGTON.

No. 25.

An account, showing the amount of water rents due and payable to the City, by the district of Kensington, on the 1st day of June next, for the year 1842, after 6 per cent. shall have been deducted, as per agreement—also an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1841.

	Dolls. C.	Dolls. C.
1 Water closet, - - - - -	at 1 50	1 50
1 Wash pavement, - - - - -	3 00	3 00
4 Baths, - - - - -	4 50	18 00
437 Dwellings, - - - - -	7 50	3277 50
1 Steam engine, - - - - -	9 00	9 00
3 Oil factories, &c., - - - - -	10 00	30 00
1 Horse, &c., &c., - - - - -	10 50	10 50
25 Dwellings, &c., - - - - -	11 25	281 25
8 Dwellings and baths, - - - - -	12 00	96 00
1 Dyery, - - - - -	13 00	13 00
1 Steam engine, - - - - -	13 50	13 50
13 Taverns, &c., - - - - -	15 00	195 00
1 Tavern, &c., - - - - -	16 25	16 25
1 Dyery, - - - - -	17 50	17 50
3 Courts, - - - - -	18 75	56 25
1 Steam engine, - - - - -	21 00	21 00
9 Laboratories, - - - - -	22 50	202 50
1 Steam engine, - - - - -	24 00	24 00
2 Courts, - - - - -	30 00	60 00
1 Paper factory, - - - - -	33 00	33 00
2 Courts, - - - - -	37 50	75 00
1 Steam engine, - - - - -	45 00	45 00
1 Court, - - - - -	48 75	48 75
1 Steam engine, &c., - - - - -	56 25	56 25
1 Factory, - - - - -	70 00	70 00
521 Carried to Account No. 3, - - -		4673 75

No. 26.

Statement, showing the quantity of iron pipes laid, and the fire plugs erected in the district of Kensington, to and including the year 1841.

Say 5 miles, or - - - - - 26216 feet 3 inches.

Fire plugs erected in the district.

Say, fire plugs, carried to Account No. 3, - - - 50

SPRING GARDEN.

No. 27.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the district of Spring Garden, as per last Annual Report, Account No. 30.

	<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
Amount of duplicates, - - -	19953	50		
Add, deducted by Commissioners in 1840,	41	25		
	19994	75		
From which deduct 6 per cent., as per agreement,	1199	68		
			18795	07
Settled, viz.—				
Amount paid to the City Treasurer, by the Treasurer of the district, carried to Account No. 1,			18795	07

No. 28.

Statement, showing the quantity of iron pipes laid in the district of Spring Garden, from the year 1826 to the year 1841, both inclusive—also the number of fire plugs erected in said period.

	<i>Feet.</i>	<i>In</i>	<i>Feet.</i>	<i>In</i>
Iron pipes laid to and including the year 1840,			83282	07
6 inch, Thirteenth, from Ridge Road to Coates' street, - - - -	949	00		
4 inch, Wood, from Franklin to Eighth street,	245	00		
6 inch, Eleventh above Wood street, -	56	00		
			1250	00
Say 16 miles, - - - -			84532	07

Number of fire plugs erected in the district.

No. 153, Thirteenth, north of Wallace street.

154, Wood, west of Franklin street.

155, Eleventh, north of Wood street.

In all, 155 fire plugs—carried to Account No. 3.

SPRING GARDEN.

No. 29.

An account, showing the amount of water rents due and payable to the City, by the district of Spring Garden, on the 1st of June next, for the year 1842, after 6 per cent. shall have been deducted, as per agreement—also an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1841.

	Dolls.	C.	Dolls.	C.
8 Horses, &c., - - - - -	at	1 50		12 00
1 Washer, &c., - - - - -		2 25		2 25
2 Horses, &c., - - - - -		3 00		6 00
25 Tenements, &c., - - - - -		3 75		93 75
329 Baths, - - - - -		4 50		1480 50
1 Porter cellar, - - - - -		5 25		5 25
18 Dwellings, - - - - -		6 00		108 00
2182 Dwellings, - - - - -		7 50		16365 00
4 Vinegar yards, &c., - - - - -		9 00		36 00
3 Soap factories, &c., - - - - -		10 00		30 00
2 Slaughter houses, - - - - -		10 50		21 00
11 Dwellings, &c., - - - - -		11 25		123 75
112 Dwellings, &c., - - - - -		12 00		1344 00
31 Soap factories, &c., - - - - -		15 00		465 00
1 Steam engine, &c., - - - - -		16 50		16 50
1 Steam engine, &c., - - - - -		18 00		18 00
14 Dwellings, &c., &c., - - - - -		18 75		262 50
2 Livery stables, - - - - -		20 00		40 00
7 Taverns, &c., - - - - -		22 50		157 50
3 Paper stainers, &c., &c., - - - - -		24 00		72 00
1 Tavern, &c., - - - - -		25 00		25 00
1 Steam engine, &c., - - - - -		25 50		25 50
3 Courts, &c., - - - - -		26 25		78 75
1 Steam engine, - - - - -		27 00		27 00
1 Tavern, &c., - - - - -		27 50		27 50
7 Factories, &c., - - - - -		30 00		210 00
1 Steam mill, &c., - - - - -		30 75		30 75
1 Stable, - - - - -		31 50		31 50
1 Steam engine, &c., - - - - -		33 75		33 75
1 Court, &c., - - - - -		36 00		36 00
4 Taverns, &c., - - - - -		37 50		150 00
3 Steam mills, &c., - - - - -		40 00		120 00
1 Court, - - - - -		45 00		45 00
2 Tanneries, - - - - -		54 00		108 00
1 Water wheel and factory, - - - - -		112 50		112 50
2 Steam for rail-roads, - - - - -		150 00		300 00
1 Factory, - - - - -		187 50		187 50
2789	Carried to Account No. 3,			22207 75

SAMUEL W. RUSH, Register.

January 1st, 1842.

4*

REPORT

*included with
preceding
report*

OF

THE WATERING COMMITTEE,

RELATIVE TO

REPAIRING FAIR MOUNT DAM.

ADDRESSED TO

THE SELECT AND COMMON COUNCILS.

PHILADELPHIA:
LYDIA R. BAILEY, PRINTER.
1841.



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REPORT.

To the Presidents and Members of the Select and Common Councils of the City of Philadelphia.

GENTLEMEN :

The Watering Committee beg leave to report on the necessity of Re-building Fair Mount Dam from low-water mark.

This structure was commenced on the 19th of April, 1819, and finished on the 22d of July, 1821. Its repairs for upwards of twenty years have been merely incidental. Its strength has been fully tested, and its durability proven all and more than was anticipated at its construction.

But after giving this subject the most careful examination, supported by the Report of Frederick Erdmann and M. Towers, Esqrs., herewith submitted, and by the opinion of Frederick Graff, Esq.—the Committee are satisfied that the time has arrived, when the interests of the City and adjoining Districts, require that the Dam should be re-built from low-water mark, early next year. It will be seen by the enclosed Report, that the estimated cost will be about sixty thousand dollars.

As the timber necessary for the work should not be cut later than the month of January, the Committee are induced to come to Councils at this early period for

authority to contract for all materials necessary for re-building the dam, and they submit the enclosed draft of a Resolution accordingly.

Resolved, That the Watering Committee be and they are hereby instructed, to contract forthwith for all the materials necessary for Re-building the Fair Mount Dam.

They also beg leave to report, that they had a conference with the Trustees of the Bank of the United States, relative to the purchase of the Lemon-Hill Estate, and were informed, that they would sell the same to the City for one hundred and thirty thousand dollars, and did not feel themselves authorized to dispose of it at private sale for less:

They respectfully submit the matter for the consideration of Councils.

JOHN PRICE WETHERILL,
Chairman.

ATTEST.—SAMUEL W. RUSH,
Register and Secretary.

November 11, 1841.

REPORT OF THE STATE OF THE DAM IN 1839.

To the Select and Common Councils of the City of Philadelphia.

GENTLEMEN:

Agreeably to the Resolution, passed April 11th, authorizing the Watering Committee to solicit the services of Henry Campbell, Daniel Groves, Josiah White, and Frederick Erdmann, Esqrs., to make a regular survey, and to examine the actual condition and stability of the Dam at Fair Mount, I am requested by said Committee to present their Report, agreeably to said Resolution.

JOHN PRICE WETHERILL,
Chairman of Watering Committee.

Philadelphia, September 12th, 1839.

REPORT.

To the Watering Committee of the City of Philadelphia.

GENTLEMEN:

The undersigned, appointed by the Select and Common Councils to examine the Fair Mount Dam, in conjunction with the Superintendent of the Fair Mount Water Works, and under the notice of the Watering Committee, beg leave to report:—

That we have made the examinations as minutely as the high stage of water would permit, and find the general condition of the dam to be sound and substantial, except the sheet-planks on the southern slope or roof of the dam, and some of the timbers in its southern face or breast, ranging between mean high-water mark and the come or top of the dam, which exhibit the only decay that can be observed in any part of the work. This portion of the dam, from its frequent exposure to the atmosphere, by reason of a low stage of water, and liability to injury from freshets and floating ice, will of course be first to fail and to require repairs.

The undersigned do not apprehend danger of immediate failure or necessity of repairs, beyond the replacing of planks, removed from the roof of the dam by freshets or otherwise. The great importance of this work to the City and Districts, however, should prevent any risk of failure for want of timely repairs, and on this account the undersigned recommend that the roof and upper part of the dam, within the triangle above the line *a b* in the annexed Figure 1, be renewed within the years 1840 or 1841. These repairs can readily be made, at small expense, without disturbing the main body of the dam, or causing inconvenience or risk, by renewing sections of one or two hundred feet at a time.

The dam has settled in the deep sections of the river some inches below its original level, by the compression of the timber of which it is constructed, and the great weight it sustains. No danger is to be apprehended from this fact, but it has been necessary to maintain the proper head of water in the dam, by raising the rubble backing above the present come of the dam. This rubble is liable to removal in times of freshets. By the

repairs proposed, the original level of the dam can be restored, and the work rendered permanent and secure for many years to come.

The present shape of the roof, or upper section of the dam, is represented in the accompanying Figure 1. It is suggested by the undersigned to change the form of this section to that represented by the Figure 2. By this change less surface will be exposed to decay in low stages of water, and less liability to accident and violence from ice or other floating bodies passing over the dam.

It may be necessary at some future day to strengthen the dam by additional cribs in front of the present structure, to be filled with stone, and united to the present dam, as suggested by Mr. Frederick Graff, the present engineer of the Works. When this addition is made, it is recommended that the sectional shape, represented in Figure 2, shall be preserved, as preferable to the shape of Figure 1. The undersigned do not deem this precaution necessary now, or so long as the lower timbers remain sound. If constructed now, the operation of decay would commence long before such an addition would be necessary. The undersigned do not deem any general repairs necessary, beyond those suggested, for many years to come.

It does not appear that the dam has sustained any injury from the great ice-freshet of last winter, beyond the removal of a few sheet-planks, which have been left off until the present time to facilitate the present examination.

All of which is respectfully submitted.

H. R. CAMPBELL,
 JOSIAH WHITE,
 DANIEL GROVES,
 F. ERDMANN.

Phila., September 12th, 1839.

Fig. 1.

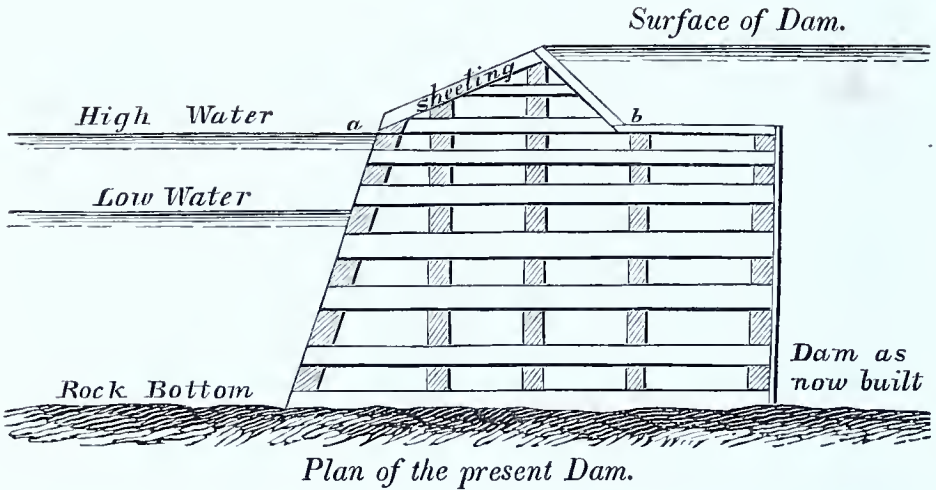
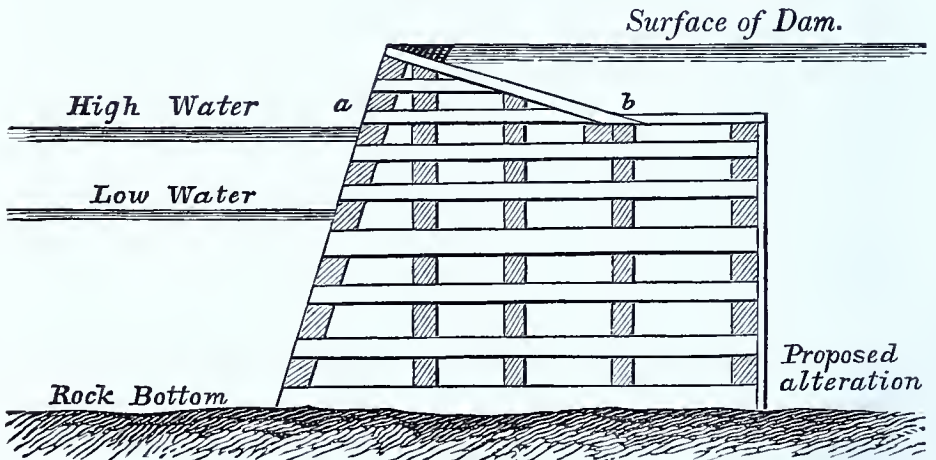


Fig. 2.



Plan approved by Messrs. Erdmann and Towers in their Report.
 That part which is coloured they propose to be re-built of white
 pine timber, with a roofing of white oak.

REPORT OF 1841.

To the Gentlemen of the Watering Committee.

In compliance with your orders to have an examination of the present state of the dam by competent persons, for the purpose of ascertaining the repairs requisite for its being put into a perfect condition, and also to obtain from them an estimate of the probable cost, I appointed Mr. F. Erdmann and Mr. Michael Towers, who have carefully attended to the subject. The questions submitted to those gentlemen, together with their report, are herewith annexed.

In relation to the capacity of these gentlemen, I will observe, that Mr. Erdmann was engaged in the erection of the mill-buildings at Fair Mount, in 1820 and 1821, at which time he planked the front facing of the dam; in 1830, he re-planked the top surface or roof of the dam, which was decayed; since then, he has with other gentlemen made several examinations of its condition; consequently, he is fully acquainted with its structure from its first erection to the present time.

Mr. Towers erected a new dam at Flat-Rock, in 1840, and previously one at Norristown; these, with the successful erection of the new lock at Fair Mount, and other work done for the Schuylkill Navigation Company, give entire satisfaction.

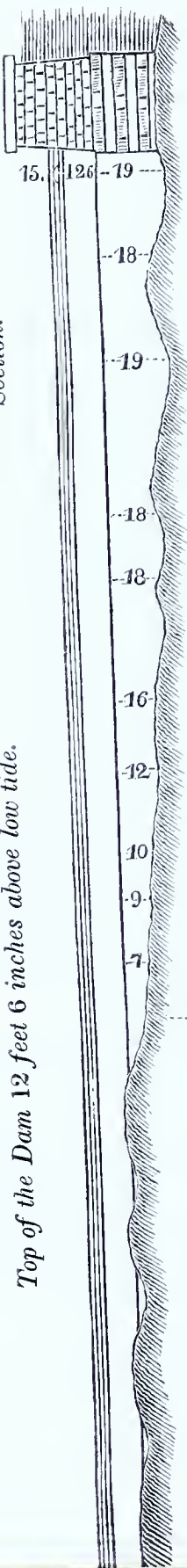
Your humble servant,

FREDERICK GRAFF.

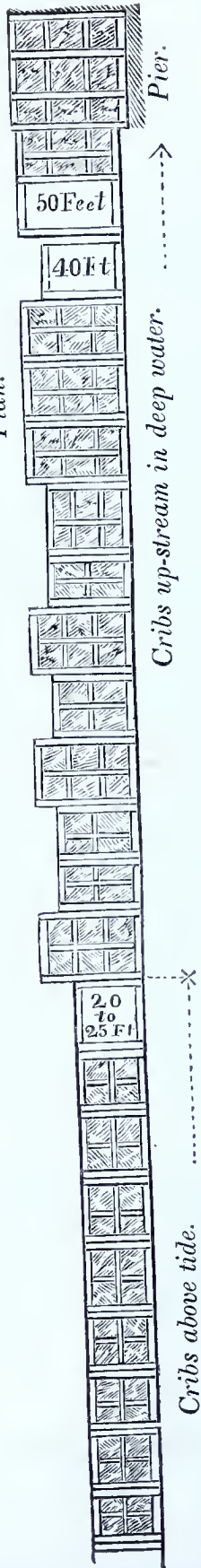
November 3d, 1841.

Section.

Top of the Dam 12 feet 6 inches above low tide.



Plan.



Explanations and Questions handed to Messrs. Erdmann and Towers.

The dam is 1200 feet long, and the whole is built on the rock bottom, 450 feet of which is in deep water; it averages below low-tide about 14 feet 3 inches in depth, and from low-tide to the top or coming of the dam 12 feet 6 inches, making the average height of the dam from bottom to top in deep water, 31 feet 6 inches.

From the deep water line, the dam westward is dry at low-tide, the highest part from the rock bottom is about 12 feet 6 inches, and the lowest about 10 feet, making an average of this part of the dam of 11 feet 3 inches high, and about 750 feet long.

The cribs in the deep sections of the river run up stream varying from 40 to 50 feet, and in the shoal part of the river from 20 to 25 feet. They are built of hemlock, and filled with stone, planked over on the top and up stream front with 3 inches hemlock joist. The whole is then backed and covered over to the top surface of the dam with stone, rubble, and gravel.

The crib-work below the tide, from various examinations, is supposed to be firm and sound; above tide, the timber appears also to be good, say half-tide or 3 feet up; from thence, to the roofing or top of the dam, the timber framing is in a decayed or decaying condition; near the top it is rotten, and has become soft, except where the timber was unusually hearty.

The above is believed to be the true state of the dam, which, with the examinations you have made, will enable you to give an opinion in what manner it can best be repaired or re-built—with an estimate of the probable cost of putting it in perfect order with the best materials.

Also please state the plan you would adopt in case of repairing the old dam; as to the distances or sections that should be done at a time, and the manner of security that would be necessary to guard the work from injury by freshets, when a section would be taken asunder; and what method will be preferable for the western end of the dam, whether to repair the old part, or build a new structure in front of it.

Should you deem any other plan preferable to that of repairing the present dam, you will please suggest it, with the probable cost and manner you would recommend it to be done.

Your early attention to the above will confer a great favour on

Yours, respectfully,

FREDERICK GRAFF.

October 11, 1841.

Philadelphia, Nov. 3d, 1841.

FREDERICK GRAFF, ESQ.

Superintendent of the Philadelphia Water Works.

DEAR SIR:

Agreeable to your request, the undersigned beg leave to return the following in answers to the questions proposed by you in relation to repairing or re-building the Fair Mount Dam.

From our recent examination as well as a prior knowledge of the dam, the undersigned are led to the opinion, that the present superstructure from low-water up to the top, could not be repaired without the erection of coffer-dams, thereby incurring the same expense in pre-

paring for the work as in re-building that portion of the dam; and when finished, should there be any of the old hemlock timber remaining above low-water, it must reasonably be expected, that it will decay long before that in the new work, particularly should it be repaired with a more durable material.

The undersigned believing the dam below the range of low tide to be perfectly sound, they are of the opinion that the only plan which should be pursued, is to rebuild the whole of the dam from low-water up; should that be determined on, the undersigned beg leave to recommend the white pine timber, as being the most durable for all work of the kind above low-water, excepting the sheeting or upper planking, which should be of oak 10 inches thick at the coming, and reduced to 5 inches at the up-stream end.

The plan of dam as proposed in Figure 2, in the report on the dam of September, 1839, we conceive to be best calculated to preserve the timber, as it presents less surface for decay; we therefore recommend the adoption of that plan when the dam is renewed.

The plan we would recommend for the operation of coffer-daming, is to dam in two sections of 150 feet each, that two sets of hands may work alternately; we are further of the opinion, that 300 feet is as much of the overfall as should be occupied at one time during the progress of the work.

We would propose constructing the coffer-dams of the backing and stone-filling of the present superstructure, by removing the backing up stream, and raising it from 5 to 6 feet above the present height of the water, forming an angle on the down stream side of degrees, to low-water line based upon the rock, and in the deep

water upon the deck of the long cribs, and firmly secured at the bottom with timber, and planking up the angle of the bank, and built in with a slope dry wall of 4 to 5 feet thick, made with the stone in the present superstructure; this would not only make a safe barrier against freshets, but would relieve the work whilst in progress of that material, which can be returned when the new work is ready to receive it.

In relation to the western angle or section of the dam, we are of the opinion, that that portion of the old dam should be let remain, and a new section erected in front of it, and connected with the main line of the dam when it is rebuilt, and also to build an abutment in rear and connected with the old pier; this would be the cheapest and most ready mode of finishing that portion of the work, without interfering with the navigation of the canal.

Should it be deemed necessary at any future period, or on taking down the old dam should any defect be discovered which would require additional security to be given to that portion of the dam remaining below low-water, the undersigned would recommend a range of strong crib-work being sunk in front of the old dam, filled with stone, and decked over with a strong log-sheeting, at low-water, as being the only mode of adding permanent strength to that portion of the dam, as it will always remain sound, and stop the action of the undertow against the face of that part of the old work.

After taking a full and deliberate view of the whole matter, both as regards the importance of security to the City, as well as the necessity of guarding against all failure in the operation of the work, and the cost of the whole, the undersigned believe they have now said all that

is necessary on the subject; and as regards the manner the proposed work should be done, whether by contract for the whole, by measurement as per wharf-builders, or by the day, the undersigned beg leave to say, that the nature of the work does not admit of being measured by any rule of wharf-builders' measurement; and in taking into view the variety of work contracted for in the public improvements of this State, and the amount of bad work done, leads the undersigned to believe, that in the present case, where so much depends on proper management and construction of the work, that it would not be good policy to let it on contract; but are fully satisfied, that all public work done by the day under proper superintendence, has given more satisfaction; we would therefore recommend the latter plan as the best in this particular case.

The whole of which we respectfully submit, together with the following estimate of the cost, which includes all work and materials, except the proposed crib-work in front of the dam below low-water, which amount is \$60,498 36.

Signed,

F. ERDMANN,
MICHAEL TOWERS.

Opinion of Mr. Frederick Erdmann, in relation to delaying the proposed repairs to Fair Mount Dam.

DEAR SIR:

As you have lately examined the state of the Dam at Fair Mount, and know its present condition, allow me to ask if you think it might be relied upon *as it now stands*, for another year?

Yours, respectfully,

FREDERICK GRAFF.

November 9, 1841.

MR. FREDERICK ERDMANN.

FREDERICK GRAFF, ESQ.

DEAR SIR:

On my return this evening in the cars from Schuylkill Haven, I received your note of yesterday. Your question in relation to the dam, is of too much importance to the City to permit me to give an opinion in favour of delaying the repairs. It will require two seasons to accomplish the work after being commenced; a delay of one year in commencing, would leave the last portion of the dam nearly three years standing from the present time (*embracing the breaking-up of two winters*). Permit me therefore, to say, I am of the opinion the repairs should not be left over another year before being commenced. Should, however, it be found on taking down the first section that its situation would warrant delay, it could then be deferred.

I am, with great respect,

Yours, &c.,

F. ERDMANN.

November 10th, 1841.

*To the Watering Committee.**Water Office, Cherry Street, Dec'r. 1, 1841.*

GENTLEMEN:—In answer to the Resolution of the Watering Committee of November 23, requesting me to give an opinion in relation to the present state of the Dam at Fair Mount, and the best manner it could be repaired, I have only to say, I approve of the plan of repairs that has been suggested by Messrs. Erdmann and Towers in their Report of November 3, which has been handed to the Committee, and laid before Councils.

By reference to the printed Reports made by a number of gentlemen on the state of the dam, in September, 1828, one will be found made by me; since that time, my observations on the wear and tear of the structure, have not changed my opinion as to the manner it should be repaired.

In relation to the Report on the Dam made by Messrs. Campbell, White, Groves, and Erdmann, in September, 1839, they recommended what may be considered a partial repair, "which" they say, "can be readily made at a small expense;" but under all considerations, would it be prudent to make such repair, by building as they recommend, "the roof and upper part of the dam" on a hemlock base which has stood exposed to wind and weather between the tides, subject to the freshets, ever since the year 1821? when by a reasonable additional expense and labour in taking down the hemlock face to low-tide, the dam may be made more permanent and secure than it ever was, owing to the old logs having been framed so far asunder as to cause the necessity of planking the front, to prevent the stone-filling from washing out from between them.

Your humble servant,

FREDERICK GRAFF.

