

# INDIANA CANALS

JOURNAL OF THE CANAL SOCIETY OF INDIANA

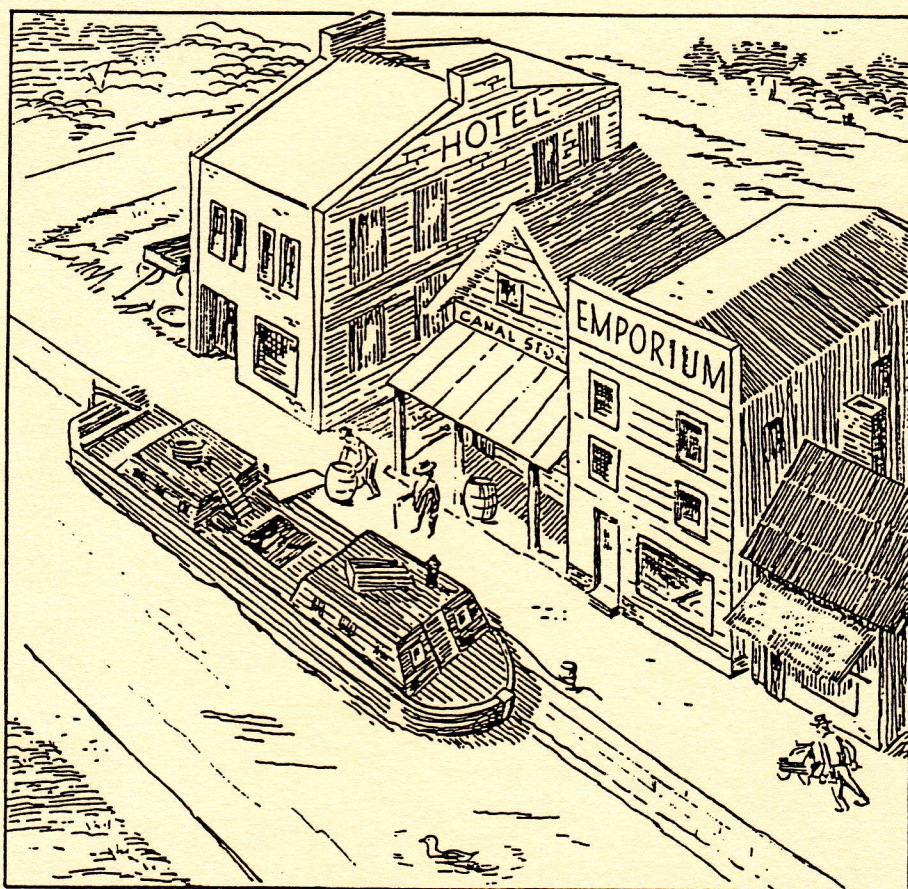
VOLUME 7.

NUMBER 4.

VOLUME 8.

NUMBER 1.

1996 - 1997



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

## Indiana and the Illinois & Michigan Canal

With the completion of the Erie Canal, Illinois joined other western states in dreams of their own canal system. The Illinois project, known as the Illinois & Michigan Canal, called for the connecting of Lake Michigan at Chicago with the Illinois River at Joliet. Completion of this canal would allow access to the Mississippi River from the Great Lakes. Begun in 1836, the Illinois & Michigan Canal took over 12 years to complete. Due to same economic collapse that crippled Indiana's canal system, work on the Illinois & Michigan Canal was suspended during much of 1842-3.

To maintain an adequate water supply the Illinois & Michigan Canal was dependent on the Des Plaines and Calumet Rivers. The Calumet feeder consisted of a dam at Blue Island and a 17 mile long connecting canal. The water source for this feeder came from the Grand Calumet and Little Calumet Rivers in northwestern Indiana. For much of the 19th century this area of Indiana remained undeveloped due to its marshy nature. In February 1837, the Indiana General assembly authorized a continuation of the survey of the planned Erie & Michigan Canal to connect it to the Illinois & Michigan Canal. Neither the Erie & Michigan Canal or the connection were ever completed.

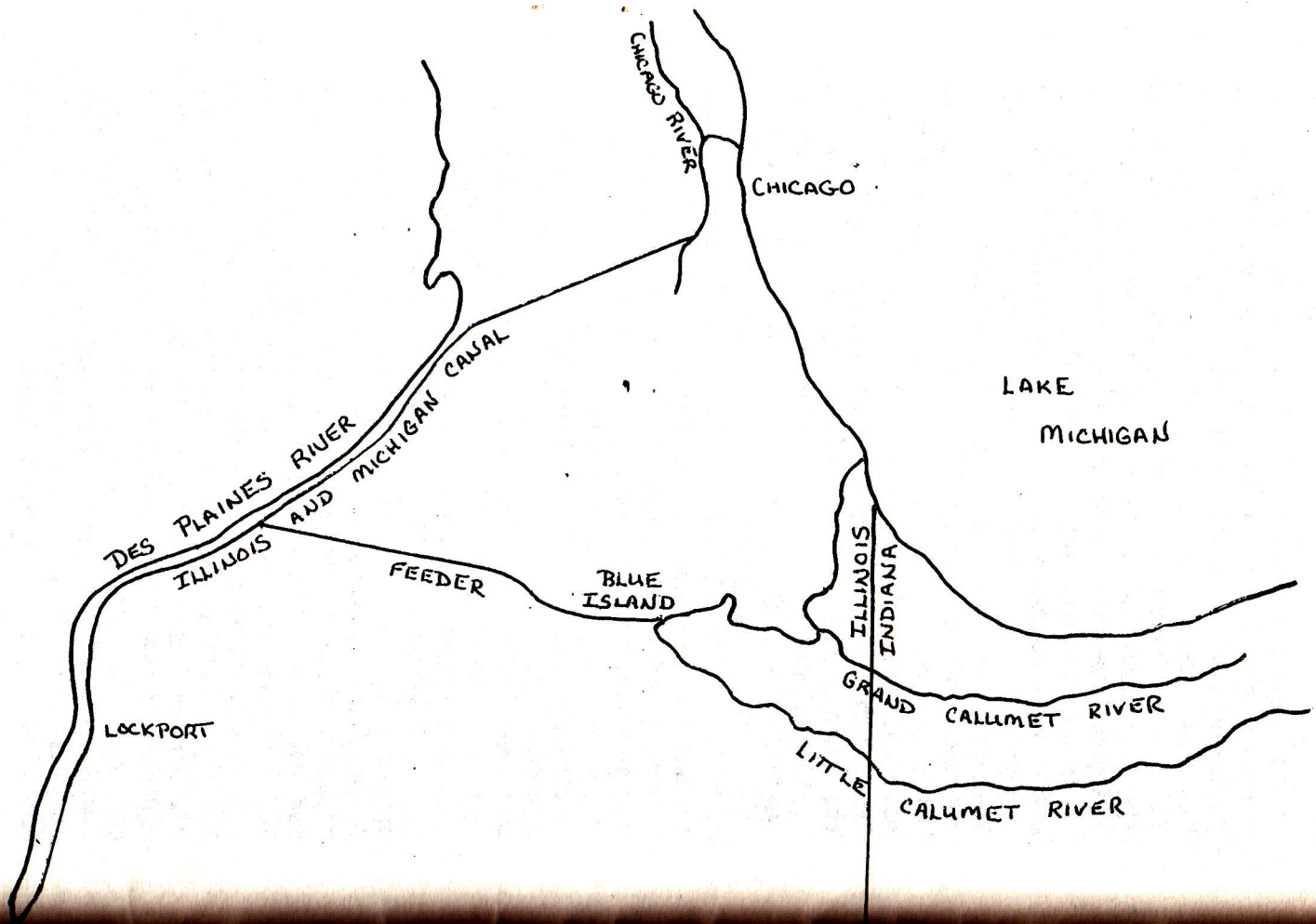
In March 1857, Indiana authorized the State of Illinois to maintain the Calumet feeder dam. Under this act Illinois secured the use of the waters from the Calumet River in return for providing a means of assessing damages sustained by the citizens of Indiana resulting from the dam. The state of Indiana agreed to insure this water supply for five years from the first day of July, 1857. During this time period Indiana would prevent the completion of the Grand Calumet Canal which was intended to divert the waters of the Calumet River into Lake Michigan in Lake county. Citizens of Indiana whose lands were inundated by water from the Blue Island dam would be able to make claims against the trustees of the Illinois & Michigan Canal.

On December 21, 1858, the General Assembly repealed the Act of 1858. Large areas of land in northwestern Indiana remained overflowed as a result of the feeder dam. With the failure of the Illinois company to comply with the conditions of the 1857 law, Indiana declared the existence of an emergency necessitating its immediate repeal.

In March 1861, the Indiana Attorney General was authorized to commence judicial proceedings for the removal of, or reduction in height of the Blue Island dam. This was not to proceed until the governor of Indiana made attempts to settle the matter with Illinois authorities. Indiana must have received little satisfaction in their claim. In December 1865, the General Assembly authorized the construction of a canal or ditch from the Little Calumet River to the Grand Calumet River in Lake County. The purpose of this ditch was to drain the overflowed lands adjoining the two rivers. The Indiana Attorney General was authorized to defend the builders from suits by the trustees of the Illinois & Michigan Canal or parties claiming an interest in the feeder.

As a result of Indiana's actions, Illinois authorities finally ordered the removal of the Blue Island dam. During its lifetime the dam had outlived its usefulness as a water source for the canal. Steam powered pumps now supplied the Illinois & Michigan Canal with water.

In February 1873, a joint resolution was approved by the Indiana legislature. The Attorney General was directed to take steps to prevent the rebuilding of the Calumet dam at Blue Island. This was the final interaction between the State of Indiana and the Illinois & Michigan Canal. For over 20 years after the completion of the feeder in 1849, Indiana fought for its removal. With the development of Lake and Porter counties the widespread overflow of lands above the Blue Island dam was no longer acceptable. Drainage and improvement of the area had become a priority of the State of Indiana. As a result, the region now contains Indiana's heaviest industries.



CHICAGO RIVER

CHICAGO

LAKE MICHIGAN

DES PLAINES RIVER  
ILLINOIS

AND MICHIGAN CANAL

FEEDER  
BLUE ISLAND

ILLINOIS  
INDIANA

GRAND CALUMET RIVER

LITTLE CALUMET RIVER

LOCKPORT

JANET

Orders, Rules and Regulations  
of the  
Wabash & Erie Canal

Sec. 60. No boat or other float strapped or faced with iron on the front part of the stem, or other most prominent part of the bow thereof, so as to be liable to strike with such iron facing against any part of any lock, lock-gate, guard-gate, bridge or other work or device appertaining to the canal shall be permitted to navigate or be moved on the canal, unless these shall be suspended and thoroughly secured in front of the stem, or other most prominent part of the bow of such boat or float, in such manner as effectually to prevent the iron facing or strap thereof from striking upon or against any lock, lock-gate, guard-gate, bridge or other work or device appertaining to the canal, a good and sufficient fender composed of rope or rope-yarn, at least six inches in diameter.

Sec. 61. The master of any boat or float, which shall be found navigating or moving on the canal, in contravention of the preceding order, shall forfeit and pay the sum of five dollars for such offence; and each mile that a boat or float shall be moved in contravention of the provisions thereof, shall be considered a new offence.

Sec. 62. No clearance shall be granted to any boat or float which shall not at the time of applying for such clearance, be provided with such fender in cases where the same shall be required by the preceding order; and it shall be the duty of every Collector of tolls, Inspector, Engineer, Lock-Tender, or Superintendent, to see that the said section be strictly enforced; and for that purpose, each and every of them shall be authorized to detain any boat or float, moving or attempting to move on the canal, until that section be complied with, and all penalties for the violation thereof be fully paid and satisfied.

Sec. 63. No boat or float shall be permitted to navigate the canal having the name of any other boat on the canal.

Sec. 64. No hay, straw, manure or other litter of

any kind shall be deposited in any part of the canal, nor on either of the banks thereof.

Sec. 65. The horse or horses of any boat, navigating the canal, shall not pass over a towing-path bridge faster than a walk, or pass into or out of any boat or float over or upon the walls or sides of any lock on the canal; and the master of any boat or float, who shall violate this regulation, or permit it to be done by others, shall forfeit and pay the sum of five dollars.

Sec. 66. Every boat passing on the canal, is required at all times during the night, to carry conspicuous lights on the bow of the boat; and every infraction of this order shall subject the master, owner or navigator, to the penalty of five dollars.

Sec. 67. Where the canal is composed, either wholly or in part, of embankment, no fence shall be placed on any part of the embankment. Where the canal is composed either wholly or in part, of excavation, no fence shall be placed within fifteen feet of the front edge of the towing-path, nor within ten feet of the front edge of the berm bank: Provided, that where the canal shall be of extra width, the chief or resident Engineer may, at his discretion, permit such deviation from the forgoing regulations as he may deem proper, so far as the construction of fences on the berm side of the canal is concerned.

Sec. 68. The Collectors at Lafayette and Fort Wayne shall deposit, at least once in each week, the amount received for tolls or fines in the Branch Bank of the state of Indiana, at their respective places, to the credit of the Board of Trustees and transmit the certificate thereof forthwith to the Board.

Sec. 69. In granting clearances to boats, Collectors will require the weight, number or quantity, as the case may be, of articles composing the cargo, to be correctly ascertained, either by actual weight, counting or measurement, or by calculating the weight of articles contained in barrels, such as flour, pork, salt, & c., from the number and ascertained average weight of each barrel, in the usual method; and will not grant

clearances on bills of lading which do not exhibit the actual weight, number or quantity, or which exhibit only the supposed weight, number or quantity of the articles of which it is composed.

Sec. 70. Every Collector will require the exhibition of the bills of lading of all the articles composing the cargo of a boat, at the time of her leaving the port at which his office is held—will enter all such articles on the clearance before it shall finally be delivered to the master of the boat, and receive toll thereon.

Sec. 71. Collectors will not enter on a clearance any article or articles of lading to be taken on board the boat after leaving the port where the Collectors office is situated.

(to be continued)

## **NOTICE TO BRIDGE BUILDERS!**

**THE COUNTY COMMISSIONERS** of the County of Vanderburgh solicit bids for building a Wooden Bridge over the Canal at the crossing of Ninth Street, near Littles' Mill. Plans and Specifications of said work may be examined at the Auditor's Office up to Tuesday, April 16th, next, ensuing. The Commissioners will also, at the same time, if suitable bids are received, let the job of building a Bridge over Big Blue Grass Creek, in Scott Township, on the road leading to Millersburgh. Also, the job of building a Bridge over Saunder's Creek, on the road leading to Mt. Vernon. Persons bidding for the last named jobs will produce to the Board the plans and specifications of the works. The Commissioners will reserve the right to amend the plans submitted, and also the right to reject all bids presented to them if deemed unreasonable. The County Board will hold a special session on the third Tuesday in April next (16th), for the purpose of acting upon said proposed contracts. By order of the Board.

March 26th, 1861.

mar27 3wd&w

WM. H. WALKER,

County Auditor.

[Volkabote copy.]

## BUILDING THE NINTH STREET CANAL BRIDGE

Of all the structures on the Wabash & Erie Canal, the most common were bridges. Upon the completion of the canal in 1853, over 172 bridges were listed in the Chief Engineers report as crossing the canal. Originally built by the Board of Internal Improvements or Canal Trustees, these bridges were later replaced by local government sources. In fact the legislature allowed individuals to construct their own bridges over the canal as long as they met certain specifications. This, along with the growth of Indiana during the canal era, resulted in the building of additional bridges not heretofore contemplated by canal officials.

Much of this local rebuilding resulted from the inability of canal officials to afford the replacement costs of the numerous bridges. In Evansville canal bridge rebuilding came about as the result of an agreement between the Canal Trustees and the city. Under this agreement the city agreed to build and rebuild all future canal bridges in exchange for the Trustees widening the canal to 60 feet throughout the city. As a result, the original single and double track wooden bridges were replaced by a variety wooden and iron bridges, including pivot, turn-table and draw bridges. During this same period, Vanderburgh County assumed the responsibility for replacing the canal bridges outside of the Evansville city limits.

On March 13, 1861, Robert Earley, Thomas Garvin and others presented a petition to the Vanderburgh County Commissioners for the "erection of a Bridge over the Canal upon the Road leading from Knight Township into Evansville". The Board decided to put off final determination until the April special session. On April 16th the Board met for the purpose of contracting for the erection of a bridge over the canal near Little's Mill. William H. Oakley was paid \$15 for drawing up plans and specifications for the new bridge and bids were advertised. On the following day, April 17th, the Board met to open bids.



Now Here this Board proceeds to open the bids for building the bridge over the Canal near Littles Mill on the road leading from Knight Township to Evansville and upon an inspection of the said bids find that Clark and Mauk agreed to build said bridge and furnish all the materials to be used in said bridge for the Sum of \$553.

And that Mr. Oakley will build the same as aforesaid for 600.

And that F.D. Allen will build the same as aforesaid for 675.

And that Charles Kinkel will build the same as aforesaid for 700.

And the Board after duly Considering Said proposals Awards the building of the bridge over the Canal at 9th Street or upon the road leading from Knight Township to Evansville over the Canal near Littles Mill to Levi S. Clark and Wm. Mauk at the Sum of five hundred and fifty three dollars with the understanding that Said Clark and Mauk will build said bridge according to the plans and specifications of said bridge on file in the Auditors Office and furnish all materials and give to this board satisfactory Security for the performance of said Contract.

At the same time the Board ordered "that Mathew W. Foster Esqr be and he is hereby appointed Superintendent, to superintend the building of the bridge across the W & E Canal on 9th Street in Pigeon Township, to be constructed by Levi S Clarke and William Mauk, and that he is authorized to take from the Auditors Office the plan and specifications of said bridge, and after the entire work is done, to return the plan and specifications the same to said Auditors Office with his Report of superintending thereto".

To provide the necessary security for their canal bridge work the following contract was drawn up between Clark & Mauk and the Vanderburgh County Commissioners. Along with this was provided a Bill of Timber and Iron with Specifications for the bridge.

Now Here comes Levi S. Clarke, William Mauk and C.Hedderich and produced to this Board their Agreement with the same for building of a bridge across the Canal on 9th Street, which agreement is in the words and figures as follows to wit:

This Agreement is made this 18th day of April AD 1861 between Levi S.Clarke and William Mauk partners under the name of Clarke & Mauk, partners of the first part, and the Board of Commissioners of the County of Vanderburgh of the second part, Witnesseth:

First: The said parties of the first part are to build a bridge across the Wabash & Erie Canal at the point where 9th Street of the City of Evansville would cross the same if extended, according to the plan and specifications on file in the Office of the Auditor of said County, which plan and specifications have been approved by the Board.-

Second: Said parties of the first part are to furnish at their own expense all the material of any description whatsoever required and necessary for the construction of said bridge and to complete the same by the first day of July 1861, and deliver the same to the said party of the second part free and discharged from any lien or incumbrances for labor or materials used in the construction of said Bridge or anything appertaining thereto on an before said first day of July 1861.-

Third: It is understood and agreed between the parties hereto that the said party of the second part may appoint a superintendent, who shall, as the work progresses, inspect the materials used and work done, and the said superintendent shall have the power to report to the said party of the second part to any failure in any respect of the parties of the first part to comply with the plans and specifications aforesaid, and the party of the second part may in their discretion when convinced of the truth of said report take the job out of the hands of the parties of the first part and have it completed according to the terms of this contract Keeping an account of the expenditures and charging the same to the account of said parties of the first part.

Fourth: Should any alterations be made from the

specifications by the said party of the second part, which may in the opinion of said superintendent be advisable during the progress of the work, they shall not invalidate this contract, And should said alterations be more expensive the excess over the contract will be estimated and paid to the said parties of the first part.

Fifth: The said party of the second part agree to pay the said parties of the first part for the said bridge, the gross sum of five hundred and fifty three Dollars in Orders drawn by the Auditor of said County upon the Treasurer thereof commonly called "County Orders" which shall be taken at their face as follows; seventy five per cent shall be paid upon each one hundred dollars or upwards in Value of labor and materials as the work progresses upon the estimate of the said superintendent, the remaining twenty five per cent shall be paid upon the completion and delivery of said bridge, according to the specifications stipulations of this contract. In testimony whereof the said parties of the first part and Levi S. Clarke and William Mauk, and C. Hedderich their sureties have herewith set their hands, and the said Board of Commissioners have caused these articles to be subscribed by William Pruitt, President of said Board and has also caused the corporate Seal of said Boar of Commissioners of the County of Vanderburgh to be herewith affixed this eighteenth day of April A.D. 1861.

Levi S. Clarke  
William Mauk  
C. Hedderich  
Wm. Pruitt

And the Board after duly examination of the foregoing Agreement of Levi S. Clarke & William Mauk and C. Hedderich, and being satisfied with their Security, accept this Contract and approve the same.

Bill of Timber and Iron with Specifications for bridge over Canal on 9th Street.

Railing

poplar 4 Plank 1in thick by 6" wide 47 ft long  
16 Posts 4x4 - 4ft 8" long

Posts are notched on Floor Beams 2in deep and 6" long and butted to Beam with  $\frac{1}{2}$ in Bolt. The Floor plank are cut around them butting close. (see Plan) The Plank or Rails are notched 1" deep on posts & spiked as per plan.

#### Floor

9 cross Ties 3"x6" x 15ft long  
 whl Oak 1500 feet Ties 2" thick x 15ft long  
 20 Planks or Floor Beams 2x12 x 25ft long  
 7 Planks or Floor Beams 2x12 x 18ft long  
 4 cross Ties 2 Each ends of Bridge (one above and one below) and 3 cross Ties on top of beams 3x6" one notched 1" to fit on Beams, and at 2 Ties 3" & 6" at End of large Braces the Beams are notched for the Ties to fit in (1" deep) The 1500 feet of Plank are spiked (5in spike) onto top of Beams (see plan) Beams are jointed & doubled on middle & bolted with  $\frac{1}{2}$ in Bolts-being 2x12" to out of trestle & 2x6 at End.

#### Trestle

6 Braces 4"x6" 9ft long  
 8 jns 2x4 7 $\frac{1}{2}$ ft long  
 poplar 6 sills 8x8 15ft long  
 3 sills 8x8 16ft long  
 9 posts 8x8 3 $\frac{1}{2}$ ft long

The 6 braces fit on upon End on pier Beam & up between Floor Beams toing on sill & post on lower end sills on 1/2 notched on each other then projecting 6" in length of Bridge. Middle ones are dove tail joint. Posts are notched 1 in at top and Bottom being 2 in thick 6" wide & small braces two against posts, (4 in deep)

#### For Iron Track

4 Timbers 4"x8"x8 feet long cut to circle of 14 feet & framed underneath to Trestle as in plan

#### Pier

4 pieces 3x8" 7 feet long - 4 pieces 3x8 5ft long (for wheels)

24 pieces 3x8" 2 feet long (24 pieces 12x12 15 ft long Hwn 3 sides)

Pieces for wheels are bolted to pier with the 1/2 in Bolt at each end and boxing for wheels are notched in and bolted with 1/2 in Bolt at each end to this 3x8 pieces wheel running between them as in plan. The 12x12 pieces are 1/2 notched on each other and wooden pined at corners by 2 in Pier, the joints of those running through centre are dove tailed on out side timbers or pieces.

#### North Abutment

Oak  
9 pieces 12x12 x 17ft long 3 sides Hewn  
2 pieces 12x12 x 17ft long 4 sides Hewn  
20 pieces 12x12 x 15ft long 3 sides Hewn  
20 pieces Round x 8ft long  
100ft 2in Plank at End

#### South Abutment

Oak  
4 pieces 12x12 17ft long Hwn 3 sides  
2 pieces 12x12 17ft long Hwn 4 sides  
10 pieces 12x12 10ft long Hwn 3 sides  
10 pieces Round 8ft long  
Timbers are 1/2 notched & pinned with 2" pins at corners and Round pieces are 1/2 notched with dove tail joints & run out into the bank at least Eight feet.  
Bill Timber neat length

#### Bill of Iron

1 pivot 4" diameter steel hardened  
2 Boxes for pivot 2x2 ft (see plan)  
16 wheels 1 foot diameter 1 1/2 in face 3" Hub 1 1/2 shaft 1 foot long wheel cast  
Iron 1 shaft wrought iron  
32 Boxes for wheels 3in wide & drill for 1/2" Bolt  
64 Bolts 1/2in diameter 10" long 1 1/4 hd. & nut  
32 Bolts 1/2" diameter 22in long 1 1/4 hd. & nut  
2 Bolts 1" diameter 15ft 3" long 2in hd. & nut

4 Bolts 3/4" diameter 23" long 1 1/2" hd. & nut  
12 Bolts 1/2" diameter 14" long 1 1/2" hd. & nut  
24 Bolts 1/2" diameter 12" long 1 1/4" hd. & nut  
16 Bolts 1/2" diameter 10" long 1 1/4" hd. & nut  
66 Bolts 1/2" diameter 8" long 1 1/4" hd. & nut  
40 Bolts 1/2" diameter 6" long 1 1/4" hd. & nut  
12 straps 1" thick 3in wide 6" long cast or  
wrought and drilled for 3/4 Bolts

Washers for all Bolts

43 1/2 ft Iron 3/8 thick by 4" wide & but to 14 ft  
curve

32 ft Iron 3/8 thick by 4" wide & but to 24 ft 5"  
curve

1 King spike 5" long for floor

Bill Iron Gross length

Bill Iron Gross length

Pivot Boxes are bolted above and below with 4 3/4  
Bolts to Each Box, wheels are made stationary as per  
plan & specifications and turn Iron way 3/8" x 4"  
made fast as follows: at Ends it is the (3/8 x 4 Iron  
track) is spiked underneath. the timbers to the  
lower beams across the End and at centre it is spiked  
underneath the trestle to the beams and timbers  
framed between the beams, the Ends of timbers  
jointing on the beams and are so made that curves  
correspond to curves above described. The timbers of  
this bridge as per this Bill and specification shall  
be of best quality of white or brown Oak and poplar.  
The work shall be well done joints well fitted  
bolts and all put in as to plan & specifications in a  
workmanlike manner. - Irons shall be best wrought  
Iron for bolts & shafts - pivot shall be steel  
hardened whrought Iron turned - Boxing good cast  
Iron. Bridge shall be turned by means of a wooden  
lever fastened into side of floor beam (bolted on)  
with a walk for man to pass on while in the act of  
turning.

As you can guess from the specifications the new  
9th Street bridge was a pivot bridge. This type of  
bridge became popular during the later stages of the  
canal era because it eliminated the need for elevated  
bridges to allow canal boat clearance. When a boat  
reached the bridge the entire span pivoted to a  
position parallel to the canal, allowing the boat to

pass. The construction of the 9th Street bridge by Vanderburgh County is rather surprising considering the canal's decline by 1861, the existence of bridges at 8th and 10th Streets and the fact that Evansville was on the west side of the canal. The 9th Street bridge was finally taken down in June 1868, and was replaced by an earthen causeway crossing the canal until it was entirely filled in 1870.

The story of the 9th Street canal bridge is just one of many during Indiana's canal era. Nothing of significance or historic importance occurred there. Yet as canawlers there is much to learn here.

First, the story shows us one of the untapped sources of information on Indiana's canals. Much of the information comes from Record Book J of the Vanderburgh County Commissioner's records. These records are available in the Auditor's Office of every Indiana County. That means that there is more information out there on the canals. At the present time I have still been unable to determine if the bridge mentioned in records still exists. If not, hopefully somewhere else in the state one exists. In this case the detailed specifications still tell us alot about canal bridge construction. More amazing is the simplicity of the entire project. Within a month of the original request the project was approved. Two days later bids were taken and a contract awarded. Three months later a completed bridge was in operation. You have to wonder how long the process would have taken given our present day rules and regulations.

\*\*\*\*\*

Council Proceedings June 8, 1868

Blenker asked that Ninth Street canal bridge be removed and the canal filled with a dirt crossing with a box sewer beneath it. It was ordered to be done.

**CANAL SOCIETY OF INDIANA**

**P.O. BOX 40087**

**FORT WAYNE IN 46804**

**ADDRESS CORRECTION REQUESTED**

**NON PROFIT ORG.**

**U.S. POSTAGE**

**PAID**

**FORT WAYNE, IN**

**PERMIT NO. 1674**