21st CONGRESS, 1st Session. [Rep. No. 281.] Ho. OF REPS.

SKINNER'S GRAND BASIN—WATER FOR PUBLIC BUILDINGS, &c.

MARCH 8, 1830.

Read, and so much thereof as relates to the system of Internal Improvements referred to the Committee on Internal Improvements; the residue, to the Committee for the District of Columbia.

To the Honorable Chauncey Forward, Member of the House of Representatives:

SIR: Permit the undersigned to make, through you, the following communication to the House of Representatives. It was sent to the honorable Speaker last Thursday, but unfortunately miscarried, so that he has never seen it, and the undersigned is unwilling to give the Speaker further trouble with it. Knowing that your constituents are deeply interested in whatever appertains to the city of Washington and the Chesapeake and Ohio Canal, he takes the liberty to request you to offer the within to the House, and move its printing, and reference to the proper committee. It is a subject of so much importance, that he deems it a duty he owes to the public to bring before them the consideration of it, in a shape most likely for examination.

The undersigned having had several years practical experience in civil engineering, and having lately been led, incidentally, as such, to look for some improvements of the city, he has become satisfied that no basin of water contemplated to be made within the city will be at all adequate to the purpose intended. A new conception has occurred on that subject, and, as he deems it, of sufficient magnitude to demand the attention of Congress, and of the city. The improvement aimed at will be obvious upon the following suggestions in a hasty outline; especially as it is under the eye of Congress.

In the first place, it is proposed that there be formed a grand common basin, 200 feet in width, and about 400 perches in length, extending from near the foot of the botanic garden, through the centre of the mall, to the Potomac river; containing a sheet of water of about thirty acres, constructed, say, in the following manner: Let the excavation be one foot below low water mark, so that, when the tide is shut in by a lock and dam, it may contain a body of water from four to five feet in depth, renewable at pleasure. If, then, the contemplated canal from Georgetown be conducted into this basin, at the height of four feet above high tide, with a fall of two feet from Georgetown, it will have a uniform depth of water from seven to eight feet, making allowance for waste at the locks; which would be a depth sufficient for any steamboats, or for any vessels in the home trade. The immense importance of such a basin, not only as an ornament and finish of the

public grounds in front of the capitol, but to the future growth and commerce of the city, as the undersigned would most respectfully suggest, deserves the attention both of Congress and the city. That this city is to become a commercial one, in no inferior sense of the word, seems now to be generally admitted. Should we not then be aware of this fact, and have an ultimate reference to it in all our preparatory movements?

He begs leave to suggest another consideration of much weight, growing out of the foregoing. It will readily be perceived that there would be a fall, from the top of this basin to the bottom of the Washington canal, of about eight feet. Now, taking one half of the tide, which is, say, two feet, and add it to the four feet in the great basin above high water mark, and you have a nearly uniform mean water power of six feet fall—sufficient for any saw-mill. Moreover, this water power would be the same throughout the whole distance between centre market and, say, Fifteenth street; from which it would be in the power of Congress, and of the city, to derive great advantages, as will appear by the suggestions hereinafter made. To the city, it may become a source of revenue, besides the improvements and increase of population to which it would naturally lead, by selling or leasing this water power for the erection of saw-mills, grist-mills, breweries, nail factories, slitting and rolling mills, spinning, weaving, cloth dressing, trip-hammering, turning, grinding, polishing, and other machinery.

There is still another consideration of this subject, of very great consequence, both in regard to the health of the city and its insurance against fire, and which comes in contact with a resolution of Congress, now before the Commissioner of Public Buildings, which has for its object the bringing of water from some of the distant hills to the capitol, and other public buildings. It is for this reason, among others, that the undersigned has thought proper to address Congress without loss of time. Because, if a substitute can be found in this water power, and much more than a substitute, it would seem to be proper to arrest the expense under that resolve. It is supposed that this substitute may be found in the following manner: If Congress were to erect a single building for hydraulic purposes, between the proposed basin and the old Washington canal, in connexion with the foregoing water power, operating a set of forcing pumps, water might be raised into a cistern on the top of the building of any supposed height or magnitude; so that water might be conveyed from it to the lobby of the House of Representatives, to the top of the General Post Office, and of all the other public buildings. And may it not be suggested that there ought to be a tank of water on the top of all the public offices, from which, with their own hose, kept and fitted for that purpose, they might extinguish fire in any room in a very few minutes, and before any engine could arrive at the spot—an insurance of the public papers, and of the Patent Office, greater than that of all the fire engines in the city. Nor should we omit to hint to the city, as we pass along, how much use they might make of this same water power for similar purposes. For instance, how much would such a tank be worth to Gadsby's immense establishment, not only as an insurance against fire, but for any other purposes to which he might choose to apply it. Suppose, then, that in connexion with the building aforesaid, there were to be four or five ten-feet water wheels, with a power of six feet fall; is it not apparent that a sufficient quantity of water might be raised for the supply of the public buildings? and that an extension of the same power would supply the whole city, in all future time, with water more decidedly wholesome than any which

should be brought two or three miles from distant fountains? Nor would such a building, with all its machinery, cost but a small part of the expense of bringing a supply from the distant hills, if it could be obtained, which is at least doubtful. Nor, indeed, if better water could be obtained from the hills, for the purpose of drinking, which is not supposed to be the case, would it supersede the necessity of this more abundant fountain at the basin? and it should be remembered that the city of Philadelphia, by their new water works, which they say is the very best of water, is supplied from the Schuylkill. In the supposed case, the city of Washington may be watered by the Potomac river.

It is apparent that this is no proper subject for individual enterprise, and that, to effect it in all its parts, there must be a co-operation of Congress, of the city of Washington, of the Chesapeake and Ohio Canal Company, and of the Washington Canal Company; because the Washington Canal would become a foot-race for the establishments which should be erected between it and the great basin. [It is respectfully suggested that if, by this means, their purpose should be frustrated, they should be liberally paid for their stock in that undertaking.] Moreover, if the Washington Canal were converted into a foot-race and common sewer, it would, of course, be narrowed down to the width of, say, 30 feet; it might then have a bridge over every street; mills and other buildings might be erected directly upon it, so that there need be no chasm in the population of that part of the city; and being paved with coarse flag stone on the bottom, as it necessarily must be, it would become a clean and wholesome refrigerator for that part of the city. And, by the way, the lands which that company have now a right to occupy, being of course thrown into market as building lots, in connexion with the water power, would be worth several times enough to buy out the whole concern.

The entire opening down through the centre of the mall should be 600 feet, so as to have, beside the canal, 200 feet on each side for road and wharfage; leaving a strip of the mall on each side, say 350 feet wide, which, if it were laid out in building lots, would be worth more money than the whole mall without the basin. The strip on the North side, however, necessarily connected, as it would be, with the foregoing water power, is estimated at about three times the value of the strip on the South side of the basin. If, then, Congress were to give the strip on the North side of the basin to the city of Washington, to be laid out in building lots, in connexion with the lots given up by the old Washington Canal, and with the forementioned water power, after selling lots enough to pay the present debts of the city, (not including the million of dollars borrowed for the Chesapeake and Ohio Canal) the remaining lots and leases of this water power, together with the tolls and wharfage of the basin, would create an income at least equal to the ordinary tax of the city.

In order to give this subject a practical shape, it is necessary, perhaps, to say something of the expense of this basin. The entire expense of the basin is put at two hundred seventy-six thousand dollars, based upon a calculation corrected by three practical engineers, one of whom has himself constructed more than 70 miles of road and canal; nor do they doubt that responsible individuals, with good security, would be found to undertake it for about that sum. That portion of the mall left on the South side, would be taken for nearly one half the sum; the other half would be in cash, as the work should be performed. The calculation, stated roundly, is thus made out:

Excavation simply, - - - -	$100,000
Extra removal of three-fourths of the contents, (say one mile)	95,000
Walls, coping, &c. - - - - -	40,000
Lock, dam, &c. - - - - -	30,000
Opening the entrance channel to the lock, - -	10,000
Two rows of best trees, on each side, - - -	1,000
	$276,000

I am, Sir, very respectfully,
Your obedient servant,
I. L. SKINNER.

WASHINGTON, *March* 2, 1830.

Notes on the foregoing.

That the Washington Canal, with the contemplated basin at the mouth of the Tiber, cannot be made to answer the same purposes as the proposed basin, is obvious from the following considerations: 1. It cannot be made to have the same capacity. 2. To give it the same height would cost more money, on the same area, on account of the badness of the bottom and of the materials to be excavated, and because it must have a new separate part for a foot-race.

There is, moreover, an insuperable objection to the Washington Canal and basin, since to raise the water in it as high as proposed would choke up all the sewers, and wet the cellars in the most populous part of the Pennsylvania Avenue.

2. It is presumed that the charter of the Chesapeake and Ohio Canal Company will be found to authorize them to come down to the proposed basin. And why not? They are authorized to come "*to tide water.*"

In legal construction, not simply *to* tide water, for then they must stop at the Little Falls; but *into* tide water far enough to meet the commerce of the ocean, which is the object of the undertaking; and also to accommodate those who live on tide water. And where is that most suitable and central point *in* tide water, if it be not the contemplated basin? a point exactly central for Georgetown, Washington, the Navy Yard, and Alexandria. For their difference of water distance is no difference at all in a practical sense.

3. Will not the proposed basin save the great expense of the aqueduct and canal from Georgetown to Alexandria? since it is certain that Alexandria never can compete with Georgetown in the boat trade by such a canal. It would only lead them to the pursuit of an imaginary interest; whereas their real interest and strength lie in their situation on the Potomac, with a depth of water sufficient for any foreign commerce, within thirty minutes steamboat distance from the proposed central basin.

4. A canal from this central basin to the Eastern Branch, with a lock and dam of the same height, would make a finish of this whole subject, and leave nothing further to be contemplated.

5. There is one more fact that we might dwell upon a moment with pleasure. It is the tribute of respect which the contemplated basin would pay to Congress, for the patriotism with which they have sustained the Chesapeake and Ohio Canal from the beginning, as it will bring the water of one of the great rivers of the West to the South front-door of the Capitol, and some of the commerce of the richest valley on the globe, of equal extent, into a basin of water under their own eye.