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*Wagon Company  
20 July 1820.*

# REPORT



OF THE

## WATERING COMMITTEE,

ON THE PROPRIETY OF

RAISING THE DAM,

AT

FAIR MOUNT.

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NO. 10, NORTH STREET.

1820.

# REPORT

OF

## THE WATERING COMMITTEE.

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**THE** plan originally adopted, to obtain a sufficient supply of pure and wholesome water from the river Schuylkill, by means of forcing pumps, worked by steam engines, experience has proved to be inadequate to furnish a quantity equal to the consumption of the city, unless at an annual expenditure which must be felt as extremely burthensome.

That water power should be substituted for steam power, for working the forcing pumps, had long been considered as an improvement which it was highly desirable should be obtained; but no feasible means for its accomplishment were suggested.

When the design of rendering the Schuylkill navigable, by the erection of dams and locks, was proposed, the opportunity and mode of acquiring a water power of sufficient capacity for the great object in view, presented itself.

The Watering Committee investigated the subject; and, from a complete examination of the river, by persons whose skill, experience, and judgment, could be relied on, it was ascertained that a dam could be easily and safely constructed at Fair Mount, and water wheels be located there, which would give, by the calculations made, a greater power, and would raise more water into the city, at a less expense, than could be obtained from any other source, or by any other means. The project was, however, embarrassed by the rights which had previously been acquired, under legislative grants, by Messrs. Gillingham & White, and the Navigation Company. Those difficulties being removed, by a negotia-

tion entered into with the above named parties, the plan of the work, together with estimates of the cost, and the reports of the engineers, were submitted to the consideration of Councils. The plan proposed was adopted, by a unanimous vote of Councils; the work was immediately commenced; and is now rapidly progressing.

When the first agreement with the Navigation Company, for the right to build a dam at Fair Mount, was under discussion, the Watering Committee were desirous to have permission to raise it eighteen inches higher, than was then granted. Their efforts proved unsuccessful; the Navigation Company conceiving that height would prove injurious to their interests at Flat Rock. The calculation of the power acquired by the head, as determined in the agreement, gave a result of eight millions of gallons of water, which would be raised into the reservoir in twenty-four hours; and was deemed fully competent to supply, not only the demand of the city, but also of the adjoining districts. Several persons, whose opinions, from their practical knowledge in subjects of this nature, are entitled to great weight, believe, and it is a reflection that has not for a moment been lost sight of by the Watering Committee, that, as this great work was commenced, it ought not to stop short of the greatest possible power that could be obtained. The head which will be obtained by the adoption of the plan now proposed, will give, according to the calculation of Mr. Oakes, in whose judgment and practical experience the Committee have the fullest confidence, an increased power equal to one-fourth of that which is obtained by the present head.

As the period approached which rendered a final determination on this point necessary, before the dam had progressed too far, and the Committee continued to feel anxious that the work should receive at once its ultimate perfection, and leave no room for deficiencies from errors or miscalculations, they renewed their negotiation with the Navigation Company, for raising the dam. After much discussion and reflection, the Navigation Company have entered into the views of the Watering Committee; and have granted permission to raise

the dam eighteen inches, in addition to its present height, on terms, the same as those, on which the original grant to raise the dam was made, as is set forth in the accompanying draft of articles of agreement.

The Watering Committee, in submitting this agreement for the deliberation of Councils, and consulting them on the expediency of the measure, beg leave to present the following considerations, as having influenced their determination :

1. The importance of a full and uninterrupted supply of pure and salubrious water to the comfort, health, happiness, and safety of the citizens, has been so repeatedly recognised, both by them and Councils, that no exertion ought to be omitted, by which it is likely to be accomplished.

2. The calculations made of the quantity of water, which can be raised into the reservoir in twenty-four hours, by the power obtained under the present head, has several of its data purely hypothetical ; and its accuracy can only be ascertained when the works are completely finished. A small additional expense will remove all danger arising from errors or miscalculations, and ensure a certainty where there is still room for doubt. Experience, besides, cautions against too confident a reliance on calculations of this nature, as the practical results of important works have so frequently varied from theoretical deductions.

3. Should the dam be completed of its present height, and the power be found inadequate to raise the quantity of water that is required, the addition to the dam, provided for in the present agreement with the Navigation Company, must be made, though it will then be embarrassed with difficulties that are now obviated, and encumbered with disadvantages that do not at this time exist. When finished, the dam cannot be raised except at a much greater expense, than it can be done at now, while incomplete ; a new assessment of damages must be made, which may be nearly equal to what will at this time be awarded ; and the water must be stopped for several months.

The expense necessary to raise the dam and the other works connected with it, the contemplated height, will amount

to seven thousand two hundred dollars. The Committee do not ask for an additional appropriation, as they conceive that a proportionate saving will be made, from being enabled, by the increased power obtained, to lessen the number and size of the mill houses, and make considerable reduction in the machinery. The sum originally estimated for the mills was forty thousand dollars. It is calculated, that the changes that can be effected by the increase of power obtained, will amount to one-fourth, or one-third, of that sum.

To accomplish the object set forth in the above Report, the Committee beg leave to offer the following resolution :

*Resolved*, That the Mayor of the city be requested to affix the city seal to certain articles of agreement with the Schuylkill Navigation Company, relating to an increase of eighteen inches of the dam at Fair Mount Works, in addition to the height that was determined on in former articles of agreement, dated the 3d day of June, A. D. 1819.

*July 13. 1820*

*J. S. Lewis C*

## ARTICLES OF AGREEMENT.

ARTICLES OF AGREEMENT, made, concluded, and agreed upon, this *20<sup>th</sup>* day of *July* in the year of our Lord one thousand eight hundred and twenty, between the president, managers, and company of the Schuylkill Navigation Company, of the one part, and the mayor, aldermen, and citizens of Philadelphia, of the other part:—

WHEREAS, the said president, managers, and company, in and by certain articles of agreement, dated the 14th day of August, 1816, made and entered into with a certain Josiah White, did grant unto the said Josiah and his assigns, the right, inter alia, of erecting a dam across the river Schuylkill, at the falls thereof, which said dam was restricted to be of a certain height, and subject to certain regulations, in the said agreement expressed, and which right of the said Josiah, inter alia, afterwards, by due and legal assignment and trans-

fer, came to, and was vested in, the said mayor, aldermen, and citizens of Philadelphia aforesaid: AND WHEREAS, the parties to these presents, in and by certain articles of agreement, bearing date the third day of June, A. D. 1819, did enter into certain covenants and agreements, in relation to the erecting a dam across the said river, near to Fair Mount, which said dam, it was stipulated and agreed by the said parties, should be so constructed as to raise the water of the said river as high as the said Josiah White might of right do, under the said recited articles of agreement between the said Navigation Company and the said Josiah White: AND WHEREAS, it is thought expedient, by both the parties to these presents, that the said mayor, aldermen, and citizens, should have power and authority to raise and elevate the said dam eighteen inches higher than was originally permitted to the said Josiah White to raise the dam at the said falls of the river Schuylkill, subject to all the agreements, rights, and duties contained in the said former articles between the parties to these presents, excepting such as regard the height of the said dam, and the elevation of the water caused thereby. NOW THESE PRESENTS WITNESS, that the said president, managers, and company, do hereby, in consideration of the premises, covenant, grant, and agree to and with the said mayor, aldermen, and citizens of Philadelphia, that they, the said mayor, aldermen, and citizens, and their successors, may and shall, within the time specified in the said articles of agreement, bearing date the 3d day of June, A. D. 1819, raise the said dam, therein contemplated to be built at Fair Mount, eighteen inches higher than was therein agreed and allowed; and shall and may use, exercise, and enjoy, all the rights and powers of the said Navigation Company, for the erection of a dam of the increased height aforesaid, as fully as for the erection of the dam heretofore agreed upon by the said parties to these presents. And it is hereby mutually agreed by the said parties, that all and singular the articles, agreements, and stipulations, clauses, rights, and liabilities, contained, made, reserved, or assumed, in and by the former articles, by and between the parties to these presents, shall be

deemed, and held to be in like manner contained, made, reserved, or assumed, by these articles, in reference and relation to the dam of increased height, hereby authorized, and the waters raised thereby, as fully as if herein particularly and distinctly repeated, saving and excepting such only as may relate to the height of the said dam, and the elevation of the waters to be caused thereby. It being the clear understanding and agreement of these parties, that the agreement heretofore made between them, and every article, clause, agreement, and covenant, therein, shall continue and be applied, in full force, effect, and virtue, with no other difference or change whatever, than such as is necessarily created by the said permission, grant, and agreement, to increase the elevation of the said dam, and that the said former agreement shall be deemed and held, in all respects, to apply, in full force, as if the elevation of the said dam, authorized by these presents, had been authorized by the said former agreement, and all the articles, agreements, stipulations, clauses, rights, and liabilities, therein contained, made, reserved, or assumed, had been so done in reference to a dam of the elevation hereby permitted, or the said agreement was herein fully and at large set out, and all and singular the provisions and clauses thereof expressly made a part of these presents.

*Provided always nevertheless, that nothing herein contained shall be construed in anywise to <sup>change</sup> vary the effect of certain articles of agreement entered into by the parties to these Presents, bearing date the*

*day of February A. D. 1820, but <sup>inquestment</sup> ~~it~~ <sup>is</sup> to be observed to apply ~~same and to be~~ <sup>in full</sup> ~~reference~~ <sup>to the Canal on the Eastern side of the Reg</sup> ~~reference~~ <sup>and of this agreement</sup>*