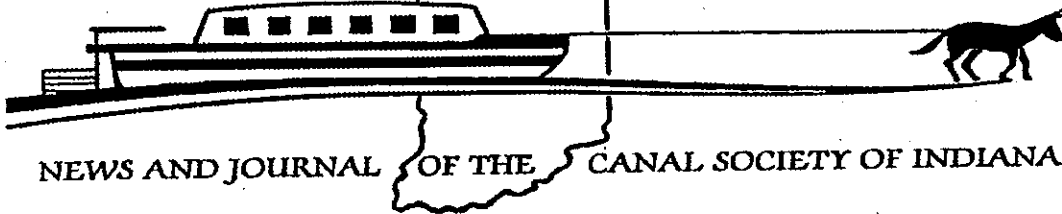


THE  
**HOOSIER-PACKET**

ISSN 1545-421



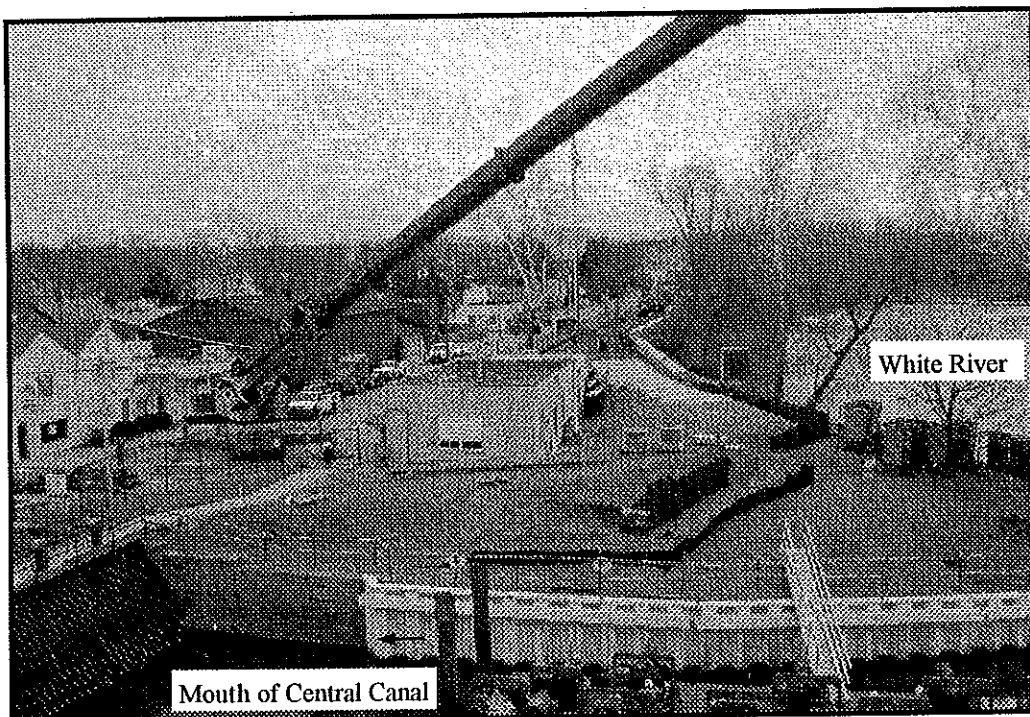
NEWS AND JOURNAL OF THE CANAL SOCIETY OF INDIANA

VOL. 7 NO. 4

P.O. BOX 40087 FORT WAYNE, IN 46804

APRIL 2008

## CANAL PROJECTS



View north on Westfield Boulevard showing current White River levee and new levee wall being installed to take Broad Ripple out of the 100 year flood plain. Photo by Chuck Huppert

### *Features*

1. Central Canal Impacts White River Levee Project
2. CSI 2008 Donor Recognition, Welcome New Members, "Flumes, Frescoes & Furnaces" Tour Reminder
4. The Wheels Of Commerce
10. Canawlers At Rest: Archibald Stitt
15. Canal Artifacts
16. W & E Study Of Technology Change In 19th Century
19. Wife Swapping On The Canal, Reminiscences Of Backwoods Life In Indiana In The Eighteen Forties
20. Central Canal Remnants, Corridors Of Progress
21. News From Delphi: First Of Canal Trailside Exhibits, Speakers Bureau
22. Restoration Of Duck Creek Aqueduct

### **CENTRAL CANAL IMPACTS WHITE RIVER LEVEE PROJECT**

Charles (Chuck) Huppert, CSI vice-president from Broad Ripple/Indianapolis, reports that in order to get Broad Ripple and points west and south out of the 100 year flood plain they are raising the White River Levee. Once the project is completed those in the area will be in the 500 year flood plain. This is a \$19 million project with the Federal Government paying 80% and the city of Indianapolis paying 20%.

In raising this levee a problem was created at

the mouth of the Central Canal where water from White River is let into the canal. During a flood the canal could be overrun with the river water defeating the purpose of the entire project.

across Westfield Boulevard to pump water into the canal at a rate of about 80 million gallons per day. Then work can take place on the pilings.

To solve the problem they are going to heighten and strengthen the Canal's inlet gates. In order to do this they can't use them during construction.

Chuck has taken photographs of the initial work on this project and will continue to monitor it, keeping CSI headquarters updated. Look for more information about it in upcoming "Hoosier Packets."

Also water on the upstream side has to be removed for pilings to be put in place. Since 55% of Indianapolis depends on water flowing from the river down the canal to the water filtration plant for drinking water, the Canal cannot be emptied for the 60 to 90 days necessary to make the inlet gate improvement.

They are going to lay 7 pipes from 7 pumps



**WELCOME NEW MEMBERS**

We welcome aboard the following new members who have joined at the \$25 membership level unless otherwise noted:

Ruth Erickson Terre Haute, IN

**CSI DONOR RECOGNITION 2008**

**CONTRIBUTOR**

- \$50 +
- Jimpisie Doyel
- Dick & Martha Kudner
- Carl & Martha Leiter
- Dan & Ceri White
- J.R. & Linda Winchell
- Tom Wood

**PATRON**

- \$75 +
- Verlin & Marilyn Bulmahn

Canal Society of Indiana  
**"FLUMES, FRESCOES & FURNACES"**  
**Tour of the Ohio & Erie Canal**  
**From Waverly to Portsmouth**  
**APRIL 18-20, 2008**  
 Comfort Inn (740) 574-1046 Wheelersburg, OH  
 (mention Bob Schmidt and CSI when booking room)  
 Continental breakfast  
  
 Tour limited to 49 participants  
 Get your reservations in early to CSI Headquarters

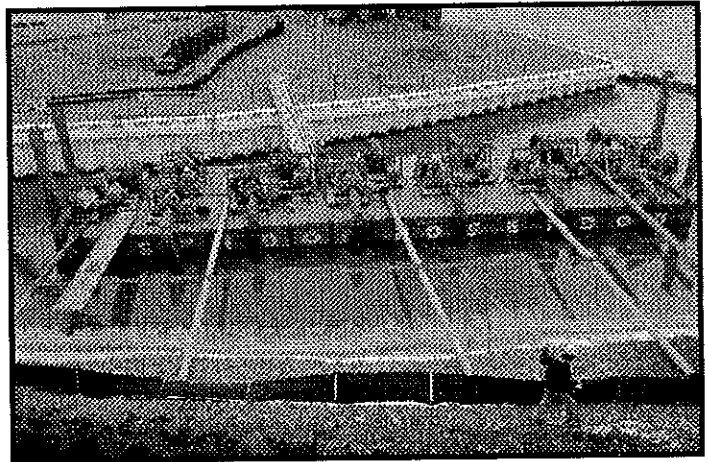
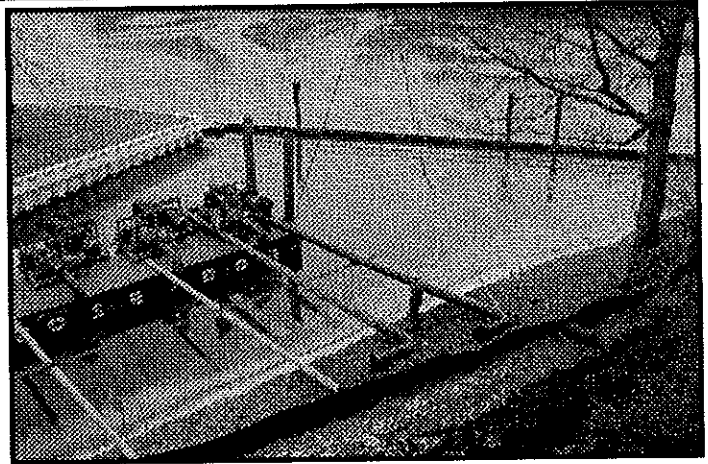
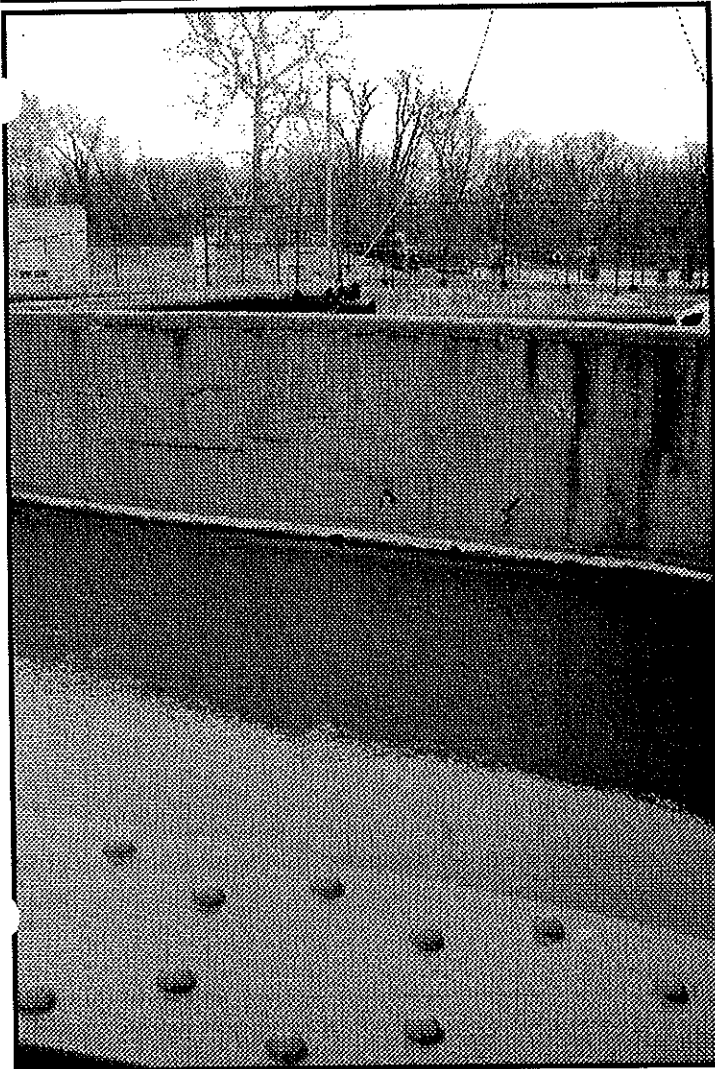
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 P.O. Box 40087, Fort Wayne, IN 46804  
 Phone & Fax: 260-432-0279      E-mail: [indcanal@aol.com](mailto:indcanal@aol.com)      Web: [www.indcanal.org](http://www.indcanal.org)

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Above: Westfield Blvd. bridge over Central Canal at the Canal's intake from White River slackwater. This is looking East from the Monon Trail bridge.

Below: Giant crane lowering output pipe to pump barge in the Central Canal's feeder pool.



Top: Barge in the Central Canal's inlet with workers attaching the output pipe being connected to the right end pump.

Center: Pump barge in Central Canal's feeder pool with seven pumps, which will pump 80 million gallons of water into the canal per day.

Bottom: Canal's inlet gates (4), which are being raised and strengthened as part of White River Levy Project.

Photos by Charles "Chuck" Huppert

## The Wheels of Commerce

By Robert F. Schmidt

When we think of canals our first thought is boats and transportation, but there was another important use of canal water that often extended beyond the transportation life of these waterways. Before the steam era mills along the canal drew their power from the water of the canal. This early industrialization and concentration of activity into small towns and villages helped create population centers. Although the transportation network brought forth a wide variety of commercial activity, the mills on the canal helped to centralize manufacturing activity.

As the land was cleared in the early 1800s farmers began raising garden crops for family consumption. They also raised the grain crops for bread and meal. Crushing the grain at home was time consuming and inefficient. Those settlers with an eye for business identified potential milling sites along creeks and rivers where the natural fall of water could be used to turn mill stones. As you can imagine these sites were limited and spread out over a wide area. Another way to create a fall of water was to dam a waterway creating a mill pond that could be used for power. These early mills were used for both grain and saw milling. The importance of these sites can still be seen today on many maps that have roads named "Mill Road." The road to the mill was always well traveled and, like the local saloon, mills were a gathering place for farmers to socialize while waiting for their grain to be ground.

The clamor for canals was also a cry for water power. In the case of canals, mills could be built just about anywhere along the route as long as there was a sufficient flow of water and a fall of several feet could be created. With mills along a canal the water they used could be either returned into the canal thus saving it for canal use or wasted into a nearby waterway. By building a mill at a lock site the headrace (intake of water) would be above the lock, the water would pass over a mill wheel powering the mill, and then it passed through the tailrace (outflow of water) back into the canal below the lock. Since locks had overflow tumbles that allowed excess water to be wasted around the lock if there was no mill nearby, this type of milling activity really didn't reduce the total water flow of the canal. In other milling applications water from the canal was diverted through the mill and out into a creek or nearby river. This type wasted or lost water in the canal.

Most of the mills along the canals were related to grain processing. The waterwheel and mill stones were essential parts of the mill. Usually made of wood locally, the waterwheels were of three general types. The most popular was the overshot wheel. Here the

water from the headrace was directed just above the wheel. As the water falls from 8-10 feet it hits the wheel and turns it. Through gears and pulleys the power it generates is directed to the millstones.

A second type of wheel found along the canal was the breast wheel. The water was introduced onto the wheel about midpoint into buckets that turn the wheel as they are filled. This wheel is only about 65% efficient as compared to the 75% efficiency of the overshot wheel. The breast wheel would be used where the water fall was not great enough to run a overshot wheel.

The final type of wheel was the undershot wheel that could be used in a fast stream flow of water to let the current turn the wheel. It was only about 30% efficient. This type wheel was not used in canals as the current was not sufficient. The drop in the canal was usually only 1 inch per mile, which made the current very slow.

A fourth type of wheel was the reaction wheel. It was used on the canal. It combined the power of the overshot and undershot wheels although it was not as efficient in water use and was used mostly in saw mill applications.

A later development was the turbine or tub. This technology was not used until the late 19<sup>th</sup> century.

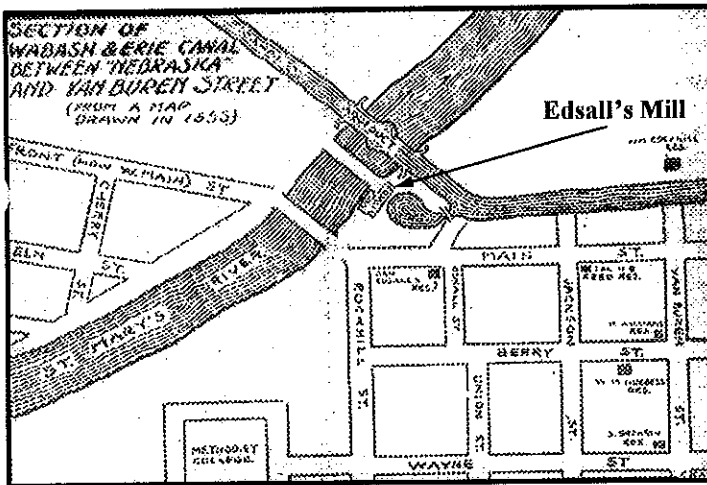
Mills stones were of two basic patterns or "dress." The shape of grooves were either sickle dress or quarter dress. Millers debated which was best but came to no final conclusion. Some of these stones were made of good local quarry stock or were obtained from other American quarries. Like wine, the finest millstones came from a small quartz quarry in northern France and were imported at considerable expense. Irregardless of stone or dress the proof was in what kind of output was obtained. The quality of flour produced at the mill was dependent on the stones.

A good grindstone had to have an extremely hard surface to retain its cutting edges, but it couldn't be too abrasive or it would powder the darker bran of the wheat and the milled flour wouldn't be white. As the stones wore down, they could be sharpened. However, they eventually had to be replaced.

The milling process was mechanically quite simple, bags of raw grain were emptied into the hopper at one end while the finished, custom-ground flour was collected at the other end. This usually required only one worker but others were needed to receive grain from farmers and to keep the simple mechanics of the waterwheel and raceways functioning properly.

In January 1846 the Indiana legislature authorized an inventory "to examine and to gauge each lessee or lessees of water power on said canal, and determine the quantity granted to him or them by the strict term of their leases." The report by Engineer Francis Cleveland is in the December 1846 report to the legislature. The standard for measuring the flow of water was based on a 4½ ft. millstone producing 5 bushels of wheat per hour = 1 power. (1 barrel of wheat = 5 bushels) After several mathematical adjustments, the conclusion was the Indiana standard would require 273 cu. feet of water per minute on a ten feet overshot wheel moving at the rate of 4½ ft. per second, to manufacture five bushels of wheat per hour. Comparisons were made with mill output at Circleville and Roscoe, Ohio. Calculations were also made for saw mills.

The summary of this mill inventory by Cleveland found most mills had leases but a few did not. Additional information about these mills comes from the December 1934 issue of the *Indiana Magazine of History* - Dr William Reser:



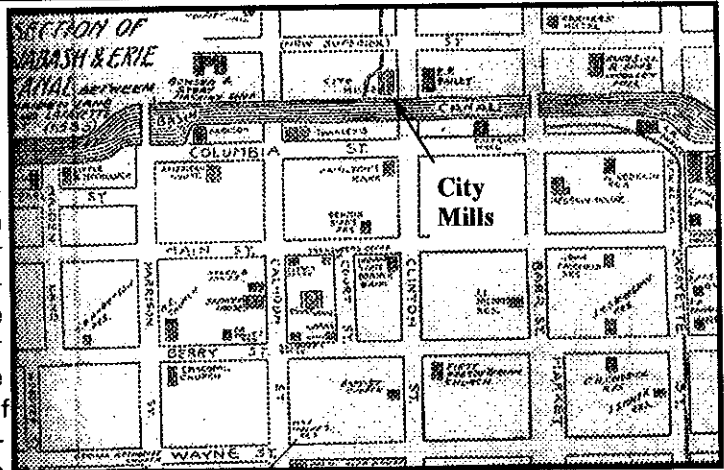
Edsall's Mill at St. Mary's Aqueduct in Fort Wayne, Indiana  
Oriswold, B. J. The Pictorial History of Fort Wayne, Indiana. Chicago, IL: Robert O. Law & Company, 1917.

**St Mary's Aqueduct Ft Wayne**

William Rockhill & Samuel Edsall  
 Dated : 23 Nov 1836 - 50 years beginning  
 Nov. 1, 1837  
 Saw mill - 1 Parker reaction wheel  
     1 - Saw water rights converted to 3  
     milling stones  
 Grain Milling - 1 overshot wheel 16 ft  
     diameter - 3 stones  
 Water wasted to St Mary's River  
 Annual Lease \$ - Saw water basis 4.38 powers  
     x \$147.29 each = \$645.13

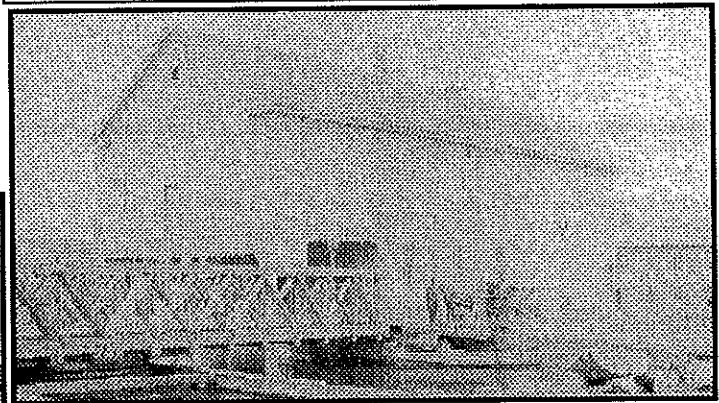
**Clinton St - Ft Wayne "City Mills"**

Jesse L. Williams & Allen Hamilton  
 Dated : 29<sup>th</sup> Nov 1842 - 30 years beginning



City Mills in Fort Wayne, Indiana

Oriswold, B. J. The Pictorial History of Fort Wayne, Indiana. Chicago, IL: Robert O. Law & Company, 1917.



City Mills 1872-1875 when owned by Hoagland & Tresselet

May 1, 1843

Grain Milling - 1 overshot 16 ft diameter  
 wheel - 3 milling stones  
 Water wasted to St Mary's River  
 Annual Lease \$ - 11 months = 1 rent year 4.85  
 stds x \$210 = \$1,018.50

**Lot 9 - County Addition Ft Wayne**

Henry Johns - assignees Rudisill & Wolke  
 Dated 6<sup>th</sup> July 1843 Perpetual  
 Carding Mill  
 Water wasted to Maumee River  
 Allowed 1,000 ft water per minute (After other  
 two above mills satisfied)  
 No Lease \$ - compensation for loss of water due  
 to dam on St Joseph

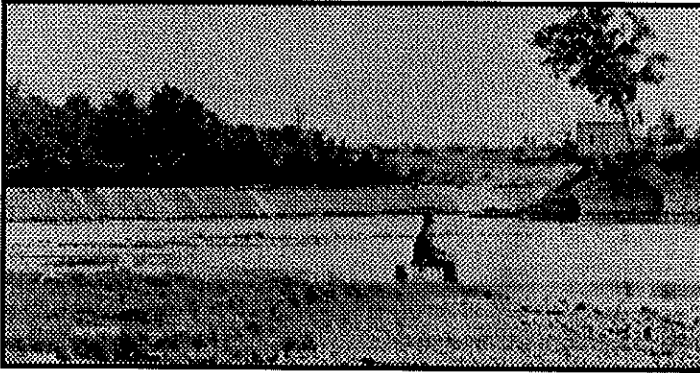
**St Joseph's Dam site**

L.G. Thompson and Joseph Miller  
 Dated : 15<sup>th</sup> November 1841 - 30 years begin  
 ning January 1, 1842  
 Saw Mill - 10 ft overshot wheel  
 Only when enough water to fill feeder require  
 ments  
 Water wasted to St Joseph River

Annual Lease 4.04 powers x \$110.00 =  
\$444.40

At Dickey's Lock - Roanoke

Col. Jones - using water without a lease  
Saw Mill - overshot wheel  
Water fed back into canal  
No Lease



**Dam #1 fed the W & E Canal and mill at the Forks of the Wabash in Huntington, Indiana.** Historic Photo from Indiana Room at Huntington Public Library

Dam # 1 - Huntington Forks of Wabash

Jesse Vermilya & William Stewart  
Dated : 2<sup>nd</sup> January, 1837 - 50 years beginning  
May 1, 1837  
Saw Mill - 8 ft overshot wheel (at the time  
shut down for lack of water)  
Water wasted to Wabash River  
Annual Lease - 3.65 powers x \$125 =  
\$456.25

Lock 16 - W abash " Hipskind Lock"

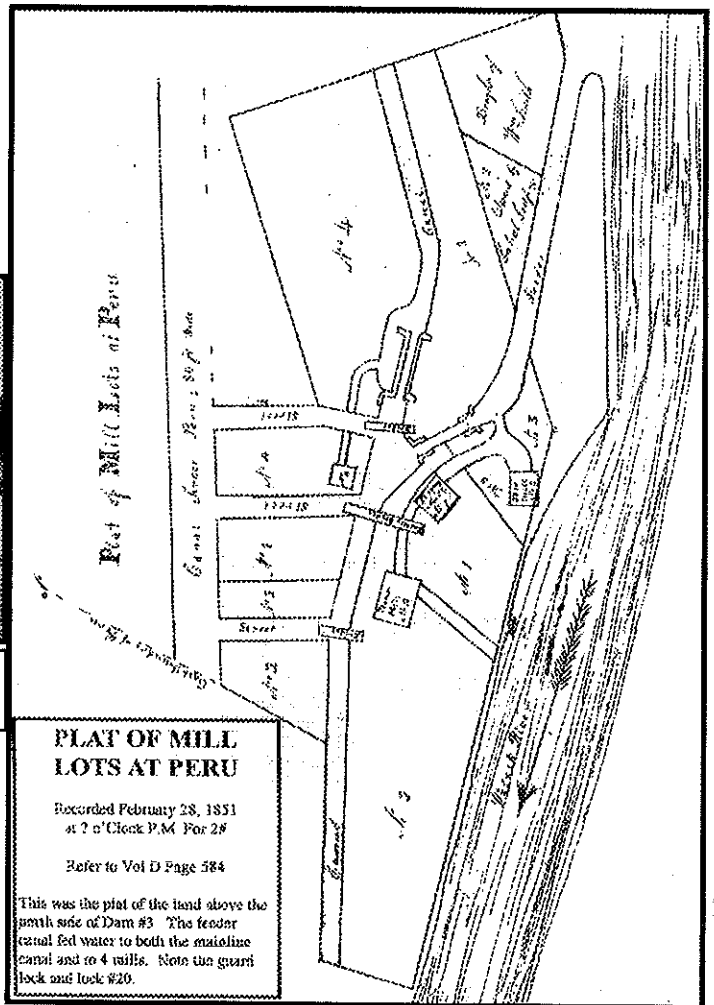
Robert Cissna  
Dated : 2<sup>nd</sup> September, 1845 - 30 years  
beginning November 1, 1844  
Grain Milling - 8 Ft overshot wheel - 2 mill  
stones 41/2 ft  
Water fed back into canal  
Annual Lease - 2 powers x \$226 = \$452.00

Lock 19 - 2<sup>nd</sup> above Peru

Charles P. Jackson & Andrew Rhodes  
Dated : 4<sup>th</sup> March 1845 - 30 years beginning  
May 1, 1845  
Water fed back into canal  
Mill? - unknown  
Annual Lease \$65

Lock 20 - above Peru "Buttermilk Lock"

Jahue Chrisman & Henry Zern  
Dated : 23<sup>rd</sup> March 1842 - 5 years beginning  
November 1, 1842  
Water fed back into canal  
Annual Lease \$30.00



**PLAT OF MILL LOTS AT PERU**

Recorded February 28, 1851  
at 7 o'Clock P.M. For 28

Refer to Vol D Page 584

This was the plat of the land above the south side of Dam #3. The feeder canal fed water to both the mainline canal and to 4 mills. Note the guard lock and lock #20.

**"Peru Mills" at Dam #3 in Peru, Indiana**

Dam # 3 at Peru "Peru Mills"

William N. Hood & Alexander Wilson - Occupant  
Mr. A. Buckley  
Dated ; 2<sup>nd</sup> January 1837 - 50 years beginning  
May 1, 1837  
Saw Mill - 2 saws driven by 2 spiral vent  
wheels  
Grist Mill - McConnell reaction wheel - mill  
stones  
Water wasted to Wabash River  
Annual Lease - 3.26 powers x \$200 =  
\$652.00

Dam # 3 at Peru "Peru Mills"

John C. Helm  
Dated : 8<sup>th</sup> September 1845 - 30 years  
beginning November 1, 1845  
Saw Mill - Leffle reaction wheel  
Water wasted to Wabash River  
Annual Lease - 2.47 powers x \$177 =  
\$437.20

**Dam # 4 - Pittsburgh**

Gardner Mudge - Occupant Bolles & Colton  
 Dated : 1<sup>st</sup> September 1841 - 30 years  
 beginning January 1, 1842  
 No mill erected at present

**Dam # 4 - Pittsburgh**

Gardner Mudge & William H. Shaw - Occupant  
 Bolles & Colton  
 Dated : 1<sup>st</sup> September 1841 - 30 years  
 beginning January 1, 1842  
 Grist Mill - 2 tub wheels driving (mill stones 1-  
 3 ½ ft 1- 4 ft)  
 1 other wheel drives a smut machine  
 Water wasted to Wabash River  
 Annual Lease - not shown

**Dam # 4 - Pittsburgh**

Gardner Mudge, William H. Shaw & John  
 Smith - Occupant Bolles & Colton  
 Dated : 1<sup>st</sup> September 1841 - 30 years  
 beginning January 1, 1842  
 Saw Mill - 1 spiral vent wheel  
 Water wasted to Wabash River  
 Annual Lease - 3 powers x \$125 = \$375.00

**Dam # 4 - Pittsburgh**

John Smith - Occupant Bolles & Colton  
 Dated : 1<sup>st</sup> September 1841 - 30 years  
 beginning January 1, 1842  
 Carding Mill - 1 - Spiral vent wheel - 2 carding  
 machines and a fulling mill  
 Water wasted to Wabash  
 Annual Lease - 3 powers x \$125 = \$375.00

**Dam # 4 - Pittsburgh**

Timothy Donovan  
 Dated : 1<sup>st</sup> September 1841 - 30 years  
 beginning January 1, 1842  
 Saw Mill - 1 - Merrill reaction wheel - 1 saw  
 Water wasted to Wabash  
 Annual Lease - 1 power x \$125 = \$125

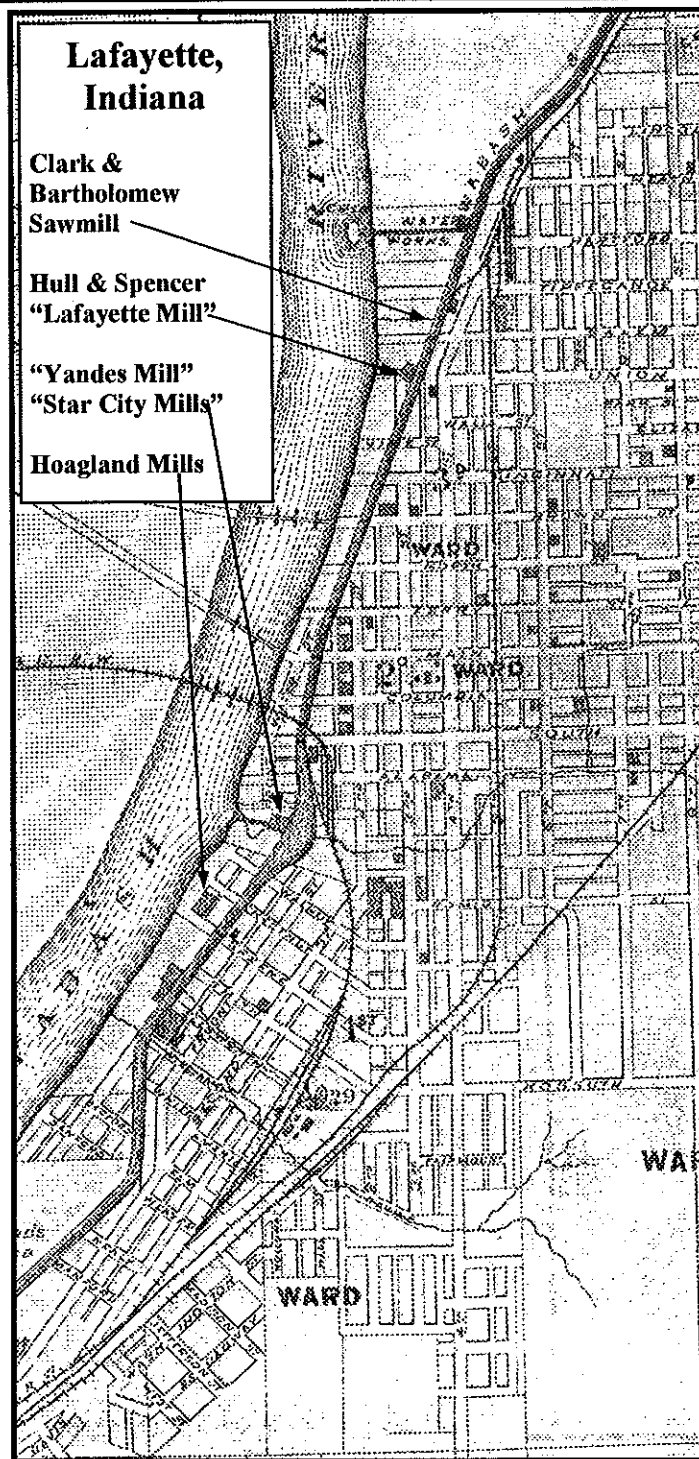
**Dam # 4 - Pittsburgh**

D. K. Ward  
 Dated : 1<sup>st</sup> May 1842 - 30 years beginning  
 May 1, 1843  
 Commercial Mill - 2 reaction wheels - 1  
 turning lathe and light machinery  
 Water wasted to Wabash  
 Annual Lease - 2 powers x \$125 = \$250.00

**West Delphi**

Mr. Vandercook - without lease  
 No Annual Lease

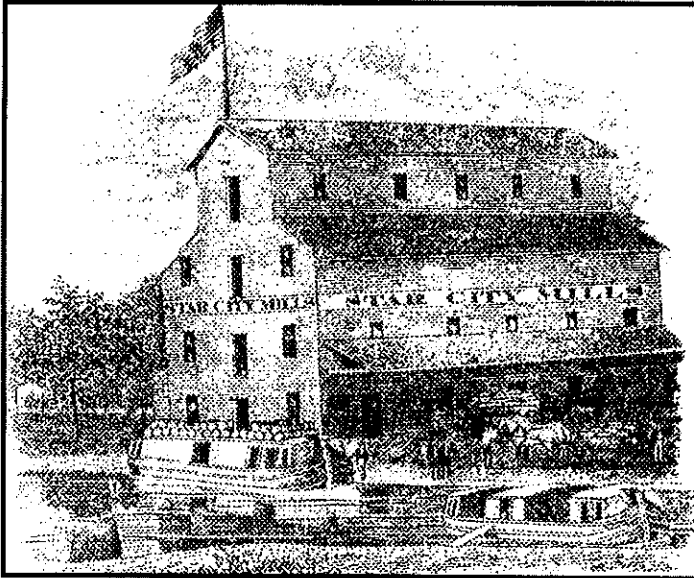
These 3 mills were in a complex together - drop was  
 15 ½ ft.



**Mills in Lafayette, Indiana**  
Illustrated Historical Atlas of the State of Indiana. Baskin & Forster, 1976.

**Lower part of Lafayette**

Daniel Yandes - Occupant T. Wood & Co.  
 Dated : 25<sup>th</sup> February 1840 - 30 years  
 beginning January 1, 1841  
 "Star City" Grist Mill - 1 overshot wheel - 3  
 mill stones  
 Water wasted to Wabash via lower basin  
 Annual Lease - 4.8 powers x \$162 = \$777.60



"Star City Mills" in Lafayette, Indiana  
Lafayette Public Library

Grist Mill - 1 over shot 14 ft wheel - 3 mill stones

Water wasted to Wabash via lower basin  
Annual Lease - 3.94 powers x \$192.85 = \$759.83

Upper end of Lafayette (Indiana Magazine of History)

S.M. Clark & A. Bartholomew  
Dated : 5<sup>th</sup> August 1841 - 30 years beginning January 1, 1842  
Saw Mill - 1 Parker or flutter wheel  
Water wasted to Wabash  
Annual Lease = \$250.00.

Other comments of the Engineer :

"A practice has grown up on the canal, and is universally adopted by the flouring mills, to put in four run of stones where only the power of three is leased and paid for. The reason assigned for this practice is, that in the ordinary course of working one of the four run is always up for dressing, so that there are never more than three, the number provide for, in actual operation."

"There is at many mills a great waste of water by leakage."

"The water power on the canal is of much value, not only to the State, but to the community along the line, and for a considerable distance on either side."

Lower part of Lafayette

Daniel Yandes - Occupants Hanna, Yandes & Co.  
Dated : 25<sup>th</sup> February 1840 - 30 years beginning January 1, 1841  
"Lafayette Paper" Mill - 2 overshot 14 ft wheels  
Water wasted to Wabash via lower basin  
Annual Lease - 3.72 powers x \$162 = \$602.64

Lower part of Lafayette - in lower basin

Daniel Yandes - Occupants Hanna, Yandes & Co.  
Dated : 25<sup>th</sup> February 1840 - 30 years beginning January 1, 1841  
Yandes Saw Mill - 1 spiral vent wheel - 1 saw  
Water drawn from the lower basin or tailrace of the 2 mills above  
Water wasted to Sample Run and thus to Wabash River  
Annual Lease = \$250.00  
Annual Lease - 3.72 powers x \$162 = \$602.64

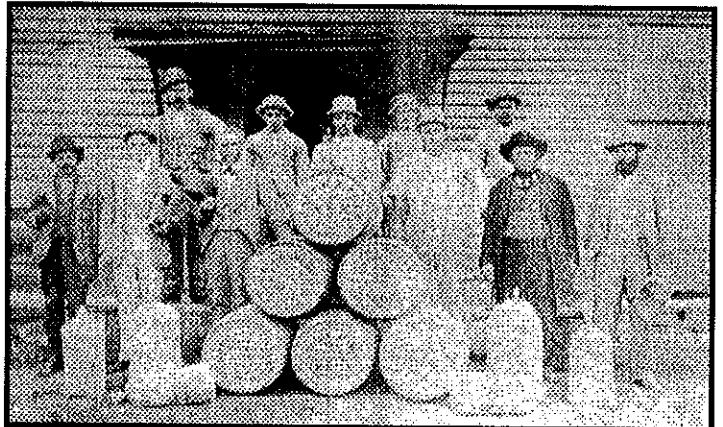
Lower part of Lafayette - west side of canal at Green St

Mr. Hoagland - without lease  
Hoagland Woolen Mill - 16 ft wheel  
No Annual Lease

Upper end of Lafayette

Israel Spencer & Nathaniel Hull  
Dated : 12<sup>th</sup> March 1840 - 30 years beginning January 1, 1840

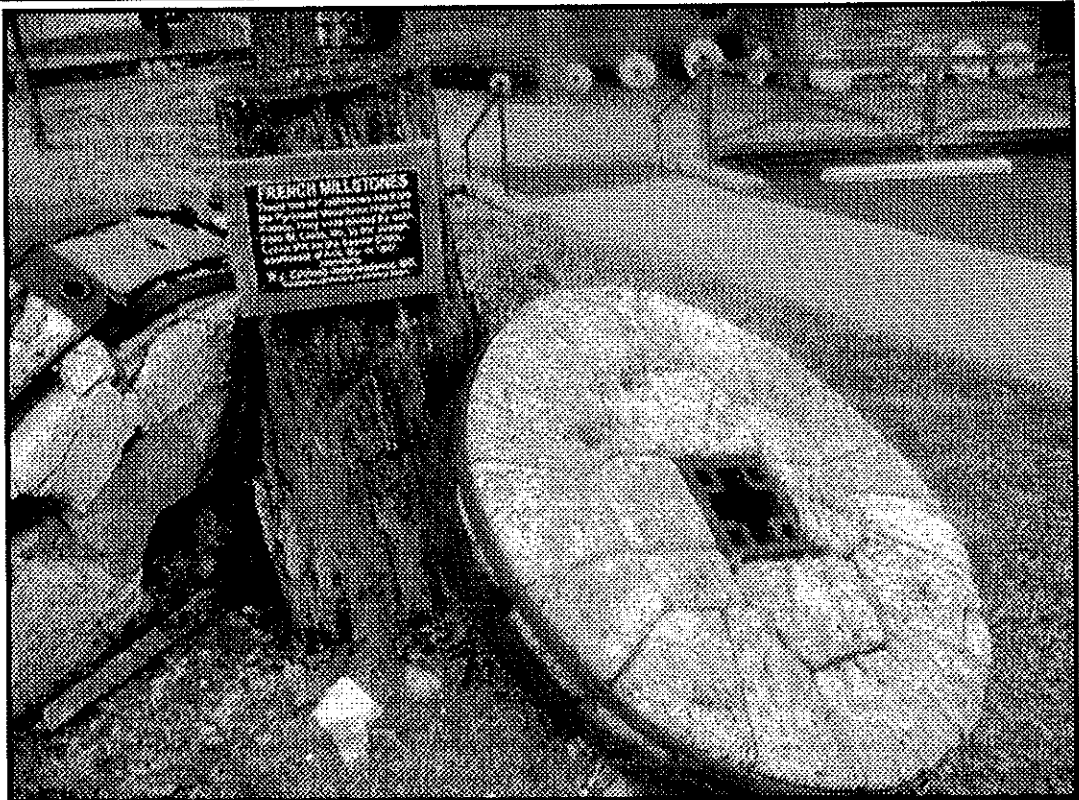
Mill employees at "City Mills" in Fort Wayne, Indiana



As noted earlier, French mill stones were prized more highly than American made ones. On a stop in Missouri, Tom Castaldi, CSI Advisory Council from Ft. Wayne, IN, found many good examples of millstones and photographed them for use with this article. The largest picture on the following page shows two 45" mill stones from the Pyrenees Mountain region in France. They were hauled by oxen from St. Louis, Mo to the Joseph Lyons Mill on Beaver Creek southwest of Ava, MO in 1847. A note on the internet about them



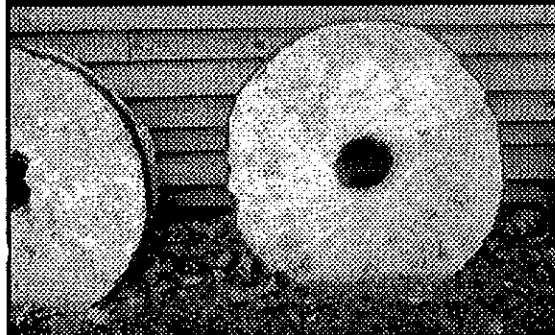
states: "Joe Lyons, as he was known, operated in a small way until 1847. At that time he saw the need for expanding the mill's capacity so he traveled to St. Louis, Missouri, and bought a Run of 45" French Buhrs. These were transported to the mill site from St. Louis by oxen. As a brief history, the French Buhrs were quarried in segments in France, put together with a stone cement, and banded with iron. They were then shipped in sailboats to New Orleans, Louisiana, and on up the Mississippi to St. Louis where the stones were assembled into a stand called a 'Run of Buhrs.' The stones were in operation at the mill site until approximately 1926. They remained idle until May, 1971, at which time these stones were given to The School of the Ozarks at Point Lookout, Missouri, by the owner, Mr. W. J. Caldwell.



French millstones are seen in the foreground along with other French and American millstones standing at the base of an old mill on the campus of the College of the Ozarks in Point Lookout, Missouri.  
Photos by Tom Castaldi

**FRENCH**

AMERICAN	AMERICAN	AMERICAN
Kissee Mill Stone. This 20" millstone was owned by John Mace, who was the hand operator of the Kissee Mill.	Sarvice Pt. Millstone. This 24" American Millstone is from the Sarvice Pt. Mill on the Finley River near Seymour, MO. It also saw service in an earlier mill.	American Millstone. This 30" millstone came from a mill of Bear Creek near Forsyth, MO.



**EARLY AMERICAN**

These two matched millstones are from the mill that was located in Thompson Hollow, near Buttermilk Spring, in Stone County, MO Their age is estimated at 145 years.

# **WHEELS OF COMMERCE**

# CANAWLERS AT REST

## ARCHIBALD STITT

b. December 1801  
d. October 13, 1867

By Carolyn I. Schmidt



Archibald Stitt's father, James Stitt I, is believed to be descended from a Scottish Covenanter family that had fled to Ireland during the early 1700s. Family records show that he was probably born in Northern Ireland in 1770. It is likely that he was a textile weaver since that was the most prevalent occupation in the Ulster-Province, Scotch-Irish community at the time. Mary Newell, Archibald's mother, was also born in Ireland around 1770. James and Mary were married in 1796 in County Down, Ireland. They were Presbyterians. Their children were:

### Nancy Stitt

b. September 28, 1798 County Down  
m. Webb  
Farmer's wife in Kansas  
Many children

### James Stitt II

b. December 22, 1799 County Down  
d. August 28, m 1873 Verona, IL  
m. Margaret Marshall  
b. February 10, 1806  
d. April 29, 1884)  
Landowner, farmer, carpenter  
Nine children

### Archibald Stitt, our subject

b. December 1801 County Down [Some say 1800 or 1802]  
d. October 13, 1867  
m. Catherine Simpson 1827 Huntingdon, Pennsylvania  
b. March 23, 1811  
d. November 23, 1893 interred Nov. 25  
Canal builder & superintendent, hotel owner  
6 children

### Thomas Stitt

b. June 24, 1804 County Down  
m. Never married  
Shoemaker for prisoners at Columbus, Ohio state penitentiary

### Alexander Stitt

b. December 1806 County Down  
d. California  
m. Never married  
Ran away from home at an early age probably to California

### William Stitt

b. September 26, 1808 Huntingdon County, Pennsylvania  
d. April 30, 1899  
m. Elizabeth Lostetter December 5, 1835,  
d. About 1845 after birth child  
Tailor, farmer  
Eight children  
m. Jane Somerville Robinson 5 years later  
Five children

James I and his family with the exception of William, who had not been born, sailed to America in 1808 accompanied by his brothers, Archibald and Robert, and their families. James I and Archibald settled in New Dublin Township, Alexandria, Huntingdon County, Pennsylvania about June 1808. Robert moved to the south. [Sources disagree on the year they came to America. Some say 1806, some 1808, some 1809]

Not long after settling in Huntingdon County

James I's last child, William, was born on September 26, 1808. The following February 1809 James I passed way, cause unknown.

Our subject, Archibald Stitt, was born in County Down, Ireland, in December, 1801. [Sources disagree -some say 1800 and some 1802] and came to the United States with his parents in 1808. [One source said he was 7 or 8 years old at the time, another 4 years old] They settled in Huntingdon, Pennsylvania, which is located along the Juniata River, west of Harrisburg and near Altoona. It is the county seat of Huntingdon County, an agricultural and fruit-growing region, with valuable forests and deposits of iron, coal, fire clay, and limestone. There Archibald grew up and learned the trade of shoemaker. He was also employed for a time in an iron foundry running a blast furnace.

In 1827 Archibald married Catherine Simpson (b. March 23, 1811 in Huntingdon, PA, d. November 19, 1893 in Wabash, IN). Their son Alexander was born in Huntingdon.



Catherine Stitt

In 1832-33 he left his family and came to Indiana and secured the contract for building the Wabash and Erie Canal from Lagro to Lafayette. He built locks. He worked on the canal in Tippecanoe County, Carroll County, Miami County and Wabash County.

Archibald returned to Pennsylvania in 1834 to get Catherine and Alexander and then brought them to Lagro, Indiana, to establish a home. The date given for this settlement was May 29, 1834. Upon completing his canal work in 1840 he returned to Pennsylvania for a short time.

Archibald and Catherine had more children born in Indiana. Four of them lived to maturity. Their children were:

Alexander Stitt  
 b. October 5, 1828 in Pennsylvania  
 d. February 9, 1901 in Columbus, Ohio  
 m. Mahala Miles January 20, 1853  
 Three children

Jane Dean Stitt  
 b. November 27, 1836 in Wabash County, Indiana  
 d. December 28, 1919 in Wabash County, Indiana  
 m. Thomas W. King October 22, 1857

Two children

James E. Stitt  
 b. April 11, 1840 (19 in 1860 Census) in Delphi, Indiana  
 d. June 1, 1915  
 m. Nancy J. Dicken June 20, 1867  
 b. Rush County  
 Tinner  
 Four children

William S. Stitt  
 b. September 5, 1843 (16 in 1860) in Indiana  
 d.  
 m. Mary A. Lutz September 1887  
 b. Ohio  
 First Lieutenant Company A, Seventy-fifth Indiana Infantry during Civil War with left hip shattered at the Battle of Chickamauga.  
 Organizer and director of Wabash County Loan & Trust Company  
 Organizer of Wabash City Water Works  
 Secretary and general manager of Home Telephone Company  
 Trustee for Wabash city schools  
 County auditor 1874-83  
 Three children



William S. Stitt

Archibald N. Stitt  
 b. Around 1848 (12 in 1860 Census) in Indiana

George E. Stitt  
 b. March 1852 in Indiana  
 d. May 24, 1855 aged 3 years, 2 months, 2 days

Archibald moved back to Wabash County in 1839-40. He purchased a tract of land south of Rich valley in Noble township situated between the canal and the Wabash River. It was heavily covered with walnut, hard maple and other fine trees. This timber was cleared with some it converted to rails or firewood, but unfortunately great quantities were piled high and burned.

Jonathan Keller deeded Archibald part of SW $\frac{1}{4}$  and part of SE $\frac{1}{4}$  of Sections 14 and 13 Township 27 Range 5 on May 7 1843. The 90.62 acres were purchased for \$1,550.

While in Wabash County Archibald became the superintendent of the division of the Wabash & Erie Canal between Fort Wayne and Logansport. He held that position until 1850.

Archibald was among the petitioners for establishing an International Order of Odd Fellows lodge in

the town of Wabash. On August 27, 1847, St. Anastasia Mesnil Lodge No. 46 was instituted. He was its first treasurer.

In 1850 Archibald was elected treasurer of Wabash County. At that time he moved from his Rich Valley home into the town of Wabash to be closer to his work. He served in this capacity for 2 terms retiring in 1854. He was a democrat until James Buchanan was nominated for president in 1856.

One of the most interesting events in Richvalley during canal times was the most puzzling deaths of the French family in October 1854. A Cincinnati business man, Aaron French, his wife and five children, settled in a cabin at the foot of a hill along the edge of the Wabash River bottom land northeast of Richvalley. Mr. French became ill and could barely support his family. Another family, John and Sarah Hubbard, began living with the French family to "Help Out" as other neighbors had in the past.

One Saturday evening neighbors stopped by the cabin to inquire about Mr. French's health. The town folk noticed Mrs. Hubbard wearing Mrs. French's clothing. They hadn't seen any of the French family for about a year. The next morning Mrs. Hubbard met Mr. James Lewis, the owner of the farm on which the cabin was located, at the gate to the yard. She said the family had moved west to Iowa since their father had died and left land to his children and that she and her husband had bought their belongings for \$40.

Later Mr. Hubbard invited a canal worker, Mr. Edward Boyle, to live with them at the cabin. Boyle was supposedly carrying several hundred dollars. In December Boyle also just seemed to disappear. It was assumed that he had left the community until March 1855 when boys, seining in the canal while the water was lowered for repairs, found Boyle's marked body. It looked like murder.

At the same time, Hubbard suddenly appeared to have lots of money. He was accused of the murder and put in jail. He denied it. When his wife came to visit him at the jail, their conversation concerning the French family was overheard. Mrs. Hubbard was immediately arrested and an investigation begun.

The sheriff and his deputy went to the old French farm. Upon arriving they noticed a 'stagnating' smell coming from the Hubbard house. The floor boards of the home were loosened and eighteen inches below them were found seven bodies. At the bottom of the shallow grave were Mr. and Mrs. French, then the four children, and finally the tiny baby at the top. A hammer or ax had crushed each skull and Mrs. French had a bro-

ken neck and leg. The Frenchs' bodies were removed and buried in the Richvalley cemetery.

During his trial Hubbard claimed innocence. Archibald Stitt testified for the defense along with others who were acquainted with Hubbard. However, Hubbard was found guilty and hanged on the Wabash County Courthouse lawn at 3 o'clock on Thursday, December 13, 1855.

In 1856 Archibald purchased the Indiana House, a popular public center of entertainment. He ran the old hotel until he died.

The Federal Census of 1860 shows Archibald being the hotel keeper at 58 years of age. He has real estate valued at \$2,500 and a personal estate valued at \$1,500. His wife, Catherine, at age 50 is the landlady. His children James, age 19, is a tinner; William, age 16, is at school; and Archibald is age 12. Also living at the hotel at the time of the census were:

- David Johnson, age 24, teamster from Ohio
- John Alna, age 17, hostler from New York
- John Drury, age 10 from Indiana
- John Sichler, age 24, a cook from Germany
- George Kinkle, age 35 an attorney at law from Kentucky
- Frederick Shutz, age 33 woolen manufacturer from Pennsylvania with real estate valued at \$2,000
- Jacob Lapp, age 43 a miller from Pennsylvania
- John Stickland, age 24 a shoemaker from Bavaria
- Leopold Levi, age 21 a clerk from Millersburg
- William Henley, age 23 a clerk from Ohio
- Eli H Dayen, age 22 a clerk from Indiana with \$100 real estate
- Daniel Thurston, age 23 a clerk from Indiana
- Matthias Wolf, age 30 a butcher from Prussia
- Lewis Twenivy, age 28 a bu peddler from New York
- Jacob Ulman, age 28 a clerk from Hessie (Darmstadt ?)
- John Tank, age 16 a boat driver from New York
- Benjamin Kersteter, age 49 a saddler from Pennsylvania
- Cyrus H. McPherron, age 32 a wagon maker from Mississippi
- Albert H. Clough, age 27 a railroad agent from New Hampshire

Although the town of Wabash had been incorporated in 1849, it was in the class of laws designed as "Local" and the State abandoned these "Special Laws." To re-organize the town had to be re-incorporated. Meetings ensued that led to an election held on Tuesday, May 16, 1854, at the courthouse creating 5 wards and on July 24, 1854 an election was held to select a trustee for each ward. Elections were held again in 1855 and in May 1856 Archibald Stitt was elected as a trustee of the Second Ward, which comprised all territory between Huntington and Wabash streets, extending

from south to north.

On July 6, 1863 John Hunt Morgan's Raiders crossed the Ohio River at Brandenburg, Kentucky, and entered Indiana. On July 9 Indiana's Governor Oliver P. Morton called for citizens to organize into military companies and be subject to orders. This Civil War group was known as the Indiana Legion.

In Wabash a war meeting was held on July 11 at the court house to organize into the military those over 45 years of age. A roll of paper was presented for signatures under the following terms:

ROLL OF WABASH PIONEERS.

ARTICLE I. The undersigned associate themselves into a military company, the persons composing it being over forty-five years of age and exempt from military duty.

ART. II. We do hereby —each member for himself — voluntarily waive all right of exemption as set on in the foregoing article, and tender our services, and present a company that shall be held and holds itself, as a part of the Indiana Legion subject to the orders of the Governor for all military purposes.

ART. III. This company pledges itself to loyalty, and hearty supports the Union and the Government. This article is fundamental, and shall not be changed.

Archibald Stitt was among the 86 signatures joining in this effort. They met every evening at 7 p.m. at the courthouse for roll call and drill awaiting further orders. They were relieved from duty on July 15, 1863 in an address by Governor Morton stating that the duties of these "minute men" were no longer needed.

A strong supporter Union troops, Archibald was "a warm friend to the soldiers of the late Civil war, no needy veteran ever having applied to him in vain for relief, and he would have given his last dollar to any one wearing the blue, providing such a one required assistance." He would not accept payment for food or lodging if they stayed in his hotel.

Throughout his life Archibald contracted for bridge and road work. He was the first appointee to the position of street commissioner under the city government of Wabash and while acting in this capacity died of sunstroke.

The Wabash histories describe Archibald as being of "average size...quick in action and in decision...generous to a fault." He had an ordinary education, "but possessed an unusual fund of good, practical sense, and the intelligence and quickness which made him a big factor in days when condition of living required just those qualities." He was "one of the most popular men of the time."

Archibald died on October 13, 1867 and was buried in the old portion of Falls Cemetery then known as the new Wabash cemetery. His obituary appeared in the local paper as follows:

Wabash Plain Dealer October 17, 1867

Mr. Archibald Stitt, one of the earliest settlers of the County of Wabash, and one of her best esteemed citizens, died at his residence in this city, on Sunday, the 13th inst. His death was sudden and unexpected, and he is sincerely mourned by all who knew him. The rich loved him for his excellent social qualities, and the poor because he was their best friend. He was one of the most genial and kind-hearted men we ever knew. His friends may mourn his loss, but they cannot be sorry for any thing he ever did.

— He was buried by his brethren of the Independent Order of Odd Fellows, and he was followed to his resting place in the New Cemetery, by the largest procession of deeply sympathizing citizens we ever saw in this city.

A more extended notice will appear next week.

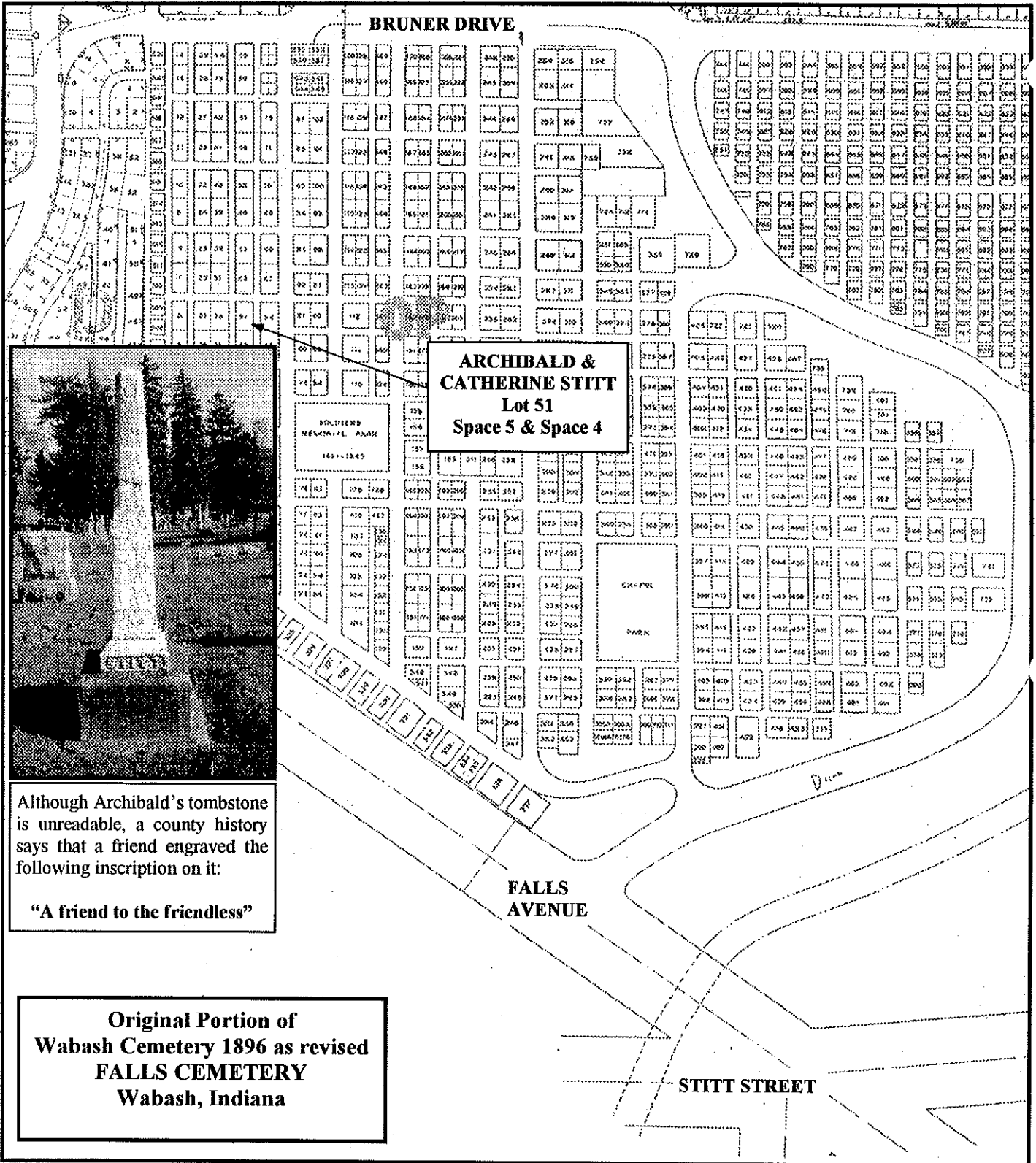
Wabash Plain Dealer October 24, 1867

ARCHIBALD STITT. — The subject of this notice was born in Ireland in 1802 [1801], and was, at the time of his death, in the 66th year of his age. About the year 1806 his father and family emigrated to this country and settled in Alexandria, Penn., where he resided until his death, when Archibald was about twelve years old. — from that time the care of the family, consisting of his mother, and several brothers younger than himself, to a great extent devolved upon him. After learning his trade (that of Boot and Shoemaker) he removed to Huntingdon, Penn., and established himself in the business of Boot and Shoemaking, which he continued successfully for some years.

In the meantime he was married to Catherine Simpson, who survives him.

At a later period he purchased an interest in a furnace and engaged in the manufacture of iron, but the general crash of the iron manufacturing interest in Pennsylvania, in 1834 and 1835, he failed.

He removed to Lagro, in this County, in 1835. In 1836, having obtained a large contract on the Wabash & Erie Canal, at the "Falling Springs" Bluff, he removed to Carroll County, where he remained until 1842, when he bought a farm in this County, near what is now the town of Rich Valley. While residing on this farm he was appointed Superintendent of Repairs on the Wabash & Erie Canal, which position he held until the Canal passed



Although Archibald's tombstone is unreadable, a county history says that a friend engraved the following inscription on it:

**"A friend to the friendless"**

**Original Portion of  
Wabash Cemetery 1896 as revised  
FALLS CEMETERY  
Wabash, Indiana**

into the hands of the creditors of the State on July, 1847. In 1850 he was elected Treasurer of Wabash County, and removed to this town. After serving out his term as Treasurer, he engaged in Hotel keeping and continued it until his death.

In all the relations of life was a son, brother, husband, father, or neighbor — he was all that could be desired. In business he was energetic, persevering and upright. Whether in public or private, all his transactions were guided by strict integrity of purpose, and it is believed that no one who knew him well, ever doubted his

entire honesty.

His heart was ever open to those in distress, and his hand ever ready to relieve them in the extent of his ability. During the recent rebellion, sick and destitute soldiers, returning from the army, always found his door upon to them, and his hand ready to supply their wants, and aid in reaching their homes, without hope of other reward than the consciousness of doing good to his fellow man. Few men would be more missed from among us. His acts of kindness and generosity were strewn all along his pathway through life. It was not with him spasmodic, but an every day matter. The writer of this knew him intimately for thirty-two years and believes it no exaggeration to say of him, that he was the "noblest work of God, an honest man."

Mrs. Archibald (Catherine) Stitt passed away on November 23, 1893. [Another source says November 19] Although her obituary was listed as being in a local newspaper, the newspaper for that month was unavailable on microfilm at the Wabash Carnegie Public Library. She was interred in Falls Cemetery in Wabash, Indiana, on November 25, 1893.

Although county histories, obituaries and genealogical researchers do not always agree on the exact year of Archibald's birth or arrival in America and his

tombstone is in such a bad condition that it is impossible to read, it is more important to note what this man accomplished during his lifetime. His work on the Wabash & Erie Canal in four counties in Indiana greatly helped to complete this great work in opening a route west from the east.

Sources:

*Biographical Memoirs of Wabash County, Indiana.* Chicago, IL: B. F. Bowen, 1901.

Federal Census 1840, 1860

Helm, Thomas B. *History of Wabash County, Indiana.* Chicago, IL: John Morris Printer, 1884.

*Wabash Plain Dealer.* October 17 & 24, 1867.

*Wabash Weekly Intelligencer.* May 30, 1855.

Woodward, Ronald. *Early Death Records of Wabash County, Indiana.* Wabash, IN: Wabash Carnegie Public Library, 2002.

Woodward, Ronald. *Wabash County Grantors Book 1836-1847.* Wabash, IN: Wabash Carnegie Public Library, 1982.

Weesner, Clarkson W. *History of Wabash County, Indiana.* Chicago, IL: The Lewis Publishing Company, 1914.

<http://archiver.rootsweb.com/th/read/STITT/1998-09/0904694473>

<http://archiver.rootsweb.com/th/read/STITT/1999-06/0928899332>

<http://www.ctaz.com/~com/!shadgraf/stitt.htm>

## CANAL ARTIFACTS

When donating books or artifacts to a museum one can not always depend on them being kept by the institution. William Shive, CSI member from Belleville, Illinois, tells of his personal experience in a letter to CSI headquarters below:

"In *The Hoosier Packet* January 2008 issue there was an article about a family vacation. It included a guided tour of the C. Howard Hiester Canal Center in Reading, PA. (CHHCC)

"In 1949, with my parents, I attended the Pennsylvania Canal Boatmen's Association meeting at Port Treverton, PA. My father's maternal grandfather was Joseph Burk, lockmaster for both the West Branch and the North Branch of the Pennsylvania Canal at Northumberland, PA. My father wanted to buy a canal boat model or pay someone to make one. Leads there led to Henry Sanders in Rochester, NY, son of Abe Sanders, a deceased employee of the Pennsylvania Canal. Henry had made two sets of two 24 inch Pennsylvania Canal Company boat models, one going to the C. Howard Hiester Canal Center. He kept a set, which my father purchased in 1950 after Henry's death.

"After my retirement in 1982, I did genealogy research in Pennsylvania and saw some of the sights. I visited the CHHCC in the 1990s to see their canal boat models like my father's models. I was advised that the models had been declared surplus and given to the State Historical Society in Harrisburg,

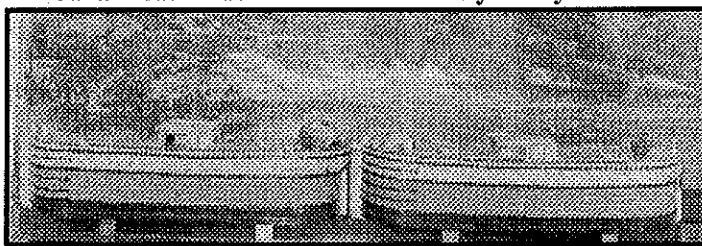
PA. Later they were again declared surplus and were moved to a restaurant in a hotel in Harrisburg. That was many years ago. Where are they now? If any one knows, it would help to advise the American Canal Society for record purposes.

"In October 2006, I delivered my father's models PENNA CANAL CO. NO. 361 & 362 to the Berwick Historical Society, Berwick, PA. That was my father's hometown and the North Branch passed through it.

"It is interesting to note that in *Canal Currents*, bulletin of the PA Canal Society, Fall 2007 issue, Glenn Wenrich has a lifelong hobby of model boat building. He has given or loaned more than half a dozen models to CHHCC.

"PENNA CANAL CO. No. 347 & 348 models were each 10 feet long and were floatable as I saw them at a PA Canal Boatmen's Assn. Meeting in Selingsgrove in the 1930s. In the 1980s they were at the Coal Mine Museum in Scranton. In the 1990s they were at the Hugh Moore Canal Park warehouse."

### Canal Boat Models 361 & 362 made by Henry Sanders



**THE WABASH & ERIE CANAL:  
A STUDY OF TECHNOLOGY CHANGE  
IN NINETEENTH-CENTURY INDIANA**

By Anthony G. Blake

*This is the second installment of Blake's paper and is a continuation of Chapter 2 from the March 2008 issue of The Hoosier Packet.*

*Erie Canal (cont.)*

In operation, the Erie Canal lived up to its hype. Tolls amounted to \$687,000 in 1826 and rose to \$1.4 million in 1835; aggregate tolls for the first nine years of operation were \$8.5 million. This was a nice return on the investment of \$7.1 million for the original canal. Increasing traffic caused the state to embark on expanding the size and improving the locks on the canal beginning in 1835. The expansion project lasted longer and cost four times as much as the original construction, but proved worth it: total revenues collected through 1883, when tolls were finally abolished, amounted to \$121.5 million.

The canal had a dramatic impact on economic development in western New York and the Great Lakes states. Freight rates between Buffalo and New York City dropped from \$100 to \$5 per ton. Wheat and flour transport from New York farms to the tide-water rose rapidly, reflecting increasing agricultural activity. After 1832, wheat and flour shipments entering the canal at Buffalo rose to match shipments within the state, indicating that farmers were moving ever westward to find land. Packets carried immigrant settlers by the thousands through to Buffalo, where they boarded schooners and steamers for all points on the Great Lakes. Contemporary observers describe Buffalo as a beehive of activity with an endless stream of arriving and departing watercraft, packed with passengers and goods.

Is there any wonder that the rest of the country viewed New York and its grand Erie Canal with envy? This was progress, and all Americans wanted part of it. There were many reasons for the decisions to build canals throughout the United States, but the simple desire to repeat the success of the Erie Canal ranked high among these.

In its early years, the Erie Canal appeared to be little influenced by railroads or the prospect of railroads. Its operation commenced early enough so that it got a jump on the American railroads. By the time there was serious competition, the Erie Canal was well established and had earned enough in tolls to make it successful. But this is not to say that there

was *no* interplay between railroad adherents and the canal project.

As early as 1812, John Stevens of Hoboken, New Jersey, published a bound copy of exchanges of letters and memos with the New York Canal Commissioners. Stevens was a lawyer and colonel in the revolutionary army turned inventor. He had conceived of steam-driven railways and was seeking support for experiments to demonstrate their feasibility. His memo to the commissioners proposed that a wooden railway with steam-driven carriages be constructed rather than the waterway they were planning. Proclaiming that he possessed "the fullest confidence in being able to convince an experienced and skilful engineer of the entire practicability of the plan," he proceeded to list its advantages:

- The construction cost for the railway would be the same as for a turnpike and much less than for a canal.
- The skill required of the workers would be less for a railway since precise leveling measurements would not be required; hence the work could be completed in one or two years.
- The railway would not be closed by ice during the winter season and would be built above snow depths so that it could operate throughout the year.
- The railways would be "free from the numerous casualties to which canals are liable."
- The operating costs would be much less for a railway than for the canal.

These factors, except perhaps for the fourth regarding "casualties," would be cited again in debates on this subject in future years. Indeed, as we shall see, the cost arguments would be used by those on both sides.

Perhaps not surprisingly, the canal commissioners were not impressed with Stevens's case. In one of the responses, Robert Livingston said:

I fear, however, on mature reflection, that [your proposals] will be liable to serious objections, and ultimately more expensive than a canal. They must be double, so as to present the danger of two such heavy bodies meeting....As to wood, it would not last a week: they must be covered with iron, and that too very thick and strong....Upon the whole, I



fear the expense would be much greater than that of canals, without being so convenient.

Here we have an example of a counterclaim on the cost of construction, together with the conservative view of the situation that we shall also see in the future. The ensuing correspondence between Stevens and the commissioners contained other claims and counterclaims concerning costs and technical feasibility. It seems that Stevens was excessively confident about his theories, while the commissioners, with no real knowledge, were excessively confident that Stevens was a crackpot. Stevens did his case no good, I fear, in his final letter to the commissioners:

But it would be useless to pursue the subject farther [sic]. Should what has already been said be insufficient to open the eyes of the Committee, I have only to lament that their blindness on this occasion will certainly be followed with future regret. A discovery... when once made, and its development fairly exhibited before the public, can never...be lost or suppressed. Sooner or later, then, the improvement now proposed will be brought into general use, and it I mistake not, long before the projected canal will be completed.

The commissioners turned him down.

Appealing to a higher authority, Stevens wrote Senator Samuel Mitchell of New York, who was a politician, well-known chemist, and a friend of Robert Livingston, requesting federal funds for his demonstration. In that letter, Stevens brought out the speed of transportation argument: because of the lack of frictional resistance, "I can see nothing to hinder a steam-carriage from moving on these ways with a velocity of one hundred miles an hour." In a footnote, he admitted that "it may not in practice be convenient to exceed twenty or thirty miles an hour." There is no record of Senator Mitchell's response.

In 1831, nineteen years after Stevens proposed that a railway be built between Albany and Buffalo and six years after the Erie Canal was completed, the Mohawk and Hudson Railroad began operations between Albany and Schenectady. Within another ten years, a series of short lines that later became the New York Central extended the entire distance between Albany and Buffalo. These railroads did indeed operate in all seasons of the year, and they did indeed offer much faster transport than the canal. Comparative costs were not clear. The legislature, becoming alarmed at the encroachment of privately-owner railroads into the market heretofore commanded by the state-owned canal, asked that a

committee of engineers be appointed to provide answers on the comparative advantages of canals and railways. The committee, led by John B. Jervis, one of New York's great engineers who worked both on canals and on railroads, reported in March 1835:

It is believed that it will not be difficult to shew [sic], that the expense of transportation on rail-roads, is very materially greater than on canals.

and

We may, however, be permitted to state, what appears conclusive from the facts presented, that canals, on the average, had thus far, cost less than rail-roads, both in their construction and repairs.

No supporting information was provided. The legislature appeared to have some doubts, for they enacted a series of regulations to ensure that the railroads' costs would be greater than canals. For a time, the railroads were not permitted to carry freight during the seasons when the canal was open. When the regulation was eased, the railroads were required to pay canal tolls on all freight they did carry. As a result of public pressure, the restrictions were removed in 1851, and the canal was forced to lower its tolls. The mighty canal's momentum was established by that time, however, and freight volume continued to increase, peaking in 1872. Thus it can be said that the remarkable success of the Erie Canal, even in the face of railroad competition, was in part due to help from the legislature.

#### *Pennsylvania Mainline System*

In 1825 in Pennsylvania, envy of the New York project quickly became panic at being left behind. Politicians and businessmen understood that the Erie Canal would capture trade from the interior of New York State and from the Great Lakes, trade which until then had at least in part passed along Pennsylvania turnpikes and through the port of Philadelphia. The state had already entered the Canal Era with its Union Canal from the Schuylkill River at Philadelphia to the Susquehanna at Harrisburg. The Union Canal had started construction in 1821 and would be opened in 1826, but all knew that it was too narrow and its locks too small to handle normal canal boat traffic. In any case, the politicians and Philadelphia merchants wanted a through canal from Philadelphia to the Ohio River at Pittsburgh. And they wanted it soon.

The Pennsylvania internal improvements promoters were handicapped, however, by geography. The 3,000-foot mountains west of the Susquehanna were a

formidable barrier to transportation of any sort. Canals seemed infeasible; even if locks would be built over the mountains, There was no way to raise water to that height for their operation. The lowest levels at which tunnels could be built, if they could be built, were also too high to supply with water. Some saw railroads as the answer to their problem. All agreed that an answer was needed soon, and they embarked on a furious round of investigations and debates, largely conducted in public, to find it.

The organizing force behind this effort was the Pennsylvania Society for the Promotion of Internal Improvement. Its leader was Matthew Carey, an articulate and well-known Philadelphia publisher. It was organized in late 1824 for the purposes of gathering and disseminating information, promoting awareness, and providing a forum for deciding upon appropriate internal improvements for the state. At about the same time, the governor appointed a three-man Board of Canal Commissioners to select a route for a Philadelphia-to-Pittsburgh canal. The Board was unable to agree on a canal route, and the Society started investigating the railroad alternative.

As in New York, John Stevens had been the first to make a serious proposal for a railroad. In 1822, he argues vigorously and publicly for the construction of a railroad between Harrisburg and Pittsburgh, claiming that at no point would inclines exceed two degrees. However, he was again unable to secure financing, even for a test to demonstrate that steam locomotives could operate on that mild incline.

At this time, however, experiments and trials were under way in Britain. The Stockton and Darlington started operations in September 1825. The Society dispatched William Strickland, eminent Philadelphia architect and engineer, to Britain to gather facts on railroad and canal developments there. His reports began to appear in the press in August 1825. In July of that year, while Strickland was still away, an anonymous pamphlet titled *Facts and Arguments in Favour of Adopting Railways in Preference to Canals in the State of Pennsylvania* appeared. The pamphlet drew on British experience; indeed, that was the only experience with railroad there was at the time. Some scholars believe Matthew Carey wrote *Fact and Arguments*, but Rubin believes not. (To be continued in next month's *The Hoosier Packet*)

Table 2. Comparative advantages of railways and canals (summarized from *Facts and Arguments*, 30-47).

<u>Railways</u>	<u>Canals</u>
Construction expense \$4,000 per mile for single track, \$7,000 per mile for double	Erie Canal and Union Canal costs about \$18,000 per mile
Construction time about one third of that for canals	Canals typically take eight years to complete
By imbedding tracks in cross roads, railways can be crossed easily	Canal crossings require bridges and disrupt countryside
Capacity easily expanded	Capacity limited by size of canal and locks, expansion very expensive; Erie Canal expansion already being planned
Can be situated in mountainous terrain; should limit incline to 12½ feet per mile.	Many difficulties in mountainous terrain: lack of water, rocks, limestone, expensive lockage
Can use inclined planes to manage steeper grades; descending cars balance ascending cars, reducing required power	No power recovered from descending locks
Repair costs one third that for canals	Repair expensive and inconvenient: all boats stopped until repairs effected, sometimes after delays of months
More portable; rails and sleepers can easily be moved to another location or sold	Nothing to move; must be built anew if location changes
Operating costs \$20 to move 100 tons 100 miles on level terrain (basis of calculation provided)	Operating costs \$32 on level terrain
Power required proportional to speed; steam locomotives in Britain typically travel at eight miles per hour; higher speeds expected in future	Power required proportional to square of speed; in any case, speeds limited to three or four miles per hour to avoid excessive wash
Freight not subject to breakage	Transport delays experienced waiting for locks
	Rough water where canals meet rivers can cause breakage
	Stagnant water can cause diseases
Can stay in service all seasons of the year	Closed by ice in the winter and subject to closure because of droughts at other times

## WIFE SWAPPING ON THE CANAL

By Terry K. Woods

Terry K. Woods, CSI member from Canton, OH and former president of both the Canal Society of Ohio and the American Canal Society, has sent in several articles of canal reminiscences for your enjoyment. The following newspaper article entitled "Wife Swapping Along the Canal" appeared in the Canal Comments column of the *Canal Fulton Signal* on Wednesday March 7, 1973.

Our old friend "Dillow" Robinson, the ex-Canaller from Independence [Ohio], told me this story and those that know him can vouch for the truthfulness of it.

Traffic on the canal was just about finished. Income was practically nothing and, soon, all this old Canaller friend of Dillow's had left in the world was his boat, his wife, and a team of mules. Things didn't get any better and there seemed to be only one way for he and his wife to survive the winter; he had to sell the team.

It was a desperate solution because a Canaller without a team couldn't operate. Perhaps a part-time job would crop up before the boating season started and he could earn enough money to purchase a new team.

The part-time job didn't materialize and this time there didn't seem to be any solution to the problem. Then, a tiny glint of hope beamed from far over the horizon; a Cleveland firm had a consignment of paint (a whole boat load) for a client in Canal Dover.

The old Canaller was asked if he wanted the job. Did he? He'd get "cash-money" to haul this load. And Canal Dover was only a short distance above Nick Heple's coal mine in Trenton (now Tuscarawas). He could purchase a boat load of coal there which could almost always be sold at the paper mill in Akron. If not, Cleveland's Lake Steamers could almost certainly use a boat-load of coal. Then, even if a return cargo couldn't be found, there'd still be enough money left to return "light" to Trenton and pick up more coal.

The big problem, of course, was that with no money, getting a new team was going to be difficult, if not impossible. A quick round of all the obvious places just confirmed that opinion. Though many wanted to help, no one could afford to "wait" until after a "few trips" to get their money.

One of these persons was Caleb Atwater, longtime friend of Ben Arthur (the old Canaller). Caleb had left the canal a few years before to take up farming, and he had a spare team of mules. However, he, too, had his problems.

"Sam," he said, "you know I'd help if I could, but Martha has to go back East for a few weeks to look after her sick mother. I need 'cash money' from selling those mules to hire someone to take care of the house and look after the kids while I'm in the fields all day."

At that, the gears in Old Sam's head began to grind and he got a crafty gleam in his eyes. "Don't do anything about the mules till I get back," he shouted as he ran out the door. "I have to check into something, but I think both our troubles are over."

Sam rushed home and explained the situation to his wife. "You know, Mary," he concluded, "it's not as if house-keeping and kid-watching were strange to you; besides, it'll only be for a few weeks."

And that's how it worked. Mary Arthur became Caleb Atwater's house-keeper and babysitter while Old Sam got the use of a team of mules "free" for that time period.

Things went well for Sam after that. He grew lucky picking up south-bound cargo and was able to buy the team and get Mary "out of hock." He was also able to set a little aside and he and Mary got off the canal a few years later. They lived out the rest of their lives, quite comfortable, on a little farm just south of Bolivar.

Of course Sam gained quite a bit of notoriety among fellow Canallers as the man who "swapped his wife for a team of mules." That title didn't bother Old Sam much. "Actually," he'd say, "I was doing her a kindness. She'd tended house and minded kids all her life so it was no hardship, but it would have been cruel to expect that good woman to pull a canal boat all by herself."

## REMINISCENCES OF BACKWOODS LIFE IN INDIANA IN THE EIGHTEEN FORTIES

By Artemas Smith

The writer attended his first school kept in a cabin two miles from home. (Delaware County, near Eaton, Indiana.) The extent of the course of study was limited to the three R's. The teacher boarded round the community. The cabin was lighted with oiled paper in the place of glass in the one window which extended almost the length of the cabin. The chimney was a stick and clay affair and was of huge dimensions. The desk was made by putting pins into the legs on the inside of the cabin which held a slab in place. This served as a writing table on which the big boys and girls took lessons in penmanship. Our teacher was a zealous disciplinarian and used the rod without mercy upon every pre-

text.

After six years of pioneer life in Delaware County my father disposed of his holdings and moved to what was then the Miami Reserve, located twelve miles south of Logansport, in Cass County, Indiana, September 9, 1849. My father left Delaware County because there was no market nearer than the Wabash and Erie Canal which was finished through Logansport.

The writer remembers having seen a flat boat on the Mississinewa River being loaded with barrels of flour and lumber floated down to Peru at the time of high water, a distance of forty miles, where the load was disposed of and shipped farther on the canal. Another reason for making the second move was the cheapness of the land in the Miami Reserve.

*Artemas Smith, great-grandfather of CSI member Mark Smith of Brookston, Indiana, contributed his memoirs to the Logansport Pharos-Tribune entitled "REMINISCENCES OF BACKWOODS LIFE IN INDIANA IN THE FORTIES" prior to his death in April of 1923. The above is a portion of them.*

## CENTRAL CANAL REMNANTS

From time to time CSI is asked to locate canal remnants. Chuck Huppert, a CSI authority on the Central Canal, recently answered Robert Laid's question about remnants of the Central Canal south of Washington Street in Marion county from his memory as follows and offered to look up further information and send photos it needed.

South end of Capitol Ave. south of Wisconsin St.  
 North of Troy at railroad track west of Bluff Road  
 Railroad track laid on canal towpath  
 Evident through Frog Hollow  
 Crosses Harding St north of Murray out of Frog Hollow  
 Runs through Stout Generating Plant property where it  
 been widened and deepened then lost at Lick Creek  
 Short stretch south of Thompson, west of IN 37, lost  
 running somewhere south along Harding — flat farm  
 land  
 Cross Southport Road, skirts glacial hill east of Belmont  
 and north of Stop 11.  
 Parallels Belmont on east side of street until it crosses it  
 as part of the Orme Ditch  
 Canal incorporated into Orme ditch crosses IN 37 then  
 turns south and ditch continues west  
 North of Wicker Road in front yard of home that has  
 been filled in but some of it is left to the north  
 Nothing to County Line south of Wicker Road  
 Several stretches beyond County Line to Waverly

## Corridors of Progress

by Richard F. Brown, Jr.

Sturdy footprints established  
 Lengthy, weather-worn trails  
 Each a narrow passageway  
 Over hills and through vales

Canoes handmade and crafted  
 From birch bark, willow, or elm  
 Paddled on swift flowing channels  
 By voyageurs at their helm

Horses, coaches, and wagons  
 Traversed wooden plank roads  
 Timber avenues of commerce  
 On which daily trade flowed

The canal-era builders  
 Engineered to new heights  
 Bringing waterborne commerce  
 To many inland town sites

Grand steamboats were plying  
 Along rivers and large streams  
 A welcoming calliope  
 Greeted all on their beams

Soon, the mighty iron horse  
 Rumbled down railroad tracks  
 To surpass each prior mode  
 And take pace to a new max

Varied methods of transport  
 Overlapped or ran side-by-side  
 Winding through narrow valleys  
 Or ascending steep hillsides

Broad interstate highways  
 Now span o'er this great land  
 Tracing corridors of progress  
 Constructed years beforehand.

## NEWS FROM DELPHI

### THE FIRST OF MANY CANAL TRAILSIDE EXHIBITS

By Dan McCain

January 2008 marked the arrival of the first of many unique trailside exhibit items coming to Delphi Historic Trails. Volunteers moved an old Wabash Railroad baggage building that originally was used at Burrows Station. This small 'typically railroad looking' building represents the Wabash Line when it was built through here in 1856.

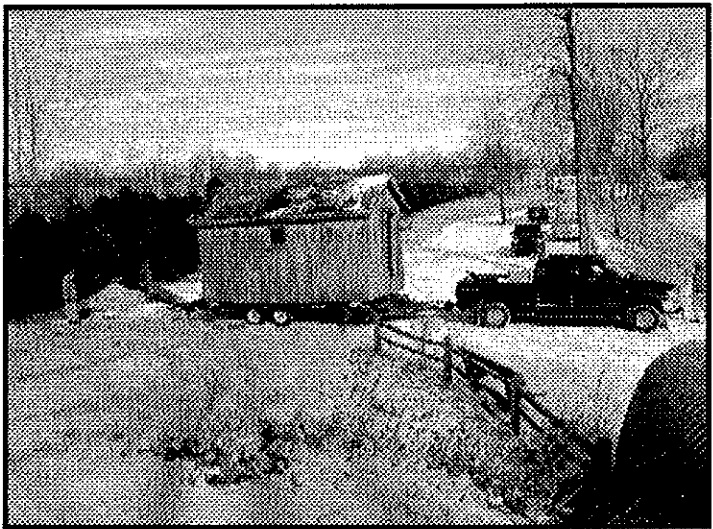
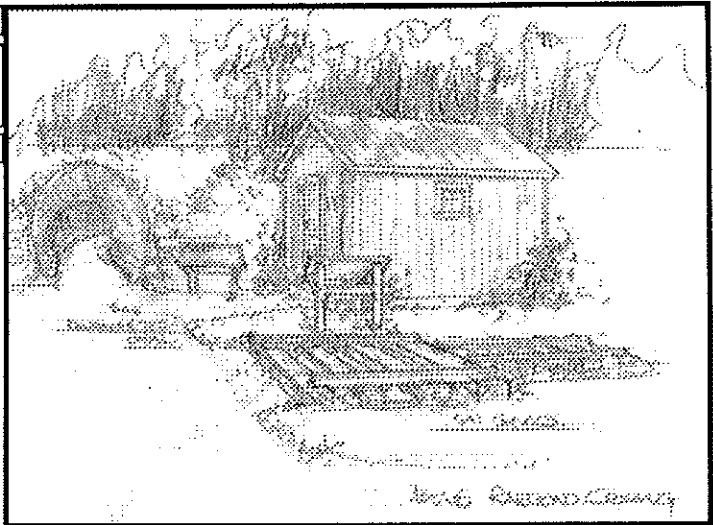
This building with its 'crossbuck doors' has been on a farm north of Rockfield for many years after it was last used for the railroad. Dr. Tom Anderson donated it to the Canal Association. This will become one of a lengthy list of interactive interpretive exhibits. The trails will become adorned with 10 commemorative sites highlighting the canal period.

Railroads quickly took over the lucrative shipping business for which canals were developed. The quicker pace and year 'round shipping offered by rail was favored and the use of waterways diminished. By 1874 Delphi saw the final run of the Wabash & Erie Canal boats. Boats always moved too slow and in winter they were unable to operate at all. The favored transit was pulled by steam locomotives.

This interpretive site with its baggage building and section of narrow gauge/standard gauge rail will be located at the back of Canal Park. At this site the two great historic transportation systems crossed. The canal has been dredged for a mile and is also accessed by the Canal Association's pontoon boat in the summer.

The intersecting live railroad is owned by US Aggregates to haul crushed stone products away from their Delphi plant. Since the rail spur line is still operating a tunnel was installed two years ago for the convenience of trail hikers accessing the ever popular Underhill Towpath Trail.

The site will be developed by canal volunteers in the next months to look like this drawing. It will be a rest stop along the towpath at the tunnel beneath the railroad. Design for all ten special historic sites along the trails has been developed by Len Mysliwiec. To his credit are the dozen galleries inside the Canal Interpretive Center that he designed.



Wabash Railroad baggage building has been moved to Delphi's Canal Park. Drawing by Len Mysliwiec Photo by Dan McCain

## Speakers Bureau

February 9, 2008 - Indianapolis

Charles (Chuck) Huppert, CSI vice-president from Broad Ripple, spoke to the Indiana State Society Colonial Dames XVII Century on the subject of Indiana Canals. He gave his usual speech about Indiana's canal heritage, which was really well received. There were women there from all over the State of Indiana -- Evansville to South Bend to Fort Wayne to Hagerstown. Each was interested in different facets of the canal system and they had some pretty interesting questions. There were 29 ladies present and one man (Chuck).



## RESTORATION OF DUCK CREEK AQUEDUCT

"Restoration of a Covered Bridge over Troubled Waters And Underneath Calm Ones" was the title of an article about Duck Creek Aqueduct that was published in the October 2007 issue of *STRUCTURE* magazine. The entire issue was devoted to bridges with the aqueduct described as a very unusual type of bridge.

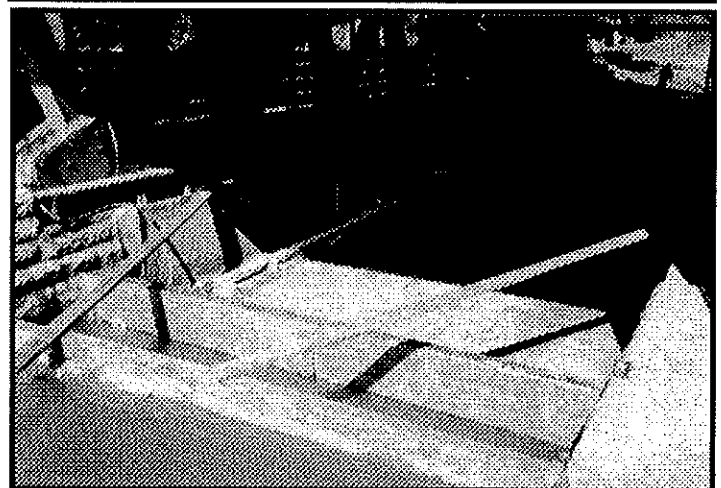
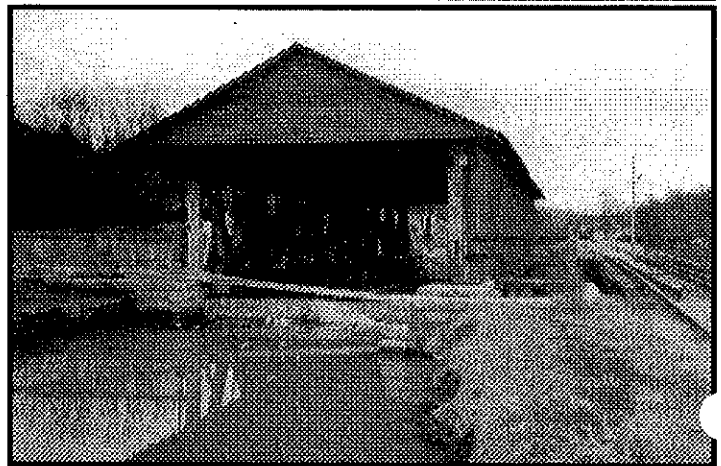
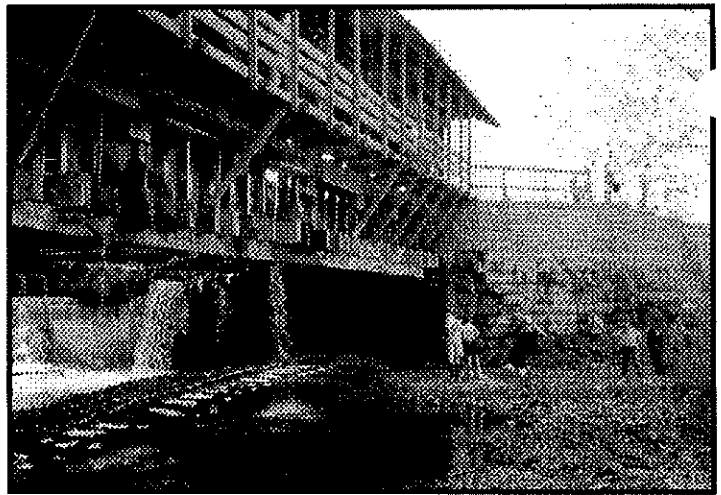
The 160-year-old aqueduct carried the waters of the Whitewater Canal as well as 16-ton loaded canal boats over Duck Creek in Metamora, Indiana. It was thought to be built using a variation of the Burr arch sometimes called a Wernwag truss named for Lewis Wernwag, who the article describes as a covered bridge genius. In this design "the 'vertical members' actually lean outwards, and lean at more severe angles the farther they are from mid-span," according to James Barker, P. E. of Barker Engineering, Inc. of Bloomington, Indiana, whose firm specializes in repairing historic bridges and barns.

The article gives a brief overview of Indiana's Mammoth Internal Improvement Plan where state bonds funded the massive plan to provide transportation outlets for almost every area in Indiana whether by canal, river, road, or railroad thinking that the improvements would increase the property values, provide more tax revenue, and the revenue would pay off the bonds. When the plan failed it resulted in a "scandal" that led to the legislature amending the state constitution to prohibit deficit spending. The Whitewater Canal was built in 1839 as part of the plan. Many times Indiana's canals are blamed for the plan's failure.

The original bridge across Duck Creek apparently was washed out during a flood. The present 1848-49 structure was built as a private venture but the name of the builder or actual construction date are not known.

A polygonal arch was added around 1865 to help support the aqueduct that spans 71 feet and has a flume that carries water that is about 28 inches deep. It was removed in 1948 and the aqueduct rebuilt. At that time parts of the trusses that attached to the arches were replaced with new yellow poplar trusses, the trees having been locally grown.

The aqueduct passed canal boats across the creek until 1866 when the Whitewater Canal ceased operation and railroad tracks were laid atop the canal's towpath. The aqueduct was repaired in 1998 for the Whitewater Canal State Historic Site. However, by 2004 the aqueduct was in distress sagging over the creek. Something had to be done.



Top: Duck Creek aqueduct was visited by Fort Wayne, Indiana's, Boy Scout Troop 333 in the late 1980s.  
Center: Boards placed across the upstream end of the aqueduct kept water out of it during the 1998 rebuild.  
Bottom: The dry flume was worked on in 1998.

Photos by Bob Schmidt

The State of Indiana contacted James Barker and asked him to design a new flume for the aqueduct. The flume, made of wooden planks and hung by steel rods from the trusses, had leaked so badly for so long

that the floor beams had decayed and broken. Barker goes on to explain that this suspension of the flume is doubly clever because it protects the all-important trusses from splashes and leaks, and allows the flume to be easily raised or lowered to maintain the exact desired bed elevation."

Barker goes on to explain that as usual there were more problems with the project than those noticed by the client. The trusses, which once had had a positive upward crown (camber) were sagging as much as 10 inches in the middle of the span. This was due to connection failures in the original plan. The arch rings stopped 12 inches short of the stone abutments, which should have supported them. Instead they were originally supported by 2-inch notches into the lower chord timbers and had "sheared" creating gaps. This was not a Wernway Truss as Barker had earlier assumed, but rather was a tied arch.

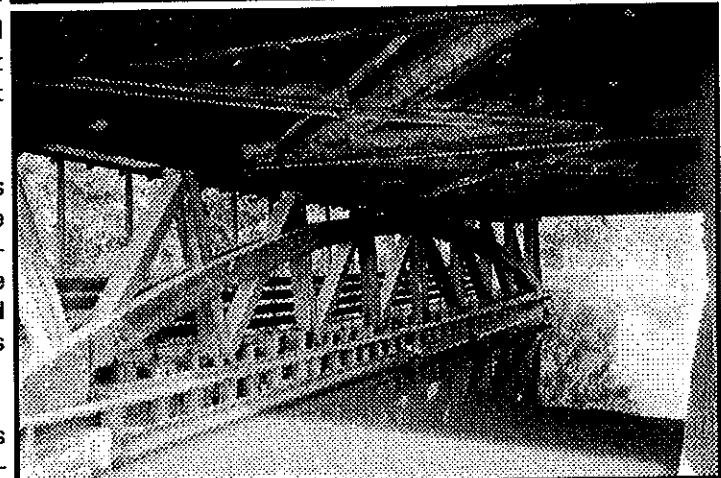
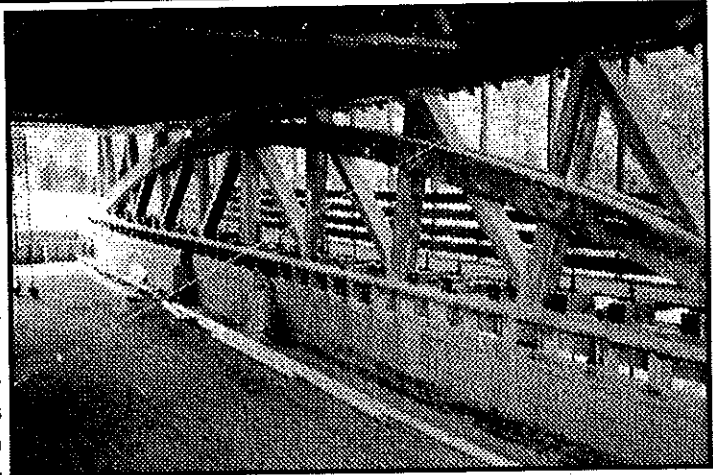
Although steel side plates with clamping bolts had been added as reinforcements sometime ago, the sagging in mid-span, slipping of the timbers and spreading of the arch rings had continued. Also found were splices in the 79-foot-long lower chord timbers. Located at their third-points were scarf joints with side plates that were failing as well.

In order to repair the aqueduct, the project was expanded to address all the problems as well as replacing the flume. Luckily canal water is lowered during the winter months so construction could take place. Any remaining water was kept out of the aqueduct by a low dam on its upstream side.

The Indiana Department of Natural Resources wanted to avoid treated lumber so that the aqueduct would be more historically correct. White oak was chosen over yellow popular or red oak from which to build the flume because it performs well in a wet environment and requires no chemical treatment. The article explains how red and white oak have clear longitudinal sap-carrying vessels, which are eventually plugged by growths in the white oak making it less porous.

Floor beams 6 inches wide, 16 inches deep, and 24-foot long were cut from the white oak to support the flume. These were covered by white oak boards to line the flume. They were fitted tightly together by using tongue and grooved edges with an additional sealant applied to the tongue. They also swelled when water was placed in the flume further tightening the joints.

Several attempts were made to seal the connection between the stone abutments and the wooden flume, but all partially failed. Eventually a very simple design solved the problem. They used a 7-inch wide



Top: Duck Creek aqueduct flume under repair in 1998 Bob Schmidt  
Center: Flume of the aqueduct is re-watered Jerry Mattheis  
Bottom: The Ben Franklin III carries passengers through the aqueduct in 2001. Photo by Gene Paschka

strip of 60 mil EDPM roofing, and clamped it down along both edges with 1/8 inch by 1 inch stainless steel bars. Bravo! No leaks!

Analyzing the lower chord splices and the connections at the end of the arches, they found them to





**Terry Lacy Presents *The Artist as Historian:  
Painting the Wabash and Erie Canal***

How far does "artistic license" go? There have been many illustrations over the years romanticizing epic moments in history. Many of these have been flights of fancy with little connection to real facts. That cannot be said of works created by Terry Lacy, an artist with a conscience.

In creating a mural composed of a series of large scale oil paintings for the Wabash and Erie Canal Interpretive Center in Delphi, Ind., Lacy, who has degrees from Herron School of Art (BFA) and Indiana University (MFA), had to imagine at certain sites may have looked like long after they had been altered by the intrusion of a modern world. Through extensive research and a keen eye for telling details, he created a sense of time and space from a bygone era. The mural circles the entire lobby of the Interpretive Center and most of the paintings measure between six and eleven feet in length.

The murals depict scenes on the Wabash and Erie Canal extending from Toledo, Oh., through Fort Wayne, Wabash, Logansport, Delphi, Lafayette, Attica, Terre Haute and south to Evansville on the Ohio River. This highly visual presentation will demonstrate how historic clues can contribute to a more faithful artistic expression.

This event as part of the George R. Mather Lecture Series is free to the public. It will be presented on Sun., April 6, at 2 p.m. in the Freimann Room of the Allen County Historical Society, 302 E. Berry Street, Fort Wayne, IN.