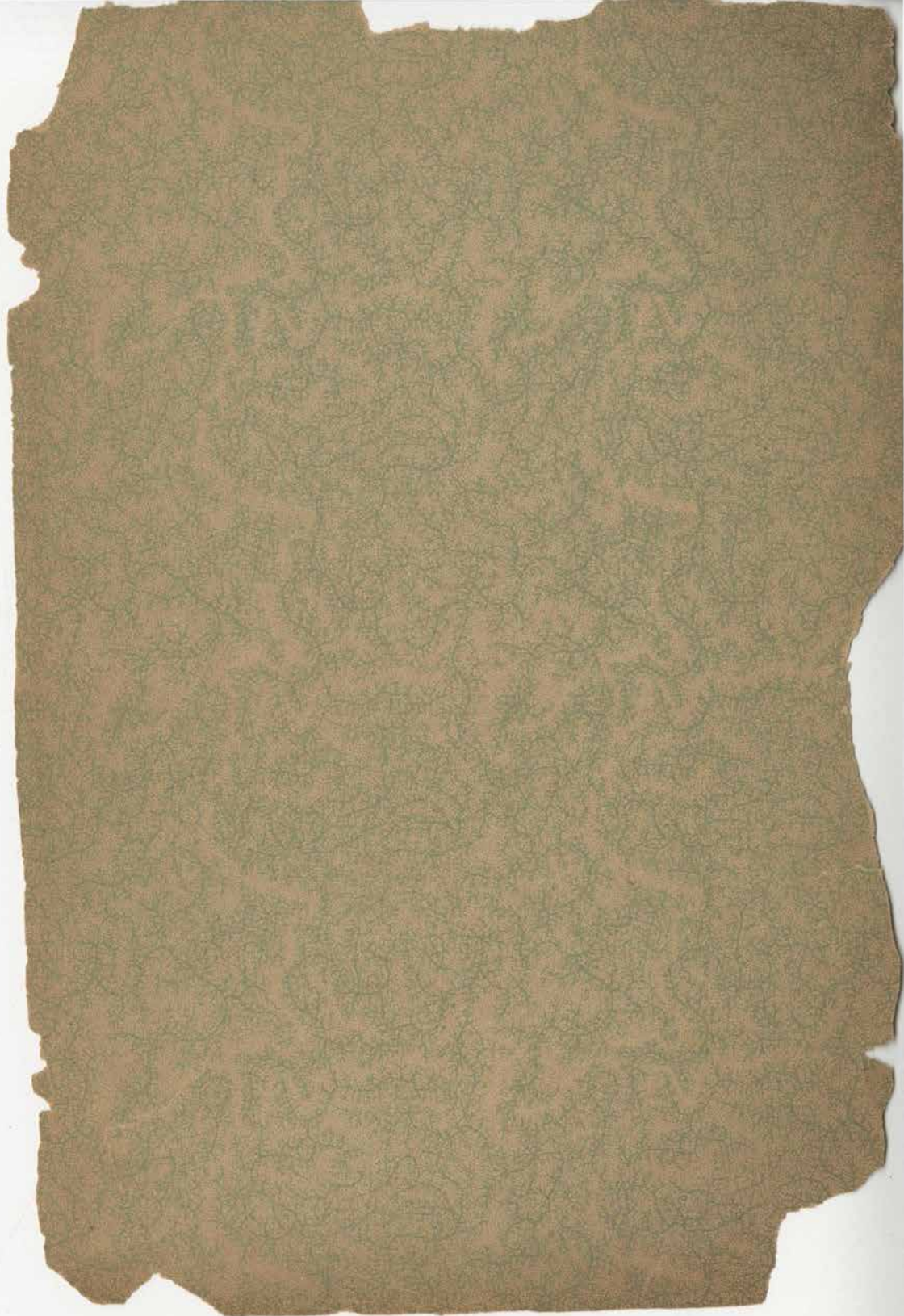


THE CANALS OF PENNSYLVANIA

AND THE

SYSTEM OF INTERNAL IMPROVEMENTS.

Benj. C. Allen.



With Compliments

of
Sam. Matt. Friday

Dep. 3.1901



Tow Path and Canal seven miles west of Harrisburg, Pa.

EXTRACT

FROM

ANNUAL REPORT OF ISAAC B. BROWN, SUPERINTENDENT
BUREAU OF RAILWAYS, TO JAMES W. LATTA, SECRETARY
OF INTERNAL AFFAIRS, FOR YEAR ENDING JUNE 30, 1900.

THE CANALS OF PENNSYLVANIA

AND THE

SYSTEM OF INTERNAL IMPROVEMENTS.

BY THEODORE B. KLEIN.

WM. STANLEY RAY,
STATE PRINTER OF PENNSYLVANIA.
1901.

674-7





Abandoned Canal at Newport, Pa., showing ruins of old Canal Boat.

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THE CANALS OF PENNSYLVANIA, AND THE SYSTEM OF INTERNAL IMPROVEMENTS OF THE COMMONWEALTH.

BY THEODORE B. KLEIN.

In view of the fact that the days of inland navigation by the channels of the rivers and canals are passing away (being superseded by the later and improved mode of high class rapid transit, steam railroad transportation), it is fitting in this last year of the present century to review the history of the system of internal improvements projected and constructed by the several corporations (that took the initial steps in the early days of the century), and the Commonwealth that took an interest in the system and by the liberal expenditure of money responded to the demands of the public voice and in a short time took great strides in the right direction to develop the resources of a great State. Although the hundreds of miles constructed by the Commonwealth seventy years ago have been abandoned and are now lying in ruins, it is generally conceded that these works were not built in vain, but have directly and indirectly proved of much value in developing many portions of the State, and have added materially to her wealth, thus refunding to the Treasury the amounts expended in their construction.

The new lines that have taken the place of those of the early days, in a majority of instances, follow closely the lines of the natural water ways; and the traveler, as he is now conveyed in luxurious parlor cars, may view the river upon whose waters the small craft of the Indian and the early trader passed to and fro, and in the immediate foreground the channel of the main line of canal which served in the transportation of great quantities of grain, lumber, flour and coal in later years, and as space is annihilated by the famous steam horse behind which he is traveling he passes long trains of steel pressed cars laden with coal and coke, and oil and grain, the products of the nation, even from the Pacific coast, hurrying by, bound for the seaboard, to be reshipped to, and distributed in every quarter of the globe, thus taking in at one view the wonderful development and expansion in the line of transportation during the century just closing.

water, passing boats with a capacity of 200 tons. The line extended from Philadelphia up the river to the Schuylkill county coal region, via Reading, and many other thriving towns, all of which were to a greater or less degree developed and built up by the influence of the Navigation Company's line along the Schuylkill river.

During the succeeding years in the infancy of the Commonwealth public interest was being developed and preparing for the undertakings looking to the development of the outlying territory. Governor Thomas Mifflin in his message to the Legislature in 1790, said:

"The very laudable attention paid to the survey of roads and rivers is a conclusive proof of the importance of the object, while it furnishes an example highly deserving of your imitation. Every day, indeed, produces an additional incentive to persevere in improvements of this kind. The commercial policy of insuring the transportation of our produce from the interior counties to the capital is dependent upon the ease and facility of the communications that are established throughout the State; and when we consider Pennsylvania not only as the route that actually connects the extreme members of the Union, but as a natural avenue from the shores of the Atlantic to the vast regions of the western territory, imagination can hardly paint the magnitude of the scene which demands our industry, nor hope exaggerate the richness of the reward which solicits our enjoyment."

A committee appointed in January, 1791, to examine the reports of Commissioners employed in exploring the western waters of the Susquehanna, the Delaware, etc., on the 19th day of February, of the same year reported as follows:

First. They considered the river Delaware as a most important channel for introducing the trade and produce, not only of the northern parts of the State, but as being capable of forming an easy communication by a portage of 19 miles, with the western parts of the State of New York, and extending by two other short portages to Lake Ontario. This river is capable of affording a safe boat and raft navigation from the extreme northern bounds of the State. By the estimates given, the expense will be about twenty-five hundred Pounds. The portage from the Delaware at Stockport, near the north line of the State, to Harmony, at the great bend of the Susquehanna, is 19 miles, the expense is about four hundred Pounds. Descending the Delaware we have considered the waters of the Lachawach and Lehigh as claiming public attention, yet as great benefit would immediately result from removing some of their obstructions. We think there may be allowed, for the Lachawach two hundred Pounds and for the Lehigh five hundred pounds.

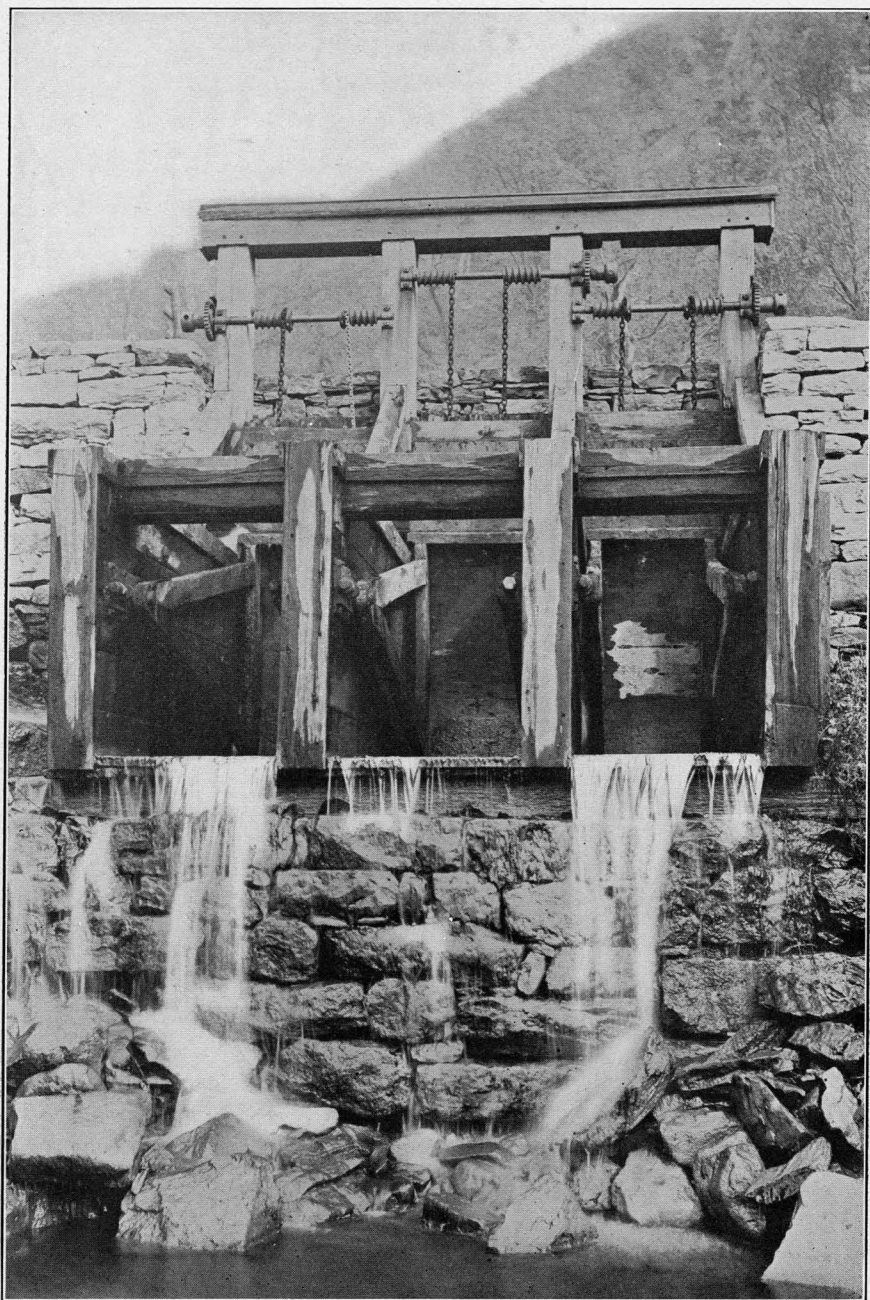
"The Schuylkill next presents itself, not merely in order as a branch of the Delaware, but as one of those great highways which

at a future day will bear on its waters the immense produce and trade of the western country. This river is to be considered in a double point of view, first as a great natural channel, tending to the Metropolis from the upper waters above Reading, and thence joining a favorable country for an excellent road to the town of Harrisburg on the Susquehanna, by which means a ready and cheap communication may be formed. The expense of the Schuylkill to Reading is estimated at about fifteen hundred Pounds. The road from Reading to Harrisburg at five hundred Pounds.

"Secondly. Pursuing the Schuylkill up the waters of the Tulpehocken, it will be found they approach so near to the waters of the Quittapahilla leading down the Swatara to the Susquehanna river, that a canal and lock navigation force themselves into our notice, the expense of which is estimated at 18,650 Pounds. From this canal down the Swatara the expense is 250 Pounds. The expense of rendering the Tulpehocken navigable up to the water of the canal, is estimated at 11,290 Pounds. The canal from the head of Tulpehocvken to Lechner's Mill, 9,700 Pounds." Having entered the Susquehanna, both at Harrisburg and at the mouth of the Swatara, a great scope of navigation presents itself. The expense of clearing the navigation of the Susquehanna to the northern boundary of the State, beyond which to its source at Lake Otsego there is no material obstruction, is as follows: From the mouth of the Swatara to the mouth of the Juniata 300 Pounds; from Juniata to West Branch to Great Bend 440 Pounds. Continuing the report an estimate was submitted for rendering the Juniata, Little Conemaugh and Kiskiminetas navigable and constructing a portage over the Alleghenies, which included a line from the mouth of the Juniata to Pittsburg, involving an expense of 10,010 Pounds, and the entire expense of the whole system of internal improvements was estimated at 60,870 Pounds, a very moderate sum indeed, when in these days the same amount might be expended in a single mile of railroad or canal.

In accordance with the report and in sympathy with the popular voice, the sum of 25,720 Pounds was appropriated for the construction of water ways, removing obstructions from the rivers, and the building of roads to connect the links, forming the line of water communication.

Thus the system was started, and from this beginning grew the great main line of canal and its branches, upon which the Commonwealth spent large sums in their development, and fostered them with scrupulous care, until in the course of events, circumstances changed the system of transportation, steam was introduced as the motive power and rapid transit became the demand, when laboring under a debt of \$40,000,000 and a clamor for relief, negotiations were



Canal Waste Way, with "Whitney" anti-friction gates, near Dauphin, Pa.



Canal Aqueduct crossing Fishing Creek, at Fort Hunter, Pa.



Old Stone Aqueduct at Newport, Pa.

opened for the disposal of the public works, which was effected after a long parley, and in June, 1857, the canal and railroad forming the main line from Philadelphia to Pittsburgh was sold to the Pennsylvania Railroad Company for \$7,500,000, and the branch lines were sold in May, 1859, for \$3,781,250, when the State was relieved of the great responsibilities of a common carrier and the finances of the Commonwealth placed upon a promising basis.

A detailed history, including the journal of the Canal Commissioners, of the difficulties attendant upon the location and construction of the public works, in the early days of the century, the various opinions and desires of individuals and communities as to the better place to locate the lines, and the demands of property owners to collect great sums for damages sustained and anticipated, and the negotiations required to adjust settlements, have filled nearly 7,000 pages of manuscript, as recorded in the Canal Commissioners' Journal, and ten times 7,000 more pages are covered with the claims and grievances and agreements and contracts and settlements and petitions, receipts and releases, complaints and maledictions, all of which demonstrate the fact that the Board of Canal Commissioners did not rest in beds of roses, but had, with the honor and responsibilities of their office, endless worry and annoyance.

After 1830 the Board consisted of three persons (whose term of office was three years), one of whom was elected each year, and party lines being closely drawn, the dominant party had among their number legions of applicants for place upon the public works, which became in numerous instances, cause for scandal, because of the abuse of confidence in some departments by the officials in charge.

Many distinguished men had a place in the Board of Commissioners from time to time. In 1829, Nathaniel B. Eldred, afterwards President Judge of the Capital District, served in the Board. Thaddeus Stevens served a term, beginning in 1838. William F. Packer, afterward Governor of the State, served in 1839. George M. Hollenback was in the Board in 1842. William B. Foster, Jr., afterwards a prominent official of the Pennsylvania Railroad Company, was elected in 1844, and Jesse Miller, afterwards Secretary of the Commonwealth under Governor Francis R. Shunk, was a member of the Board at the same time, while Francis R. Shunk himself served as Secretary of the Board for a number of years. He was succeeded by Thomas L. Wilson, who continued in the position until the Board was abolished. Mr. Wilson died February 28, 1861, and it is recorded of him, on the last page of the Commissioner's Journal, "He was a good man, thoroughly honest."

During the administration of John Andrew Shulze as Governor of the Commonwealth, beginning in 1823, the demand for a system of internal improvements was very strong, and in accordance therewith

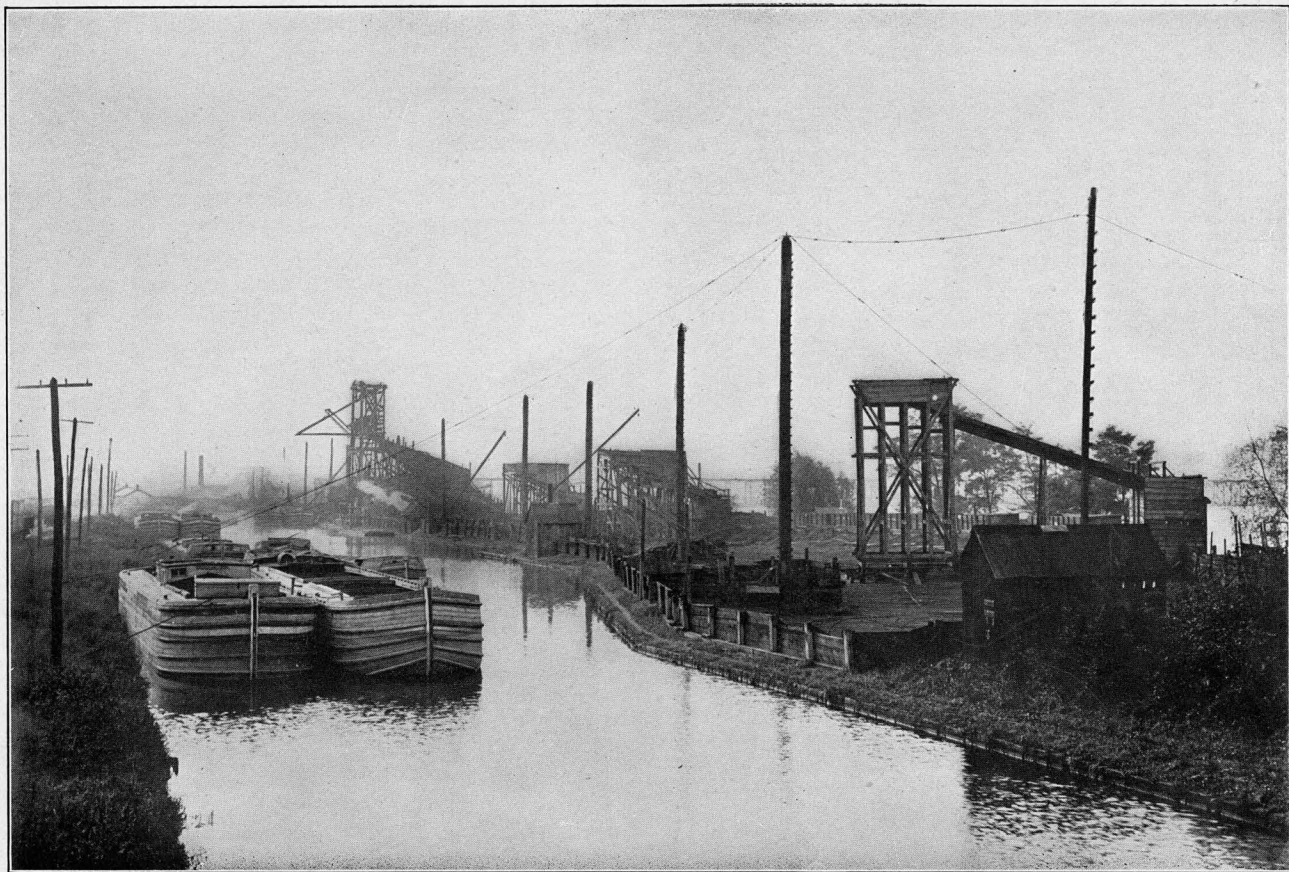
an act of Assembly was approved March 27, 1824, providing for the appointment of a Board of Commissioners for the purpose of promoting the internal improvement of the State. "This act authorized "and required the Governor to appoint three Commissioners whose "duty it shall be to view and explore a route for a canal from Harris- "burg to Pittsburg by the waters of the Juniata and Conemaugh "rivers, and also the route of the West Branch of the Susquehanna "and Sinnemahoning, with the waters of the Allegheny river, and "also the country between the Schuylkill and the Susquehanna, "through the great valley of Chester and Lancaster counties; and "when these are effected the Commissioners shall view and explore "the route, beginning at a point on the Schuylkill river, in the county "of Schuylkill, thence by Mahanoy creek, the river Susquehanna, the "Moshannon or Clearfield and Black Lick creeks, the Conemaugh, "Kiskiminetas and Allegheny rivers to Pittsburg, and who shall "make report to the Governor, accompanied with estimates of the "probable expense of completing the same, the quantity of water at "the terminal levels, and the number of locks necessary, with such "observations as may tend to elucidate the subject."

This was the beginning of the State system of internal improvements, and it was a bold and startling step and probably more than likely stunned the three commissioners as they contemplated the task for them to study and prepare during one short summer. Rapid progress was made, however, and on the 11th day of April 1825, Governor Shulze approved an act to appoint a Board of Canal Commissioners. The following is the preamble to the act: "Whereas, the establishment of a communication between the eastern and western waters of this State, and the lakes, by means of navigable streams and canals, would advance our agriculture, commerce and manufactures, would unite in a common interest the great natural divisions of the State, and would in the end be an important source of revenue to the Commonwealth: And, whereas, the best interests of the State require that this great and important improvement should be the property of the Commonwealth, and that the Commonwealth ought to embark in it with that zeal and energy that is best calculated to carry it into effect; therefore, be it enacted, etc."

Under this act five commissioners were to be appointed to consider and adopt such measures preparatory to the establishment of a navigable communication between the eastern and the western waters of the State and Lake Erie. The act further authorized the employment of engineers and surveyors to make examinations and surveys, and the act furthermore appropriated a sum not to exceed \$20,000 to be expended and paid on the order of the majority of the Commissioners appointed under this act. And as if to confirm the determination of the administration to continue the work initiated by the



Basin at Harrisburg, Pa., and inlet to Lock.



Present Condition of Terminus of Canal at Columbia, Pa.

act just noted, another act pledging the faith of the Commonwealth for a five per cent. loan of \$150,000, payable in 15 years, was authorized upon the same date as the act authorizing the appointment of the Board of Canal Commissioners.

On the 25th of February, 1826, Governor Shulze approved an act of Assembly, entitled "An act to provide for the commencement of a canal to be constructed at the expense of the State, and to be styled The Pennsylvania Canal." This act authorized the commissioners to locate and contract for making a canal and locks from the river Swatara at or near Middletown to or near a point on the east side of the river Susquehanna opposite the mouth of the river Juniata; and from Pittsburg to the mouth of the Kiskiminitis; and also, as soon as they shall deem it expedient and practicable, to construct a navigable feeder for a canal from French Creek to the summit level at Conneaut Lake, and to survey and locate the route for a canal from thence to Lake Erie. The Commissioners appointed under the act of 1825 were authorized by this act to appoint one or two of their number, as occasion might require, as acting commissioner or commissioners at a compensation of four dollars a day while actually engaged in the superintendence of the works contemplated by this act, which sum was to be in full for all compensation for services and expenses. The same act appropriated the sum of \$300,000 to be expended by the Board of Commissioners, subject to the usual restrictions and requirements of the law governing public expenditures. On the 10th of April, 1826, a supplement to the above act was approved authorizing the Governor to appoint four additional canal commissioners, making a board of nine, five of whom constituted a quorum. They were required to call upon the owners of the land through which the land passed, with a view to obtaining releases, and adjust any damage claimed by reason of the construction of the works.

The succeeding year, 1827, witnessed increased activity and interest in the great work now started, for on the 9th of April of that year Governor Shulze approved an act to provide for the further extension of the Pennsylvania Canal. This act authorized the Canal Commissioners to locate and contract for the making of a canal and locks up the valley of the Juniata from the eastern section of the Pennsylvania Canal to a point near Lewistown. Also a canal and locks up the valley of the Kiskiminitas and the Conemaugh from the western section of the Pennsylvania Canal to a point at or near Blairsville; and also a canal and locks up the valley of the Susquehanna from the eastern section of the Pennsylvania Canal to a point at or near Northumberland. Surveys were also directed to be made for a portage road over the Allegheny mountains to ascertain the best mode of connecting the lines east and west. That all parts of

the Commonwealth might be benefited by the improvements, surveys were ordered to be made from Northumberland up the north branch of the Susquehanna to the State line; from the western section of the Pennsylvania Canal, near the mouth of the Kiskiminitas, to a point on Lake Erie, by the Allegheny river and French creek, at or near the borough of Erie; and from the city of Pittsburg to the said point on Lake Erie, by the route of Beaver and Shenango. Thorough examinations were also to be made of the Juniata Valley; also surveys of a canal and railway from Philadelphia to Columbia; also a survey in order to ascertain the practicability and cost of forming a connection of the North Branch of the Susquehanna and the Lehigh. A survey was also ordered down both sides of the Susquehanna river from the Swatara to the Maryland line. Section 6 of the same act directed surveys to be made along the Delaware Valley from Philadelphia or from Bristol or any intermediate point between Bristol and the head of tide water to Carpenter's point; and the next section directed the immediate commencement of the work to be built toward Easton, and \$100,000 were appropriated for that purpose.

A concluding section of the act ordered a survey for a canal commencing in the vicinity of the United States Arsenal, upon the east bank of the river Schuylkill, and terminating at the river Delaware, at the south of the Navy Yard, in the county of Philadelphia.

In the furtherance of the numerous projects of this act a loan of \$1,000,000 was authorized and the Canal Commissioners searched the country for engineers to make the required surveys and examinations. At the succeeding session of the Legislature another act, approved the 24th of March, 1829, authorized additional surveys and the speedy construction of canal sections, the location of a railroad across the Allegheny mountains, the location of a railroad from Philadelphia, via Lancaster and Columbia, to York. Surveys were ordered along the valley of the Monongahela river from Pittsburg to the Maryland line. From Columbia to the Conestoga river in Lancaster county, and along the Ohio river from Pittsburg to the mouth of Beaver creek, besides many other projected lines. A further sum of \$2,000,000 was directed to be borrowed to carry out the provisions of the Internal Improvement Acts.

A review of the construction of the early projects develops the fact that the magnitude of the undertakings were boldly taken in hand, and notwithstanding the discouragements that presented themselves in the way of financial difficulties, etc., persevering zeal at last accomplished the desired end.

Incorporated companies, anticipating the State authorities, began their improvements at a somewhat earlier period, among which:

The Schuylkill Navigation Company's line, which covered a distance of 108 miles up the valley from Philadelphia; and in that dis-



Outlet, Pennsylvania Canal at Columbia, Pa., showing terminus of canal and ruins of Columbia Bridge.



Ruins of Columbia Dam, Columbia, Pa.

tance the channel of the Schuylkill river was utilized and converted into slack water (by the erection of 31 dams), covering 50 miles of the river channel with a slack water navigation. In the line 71 locks were constructed to overcome the elevation from tidewater which amounted to 618 feet between Philadelphia and the upper terminus at Mill Creek. In 1865, 1,000 boats with an average capacity of 170 tons passed to and fro through the canal carrying nearly 1,500,000 tons of coal, lumber, iron ore and other products of the mines, etc., yielding a revenue of \$1,650,800. The cost of the line at this time was \$12,250,000, and the stockholders received dividends of six per cent. The venerable Frederick Fraley, of Philadelphia, who was President of the company for a number of years, still survives after having witnessed the marvellous changes in the transportation of the traffic of the country, and the passing of the great line of navigation into the control of its great rival, the Philadelphia and Reading Railroad Company, which has a long lease. At this time the length of the works have been reduced 18 miles, and the receipts reported for the year ending June 30, 1900, amounted to \$50,694.

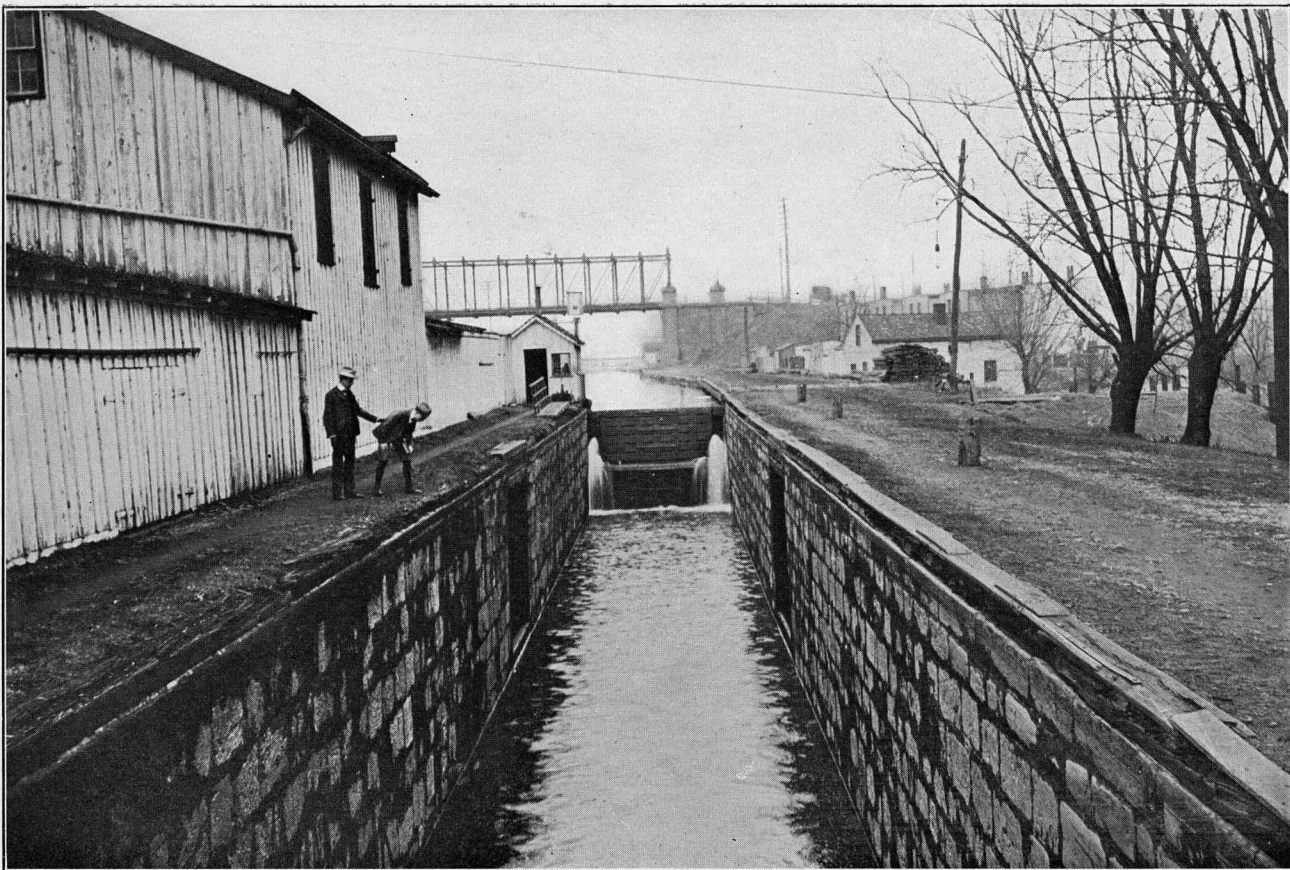
By an act of Assembly passed the 29th of September, 1791, a company was incorporated to construct a canal and lock navigation between the Schuylkill and Susquehanna rivers by the waters of Tulpehocken, Quittapahilla and Swatara creeks, in the counties of Berks and Dauphin, and that project may therefore be classed as another pioneer in the projected lines to the west. It was virtually a branch of the Schuylkill Navigation, or rather a feeder, and connected the Schuylkill river with the Susquehanna. As one of the very early corporations it too passed through many vicissitudes and trials. Lotteries that brought in some money, bridged it over some of the difficulties, but at last it went into decay, and a railroad is now constructed in the summit level at Lebanon. The line of this canal was constructed along the Tulpehocken creek between Reading on the Schuylkill river and Lebanon, a tortuous route, following the stream to its head, a distance of 40 miles. On nearing the summit or the dividing ridge a treacherous limestone country prevailed, and the great fissures between the rocks for many years deprived the canal of the water required for navigation purposes. Many of the levels east and west of the summit were planked upon solid oak sills which for a few years retained the water, but advanced engineers discarded the wooden lined canal, and clay puddling was substituted after the limestone was removed in order to give sufficient base for the clay to be tramped in. The summit level seven miles in length between the headwaters of the Tulpehocken and the Quittapahilla required its supply of water almost entirely from artificial sources from the first; and subsequently, after enlargement in 1856, from reservoirs filled from winter rains and snows stored for use in the summer months.

Enormous steam pumping engines hauled from Pittsburg on wagons to a point on the Swatara creek, six miles west of Lebanon, and large water wheels of great capacity, forced the water from that stream to a height of 95 feet, from which point it flowed by gravity through a wooden cylinder three feet in diameter for four miles to the summit level, from which it was utilized in the required pool and to supply the contingent levels east and west, with 25 locks to raise and lower the traffic in transit. Another steam engine was located at the headwaters of the Quitapahilla (near Lebanon), which raised the waters from that stream 45 feet, and they were carried by an open trunk one-half mile to the summit. A bit of engineering skill in those early days was the construction of a tunnel 600 feet in length just west of Lebanon and hard by a flight of 16 locks carrying the canal to Swatara creek, which stream it followed, crossing it at one place by an aqueduct, to Middletown, where the main line of the Pennsylvania Canal received the tonnage from the east and distributed the cargoes of lumber, coal, etc., from points north and west. Standing at the head of the tunnel the observer cannot but feel a tinge of sadness akin to the feeling upon viewing the ruins of any historic castle beyond the sea, as the crumbling atoms fall from the tunnel roof into the abandoned channel of this once famous canal.

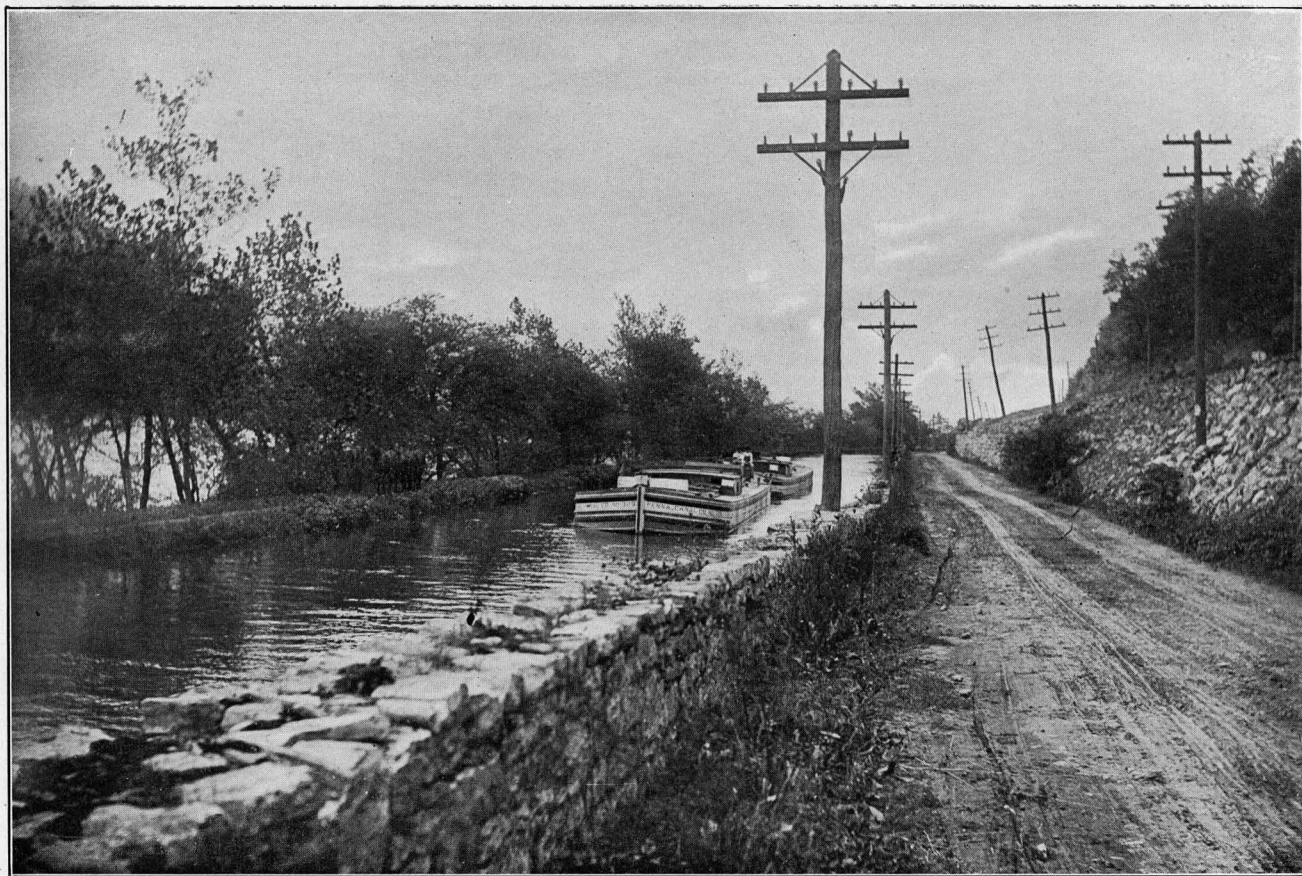
Other appliances to furnish a supply for the summit level consisted of impounding the winter waters in reservoirs north of the line of the canal and utilizing them in the summer time. Three reservoirs were constructed covering in all over 100 acres, and having a depth of from 20 to 30 feet of water at the breasts of the dams. The supply from the largest of these reservoirs was conveyed in a brick conduit 30 inches in diameter and 3 miles in length to the eastern end of the summit, 3 miles east of Lebanon. This line of canal was finished and open for navigation in the spring of 1828.

The Union Canal was 77 miles in length between Middletown and Reading, via Lebanon, with a branch of 22 miles from a point where the canal left the Swatara creek to Pine Grove in the Schuylkill Coal Region, which branch was almost entirely destroyed by a flood which broke through a large dam on the Swatara, and its flow towards the river took with it the towing path and banks with the superstructure, rendering the branch canal entirely useless. The Philadelphia and Reading Railway Company invested \$100,000 in the damaged canal and built a portion of their Tremont branch from Lebanon upon the land acquired by the purchase.

Large quantities of iron ore from the Cornwall banks of Lebanon county were shipped to Danville and other points via the Union Canal, and coal was returned from the Wyoming region for use in the furnaces at Lebanon and vicinity as back loading. After the enlargement of the Union Canal lumber from the West Branch came



Double-lift Lock at Harrisburg, Pa., showing empty chamber.



Dauphin Narrows, showing pair loaded boats coupled together in tandem, the usual practice on the Canal.

through for a time in order to avoid towage charges on the Chesapeake Bay, but the delays incident to low stages of water and the great amount of lockage was detrimental to the shippers and carriers and at last, in 1885, the officials of the company reported that "The Union Canal is non est, it having been sold out, property and franchise, by the sheriff of Philadelphia." It had borne the brunt of flood and financial panic for almost three-quarters of a century, it having been in operation before the canals of the Commonwealth. The work was abandoned and sold for a song, including the masonry of 100 lift locks, 3 guard locks, with buildings, machinery and pumps, all of which had cost more than \$6,000,000, which melted away from the estates of widows, orphans and capitalists all over the Commonwealth.

One of the most successful enterprises of the early years of the century was incorporated by the Legislature on the 24th day of March, 1817, under the name and title of the President and Managers of the Monongahela Navigation Company. This act authorized George Sutton, Anthony Beelan and Thomas Baird, of Pittsburg, and their associates to act as commissioners to receive subscriptions to 1,600 shares of stock at \$30 each as a capital for the construction of 16 dams across the Monongahela river, in order to form a slack water navigation with locks connecting the pools. A period of 25 years was granted to complete the work to the mouth of the Cheat river. In 1870, the capital invested was \$1,003,500, upon which 10 per cent. dividends were divided on a tonnage of 2,246,000 tons, of which 2,188,000 tons were bituminous coal. In 1880 the capital had been increased to \$1,115,000, and the coal tonnage reached 3,193,800 tons. A dividend of 12 per cent. was paid that year on the capital stock. In 1890 the capital had reached the amount of \$1,632,000, upon which a nine per cent. dividend was paid, thus showing a profitable investment for the shareholders. In 1897, the United States government by proceedings in condemnation assumed possession of the work, and it is now maintained free of expense to the carrier of the products of the Monongahela Valley.

On the 20th of March, 1818, an act entitled "An act to improve the navigation of the river Lehigh," granted to Josiah White, George F. A. Hanto and Erskine Hazard certain rights and privileges concerning the improvement of the navigation of the river Lehigh. These gentlemen became owners of coal lands, to develop which, it became necessary to enlarge their capital which was done by organizing the Lehigh Coal Company. In order to carry out the intents of the projectors, further capital was required and a new company with enlarged privileges was organized and on the 13th of February, 1822, the Lehigh Coal and Navigation Company was incorporated with a proviso that the maximum amount of money to be invested in the

purchase of land should not at any time exceed the sum of \$60,000, nor the entire capital exceed \$1,000,000 in the undertaking. In after years the requirements of the corporation demanded more capital for which privileges were duly granted, so that there is at this time a capitalization of over \$14,000,000 and a funded debt of \$17,500,000, the value of which is invested in coal lands, 108 miles of canal owned and leased, and other property.

The Delaware and Hudson Canal pierced the northeastern section of the State and connected Honesdale, in Wayne county, Pennsylvania, with Eddyville, in the State of New York. It was constructed by a company incorporated by the Legislature of New York, and authority was given by the Legislature of Pennsylvania to the Delaware and Hudson Canal Company in 1825, to assume the privileges conferred upon one Maurice Wurtz to improve the navigation of the Lackawaxen river. This undertaking resulted in the construction of 25 miles of canal in this State from Honesdale to the Delaware river, by the Delaware and Hudson Canal Company. A million tons of merchandise passed through this canal in 1865, principally anthracite coal. A fleet of 880 boats was employed in the traffic. The canal was maintained with a depth of six feet of water, and the locks were 100 feet in length between gates. The company abandoned the Pennsylvania division of the canal in 1899, transferring the tonnage to their lines of railroad, which traverse the coal regions of that section of the State.

On the 9th of May, 1825, the commissioners appointed by the Governor under the act, entitled "An act to appoint a Board of Canal Commissioners," held their first meeting in Philadelphia. There were present Robert M. Patterson, John Sergeant, William Darlington and David Scott. Mr. Gallatin, another appointee, was absent. The names of several persons, notably Charles Trezcuyliney, William Wilson and John Mitchell were presented as competent engineers for employment. After several short meetings from day to day the Board adjourned until (called together pursuant to notice) on the 2d day of July, 1825, when the same gentlemen were present, together with Abner Lacock, who filled the place of Mr. Gallatin. John Sergeant was chosen as President of the Board on the 4th of July. William Wilson was selected as the first engineer by the Board. At a meeting of the Board held October 26, of the same year, reports were made by William Wilson and John Mitchell on surveys made during the preceding months, and in December Mr. William Strickland was appointed as a consulting engineer and to prepare maps and make estimates of the several lines reported upon.

On the 10th of May, 1826, an advertisement for proposals to construct a part of the canal from the Swatara to the mouth of the Juniata river was authorized by the Board. The four new members



Abandoned inlet lock, Old Ferry Station, Pa.



Canal Overflow at Lochiel, Harrisburg, Pa.

authorized by act of April 10, 1826, General Daniel Montgomery, of Columbia county, Thomas Enochs, of Allegheny county, General John Phillips, of Erie county, Charles Mowry, of Dauphin county, were appointed May 17, 1826. On the 19th of June, 1826, the Governor approved of the location of the canal from the Swatara to the mouth of the Juniata river, William Strickland's location, and on the fourth of July following, the first ground was broken in the construction of the great system of Pennsylvania's line of internal improvements near Harrisburg.

In the settlement for damages along this part of the line about 100 different land owners out of 122, claimed damages, and some of them to an extravagant extent. Several honorable exceptions were named and but one specific offer in the whole number was accepted. On the 14th of September, 1826, the acting Commissioner on the western division reported that 25 miles of that division had been contracted for and that more than 1,000 men were at work under the contractors. On the 2d of May, 1827, the Board of Canal Commissioners appointed William Strickland, Nathan S. Roberts, James Geddes, David B. Douglass and Simeon Guilford as principal engineers, and assigned Judge Geddes to examine the north branch and Chester Valley. Nathan S. Roberts was instructed to locate the line to Blairsville; Mr. Strickland to locate the lines to Northumberland and Lewistown; Major Douglass to locate the French creek feeder and make surveys on the Allegheny and to Lake Erie, and Simeon Guilford to attend to the Delaware line.

In the Autumn of 1828 it was resolved by the Board of Canal Commissioners to further prosecute the work by placing under contract the construction of the canal from Blairsville to Johnstown, a part of the French creek feeder, a portion of the North Branch to include 45 miles with that already under contract, a portion of the west branch from Sugar Camp Island to Northumberland, on the Juniata from Lewistown to Huntingdon, on the Delaware division, from New Hope to Raubs, 18 miles.

The construction of these works involved a large expenditure of money, but provision was made therefor by loans through the Bank of Pennsylvania, which furnished the amounts required in instalments as the work progressed.

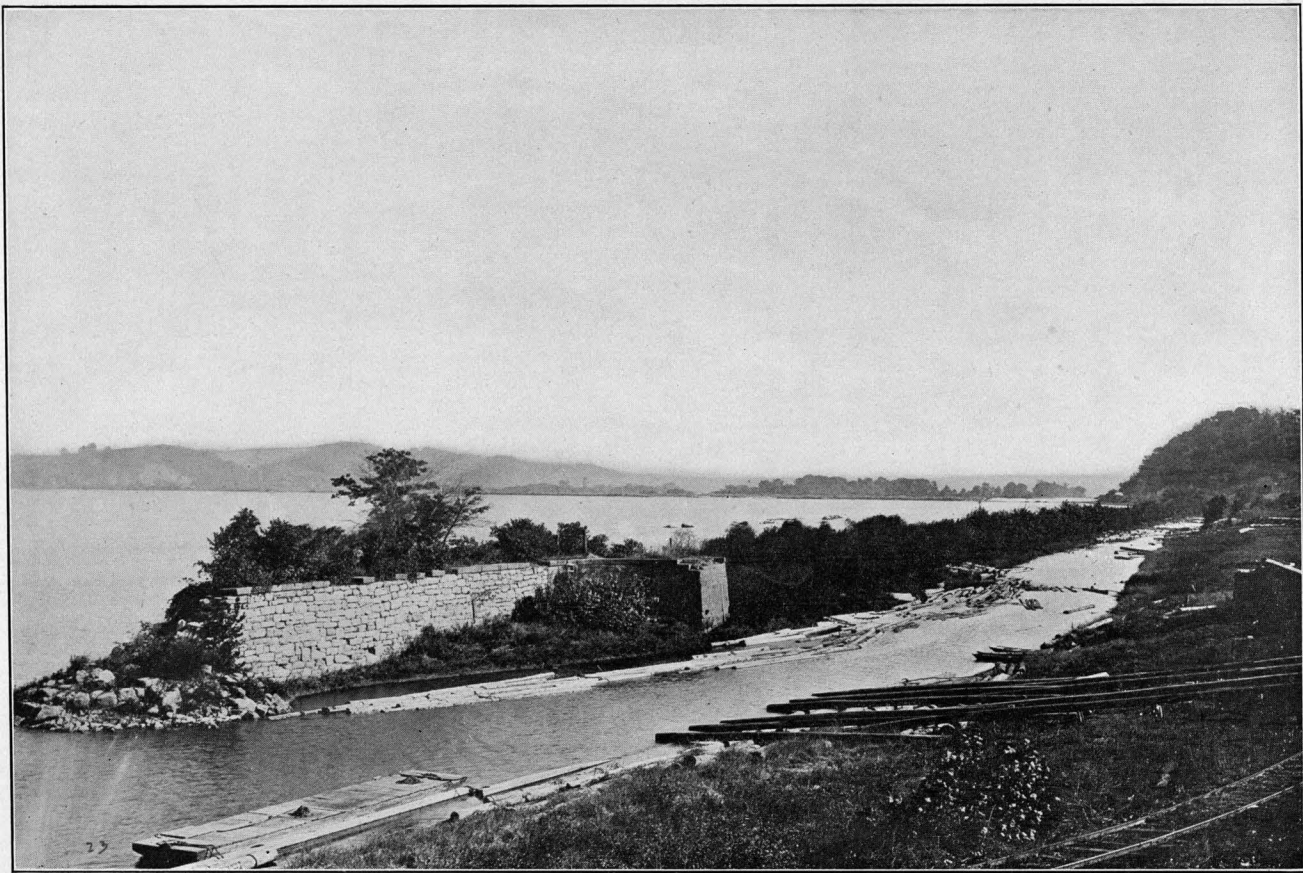
The construction of a railroad from the end of the canal at Columbia, on the Susquehanna river, to Philadelphia, being an important link in the line of internal improvements, the survey of Mr. Roberts with report was submitted by a committee (to whom the subject was referred) to the Board of Commissioners at their meeting of December 9, 1828, who decided that in consequence of the importance of this line in connection with the projected canals, \$200,000 should be appropriated during 1829 toward the construction of the road which

was considered about one-half the sum required to cover the distance between the Susquehanna and Delaware rivers. At this time the system was well outlined, and from Philadelphia to Columbia the first link in the chain was to be 84 miles of railroad, on which was to be transported the merchandise to the west and the products of the soil, mines and forests to the seaboard. From Columbia along the east bank of the Susquehanna river, the eastern division covered a distance of 46 miles via Harrisburg to the junction of the Juniata and Susquehanna divisions. The Susquehanna division continued up the west branch of the river for 42 miles where the river was crossed to Northumberland where the north and west branch divisions were united. The north branch division was constructed on the west side of the river in Northumberland by way of Danville, Bloomsburg, Catawissa, Berwick and Wilkes-Barre to Lackawanna dam a distance of 72 miles, and the west branch division formed that part of the system from Northumberland by way of Milton, Watsonstown, Muncy, Williamsport, Jersey Shore and Lock Haven to Farrisville, a distance of 76 miles. These branches constituted the great feeders to the main line, delivering anthracite coal from the Wyoming region and lumber from the virgin forests of the State. The Juniata division being a continuation of the main line and the thoroughfare to the west composed that part of the canal between the junction of the several divisions at Duncan's Island and Hollidaysburg up the valley of the Juniata by way of Newport, Mifflintown, Lewistown and Huntingdon, covering a distance of 128 miles. At Hollidaysburg connection was made with the Allegheny Portage railroad which by a series of inclined planes and intermediate short levels served for the transportation of the traffic, as well as passengers over the mountain to Johnstown, a distance of 36 miles.

The Portage Railroad over the Allegheny mountains was considered in its day a marvel in engineering skill, which David Stevenson, a distinguished civil engineer, in 1838 described as "a mountain railway which in boldness of design and difficulty of execution compared only with the passing of Simplon and Mount Cenis in Saradinia, but even those remarkable passes viewed as engineering works, did not strike him as being more wonderful."

The history of this section of the system of internal improvements is full of interest and an article entitled "The Evolution, Decadence and Abandonment of the Allegheny Portage Railroad," as written by William Bender Wilson, and published in the report of the Railway Bureau of this Department for the year 1898-1899, embraces in detail a full account of this most interesting section of the public works.

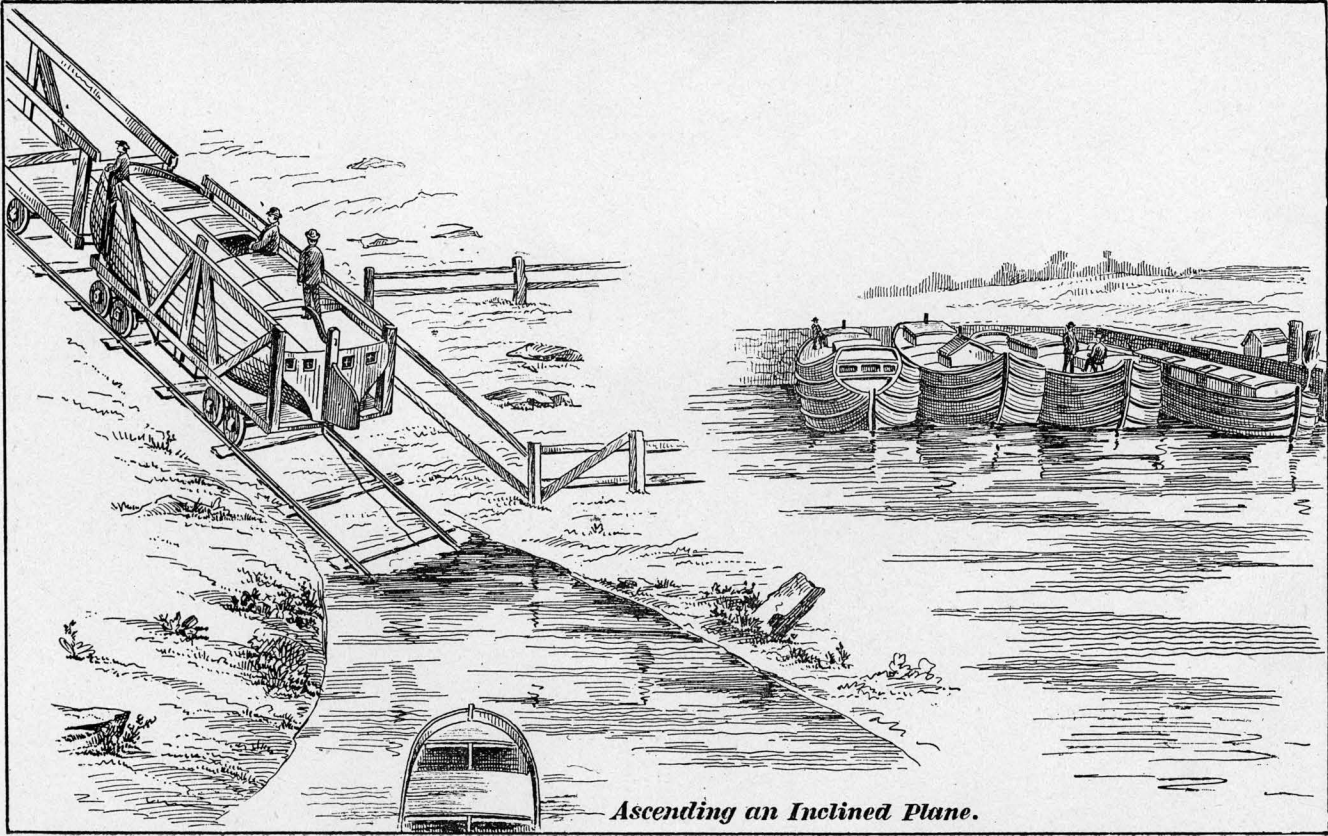
The western division joined the Portage road, and by a canal



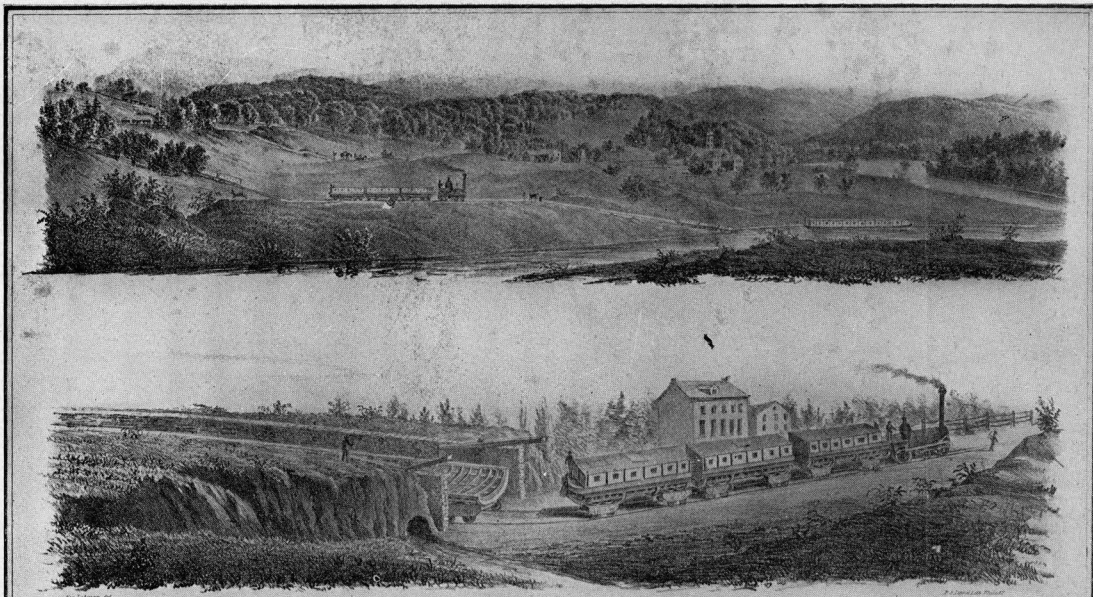
Ruins of Inlet to Tidewater Canal at Wrightsville, Pa.



Bed of Susquehanna and Tidewater Canal at Wrightsville, Pa., now used as a Saw Mill Dam.



Ascending an Inclined Plane.



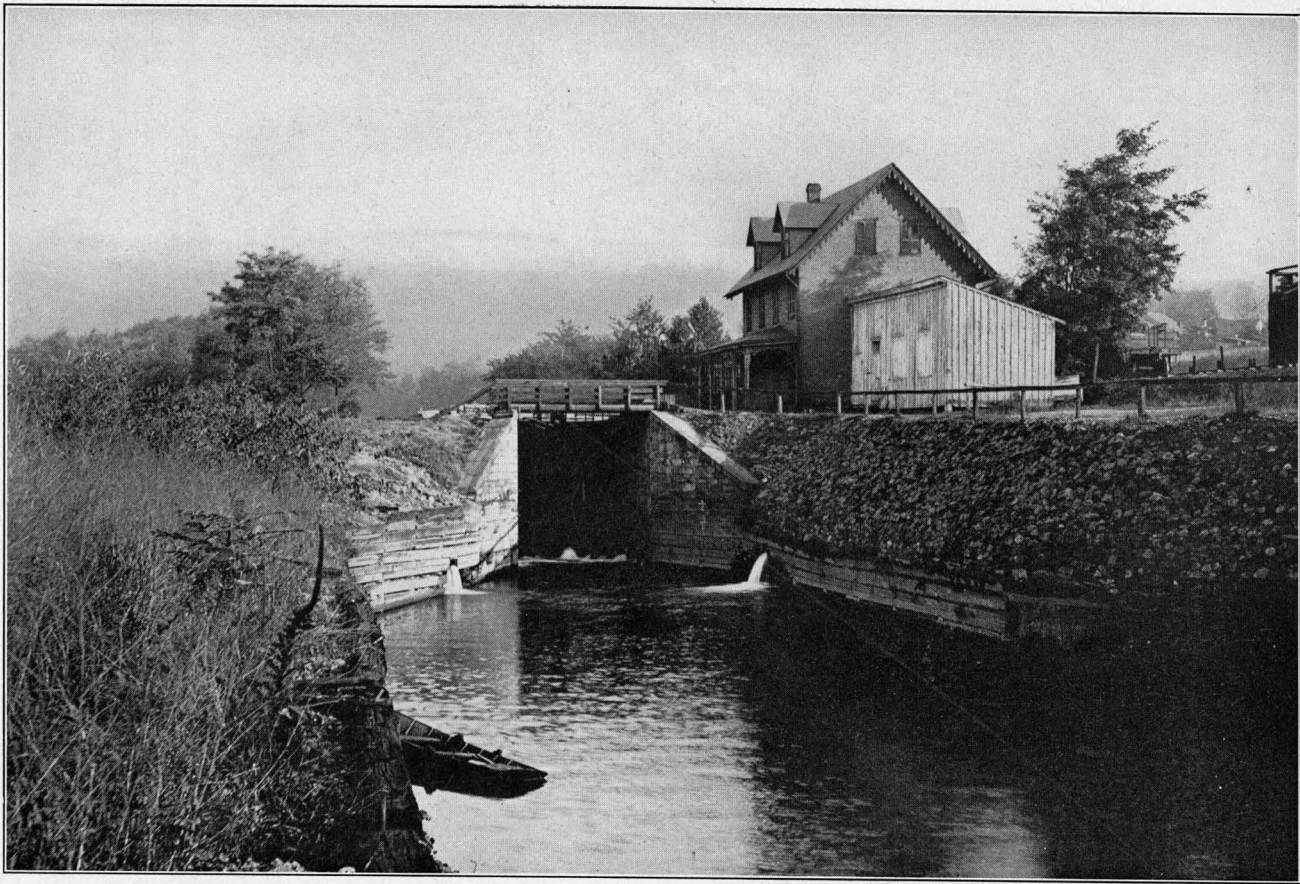
RELIANCE TRANSPORTATION COMPANY.

(VIA)

Pennsylvania Rail Roads and Canals
FROM PHILADELPHIA TO PITTSBURG

By means of Transshipping IRON CANAL BOATS, in which Goods are placed at Philadelphia and pass together with the Boats to Pittsburg, with Safety, certainty and unprecedented despatch. Emigrants and others travelling with their effects can be accommodated with a cheap & expeditious passage West.

Agents: JAMES M. DAVIS Pittsburg.
J. M. DOUGHERTY Philadelphia.
M. KEE & LOUDEN New-York.



Outlet from Canal into River at Columbia, Pa.



Section of Reservoir, with gates, West of Lebanon, Pa.

covering a distance of 103 miles reached Pittsburg, and thus the main line traversed the State from east to west and joined the city of Philadelphia with the young and prosperous city beyond the mountains. The Delaware division being an independent section of the public works consisted of a canal from Bristol on the Delaware river above Philadelphia to Easton, a distance of 60 miles, where connection was made with the navigation of the Lehigh. This canal passed into the hands of a corporation and is still being successfully operated under the management of the Lehigh Coal and Navigation Company.

The Susquehanna and Tidewater Canal, constructed by a company with a view to take the tonnage from the public works of Pennsylvania to Philadelphia and Baltimore via tidewater, ran along the west side of the Susquehanna river from Wrightsville, opposite Columbia, to Havre de Grace on Chesapeake Bay in the state of Maryland, from which point steam tow boats were required to take boats and cargoes to their destination. This canal passed through all the vicissitudes of floods and financial difficulties, and was on January 2, 1872, leased to the Philadelphia and Reading Railroad Company for 999 years, at a rental of \$20,000, and is now with its 45 miles of well constructed works, including a great feeder dam at Columbia, a ruin past reconstruction. This work involved an expenditure of \$5,000,000.

A short line of canal from Duncan's Island to Millersburg, called the Wiconisco, was built by the State to transport coal from the Lykens Valley region, and its 10 miles served a good purpose for some years, but it passed into the possession of the Pennsylvania Canal Company with the main line, and with a division of the traffic with the Northern Central Railroad Company it proved to be unprofitable, and it has passed out of existence as a water way.

The French Creek division was also constructed by the State. It commenced on the Allegheny river near the borough of Franklin, from which point it was carried up French creek $22\frac{1}{4}$ miles to the feeder from whence the feeder formed a continuation of the canal up which the right branch proceeded 11 miles, and the left branch down the feeder $12\frac{1}{2}$ miles to Conneaut Lake. The whole division, 45 miles in length, consisted of 27 miles of canal and 18 miles of slack water.

The Beaver division was another part of the system of public works in the western part of the State and connected with the Ohio river, 28 miles below Pittsburg, and was located from the mouth of the Big Beaver creek up that stream and Shenango creek 30 miles, terminating in Mercer county. Eight miles of this division was canal and 22 miles slack water formed by the erection of 7 dams across the stream. As the works were about being completed the report of the Canal Commissioners made December 2, 1833, contained a

statement submitted by the President, in which was given the time of the commencement and progress of the "most splendid system of internal improvement that has ever been undertaken and executed in so short a period by any country." In his recapitulation he gave as placed under contract:

In 1826,	46 $\frac{1}{2}$	miles.
1827,	162 $\frac{3}{4}$	"
1828,	214 $\frac{1}{2}$	"
1829,	15 $\frac{3}{4}$	"
1830,	3 $\frac{1}{2}$	"
1831,	193	"
1832,	28 $\frac{1}{2}$	"
1833,	47	"
Or a total,	711 $\frac{1}{2}$	"

The same statement says that on December 18, 1829, 195 miles of canal were finished, but of this distance only 180 miles were so situated as to be partially navigable, on which tolls to the amount of \$27,012.90 were received in 1830. On the 21st of December, 1830, 426 miles of canal were reported as finished and the water had been introduced into 406 miles. On the 1st of November, 1832, 408 $\frac{1}{2}$ miles of canal and 22 miles of railroad were finished, the tolls on which amounted to \$151,419 for the year.

In anticipation of the progress of the lines under course of construction it was announced that by the 10th of March, 1834, there would be completed and ready for use a total of 632 miles of canal and railway.

Governor George Wolf in his message of December 4, 1833, to the General Assembly re-echoed the proud claim of the President of the Board of Canal Commissioners. He said:

"With prospects so flattering, fellow citizens, in the very infancy of our public works, the friends of the internal improvement policy may rest satisfied that the day is not far distant when Pennsylvania, encouraged by the success that has attended her public improvements; their continually increasing productiveness; the overflowing treasury, for which she will be indebted to the redundant revenues derived from that source; and threatened as she is on all sides to be deprived of that commerce which the God of Nature seems to have destined for her use, will in her own defence force the waters of Lake Erie to mingle with those of the Allegheny and the Delaware; the Ohio river to become tributary to her own extensive improvements; the waters of the Cayuga and Seneca Lakes, by means of the



Old Winding Bridge, Abandoned Canal, above Newport, Pa.



Ruins of Kishacoquillas Creek Aqueduct, at Lewistown, Pa.

Elmira Canal, to unite with those of the Susquehanna; and will cause the wilderness countries, drained by the improvements by which all this will be accomplished, to 'smile and blossom as the rose.' This may be regarded as fancy now, but it must become fact before long; and judging from the signs of the times, it would not be surprising if it should all happen in our own day and generation, and be achieved by the force of public opinion itself."

And now the solving of the problem of operating an extended line of public works by the Commonwealth was commenced and begun under flattering auspices, from which great results were anticipated; but the contingencies of flood, depressions in trade, and the advancing ideas of the times, involving a demand for more rapid transit and quick delivery; (all tending to difficulties in the maintenance of the system projected in the early days) in the course of the succeeding twenty-five years developed a demand of the public to transfer (by sale or otherwise) the enterprise into the hand of private corporations, who, it was argued, could operate the lines to better advantage than the Commonwealth.

In the meantime toll sheets were being prepared and all manner of produce, merchandise, etc., were classified and rated in schedules on which tolls were to be collected in transit at the various offices established on the line.

The enthusiasm of the State officials was indeed justifiable, for the line of internal improvements about being completed was a magnificent work, involving in all the details and contingencies of construction; more in comparison, than the work of De Lesseps in his work on the great ship canal at Suez, for that (although greater in capacity) was of a comparative short distance, with no engineering difficulties after the construction of the terminal locks and breakwaters, and provision for the prevention of the drifting sands of the adjacent deserts into the channel; whereas the construction of the Pennsylvania improvements involved the location of hundreds of miles of canal beds, so as to be free from the dangers of the semi-annual floods that swept down from the mountains through the valleys occupied by the mother river, from whom the required nurture was to be furnished to the artificial waterways, as required. The construction of great dams across the rivers from which the water was taken to supply the canals; the building of hundreds of great locks of masonry to overcome the elevation, with massive water-tight gates; the building of miles of heavy retaining walls as shields against the encroachments of ice and flood; the construction of numberless bridges for the crossing of public and private roads; the erection of houses for the residences of the keepers of the locks; the construction of heavy aqueducts carrying the canal bed across large streams; the building of culverts to prevent the innocent looking brooks that

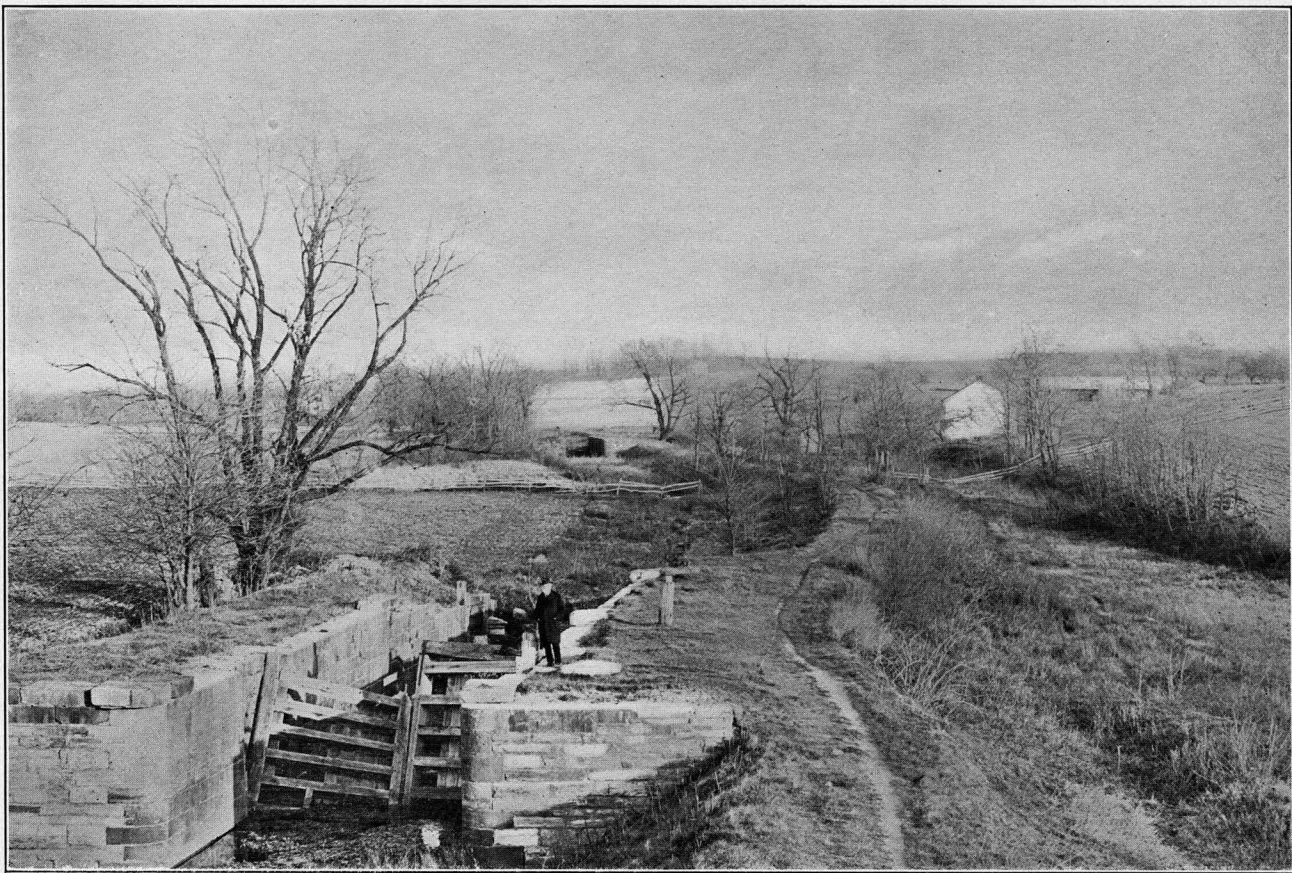
trickled from the hillsides, that were often transformed into raging streams, from doing damage; the provision for the excess of water that often came unexpectedly, doing great damage, by the erection of spills and waste wiers, besides many other details, required the watchful care and direction of the engineers in the finishing of the great system; and therefore with a commendable pride the officials might well be enthusiastic upon the achievements of their efforts. Thousands of brawny men from the Emerald Isle followed the directions of the engineers, and the ultimate results caused joy and enthusiasm. The work was a grand school for engineers, and many prominent names in the profession are recorded as efficient in the construction of later improvements who served in the different corps of engineers employed by the Commonwealth. Among these are the names of Roberts, Mitchell, Treczyuliny, Douglass, Strickland, Kneass, White, Welsh, Robinson, Faries, Guilford, Gay, Foster, Wierman, Worrall, Hage, Mifflin, Warford, Whippo, Schlatter, J. Edgar Thompson, Miller and many others will be remembered, whose work at many points in the line, although now in ruins, still shows their skill in directing construction.

And thus the work went bravely on. Individuals prepared for the anticipated traffic by building boats to launch in the now completed canal. Transportation companies were formed to carry merchandise from Philadelphia to Pittsburg without break in the cargo by means of boats built in sections, some of iron, which could be transferred from the channel of the canal into cradles upon the trucks of railroad cars and be hoisted over the Allegheny mountains and again placed in the waters of the Conemaugh and Kiskiminetas, and thus reach Pittsburg in what was at that time considered quick despatch. These lines claimed right of way on the main line, running night and day with double crews and extra teams aboard as relays. Some of these line boats made a specialty of passenger traffic, particularly of emigrants to the west, and every day in the week during the summer might be seen merry groups of German immigrants upon the deck of their chosen craft passing the Capitol City and lifted by the old Penn lock (now enlarged greatly in its capacity, at the foot of Walnut street in the city of Harrisburg), to the upper level which would soon bring them to view the broad waters of the Susquehanna, cleaving the spurs of the Blue mountains, and soon after into the valley of the Juniata, famous as the abode of the red man not many years ago.

The robust men and fair maidens among these emigrants from the German Fatherland tripped with their wooden shoes upon the upper decks and were borne to the broad acres beyond the mountains, where they and their descendants peopled the new states of Ohio, Indiana and Illinois, which are now empires of this Republic, which the emigrants adopted in their day, where there was a freer air, than in the hampered home of their own Fatherland.



Double Lift Lock at Harrisburg, Pa., view from below.



Locks Nos. 2 and 3—Abandoned Union Canal west of Tunnel near Lebanon, Pa.

A number of transportation companies to operate upon the canals were formed, and boats of the "Union Transportation Company," the "Reliance Line," the fleet of the "Leech Brothers," and "Bingham's Line," with a company from Baltimore, styled the "Chesapeake and Ohio Line," were soon in active operation and in a measure competed for the trade between Baltimore and Philadelphia and the west. Lines of packets, too, were established for passengers. The principal lines from Harrisburg to points north and west, as well as to Columbia (before the Harrisburg and Lancaster Railroad was constructed) was operated by William Colder, Sr., of Harrisburg, and his associates, who for many years maintained the lines and operated them with regularity and success. The traveler who had time (and he was obliged to have it in those days), enjoyed the trip along the picturesque valley of the Susquehanna and Juniata, and the social pleasures attendant during the journey would long be remembered. Charles Dickens in his American Notes records an amusing account of his experience in gaining the place where he was to sleep in the main saloon of one of these packets. Individuals, too, invested in horses, mules and boats to engage in the transportation of merchandise and produce, and many yards and dry docks were constructed along the line for the building and repairing of boats, and some of the skeletons of the oak ribbed hulls of the fleet still remain scattered along the line, going to decay, with the superstructure of the works, of which they formed an important part in the busy days of inland navigation.

The Commissioners experienced many difficulties during the succeeding years in operating the lines, including a deficiency in the supply of water at the headwaters of the rivers which were the natural feeders for the canals. It was therefore necessary to construct large reservoirs to impound the winter waters for use in case of emergency.

The engineers in 1839 and 1840 projected reservoirs for the purpose upon the eastern and western slopes of the Allegheny mountains, near Hollidaysburg, for the eastern division, and upon the south fork of the Conemaugh near Johnstown for the western division. A large area of land was submerged by each of the reservoirs, forming beautiful lakes surrounded by high rolling ground; they answered the purpose for which they were built, and passed out of the possession of the State authorities upon the sale of the main line. The western reservoir and adjacent lands became the property of a company who established an elegant resort upon the shore of the great sheet of water which was maintained until the time of the memorable flood of 1889, when the waters destroyed the retaining bank of the reservoir, and a frightful loss of life and property followed the course of the mighty wave that came down the ill-

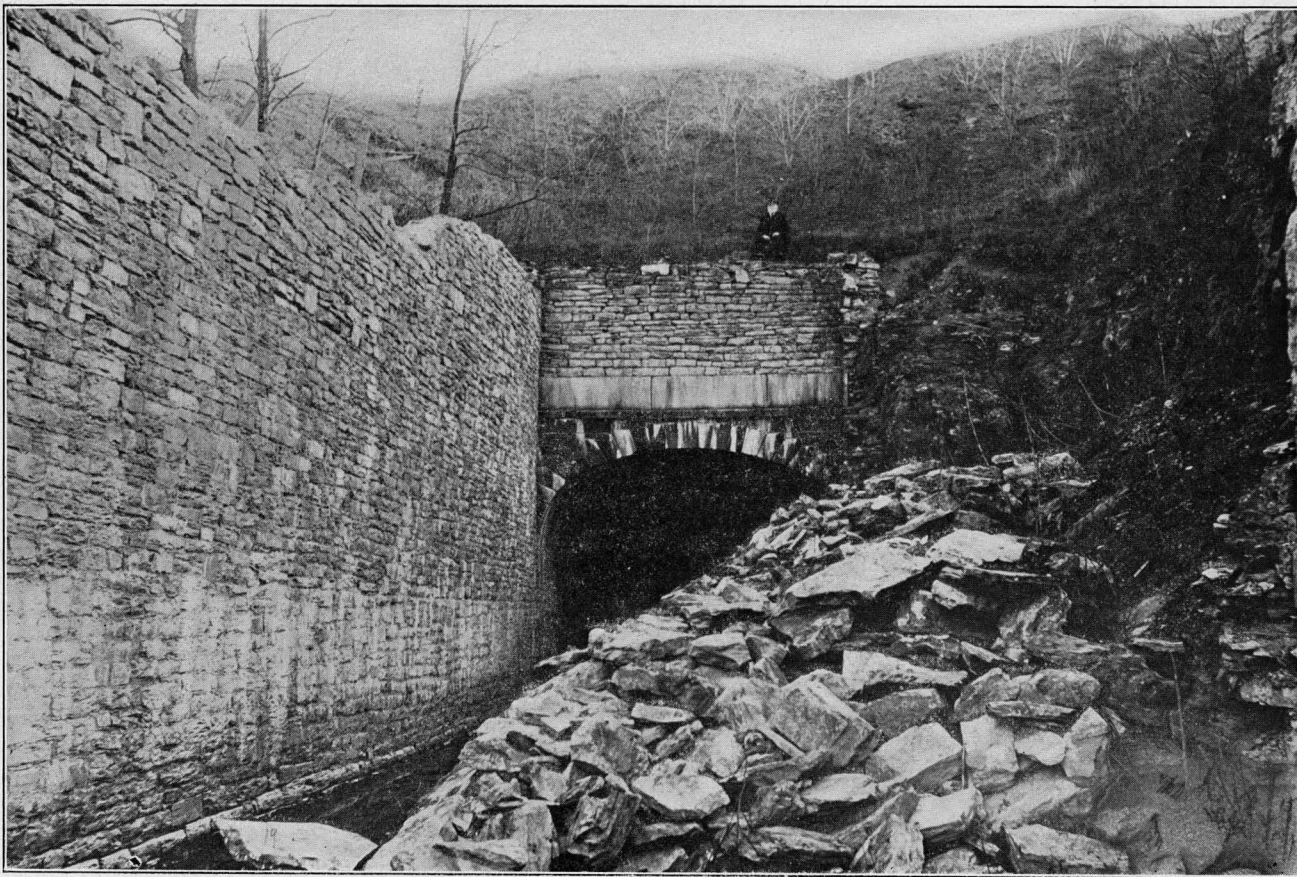
fated valley of the Conemaugh, submerging everything in its path and spreading dismay and death in the unfortunate city of Johnstown and the neighboring towns and villages.

The financial operations of the works were in the first years considered satisfactory. The receipts averaged about one and a quarter millions per annum for the first six years, and the expenditures about \$625,000. In the succeeding years, when the superstructure began to show signs of decay, the expenditures began to increase, so that in 1846 they amounted to \$707,000, in 1847 \$723,000, and in 1848 to \$1,008,429, while the receipts in the latter year amounted to \$1,500,555. At this time the debt of the State approximated \$40,000,000, and the agitation began for the sale of a portion at least of the public works. To this end an act, entitled "An act to reduce the State debt and to incorporate the Pennsylvania Canal and Railroad Company," was approved the 29th day of April, 1844, by Governor David R. Porter. This act provided for the sale of the railroad from Philadelphia to Columbia, the canal from Columbia to Hollidaysburg, the Portage Railroad over the Allegheny mountains from Hollidaysburg to Johnstown, and the canal from Johnstown to Pittsburgh, for the sum of \$20,000,000. This sum was to form the capital of a company incorporated by the same act. Commissioners consisting of prominent men from different sections of the State were named and appointed to offer for sale the stock and shares of \$100 each of the said Pennsylvania Canal and Railroad Company at public auction in the city of Philadelphia, payable in money or certificates of indebtedness of the State. Section 30 of the act provided "that so much of this act as relates to the sale of certain public works shall not go into operation unless approved by a majority of the people, in the following manner, to-wit: "That at the next general election the qualified "voters of this Commonwealth, or as many of them as choose to do "so, shall deposit in the ballot boxes at the usual times and places "provided by law separate ballots indorsed 'main line,' with the "words, 'for sale of the main line' upon them, or 'against the sale of "the main line,' as their opinion may be."

At the election in the succeeding autumn a majority of the votes cast were in favor of the sale of the main line, and in accordance with the provisions of the act of Assembly the Commissioners appointed the 20th of January, 1845, as the date to begin the sale of the stock, The sale of the stock was not consummated, and therefore the works remained in control of the State and its Board of Canal Commissioners. Several years of good traffic followed, and Governor Francis R. Shunk, in his message to the Assembly January 5, 1848, in commenting on the prospects and success of the system, said: "The increased and increasing value of these great works renders them an object worthy of peculiar care and protection, and must forever nega-



Lock No. 1—Abandoned Union Canal, West of Tunnel, near Lebanon, Pa.



West End of Tunnel, Abandoned Union Canal, near Lebanon, Pa.

tive the idea of the State surrendering the control over them to a corporation." In 1850, Governor William F. Johnston in his message to the Assembly said: "The method adopted in the management "of the public works is evidently defective, as the State does not derive an adequate share of the profits arising from the use of the "Columbia Railroad." This remark, caused by a continued decrease in current receipts, created a distrust in the public mind, and the question of a sale was again discussed, which was increased by the construction of the Pennsylvania Railroad, which many feared would ruin the canals of the State.

In 1852 Governor Johnson said in his message: "It cannot be "doubted that the revenues derived from the public works ought to "be very greatly increased. These improvements should bring a "clear revenue to the treasury. In other states canals and railways "have rarely failed to become sources of such revenue within 20 "years from the period of construction, while with us, from causes "heretofore suggested for legislative action, and still within legislative control, the result has been widely different."

As late as 1853, Governor William Bigler in his annual message said: "There are a few public enterprises to be consummated to render Pennsylvania's triumphs complete. The North Branch Canal "must be finished, the Allegheny mountains must be passed without "the use of inclined planes, and our metropolis must be connected "with the lakes by means of a railroad."

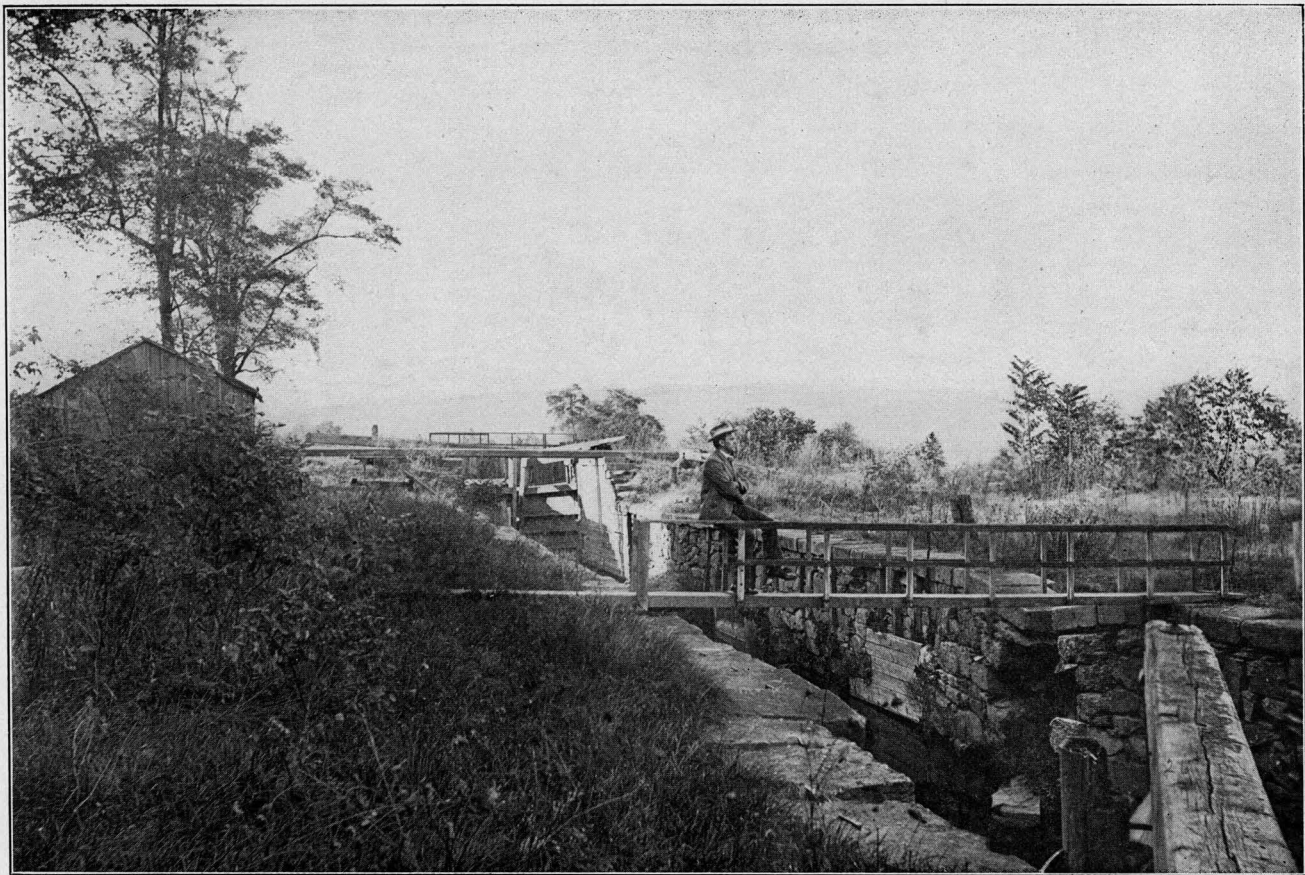
In accord with the declaration of the Governor, a statement to the Legislature on the finances, made January 4, 1854, contained an item of expenditure of \$1,000,000 for the construction of the North Branch Canal towards the New York state line, and an item of \$556,000 for the construction of a new railroad to avoid the inclined planes on the Allegheny mountains. In addition to these expenditures, estimates were presented requiring an additional million to complete the urgent desires of the chief magistrate as expressed in his message of the previous year. The same message discussed the sale of the public works, because of its agitation in the public press. The Governor was not favorable to the proposition, but said: "It is "apparent that the effect of competition on the value of these works, "the inroads which may be made by science and mechanic arts on "every description of transportation facilities now in existence, the "casualties that may result to them from the elements; in short, the "mutability of human structures and the propriety of simplifying "the duties of government must constitute mainly the considerations "in favor of the separation between the State and her improvements. "If it be desirable to sell the public works, we should not underrate "their importance, nor is it just to disparage the wisdom of their "founders. We are prone to murmur against the policy that dic-

“tated their construction because of the debt we have thus incurred, “and yet if the proposition were submitted to cancel this liability “by their destruction or disuse, we should be compelled to reject it.”

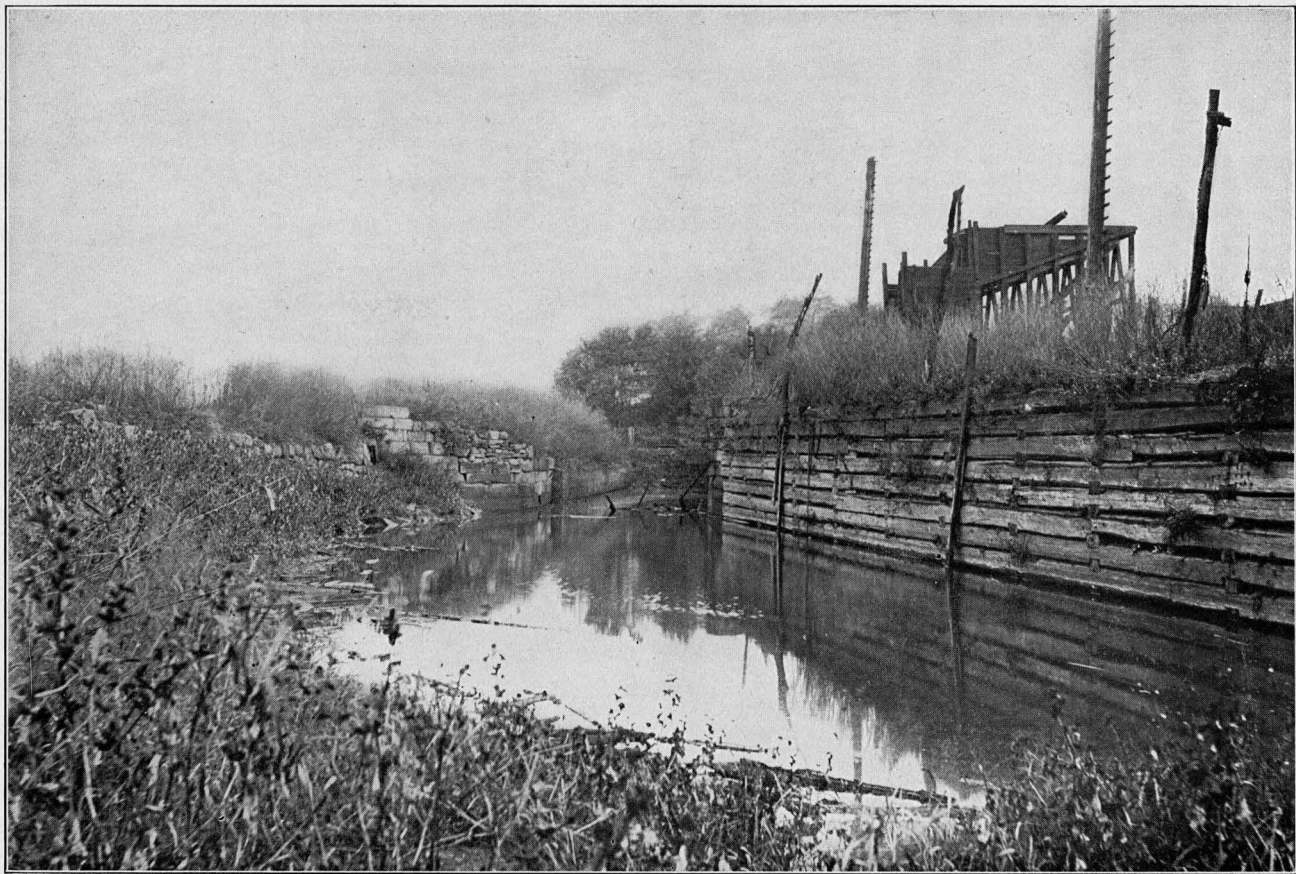
Objections were also urged against the sale to any corporation in which the State would be a holder of the stock, but recommended that in case the sale should be determined upon, that a full compensation equivalent to \$22,000,000 of State bonds should be the minimum price.

By an act of Assembly, approved the 27th of April, 1854, the Governor was authorized to invite sealed proposals for the purchase of the main line of the public works from Philadelphia to Pittsburg. The minimum price was fixed at \$10,000,000. No bid for a less amount could be entertained. Governor Bigler, in his message of January 5, 1855, declared that proposals were invited during the year 1854, covering periods of several months, and that none had been received. The Governor in his comments on the proposed sale said: “A sale might not prove injurious to the public weal, but a bad “sale would assuredly be a greater misfortune than no sale at all.” Continued efforts were made to effect a sale, and by an act of Assembly, approved the 8th day of May, 1855, the Governor was directed to advertise notice of a public sale (within ninety days after the passage of the act) of the main line of the public works, for a sum not less than \$7,500,000. The act of Assembly provided that in the event of the purchaser being the Pennsylvania Railroad Company an additional million of dollars should be charged, for which amount (paid in excess of the minimum price fixed), the said company should be exempt from the tonnage tax imposed by the State in order to make up any deficiency in revenue from the main line, because of the construction of the Pennsylvania Railroad. No sale was made under this act; no offers even having been made. The act providing for the sale also provided that (in case no sale was effected) the Governor should invite proposals for the purchase or lease of the said works. In accordance with the provisions of this section John Edgar Thompson, for the Pennsylvania Railroad Company on the 20th of December, 1855, submitted a proposition to Governor James Pollock for the purchase of the main line and also for the Columbia Railroad separately. For the main line from Philadelphia to the Monongahela and Allegheny rivers, including the real estate, shops, locomotives, cars and other property connected therewith, the sum of \$7,500,000 was offered, payable in instalments, covering a period of thirty years, the State to repeal “all tonnage tax laws” heretofore imposed

The Pennsylvania Railroad Company at the same time proposed to purchase the Philadelphia and Columbia Railroad alone at the cost of construction, agreeing to pay forever, semi-annually, to the State Treasurer an amount equivalent to the dividend paid to the stockholders of its company, on an equal portion of its capital stock.



Old Lock at Wrightsville, Pa.



Outside Canal Basin at Columbia, Pa.

The Harrisburg, Mt. Joy and Lancaster Railroad Company, by its President, also submitted a proposition to purchase the Philadelphia and Columbia Railroad for \$4,000,000 in cash or in loans of the State payable in instalments covering a period of twenty years.

These were the only proposals received which were submitted to the General Assembly by Governor Pollock in his message January 1, 1856. The Governor favored the sale and said: "A sale of these works for a fair consideration and upon terms just and liberal, would constitute a beginning in the process of liquidation that would free our Commonwealth from debt, and her people from consequent taxation. In every measure calculated to produce these desirable results, I will cheerfully co-operate with the Legislature."

The receipts from the public works during the year 1856 were \$2,006,000, and the expenditures \$1,943,900, leaving but \$62,100 in excess for interest. Governor Pollock in his message of January 7, 1857, in commenting on the results of the operations, said "Every consideration of public policy, of present and future interest, requires the separation of the State from the management and control of these works. A sale of the main line for a fair consideration and upon terms just and liberal to the purchasers is the proper remedy. The subject is earnestly recommended to your favorable consideration."

In pursuance of these suggestions, legislation was secured on the 16th of May, 1857, providing for the sale of the main line, and on the 25th of June following it was sold to the Pennsylvania Railroad Company for \$7,500,000 and the line was delivered to the purchaser on the first day of August, 1857, payable in bonds to be redeemed at stated periods ending July 31, 1890.

Governor Pollock gave expression to his feelings in his message to the Assembly on January 6, 1858, in these words: "I cannot forbear congratulating the people of the Commonwealth on the consummation of this sale. Public sentiment as expressed through the ballot box, and in other forms equally significant, demand it—public policy and the interests of the Commonwealth required it. It is done—the many approve—few complain—those most, who have gained an unenviable reputation by a reckless disregard of the public interests as exhibited in the extravagant, useless and fraudulent expenditures of the public money for selfish or partisan purposes."

Thus an important step was taken in the disposal of the main stem in the system, and the Governor in the same message warmly recommended the sale of the remaining branches "for a fair consideration, upon terms just and liberal to the purchasers, amply protective of the rights and interests of the people."

Quick to accomplish the desired end, the Legislature passed an act for the sale of the State canals (which was approved the 21st of April,

1858) providing for the sale of all the public works remaining unsold (to the Sunbury and Erie Railroad Company) consisting of the Delaware Division, the Lower North Branch Division, the Upper North Branch Division, the West Branch Division and the Susquehanna Division for the sum of \$3,500,000.

This act authorized the Sunbury and Erie Railroad Company to issue seven millions of bonds, the one-half of which were to be used in the construction of the railroad from Sunbury to Lake Erie, and the other half in the purchase of the branch canals, thus establishing a basis of credit for the construction of an important line of railroad to the lakes. The act of Assembly also gave power to the railroad company to dispose of the lines of canal with a proviso that in case the canals were sold for more than the price paid to the State, 75 per centum of the excess received should revert to the Treasury of the Commonwealth.

Governor William F. Packer, in January, 1859, in his message informed the Assembly that on the 19th of May, 1858, he had conveyed to the Sunbury and Erie Railroad Company the lines remaining unsold upon the compliance of the terms of the sale, and before the meeting of the Legislature the Sunbury and Erie Railroad Company had sold the lines for \$3,875,000 of which amount \$281,250.00 (75 per cent. of the excess above purchase price), was added to the original price and paid into the Treasury of the Commonwealth.

Governor Packer, endorsing the opinions of his predecessor in office said: "I have an abiding confidence that the measure will prove wise; guaranteeing the completion of one of the greatest improvements ever projected in the Commonwealth, it, at the same time, divorced the State from the unprofitable and demoralizing management of the railroads and canals. Whatever differences of opinion may at any time have been entertained in regard to the propriety of the details of the legislation authorizing the sale of the main line, or the branches, it can scarcely be doubted that the public welfare will, in every respect be vastly promoted by the transfer of the management of the public works from the State to individual owners." He continues: "It would, in my judgment, be a public calamity, if, by the happening of any contingency, the Commonwealth should be constrained to again become the owner, and resume the management, of any portion of the public improvements."

From these comments we find that the Executives of the Commonwealth of all political parties, were at this time in harmony upon the relinquishing of the public works, notwithstanding some litigation was proposed to prevent the disposition of the line, as decided upon.

At this date it may be safely inferred that the sales were profitable to the Commonwealth and the purchases a bargain to the buyers. In the abandonment of many miles of the works, there may have been

some losses, most of which have ere this been made up, in economies practiced because of non-sustenance indirectly, and by increase of traffic upon lines connected in interest with those abandoned.

The Board of Canal Commissioners, consisting of Messrs. Strickland, Scott and Frazer, held their last meeting on the 25th of January, 1859, and transferred to the Auditor General the custody of all the books, papers, records and other property belonging to the Canal Commissioners' Department, which was their last official duty, and the official Board was abolished.

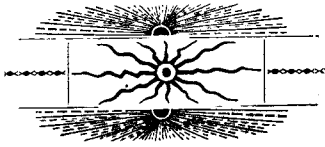
On February 26, 1885, by an act of Assembly, the records and papers of the Canal Commissioners were transferred from the custody of the Auditor General to that of the Department of Internal Affairs, where they remain on file classified for reference when required.

The remaining portions of the main line, known as the Pennsylvania Canal and its branches consist at this time of 144 miles of navigable canal with a width at water line of 52 feet, from Columbia to Nanticoke (from which point anthracite coal may be transported from the mines), and a section of 25 miles from Northumberland toward Muncy, covering that distance of the old West Branch Division.

The Pennsylvania Railroad Company operated the canals acquired by the purchase as a "Canal Department" of their road, for a period of ten years, when the entire main line and leased branches were merged into the present Pennsylvania Canal Company, and operated under a separate organization from the railroad. General Isaac J. Wistar is president of the company and Thomas T. Wierman is the Chief Engineer.

It is a model of canal navigation in its construction and all of its appliances, and in the maintenance of its 60 locks (overcoming 277 feet in elevation) 99 houses for employes, 73 waste ways and overflows, covering 7,322 feet of surface, 309 bridges, 71 culverts, 5 dams across large streams, 33 aqueducts, comprising 2,832 feet of superstructure and 150 boats, all involving a watchful care and zealous supervision; subject as they are to damage from many contingencies, which can only be averted by strict attention to the duties of those in charge of the work. The improved mode of transportation in boats operated in pairs carrying 250 tons, gives this division of the canal enlarged facilities for delivering coal in large quantities during the season of navigation.

Although the traffic upon the Pennsylvania Canal has not in the last year of the century yielded any profits to its owners, it is nevertheless a worthy monument of the once famous line of Pennsylvania's system of internal improvements which formed a memorable part in the history of the Commonwealth.

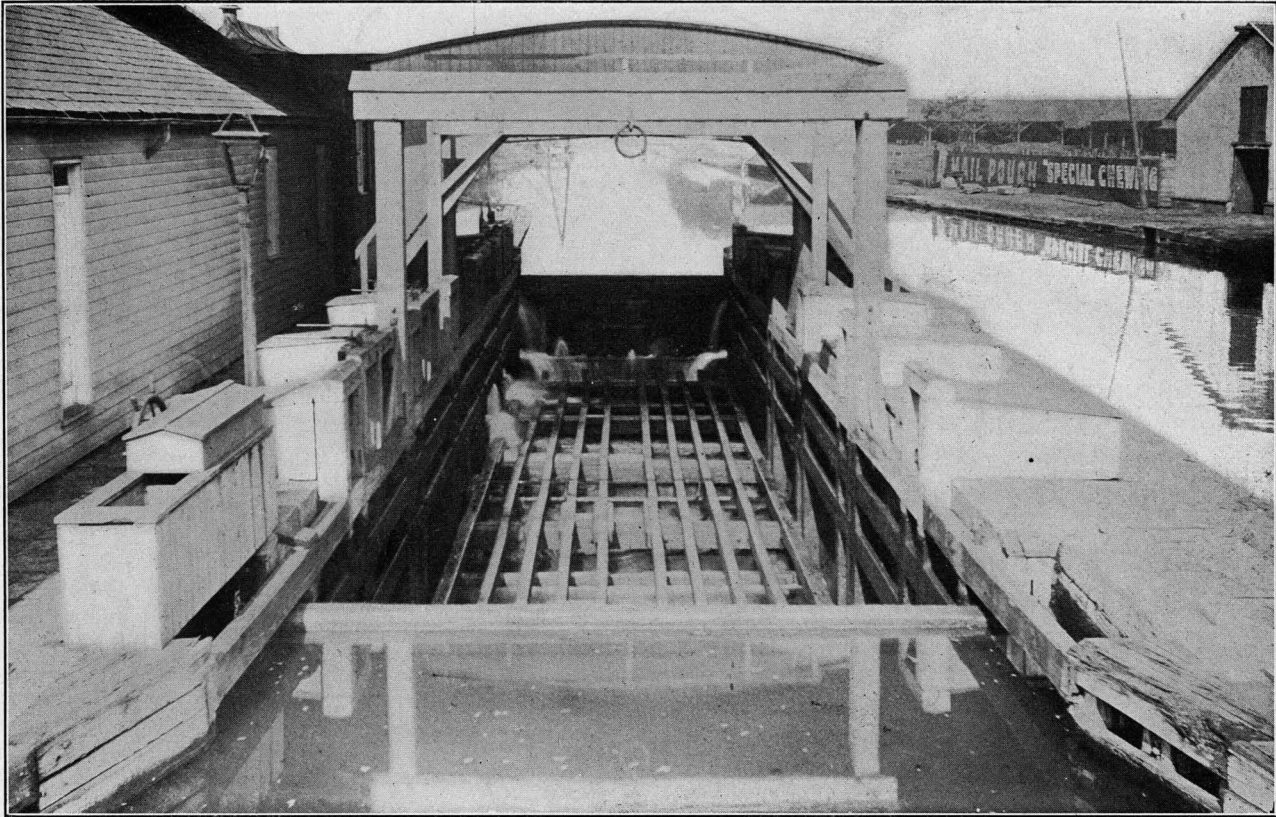




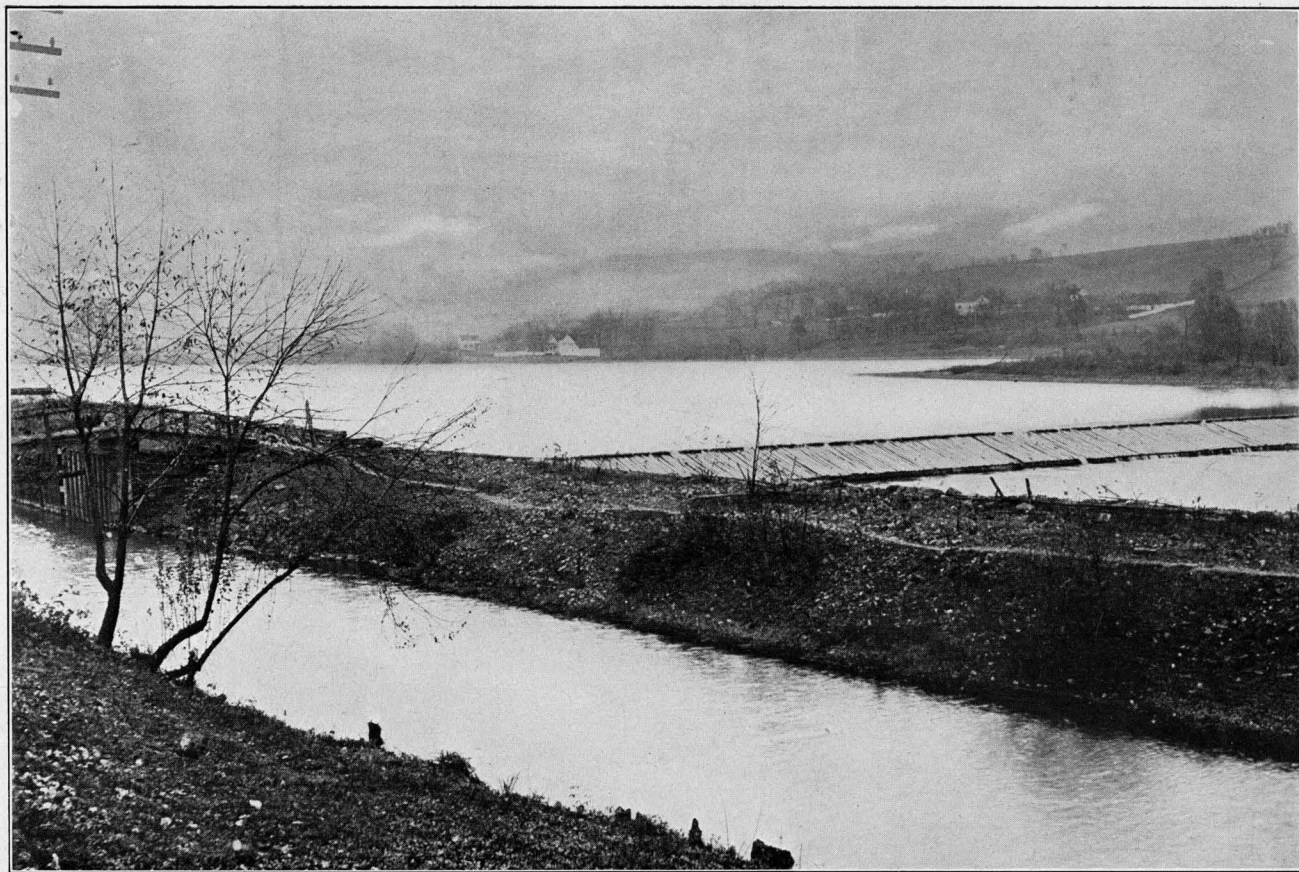
Abandoned Lock near Baileys, Pa.



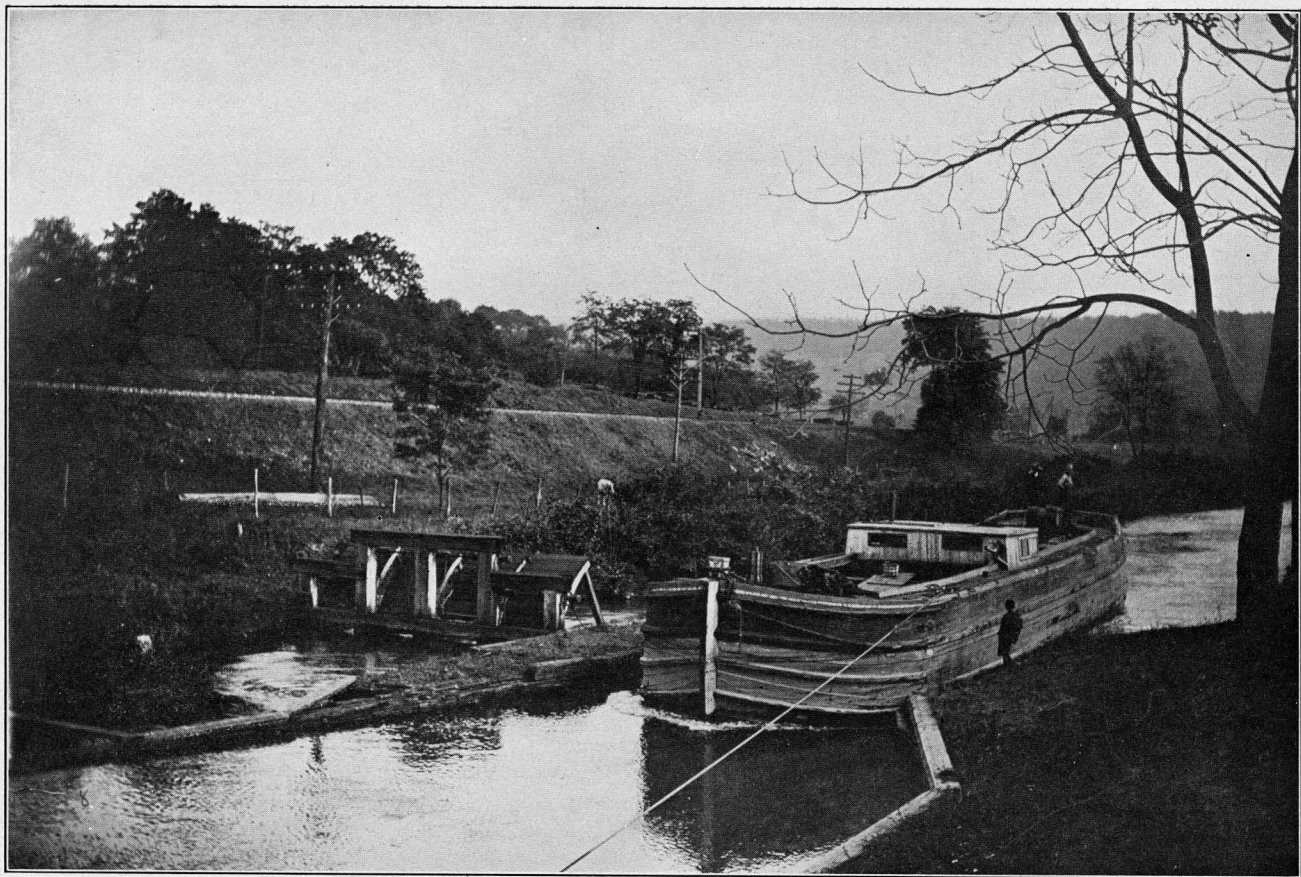
Ruins of Lock on Juniata Division, Pennsylvania Canal, at Lewistown, Pa.



Weigh Lock at Harrisburg, Pa., showing lock chamber empty of water.



River Dam at Old Ferry Station, Pa.



Canal Guard Lock, Dauphin Narrows, used to check the current of the river, when at flood stage and flowing into Canal.



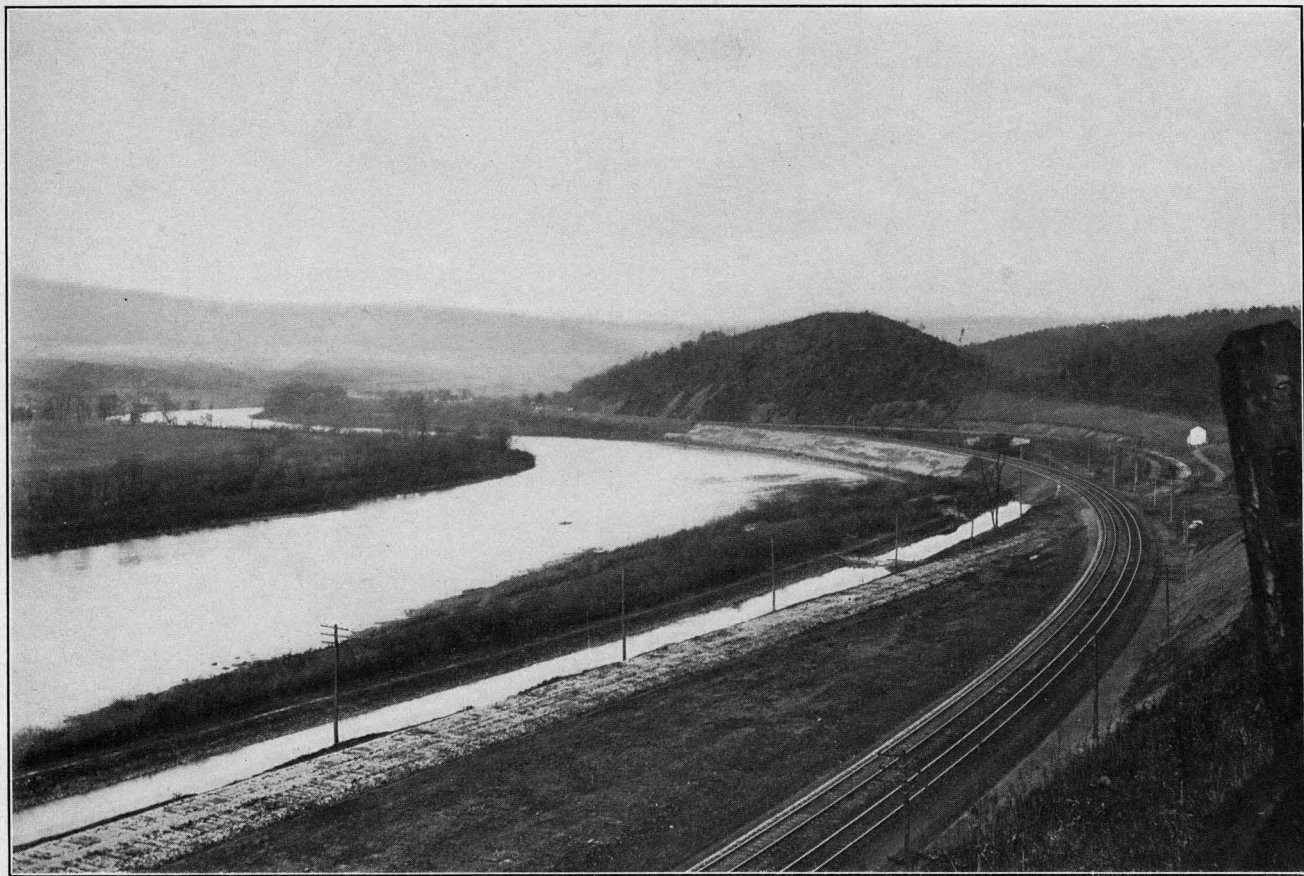
Canal Lock at Dauphin, Pa.



Canal Lock at Dauphin, Pa., showing boat passing up stream, also "Twin Brothers" large elm tree standing on river bank to right of picture.



Tunnel of the abandoned Union Canal near Lebanon, Pa.



Trimmer's Rock, east of Newport, Pa., showing Juniata River, abandoned Canal, and Pennsylvania Railroad; also abandoned location of railroad.

