



Our sure the plans of fair, delightful Peace. Unwarp'd by party rage, to live like Brothers.

INTERNAL IMPROVEMENT.

REPORT OF THE COMMISSIONERS. Appointed by an act of the Legislature of the State of New-Jersey, for ascertaining the most eligible route for, and the probable expense of, a Canal to connect the tide waters of the Delaware with those of the Raritan—Passed Feb. 13, 1816.—Laid before the Legislature at their late sitting:

REPORT—That in ascertaining the most eligible route for a canal, to connect the tide waters of the Delaware with those of the Raritan, they have examined the plans & routes of Canals heretofore proposed, and have considered the advantages and disadvantages, which would respectively attend them.

The first and most obvious plan heretofore proposed, was to use the beds of the streams intervening between the Raritan and the Delaware, to ascend the Raritan from the tide water to the first obstruction, and by deepening or widening, or by confining the stream to a narrow channel, to proceed as far as practicable on that step, and then by a dam and lock to raise boats to another step, to be pursued by deepening, widening, narrowing, or clearing as before, until another dam would become necessary, and in the same manner to continue the process until the navigation would arrive at the mouth of the Millstone river; to proceed from thence up the Millstone, erecting locks in the several mill-dams, and deepening, widening, or clearing the channel, and placing other dams and locks where necessary, to the mouth of the Stonybrook, and from thence up the Stonybrook in like manner to the vicinity of the great meadows, in the township of Lawrence; here a connecting cut would be made through the meadows of Lawrence to the Shippetaukin branch of the Assanpink creek.—This connecting cut would on this route, be the lowest part of the ground dividing the waters of the two rivers, and would form the summit or crown level of the Canal. The boats would be raised by locks to this level, which would be supplied by a feeder from the nearest stream of sufficient elevation; they would from thence descend by locks into the Shippetaukin, where a like process would be used, to enable them to reach the Assanpink; and down the Assanpink by Lambertton to the Delaware. In this route it would be necessary in some places to make cuts through the intervening low grounds, and to depart occasionally from the beds of streams—the elevation of the summit level would be about forty-six feet above the tide water, and the whole distance would be about forty miles. The route was viewed and levelled by several gentlemen, in the year 1804, who were of opinion that a communication might be opened between the tide waters of the Delaware and Raritan, of at least three and a half feet in depth.

This plan is liable to objections: 1st. From the difficulty and great expense of removing obstructions in the beds of the Raritan and Millstone, which are formed as far as Rockyhill, of red sand stone and its accompanying red shell or wack. 2d. From the precipitous, marshy, or cavernous banks of the streams, preventing the construction and continuance of towering paths, thereby rendering the labor of men necessary for propelling boats, instead of the draught of horses. 3d. From the dams across the streams occasioning back water on the adjacent grounds, destroying the finer species of grass, and generating a miasma, affecting the health of the inhabitants of the country. 4th. From the locks being placed in low situations, and therefore subject to injury and decay. 5th. From the cuts in the low grounds being liable to be filled by freshes with sand or mud, or to be washed to an improper size or shape. 6th. From the unequal currents of the streams, which in some places would require the labor of many men to stem their force. 7th. From the inconvenience of 8 mills in the route, any one of which could at any time during the summer destroy the navigation, by using and exhausting the water of their ponds so as to occasion a simlow water above, and to prevent the use of the locks. 8th. From the great distance of the route, preventing the despatch so necessary to ensure a preference of conveyance and transportation. 9th. From the varying quantity of water at different times of the year. In dry seasons the water near the dams being spread over the wide surface of bed of the creek or river, and in some places over the adjacent grounds, great quantities would be lost by evaporation, and on the streams becoming low, the navigation would be obstructed by either permanent or shifting bars, & shallows, which would be often impassable for several days or weeks; and in wet seasons the torrents of water after heavy rains, would totally stop the navigation, displace the stones and walls constructed to widen or narrow parts of the water course, fill up parts of the channel, and sometimes destroy the

dams and locks, and perhaps the boats.—These contingencies would occasion great losses to the navigation, not only from the expense of removing sands and obstructions, replacing facilities, and rebuilding dams and locks; but also from the injury to the boats and their cargoes, the delay and loss of time, the consequent loss of toll, and the diversion of trade to other channels.

Another plan has been suggested, by digging a canal in the valleys and along the banks of the streams above mentioned pursuing the level as far as practicable, and constructing locks where necessary; thus rising to the summit level, from whence the navigation to the opposite tide water would descend in the valleys, and along the banks of the other streams, by the same process.

This plan is also liable to objections:

- 1st. From the frequent occurrence of deep ravines and gullies, conveying small runs of water to the stream of the valley, occasioning expensive aqueducts, culverts, walls and embankments, which in wet seasons would be subject to injury. 2d. From the adjacent stream overflowing its banks, in some situations filling the canal with mud or sand, and in other places destroying the lock and sides, and washing deep holes. 3d. From the irregularity of the valleys, high promontories and low bottoms often succeeding each other, rendering the crossing of the streams frequently necessary, by expensive aqueducts. 4th. From the red stone and other hard matter difficult to excavate, forming the banks of several of the streams. 5th. From the circuitous route of the navigation. 6th. From the number of locks which would be required at irregular distances and in ineligible situations. 7th. And above all, from the almost insuperable difficulty of procuring a sufficient supply of water at the crown level to answer the demand at the locks, for the passage of every boat to or from the summit and from thence to the tide water.

Another route proposed was to make a cut from Lambertton to the Assanpink creek, and to proceed up the bed of the Assanpink to the Stonybrook, as in the first proposed route; from thence up the Millstone to Devil's Brook, up Devil's Brook to the head thereof, and from thence across to Lawrence's brook, and to proceed on the bed of Lawrence's brook to the tide water of the Raritan.—A third route proposed was to ascend Crosswick's creek to Doctor's creek, up Doctor's creek to the vicinity of Allentown, and from thence crossing the Millstone and other intervening streams, to the Monopolon, then down the Monopolon and South river to the tide water of the Raritan. A fourth route proposed was to proceed from the Assanpink, near Wright's mill, to the Monopolon, near Mount's mill, or Spotswood. A fifth from Crosswick's creek to the head of Lawrence's brook, and a sixth from the head of Lawrence's brook to Wright's mill, on the Assanpink.

It has been proposed to dig canals in the valleys of the above mentioned streams on the foregoing routes, in the manner specified in the second proposition. It is obvious, that many of the objections to the plans already examined apply also to these; and that there are others still more forcible from the elevation of the ground and the scanty supply of water, but in order to appreciate their relative merits, it is necessary to take a general view of the district of country through which it is proposed to effect an inland navigation.

In the county of Monmouth, there is a ridge of highland, which like the chief part of the district, is of alluvial formation; this ridge divides the waters of the streams running immediately into the ocean, from the waters of the streams running into the Delaware and the Raritan; the highest part is near Perine's and the Burnt Taverns, in the township of Upper Freehold.

Within a circle of not more than five miles diameter, are the heads of Tom's river and Metecunk, flowing into the ocean, of Crosswick's creek and Assanpink creek, flowing into the Delaware; and of the Millstone and South river, flowing into the Raritan. Although no actual measurement has been made, it may be safely asserted, that this spot is three hundred feet above the tide waters of the Delaware and Raritan; from hence the country gradually descends in a northerly direction to the mouth of the Millstone, a distance of thirty miles, and where the waters of the Raritan are not more than thirteen feet above the tide water.

It is manifest, therefore, that the further we proceed from this circle in a northerly direction, and the nearer we approach the mouth of the Millstone, the less will be our elevation above the tide water; but in our progress northerly, keeping in view the descending country between the Delaware and the Raritan, we are stopped by Rockyhill and the Sandhills. The former a part of the granite ridge, first appears in the South-easterly part of Hunterdon county, passes through the westerly part of Somerset county, permits the Millstone to pass in a northerly direction through a nar-

row gap between Kingston and Rockyhill Proper, and terminates in Middlesex county, near Dean's saw-mill on Lawrence's brook, where it gives place to sand-stone and wack, which continue to New Brunswick. The Sandhills are a detached mass of sand, of greater elevation than the terminating part of Rockyhill, and are situated about one mile to the northward of Dean's saw-mill. The sides of the gap of Rockyhill, are of considerable elevation with little soil. A spur or branch of Rockyhill, but of different formation, extends from hence northerly for several miles on the right of the Millstone, forming its second bank, and contains sand stone and wack, also of considerable elevation. From this view it is apparent that we cannot proceed to the northward of the termination of Rockyhill, and that the ground near this termination is lower than the ground to the southward of it towards the sources of the Millstone and South rivers, and the Assanpink and Crosswick's creeks.

It is also to be noticed that Stonybrook, from its confluence with the Millstone, to the vicinity of the great meadows of Lawrence, and the Shippetaukin, from its confluence with the Assanpink to the same great meadows, are sluggish streams with very little perceptible fall; and that in the time of freshes part of the water of Stonybrook is discharged thro' the great meadows, by the Shippetaukin into the Assanpink, from which it is inferred, that those meadows are lower than the Millstone and Assanpink, above Scudder's and John Mount's mills.

It will likewise be recollected, that a single foot of additional height of the summit level of a canal, gives two feet additional ascent and descent of boats, increases the expense of constructing the locks, produces greater delay, and requires more labour for the transit, is attended with a greater consumption of water, and occasions a smaller supply by placing the canal above the level of some streams, and nearer the sources of others.

From the foregoing objections to the old plan of using the beds of the streams with connecting cuts and locks, and to the more recent mode of pursuing the valleys of the streams with canals adjacent to their banks, and from a general view of the face of the country, it was proposed as the plan of the Delaware and Raritan Canal, that the lowest part of the ground, dividing the highest streams which would be intersected between the Delaware and the Raritan, should be ascertained, and assumed as the point of passage of the canal, which would be the highest part of the ground that it would be necessary to pass between the two rivers; that a level should be pursued from this place and on this elevation towards the Delaware and towards the Raritan, terminating on a high bank on the tide water to each of the rivers, and that locks should be constructed at such banks for the ascent and descent of boats, to and from the canal and the tide waters.

It appeared reasonable that if this level could be pursued without meeting with hills or hollows, which could not be passed with moderate digging or embanking, and if banks could be found at convenient places on the tide waters of the Delaware and the Raritan, of the same elevation, or which might be made so, by moderate digging or embanking, that great advantages would result from the adoption of this plan.

1st. The canal crossing the country on the surface of the ground, as much water as may be requisite of all the streams intersecting it, may be turned into it by dams and feeders constructed in and from those streams, at short distances above the canal, and the quantity of water supplied will be regulated by the gates of the feeders, the remainder of the water will fall over the dams, and pursue the old channels through arches or culverts under the canal.

2d. It will not be necessary to conduct a feeder to the spot assumed as the crown level, as the whole canal will be of the same elevation, but the feeders may supply the requisite quantity of water at any point or points between the Delaware and Raritan.

3d. The canal being on a dead level the whole distance, its sides will not be subject to injury by the rapid flowing of the water, nor will the puddling be disturbed so as to occasion a loss of water.

4th. Heavy rains or freshes will not impede the navigation nor injure the canal, as the quantity of water running into it will be at perfect command.

5th. There will be no difficulty in locating and constructing reservoirs for the whole line of canal, to be filled in the time of freshes and to be used in dry seasons, to prevent any injury to the mills.

6th. The mills and low lands on the streams will be benefited by the filling of the copious reservoirs, which will tend to diminish the height of the freshes, and to give a more regular supply of water in the summer.

7th. The greatest drought will not prevent the continual navigation of the whole length of the canal from lock to lock, that is from river to river.

8th. If by an increased intercourse, & the constant ascent and descent of barges to and from the tide waters, there should

not be a sufficiency of water for the locks in a dry season, without injury to the mills, modes may be adopted to transfer the freight of a part of the boats to and from the tide waters to other boats, without any loss of water.

9th. Modes may also be adopted to lessen the consumption of water at the locks on the tide water, by returning a part to the canal during the descent of the boats, and to obtain a further supply from the tide water during the descent of boats or freights, and at other times by means of other machinery.

10th. As in the usual mode of following the valleys of streams, the water must be drawn out of the connecting cut or summit level canal, whenever a boat enters or departs from it; if the level extends only a short distance a basin for the summit locks will be necessary; but if the canal extends the whole distance without a lock, it becomes itself the basin for the locks, and other basins for that purpose will be necessary.

11th. There will be no delay in ascending or descending locks at irregular distances between river and river; but the whole ascent or descent will be performed at one time and at one place.

12th. Only two keepers of locks with their necessary attendants will be required to superintend the ascent or descent of boats; but if there are fifteen or twenty locks at different places, as many superintendants will be necessary.

13th. The locks will be built at the tide waters of rivers, where stone, and lime, and other materials for their construction, may be brought by water, instead of being carted into the country at a great expense.

14th. A plan is offered for consideration, for ascending or descending the whole height between the tide waters and the canal by a single lock, on a construction which will save a large proportion of the water, time and labour, which would be required by the common mode for the same height.

15th. If the sum appropriated or subscribed for the undertaking should be insufficient for the whole expense, the canal may be completed, and used from Delaware bank to the Raritan bank, without locks in the first instance, and at a future period they may be constructed for the passage of boats to and from the tide water.

16th. The towing paths, being on a dead level from river to river, will form an excellent turnpike road for carriages of a particular construction, during the winter season, when the navigation of the canal will be obstructed by ice.

17th. Mills may be erected on the banks of the canal and the most arid part of the country may be irrigated by the surplus water.

18th. The grand trunk canal between the Delaware and the Raritan being assumed as the New-Jersey level, minor canals may at a future period be constructed, branching off from it through most of the counties of the state, creating an easy, active, safe, cheap, and lucrative, inland commerce, by receiving the materials for agriculture, manufactures, and domestic economy and comfort, and by transmitting their multifarious products. (To be continued.)

FOREIGN NEWS.

REVOLUTION IN BRAZIL.

The following Address to the inhabitants of Pernambuco appears in the papers.

INHABITANTS OF PERNAMBUCO.

Divine Providence, who, by his inscrutable designs knows how to extract from the most obscure things the most vivid light, and who, through his infinite goodness, does not permit the existence of evils unless it be to draw therefrom the greatest benefits and felicity, has consented that some turbulent and indiscreet spirits, by whom great conflagrations can be originated from a small spark, should begin to sow the seeds of an ill understood rivalry between the sons of Brazil and of Europe, inhabitants of this capital, since the period of the events of Europe which gave to the continent of Brazil the consideration of which she was worthy, and which events the Brazilians did not and could not concur in. In fact, how could the inhabitants help that the prince of Portugal, precipitated from his capital by the impetuosity of an invading enemy, should come for shelter to the generous continent of Brazil, to live there by the liberality of its inhabitants, and through Divine Providence? How could they help that this same prince, sensible and grateful, should honor the land that received him with his residence and the establishment of his court, and give it the rank of a kingdom? Those seeds of discord unhappily have grown in a country which kind nature has endowed with a general and unlimited fertility. Far from being distinguished by an able and powerful hand, and far from being suffocated in their origin, they have been reared by the mutual indiscretions of the Brazilians and the Europeans. But they never will grow to such a height as not to be extinguished by a conciliating spirit that will undertake this task, which can be easily accomplished. However, the spirit of

despotism and bad councils have promoted the most violent and perfidious designs that could be devised by persecution; they have adopted the tyrannical measure of annihilating the honorable patriots, and the well deserving of the country; to bathe in tears miserable families, that existed by the labor and assistance of their chiefs; and whose loss would cause their total ruin. Nature and courage, at the horrible sight of these misfortunes, have arisen against tyranny and injustice in their natural defence. All the military have supposed themselves involved in the ruin of some of their officers. The cry for defence was general, and has sounded in every corner of the province of San Antonio. Every one has turned soldier and protector of soldiers, because they are Brazilians like themselves. The despots, astonished at these new and unexpected events, and grieved even more by their own consciences, (which even in the most impious bosoms erects its tribunal, dictates its judgments, and implants its remorse,) have abandoned the place from which they issued their homicide orders. Inhabitants of Pernambuco! you may believe that they have taken means to make your countrymen appear devoid of honor and humanity!

The patriots in two hours found themselves without chief, without governor.—It was necessary to avoid the disorders of anarchy amidst an agitated population and a revolted people. Every thing was done in a moment, and was the work of prudence and patriotism.

Inhabitants of Pernambuco! Be tranquil. Peace reigns in the capital. The people are satisfied. There is no distinction between Brazilians and Europeans.—They consider themselves as brothers, descending from the same origin, inhabitants of the same country, and professing the same religion. A provisional government well informed, and selected from all the orders of the state, presides over your felicity. You may rely on its zeal and patriotism. Providence, by whom this work is directed, will carry it to its end, and will protect this heavenly undertaking. Your happiness will be secured. You shall be liberated from the weight of enormous tributes, which have been so heavy upon you. And your country and ours will rise to that point of grandeur to which it is entitled, and you will gather the fruit of your work, and of the zeal of your countrymen. Help us with your counsels, they will be received with gratitude. The country expects them, as well as your application to agriculture.—A rich nation is always a powerful one.—Our country is our common mother.—You are her sons, the descendants of the valiant Lusitanians. You are Portuguese, Americans, Brazilians, and inhabitants of Pernambuco.

Given at the house of the Provisional Government, on the 12th of March, 1817. MARTINS, MONTENEGRO, ARAUGO, MENDOSA.

We are indebted to the politeness of Mr. Sebahn, for the following interesting letters. Balt. Pat.

Extract of a letter from Pernambuco, March 9th, to a gentleman in this city.

On the 6th inst. Heaven deigned to liberate this province from the chains of monarchy, with the trifling loss of 11 lives on the part of the royalists. On the 7th all was quiet, and nothing to be feared from the populace, except a few inebriated soldiers, who did no mischief. On the 8th all was perfectly tranquil, and so continues. My old friend, Seignor Domingos Joze Martins, was the chief mover of this revolution and is now at the head of the government. The former governor and his son retreated to Fort Brum, where he was delivered up by his own soldiers, without any defence, so unanimous are they in favour of independence. He, with some officers who sided with him, were this day embarked for Rio on board a sumaca.

Extract of a letter dated Pernambuco, March 13th, to a commercial house in Baltimore.

On the 6th inst. a revolution commenced in this place, and the people have declared themselves independent. There was but little opposition, and few were lost; order and regularity now reign, and the Americans are happy in their situation. By request of this government forward despatches from the president of the United States, comments for publication, and are requested to do the same.

Extract of another letter from Pernambuco, 15th March, 1817.

The Revolution commenced instant, about 2 o'clock, P.M. Pranks just by our house, and all was quiet. This thing has tempted a number of years, organized as to have taken place on the birth day of one of the Princes of Portugal, when all the troops were under arms for the celebration, but