

REPORT

Of the Committee on Roads and Canals, upon the subject of the navigation of the Ohio and Mississippi Rivers, accompanied with a bill to improve the navigation of the Ohio and Mississippi Rivers.

FEBRUARY 28, 1824.

Read, and, with the bill, committed to a committee of the whole House on Monday next.

The Committee on Roads and Canals, to whom was referred the message of the President of the United States, of the 22d January, 1824, communicating the report of the engineers appointed to examine and survey the rivers Ohio and Mississippi, for the purpose of ascertaining the most practicable mode of improving the navigation of those rivers, have had that important subject under consideration; and respectfully submit the following

REPORT:

It is known that the great rivers Ohio and Mississippi are the principal commercial outlets of the vast and fertile regions west of the Allegany Mountain; and it must be obvious that whatever tends to obstruct or endanger the navigation of those streams cannot be regarded with indifference, by that portion of our people whose interests are thus seriously and vitally affected. Your Committee have, therefore, faithfully endeavored to ascertain the causes and actual condition of the obstacles, whether temporary or permanent, which now, at certain seasons of the year, prevent all navigation upon one of those rivers; and, at all seasons of the year, impair the security of navigating the other. For this purpose they have availed themselves of every source of information in their power; and have carefully examined the "Report on the Ohio and Mississippi Rivers," made by General Bernard and Major Totten of the Engineer corps, which is printed in the third volume of Executive papers, transmitted by the President during the second session of the Seventeenth Congress.

In relation to the Ohio, your Committee have ascertained that there are, between the Falls and the Mouth, twenty-one bars crossing its channel, which render it impassable by steam boats, during six

months of the year; and that six of these bars, at the lowest stages, preclude the passage of all vessels, drawing three feet of water. To the bars last mentioned, our attention has been particularly directed; believing it to be the better policy, to leave the falls, at Louisville, and the majority of the bars, to be comprehended in some more extensive scheme of internal improvement.

The six bars which, in our opinion, fall within the range of our present policy, are indicated by the following descriptions, viz:

1st. A mile and a quarter below Flint Island, the River is obstructed by a sand bar, of about 1,200 yards in length; for the distance of 360 yards there are three and a half feet of water; for 240 yards, but two feet; and for the remaining distance of 600 yards, three and a half feet. The shoalest part is also the narrowest, the breadth being about 180 yards.

2d. Two miles above French Island, there is a sand bar of about 200 yards in length, and on which only from 20 inches to two feet of water are to be found.

3d. The bar below Henderson is fifty yards long; the channel fifty yards wide; and the least depth of water two and a half feet.

4th. The bar below Straight Island consists of two parts, one of compact, and the other of moving sand. The length of the bar is 150 yards; the breadth of the channel about 40 yards; and the least depth of water is two and a half feet.

5th. Below Willow Island (in the Mississippi Bend) is a sand bank, on which the depth of water is two and a half feet; the length of the bar is 100 yards; and the breadth of the channel about 50 yards.

6th. Opposite to Lower Smithland, and below Cumberland Island, there is a bar of moving sand; its length is 80 yards, and the depth over it, two feet.

In addition to the impediments before described, there is another of a different kind, which deserves to be mentioned, viz: On the right side of the River (below the mouth of Deer Creek) about fifteen yards from the bank, there is a rock fifty feet long, parallel with the shore, fifteen feet broad, and rising fifteen feet above the surface of the water, at its lowest stage. In times of flood, this rock, covered by a few feet of water, is very dangerous, and can only be avoided by accident or by skilful pilotage.

The most eligible means of producing the uniform depth of three feet over the bars above mentioned, is recommended in the *report* of the Engineer corps, already referred to, viz: the construction of dykes, which, by confining the current to a particular channel, will necessarily swell the volume, and increase the depth of the water.— These dykes are ordinarily formed by rows of piles, driven with force into the bed of the stream, and strongly wattled together; the spaces between the rows being filled with such rough and flat paving stones as the neighborhood can supply. *The piles*, being elevated a little above low water, the rises of the river, whether partial or general, pass over them without injury. As the dykes must extend, with the exception of the sluice, quite across the river, the length of the

whole, when added together, may be estimated at about four miles and a half. The expense of this improvement will be very inconsiderable, when compared with the permanent benefits which must flow from it to the industrious and adventurous people who inhabit the shores of this great river, and its tributary streams, and have no other vent for the bulky productions of their industry.

The danger arising from the rock below the mouth of Deer Creek, should, in our opinion, be averted, by the erection of a beacon upon it, of sufficient elevation to be always visible above the highest floods.

We now turn our attention to the difficulties which embarrass the navigation of the Mississippi. These arise from the impetuosity of its current, and the *almost* entire absence of rock on its shores, from St. Louis to New Orleans. Hence, its constant effort to change its course; and hence the frequent submersion of whole acres of land, covered with trees of the most gigantic growth. Of the trees which are thus precipitated into the river, some are borne off by the stream; some lodge upon the shores in great masses, where they form what are called "rafts;" others become fixed, at one end, in the bed of the stream, whilst the other end inclines towards the surface; sometimes appearing above it, sometimes concealed below it. When they are so fixed as to preserve an immoveable position, they are called "*planters*;" but when they play up and down with restless vibration, now yielding to the pressure of the stream, and again rebounding from beneath it, they are called "*sawyers*."

These terrible obstacles have been the causes of much calamity to the people of the West. To say nothing of the awful occasion, which consigned, in the brief space of five minutes, a large number of *human beings*, on board the steam boat Tennessee, to a watery grave; to say nothing of a thousand similar accidents, differing only in the degree of horror, the annual loss of *property* is variously estimated at from five to ten per cent. upon the whole amount which is hazarded upon the river. But can these difficulties be removed? Of this we have no doubt. Between Natchez and Baton Rouge, there are now fewer rafts, planters, and sawyers than formerly; and between Baton Rouge and New Orleans, they are rarely to be seen. Below Baton Rouge the forest has been succeeded by cultivated fields, and the disposition of the river to encroach upon its shores, is counteracted by artificial embankments. This description of dyke, we are aware, will never be attempted for commercial purposes alone. To a combination of the future proprietors of the shores, for their own security and advantage, we are to look for the consummation of this desirable improvement, by its extension to the mouth of the Missouri. In the mean time, it is entirely practicable, at the lowest stage of the water, by the aid of suitable machinery, to *raise* the trees which now obstruct the channel, and to saw them off at a proper depth. The labor may be great, in the first instance, to remove the wreck of centuries; and it may be necessary, from time to time, to prostrate all similar impediments, which may intervene. But when the forests shall be entirely cleared, whether for the purpose of cultivation, for

supplies of fuel to steam boats, or for the immense, and still augmenting, consumption of New Orleans, these frightful and formidable enemies of western enterprize will gradually disappear, until it will be as rare to see "a sawyer, a planter, or a raft," above Baton Rouge, as it is now to find one below it.

The Committee have had access to no data which could enable them to determine, with accuracy, the probable expense of the improvements above suggested. Indeed, the very nature of the proposed undertaking forbids the application of any ordinary rule of calculation. Your Committee would, however, suggest the expediency of dividing those rivers into precincts, and that the President of the United States be authorized to employ supervisors for each precinct, binding each by contract to perform the services which may be assigned to him; and that, for the purpose of carrying into effect the improvements beforementioned, the sum of _____ dollars be appropriated, to be paid out of any money in the Treasury, not otherwise appropriated.

Which is respectfully submitted.