

New York (City)

Catskill Aqueduct Celebration Publications

A Collection of Pamphlets Published in Connection with the Celebration of the Completion of the Catskill Aqueduct, being chiefly Catalogues of Exhibitions held by Art, Scientific and Historical Museums and Institutions in New York City in cooperation with the Mayor's Catskill Aqueduct Celebration Committee in 1917.

ARRANGED BY
GEORGE FREDERICK KUNZ, Ph.D., Sc. D.,
Chairman of the Committee on
Art, Scientific and Historical Exhibitions



The Mayor's
Catskill Aqueduct Celebration Committee
New York, 1917

Chapter IV.

Early Pipe-Line Projects

Christopher Colles' Water-Works

The earliest proposal to supply the city with water conducted underground through pipes was made by Christopher Colles just before War of the Revolution.

Colles was born in Dublin, Ireland, May 9, 1739, and came to America in 1771.‡ He was certainly a man of genius and foresight as his water-works project sufficiently attests. He was an expert in mathematics, gunnery, and drawing, upon which subjects the Common Council allowed him to lecture in the Exchange,§ and he was a chemist, as indicated by the reference hereafter to his manufacture of "fig blue." He was also a pioneer in canal development, and as early as 1784 petitioned the Legislature to connect the waters of Lake Ontario with the Hudson by a canal through the Mohawk Valley.* He was an American patriot, suffering many privations during the American Revolution, and his memory is deserving of high respect.†

On April 22, 1774, Colles proposed to erect a reservoir near the Collect or Fresh Water pond where he had reason to believe that he could get an adequate supply of fresh water, and to distribute it through the streets by means of pipes made by boring a hole longitudinally through the trunks of small trees. The water was to be pumped into his reservoir from a well by a steam engine, and to flow by gravity through the pipes.

When the proposition first came to the Common Council it was so novel that there was uncertainty as to its practicability and advisability. The Council therefore put the subject off and deliberated on it for three months. When it came up for action on July 21, opinion was still divided; but the majority were in

‡ Transcript from family Bible received from Dr. Christopher J. Colles of New York.

§ Common Council Minutes of August 22, 1787.

* Sketch of Colles by John W. Francis in "The Knickerbocker Gallery," 1855.

† Francis errs in dates. Those above are correct. Colles died October 4, 1816, in the New York Institution in Chambers street, New York, which at that time included the Academy of Arts, the Historical Society, the City Library and the American Museum. Francis says he was buried in the Hudson street (St. John's) cemetery, and others say in St. Paul's churchyard, but the Rector of Trinity Parish says the parish has no record of burial in either. Colles was a man ahead of his time. He conceived many ideas for which others received credit. His culture is reflected in living descendants who are prominently connected with the social, intellectual, art and civic life of the city. The New York Historical Society has a fine portrait of him by John W. Jarvis.

favor of the experiment and voted 8 to 2 to undertake it. At the same time, they voted to issue notes to the amount of £2,600 for the undertaking. Subsequent issues brought the amount up up to £9,100.

These notes were about the size of the "shin-plasters" of the Civil War period, being about 2 1/3 by 4 inches in size. A specimen of which we have a copy before us bore on its face the following inscription.

NEW YORK WATER WORKS

(No. 1911.)

This Note shall entitle the Bearer to the sum of
Four Shillings

current money of the Colony of New York, payable on Demand, by the Mayor, Aldermen and Commonalty of the City of New York, at the office of Chamberlain of the said City, pursuant to a Vote of the said Mayor, Aldermen and Commonalty, of this Date. Dated the Sixth Day of January, in the Year of our Lord One Thousand Seven Hundred and Seventy Six.

By order of the Corporation.

N. Bayard.

J. H. Cruger.

On the back of the note was the picture of a pumping engine and two fountains.

It cannot be said that the Common Council proceeded with rash haste in this enterprise, for when Augustus and Frederick Van Cortlandt offered to sell to the city a site for the reservoir on the east side of Great George street, now Broadway, at what is now White street, at the rate of £600 an acre, they personally went to the new well sunk on the property and tasted the water. One can almost imagine these dignified gentlemen going to that then remote spot on the west side of the Fresh Water pond, adjacent to the marshy Lisenard meadows abounding in bullfrogs and game birds in season, sipping the water from the new well like connoisseurs of some rare vintage, smacking their lips, looking at each other wisely, and finally pronouncing a favorable verdict. Concluding "the same to be of very good quality," they accepted the Van Cortlandts' offer and told Mr. Colles to go ahead with his work.

On August 29, 1774, the Common Council appointed a committee of eight members to superintend the construction of the

works, and in November they contracted with Isaac Mann and Isaac Mann, Jr., of Stillwater, now in Saratoga county, to furnish 60,000 linear feet of pitch or yellow pine timber for the making of the pipes. The original contract, which is on file in the document room of the City Clerk in the Municipal building, provided that the logs should be from 14 to 20 feet long and that one-fourth of them should be 12 inches in diameter at the small end of the log "exclusive of the sap thereof" and three-fourths 9 inches in diameter at the small end, and all should be "streight and free from shakes and large knots." The contractors were to deliver one-third of the timber on July 1, 1775, one-third on August 1, and one-third on October 1, and were to receive therefor £1,250.

While waiting for the timber for the pipes, Mr. Colles went ahead diligently with the construction of his well, reservoir and pumphouse on a slight eminence on the east side of Broadway between Pearl and White streets. The reservoir had a capacity of 20,000 hogsheads. The well was 30 feet in diameter. And the engine pumped 200 gallons of water 52 feet high per minute. After the war, Josiah Hornblower was paid £12 for "attending and making report of the fire-engine for the water works about to be erected in 1775." The pump-house was a substantial structure, roofed with pantiles (curved tiles, laid alternately with the convex and concave sides upward) and the bills for iron-work, braziers work, rope, etc., which the city had to pay after the war, indicate that all the works were built in a durable manner.

But while the water-works were being built, the city was thrown into a turmoil of excitement by the news from Lexington and Bunker Hill. The work of construction, however, continued into 1776, but with the critical events of that year, the project was completely interrupted, never to be renewed. Mr. Colles with his family fled from the City and endured great privations, rather than submit to the British rule; and during the period of the war his water-works became totally ruined.

After the war, he returned to New York and soon after the Common Council assembled he presented a petition for the payment of moneys due him. His original memorial, dated October 27, 1784, is in the records room of the City Clerk in the Municipal building. It is a document of peculiar historical interest:



Horse-Drawn Steam Fire-Engine, Period of 1865



Self-Propelled Steam Fire-Engine, Period of 1917

To the Honorable the Mayor, Aldermen and Common Council of the City of New York.

The Humble Memorial of Christopher Colles of said City Engineer Sheweth.

That your Memorialist in the year 1774 presented a proposal to this honorable corporation for erecting works for supplying this city with water for the sum of eighteen thousand pounds.

That this honorable board after sufficient enquiry concerning the practicability of the design Resolved to agree with the said proposal and directed your memorialist to proceed in the execution of the work.

That your memorialist did accordingly proceed in the execution of the work and erected a reservoir capable of containing twenty thousand hogsheads of water; dug, walled, covered and completely finished a well of thirty feet diameter at the inside, from which he pumped by means of a steam engine which he also erected, two hundred gallons of water, fifty-two feet high perpendicular per minute, into the said reservoir.

That previous to the said resolve of the corporation your memorialist furnished them with an estimate of the expense of the different parts of the work, agreeable to which the part executed amounted to the sum of three thousand six hundred pounds.

That the several sums advanced for the prosecution of the work amounted to three thousand pounds, consequently, that there remains a balance of six hundred pounds, one hundred and fifty pounds of which is due to different artificers for work and the remaining four hundred and fifty pounds is due to said Colles.

That your Memorialist in common with other citizens, friends of society and the interest of mankind, suffered the most poignant afflictions during the late war, and with the utmost difficulty procured the common necessaries for his family; and being now returned to the city, where he hopes to devote the remainder of his days in promoting the welfare of the city and country, he prays the corporation to use their endeavors to pay him the balance above referred to, by which he may be enabled to support his numerous family in credit, and in some degree of comfort.

May it therefore please your honors, to take the premises into consideration, and grant him that justice and assistance, which to your judgment shall seem meet.

CHRISTOPHER COLLES.

The Common Council did not at first act on this petition and on July 20, 1785, Mr. Colles begged the Board again to give him relief declaring that "his distresses are of such a poignant nature as to compel him to request some (though small) yet

present assistance.”* In August, 1785, the Council granted him £100 on account.

On November 23, 1785, he appealed to the Council for £50 more on account. This petition gives an interesting indication of Mr. Colles' abilities. He said that he was desirous of applying part of the money “so as to enable him to support his family with credit,” and to that end “he has erected a horse-mill and other works for the purpose of carrying on in this City the Manufacture of Fig Blue, which manufacture he proposes to have carried on by his eldest son in case he shall be engaged in the prosecution of the navigation of the Mohawk River.” He said that he had already made and sold to grocers and others this product “which upon trial is proved to be fully equal in quality to any imported, although he can afford to sell it at less price.”

The foregoing petition was granted and he was given the £50 asked for. Finally, on January 16, 1788, he consented to accept £50 in settlement of all demands. Meantime, the corporation had allowed him to use the room at the Exchange to give lectures on gunnery, drawing, mathematics, etc., which indicate that the delay and apparent penuriousness in paying him were not due to any underestimate of his character and abilities.

Projects of Ogden, Livingston, Rumsey and Others

While the Common Council was still paying bills for the dead enterprise of Mr. Colles, it received successive propositions of a similar nature from other sources.

The first, dated March 24, 1785, came from Samuel Ogden. The original document, which is in the document room of the City Clerk in the Municipal building, reads as follows:

“To the Mayor, Aldermen and Commonalty of the City and County of New York in Common Council.

The Memorial of Samuel Ogden of said City
Sheweth:

That as the late war hath totally ruined the fire engine and water works which were erected for the purpose of supplying this city with water, your Memorialist begs leave to propose to the consideration of the corporation the following proposals. That he will at the expense of himself and associates erect and establish at or near the place where the former one was built† which

* Original in records office of city clerk, Municipal building.

† The word “works” evidently omitted.