INDIANA CANALS

JOURNAL OF THE CANAL SOCIETY OF INDIANA

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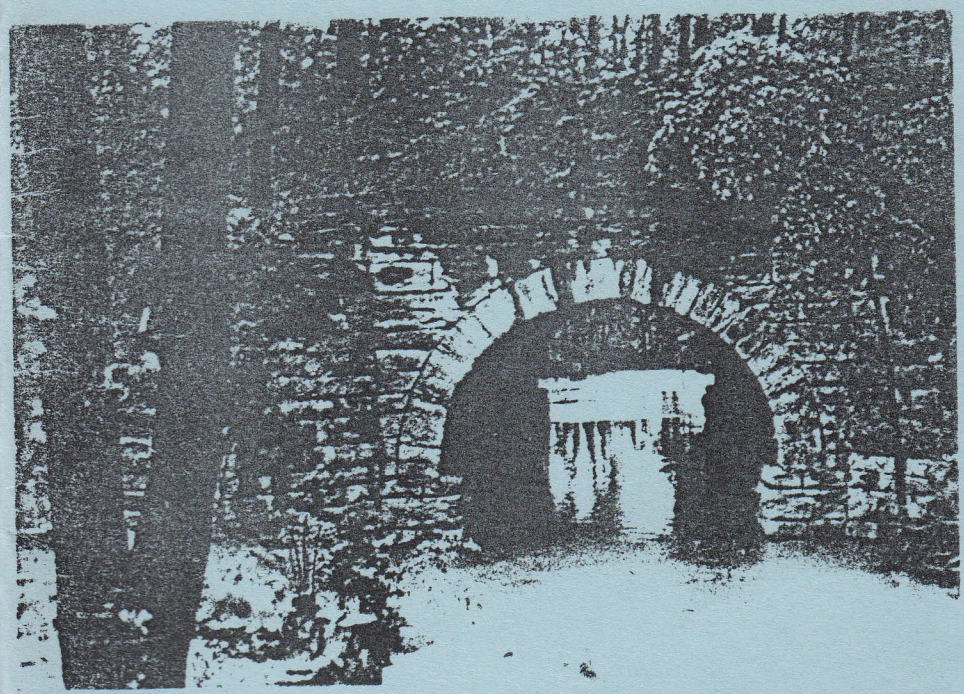

Miami & Erie Canal culvert at Junction, Ohio.

INDIANA CANALS is published quarterly. Send articles and comments to the editor Stan Schmitt, 3900 N. Fulton #1F, Evansville, IN 47710.

FROM THE EDITOR

Greetings fellow Canawlers-

It seems hard to believe, but with this issue we begin the sixth year of INDIANA CANALS. Over the past five years we have covered quite a bit of ground with the publication. Although the Wabash & Erie Canal has been a main feature, I have tried to be even handed and include information on all of Indiana's canals. When possible, I have tried to tie the nearest issue of INDIANA CANALS to the Spring and Fall tours of the Society. I would like to continue upgrading the publication, but will not be able to do so without your support. If you look back through some of the previous issues of INDIANA CANALS you will find that no authors are listed for many of the articles. In those instances everything in that issue was submitted by me, the editor. Being a publication of the Canal Society of Indiana does not mean the editor's publication. As in the past, I again ask for the membership to help in submitting articles. It doesn't have to be a major literary work - just something about the canal history of your area or even an interesting canal clipping from your local period newspaper. Unlike previous times, I have no reserve of already submitted articles to use in future issues of INDIANA CANALS. I am also in need of suitable pictures for future cover pages and to accompany your articles. If you have clear pictures of interesting or little known canal structures I would appreciate seeing them. All pictures will be returned after use. Since there have been no complaints during the past year I am assuming that there are no significant problems to be corrected. I would appreciate hearing what you would like to see covered in future issues. I would also like to try a Question & Answer column again. This would feature reader's questions on various aspects of Indiana canaling, which in turn would be answered by our knowledgeable membership. It has been the intent of INDIANA CANALS to be an educational vehicle to disseminate information on Indiana's

canal era. To do that we need to have a two way communication between the reader and the editor. I look forward to hearing from a lot of you during the next year. (Don't think someone else will do it.)

The next issue of INDIANA CANALS will be devoted in anticipation of the SPRING TOUR, to the Whitewater Canal. Don't forget to send in your reservations before March 24th. Future issues for this year should feature articles on Indiana's unbuilt (uncompleted) canals, the Wabash & Erie Canal boatman's hospital, Fall Tour area, Wabash & Erie Canal regulations and anything else that you might care to contribute. The spring issue should arrive before the tour.

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PACKET BOATS FOR THE WABASH AND ERIE CANAL.

There are now building, and nearly completed, at the boat of William Smith, near the weigh lock, two large and beautiful modeled packet boats designed to ply between Toledo and Fort Covington, on the great Ohio and Indiana Canal. They are to run on the line of Brockway and Co., and with other boats now on the canal to form a tri-weekly line. The distance from Toledo to Covington is 216 miles, and the boats have been constructed with express reference to performing their trip in the shortest possible time. They are each 80 feet long, and are pronounced by persons experienced in such matters, to be the most perfect models of packet boats ever turned out in Rochester. In the interior they are high, airy, and commodious - their finish is to be equal to the best. - Rochester Gazette.

Prairie Farmer August 21, 1847.

CANAL CELEBRATION AT DEFIANCE

The Wabash and Erie Canal is now filled with Water to Independence, five miles below Defiance, and boats are regularly running to that place. In two or three weeks more, the water will be let in to Florida, some three or four miles below, and at the foot of the Flat Rock ripples. From this point the Maumee is free from all obstruction and is navigable at all seasons to Providence at the head of the rapids; and as the canal is already completed from the latter place to Toledo, we shall have a good communication with the Lake. It will be but little more expense now to ship off our produce than if the canal was already completed. All that will be required will be to tranship the loading from the boat in the canal to another in the river, a distance of but a few rods, which can be easily accomplished without the use of teams. We may therefore state that the long looked for opening of navigation between Lake Erie and the navigable waters of the Wabash is consummated. This will cause a great revolution in the course of trade. The entire produce of the Wabash valley, will now pass through this place and be shipped in Lake Erie. instead of as formerly, having to be transported by land seventy or 100 miles to Chicago or Michigan City, and thence taken by the circuitous route of the upper lakes to market. Emigrants to many parts of the West, will now find this to be the cheapest, pleasantest, and most expeditious route.- There is a daily stage line between Toledo and the present termination of the Canal, where they can enter a canal boat, and in two or three days and at the expense of but a few dollars, find themselves at Lafayette, in the centre of the Wabash Country, whence they can embark in steamboats for almost any point in the West or southwest. Those who prefer can enter a canal boat at Toledo or Maumee, and come the whole distance from the Lake by water.

The canal from Fort Wayne to Defiance is one of which we may be justly proud. It is 60 feet wide and 6 feet deep, constructed in the most durable

and scientific manner, and reflects equal credit on the skill of the engineers and contractors and the liberality of the States of Indiana and Ohio. We are assured by a competent judge of such matters- a gentleman of well known talents in that line, having himself been a contractor on many of the public works in Pennsylvania and Maryland, that this portion of the Wabash and Erie Canal is equal, if not superior to any similar work in the United States.

We have been led into so many remarks on the Canal that we have not much room for the celebration. We will therefore briefly state that the packet boat Jesse L. Williams, belonging to Capt. S. Mahon - the first boat - arrived in Defiance on Monday night last escorted by the Defiance Band and a number of the citizens. She was received with greatest enthusiasm. The inhabitants of Defiance felt that a new era had dawned upon them as they beheld the consummation of their long cherished hopes. The next morning a large party of ladies and gentlemen accompanied by the Band, embarked in the canal boat and took a trip to Independence. All were animated and in good spirits, despite the hardiness of the times. , On the return of the boat the gentlemen on board organised a meeting by calling Judge N.B. Adams to the chair and appointing W.A. Brown, Secretary, and passed the following resolutions:

Resolved, That in the completion of the Western division of the Wabash and Erie Canal we anticipate a triumph over every obstacle, and that nothing now can prevent our rapid improvement.

Resolved, That to the enterprising contractors we owe a tribute of gratitude for their steadfast perseverance to the final completion of work on this division of the canal.

Resolved, That we fully appreciate the talent and industry of our worthy Commissioner, R. Dickinson, and S. Medberry resident engineer on the Western Division of the Wabash and Erie Canal, and tender them our united thanks for their activities.

Resolved, That we still bear in mind the valuable influence of Gen. Hunt of Maumee City, in

establishing this line of canal, and his untiring zeal while a Senator in the Ohio Legislature in obtaining appropriations to the same.

Resolved, That we fully appreciate the importance of the Wabash and Erie Canal as being the connecting link between the Ohio and Lake Erie, thereby bringing the Northern trade in competition with that of the South.

Resolved, That the thanks of this meeting be tendered to Capt. Mahon, for his polite invitation and attention to the citizens of Defiance and for his gentlemanly deportment on this occasion; and that his enterprise deserves the encouragement of the citizens of the Maumee and Wabash valleys, and is fully entitled to the patronage of a generous public.

Resolved, That the proceedings of this meeting be signed by the officers and published in all the papers in the United States that feel an interest in the prosperity of Northwestern Ohio and Indiana.

N.B. Adams, Ch'n.

W.A. Brown, Sec'y.

Printed in the Fort Wayne Sentinel - July 16th, 1842.

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QUICK TRIP - The Canal Boat Niagra, Capt. H. Miller, left our dock last Monday afternoon, with a full load of wheat, flour, & c. for Toledo. She delivered her cargo, and was back here bright and early yesterday morning, making the trip to Toledo and back in a little over three days and a half. This is, we believe, the quickest trip ever made, and speaks well for the sailing qualities of this favorite boat, and the go-a-headativeness of her enterprising captain.

Fort Wayne Sentinel May 1, 1847.

In the last issue of INDIANA CANALS we concluded our series on Wabash & Erie Canal mechanical structures. Since then a number of people have asked for an explanation of some of the terms contained in the descriptions. To clarify this, a glossary of terms and drawings are included in this issue.

GLOSSARY

"A" - above, the distance above the water line or the bottom of the canal to a structure.

ABUTMENT - end anchorage of wood or stone to support a structure.

APRON - protection in the form of plank, brush or stone to prevent erosion.

AQUEDUCT - structure in the form of a trough to carry the canal across a water course. Common Indiana types were open trunk or covered bridge aqueducts.

ARCH - curved mechanical structure of wood or stone spanning an opening or serving as a support.

"B" - below, the distance between the bottom of the canal and the top of a mechanical structure.

BASIN - a widened stretch of canal for the turning of boats and the loading of cargo.

BENT - a timber frame or pier supporting a structure.

BERM - canal bank on the opposite side from the tow path.

BRIDGE - structure for carrying traffic over the canal. Common Indiana varieties tow path and road (pivot, draw, single and double track) bridges.

CAPS - covering for the top of a structure.

CLEAR - the total distance between two parts of a structure, ie. the width of the lock chamber was 15 feet clear.

COMB - the peak of a dam's structure.

COPING - stone or timber covering of a structure.

COURSE - a continuous level range of stone or timber in a structure.

COVERING TIMBER - plank cover for the top or sides of a structure.

CRIB - a timber box filled with stone forming the base or walls of a structure.

CROSS TIE - a timber piece connecting two parts of a structure to prevent movement.

CROWN - top point of a structure, ie. the crown of the arch.

CULVERT - a structure to convey a stream under the canal. Common Indiana varieties include wooden box, stone box, wooden arch and stone arch culverts.

CHORD - the distance between two points on a curve, ie. the stone arch culvert had a chord of 10 feet.

DAM - a structure across a water course to store water or raise the level of the water.

EMBANKMENT - an earthen wall built to contain or keep water out.

FEEDER - a short canal connecting a water source to the main line of the canal.

FLIGHT - a series of locks in close proximity to each other.

FRAME - timber structure forming the sides of a structure.

GATES - a part of a mechanical structure for controlling the flow of water. Various types include chain and roller, sliding, paddle, flood, head and waste gates.

GROUT - the material used in filling joints or spaces to make them water tight.

HEAD WALL - the wall of a structure which is perpendicular to the flow of the water.

HOLLOW QUOIN POST - the recess where the lock gate turns on its pivot.

KEY STONE - the final stone at the crown of an arch which holds the entire structure together.

LIFT - the distance between the water levels at the upper and lower levels of a lock.

LEVEL - a stretch of canal between locks.

LOCK - a structure of wood or stone for raising or lowering boats between different levels or controlling the flow of water in the canal.

Various types include frame, crib, stone, combined or composite and guard locks.

LOW WATER - reference point for measurement usually referring to two feet above the bottom of a river.

MITRE SILL - the V shaped timber frame on the lock floor to correctly position the closed lock gates.

MUD SILL - term for foundation timbers set in the ground.

OUT-TO-OUT - total distance between the outsides of two parts of a structure.

PIER - timber or stone supports for a multi-span structure.

PILING - timbers driven vertically into the ground to serve as a foundation.

PLATE - the top beam in a frame.

POOL - a body of water formed behind a dam.

PRISM - the cross section or profile of the canal.

PUDDLE - the clay and sand mixture used to make an embankment water tight.

RACE - a small canal for diverting water around locks or to a mill.

RANGE TIMBERS - a series of timbers laid on top of and perpendicular to the foundation timbers.

RESERVOIR - an artificial body of water created to supply water to a canal.

RING DEPTH - the thickness of stones forming an arch.

RING STONES - the curved stones forming an arch.

ROUND TIES - unhewn timbers joined to the back of a structure to prevent settling.

SHEET PILING - planks placed vertically under a structure to prevent undermining.

SIDE BRACES - diagonal pieces of timber used to hold a frame rigid.

SIDE CUT - a short canal connecting a river to the main line.

SLACKWATER - the navigable lake formed behind a dam.

SLOPE - the diagonal angle of a canal bank.

SPACE - the opening of a culvert.

SPAN - the individual section of a structure resting between two piers or abutments.

STICK - an individual piece of timber used in a structure.

SUMMIT - the high point between two water sheds.

TOE STICK - the end piece of a timber structure.

TOW PATH - the bank of the canal used by horses or mules towing the boat.

TRUNK - the main structure of an aqueduct resting on piers or abutments.

TRUSS FRAME - assemblage of beams forming a rigid frame work.

TUMBLE - a sluice allowing water to flow around a lock.

WASTE WEIR - a structure for drawing water out of the canal.

WING WALL - a curved wall projecting from the head wall to divert water flow into the structure.

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About the drawings - The nine drawings in this issue of INDIANA CANALS are based on Wabash & Erie and Whitewater canal plans located in the Indiana State Archives and the descriptions of structures contained in engineer reports. They are being used to illustrate many of the terms given above. The drawings in order of appearance are as follows;

AQUEDUCTS - cut-away views of a section of the covered bridge aqueduct at Petersburg (top) and a two span open trunk aqueduct (bottom) on the Whitewater canal.

BRIDGE - side an top views showing the various components of a single track road bridge over the canal.

CULVERT - end and top views of a stone arch aqueduct on the Whitewater canal.

CULVERT - end, side and top views of a two space wooden box culvert.

DAM - side an top cross section views of a wooden crib dam with stone abutments.

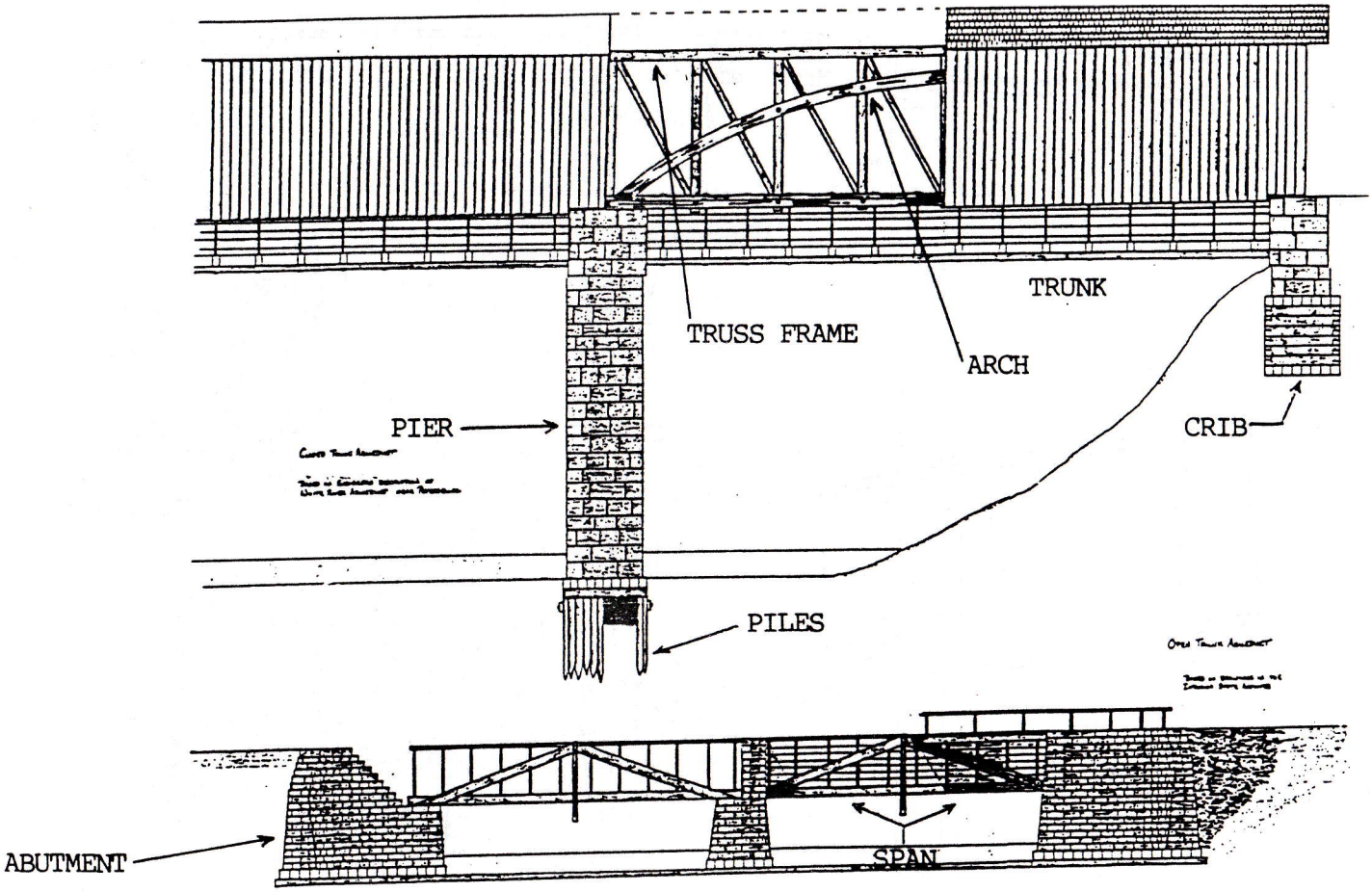
LOCK - end, side and top cross section views of a timber crib lock.

LOCK - side and top cut-away views of a combined lock on the Whitewater canal.

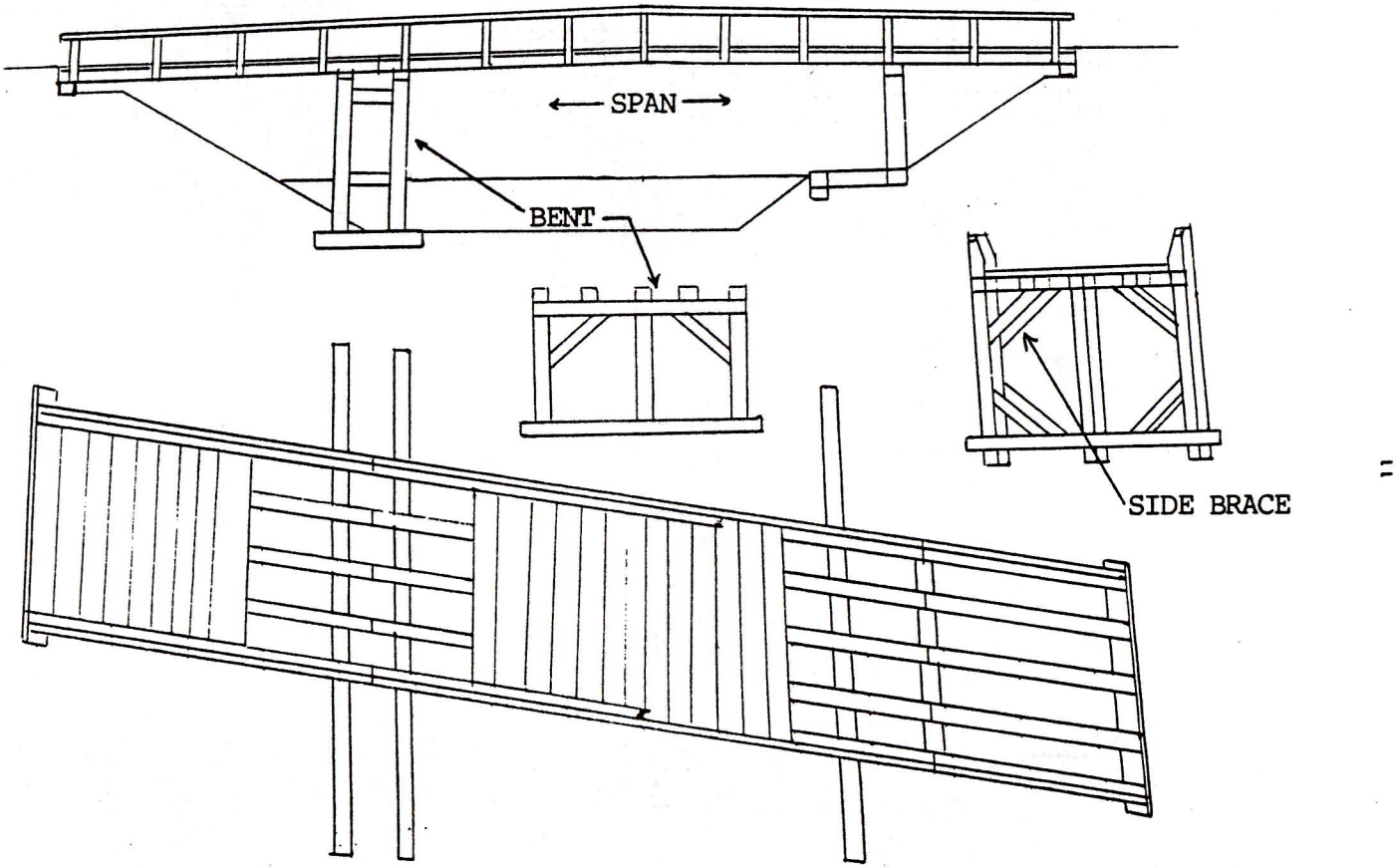
PROFILE/PRISM - cross section of the W & E canal at the Portland bluffs.

WASTE WEIR - side, end and top views of a wooden waste weir operating a chain and roller gate.

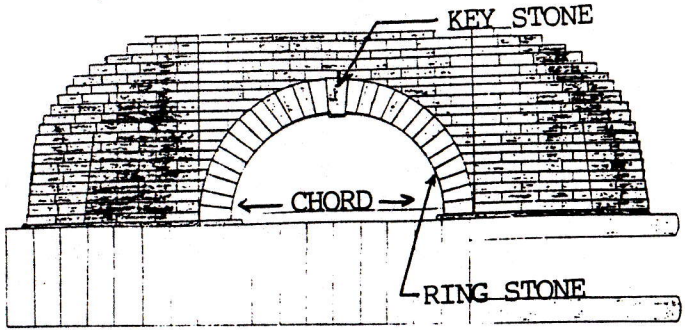
AQUEDUCTS

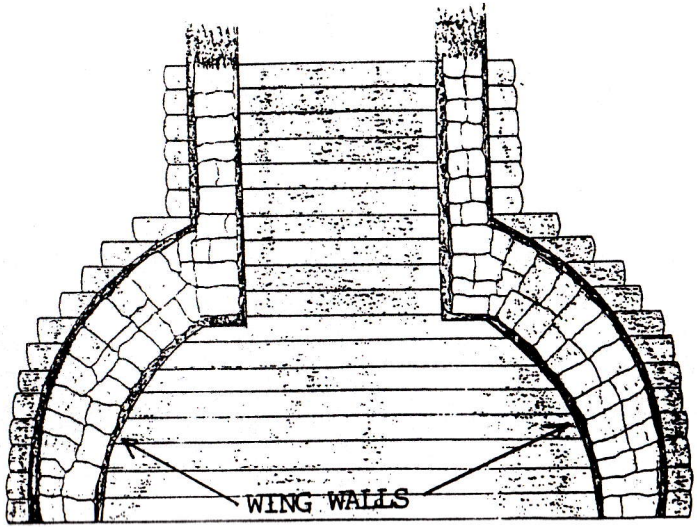


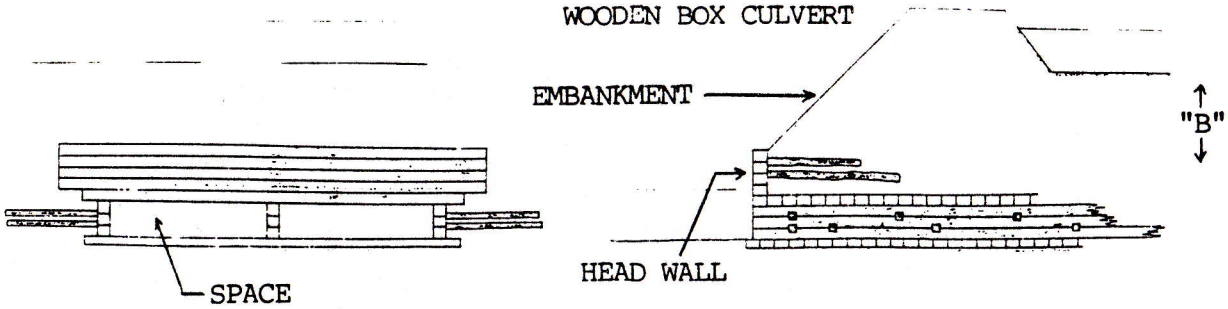
SINGLE TRACK ROAD BRIDGE



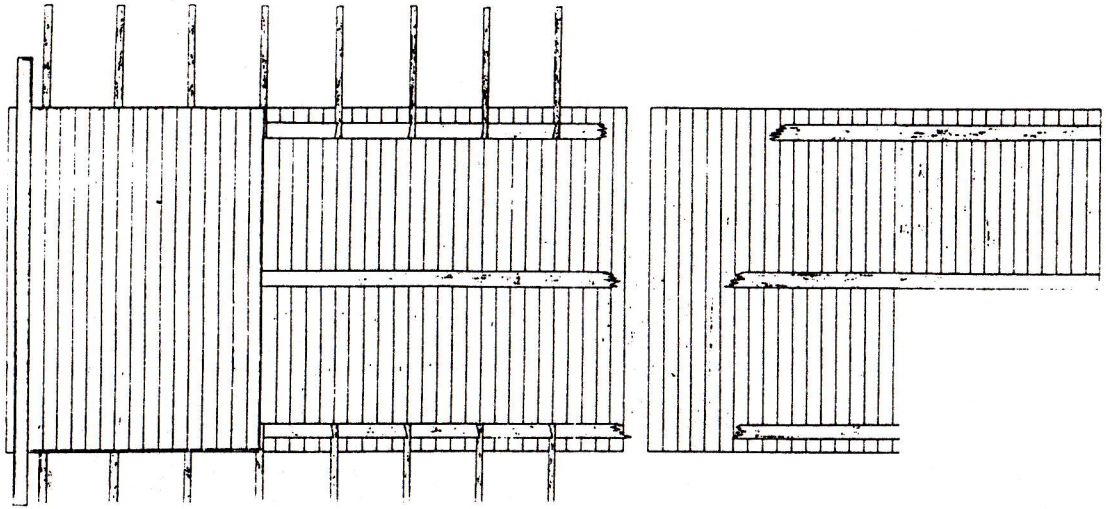
STONE CULVERT



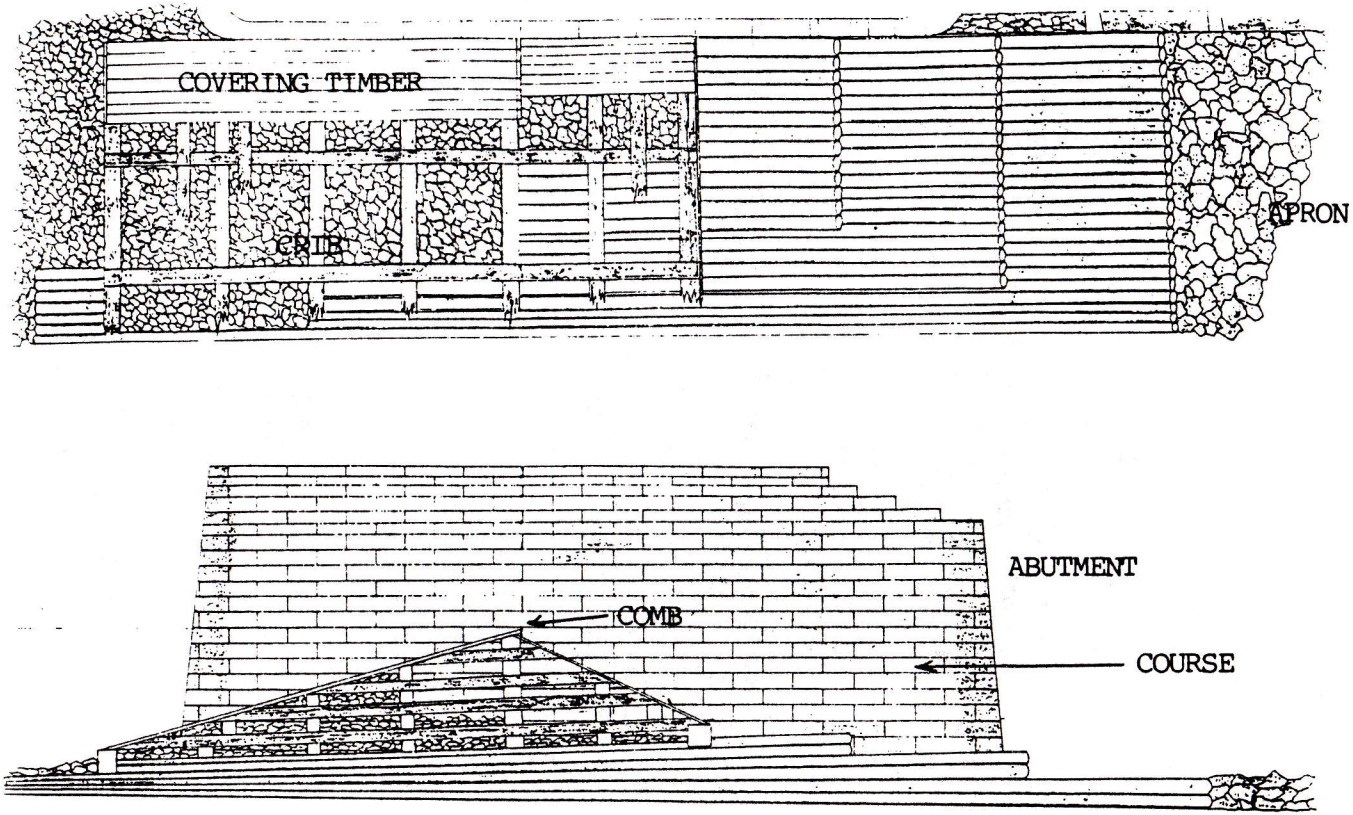




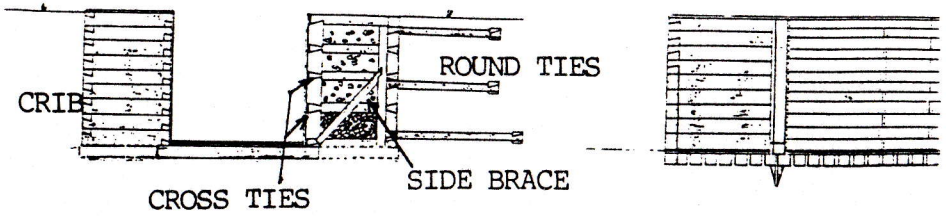
ROUND TIES

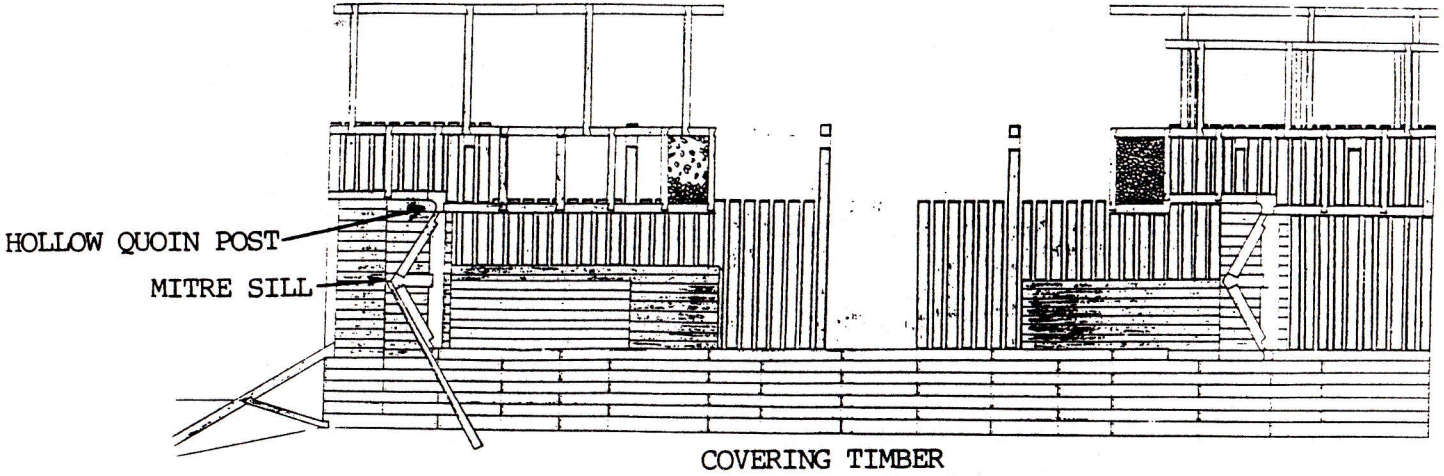


DAM

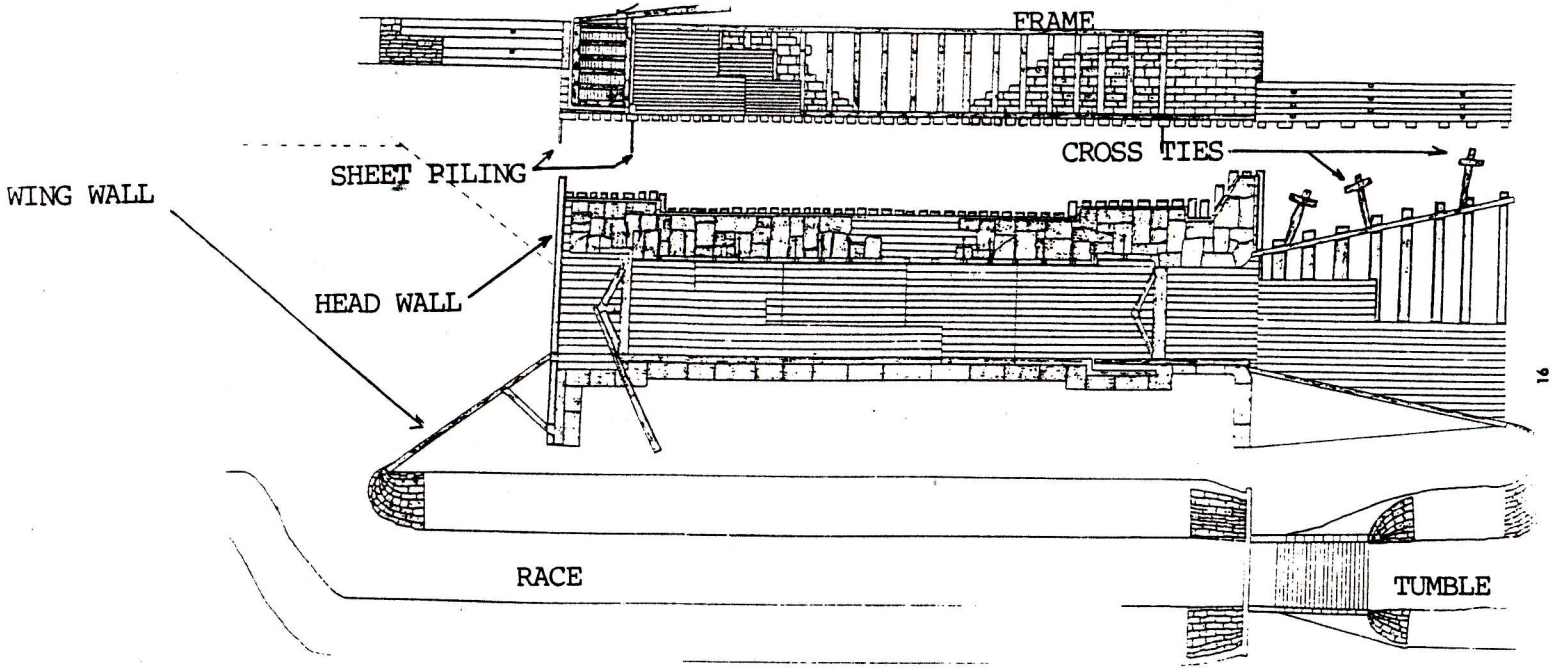


WOODEN CRIB LOCK

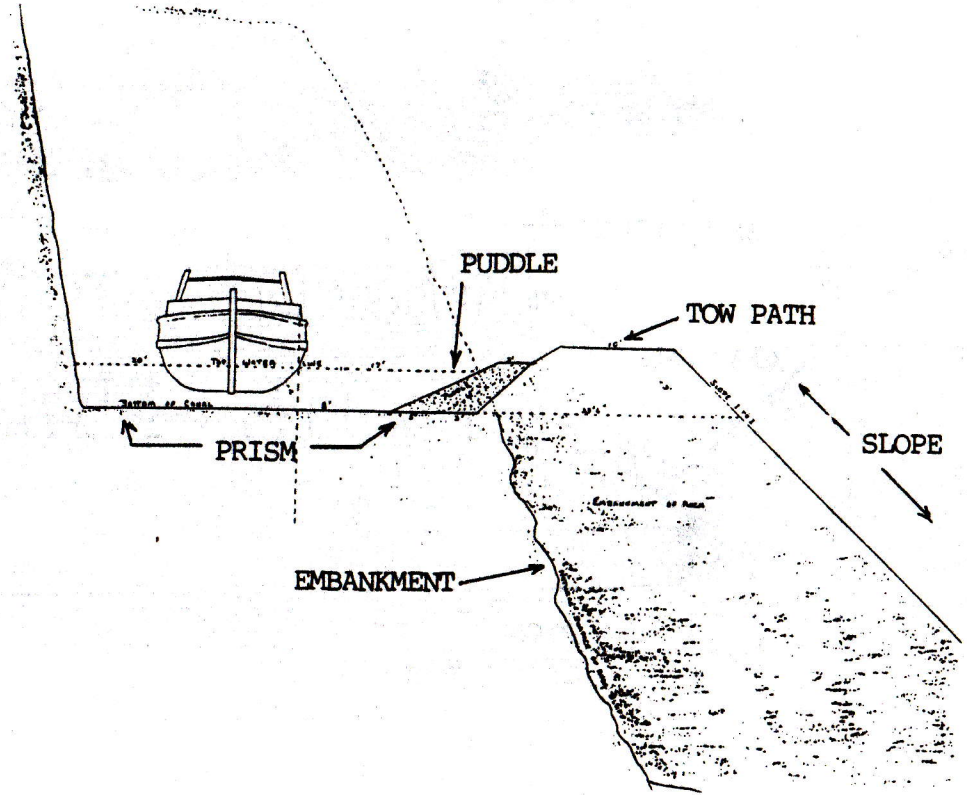




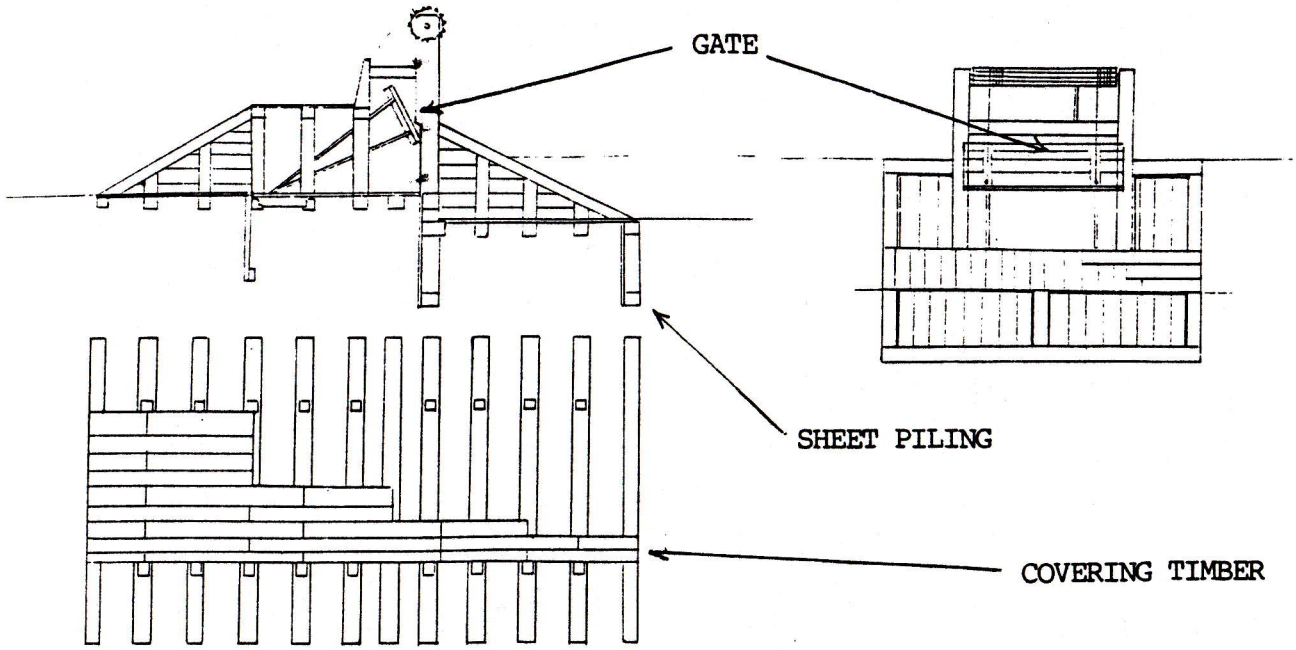
COMBINED LOCK



PRISM/PROFILE



WOODEN WASTE WEIR



Sec.9. That every boat running upon said canal, shall have a guard or plate of iron, or some other permanent device, firmly attached, so as to cover and secure the opening between the keel or stern-post and the rudder, thereby effectually preventing the tow-line of any other boat from entering said opening.

Sec.10. That no boat shall be permitted to navigate the said canal, without a good and sufficient bow line, which shall be approved of by the Engineer or Superintendent.

Sec.11. That it shall not be lawful for any setting pole or shaft, pointed with iron, steel or other metal, to be used in the navigation or management of any boat or other float on the said canal.

Sec.12. No float shall move on the canal with a velocity exceeding four miles per hour.

Sec.13. When a boat or other float shall be overtaken by another boat, it shall be the duty of the Master or manager of the former, to turn from the towing-path and afford the latter every possible fasility for passing, and to stop, if it should become necessary, until the boat or float last mentioned shall have passed by.

Sec.14. When any boat or other float, in passing on the canal, shall meet any other float, passing in an opposite direction, it shall be the duty of the master of each to turn to the right hand, so as to be wholly on the right side of the center of the canal; and the horses or other moving powers of the boat which in turning to the right as aforesaid, shall turn from the towing-path, shall be stoped so as to allow the moving power of the other, and the float itself, to pass freely over the towing rope of the float so turned from the towing path.

Sec.15. Any float moving on the canal, which shall have arrived within one hundred yards of any lock, in which the water is on the same level with such float, shall be permitted to pass such lock, before any float not on the same level.

Sec. 16. No person shall attempt to pass any float into any lock, or out of any lock, until the main gates or foot of said lock, as the case may be, between which gates such float shall be about to pass, shall first be entirely opened into their respective recesses, nor until all paddle and culvert gates of such lock shall be closed.

Sec. 17. Neither the main gates at the head or at the foot of any lock, shall be closed, or allowed to close of their own accord, while either of the paddle or culvert gates at the opposite end of said locks shall remain open.

Sec. 18. When any float shall pass out of any lock, the main-gates of such lock, through or between which such float shall have passed out, shall be entirely open and completely within their several recesses, and all the paddle and culvert gates of such lock shall be left closed. Provided however, that where the Board of Trustees, the Engineer or Superintendent having charge of that part of the canal, in which the lock is situated, shall direct any paddle, culvert or other gate to be left open for the purpose of passing water through the same, such direction shall be complied with and obeyed by all the lock-keepers, masters of floats, boatmen and all other persons concerned in navigating such canal.

Sec. 19. That in no case shall the stern or bow of any boat or float, approaching or being about to enter, or having entered any lock, be permitted to run against, or strike the head walls of either of the gates of such lock wilfully or negligently.

Sec. 20. No lock-gate, culvert gate or paddle-gate, shall be closed, nor be permitted by any person using the lock to close itself with such violence as to injure, or be liable to injure itself.

Sec. 21. Every master or owner of any boat or other float, or any other person having charge of such float, who shall violate either of the provisions contained in the fourteen sections next preceding this section, or who shall permit any boatman or other person assisting in the navigation or management of such float, to violate either of the said sections, or any of the

provisions thereof, shall forfeit and pay a sum not less than five nor more than twenty dollars.

Sec.22. Every penalty and forfeiture imposed by this act, for which any master, owner, boatman or other person may be liable, and which herein recoverable by action of debt in the name of the Board of Trustees of the Wabash and Erie Canal, shall be chargeable on such boat or float, and when any suit shall be instituted for any such forfeiture, the officer issuing such process may cause such boat or float, together with the horses and furniture belonging thereto, to be attached and detained.

Sec.23. Any person who shall wilfully throw into the canal any saw log, or other timber, or other thing which may obstruct the navigation, shall, on the conviction thereof, forfeit the sum of ten dollars. And it shall be the duty of every Engineer, Collector, Superintendent or Agent employed on the canal, to seize all logs, fire-wood or other thing, which may be found floating loosely, and all rafts which may be found in the canal, and to hold the same to satisfy the penalty for the aforesaid offence.

Sec.24. If any person in navigating, or assisting in the management of any boat or other float, on the canal, shall either through design or negligence, in the navigation thereof, injure any lock, lock-gate, waste-gate, guard-gate, aqueduct, bridge or other mechanical structure, he shall forfeit and pay, upon conviction thereof, any sum not less than five nor more than twenty dollars, and moreover be liable for all damages caused by such mismanagement or negligence.

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(to be continued)

AN ACT to cede and transfer the right and interest of the State in and to the Northport Feeder Dam to the Board of Commissioners of the county of Noble, for the use of common schools.

APPROVED JANUARY 19, 1850.

Section 1. Be it enacted by the General Assembly of the State of Indiana, That the State of Indiana does hereby cede, transfer, and convey unto the board of commissioners of Noble county, and their successors in office forever, all the right, title, and interest of the State of Indiana in and to the Northport Feeder Dam and water power, with the appurtenances thereto belonging, to have and to hold the same as trustees for the use of the people of said county, subject to the right and power of said board to lease out and rent said water power annually, or for a term of years, which said water rents, and all other profits arising from said dam, (after the payment of necessary expenses and repairs thereon,) shall be paid over to the Treasurer of said county, for the use and benefit of the common schools of said county of Noble.

This act to be in force from and after its passage.

DESTRUCTION OF THE DAM AT NORTHPORT - Three persons drowned.- On Saturday last the feeder dam across the Middle Fork of Elkhart, in Noble county, was undermined and partially carried away by the freshet. James Campbell and his adopted son, and William Abbott, who had been engaged in building a bridge, were standing on the bank close by the dam at the time and the bank caving in with them, they were swept into the flood and drowned. The body of Abbott was recovered on Wednesday, but neither of the others have yet been found.

This dam was commenced by the State to feed the Erie and Michigan canal. Since the abandonment of that work, it was finished on account of the valuable water power it created. The damage is estimated at $6,000.

Fort Wayne Sentinel March 15,1845.

CANAL SOCIETY OF INDIANA
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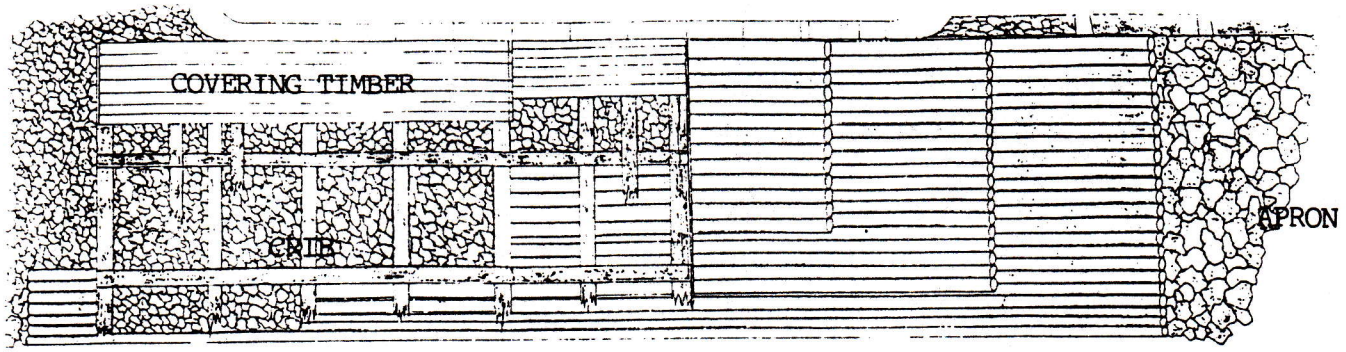
DAM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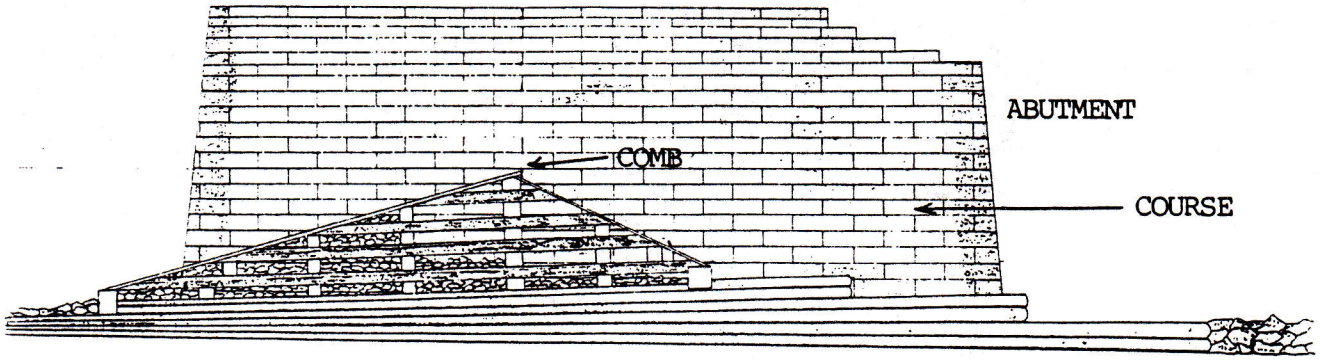
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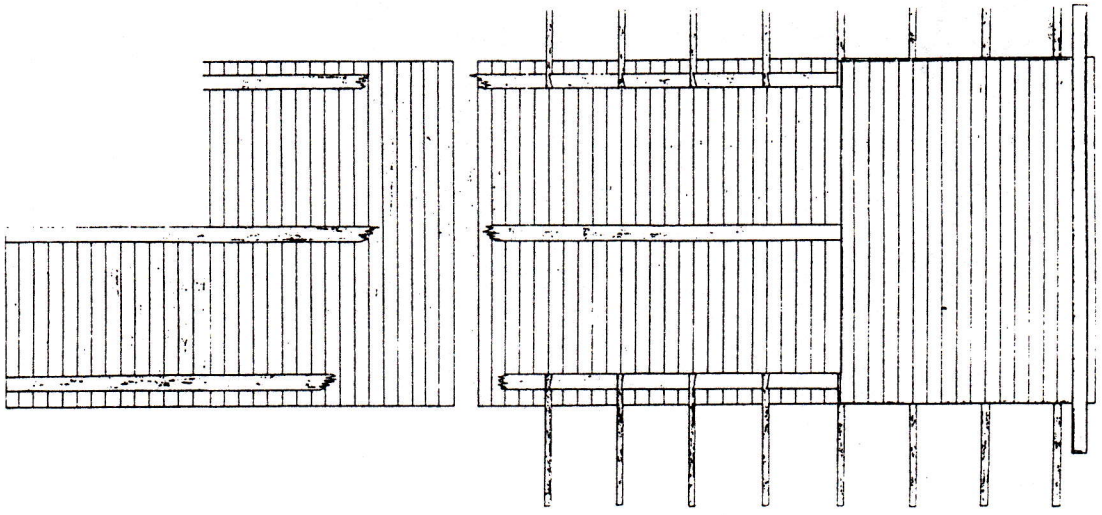
ROUND TIES

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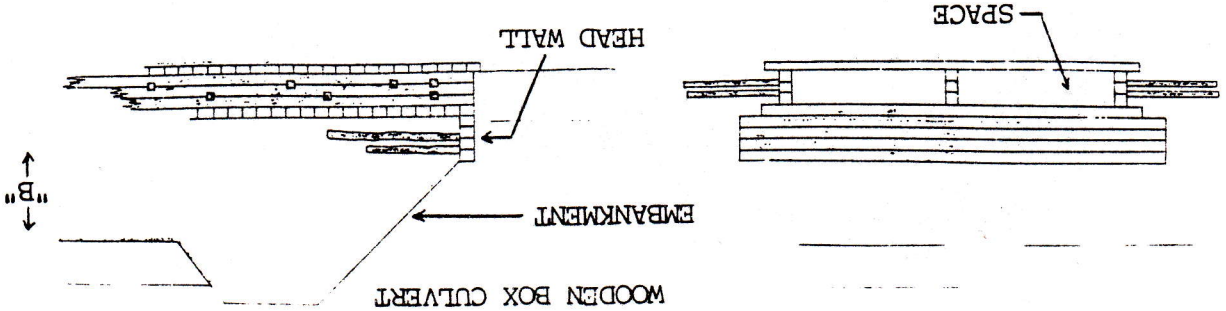
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