

THESIS.

Subject, History of the Locks and Dams
of the Monongahela.

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The earliest known suggestion of an improvement of the navigation of the Monongahela by dams and locks, was in a report of a survey made for the state by C. F. Gray, Civil Engineer, in 1828. By Act of Assembly of March 31, 1836 the Monongahela Navigation Company was authorized. It was to make a slack-water navigation from Pittsburg to the State line, and as much farther as Virginia would allow it to go. The stock was to be \$300000 in shares of \$50, and as much more as needed. The height of the dams was not to exceed four and one-half feet, supposed to mean from pool to pool.

Another survey was taken in 1838. From Pittsburg to Brownsville the distance was found to be nearly

fifty five and a half miles, and the ascent a little over thirty three and a half feet; from Brownsville to the Virginia line, a little over thirty five miles, ascent forty one feet, - Totals, ninety and one half miles, and seventy four and one half feet. This would have required seventeen dams with four and one half feet lift but this was soon seen to be too many so it was arraigned thus: An increase of Dam No. 4 to ten feet, and those above Brownsville to whatever height the banks would allow, it was found that about seven would suffice. Two more dams have been added since and are composed of stone and cement.

Dams and Locks Nos. 1 and 2 having been located - No. 1 a mile above Smithfield street bridge, at

Pittsburg, and No. 2 at Braddock's Upper
Ripple, ten miles above No. 1 were let,
No. 1, Dec. 17, 1838 to J. K. and J. B. Moorhead,
and No. 2^{to} Correys and Adams in May
17, 1839. Though not entirely finished
these two locks and dams were put
into use Oct. 18, 1841. On July 13, 1840 locks
and dam No. 3, at Watson's Run, two
miles above Elizabeth, and fourteen
miles above No. 2 was let to Bills and
Foreman. No. 4 at Frey's Shoals, fifteen
miles above No. 3 and fifteen and one
half miles below Brownsville, was let
to Felon and Patton. Fearing a lack
of funds, the Company reserved in
the contract for No. 4 the right to stop
the work at any time and pay for
what was done. This right had to
be resorted to in May, 1841, for the
cause provided against, and work

on no. 3 had to be suspended for the same reason.

The State's financial condition had become so depressed, that the Legislature, by Act of July 27, 1842 repeated by Act of April 8, 1843, directed sales of all its corporation stocks, among them its \$125,000 in this Company. This induced a number of men, of capital, enterprise, and of unfaltering faith in the ultimate success of the Improvement, to buy this stock - of course at a low figure - and to engage to repair and complete the work to Brownsville. These men deserve to be held in kind remembrance. They were James K. Moorhead, Morgan Robertson, George Schnable, Charles Avery, Thomas M. Howe, John Graham, Thomas Bakewell, J. B. Moorhead and John

Freeman.

The Legislature by Act of Jan. 25th, 1854, made it imperative upon the Company to put locks and dams Nos. 5 and 6 under contract and have them completed - No. 5 before June 1st 1855, and No. 6 before Dec. 1st 1855. The Improvement to the State line was required to be completed before Dec. 1st 1857, but the requirement was relaxed by act of April 8th, 1857, so as not to require No. 7 to be begun until locks and dams to carry the work from the State line to Morgantown should be put under contract, and with the completion of which No. 7 was to be cotemporaneous.

In obedience to the Act of Jan. 25th, 1854, the company promptly put Nos. 5 and 6 under contract. No. 5 - just above Brownsville on Watkins's

bar, was let to Burns and Ross, and No. 6 at Rice's Landing, ten miles farther up, to Messrs. Bull. They were ready for use in November, 1856.

Dams 1 and 2 run straight across the river. No. 3 is in three straight lines of unequal length - the middle one two hundred and eighty feet, the other two aggregating about five hundred feet. Dam No. 4 is a segment of a circle - about six hundred feet in length - curves up stream, having a versed sine of fifteen feet. Dams 5 and 6 are also segments of a circle and are about six hundred feet in length.

Locks and dams 8 and 9 are made entirely of stone and have the shape of a segment of a circle. Not long ago the State purchased

the claims of the Company of
Stockholders and placed govern-
ment men at the locks and dams.
Under these new conditions we
now have the great privilege of
"Free Navigation."