

From F. Grady to Charles Grady Esq

1822
REPORTS

OF THE

Watering Committee,

1836 + 1822
TO THE 1823

SELECT & COMMON COUNCILS

OF THE

City of Philadelphia.

J. Broggin
Room 531 Annex

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G. Lehman Peit.

FAIRMOUNT.

From the head of the Forebay.

Pub. by C. G. Childs & R. L. Hobson Philad. 1829.

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ANNUAL REPORT
OF THE
WATERING COMMITTEE,
For the Year 1836,
TO
THE SELECT AND COMMON COUNCILS
OF
THE CITY OF PHILADELPHIA:
TO WHICH ARE PREFIXED,
THE REPORT FOR THE YEAR 1822,
AND
AN EXTRACT FROM
THE REPORT FOR 1823.

PHILADELPHIA:
PRINTED BY L. R. BAILEY, 26 NORTH FIFTH STREET.
1837.

ANNUAL REPORT

OF THE

COMMISSIONERS

OF THE LAND OFFICE

FOR THE YEAR 1887

ALBANY, N. Y.

1888

W. H. BROWN, PRINTER.

WATERING COMMITTEE.

JOHN PRICE WETHERILL, *Chm'n.*

LAWRENCE LEWIS,

DENNIS M'CREDY,

THOMAS DUNLAP,

FREDERICK FRALEY,

JOHN S. WARNER,

BENJAMIN M. HINCHMAN,

JAMES HUTCHINSON.

Engineer.

FREDERICK GRAFF.

Register.

SAMUEL W. RUSH.

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FREDERICK BRANT

PHYSICS

PHYSICS 101

REPORT
OF
THE WATERING COMMITTEE.

January 6, 1823.

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

THE great work at Fair Mount, with which the Watering Committee have been intrusted, being now brought to a conclusion so far as it is contemplated at present to extend it, the Committee think it will be acceptable to Councils, as well as to their fellow-citizens, to have a detailed account of the nature of the work, its value, and its cost of time and money.

The small and expensive supply of water by the Steam Engines, induced the Watering Committee, in the fall of 1818, to inquire into a more economical means of furnishing the City, which it was found could be obtained by the erection of a dam and other works, at Fair Mount, on the river Schuylkill, if permission could be had from the Schuylkill Navigation Company, who had an Act of Incorporation for the improvement of that river, and if the right of White & Gillingham to a Water Power at the Falls, about five miles above the City, could be purchased. Both these objects, it was found, could be obtained;—the first, by an agreement with the Navigation Company to erect locks and a canal on the west side of the river, opposite Fair Mount, at the expense of the City; and the other object, by a purchase from Messrs. White & Gillingham of their Water Power, for 150,000 dollars. JX

When arrived at this stage, the subject was submitted to the Councils of the City, who unanimously approved the measure;

and, with a feeling of public spirit, (which, while it relied upon the good sense of their fellow-citizens for support in the prosecution of so important a design, was nevertheless willing to encounter all the responsibility of commencing it,) appropriated 350,000 dollars to the object. The same disposition has been continued in subsequent Councils, to whose steady support the Watering Committee are indebted for their own regular progress in the execution of their important task.

85 On the 19th of April, 1819, the work was commenced by Captain Ariel Cooley, with whom a contract was made for the erection of the Dam, the Locks and Canal, the Head Arches to the Race, and the excavation of the Race from a solid rock, for the sum of 150,000 dollars. This work is a monument to his memory; and he had nearly completed it, when he was taken off by a disease, supposed to have been contracted by his exposure to the sun and night air, at the closing part of his work. His talents, his integrity, and his general worth, will long be held in grateful remembrance by the citizens of Philadelphia.

It will be proper, in this stage of the report, to state the nature of the work that was to be accomplished, and to expose certain of its difficulties. The river is about nine hundred feet in width; one fourth of which, at the bottom, on the eastern side, is supposed to be rock, covered with about eleven feet of mud; the remainder is of rock. The greatest depth is thirty feet at high water; and it gradually shoals to the western shore, where the rock is left bare at low tide. The river, whose average rise and fall is six feet, is subject to sudden and violent freshets.

Mr. Cooley determined, where rock was to be found, to sink cribs, formed of logs, about fifty feet up and down stream, by seventeen or eighteen feet wide, which were sunk and filled with stone, and securely fastened to each other above low water, having the up-stream side planked from the bottom to the top; and the space immediately above, filled to some extent, with earth, small stones, and other matter, to prevent leakage. In that part where mud was found, the dam is made of quarry spalls and earth, and raised about fifteen feet higher than the other part of the dam, which is an over-fall for the water; the base of this mound is at least one hundred and fifty feet, and its width on the top twelve feet; and the whole of the top, and of the up-stream side from the water edge, is paved to the depth of

three feet, with building stone, to prevent washing by water, and injury from ice. Between the mound dam and the over-fall, there is sunk, on the rock, in twenty-eight feet water, a stone pier, twenty-eight feet by twenty-three feet, which supports the end of the mound, and protects it from injury by ice or water. The contraction of the river by the mound dam, suggested to Mr. Cooley the idea of forming the dam in a diagonal line running up stream, and when nearly over, to run the rest of the distance at a right angle toward the shore, so as to join the head pier of the guard lock, on the western side, by which means a large over-fall was created, and the rise above the dam, in cases of freshet, considerably abated. The whole length of the over-fall is twelve hundred and four feet; the mound dam, two hundred and seventy feet; the head arches, which will presently be mentioned, one hundred and four feet, making the whole extent of the dam, including the western pier, about sixteen hundred feet, and backing the water up the river about six miles. The water power thus created is calculated to be equal to raise into the Reservoir, by eight wheels and pumps, upwards of ten millions of gallons. The lowest estimate of the quantity of water afforded by the river in the dry season, is four hundred and forty millions per twenty-four hours, and as it is calculated, allowing for leakage, waste, &c., that forty gallons upon the wheel will raise one into the Reservoir, the quantity raised would be eleven millions of gallons per day.

On the west side of the river there is erected a head pier and guard locks, whence there is a canal extending five hundred and sixty-nine feet to two chamber locks, of six feet lift each, by which the boats ascend or descend; and below these locks there is a canal into the river four hundred and twenty feet long. The locks are built of dressed stone; the upper canal is walled on the east side, and on the west it is rock; the lower canal is formed of the stiff mud of the river, and covered with stone. The whole of the outer front of the locks and canal is protected by a wall on the upper part, and on the lower with stone thrown on the bank to prevent washing. On the east side of the river the whole of the bank was a solid rock, which it was necessary to excavate to the width of one hundred and forty feet, to form a race, and a site for the Mill-houses, running parallel with the river. The length of the mill race is four hundred and nine-

teen feet; the greatest depth of the excavation sixty feet, and the least sixteen feet; the gunpowder used, alone cost the contractor upwards of 12,000 dollars. At the upper part of this excavation were erected the head arches, three in number, which extend from the east end of the mound dam to the rock of the bank, thus forming a continuation of the Dam.

On the west of the excavation are erected the Mill-houses, forming the west side of the race, which is supported on the other side by the rock rising above it seventy or eighty feet perpendicularly. The south end, or wall of the race, is also of solid rock; and the Mill-houses are founded on rock; so that nothing can be contrived more secure in all respects.

The race is about ninety feet in width, and is furnished with water through the head arches, which allow a passage of water of sixty-eight feet in breadth, and six feet in depth, to which the race is excavated below the over-fall of the Dam, and of course room is allowed for a continual passage of four hundred and eight square feet of water. These arches are on the north of the race, and the Mill-buildings being on the west, the water passes from the race to the wheels, which discharge the water into the river below the Dam. The gate of the centre arch is upon the principle of a lock gate, and admits the passage of boats, &c., into the race; at the south end of the Mill-buildings there is a waste gate, eight feet wide, by which (the upper gates being shut) the water can be drawn off to the bottom of the race. A ground plot and elevation of the Works are annexed, upon reference to which, the situation of the Dam, Locks, Mills, &c. will be seen at a glance.

The Mill-buildings are of stone, two hundred and thirty-eight feet long, and fifty-six feet wide. The lower section is divided into twelve apartments, four of which are intended for eight double forcing pumps. The other apartments are for the forebays leading to the water-wheels. The pump and forebay chambers are arched with brick, and are perfectly secure from the inclemency of the winter. Those now in use are kept warm by means of two large iron stoves, heated to great advantage and economy with Schuylkill and Lehigh coal. A gallery will be erected, extending the whole length of the building, from which all the wheels may be seen at one view. The centre part of the buildings is one hundred and ninety feet by twenty-five feet, with

circular doors to the pump chambers, and a range of circular windows over the arch ways of the wheel rooms: on a line with the cornice of the central part is the base course of two pavilions, with Doric porticoes, which terminate the west front. One of these is used for the office of the Committee; and the other is the residence of an old and faithful servant of the Corporation, who has the general care of the property at Fair Mount. On the east front, immediately over the pumps and fore-bay rooms, is a terrace, two hundred and fifty-three feet long, and twenty-six feet wide, paved with brick, and railed, forming a handsome walk along the race, and leading by steps at the end to the top of the head arches, mound dam, and pier.

In the erection of the Mill-buildings, Mr. John Moore was employed as the mason; and to his care and skill we are much indebted, not only for the excellence of the work in appearance, but for its substantial properties; it being ascertained, that in the whole extent of the foundation along the race, under a six feet head of water, there is no leak. Mr. Frederick Erdman, the carpenter, also deserves particular notice, for his part of the work, which has been most faithfully done, and to our entire satisfaction.

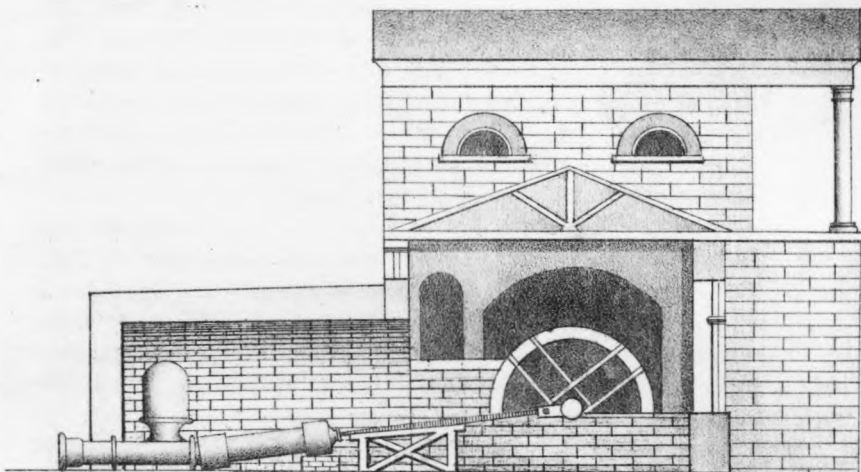
It has been from the commencement determined, for the present to erect only three wheels and pumps, which are now completed, and with them the most important part of the duty of the Committee. The first of the wheels is fifteen feet in diameter, and fifteen feet long, working under one foot head, and seven feet fall. This was put in operation on the 1st of July 1822; and it raises $1\frac{1}{4}$ million of gallons of water to the Reservoir in twenty-four hours, with a stroke of the pump of four and a half feet, a diameter of sixteen inches, and the wheel making eleven and a half revolutions in a minute. The second wheel was put in operation on the 14th of September 1822; and is the same length as the first, and sixteen feet diameter; it works under one foot head, and seven and a half feet fall, making thirteen revolutions in a minute, with a four and a half feet stroke of the pump, and raising $1\frac{1}{2}$ million of gallons in twenty-four hours. The third wheel, which went into operation on the 24th of December 1822, is of the same size as the second, and works under the same head and fall, making thirteen revolutions in a minute, with a five feet stroke of the pump, and raising $1\frac{1}{2}$ million of gallons in twenty-

four hours. It is not doubted that the second wheel can be made to raise an equal quantity; thus making the whole supply upwards of four millions of gallons in twenty-four hours. For the calculation of the water power for the wheels, with much valuable information in other matters connected with the works, we are largely indebted to Mr. Thomas Oaks, a gentleman of science and practical knowledge, now employed as the Engineer of the Schuylkill Navigation Company.

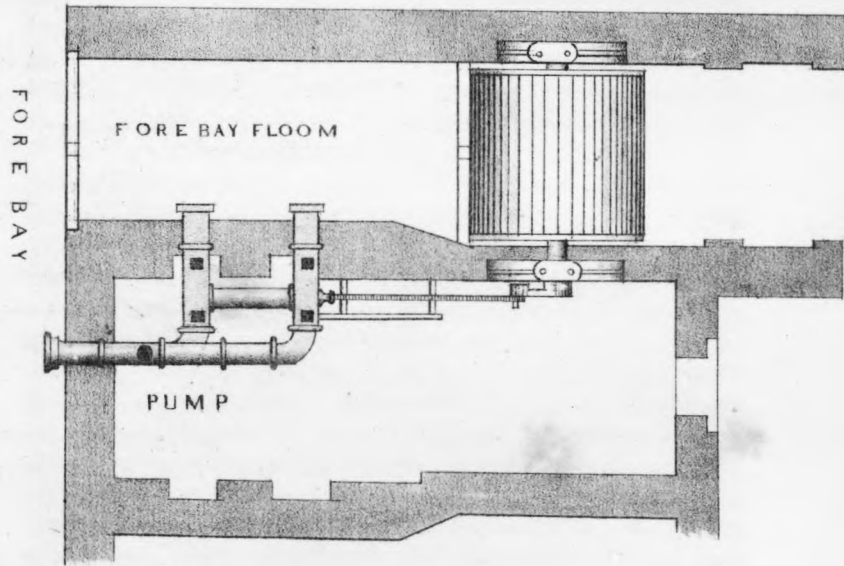
The wheels are formed of wood, and put together with great strength. The shafts are of iron, weighing about five tons each. The great size and weight of the wheel give it a momentum which adds greatly to the regularity of its motion, so necessary to preserve the pumps from injury under so heavy a head as they are required to work, which is a weight of 7900 lbs., the height ninety-two feet.

The wheels being sunk below the usual line of high water, it might be supposed that they would be obliged to stop at that time; but this seldom happens, except in the spring tides, at the full and change of the moon, which, upon the average, stops them about sixty-four hours in a month. It is found that they are very little affected until the back water is about sixteen inches on the wheel. The excellence of the work in the wheels and gates, with the whole arrangement of the Mill Works, does the highest credit to Mr. Drury Bromley, whose attention has been most assiduous, and whose skill is of the first class.

The Pumps were made by those ingenious engineers, Messrs. Rush & Muhlenberg, according to the designs of Mr. F. Graff, and are worked by a crank on the water-wheel, attached to a pitman connected with the piston at the end of the slides. They are fed under a natural head of water, from the forebays of the water-wheel, and are calculated for a six feet stroke; but hitherto it has been found more profitable to work with not more than five feet. They are double forcing pumps, and are connected, each of them, to an iron main of sixteen inches diameter, which is carried along the bottom of the Race, to the rock at the foot of Fair Mount, and thence up the bank into the new Reservoir. At the end of the pipe there is a stop-cock, which is closed when needful for any purpose. The shortest of these mains is two hundred and eighty-four feet long: the other two are somewhat longer. The Reservoir next the bank is one hundred and

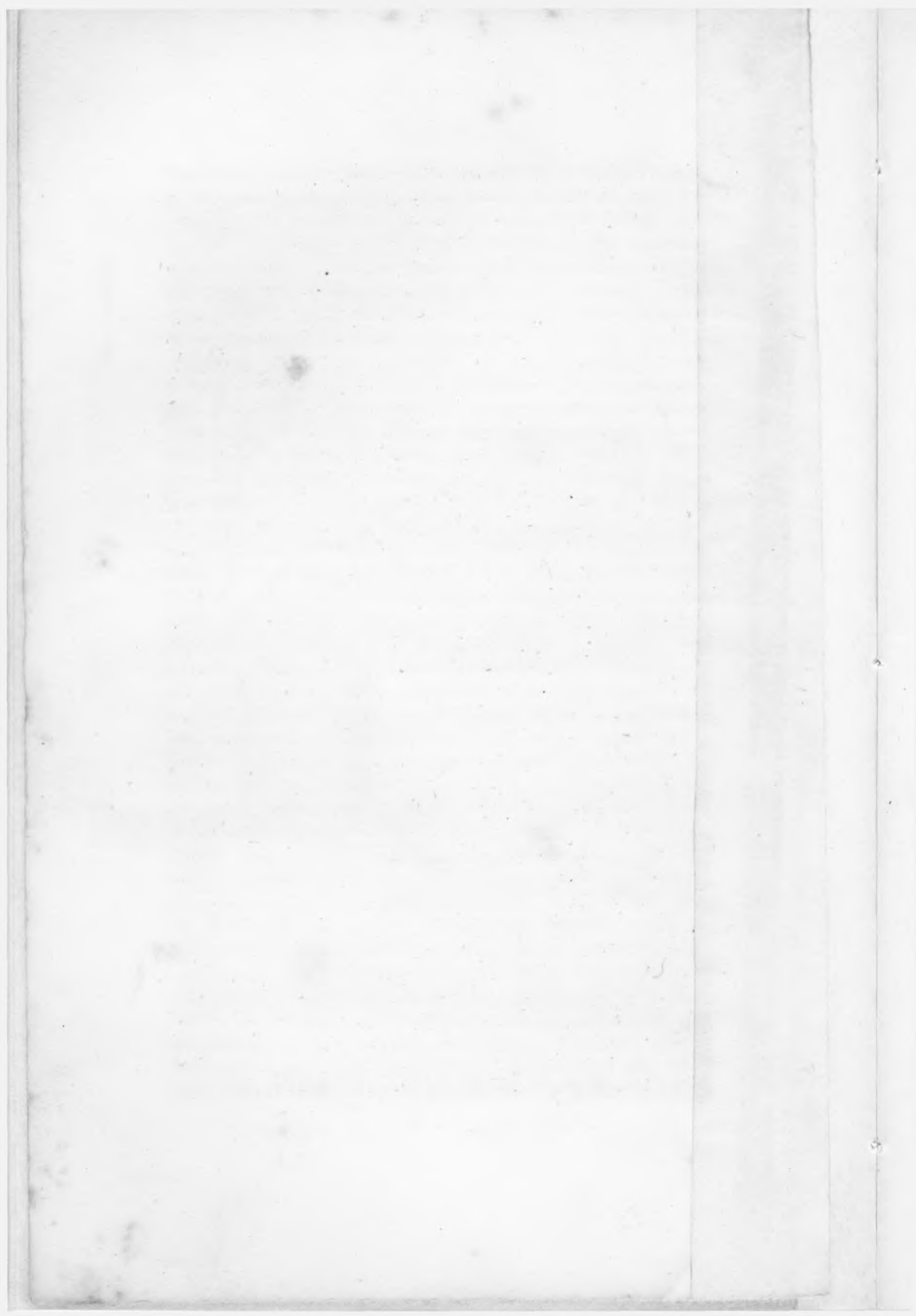


SECTION OF THE PUMP ROOM AND OFFICE



PLAN & SECTION
of the Water Wheel & Pump

F. Graff del.



thirty-nine feet by three hundred and sixteen feet, is twelve feet deep, and contains three millions of gallons. It is connected at the bottom with the old Reservoir, by two pipes of twenty inches diameter, with stop-cocks. This Reservoir contains four millions of gallons. All the water being raised into the Reservoirs, one hundred and two feet above low tide, and fifty-six feet above the highest ground in the City, is thence conveyed to the City, in a mode which will be pointed out when the Committee speak of the Iron Pipes.

On the 24th of October 1822, the steam-engines were stopped, and it is believed will never again be wanted. The satisfactory test to which the Dam was exposed, on the 21st of February 1822, by an ice freshet, which rose nine feet above the over-fall of the Dam, and which is supposed to be the greatest that has been ever known in the Schuylkill, has quieted all fears as to its safety, and done away all the objections that ever could be raised to a resort to Water Power, where Nature had kindly done so much.

In another Report, the Committee will submit the usual estimates for the coming year: in this place, they deem it proper to state the cost of the whole work done since the Ordinance passed, April 18th, 1819:—viz.

Purchase of White & Gillingham,	-	-	-	\$ 150,000
Erection of the Dam, Locks, Head Arches, Race, and Piers, including estimate of damages for over- flowing by the Dam,	-	-	-	181,000
Three Pumps,	-	-	-	11,000
Mill-houses, Mills, and other work connected with them,	-	-	-	71,250
Iron Raising Mains,	-	-	-	4,480
New Reservoir,	-	-	-	8,600

Amounting together to - \$ 426,330

A comparative view of the advantage of Water Power over Steam Power, will close this part of the Report.

By an estimate made by Mr. Graff, and exhibited to Councils, with the Report of the Committee on Water Power, on the 5th of February, 1818, it appeared, that the cost of working one steam-engine and pump for one year was 30,858 dollars; and it has been found, that with this expenditure, not more than

1,600,000 gallons could be raised in twenty-four hours; a very inadequate supply for the population of the City, consisting of above sixty thousand souls; without a gallon being afforded to the adjoining Districts, containing an equal number, and for whom, until the present period, there was no provision except by means of wells. If, therefore, it were required, at the same rate of expense, to raise an equal quantity with that at present afforded by three wheels, the cost would be upwards of 70,000 dollars; but, estimating the cost at only double that of one engine, it will amount to 61,716 dollars. From this is to be deducted the interest on the capital expended in erecting the Water Power and Works, which was 426,330 dollars, and was principally borrowed at an interest of five per cent., and amounts to 21,316 dollars annually, and also the expenses for wages, fuel, oil, &c., estimated at 1,500 dollars annually, amounting together to 22,816 dollars, which being deducted from the sum of 61,716 dollars, leaves a clear annual saving of 38,900 dollars, equal, at an interest of five per cent., to a capital of 778,000 dollars.

As before stated, it is not doubted that the Water Power is sufficient to work five wheels and pumps, in addition to the three in operation, which would raise an additional quantity of more than six millions of gallons; and, estimating the saving on this quantity in the same ratio as before stated, the amount would be 103,000 dollars more, equal to a capital of upwards of two millions of dollars, and showing the whole saving or profit to be 142,000 dollars annually, a sum nearly double the amount of the City Taxes, exclusive of interest on the City Debt, which will soon melt away by the operation of the Sinking Fund.

The uses and importance of this water, it is impossible sufficiently to value. The additional cleanliness of the City,—the supply of the neighbouring Districts, for culinary purposes, as well as for purposes of refreshment,—the great advantage in cases of fire,—the ornament of fountains in the Public Squares so wisely provided by our Great Founder,—the benefit to manufactures,—and the establishment of Water Power in the City for various purposes, may be named among the advantages of this New Work; but above all we are to place its effect upon the health of a great and growing community, which of itself would justify a much greater expenditure.

Necessarily connected with this subject is the distribution of the

water, after it has been raised to the Reservoirs, and the Committee therefore detain Councils a little longer, whilst they show what has been done on that head.

The former inadequate supply of water, derived through the Wooden Pipes of Conduit, from Fair Mount, and the constant vexation and expense, occasioned by the bursting of those in the streets, had long turned the attention of the Committee to the propriety of substituting Iron Pipes, but the experiments which had been made were not encouraging, and therefore it became desirable to get information from abroad: several attempts were made without success, until the Summer of 1818, when, through a respectable House in London, Mr. J. Walker, an engineer of much eminence, made a report, which was submitted to Councils, with a report from the Committee, on the 11th of November, 1818, and both were ordered to be printed.

At the same time, some of the Iron Pipes were procured, and the information derived was so satisfactory, that it determined Councils to commence the work with laying down a large Iron Main, from Fair Mount to the junction of Chesnut and Broad Streets. An appropriation was made of 70,000 dollars for this purpose, at that time, and other appropriations, equally liberal, have since been added for Iron Pipes.

The Work was commenced at the Old Reservoir at Fair Mount, into the bottom of which there was inserted a bell-muzzle pipe of thirty inches diameter, tapering off to twenty-two inches; this size pipe was continued along Hunter Street, which was filled up to a proper level for the purpose, at the expense of the City, and thence on the old Canal Bank, as nearly level as possible, to Callowhill Street, 2661 feet; the Pipe was then diminished to twenty inches diameter, and continued along Callowhill Street to Broad Street, and thence along Broad Street to Chesnut Street, 6909 feet. The opening into the Reservoir is closed when required, by a stop-cock. The whole quantity of Wooden Pipes, from Fair Mount and through the City, was about thirty-two miles in extent, all of which, in process of time, will have to be removed, and Iron substituted; but, in the meantime, the Committee have deemed it right to lay down some important Mains, even where the Pipes do not actually require taking up; for instance, there is placed a ten inch Iron Main on the south side of Chesnut Street, extending from Broad to Water Street, and contracts have been made for Pipes of the same

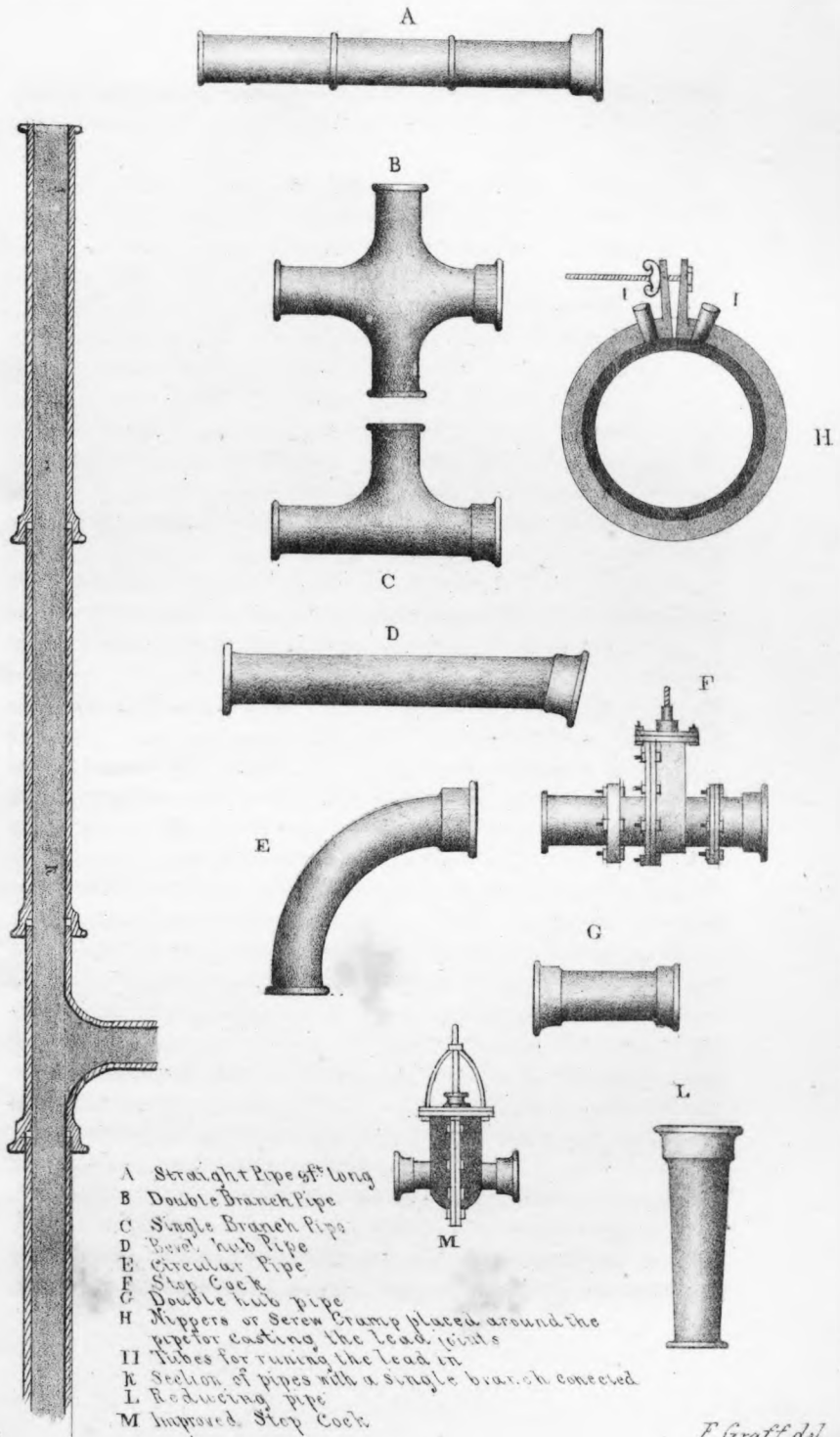
size, to be laid next season, on the north side of Chesnut Street, which will thus furnish an ample supply to both the north and the south part of the City.

In High Street, six inch Pipes are laid on the south side, from Broad Street to Water Street, and are nearly completed on the north side, and will be entirely so, early in the Spring. Front Street, from Chesnut Street, with an eight inch Iron Main, is laid to Union Street, and will be completed early in the season from High to South Street,—the Pipes for both the abovementioned sections being all prepared. Walnut, from a little west of Sixth Street, to Water Street, is laid with six inch Iron Pipes, and some other streets are laid partially, where it was found to be necessary: the whole quantity of Iron Pipes now laid, is 35,205 feet, and in no instance has a leak been discovered. The contrast between this and former experience with the Wooden Pipes, is highly gratifying.

The straight Pipes are made in lengths of nine feet each, with what are called spigot and faucet joints: other Pipes, of a circular form, to pass round corners, are made of different lengths, as may be required, with easy turns, by which it is obvious the passage of the water is much facilitated; a drawing of the different kinds of Pipes is annexed.

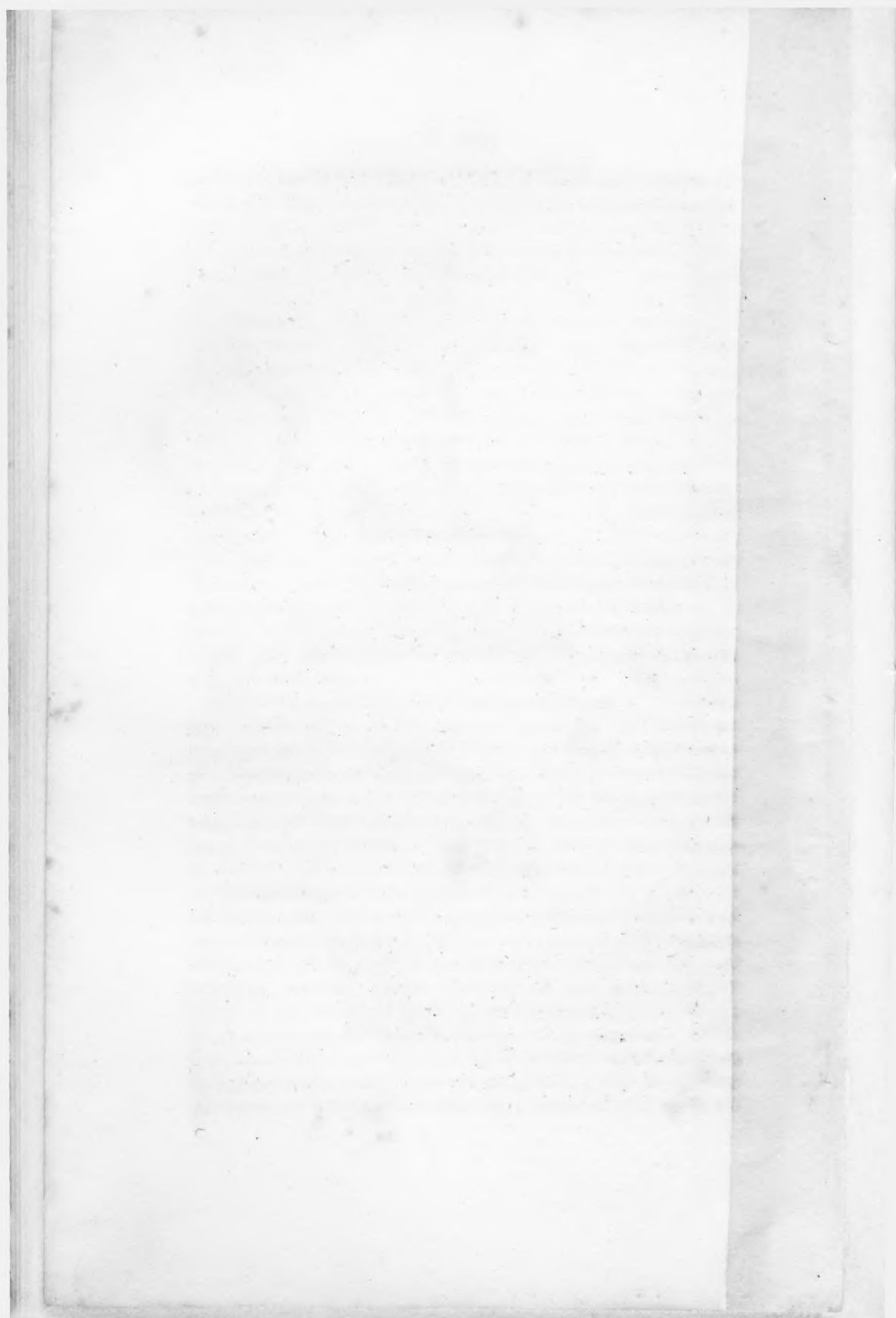
The laying of the Pipes is very easy, care being taken to keep them firm in their bed—the hub, or large end of one, laps about four to six inches over the small end of the other, leaving a space of from one-fourth to one-half of an inch all round, which is first caulked in with a ring of plaited hemp, to prevent the lead running into the Pipes; then a pair of nippers, with a joint in the lower part, to fit all round the Pipes, and having an opening on the top for the lead, and another for the escape of the air, which will be shown in the annexed drawing, is affixed next to the opening on the outer part of the Pipe, so as to prevent the lead coming out in front, which is further secured by a ring of clay, outside of the nippers, and formed into a cap at top, into which melted lead is poured, forming a ring of lead three or four inches in depth. When the lead is cold, the clay and nippers are removed, and it is then upset with a hammer and chisel, which completes the joint.

Although the Iron Pipes cost more in the first instance, yet, with the experience this City has had with Wooden Pipes, there can be no hesitation in adopting Iron in preference to the latter.



- A Straight Pipe of 4' long
- B Double Branch Pipe
- C Single Branch Pipe
- D Bell and Hub Pipe
- E Circular Pipe
- F Stop Cock
- G Double Hub Pipe
- H Mippers or Screw Cramp placed around the pipe for casting the lead joints
- I Tubes for running the lead in
- K Section of pipes with a single branch connected
- L Reducing pipe
- M Improved Stop Cock

F. Graft del.



The cost of Iron Pipes, it may be satisfactory to mention, is as follows:—

				D. C.
22	inch	Pipes,	per	foot
	-	-	-	6 25
20	do.	do.	-	5 00
16	do.	do.	-	3 33 $\frac{1}{3}$
10	do.	do.	-	2 40
8	do.	do.	-	1 66 $\frac{2}{3}$
6	do.	do.	-	1 10
4	do.	do.	-	64
3	do.	do.	-	45
1 $\frac{1}{2}$	do.	do.	-	40

These prices do not contain the prices of lead, laying, &c., as the difference of situation makes so material an alteration. The twenty and twenty-two inch Main cost 7 dollars and 42 cents per foot, on the average, but this includes the filling up of Hunter Street, &c.

The greater part of the Pipes now laid, or on hand, were made in the United States, and the Committee have never imported any when they were to be had here, except as samples, for the benefit of our manufacturers. In the first contract for the large Main, only one offer was made that could be accepted, and after the acceptance of the contract, the person who proposed for it preferred making only the twenty-inch Pipes, which induced the Committee to import the twenty-two inch Pipes. Since that time, none others were imported until last Summer, when one of the contractors failed in his performance, owing to an accident to his furnace, and the other contractor could not undertake to make more during the season in which the Committee had made arrangements to complete High and Front Streets. An offer being made to contract for the quantity thus deficient, to be obtained from England, an engagement was made for the deficiency, and the contract has been fulfilled. The sum paid to the manufacturers here, for Iron Pipes, and those now contracted for, amounts to 97,814 dollars and 20 cents, and the cost of those imported amounts to 16,940 dollars and 31 cents.

The Committee cannot close this Report, without presenting, in the most distinct manner, to the notice of both the Councils and the City, Mr. Frederick Graff, for many years Superintendent of the Water Works, whose taste in the design, and whose judgment

in the arrangement, of the Works at Fair Mount, with his indefatigable zeal for the public interest, in every department, have attracted the regard and thanks of the Committee, and entitle him to those of the Councils.

All which is respectfully submitted.

By Order of the Committee,

JOSEPH S. LEWIS,

Chairman.

January 6, 1823.

Extract from the Annual Report of the Watering Committee, dated January 3, 1824, to the Select and Common Councils of the City of Philadelphia.

THE experience of another year has furnished results that will probably be interesting to Councils; and the Committee therefore trespass a little in detailing the beneficial effects produced by the new Water Works at Fair Mount, which have exceeded the warmest anticipations of their most sanguine friends. The calculations formed were of the most cautious kind, for there was little experience to guide in the construction of water works, calculated to raise water, and hence it was stated, that forty gallons upon the wheel would be required to raise one to the reservoir, but experience has shown that thirty are more than ample, thus at once increasing the calculation of the water power of the river one-third; the quantity raised, was also underrated at one million of gallons in 24 hours for each wheel and pump; it may now be safely stated at 1,250,000, supposing the wheel to work during the whole time, but this is not always the case, as the tide occasionally makes it prudent to stop them, to prevent straining the works.

An experiment was made in July last for 18 days, during which time four fire plugs were constantly in use, during the day time, in washing the gutters, when two wheels and pumps were found adequate to supply the demand, and working only 14 hours in 24,

and the consumption of water was 1,616,160 gallons in the same period of 24 hours. In October last, the three wheels were found sufficient to supply the city in 8 hours, equal to one wheel for 24 hours, and supplying 1,250,000 gallons.

In the last month, the wheels were stopped three days on account of the water being disturbed by a freshet, during which time the reservoir fell 52 inches; after the water had settled, the three wheels were put in operation, and besides supplying the city with about 1,250,000 gallons, they filled the reservoir in 24 hours, equal in all to 3,750,000 gallons; the demand of the city for water in very cold weather, may be stated at about a million of gallons.

The advantage of the large reservoirs is particularly observable during a freshet in the river, as the city can be supplied for several days with clear water from them, whilst the muddy water is running off, during which time the wheels are of course stopped.

Two men are found sufficient to attend the works 12 hours at a time alternately, night and day, and the calculation made last year of 4 dollars per day for wages, fuel, light, tallow, &c., is, upon experience, found to be ample. The plan of warming the house has completely answered the object proposed, and no ice has formed in the coldest weather, on the wheels or in the pumps.

The whole cost of the new works, including the damages, the new reservoir, and the preparation for a third one, is 432,512 dollars, the interest on which, at the rates the money was borrowed, amounts to 24,230 dollars, a sum not much exceeding that formerly appropriated every year out of the city taxes, for the support of the steam engines, besides consuming the whole of the water rents; the contrast is most pleasing, when it is seen that the water rents are so much disengaged, as to place in the treasury from their avails, upwards of 14,500 dollars, whilst the sums heretofore appropriated, of the taxes, for the steam engines, go to meet the interest on the debt for the erection of the works.

But this is not the whole advantage; it was not possible, with the steam engines, that a million and a quarter of gallons could be raised; now three times that quantity can be had without any increase of expense; but if the same quantity were required to be raised by additional steam engines, the annual expense would be at least 75,000 dollars, or in other words, the expense, (exclusive of the first cost of the steam engines and of the water works,) would be two hundred and six dollars per day, to raise three

millions and three quarters of gallons by steam, which is now done for four dollars per day by water, with this further advantage, that with the expenditure of not more than fifty thousand dollars for five new wheels and pumps, the quantity can be increased to ten millions of gallons in 24 hours, the water power being sufficient to raise even more if required.

An additional quantity of 6,750,000 gallons, raised by steam engines, would cost three hundred and forty-four dollars per day, making the whole expense to raise ten millions of gallons by steam, 550 dollars per day, whilst the same quantity can be raised by water for ten dollars per day, which includes the present expense, (beforementioned,) of four dollars per day, and an allowance of six dollars for additional hands, fuel, tallow, &c., without estimating the interest on the first cost of either species of engines and pumps.

A further trial of the dam took place last month, from a severe freshet which rose only five feet on the dam, whilst three miles above, the water rose 14 feet, bringing with it all the ice of the river. Not the slightest injury was sustained; no accident whatever has occurred to any part of the works during the last year, during which they performed in the most satisfactory manner; the same observation may be made as to the iron pipes in the streets, of which there are about nine miles laid, without the occurrence of a leak.

The Committee, upon the happy state of affairs above detailed, renew their congratulations to Councils.

By Order of the Watering Committee.

JOSEPH S. LEWIS,
Chairman.

January, 3, 1824.

ANNUAL REPORT
OF
THE WATERING COMMITTEE.

January 5, 1837.

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

THE Watering Committee, in submitting their annual report on the great public work committed to their care, deem it proper to present to the Councils a more extended notice of the Fair Mount Water Works than has been given since the year 1823, when the completion of what may be termed the experimental part of the Water Power Works, was presented by our much respected fellow citizen the late Joseph S. Lewis Esq., in the Report of the Committee for that year.

In the year 1799, the attention of the citizens of Philadelphia was first directed to the subject of obtaining for domestic purposes a copious supply of pure and wholesome water; and at the same time that so indispensable a necessary of life was obtained, to secure an ample quantity of the same element for the protection of the dwellings and property of the inhabitants from conflagration. Resort was had to steam power to carry the views of the first projectors into effect, and after two sets of works had been erected, and crowned with a success which for the then limited population was deemed satisfactory, the forecast of the Councils who at that time administered the affairs of the City, seized on the favourable circumstance of the improvement of the navigation of the river Schuylkill, to lay the foundation of the splendid Works which are now the pride and ornament of Phila-

delphia. Acquiring under the several contracts with the Schuylkill Navigation Company, the whole of the water and water power of the river Schuylkill at Fair Mount, which might remain after supplying the Locks and Canal constructed by the City to complete the navigation at that point, the Corporation has continued from year to year to make the most liberal appropriations for the completion of the works, and we now behold them with a capacity, if left untouched by the scheming hand of speculation, to supply the wants of a population twice as numerous as that now embraced within the limits of the city and adjoining districts. During the past year the two remaining sections of Reservoir No. 4 have been finished, and the Committee have the pleasure to state, that although the reservoirs are elevated one hundred and two feet above the level of the tide in the river Schuylkill, with portions of them resting on upwards of ninety thousand yards of artificial embankment, they have great solidity, and are all in good order. With the exception of some slight filtration through the rocky substratum of the reservoir last constructed, they are water tight, and the Committee have no doubt that when the materials of which that is built have consolidated, it will also become perfect. Owing to the advanced period of the year when the new reservoir was completed, there was not time to finish the external embankments, which, with a portion of the Guard wall on Fair Mount street, will be undertaken this year, and provision therefor is accordingly made in the estimate herewith presented.

In compliance with the resolution of Councils of May 14, 1835, the lot of ground south of the garden plot has been purchased from the Fair Mount Bridge Company, for the sum of six thousand dollars; a stone wall has been put up on the river boundary of the lot, and the necessary filling up and fencing done, to prepare it for ornamental laying out and planting next Spring.

The lot belonging to the city at the corner of Callowhill and Schuylkill Second street, for the sale of which authority was given to the Committee in 1835, has not yet been disposed of; but, as Callowhill street has recently been widened at that point to eighty feet, and the paving extended beyond it, there is every reason to believe that it may be profitably sold during the ensuing year.

The iron pipes for the distribution of water have been extended wherever the denseness of the population, and the value of property exposed to fire, appeared to require it—three and one quar-

ter miles have thus been put down chiefly west of Broad street, and a sixteen inch main has been carried through Cedar street to Broad street, in order to afford a full supply to the Township of Moyamensing.

The suit pending at the time of making the last report, between the City and the District of Spring Garden, in relation to a wharf and strip of ground at Coates's street, on the Schuylkill, having been determined in favour of the City, an amicable arrangement was made for a new disposition of the disputed land, and being agreed to by the two Corporations, was confirmed by the Legislature, and the fullest power given for the protection of the Water Works at and near that point.

The estimates presented by the Committee, January,	
1836, amounted to - - - - -	\$ 72,000 00
To which was afterwards added for payments due	
in January last, and for further improvements to	
the guard pier, fences, and to the bridge lot, &c.,	3,711 62
	<hr/>
Making the total amount appropriated, -	\$ 75,711 62
	<hr/>

The expenditures of the Committee in 1836, have amounted to \$ 71,706 51, of which the sum of \$ 57,706 51 is charged to permanent improvements, and \$ 14,000 00 to the distribution and the incidental expenses of the Works, leaving a balance of \$ 4,005 11, which will be used for the payment of the wages of the workmen during the present month, for pipes and castings not received on account of the ice, and for hydrant pumps, &c., not delivered in 1836.

The water rents actually paid into the Treasury for the year 1836, amounted to \$ 101,266 39, and the whole sum charged on the duplicates of the collectors, was \$ 99,848 50, of which \$ 237 50 is now in suit, and \$ 324 50 was allowed.

For the details of the receipts and expenditures connected with the Water Works, the Committee respectfully refer to the respective accounts of the Superintendent and Register hereto annexed.

The water rents payable from the city and districts, for the year 1837, amount to - \$ 106,432 37

And are thus distributed :

City of Philadelphia, - - - -	57,080 50
Ditto, for the Girard Estate, and rents charged to H. J. Williams, for factories, &c., near Fair Mount, - - - -	1,048 50
District of Spring Garden, - - - -	13,674 25
District of the Northern Liberties, - - - -	20,009 37
District of Southwark, - - - -	10,517 50
District of Moyamensing, - - - -	1,956 00
District of Kensington, - - - -	2,146 25
Amounting to	<u>\$ 106,432 37</u>

And the sum of \$ 6,000 00 is estimated to accrue for the fractional parts of the year, which will leave, after deducting commissions and allowances, the sum of one hundred thousand dollars in aid of the taxes.

The Committee estimate that the sum of fifty thousand dollars will be required for the extension and support of the Works in 1837, according to the following statement :

Distribution and incidentals, - - - -	\$ 14,000 00
External embankments, Guard wall, and other permanent improvements on the property at Fair Mount, - - - -	21,000 00
Extension of iron pipes, - - - -	15,000 00
	<u>\$ 50,000 00</u>

The Water Works at Fair Mount, as at present in operation, consist of a dam upwards of twelve hundred feet in length, of a peculiar construction, and the race and mill buildings minutely described in the Report of 1823, a copy of which is herewith presented;—six water wheels, and as many double forcing pumps, varying in a slight degree in the diameter of the wheels, and in the length of the stroke of the pumps, but conforming in their structure and appearance to the original plan; and four reservoirs, divided into convenient sections, covering a superficial area of

upwards of six acres. The average quantity of water raised by each wheel and pump daily for the past year, was about 530,000 gallons, which is elevated into the reservoirs 102 feet above the level of the tide in the Schuylkill, and distributed from thence through ninety-eight and three quarters miles of iron pipes, which can be separately controlled by a very simple apparatus. The reservoirs are built of stone, and paved with bricks laid upon a very tenacious clay puddle in strong lime cement, and covered with grouting to prevent leakage. They are surrounded by an artificial embankment thirty-eight feet high, the base line of which is about forty feet, composed of strong clay immediately in contact with the walls of the reservoirs, and forming a belt about two feet thick, and the remaining portion of good loam, the whole being neatly faced with grass sods, which prevent washing. The reservoirs are twelve and a quarter feet deep, and will contain, when filled, upwards of twenty-two millions of gallons of water. The pumping apparatus now in use will furnish a supply of six millions of gallons daily, and that quantity may be increased to eight millions of gallons by the erection of two more wheels and pumps, which will complete the original design, and fill up the mill buildings.³ The whole cost of these works, to the 1st instant, amounts to \$ 1,381,031 43, which includes all the pipes and fixtures of the old steam power works applicable to the distribution of water on the present plan. The contrast which the works now present to what in 1824 furnished a subject for felicitation, cannot fail to be highly gratifying to the Councils and our fellow citizens, and will, we trust, make them doubly watchful of all attempts to impair the efficiency of those structures, with which their comfort and security are so intimately connected. The following statement exhibits the extent of the works, the number of tenants supplied, the quantity of water daily distributed, and the amount of revenue for the years 1823 (at which time the city only was supplied with water) and 1837, respectively.

In 1823, three wheels and pumps were in operation, six and a half miles of iron pipes were laid, 4844 tenants were supplied with 1,616,160 gallons of water daily, and the revenue was \$ 26,191 05 per annum.

In 1837, six wheels and pumps are in operation, 98½ miles of iron pipes are laid, 19,678 tenants are supplied with 3,122,164 gallons of water daily, and the revenue is \$ 106,432 37.

The Committee submit as an Appendix to this Report, the Report presented in 1823, giving a full description of the general plan of the present works, of which it is now extremely difficult to procure copies, and they would respectfully recommend that it should be reprinted herewith for general information.

The Committee cannot conclude this Report without referring to the project of a canal from Fair Mount Dam to Mill Creek, which has appeared to them to be full of danger to the works; and whilst it has repeatedly claimed the attention and interposition of Councils to prevent it, is again pressed upon the attention of the Legislature of the State for their sanction by an act of incorporation. A canal or basin of the dimensions proposed by the projectors, namely, two and a half miles long, forty-five feet wide, and five feet deep, would of itself, by the natural exhaustion of leakage and evaporation, consume daily five millions of gallons, according to the best data in the possession of the Committee; and when we consider that such a basin, without the necessary conveniences of docks for the accommodation of boats, would be almost entirely useless, and add to that quantity the amount sufficient to supply such docks, equal, on the lowest estimate, to three millions of gallons more (all of which it is proposed to draw from the present Dam at Fair Mount, without compensation to the city, and against her consent), the subject becomes one of incalculable importance, and demands the most prompt and energetic measures to prevent it. The strongest appeals have been presented to the Legislature to continue that protection to the Water Works which they have hitherto so liberally extended; to regard the sanctity of contracts on which the health and security of upwards of two hundred thousand souls depend; and the subject is introduced here in order that public attention may be strongly directed to it, and that no speculative and temporary benefit may be afforded to what is conceded to be a valuable trade, at the expense of the vast and increasing interests now connected with the Water Works.

Blessed as we are above every other city of the Union, and perhaps not excelled by any in the world in the cheap and abundant supply of pure and wholesome water we now enjoy, the preservation of the Water Works becomes a matter of individual interest to every citizen, and the Committee feel that it is only ne-

cessary to suggest the danger that is apprehended, to secure the works from any and all encroachments.

In conclusion, while the Committee congratulate the Councils on the present condition and prospects of Fair Mount Water Works, they cannot omit paying a public tribute of respect to Frederick Graff Esq., who, for nearly thirty-two years, in the arduous and responsible duties of Engineer and Superintendent of the Works, has most signally contributed to their success, and won for himself an enduring name, and the lasting gratitude of his fellow citizens.

JOHN PRICE WETHERILL,
Chairman of the Watering Committee.

Philadelphia, January 5th, 1837.

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NO. 1.

LIST OF CERTIFICATES FOR MONEYS

DRAWN BY THE

WATERING COMMITTEE

FOR

FAIR MOUNT WATER WORKS.

From December 31, 1835, to December 31, 1836.

No.	1836.		Dolls.	C.
1	Feb'y. 1,	In favour of Frederick Graff, -	602	78
2		Ditto, ditto, -	358	15
3	March 1,	Ditto, ditto, -	989	98
4		Ditto, ditto, -	493	37
5	April 1,	Ditto, ditto, -	590	11
6		Ditto, ditto, -	1025	81
7	20,	Ditto, ditto, -	3963	94
8	May 2,	Ditto, ditto, -	1567	70
9		Ditto, ditto, -	959	24
10	9,	Ditto, ditto, -	2255	59
11	14,	Ditto, ditto, -	6000	00
12	June 1,	Ditto, ditto, -	2547	85
13	20,	Ditto, ditto, -	5844	10
14	July 1,	Ditto, ditto, -	3243	51
15		Ditto, ditto, -	3314	09
16	August 1,	Ditto, ditto, -	2649	19
17		Ditto, ditto, -	8039	35
18	17,	Ditto, ditto, -	1868	55
19	Sept'r. 1,	Ditto, ditto, -	2227	60
20		Ditto, ditto, -	4192	48
21	Oct'r. 1,	Ditto, ditto, -	2832	98
22		Ditto, ditto, -	2689	21
23	6,	Ditto, ditto, -	800	00
24	17,	Ditto, ditto, -	2577	73
25	Nov'r. 1,	Ditto, ditto, -	1729	58
26		Ditto, ditto, -	760	42
27	Dec'r. 1,	Ditto, ditto, -	1372	43
28		Ditto, ditto, -	523	01
29	5,	Ditto, ditto, -	1222	46
30	10,	Ditto, ditto, -	1324	79
31	26,	Ditto, ditto, -	3140	51
			71706	51

Abstract of Payments made under the foregoing Certificates.

No. 2. Distribution.

No.	1836.		Dolls.	C.	
1	Feb'y. 1,	Wages of workmen for January,	-	302	30
3	March 1,	Martha L. Adams, for 6 months' ground rent, due February 1, on shop lot,	-	13	33
4		Wages for February,	-	224	37
5	April 1,	Wages for March,	-	253	94
6		Jackson & Riddle, for wrought iron, from December 14, 1835,	-	67	18
8	May 2,	Wages for April,	-	303	86
9		William Call, for 12 Cwt. 2 qrs. of hay, at \$ 1 30,	-	16	25
12	June 1,	Wages for May,	-	260	55
13	20,	Griffith Miles, for 19 Cwt. of hay,	-	19	00
		Bolton & Co., for 1½ tons of coal, purchased in February last,	-	10	50
14	July 1,	Wages for June,	-	328	75
15		Lane Schofield, for hauling pipes in April, and repairs to cart,	-	71	46
		Daniel R. Erdman, for 24 pumps, and for sundry nossels and boxes,	-	157	50
		Peterman & Garrett, for horse feed, from December 10, 1835, to June 22, 1836,	-	76	02
16	August 1,	Wages for July,	-	292	67
17		Israel Roberts, for copper work for pumps,	-	34	84
		Reeves & Whitaker, for nails and spikes,	-	47	00
19	Sept'r. 1,	Wages for August,	-	289	44
20		Martha L. Adams, for 6 months' ground rent, due August 1, on shop lot,	-	13	33
		C. W. Schreiner, for taxes on shop lot for 1836,	-	19	48
		John Rosenberger, for 25 Cwt. 3 qrs. 14 lbs. of hay,	-	29	60
21	October 1,	Wages for September,	-	234	62
22		Francis Harley, for 63 lbs. of block tin,	-	17	01
		Amount carried forward,		3083	00

No.	1836.		Dolls. C.	Dolls. C.
		Amount brought forward,	3083	00
25	Nov'r. 1,	Wages for October, - - - - -	151	50
26		Otis & Craven, for sundry lumber, from April 23d, - - -	74	99
		M. Randolph & Co., for 7715 feet, 1½ inch yellow pine boards, delivered,	212	16
		James Patterson, for 19 Cwt. of hay, - - - - -	22	80
		Isaac Wilson, for 266 bushels of Virginia coal, delivered, - - -	78	45
		Bumm & Smith, for 20 loads of canal sand, hauling pipes, &c., - - -	26	50
27	Dec'r. 1,	Wages for November, - - - - -	275	33
28		Levi Morris & Co., for cast iron branches and stuffing boxes, - - -	17	10
		Benjamin Homer, for 1 dozen of 1 inch pump cocks, - - -	17	00
		Rowley & Alberger, for plumber's work to pumps, pipes, &c., - - -	46	50
		Charles Fox, for 3200 paving bricks for pumps, plugs, &c., - - -	29	80
		John Mingle & Son, for 466½ lbs. of brass castings, - - -	139	95
29	5,	Keyser & Longstreth, for sundry lumber, from April 12th, - - -	90	72
		Ezra Evans, for 6474 feet of 1½ inch cedar boards, - - -	194	22
		William Riehlie & Son, for 382 lbs. of pump and plug leather, - - -	118	60
30	10,	J. P. & William Wetherill, for 75 feet of lead pipe, - - -	23	15
		Robert Looney, for 1384 bundles of straw for packing fire plugs, &c., - - -	142	51
		John Murray, for shoeing horses in 1836, &c., - - -	24	64
		Walton & Hill, for spades, shovels, and ironmongery, - - -	44	18
		Jackson, Riddle & Co., for sundry wrought iron, - - -	40	10
		Erdman & Murray, for 120 pump boxes, - - -	7	50
		Wetherill & Co., for paints, oil, &c., - - -	95	00
		Peterman & Garret, for horse feed, from June 24, - - -	75	86
31	26,	Samuel Ratcliffe, for 19 Cwt. 14 lbs. of hay, - - -	20	00
		Charles Fox, for 2000 paving bricks, - - -	18	00
		Wages for December, - - - - -	345	60
			5415	16

(24)

No 3. Fair Mount Works.

1	Feb'y. 1,	John Kissick, for sundries for Legislature, for washing saloon, &c., -	11	23
2		Evans & Caldwell, for omnibus hire, Legislature visiting Fair Mount,	10	00
3	March 1,	Robert Rittenhouse, for lot of ground on Schuylkill Second, north of Callow-		
		hill street, - - - - -	550	00
4		William M. Meredith, for services in suit with District of Spring Garden,	200	00
		Lucretia Burquin, for sundries for Committee and Councils, - - -	48	00
6	April 1,	Thomas Evans, expenses for Jury of valuation on Pennsylvania Avenue,	12	00
		J. Turney, for glazing and painting the fountain in 1835, - - -	10	38
11	May 14,	Jacob Ridgeway, for lot of ground belonging to Fair Mount Bridge Co.,	6000	00
13	June 20,	Lucretia Burquin, for sundries for Corporation, April 28th, - - -	225	00
		William Carter, for hack hire, June 1st, - - - - -	45	00
		Evans & Caldwell, for hack hire, April 28th, - - - - -	10	00
14	July 1,	Wages for June, - - - - -	130	83
15		Joseph Jackson, for 35 days' carpenter's jobbing done in 1835 and 1836,	69	56
16	August 1,	Wages for July, - - - - -	64	00
17		Thomas Patterson, for 800 perch of stone work in base of bridge wall, at		
		\$ 1 75, - - - - -	1400	00
		Robert Donnell, for sundries for the Committee, - - - - -	39	29
		Samuel Hains, for plan, and surveying bridge lot, - - - - -	10	00
20	Sept'r. 1,	Joseph Jackson, on account, for carpenter's jobbing, - - - - -	75	00
		Thomas Patterson, balance for 1407 perch of stone wall to bridge lot,	1014	25
21	Oct'r. 1,	Wages for September, - - - - -	110	72
22		Alexander Parker, for 24 trees for the garden and banks, - - -	48	00
		James Wilson, for sheathing and decking scow, caulking, &c., - - -	75	60
		William Dougherty, taxes for Fair Mount Estate, for 1836, - - -	761	50
		Amounts carried forward,	10920	36
			5415	16

(25)

No.	1836.		Dolls. C.	Dolls. C.
		Amounts brought forward,	10920 36	5415 16
22	Oct'r. 1,	Edward Pennington & Co., for sundries for Councils, April 28th, -	112 50	
		James M. Patton, for 605 feet of ship plank for the stairs to reservoirs,	16 95	
		Joseph Jackson, for carpenter's work to stairway, &c., -	75 00	
24	17,	A. W. Roberts, for 416 feet 10 inches of coping for bridge lot wall, at 29 cts.	120 89	
		George Zantzinger, for sundries, October 8th, -	40 00	
		Robert Donnell, for sundries in August, and October 8th, -	99 02	
		Lucretia Burquin, for sundries for the Corporation, &c., October 8th,	237 75	
		Alexander Scott, for 3300 yards of dirt filled in the bridge lot, at 18 $\frac{3}{4}$ cents,	618 75	
26	Nov'r. 1,	Otis & Craven, for sundry lumber, from April 23d, -	42 79	
		William Dougherty, for taxes for bridge lot, for 1836, -	33 00	
27	Dec'r. 1,	Wages for November, -	119 29	
28		J. F. Watson, for 150 lithographic copies of canal and improvements near Fair Mount, -	60 00	
		Remington & Co., for 1431 feet, delivered, of pannel lumber for stairway, &c.,	43 12	
		William H. French, for materials and repairs to rough casting, -	16 00	
		William Dougherty, for poor tax for 1836, on bridge lot, &c., -	1 59	
		Caldwell & Evans, for omnibuses, October 8th, for Councils, -	5 00	
		James McClosky, for resetting curb on bridge lot, and on Schuylkill Second street, -	34 14	
		Reeves & Whitaker, for 3 casks of nails, -	21 00	
		Amos Jeanes, for 34 picked fence posts, delivered, -	15 21	
29	5,	Alexander Scott, for digging and hauling 232 yards of dirt from footway of lot at Schuylkill Second and Callowhill streets, -	29 00	
		J. & J. B. Andrews, for 10,866 feet of boards and lumber, repairing Reservoir No. 1, Guard Pier, &c., -	276 26	
		Joseph Jackson, balance, carpenter's daywork, repairing Reservoir No. 1, Guard Pier, Forebays, &c., -	97 50	

(26)

29	5,	John Kenworthy, for painting pavilion and reservoir stairway, -	33 89	
30	10,	Erdman & Murray, for 136 yards of rubble stone put on the dam, -	34 00	
		Keyser & Longstreth, for lumber for fences on bridge lot, December 1,	68 06	
		William Dougherty, balance for poor tax on Fair Mount Estate, for 1836,	157 41	
31	26,	Thomas Ashton, for 15 red cedar posts for the bridge lot, -	18 00	
		Owen Sheridan, for hack hire, from April 6th, -	70 00	
		T. Carter, for hack hire, from June 14th, -	52 50	
		Wages for December, -	36 62	
				13505 60

No. 4. Iron Pipes.

1	Feb'y. 1,	Wages of workmen, -	142 00	
2		Samuel Hains, for curb heights in 1835, -	3 00	
		Jesper Harding, for advertising in 1834 and 1835, -	26 12	
		Condy Raguét, for advertising in 1835, -	11 25	
4	March 1,	Wages for February, -	131 25	
5	April 1,	Wages for March, -	143 67	
6		Jackson & Riddle, for wrought iron, from December 14, 1835, -	100 00	
7	20,	Samuel Richards, for pipes and castings, as per contract, -	3963 94	
8	May 2,	Wages for April, -	142 37	
9		Thomas Fassitt's Estate, for 10,010 lbs. of lead, at 7 cents, 6 months' discount off, -	679 68	
10	9,	Samuel Richards, for pipes and castings, -	2255 59	
12	June 1,	Wages for May, -	853 75	
13	20,	Samuel Richards, for pipes and castings, as per contract, -	4838 81	
14	July 1,	Wages for June, -	614 05	
Amounts carried forward,			13905 48	18920 76

(27)

No.	1836.		Dolls.	C.	Dolls.	C.
		Amounts brought forward,	13905	48	18920	76
15	July 1,	John Mingle & Son, for 1,035½ lbs. of brass work to cocks, ferules, &c.,	310	65		
		Wetherill & Co., for 10,145 lbs. of lead, at 6½ cents, 3 per cent. off,	664	24		
		Bumm & Smith, for 22 days' hauling wood and iron pipes, - -	93	50		
16	August 1,	Wages for July, - - - - -	597	50		
17		Israel Roberts, for brass work, stop cocks, ferules, &c., - -	100	00		
		Samuel Richards, for pipes and castings, - - - - -	2794	02		
		Willis G. Clark, for advertising iron pipes, - - - - -	12	00		
		Jackson, Riddle & Co., for sundry wrought iron, to July 13, -	145	01		
18	17,	Samuel Richards, for pipes and castings, - - - - -	1868	55		
19	Sept'r. 1,	Wages for August, - - - - -	536	62		
20		Wetherill & Co., for 4031 lbs. of pig lead, at 6½ cents, and for lead pipe,	304	82		
		George Bumm & Smith, for 12½ days' team, hauling pipes, -	51	18		
21	Oct'r. 1,	Wages for September, - - - - -	350	50		
22		John L. Hodge, for 4012 lbs. of lead, at 5½ cents, - - - - -	270	81		
		Samuel Richards, for pipes and castings, to September 28th, -	982	34		
25	Nov'r. 1,	Wages for October, - - - - -	466	65		
27	Dec'r. 1,	Wages for November, - - - - -	162	50		
30	10,	Walton & Hill, for spades, shovels, and ironmongery, - -	60	00		
		Jackson, Riddle & Co., for sundry wrought iron, - - - - -	60	00		
		William Kerr, for spun yarn and chandlery, - - - - -	80	84		
		E. Dallett & Co., for tallow, - - - - -	23	30		
31	26,	Jesper Harding, for advertising for iron pipes, - - - - -	10	50		
		Peter Hay, ditto, ditto, - - - - -	6	50		
		Samuel Richards, for iron pipes and castings, - - - - -	1277	32		
		Wages for December, - - - - -	181	00		
					25315	83

(28)

No. 5. Reservoir No. 4.

2	Feb'y. 1,	Alexander Scott, for hauling 277 yards of clay, at 48 cents, and for 493 yards of soil cleared off of 2,777 yards of clay, at 15 cents, - -	206	91		
3	March 1,	Joseph Jackson, on account, for preparing fences for Fair Mount, - -	80	00		
5	April 1,	Wages for March, - - - - -	45	25		
8	May 2,	Wages for April, - - - - -	978	97		
9		Joseph Jackson, on account, for carpenter's work to reservoir fence, -	75	00		
		Alexander Scott, for 150 perch of stone, at 75 cents, for hauling 75 loads of canal sand, 11 loads of grass sod, and two loads of posts, - -	149	87		
12	June 1,	Wages for May, - - - - -	1286	30		
13	20,	Alexander Scott, for 760 perch of stone, at 75 cents, for hauling 100 loads of sand, and for 112 yards of clay, - - - - -	655	14		
		Joseph Miller, for 4 wheelbarrows, and repairs to others, - -	26	12		
14	July 1,	Wages for June, - - - - -	1217	38		
15		James Hooven, for 1272 bushels of lime, at 23 cents, - - - - -	292	56		
		John Snyder, Son & Co., for 149,050 bricks, at \$ 8 75, - - - - -	1304	18		
		Alexander Scott, for hauling 249 loads of canal sand, at 32½ cents, -	80	92		
16	August 1,	Wages for July, - - - - -	1547	77		
17		Reeves & Whitaker, for nails and spikes for new and old reservoirs, -	50	00		
		A. W. Roberts, on account, for flagging banks, - - - - -	850	00		
		Joseph Jackson, on account, for carpenter's work to fence, &c., -	100	00		
		Alexander Scott, for hauling clay, on account, - - - - -	480	00		
		John Snyder, Son & Co., for 143,400 bricks, at \$ 8 75, - - - - -	1254	75		
		William Loyd, for 714 loads of canal sand, at 20 cents, - - - - -	142	80		
		Alexander Scott, for hauling 370 loads of canal sand, at 32½ cents, -	120	25		
		James Hooven, for 806 bushels of lime, - - - - -	185	38		
		Amounts carried forward,	11129	55	44236	59

(29)

No.	1836.		Dolls.	C.	Dolls.	C.
		Amounts brought forward,	11129	55	44236	59
19	Sept'r. 1,	Wages for August, - - - - -	1254	29		
20		James Hooven, for 866 bushels of lime, at 23 cents, - - - - -	199	18		
		Alexander Scott, balance, for hauling 1354 yards of clay, and for clearing off grass sod, - - - - -	565	96		
		John Snyder, Son & Co., for 204,350 bricks, at \$ 8 75, - - - - -	1788	06		
		Alexander Scott, for hauling 405 loads of canal sand, at 32½ cents, - - - - -	131	62		
21	October 1,	Wages for September, - - - - -	1184	64		
22		Henry Pratt, for 1542 yards of clay, at 12½ cents, - - - - -	192	75		
		William Loyd, for 450 loads of canal sand, at 20 cents, - - - - -	90	00		
		George Zantzinger, for 8½ casks of Roman cement, at \$ 5 50, - - - - -	46	75		
23	6,	Frederick Graff, for extra services in the erection of the reservoirs, - - - - -	500	00		
24	17,	A. W. Roberts, balance, for sundry flagging, and stone for old and new reservoirs, - - - - -	1461	32		
25	Nov'r. 1,	Wages for October, - - - - -	964	18		
26		James Hooven, for 180 bushels of lime, at 23 cents, - - - - -	41	40		
		Joseph Jackson, balance, for reservoir fences, and repairs to Reservoirs Nos. 1, 2, and 3, - - - - -	228	33		
27	Dec'r. 1,	Wages for November, - - - - -	672	81		
28		Andrew M. Jones, for 250 lbs. of large wrought spikes, - - - - -	17	75		
29	5,	Keyser & Longstreth, for sundry lumber, from April 12th, - - - - -	90	00		
		Alexander Scott, for hauling 48 loads of canal sand, - - - - -	24	00		
		John Kenworthy, for painting 2721 yards of reservoir fence, platform, &c., - - - - -	251	77		
30	10,	Walton & Hill, for spades, shovels, and ironmongery, - - - - -	50	00		
31	26,	William Loyd, for 48 loads of canal sand, - - - - -	9	60		
		Alexander Scott, for hauling 600 yards, for north road to reservoirs, - - - - -	114	00		
		Wages for December, - - - - -	23	62		
					21031	58

(30)

No. 6. Water Power.

1	Feb'y. 1,	Wages for January, - - - - -	147	25		
4	March 1,	Wages for February, - - - - -	137	75		
5	April 1,	Wages for March, - - - - -	147	25		
6		Conrad Groves, for 3½ tons of coal purchased in February, - - - - -	26	25		
8	May 2,	Wages for April, - - - - -	142	50		
9		Conrad Groves, for 2 tons of coal purchased in April, - - - - -	13	00		
12	June 1,	Wages for May, - - - - -	147	25		
14	July 1,	Wages for June, - - - - -	142	50		
16	August 1,	Wages for July, - - - - -	147	25		
17		Shober & Bunting, for 30½ gallons of lamp oil, - - - - -	27	45		
		Bunting & Clark, for 34 tons of coal, - - - - -	188	00		
19	Sept'r. 1,	Wages for August, - - - - -	147	25		
21	Oct'r. 1,	Wages for September, - - - - -	142	50		
25	Nov'r. 1,	Wages for October, - - - - -	147	25		
27	Dec'r. 1,	Wages for November, - - - - -	142	50		
28		Thomas Morgan, for 31 gallons of lamp oil, - - - - -	32	55		
30	10,	William Kerr, for chandlery, - - - - -	123	77		
		E. Dallett & Co., for tallow, - - - - -	83	04		
		Wetherill & Co., for oil, paints, &c., - - - - -	131	43		
31	26,	Wages for December, - - - - -	147	25		
					2363	99
Amount carried forward,					67632	16

(31)

No.	1836.		Dolls.	C.	Dolls.	C.
		Amount brought forward,			67632	16
No. 7. Incidentals.						
2	Feb'y. 1,	James Earle, for frame and glass for Register's office,	-	-	3	00
		Messrs. Wetherill & Fraley, for expenses to Harrisburg, against Western Canal,	-	-	79	87
		Robert Desilver, for check and receipt books, and for stationary,	-	-	18	00
3	March 1,	J. G. Clarkson, for services in relation to the western canal, &c.,	-	-	98	65
9	May 2,	J. Price Wetherill, for expenses to Harrisburg, on the subject of the Western Canal,	-	-	25	44
13	June 20,	Stephen Morris & Co., for repairs of stove, &c., for Register's office,	-	-	14	53
15	July 1,	Messrs. Wetherill, Fraley & Graff, for expenses at Harrisburg, and for recording bridge lot deed,	-	-	193	50
17	August 1,	Robert Desilver, for water rent books, and stationary,	-	-	58	56
23	Oct'r. 6,	S. W. Rush, for services to the district water books, &c.,	-	-	250	00
		Samuel Curry, for services as messenger,	-	-	50	00
28	Dec'r. 1,	Lydia R. Bailey, for printing and stationary,	-	-	26	30
29	5,	R. Desilver, for stationary and books, from July 28th,	-	-	16	50
					834	35
No. 8. Salaries.						
5	April 1,	Samuel W. Rush, for 1 quarter's salary,	-	-	250	00
		Samuel Curry, ditto, ditto,	-	-	60	00
		Frederick Graff, ditto, ditto,	-	-	500	00
14	July 1,	Samuel W. Rush, ditto, ditto,	-	-	250	00
		Samuel Curry, ditto, ditto,	-	-	60	00

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14	July 1,	Frederick Graff, ditto, ditto,	-	-	500	00
21	Oct'r. 1,	Samuel W. Rush, ditto, ditto,	-	-	250	00
		Samuel Curry, ditto, ditto,	-	-	60	00
		Frederick Graff, ditto, ditto,	-	-	500	00
	Dec'r. 26,	Samuel W. Rush, ditto, ditto,	-	-	250	00
		Samuel Curry, ditto, ditto,	-	-	60	00
		Frederick Graff, ditto, ditto,	-	-	500	00
					3240	00
					71706	51

No. 9. Abstract of Payments made by the Watering Committee,

From December 31, 1835, to December 31, 1836.

Distribution,	-	-	-	-	5415	16
Fair Mount Works,	-	-	-	-	13505	60
Iron Pipes,	-	-	-	-	25315	83
Reservoir No. 4,	-	-	-	-	21031	58
Water Power,	-	-	-	-	2363	99
Incidentals,	-	-	-	-	834	35
Salaries,	-	-	-	-	3240	00
					71706	51

(33)

No. 10. Sums paid into the Treasury,

From December 31, 1835, to December 31, 1836.

April 13, 1836, for 887 perches of stone, and for sundries,	\$124 24
July 8, for 1280 perches of stone, and for sundries, -	186 05
October 26, for sundry old castings, old wood pipes, &c.,	528 33
November 14, for old castings, wrought iron scraps, &c.,	564 36
	<hr/>
	\$ 1402 98
	<hr/>

No. 11. Estimate for the Year 1837.

Incidental expenses—

For working the machinery at Fair Mount, for fuel, and materials, - - -	\$ 2500 00
For lumber, castings, and sundries for the Distribution, - - -	5500 00
For salaries and incidentals, - - -	3500 00
For the payment of taxes, and for sundry repairs at Fair Mount, - - -	2500 00
	<hr/>
	\$ 14000 00

Permanent expenses—

For paving footway on Coates's street, and the front of the bridge lot, for fences to said lot, for paving the garden walks, for grass sodding, and for planting trees, - - -	\$ 6000 00
For building a wall east of the reservoirs on Fair Mount street, 400 feet long and 36 feet high, for grass sodding the upper embankment, for finishing the lower one for the support of the reservoirs, and for regulating the fences, &c.,	15000 00
For the extension of the Iron Pipes, -	15000 00
	<hr/>
	36000 00
	<hr/>
	\$ 50000 00
	<hr/>

No. 12. Account of Iron Pipes laid in 1836.

	Feet.	Feet.	Feet.
Iron Pipes laid in former years, commencing October, 1819, to December 1835, - - -			288992
<i>Iron Pipes laid in 1836—</i>			
Cedar street, from Eleventh to Broad street, 16 inch,		1420	
Schuylkill Front, from Chesnut across High street, - - - 12 inch,	584		
Schuylkill Fifth, from Spruce st. southward, do.	265		
		849	
Schuylkill Seventh, from Vine southward, 6 inch,	370		
Twelfth street, from Vine to the north side of High street, - - - do.	2028		
Cherry street, from Eleventh to Twelfth st., do.	456		
Pine street, from Schuylkill Third eastward, do.	220		
East side of Broad, from George towards Chesnut street, - - - do.	140		
Schuylkill Seventh, from Pine to Lombard st., do.	310		
Schuylkill Eighth, from Locust to Pine street, do.	1023		
Pine, from Willow to Bank street, on the Sch., do.	510		
Schuylkill Sixth, from north of Cherry to north of Race street, - - - do.	360		
		5417	
Connexions for sundry fire plugs, - 4 inch.	170		
Ashton street, from the Gas Works to the north of Race street, - - - do.	1334		
For fire plugs to the new Market houses, do.	125		
For repairs of iron pipes to wooden pipes, do.	196		
		1825	
Rittenhouse street, from Schuylkill Seventh to Eighth street, - - - 3 inch,	440		
State street below Vine, from Schuylkill Seventh eastward, - - - do.	260		
Lybrand street, from Race street northward, do.	306		
Alley north of South street, from Schuylkill Second to Fourth street, - - - do.	900		
Burden street, from Schuylkill Fifth to Sixth street, - - - do.	396		
Beaver Court, northward from Cherry above Fourth street, - - - do.	174		
George street, from Juniper to Broad street, do.	310		
Amount carried forward,	2786	9511	288992

	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
Amount brought forward,	2786	9511	288992
Helmuth street, from Sixth to Seventh, south of Pine street, - - - 3 inch,	420		
Richards street, from Sixth to Seventh street, do.	420		
Lodge Alley and Pemberton Court, do.	380		
Ann street, from Schuylkill Seventh to Eighth street, - - - do.	430		
Emlen street, from Sixth to Seventh street, do.	446		
Clinton street, from Tenth to Eleventh, on the Alms House lot, - - do.	481		
Dugan street, from Pine to Spruce street, do.	400		
Emlen's Alley, from Buckley street southward, do.	90		
Alley, west side of Ninth below Race street, do.	144		
Schuylkill Bank street, from Pine to Lombard street, Lombard from Bank to Water street, and Schuylkill Water street, from Lombard to Cedar street, - - - do.	1007		
The street north of the Deaf and Dumb Asy- lum, from Schuylkill Eighth eastward, do.	65		
Morris street, from Pine southward, west of Broad street, - - - do.	132		
Madison Avenue, from Sheaff's Alley towards Race street, - - - do.	150		
Jones's Alley, north of High street, between Schuylkill Fifth and Sixth streets, do.	421		
		7772	
Pipes laid in 1836, upwards of three miles and one quarter, - - - - -			17283
Iron pipes laid from October 1819, to December 31, 1836, being upwards of 58 miles in the city,			306275
Iron pipes laid from October, 1819, to December 31, 1836, in the city, - - - - -			58 miles,
Iron pipes laid in the Districts, to December 31, 1836,			40½ "
Together,			98½ "

The average cost for mains and pipes laid in the city, is \$1 47 per foot.

Particulars relating to the Fair Mount Water Power Works, from their commencement up to December 31, 1836.

The dam was commenced April 19, 1819, and finished July 23, 1821.
 The great ice freshet which rose 9 feet above the dam, took place - - - February 21, 1822.
 The corner stone of the mill buildings was laid April 28, 1821.

The wheel and pump No. 1, was first put into operation July 1, 1822.
 No. 2, ditto, ditto, September 14, 1822.
 No. 3, ditto, ditto, December 24, 1822.
 No. 4, ditto, ditto, November 10, 1827.
 No. 5, ditto, ditto, April 5, 1832.
 No. 6, ditto, ditto, November 5, 1834.

The 22 inch iron main was laid in - - - 1820.
 The 20 inch iron main was laid in - - - 1829.
 Each of these is nearly 10,000 feet in length.

	Gallons.	Gallons.
The Reservoir No. 1, was finished in 1815, it contains - - - -	3,917,659	
The Reservoir No. 2, was finished in 1821, it contains - - - -	3,296,434	
The Reservoir No. 3, was finished in 1827, it contains - - - -	2,707,295	
Containing,		9,921,388
The first section of Reservoir No. 4, was finished in 1835, it contains - - - -	3,658,016	
The second section of Reservoir No. 4, was finished in 1836, it contains - - - -	4,381,322	
The third section of Reservoir No. 4, was finished in 1836, it contains - - - -	4,071,250	
		12,110,588
The Reservoirs contain together,		22,031,976

Reservoir No. 1, cost - - - -	\$ 32,508 52
Reservoir No. 2, cost - - - -	9,579 47
Reservoir No. 3, cost - - - -	24,521 75
First, second, and third sections of Reservoir No. 4, cost	67,214 68
	\$ 133,824 42

The waters of the Reservoirs cover a surface exceeding six acres. The Reservoirs are each twelve feet three inches deep, and are elevated above the water in the dam, ninety-six feet perpendicular.

The water flowing from the Reservoirs for the supply of the city and districts, per day, at different periods of the year 1836, was as follows:
Gallons.

(In very cold weather,) from February 1st, to the 21st,	1,769,800
February 21st, to March 20th,	2,113,257
March 20th, to June 3d,	3,046,120
June 3d, to July 22d,	3,942,643
July 22d, to September 9th,	4,152,917
September 9th, to October 28th,	3,679,800
October 28th, to December 31st,	3,154,114

The average daily supply, in 1836, was 3,122,664 gallons.

The above supply of water is distributed to 10,632 tenants by private hydrants, and to 3,000 families by hydrant pumps.

		Tenants.
	In the City, to	13632
And by private hydrants in the District of Spring Garden, to		1762
Ditto, ditto, in Southwark, to		1287
Ditto, ditto, in Northern Liberties, to		2535
Ditto, ditto, in Moyamensing, to		228
Ditto, ditto, in Kensington, to		234
	Together,	19678

Being an average daily supply to each tenant of 160 gallons.

The quantity of iron pipes laid for the distribution of the water, is as follows:

	Miles.
in the City,	58
in Spring Garden,	11 $\frac{5}{8}$
in Southwark,	10 $\frac{1}{4}$
in the Northern Liberties,	12 $\frac{7}{8}$
in Moyamensing,	2 $\frac{5}{8}$
in Kensington,	3
Together,	98 $\frac{3}{4}$

The water rents up to the 31st of December, 1837, are as follows:

For the City,	\$ 57,080 50
Including rents on the Girard Estate, and rents due by H. J. Williams and others at Fair Mount,	1,048 50

Amount carried forward, \$ 58,129 00

Amount brought forward,	\$ 58,129 00
For Spring Garden, - - -	13,674 25
For Southwark, - - -	10,517 50
For the Northern Liberties, - - -	20,009 37
For Moyamensing, - - -	1,956 00
For Kensington, - - -	2,146 25
Together,	<u>\$ 106,432 37</u>

The expenses for the Water Power Works, connected with the applicable parts of the former steam works, were, December 31, 1831, - - -	\$ 1,138,323 54
Add the expenses for reservoirs, iron pipes, &c., in 1832,	65,195 58
Ditto, ditto, in 1833,	37,354 06
Ditto, ditto, in 1834,	65,163 36
Ditto, ditto, in 1835,	73,288 38
Ditto, ditto, in 1836,	71,706 51
	<u>\$ 1,451,031 43</u>
From which deduct for the support of working machinery, materials, salaries, &c., \$ 14,000 00 per annum, for the last five years, - - -	70,000 00
Leaves the expenditure for the permanent works, up to the 31st of December, 1836, - - -	<u>\$ 1,381,031 43</u>

The contract for supplying the District of Spring Garden with water, was signed	April 26, 1826.
The second contract for the extension of the water from Broad street to the Schuylkill,	October 10, 1831.
Agreement with Southwark, signed	June 1, 1826.
Agreement with the Northern Liberties, signed	June 6, 1826.
Agreement with Moyamensing, signed	January 6, 1832.
Agreement with Kensington, signed	October 5, 1833.

FREDERICK GRAFF,

Superintendent of the Fair Mount Water Works.

December 31, 1836.

Index to the Accounts

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

- No. 1, A. Statement in part of his accounts.
 - 1, A. Girard water rents in the city for 1837.
 - 1, A. Water rents charged to Williams and others at Morrisville, for 1837.
 - 2, B. Cash received from the city and districts in the year 1836.
 - 3, C. Expenditures for the year 1836.
 - 4, D. Revenue of the year 1836.
 - 5, E. Settlement of the city duplicates for the year 1836.
 - 6, F. Settlement of the returns by the collectors in 1836.
 - 7, G. Settlement of balance of water rents sued in 1835.
 - 8, H. Settlement of rent sued in 1836.
 - 9, I. Settlement of Girard city water rent in 1836.
 - 10, L. Duplicates of rents for the year 1837.
 - 11, M. Amount declined, &c., in city and districts in 1836.
 - 12, N. Number of water takers, &c., in the city for 1837.
 - 13, Northern Liberty duplicates for the year 1837.
 - 14, Settlement of Northern Liberty duplicates for 1836.
 - 15, Iron pipes laid and fire plugs erected in Northern Liberties.
 - 16, Amount of Southwark duplicates for 1837.
 - 17, Settlement of Southwark duplicates for 1836.
 - 18, Iron pipes and fire plugs in the District of Southwark.
 - 19, Settlement of Moyamensing duplicates for 1836.
 - 20, Moyamensing duplicates for 1837.
 - 21, Iron pipes and fire plugs in Moyamensing.
 - 22, Settlement of Kensington duplicates for 1836.
 - 23, Kensington duplicates for the year 1837.
 - 24, Iron pipes laid and fire plugs in Kensington.
 - 25, Settlement of Spring Garden duplicates for 1836.
 - 26, Iron pipes laid and fire plugs erected in Spring Garden in 1836.
 - 27, Spring Garden duplicates for 1837.

No. 1. A.

The Register submits to the Watering Committee the following condensed Statement, embracing the Accounts of his Department, (except the City Iron Pipes and Fire Plugs, which are taken from the Accounts kept by the Superintendent,) setting forth the Expenditure, Income, Water Rents, Iron Pipes, Fire Plugs, &c., &c., to the 31st December, 1836.

	Cash drawn for the Expenditure of the year 1836, see Account No. 3, C.		Receipts for Water-Rents during the year 1836, see Account No. 4, D.		Amount allowed the Districts for collecting the Water-Rents, including 1837.		Increase of Water-Rents during the year 1836.		Water-Rents declined, allowed, &c., during the year 1836.		Number of Water Takers.	Amount of Water-Rents, City and Districts, for the year 1837.		Miles of Iron Pipes laid.	Fire Plugs Erected.	Amount of Water-Rents from the commencement to the year 1837, inclusive.	
	Dols.	C.	Dols.	C.	Dols.	C.	Dols.	C.	Dols.	C.		Dols.	C.			Dols.	C.
City,	71,706	51	101,266	39			3,328	50	968	00	10632	57,080	50	58	472	843,062	00
Spring Garden,					4,489	96	1,084	50	178	50	1762	13,674	25	11½	115	76,046	00
Southwark, -					4,167	26	696	50	45	00	1287	10,517	50	10½	119	70,266	63
Northern Liberties,					7,439	09	716	62	413	50	2535	20,009	37	12½	135	141,961	26
Moyamensing,					365	95	271	00	3	75	228	1,956	00	2½	33	6,275	25
Kensington, -					221	45	601	50			234	2,146	23	3	33	3,691	00
Girard Water-Rents in the City,							160	00				765	00			1,370	00
Rent of wharf at Fair Mount for the season of Ice,												45	00			90	00
Water-Rents charged to H. J. Williams, at Fair Mount, in N. M. Ward Book,							68	50				238	50			238	00
	71,706	51	101,266	39	16,683	71	6,927	12	1,608	75	16678	106,432	37	98½	907	1,143,000	14

Water Takers from the Pumps in the Streets, about 3000.

December 31, 1836.

SAMUEL W. RUSH,
Register.

No. 2. B.

STATEMENT,

Showing the amount of Cash received and paid by Samuel W. Rush, Register, into the City Treasury, during 1836.

DATES.	City Water-Rents, Fractional Parts.		Fer-rules.		Repav-ing.		Spring Garden Water-Rents, Fractional Parts.		South-wark Water-Rents, Fractional Parts.		Moya-mensing Water-Rents, Fractional Parts.		Northern Liberties Water-Rents, Fractional Parts.		Kensing-ton Wa-ter-Rents, Fractional Parts.		City Dupli-cates, Year 1836.		City Dupli-cates, Year 1837.		Delin-quents, Year 1835, sued.		Delin-quents, Year 1836, sued.		Rent of Wharf at Fair Mount.		TOTAL.	
	Dols.	C.	D.	C.	D.	C.	Dols.	C.	Dols.	C.	Dols.	C.	Dols.	C.	Dols.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	Dols.	C.
1836.																												
January 30,	146	02	9	00	9	25																					207	93
February 29,	5	73					23	28					10	69	41	11											80	81
March 31,	41	30	10	50	14	00	49	85	8	47			32	33	16	92									45	00	173	37
April 30,	274	67	90	50	65	50	52	03	67	50	65	02	122	22	10	82											793	26
May 31,	291	94	70	25	62	00	79	19	51	72	12	60	64	31	18	55											650	56
June 30,	165	05	53	50	49	00	77	94	47	02	13	02	42	24	41	94	63	00									552	71
July 30,	444	88	94	75	74	00	63	34	38	60			74	26	83	95	20	00									893	78
August 31,	187	26	84	75	56	75	64	67	32	84	19	24	52	00	15	27	474	75	46	00							1033	53
September 30,	185	29	94	75	48	00	39	18	21	67	12	14	24	32	23	74	18	00									467	09
October 31,	123	60	66	50	46	50	56	76	11	02			21	48	2	25											328	11
November 30,	86	00	60	75	50	50	9	17	5	03	5	04	10	56	4	08											231	13
December 31,	10	18	47	00	24	00		97	21	56			5	96	1	52			86	00	36	25	67	75			301	19
	1961	92	682	25	499	50	516	38	327	46	127	06	460	37	281	78	575	75	132	00	36	25	67	75	45	00	5713	47

Carried to Account No. 4, D.

SAMUEL W. RUSH,

Register.

No. 3. C.

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

			<i>Dolls. C.</i>
Distribution,	-	-	5415 16
Water Power,	-	-	2363 99
Incidentals,	-	-	834 35
Iron Pipes,	-	-	25315 83
Fair Mount Works,	-	-	13505 60
Salaries,	-	-	3240 00
Reservoir No. 4,	-	-	21031 58
Carried to Account No. 1. A,	-	-	<u>71706 51</u>

No. 4. D.

Statement, showing the amount of moneys paid into the City Treasury, to the credit of the Water Works, for the year 1836.

			<i>Dolls. C.</i>
By A. Davis, collector, as per account No. 5. E,			25510 56
By J. Hickey, collector, as per account No. 5. E,			25797 11
By S. W. Rush, Register, as per account No. 2. B,			5713 47
By F. Graff, Superintendent, as per account No. 10,			1402 98
By Treasurer of Northern Liberties, as per account No. 14,			18135 19
By Treasurer of Southwark, as per account No. 17,			9231 74
By Treasurer of Spring Garden, as per account No. 25,			11834 37
By Treasurer of Moyamensing, as per account No. 19,			1583 90
By Treasurer of Kensington, as per account No. 22,			1452 07
By Treasurer of Girard Trusts, as per account No. 9. I,			605 00
Carried to Account No. 1. A,	-	-	<u>101266 39</u>

No. 5. E.

Statement, showing the settlement of the duplicates of the city water rents, for the year 1836.

	Dolls.	C.	Dolls.	C.
Amount of duplicates of water rents, -	53967	00		
Add discoveries by Davis & Hickey, collectors,	72	75		
			54039	75
From which deduct—				
Collectors' commissions, - -	1594	33		
Amount to be sued, as per account No. 6. F,	237	50		
Amount allowed, as per account No. 6. F,	324	50		
			2156	33
Amount paid into the city treasury, -			51883	42
Of which was received—				
By A. Davis, collector, carried to account No. 4. D, - - - - -	25510	56		
By J. Hickey, collector, carried to account No. 4. D, - - - - -	25797	11		
By S. W. Rush, register, as per account No. 2. B,	575	75		
			51883	42

No. 6. F.

Statement, accounting for the amount of water rents returned as unpaid by Messrs. Davis and Hickey, collectors, for the year 1836, and allowed to them in the settlement of the duplicates of water rents for said year.

	Dolls.	C.	Dolls.	C.
Amount allowed to A. Davis, - -	503	75		
Amount allowed to J. Hickey, -	634	00		
			1137	75
Accounted for, to wit—				
Received and paid into the treasury by the register, as per account No. 5. E, -	575	75		
Amount allowed by committee, -	324	50		
Amount ordered to be sued, (for settlement of which see account No. 8. H,) -	237	50		
Making the above amount, - -			1137	75

No. 7. G.

Statement, showing the settlement of the balance of water rents ordered to be sued for the year 1835, remaining in the hands of Alderman Pettit, as stated per last report, per account No. 7, G.

	D.	C.	D.	C.
Balance unsettled on the 31st of December, 1835,	105	00		
Deduct Alderman's fees, - - -	7	00		
			98	00
Settled, to wit—				
Cash received by register, from Alderman Pettit, December 2, 1836, as per account No. 2. B, -	36	25		
Amount returned by Alderman as lost, -	61	75		
			98	00

No. 8. H.

Statement, showing the amount of water rents ordered to be sued in the year 1836, and a settlement of the same.

	D.	C.	D.	C.
Amount of water rents ordered to be sued, -	237	50		
Add for cutting off pipes, - - -	24	75		
			262	25
Received by register without instituting suit,			67	75
Balance in Alderman Pettit's hands, Dec'r. 31, 1836,			194	50

No. 9. I.

Statement, showing the settlement of the water rents charged to the Girard Estate in the city, as per account No. 10, K. of last Report.

	Dolls.	C.
Amount of bill of water rent, - - -	605	00
Cash paid city treasurer, by the treasurer of the Girard Trusts, carried to account No. 4. D, - - -	605	00

No. 10. L.

Statement, showing the amount of the duplicates of water rents of the city, for the year 1837.

	Dolls.	C.	Dolls.	C.
<i>Northern District.</i>				
Chesnut ward, - - - -	2864	50		
Upper Delaware and North Mulberry wards,	9122	00		
Lower Delaware and South Mulberry wards,	7863	50		
High street and North wards, - -	8512	50		
			28362	50
<i>Southern District.</i>				
Middle ward, - - - -	3134	00		
Walnut and South wards, - - -	6784	50		
Dock and Locust wards, - - -	11112	50		
Pine, New Market, and Cedar wards, -	7555	00		
			28586	00
Received on account of said duplicates, by register, in June, as per account No. 2. B,	46	00		
For permits issued in Dec'r., as per do.	86	00		
			132	00
Carried to account No. 1. A, - -			57080	50

No. 11. M.

Statement, showing the amount of water rents taken from the duplicates of water rents of the city and districts, during the year 1836.

	Dolls.	C.
<i>City, viz.—</i>		
Amount allowed, - - - -	324	50
Amount sued, - - - -	237	50
Amount declined, &c., - - -	406	00
		968 00
<i>Districts—</i>		
Northern Liberties, - - - -	413	50
Spring Garden, - - - -	178	50
Southwark, - - - -	45	00
Moyamensing, - - - -	3	75
		1608 75
Amount taken from the duplicates, - - -		1608 75

It will be perceived, that the increase of water rents during the year 1836, by new permits, is decreased to the amount of the aforesaid deduction.

No. 12. N.

Dwellings, manufactories, and institutions, supplied with the Schuylkill water in the city of Philadelphia, to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
43 Horses, - - - - -	at	1 00		43 00
91 Wash pavements, &c., - - - - -		2 00		182 00
118 Tenements, &c., - - - - -		2 50		295 00
1492 Baths, - - - - -		3 00		4476 00
2 Taverns, - - - - -		3 75		7 50
23 Stables, - - - - -		4 00		92 00
30 Baths, - - - - -		4 50		135 00
7699 Dwellings, &c., - - - - -		5 00		38495 00
18 Dwellings, &c., - - - - -		6 00		108 00
366 Dwellings, &c., - - - - -		7 50		2745 00
345 Printing offices, &c., - - - - -		8 00		2760 00
20 Vinegar yards, &c., &c., - - - - -		9 00		180 00
139 Dyers, &c., - - - - -		10 00		1390 00
3 Marble yards, - - - - -		11 00		33 00
2 Dwellings, &c., - - - - -		11 25		22 50
21 Soap boilers, &c., - - - - -		12 00		252 00
8 Dwellings, &c., - - - - -		12 50		100 00
1 Tavern, &c., - - - - -		13 00		13 00
2 Courts, &c., - - - - -		14 00		28 00
60 Distilleries, &c., - - - - -		15 00		900 00
7 Hatteries, &c., - - - - -		16 00		112 00
1 Stable, - - - - -		17 00		17 00
1 Court, &c., - - - - -		18 00		18 00
4 Taverns, &c., - - - - -		18 00		72 00
36 Taverns, courts, &c., - - - - -		20 00		720 00
5 Courts, &c., - - - - -		22 50		112 50
1 Stable, - - - - -		24 00		24 00
22 Sugar houses, &c., - - - - -		25 00		550 00
1 Steam engine, - - - - -		44 00		44 00
1 Tavern, &c., - - - - -		29 50		29 50
16 Stables, - - - - -		30 00		480 00
3 Courts, &c., - - - - -		33 00		99 00
2 Mansion houses, &c., - - - - -		34 00		68 00
6 Morocco factories, - - - - -		35 00		210 00
1 Steam engine, - - - - -		36 00		36 00
1 Court, &c., - - - - -		39 00		39 00
8 Baths, &c., - - - - -		40 00		320 00
2 Courts, &c., - - - - -		45 00		90 00
10 Stables, &c., &c., - - - - -		50 00		500 00
1 Tavern, &c., - - - - -		52 00		52 00
1 United States Mint, - - - - -		70 00		70 00
10 Breweries, &c., - - - - -		75 00		750 00
2 Public baths, - - - - -		80 00		160 00
2 Distilleries, &c., - - - - -		100 00		200 00
1 Bath house, - - - - -		300 00		300 00
1 Sugar house, - - - - -		335 00		335 00
1 Distillery, - - - - -		350 00		350 00
1 Brewery, - - - - -		69 00		69 00
				<hr/>
				58084 00

The above amount of account No. 12. N, is composed of the following water rents—
 Duplicates, as per account No. 10. L, - - - - - \$ 57080 50
 Girard water rents, as per account No. 1. A, - - - - - 765 00
 H. J. Williams and others at Fair Mount, as per account No. 1. A, - - - - - 238 50

\$ 58084 00

No. 13.

An account showing the amount of the water rents due to the city by the incorporated District of the Northern Liberties, for the year 1837—also the number of dwellings, &c., supplied therein with the Schuylkill water to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
37 Horses, - - - -	at	1 50	55	50
1 Horse, &c., - - - -		2 50	2	50
12 Wash pavements, &c., - - - -		3 00	36	00
67 Tenements, - - - -		3 75	251	25
162 Baths, - - - -		4 50	729	00
2 Stands for horses, - - - -		5 00	10	00
79 Dwellings, - - - -		6 00	474	00
1949 Dwellings, - - - -		7 50	14617	50
1 Stable, - - - -		8 00	8	00
8 Dwellings, &c., - - - -		9 00	72	00
5 Factories, &c., - - - -		10 00	50	00
1 Stable, - - - -		10 50	10	50
58 Dwellings, &c., - - - -		11 25	652	50
42 Curriers, &c., - - - -		12 00	504	00
1 Dwelling, &c., - - - -		12 00	12	00
1 Stable, - - - -		13 50	13	50
36 Curriers, morocco factories, &c., - - - -		15 00	540	00
2 Courts, - - - -		18 00	36	00
11 Taverns with stables, - - - -		18 75	206	25
1 Brewery, &c., - - - -		19 50	19	50
3 Soap factories, - - - -		20 00	60	00
2 Taverns and stables, - - - -		21 00	42	00
1 Tavern and stable, - - - -		21 25	21	25
16 Taverns and stables, - - - -		22 50	360	00
5 Morocco factories, - - - -		25 00	125	00
1 Stable, - - - -		25 50	25	50
1 Court, - - - -		26 25	26	25
9 Soap factories, &c., - - - -		30 00	270	00
6 Stables with taverns, - - - -		33 75	202	50
1 Brewery, - - - -		33 00	33	00
2 Morocco factories, - - - -		37 50	75	00
1 Court, &c., - - - -		39 00	39	00
1 Farmers' hay market, - - - -		40 00	40	00
1 Court, &c., - - - -		45 00	45	00
2 Turpentine distilleries, - - - -		50 00	100	00
3 Tanneries, - - - -		52 50	157	50
1 Steam engine, - - - -		12 37	12	37
1 Brewery, - - - -		75 00	75	00
Carried to account No. 1. A, - - - -			20009	37

No. 14.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the District of the Northern Liberties, as per last annual report, account No. 15.

	Dolls.	C.	Dolls.	C.
Amount of duplicates, - - -	19292	75		
Deduct 6 per cent., as per agreement, -	1157	56		
			18135	19
Settled, to wit—				
Amount paid city treasurer, by the treasurer of the said district, carried to account No. 4. D,			18135	19

No. 15.

Statement, showing the quantity of iron pipes laid, and the number of fire plugs erected in the District of the Northern Liberties, from the year 1826 to the year 1836, both inclusive.

	Feet.	In	Feet.	In
<i>Iron pipes laid in 1836.</i>				
6 Inch, Old York Road, from Poplar Lane to George street, - - -	597			
6 Inch, St. John street, connexion with Kensington District, - - -	23			
			620	
Number of feet laid, from the year 1826 to the year 1835, both inclusive, - - -			67594	1
Carried to account No. 1. A, say 12 miles and $\frac{7}{8}$,			68214	1

Fire plugs erected in the District of the Northern Liberties, during the year 1836, to wit—

- No. 134 Old York Road, near the corner of George street.
- 135 Old York Road, between Poplar Lane and George street.
- 135 Fire plugs erected in the district.
- Carried to account No. 1, A.

No. 16.

An account, showing the amount of water rents due the city by the incorporated District of Southwark, for the year 1837, with an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
1 Horse, - - - -	at	1 50		1 50
1 Horse, &c., - - -		2 50		2 50
11 Bake houses, &c., - - -		3 00		33 00
29 Tavern licensed houses, - - -		3 75	108 75	
31 Baths, - - - -		4 50	139 50	
1 Commissioners' hall, - - -		5 00	5 00	
15 Dwellings, - - - -		6 00	90 00	
1132 Dwellings, &c., - - -		7 50	8490 00	
2 Dwellings, &c., - - - -		9 00	18 00	
1 School house, &c., - - -		10 00	10 00	
13 Taverns, &c., - - - -		11 25	146 25	
4 Dwellings, &c., - - - -		12 00	48 00	
1 Hattery, &c., - - - -		12 75	12 75	
22 Hatteries, &c., - - - -		15 00	330 00	
2 Soap factories, - - - -		18 00	36 00	
2 Steam engines, - - - -		20 00	40 00	
6 Sugar houses, &c., - - -		22 50	135 00	
1 Livery stable, - - - -		25 00	25 00	
2 Courts, - - - -		26 25	52 50	
1 Court, &c., - - - -		30 00	30 00	
2 Courts, &c., - - - -		37 50	75 00	
1 Brewery, - - - -		45 00	45 00	
1 Court, &c., - - - -		52 50	52 50	
3 Courts, &c., - - - -		18 75	56 25	
1 Brewery, - - - -		60 00	60 00	
1 Navy yard, - - - -		75 00	75 00	
1 County prison, - - - -		400 00	400 00	
Carried to account No. 1. A, - - -			10517 50	

No. 17.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the District of Southwark, for the year 1836, as per last annual report, account No. 18.

	Dolls.	C.	Dolls.	C.
Amount of duplicates, including prison,	9821	00		
Deduct 6 per cent., as per agreement, -	589	26		
			9231	74
Amount paid city treasurer, by the treasurer of the district, carried to account No. 4. D,			9231	74

No. 18.

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 1836, both inclusive.

	Feet.	In	Feet.	In
<i>Iron pipes laid in 1836.</i>				
6 Inch, Catherine, from Second to Third street,	551	10		
6 Inch, Queen, from Fourth to Fifth street,	450	6		
3 Inch, Prime, from Front to Second street,	453	5		
			1455	9
The number of feet of iron pipes laid in the district, from the year 1826 to 1835, both inclusive, is			52932	3
Carried to account No. 1. A, say 10½ miles,			54388	

Fire plugs erected in the District of Southwark, during the year 1836.

- No. 117 Catherine, between Second and Third streets.
- 118 Catherine, between Fourth and Fifth streets.
- 119 Catherine, between Front and Second streets.
- 119 Fire plugs erected in the district.
- Carried to account No. 1, A.

No. 19.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the Township of Moyamensing, for the year 1836, as per last annual report, account No. 21.

	Dolls.	C.	Dolls.	C.
Amount of duplicates, - - -	1685	00		
Deduct 6 per cent., as per agreement, -	101	10		
			1583	90
Amount paid city treasurer, by the treasurer of the township, carried to account No. 4. D,			1583	90

No. 20.

An account, showing the amount of water rents due the city by the Township of Moyamensing, for the year 1837—also the number of dwellings, &c., supplied therein with the Schuylkill water, to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
3 Tenements, - - - -	at	3 75	11 25	
15 Baths, - - - -		4 50	67 50	
1 Commissioners' hall, - - - -		5 00	5 00	
184 Dwellings, &c., - - - -		7 50	1380 00	
9 Taverns, &c., - - - -		11 25	101 25	
2 Distilleries, &c., - - - -		12 00	24 00	
4 Taverns, &c., - - - -		15 00	60 00	
1 Court, - - - -		21 00	21 00	
1 Court, - - - -		22 50	22 50	
1 Court, - - - -		24 00	24 00	
2 Factories, - - - -		30 00	60 00	
1 Court, - - - -		33 75	33 75	
1 Court, - - - -		42 00	42 00	
1 Cider still, - - - -		10 00	10 00	
1 Court, &c., - - - -		18 75	18 75	
1 Court, &c., - - - -		75 00	75 00	
Carried to account No. 1. A, -			1956	00

No. 21.

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 1836, both inclusive.

	<i>Feet.</i>	<i>In</i>	<i>Feet.</i>	<i>In</i>
<i>Iron pipes laid in the year 1836.</i>				
6 Inch, Sixth street, from Fitzwater to Passyunk Road, - - - - -	524	4		
Number of feet laid, from the year 1832 to the year 1835, both inclusive, - - -	12752			
Say 2 miles $\frac{3}{8}$, carried to account No. 1. A,			13276	4

Fire plugs erected in the Township of Moyamensing, during the year 1836.

- No. 32 Sixth street, between Fitzwater and Passyunk Road.
 33 Bedford street, between Seventh and Eighth streets.
 33 Fire plugs erected in the township.
 Carried to account No. 1, A.

No. 22.

Statement, showing the settlement of the duplicates of water rents charged to the Board of Commissioners of the District of Kensington, for the year 1836, as per last annual report, account No. 24.

	<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
Amount of duplicates, - - - - -	1544	75		
Deduct 6 per cent., as per agreement, -	92	68		
			1452	07
Amount paid city treasurer, by the treasurer of the district, carried to account No. 4. D,			1452	07

No. 23.

An account, showing the amount of water rents due the city by the Board of Commissioners of the District of Kensington, for the year 1837, with an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
2 Back tenements, - - -	at	3 75		7 50
195 Dwellings, - - -		7 50	1462	50
1 Washing, &c., - - -		10 00		10 00
13 Dwellings, &c., - - -		11 25	146	25
3 Dwellings and bath, &c., - - -		12 00	36	00
6 Taverns, &c., - - -		15 00	90	00
1 Tavern, &c., - - -		16 25	16	25
1 Dyery, &c., - - -		17 50	17	50
3 Courts, &c., - - -		18 75	56	25
2 Laboratories, &c., - - -		22 50	45	00
2 Courts, - - -		30 00	60	00
2 Courts, - - -		37 50	75	00
1 Factory, - - -		70 00	70	00
1 Steam engine, - - -		45 00	45	00
1 Steam engine, - - -		9 00	9	00
Carried to account No. 1. A, -			2146	25

No. 24.

Statement, showing the quantity of iron pipes laid, and the number of fire plugs erected in the District of Kensington, during the years 1835 and 1836.

<i>Iron pipes laid in the year 1836.</i>		Feet.	In	Feet.	In
6 Inch, St. John, from Germantown Rd. to Canal st.		1346	7		
6 Inch, Shackamaxon, from Bedford to Beach,		767	5		
4 Inch, Penn street, from Bedford to Beach st.,		1561	6		
				3675	6
Number of feet laid in the year 1835, -				12526	6
Say 3 miles, carried to account No. 1. A,				16202	

Fire plugs erected in Kensington, in the year 1836.

- No. 29 Corner of St. John and George streets.
 30 Shackamaxon street, between Bedford and Queen streets.
 31 Shackamaxon street, between Queen and Beach streets.
 32 Penn street, between Shackamaxon and Maiden streets.
 33 Penn street, between Maiden and Marsh streets.
 Carried to account No. 1, A.

No. 25.

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 report, account No. 26.

	Dolls.	C.	Dolls.	C.
Amount of duplicates, - - -	12589	75		
Deduct 6 per cent., as per agreement, -	755	38		
			11834	37
Amount paid city treasurer, by the treasurer of the district, carried to account No. 4. D,			11834	37

No. 26.

Statement, showing the quantity of iron pipes laid in the District of Spring Garden, from the year 1826 to the year 1836, both inclusive—also the number of fire plugs erected during said period.

<i>Iron pipes laid in 1836.</i>		Feet.	In	Feet.	In
10 Inch, Eighth st., from Green to Coates's st.,		828			
6 Inch, Washington st., from 9th to 11th street,		868			
6 Inch, Callowhill, from Nixon to Fair Mount street, - - -		959			
6 Inch, Fair Mount street, from Callowhill to Coates's street, - - -		1619			
10 Inch, Coates's street, from Fair Mount to rail road, - - -		324			
6 Inch, Coates's street, from rail road to Landing street, - - -		966			
6 Inch, Landing street, from Coates's street north,		214			
Number of feet of pipe laid, from 1826 to 1835, both inclusive, - - -				5778	
				56467	7 $\frac{3}{4}$
Carried to account No. 1. A, say 11 miles and $\frac{5}{8}$,				62245	7 $\frac{3}{4}$

Fire plugs erected in the district in 1836.

- No. 107 Eighth street, south of Wallace street.
 108 Washington street, west of Eighth street.
 109 Callowhill street, west of Nixon street.
 110 Callowhill street, west of William street.
 111 Fair Mount street, south of Biddle street.
 112 Fair Mount street, opposite Hunter street.
 113 Coates's street, west of Pearl street.
 114 Coates's street, west of Esher street.
 115 Landing street, north of Coates's street.
 115 Erected in the district, carried to account No. 1, A.

No. 27.

An account, showing the amount of water rents due the city by the District of Spring Garden, for the year 1837—with an account of the number of dwellings, &c., supplied with the Schuylkill water, to the 31st of December, 1836.

	Dolls.	C.	Dolls.	C.
7 Horses, - - - -	at	1 50		10 50
1 Horse, &c., - - - -		3 00		3 00
23 Tenements, - - - -		3 75		86 25
167 Baths, - - - -		4 50		751 50
1 Porter cellar, &c., - - - -		5 25		5 25
18 Dwellings, - - - -		6 00		108 00
1434 Dwellings, - - - -		7 50	10755	00
2 Vinegar yards, &c., - - - -		9 00		18 00
2 Soap factories, &c., - - - -		10 00		20 00
2 Slaughter houses, - - - -		10 50		21 00
9 Dwellings, &c., - - - -		11 25		101 25
47 Dwellings, &c., - - - -		12 00		564 00
17 Soap factories, - - - -		15 00		255 00
1 Steam engine, - - - -		16 50		16 50
6 Dwellings, &c., - - - -		18 75		112 50
2 Livery stables, - - - -		20 00		40 00
1 Tavern, - - - -		22 50		22 50
1 Dwelling, - - - -		24 00		24 00
1 Steam engine, &c., - - - -		25 50		25 50
1 Court, &c., - - - -		26 25		26 25
1 Tavern and stable, - - - -		27 50		27 50
1 Steam mill, &c., - - - -		30 75		30 75
4 Factories, - - - -		30 00		120 00
1 Court, &c., - - - -		36 00		36 00
3 Taverns, &c., - - - -		37 50		112 50
2 Steam mills, &c., - - - -		40 00		80 00
1 Court, - - - -		45 00		45 00
1 Tannery, - - - -		54 00		54 00
1 Factory, - - - -		58 50		58 50
1 Stable, - - - -		31 50		31 50
1 Water wheel, - - - -		112 50		112 50
Carried to account No. 1. A, - - - -			13674	25

SAMUEL W. RUSH, *Register.*

Philadelphia, December 31, 1836.

