AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 51 Editorial Address – 809 Rathton Road, York, Pa. 17403 NOVEMBER 1984

PRESIDENT'S MESSAGE

The year 1985 promises to be a busy one for the American Canal Society. First event of importance will be the combined meeting of the American Canal Society with the Canadian Canal Society at Peterborough, Ontario, May 17th and 18th, 1985.

This will be the third meeting in Canada which ACS has co-sponsored: the first a two-day tour of the Rideau Canal with the Society for Industrial Archeology at Ottawa in 1973; the second a two-day meeting and tour of the Welland Canals, with the Marine Historical Society of Detroit, at St. Catharines in 1979. Both these events were well attended and quite successful. Drawing next year upon the local expertise and membership of the Canadian Canal Society (which was formed in 1982) the Peterborough meeting, and tour of the Trent-Severn Waterway, should be one of our best-attended events in recent years!

The combined CCS-ACS Committee planning for the affair already includes **Colin Duquemin,** President of the Canadian Canal Society; **Doug Stewart,** Central Area Manager for the Trent Severn Waterway; **Hayward Madden,** ACS Director and CCS Program Chairman; **Walter Meseck,** who has just returned from a full-length tour of the Trent-Severn; and of course our ACS Canadian Director **Lou Cahill.** Headquarters will probably be the Trent Univ. in downtown Peterborough. We are investigating several local boat companies who can't take our combined group on a day-long tour through the famous lift-locks and the section of the canal (and 8 locks) between Peterborough and Lakefield, and possibly beyond. For those ACS members who wish to fly, we are investigating shuttle service between Peterborough and the Toronto and Montreal Airports. Please mark your calendar now, for the long week-end of May 17th through 19th, 1985. Full details, with all costs and registration forms, will be sent ACS members about six weeks prior to the meeting.

The second event of 1985 with which ACS will concern itself is the formal opening of the Tennessee-Tombigbee Waterway at Columbus, Mississippi, June 1, 1985 (see separate letter from Administrator **Donald Waldon** elsewhere in this issue.) This is the most important

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TRENT-SEVERN WATERWAY

The "Kawartha Voyageur", one of several vessels operated by Ontario Waterway Cruises along the full length of the 240-mile Trent-Severn Waterway.

A view looking downstream from the upper deck of the famous Peterborough Hydraulic Lift Locks. Several small boats are shown being lowered 65 feet from one canal level to the other.

By Walter L. Meseck

If you are a "CANAL BUFF" or would just like to make an interesting and pleasant passage through a canal the TRENT-SEVERN CANAL is for you. It goes for about 240 miles from Trenton, Ontario, on Lake Ontario to Port Severn, Ontario at the foot of Georgian Bay, enroute passing through the many small towns, the farm land and resort areas. Although the canal was built to open up the interior of Western Ontario it also had its military function to avoid exposure to the United States along the St. Lawrence River and on the Great Lakes. Today it is recreational and maintained for that purpose.

The locks, however, add to the interest. Many are still manually operated with rack and pinion gear on the gates and with the inlet and outlet valves built into the gates themselves. Some have been modernized to operate hydraulicly but still retain their original appearance. Where there were two locks in series some have been replaced with new high lift locks, all mechanical. Perhaps the highlight is the Hydraulic Lift Lock at Peterborough, pictures of which you have no doubt seen, with its ornate stone work.

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American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

"DEDICATED TO HISTORIC CANAL RESEARCH, PRESERVATION AND PARKS"

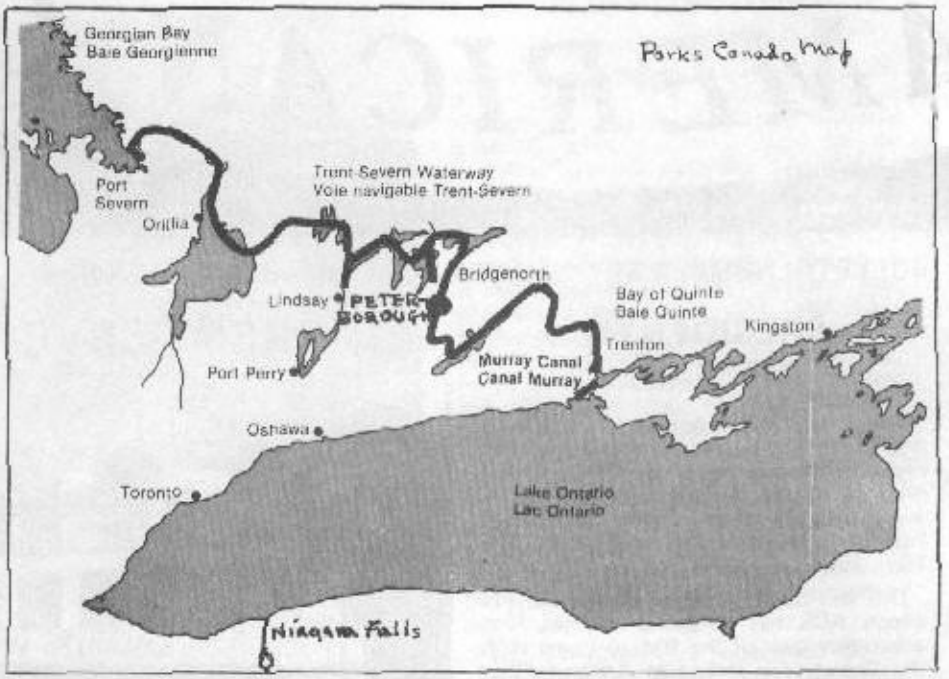
AMERICAN CANALS is issued quarterly by the American Canal Society, Incorporated. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

Annual subscription to "AMERICAN CANALS" is automatic with a minimum ACS dues payment of $10.00. Individual copies may be purchased at $2.00.

1985 DUES

1985 ACS dues are now "due and payable". Many of you have already responded to the invoice sent you several weeks ago. It will be a great help to our Secretary (and save extra work and expense) if you will honor this first invoice, so that he doesn't have to send a second "reminder". Nuf sed!

TRENT-SEVERN WATERWAY



The Trent-Severn Waterway, which runs 240 miles from Trenton to Port Severn in Ontario. Peterborough (located approximately eighty miles northeast of Toronto) will be headquarters for the Spring 1985 Tour of the Canadian and American Canal Societies.

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However, it has a sister at Kirkfield with a little less lift, no stone work, just the steel structure, otherwise the same. Since it is out in the country, off the main roads and less accessible it is less well known. The new lift lock at Swift Rapids replaces the old marine railway and is novel in that it is built into the side of a hill and discharges into the river beside it and not into the canal itself. The lock walls have a shower bath system built into them so as to drench the entire lock chamber in the event of a fire on one of the boats. Fire prevention and escape ladders are present throughout the system.

The latest improvement is the new marine railway at Big Chute. (See American Canals #43, November 1982) It replaces the old, small car which was incapable of handling today's traffic. As noted in the article the car is on two separate tracks at different elevations so that the car remains horizontal throughout its trip.

Today this is all available to you by passenger-carrying boats of the Ontario Waterway Cruises, which are based in Peterborough and make 4 and 6-day trips to Trenton and Port Severn as well as 9-day, end-to-end, trips throughout the system. They are sleep-aboard, eat-aboard vessels built for the purpose which serve it very well. For more information contact Ontario Waterway Cruises, Inc. P.O. Box 1540, Peterborough, Ontario, Canada. K9J 7H7.

HISTORIC CANALS REJUVENATED

While some historic canals, notably the Rideau Canal have maintained both their historic and navigation functions, other canals have not been so lucky. The Shubenacadie in Nova Scotia, and Soulanges in Quebec, for example have been abandoned. But two major historic canals have been the subject in recent years of a revitalized role.

At Montreal, Parks Canada is undertaking a long range rehabilitation of the Lachine Canal while at St. Catharines, a public organization, the Welland Canal Preservation Association (WCPA) is making sections of the first, second and third canals "navigable" to cyclists and walkers.

The Merritt trail, as the WCPA trail is known, will link Thorold and Port Dalhousie when completed by the end of 1984. The 11 km trail is 2 to 2.5 meters wide.

In Montreal Parks Canada is developing a similar and ultimately much more ambitious project for the Lachine Canal. (See "Rediscovering Montreal's Lachine Canal", *CANADIAN GEOGRAPHIC*, April/May, 1983). A cycling/hiking trail has been developed from Lachine to central Montreal at a cost of $8 million. But because most of the canal is still in place, there is some talk of reopening it to navigation. Part of the desire arises from the problem of locking pleasure boats through the massive locks of the Seaway Canal on the south shore. A short, but crucial section of the Lachine canal has been filled in at Montreal harbour and this would have to be excavated.

RONALD REAGAN SIGNS I & M BILL

AUGUST 24, 1984. (CHICAGO): Today President Ronald Reagan signed legislation here to create the country's first "National Heritage Corridor" along the 100-mile route of the historic Illinois and Michigan Canal. The new "Illinois and Michigan Canal National Heritage Corridor", a linear historical park, runs from Navy Pier and Lake Calumet in Chicago to LaSalle/Peru on the Illinois River. The Corridor works to "preserve, enhance and interpret" natural, historic, cultural and economic resources in Northeastern Illinois.

The signing caps years of effort by local advocates, including the Upper Illinois Valley Association, a "not-for-profit" group of business and industrial leaders, and the Friends of the I & M Canal National Heritage Corridor, a grass-roots advocacy group. The entire Illinois Congressional delegation co-sponsored the bill, introduced in 1983.

"The establishment of the National Heritage Corridor is an exciting event for Illinois, a major new step in national park planning, and a moment of pride for those of us, both the Friends of the I & M Canal and Upper Illinois Valley Association, who have fought so long for this day." said George W. Overton, Chairman of the Upper Illinois Valley Association.

"This is a time of joy, gratitude and commitment; we won't walk away from this challenge and opportunity." said Mrs. Constance E. Fetzer, President of Friends of the I & M Canal National Heritage Corridor. "We want to thank not only Governor Thompson, local media, the Congresspersons and their staffs, but also the thousands of people who have worked for the development of the canal." said Mrs. Fetzer.

The Heritage Corridor encompasses 49 cities, towns and neighborhoods and over 200 historic districts and buildings. Along with historic homes and downtowns, the Corridor contains many forest preserves, parks and trails. Eight state parks are found within its boundaries, as well as 38 high-quality natural areas. So are modern industry and transportation systems. These resources — and new recreational and cultural amenities to be created — form the Heritage Corridor.

PRESIDENT'S MESSAGE

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event in the History of American Canals since the opening of the Panama Canal and the St. Lawrence Seaway. We hope that as many ACS members as possible will be able to attend the opening ceremonies. We will keep you informed of further details as we learn them.

Since this will be our last issue in 1984, I would like to take this opportunity to wish all of you a Happy Holiday Season and the best of everything in 1985.

Bill Shank

TENNESSEE-TOMBIGBEE Waterway Development Authority

GLOVER WILKINS, Administrator

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September 28, 1984

Mr. William H. Shank, P.E.
President, AMERICAN CANAL SOCIETY
809 Rathton Road
York, PA 17403

Dear Mr. Shank:

Thank you for your letter of September 13, 1984 concerning the Society's interest in participating in the dedication of the Tennessee-Tombigbee Waterway.

As you may know, this historic event is set for June 1, 1985 at the Columbus Lock and Dam at Columbus, Mississippi. The President, former Presidents, Congressmen and Senators, Governors, Ambassadors, and other officials will be invited to participate in this event.

As part of the overall dedication ceremonies, flotillas of boats, both commercial and pleasure, will leave from distant points like Mobile, Alabama; Paducah, Kentucky; and Guntersville, Alabama and meet at Columbus on the afternoon of May 31st. So-called community or satellite ceremonies will take place along these routes as the boat flotillas make their way to Columbus.

We have always appreciated the interest and attention the Society has shown in Tenn-Tom. We look forward to having you join us in the "Grand Opening" Ceremonies for this historic project next year.

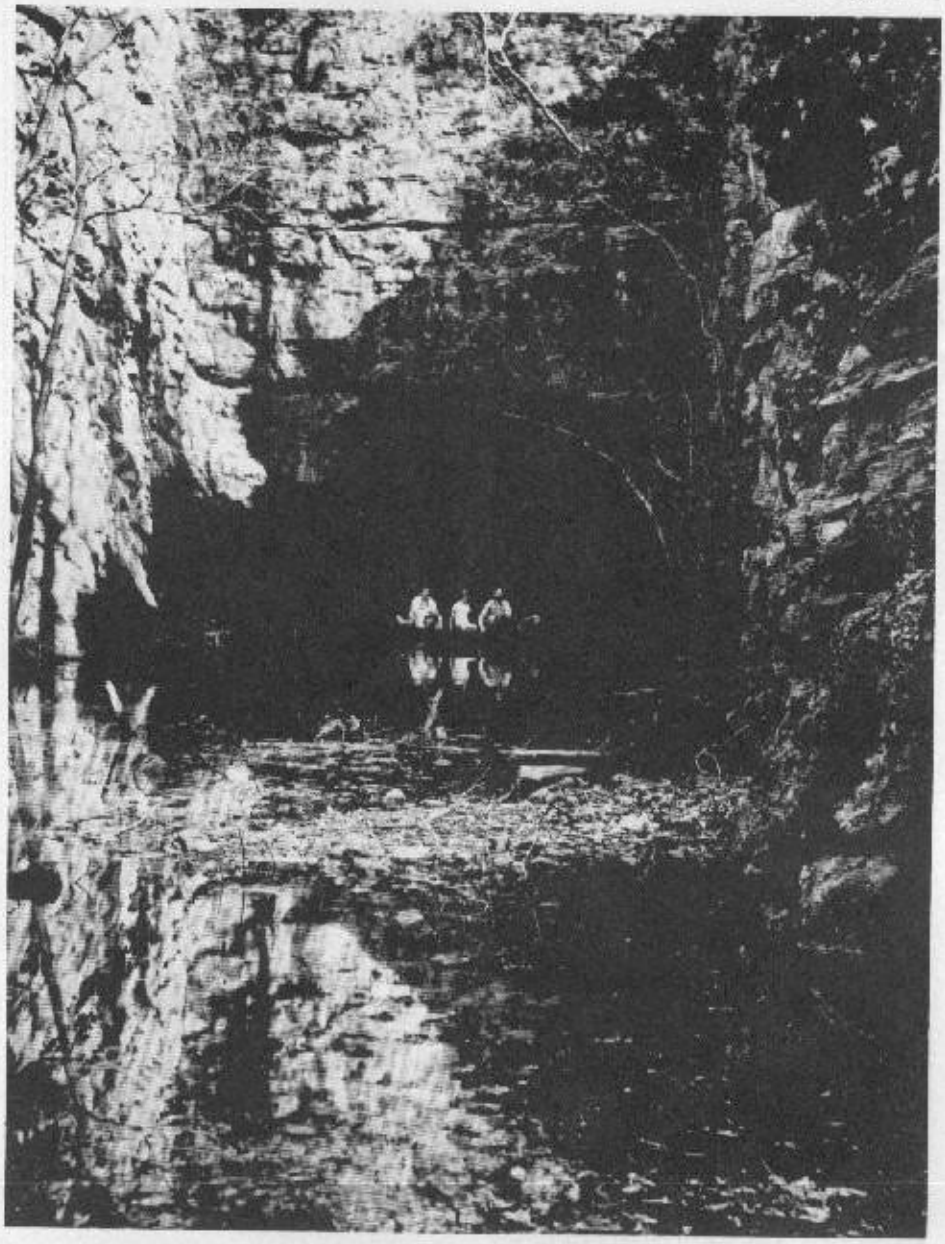
Sincerely,

Donald G. Waldon
Administrator

DGW/bc

When originally constructed (1824-1829) the important, 13-1/2 mile, Chesapeake and Delaware Canal had two lift locks to overcome a summit level of twelve feet above tidewater. This photo, from Tom Hahn's collection, shows the removal of one of the old lift locks, by the Army Corps of Engineers, at Chesapeake City Maryland to make way for the all-tidewater level of the enlarged C. & D. Canal. Perhaps one of our readers can tell us the year when this picture was made?

J. R. & K. TUNNEL & REMNANTS THREATENED



Marshall Tunnel on the J.R. & K. Canal much as it looked when workers laid down their tools in 1856. Three Virginia canal buffs are shown exploring its water-filled channel in a canoe, (1970). This is the North Portal (west entrance). Photo by Alexander Brown.

By Alexander C. Brown

The Virginia Canals and Navigations Society, an innocuous little organization composed of antiquarians and canal buffs, is dedicated to the recognition and preservation of relics of the Commonwealth's once-important canal era, and in particular, with the famed James River and Kanawha Company.

The society is especially concerned with preserving the vestages of one of the few remaining canal tunnels in the United States — the unfinished Marshall Tunnel in Botetourt County — now threatened, along with other works in the vicinity, by a proposed hydro- electric plant.

Virginia's great dream of a waterway to the west began in 1785 with the founding of the James River Company, with George Washington as its first president.

The company initially proposed to construct short lock canals circumventing the falls and rapids of the James, first at Richmond, then at Balcony Falls where the James breaks through the Blue Ridge Mountains.

In 1832 the James River and Kanawha Company, as the third major reorganization of the James River Company, adopted the westward connection planning to span mountain barriers to the Ohio River valley. Expectedly, the company's progress was slow.

In 1840, with about 3,300 workers engaged, the so-called First Grand Division of the James River and Kanawha Canal was completed to Lynchburg — a continuous canal 50 feet wide at the waterline, 30 feet at the bottom and five feet deep.

The canal's Second Grand Division was completed by 1851 and brought the canal from Lynchburg, to and beyond the Blue Ridge, an additional 50 miles as far as Buchanan in Botetourt County.

Buchanan, at 728 feet above sea level, proved to be the highest elevation of the canal. About 197½ miles of gradual climb from Richmond had then been completed at a cost of $8,259,184.

This amounted to $39,082 per mile for the First Grand Division and $48,451 for the more difficult Second Grand Division.

The greatest challenges lay ahead, however, as the canal set out to surmount the 1,700-foot crest of the Alleghenies, then descend to the Kanawha River and so on to the Ohio.

In 1853, having secured continuing approval of the Virginia legislature, work began on the Third Grand Division, an extension along the James and Jackson rivers 47 miles from Buchanan and 465 feet higher to Covington.

The first section, 15 miles of twisting river from Buchanan to Eagle Rock, was put under contract in August 1853 and and was to have included 11 100-foot locks, three 320-foot aqueducts, a long towpath bridge and two dams across the river, four culverts, an assortment of small farm and towpath bridges and two 20-foot wide tunnels.

The shorter tunnel, 198 feet long, was completed and named for Navy Secretary John Y. Mason and, subsequently, was adapted for use by the Chesapeake and Ohio Railway when the James River Canal was abandoned and its properties taken over by the Richmond and Allegheny, later the C&O Railway.

The other tunnel, named for Chief Justice John Marshall and never completed, was to have been an impressive

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Katie Lyle and Dr. Bill Trout examine the remains of a shovel blade discovered in the muck of the Marshall Tunnel, thought to be left by the workers of 1856. (Photo by Alexander Brown.)

(Continued from Page Four)

excavation almost half a mile in length cutting under Timber Ridge, a solid limestone mountain spur.

This would eliminate six miles of tortuous river. A cut in the side of the tunnel would form the towpath.

Working from both ends of the Marshall Tunnel, as well as from a vertical shaft sunk midway along its route, the canal's chief engineer estimated that only 195 days' work remained to complete this, the canal's most spectacular engineering feature.

But abruptly in 1856 all work was stopped. The money had run out and there were no appropriations from the General Assembly. Accordingly, laborers merely dropped their tools where they were and left. Already $511,094 of an estimated $2.5 million had been spent on the Third Grand Division.

It is this mile-long stretch of the James River and Kanawha Canal in Botetourt County which holds the greatest fascination for canal buffs today. They are most anxious to maintain graphic examples of on-going 19th century canal engineering techniques which antiquarians wish to preserve.

Yet, all will be lost if the present developers follow through with their plan to use the unfinished Marshall Tunnel and a mile of the canal bed to run water across a bend in the river to a powerhouse planned to generate electricity to sell to the Virginia Electric and Power Co.

The tunnel is to be holed through, one of the incompleted 19th century dams is to be finished, and a canal dug along the unexcavated route.

But there is no way to complete the project and avoid the destruction of most of the artifacts along the route which make the site invaluable as a treasure of information on antebellum tunneling and canal technology.

The Virginia Canals and Navigations Society would prefer the project not come to pass. If it must, though, a thorough archaeological study should be insisted upon.

Alexander Brown is the retired Literature Editor for the Newport News (Virginia) Daily Press, which published this article, August 26, 1984.

ACS LITERATURE

ACS members are reminded that Bradley Haigh, our ACS Literature Salesman, stands ready to supply them with back issues of AMERICAN CANALS, Bill Trout's three-part CANAL GUIDES, ACS Shoulder Patches, Site Markers, and reprints of supplements sent with past mailings. Most of these items are available at cost. Order forms, with prices, are enclosed. Contact **Bradley Haigh**, 4926 Herkimer Street, Annandale, Virginia 22003; Phone: (703) 642-5366.

THE MOTT HAVEN CANAL

Old photo of the Mott Haven Canal, built about 1850 by Jordan Mott, inventor of the first coal-burning stove. (Courtesy "Yankees" magazine)

The following item was discovered by one of our ACS members in the June 28th, 1984 Issue of "Yankees" Magazine. It was written by the Bronx County Historical Society.

Almost everyone has heard of Canal Street in Manhattan, but how many Bronx residents know that there is a Canal Place in the Bronx, and that the story of the Bronx street is even more fascinating than the tale of the one in Manhattan?

The story begins in 1828. In that year, Jordan L. Mott, who had invented the coal burning stove (a major invention in the 19th century) opened a small iron foundry, (south of Yankee Stadium) at 134th Street and the Harlem River.

Over the years, the foundry grew in size, so that the original two buildings were dwarfed by the additions to the complex. By 1906, the business grew to be so large that there was not enough room on the original spot to expand, and the iron works moved to Trenton, N.J.

In any event, Mott saw possibilities in the expansion of the section in which his iron works had been built back in 1828, and as the first step in the development of the section, he purchased 200 acres at $175 an acre from the owner, Gouverneur Morris II, Mott immediately changed the name of the property from Morrisania to Mott Haven.

About 1850, Jordan L. Mott thought it a good business idea to dig a canal to replace a small stream that ran from 144th Street to the Harlem River between Third and Park Avenues. Mott dug his canal, but only to 138th Street, and it was called the Mott Haven Canal.

In 1864, Mott sold the land on either side of the canal to a man named Bryant. Four years later, Bryant began to extend the canal to 144th Street, with the understanding that there would be a bridge built over the canal at 138th Street to allow street traffic to cross.

However, Bryant sold his land to Rider and Conkling, who wanted to finish work on the canal. This aroused opposition from the residents of the Town of Morrisania, who felt the canal would be a nuisance and a source of malaria. Rider and Conkling pledged to maintain a bridge at 138th street, to dredge out the canal and bulkhead it, to build and keep in repair other bridges crossing the canal, and to fill in the canal at their own expense if it should become a nuisance.

The Mott Haven Canal was extensively used by the lumber yards and coal dealers which lined its banks. Shipments of fuel to the North River Electric Light and Power company came via the Harlem River through the canal to the company's power plant.

All this did not prevent the Town of Morrisania, and later the City of New York from declaring the canal a public nuisance, and after a full 25 years of litigation in the courts, the city began filling the waterway in 1901. A bulkhead was built at 138th Street in 1903, and the portion of the canal from there to 144th Street was opened as Canal Place, the Mott Haven Canal being allowed to exist below that point. The landfill was provided by the material excavated from 149th Street for the subway.

With the building of the Triborough Bridge in the 1930s, most of the rest of the canal disappeared. The lower portion of the Major Deegan Expressway was built as an approach to the new bridge, and this cut the canal at 134th Street.

Today, Canal Place runs from 134th Street to 144th Street in place of the Mott Haven Canal.

REMINISCENCES OF THE LEHIGH CANAL, 1840-1856

By W. H. Gausler, Philadelphia, Pa.
(1912)

The Lehigh River starts from springs at Stoddardsville, Pa., and enters the Delaware River at Easton, Pa., after flowing a distance of one hundred and twenty-two miles.

The Lehigh Canal and Susquehanna Gravity Railroad were the only means to bring to market the products of the Lehigh Valley from 1829 to 1856, when the Lehigh Valley and North Penn railroads were built.

Previous to the building of the Lehigh and Delaware canals in 1829, the coal was transported from Mauch Chunk to Philadelphia by flat boats of small tonnage, at the time of spring freshets, by way of Easton, Pa., and Trenton, N.J.

The Lehigh Canal from White Haven to Easton was built by the Lehigh Coal and Navigation Company in 1829.

When this canal was built they discovered the first cement vein, put up the first cement mill at Siegfried's Bridge, and made the cement to build the canal locks. This mill is still standing opposite the Coplay Cement Mill at Coplay, Pa.

The Delaware Canal was built by the State of Pennsylvania about the same time as the Lehigh Canal, from Easton to Bristol, Pa. The boats were towed by the old Pennsylvania Steam Boat on the Delaware from Bristol to Philadelphia, a distance of twenty miles.

The Delaware Canal is now leased and controlled by the Lehigh Coal and Navigation Company.

The Lehigh River enters the Delaware River at Easton, Pa., and three canals terminate at Easton — the Lehigh, the Delaware and the Morris. On the Jersey side of the Delaware, the Delaware Canal locks are twelve feet wide by seventy feet long; the locks of the Lehigh Canal are twenty-four feet by seventy feet, and hold two boats of the size that the locks hold on the Delaware. The Morris Canal Boats are of thirty-five tonnage and are built in one section. The entrance to the Morris Canal on the Pennsylvania side is by a lock, and on the Jersey side, opposite the lock on the Pennsylvania side, is by plane.

The names of the dams between Mauch Chunk and White Haven are as follows: Packer, Turnhold, Hetcheltuth, Oxbow, Two Mile, Penn Haven, Hileman's, Porter's, Stony Creek, Hickory Run, Dam No. Four, Three, Two, One, White Haven.

The Delaware Canal has no dams, but has twenty locks and is fed from the Lehigh at Easton. It is sixty miles long and terminates at Bristol, Pa., where it enters the Delaware River at tide water. From this point the boats are towed by steam to Bordentown, N.J. and Philadelphia, Pa. They also enter the Raritan Canal via New Brunswick, N.J., to reach New York, the only means to get coal to New York by boat prior to 1856.

The levels are one-half, one, two, three, five, six, seven and ten miles long on the Delaware Canal. On the Lehigh Canal they are one-half, one, two and three miles long.

I commenced to drive a horse on the towpath of the Lehigh Canal in 1840 for board and clothes, and by 1856, when the Lehigh Valley Railroad was built, I was proprietor and owner of a line of twelve transportation boats plying between Philadelphia and Wilkes-Barre.

I was at first employed as driver by John Bachman, of Freemansburg, Pa. Mr. Bachman was the owner of two canal boats, or scows, built in double sections, with a capacity of about sixty tons used to freight coal from Mauch Chunk to Bristol and Philadelphia via the Lehigh and Delaware canals. I drove the horse of the boat "Bear" that brought the first load of iron ore from South Easton to Catasauqua, Pa., for the Crane Iron Furnace Company in September, 1840. On January 8, 1841, the canal from White Haven to Easton was completely destroyed by a freshet, which nearly bankrupted the company. The Pennsylvania Legislature being in session, the Lehigh Coal and Navigation Company was authorized to issue scrip bearing six per cent and redeemable in toll and coal. This enabled the company to rebuild the canal. Mr. Bachman, my employer, lost both of his boats by the freshet and discharged me without pay, after which I was taken in by a daughter of John Warg of the same place. I drove a cart horse to repair the canal, during the winter of 1941, and boarded in a shanty at Laubach's farm below East Allentown, Pa.

In this freshet all the bridges, with the exception of the chain bridge at Lehigh Gap, were swept down the river and 90 per cent of the canal boats at Freemansburg, a small town depending on the earnings, were lost. The boats were all tied to a line, and every man, woman and child was holding on this rope on the night of the 8th, when the rope broke and all the boats belonging to the boatmen of the town went down the river. I was at the rope when it broke. Jacob Killpatrick, a boatman, was in a bateau and went down with the boats, but was saved.

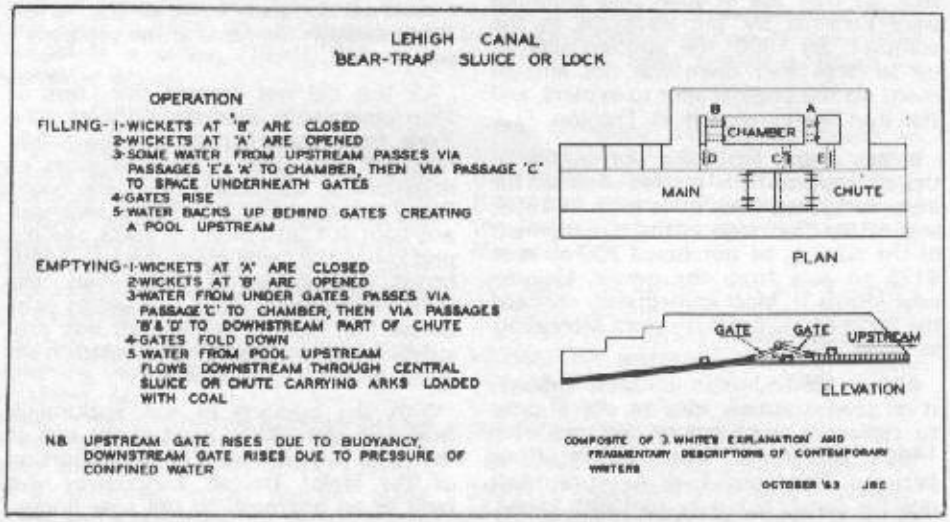
It took nearly all summer till boating could be resumed from Penn Haven to Bristol. The White Haven end was not finished until 1842. White Haven was at that time, and for many years, a great center for white pine and hemlock lumber, but the lumbermen could not bring any lumber to market in 1841 and part of 1842.

The freshet destroyed the Beaver Meadow Railroad from Mauch Chunk to Parryville where up to 1841 coal was transferred to boats. This road was not rebuilt. Shipping was done for some time at East Mauch Chunk and later, up to June 1862, at Penn Haven.

The cause of the freshet was the breaking of the high dams above Mauch Chunk.

EDITOR'S COMMENT

The accompanying article, written by W.H. Gausler of Philadelphia, was published in June of 1912 in THE PENN GERMANIA. It was discovered recently by **George R. Wills** of Lebanon, Pennsylvania. Not much is known of Mr. Gausler, except what we glean from this article. He evidently began work on the Lehigh Canal as a young lad (probably in his teens) in 1840 and was running his own fleet of canal boats by 1856. He also served in the Civil War and was away when a flood destroyed his lumber mill and home in Allentown in 1862. (The same flood permanently closed the Lehigh Canal from White Haven to Mauch Chunk.) Gausler's attention to details of all kinds during the time when he traveled the canals, 1840 to 1856, is most revealing. It is seldom we run across a written account of mid-1800's canaling which tells us so much.



A diagram, by John R. Connelly, P.E., of Palmerton, Pa. (a former Lehigh University instructor) showing the principle of operation of the Lehigh "Bear Trap Locks". This was an invention of Josiah White, the "spark plug" of the Lehigh Coal and Navigation Company, to provide one-way traffic before two-way locks were built on the Lehigh.

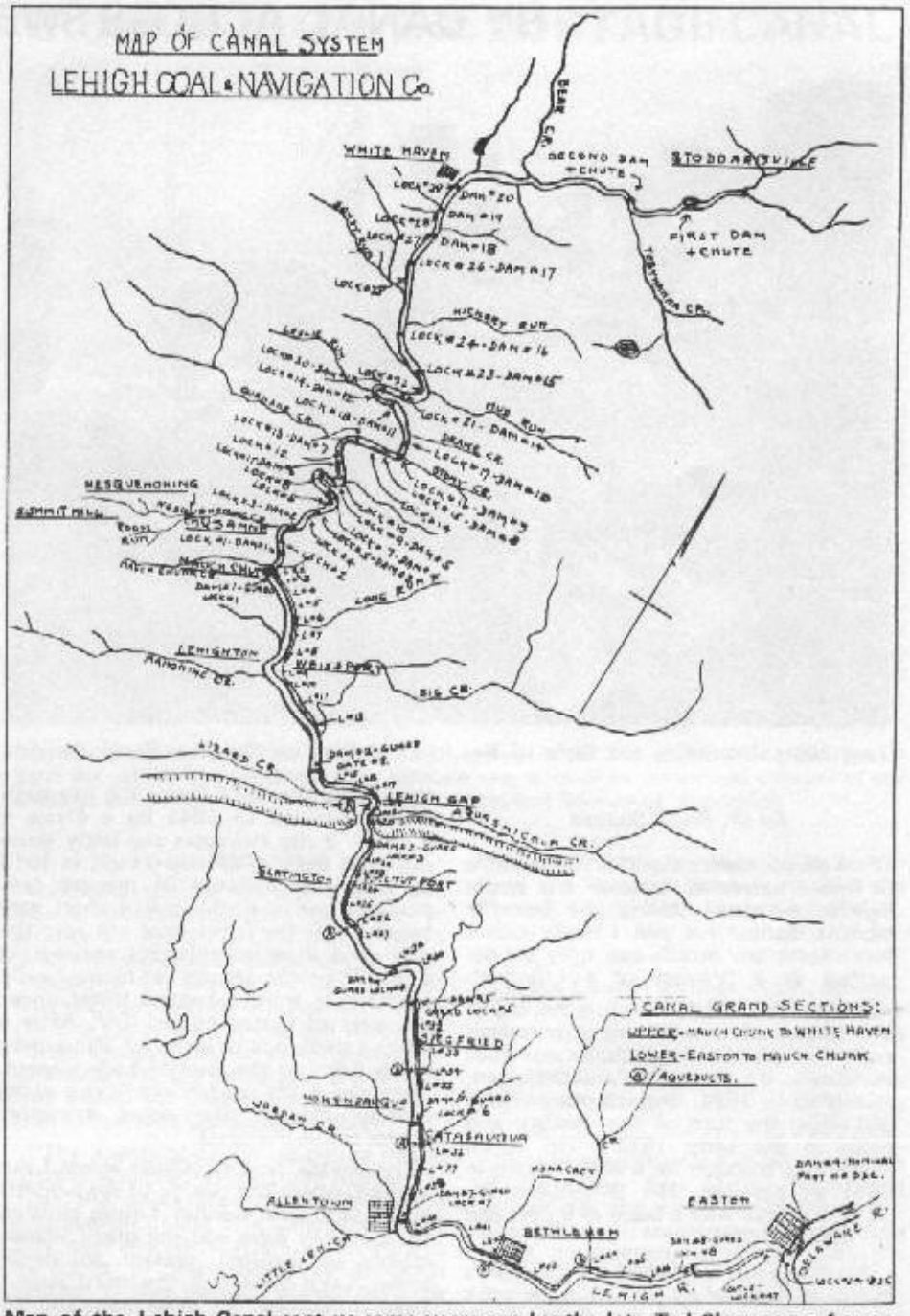
The swell of water and ice swept everything before it and ruined nearly everybody living near the Lehigh River.

During the time, from January 1841 to April 1846, that I remained with John Warg, of Freemansburg, I boated for him, first as driver and in 1844 as commander of a boat. The Clinton Furnace was built about 1842.

The great boat strike was in 1844 at Easton, Pa. I remember that a boat was sunk at the weighlock where the Lehigh Canal enters the Delaware Canal, preventing the passing of boats. This strike was for more pay for freight. The militia was called out several times to quell a riot and prevent depredation. The Lehigh Dam at Easton was packed solid with boats. I remember when Asa Packer and other officials of the Lehigh Coal and Navigation Company came down to Easton to break the strike they came near being thrown overboard.

I worked for Mr. Warg until 1846, when I was employed by James Cook, at Allentown, Pa., proprietor of a Transportation Line, as commander of a Transportation Boat in 1847. I bought a boat from Amandus Trexler, of Allentown, and freighted lumber for Nathan Dresher and the father of Col. H. C. Trexler, from White Haven to Allentown and, making a storehouse of my boat, supplied the lumbermen and canal lock tenders from Mauch Chunk to White Haven with flour, feed and provisions of all kinds. This grew into a large business and a great outlet for the merchants of Allentown as well as Lehigh and Northampton counties. In September, 1849, I lost my brother by drowning at the Chain Dam above Easton, when I sold out to Keck, Childs & Company, of White Haven, and coming to Philadelphia bought an interest in a hotel called the Gem, on Chestnut street above Seventh. I returned to Allentown in July, 1850, at the time the big freshet destroyed the Schuylkill Canal from Pottsville to Philadelphia and damaged the Lehigh Canal which was repaired in about a month. I bought a boat and resumed the business that I quit in the year 1849. I soon had a line of eight boats, and freighted store goods from Vice Street wharf, Philadelphia, where Peter Wright & Sons were my agents, to Wilkes-Barre, via White Haven, over the Lehigh and Susquehanna Railroad.

About 1850 the Hockendauqua Iron Furnace was built at Swartz's Dam above Catasauqua. I freighted pig iron from Catasauqua and Hockendauqua to Philadelphia for $1.46½ per ton up to December, 1852. On January 1, 1853, the Crane Iron Company, the Allentown Company and the Hockendauqua Iron Company took proposals to freight the pig iron for the year 1853, when Hecker, Long & Co. offered to freight the iron for $1.27 per ton. My proposal being $1.46½, Hecker, Long & Co. got the job. I sold out my Transportation Line to Hecker, Long & Co. the same day and took their notes and signed an agreement not to interfere with transporting freight for two years. The next day January 2d, I received word from David Thomas to



Map of the Lehigh Canal sent us some years ago by the late Ted Sherman, a former Lehigh Canal Boat Captain. Ted's comments about this map: "Upper section, Stoddartsville to White Haven, 12-1/2 miles, had two Bear-Trap Locks; this section had a drop of 336 feet. White Haven to Mauch Chunk had 29 lift locks, 20 dams, about 26-1/2 miles. Mauch Chunk to Easton originally had 50 locks, including eight guard locks, 46 miles."

come to Catasauqua and sign my contract for $1.46½ per ton. I was in a dilemma. I had sold my line and signed an agreement not to interfere for two years in transportation of freight and could not accept Mr. Thomas' offer. Before their notes became due, they failed and I never got a cent for my line. Steven and Edward Long went to St. Paul, Minn., leaving Hecker to face the trouble.

The year 1853 was a booming year and pig iron advanced from $14.00 to $27.00 per ton. Hecker, Long & Co. failed about June, 1853, and Edelman, the distiller, bought their line at private sale. About this time, David Thomas, of the Crane Iron Co., sent for me and asked me to freight his iron to Philadelphia. I told him I had no boat and no money. He asked me how much money I would need. When I told him he ordered Owen Rice to draw up a check and I started out to get a line together. He paid me $2.40 per ton freight and I made up my loss by the end of the boom year 1853. I remained in this business until 1856, when the Lehigh Valley Railroad was built from Mauch Chunk to Easton and the North Penna. Railroad from Bethlehem to Philadelphia. I then sold out my transportation line, but kept the provision line from Allentown to White Haven.

(To Be Concluded Next Issue.)

BY CANAL ACROSS SWEDEN

Tour boats descending the flight of five locks at Berg on the Gota Canal, Sweden.

By Dr. Roger Squires

Few people realize that it is still possible to take a scheduled 'steamer' trip across Sweden by canal during the Summer months. Earlier this year I made such a four day trip - which can only be described as a 'Voyage of a Lifetime'.

I travelled in 'Juno' which is the oldest and largest of the fleet of 3 passenger craft that ply the canal. 'Juno' was built at Motala, on the canal, and was commissioned in 1874. She was modernized just after the turn of the century and again in the early 1970's. Her steam engine was changed for a diesel engine in 1961 at Karlstad. Her dimensions are 31.50m overall with a beam of 6.68m and the draft is 2.80m.

Our cruise left from the Lilla Bommen's Hamn at Gottenberg and soon we were making our way up the Gota River, through industry of the dock area and out into the narrower river and fascinating countryside. At first the land was flat, but gradually became more undulating. Occasionally one passed a wharf close to a village and a few mainly derelict ferries, but not many bridges, there being good roads from Goteborg on either side of the river. At Lilla Edet, a market town, we reached the oldest lock built in 1607 and once through it passed into hilly countryside.

At Trollhattan we entered the true canal. It was planned by the famous inventor Polhem in 1718 and opened for traffic in 1800, rebuilt in 1844 and 1916. The original waterfalls have dropped 31.4m and are now used for hydro-power generation. The various flights of disused locks around the current flight identify past attempts to simplify the difficult descent. The first was Polhem's Sluss; then came the 1800 3 rise + 5 rise staircases; followed in 1844 by a 4 rise + 4 rise + 3 rise staircases and lastly those our boat used which were built in 1916 as a 3 rise staircase of massive proportions and a single lock a short way beyond. All the locks were cut into the rock, and show considerable engineering skills. The locks are worked hydraulically by keepers from a control tower under the eyes of closed circuit T.V. After a while a sixth lock is reached at Vanersborg rising 6.2m to the level of Lade Vanern. Here also a lift road bridge and a swing railway bridge take other transport routes across the canal.

The voyage now continues across Lake Vanern, where the beauty of the wooded banks with neat holiday houses clinging to the steep sides and the many islands mainly uninhabited, present an idyllic scene. Lake Vanern is the third largest Lake in Europe, 90 miles long and 50 miles across. It's surface is 43.9m above sea level and it's bottom is at sea level. It provides a major transport link with vessels carrying 2,000 to 3,000 tons trading between the lake ports and the rest of the world via the Gota Canal.

Once the overnight transit of Lake Vanern was completed, Sjotorp locks were reached which lifted the canal another 9.3m. After a pretty canal section, a further set of locks at Hajstorp lifted the craft 28.3m to the summit pound at 91.5m above sea level.

The summit pound here passes Toreboda and offers some of the most outstanding views of the whole journey. The rugged partly tree covered hills, woodland and sheep and cattle pastures all make up an idyllic scene. Sliding, swing and lift bridges add interest to the trip along the highest part of the whole canal system. The water is shallower and much narrower along some sections of the summit, with few passing places. In some places the canal was blasted into the rock and bends so sharply that the craft goes on at a snail's pace.

The work of building this part of the canal took 7 years and it still provides a memorable link. However, it did not prove to be the most difficult section of the canal to navigate. This was reached after passing through Lake Viken en route for Karlsborg. There in places the lake was so shallow that under the surface a canal is cut into the rock. The route, far from straight, is marked out with red and green stakes and low rock walls rather like a slalom course. The course is so different that it creates most of the problems for the Captain in guiding the largest ship that can pass the summit pound through the Forsvik end of Lake Viken. In one place the whole ship resounded as we touched a rock.

At Forsvik the canal drops 3.5m to the level of the Lakes Bottensjon and Vattern which are 88m above the sea level. However, what is remarkable is that the bottom of Lake Vattern is some 40m below sea level, where it was gouged out by glaciers to leave a flooded rift valley only 30km wide at the most.

The journey through Lake Bottensjon is fascinating from the scenic point of view. After a while we reached the Karlsborg fortress built between the two lakes as a central point for Sweden's internal defense system. Building started in 1820 and was completed in 1909. It was closed down in 1928 and became a museum.

After crossing Lake Vattern we moored for the second night at Vadstena with a stately berth beside the Castle. The ship having first been winded in the Castle Moat. The Castle was build in the 16th Century and has recently been restored.

The next morning we followed the shore of Lake Vattern to Motala and reached the halfway point on the route to Stockholm. It contains the headquarters of the Canal Company, docks engineering works and canal boat building can be found close by. Along the canal section which follows is the grave of Baltzar Bogislaus Von Platen (1766-1829), the true father of the canal, although he consulted Thomas Telford for a second opinion on the ideas of Danile Thuneberg, who had prepared the route to be followed, before it's construction.

Later that morning we passed down the five locks at Borenshult - a fall of 15m - to reach the beautiful Lake Boren. At the eastern end of the lake stands Borenberg and the start of the canal to the15 locks at Berg. To the north of the canal runs the Motala River about 15m lower down. The fall from Lake Boren to Lake Roxen is 40m, most of it being at the Berg end where the locks concentrated in 3km, seven of them being in a flight leading straight down into Lake Roxen. The passage down the flight of seven locks proved to be an awe inspiring sight with 'Juno' towering over the lock gates on the

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way down. Our route then crossed Lake Roxen and on through 23km of canal with 11 locks to Lake Asplangen and thence by a further canal section to Soderkoping. Here a motorway bridge has to be lifted to allow the boat through. The town was neat and tidy, with extensive pleasure craft moorings along the old wharf area. After passing through two more locks and along a wide canal channel we reached Mem where the final lock brought us to sea level in Slatbaken. This lock was the last to be officially opened on September 26th, 1832.

The high rocky hills on either side of Slatbaken provide a wonderful backdrop to the entrance to the canal and the fortress at Stageborg offers the guardian a 26m high watch tower which stands guard, as it has for 500 years.

From here our course entered the Osterjon and the boat weaves among hundreds of islands, some smooth and almost seal-like, only a few metres across, others much larger with signs of holiday habitation. Unfortunately our trip passed the industrial port of Oxelosund, with it's iron ore quays, during the night, but by dawn the array of islands seemed to be even more beautiful and wooded, many with small jetties providing mooring of yachts and cruisers.

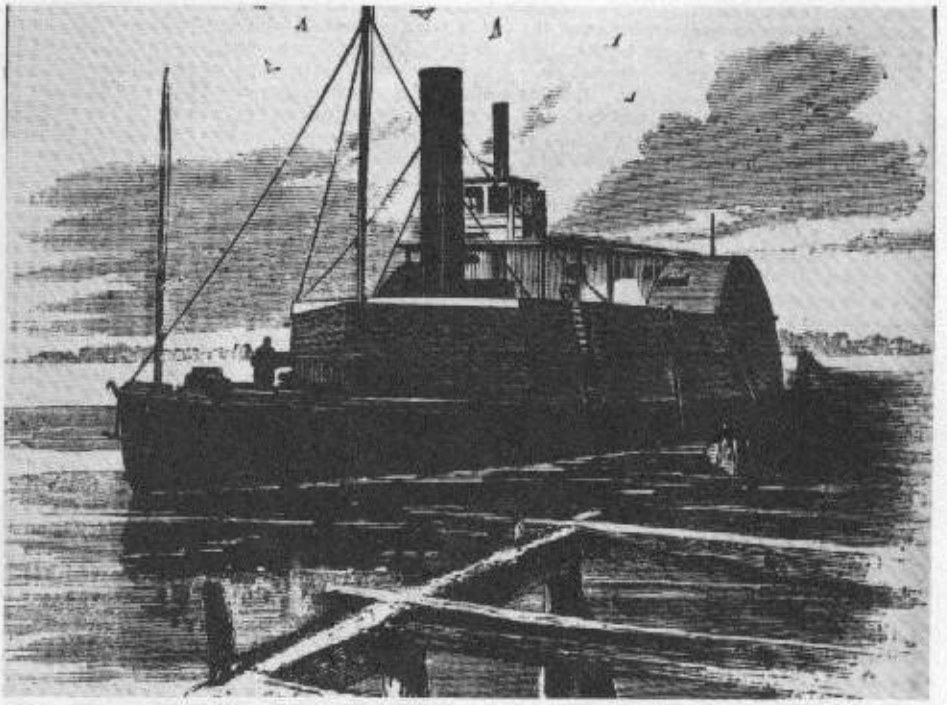
After some time we passed up Himmer Fjorden where the land was mostly wooded with small grassy clearings running down to the shore, and on the northern shore, high above Morko, stood the massive and beautiful Castle of Hornigsholm. Some distance on, we reached a tree lined gorge and the entrance to the short Sodertalge Canal with the last of the 65 locks from Goteborg. This lock at Maren is very large with only a small rise into Lake Malaren providing a link for medium sized shipping from the Baltic into Stockholm. Beyond this lock the drawbridge of Motorway E3 announced the outskirts of Stockholm's suburbs, yet, beyond are so many islands, skerries and islets that it is almost impossible to visualize reaching a town. The only signs of habitation are the smart summer cottages all clinging to the rocky ledges.

In the past the Vikings stretched chains across the sounds close to the islet of Estbrote. If an invader appeared the chains were wound up to slice into the bows of hostile ships. Fortunately they do not do that today! And now one can look out for the spires and towers of Stockholm without a care.

Soon we were in sight of the north quay of Riddarholmen below the Wrangel Palace and our voyage across Sweden was over. But, the interest of a town, suitably named the Venice of the North, quickly made up for the sadness of leaving 'Juno', after what had been one of the most invigorating canal voyages I have ever made.

For further details, contact: REDERI-AKTIEBOLAGET GOTA KANAL, P.O. BOX 272, HOTELLPLATSEN 2, S. 401 24 GOTEBORG, SWEDEN.

GUNBOATS ON THE PORTAGE CANAL



The steam-driven Gunboat "Planter" as shown in Harper's Weekly in 1862, the type of boat for which the accompanying petition was written by concerned citizens of the State of Wisconsin. (Courtesy of the State Historical Society of Wisconsin).

By Frederica Kleist

Gunboats on the Portage Canal; was that a possibility? Let's go back to January 28, 1863 . . . Civil War Times. In Senate Miscellaneous Document No. 19: "Memorial of Legislature of State of Wisconsin in favor of the Enlargement of the Erie Canal and the Fox and Wisconsin Rivers improvement to admit passage of gunboats: To the honorable the Senate and House of Representatives of the United States in Congress assembled:

"The memorial of the legislature of the State of Wisconsin respectfully represents: That the importance of the immediate enlargement of the Erie Canal and of the Fox and Wisconsin rivers improvement, to admit of the passage of gunboats cannot, at this time of national peril, be overrated; that in the event of a foreign war the completion and use of this work might result in the preservation of the government; that in peaceful times, with the dangers of war averted, its importance as a great national work is scarcely less, as it is demanded by a great and increasing commerce, a commerce that unites the west with the east and enriches the entire country.

"The memorial further represents that the Fox and Wisconsin rivers improvement, reaching from the great lakes to the Mississippi, and admitting of the passage of boats drawing three and half feet of water, is nearly or quite completed; that to enlarge this work for admitting the passage of gunboats 144 feet long by 34 feet beam, and drawing six feet of water, will require an expenditure estimated by competent engineers at about one million dollars, a sum trifling in amount when considered in connection with the benefits to be derived and expense necessary to unite the Mississippi and lakes by any other channel; that the entire length of said improvement is 280 miles as follows:

On the Lower Fox river	35 miles
Lake Winnebago to Oshkosh	15 miles
The upper Fox River	113 miles
Canal connecting the Fox and Wisconsin rivers	2 miles
Wisconsin River	115 miles
Total	280 miles

That in Lake Winnebago and the mouth of the Lower Fox can be found safe harbors for the entire commerce of the lakes; that of enlargement of the Erie Canal, the character of the work, and the expenditure necessary to complete it, your memorialists are not equally as well informed, but they know that the channel is a continuation of the military and commercial highway that connects the west with the east.

"The memorial further represents that his excellency the governor of Wisconsin, in his late message to your memorialists, urges upon them the pressing necessity for this important national improvement. Therefore, your memorialists most respectfully ask that the enlargement of the Fox and Wisconsin rivers improvement and of the Erie Canal may be undertaken by the national government at the earliest practicable moment . . ."

Excerpt from Senate Miscellaneous Document No. 110 date April 27, 1864: "In relation, however, to the particular channel of connection between Lake Michigan and the Mississippi river, as an important link in the chain of communi-

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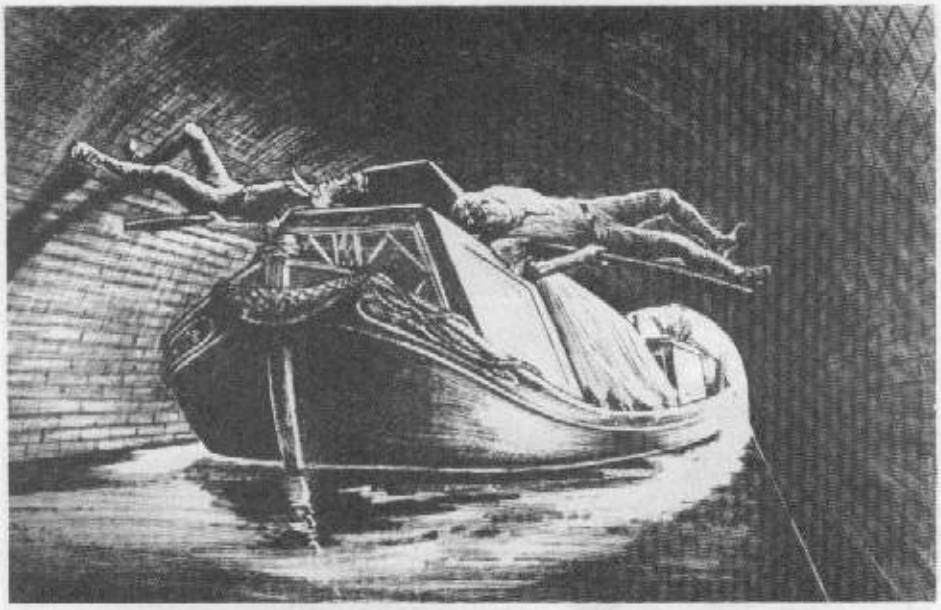
"LEGGING" ON THE BRITISH CANALS



Legging through an English Canal Tunnel. (Courtesy of Bill Gerber).

By William E. Gerber, Jr.

The following is an excerpt from an article entitled "Inland Waterways" published recently by Bill Gerber in the Apprenticeshop Journal of Rockport, Maine. Bill Gerber is a Vice President of the American Canal Society and has guided several groups of American canal buffs on tours of the canals of England and Scotland.

Some appreciation of the degree to which tunnels could restrict the flow of traffic on an old English canal can be gained by examining the historic operation of the Dudley tunnel, southwest of Birmingham England. Records indicate that 41,000 boats passed through this tunnel during the year 1853. A little analysis indicates just how impressive and revealing that figure really is. Dudley tunnel is one and three-quarters miles long and had a design width of nine feet; only enough for one way traffic. Operating records indicate that the direction of traffic was reversed at six hour intervals and that it took about 4 hours for a boat, actually a tandem pair of boats, to travel the entire length; about a half mile per hour rate. So, about one-quarter of the daily number of boats passed through the tunnel during each 6 hour period and all of these entered within the first two hours. (The remaining 4 hours were required for the last boat to propagate through). This means that 28 to 30 boats, usually operating in tandem pairs, entered during the two hour start period; a pair every eight minutes. A tandem pair of 70 foot boats would extend to 140 feet and, at ½mph, about 40-45 feet per minute, they would require about four minutes to clear the tunnel portal. And in another four minutes, they would be followed by another pair, only two boat lengths behind; and this went on day-in and day-out, every day of the year!

Tunnels were a non-trivial challenge to the early canal engineers. They were terribly expensive to build; so when they were required there were strong pressures to economize. This often meant small bores and, therefore, no tow paths. Typically the children or women of a boating family would lead the horse over the hill while the boat was taken through. A number of solutions were employed to propel the boats. They were poled; drawn through hand over hand on fixed lines; attached to and drawn through by continuous traveling loops, powered at a fixed station at one end or the other; and taken through by tug-boat. (Some of the early steam powered tug boats had the nasty habit of asphyxiating the crew in the inadequately ventilated tunnels.) But, without a doubt the most novel solution, and one widely used in England, was "legging".

"Legging" was an exhausting task. It was performed by two men, sometimes a boat man and his "mate" (wife), who laid on their backs or sides near the bow of the boat and pushed against the tunnel walls with their feet. It the tunnel was wide, so that the two walls could not be reached. "legging boards" or "wings" were laid across the boat, projecting over the sides, and the "leggers" laid on these. Both worked together, otherwise the boat would ricochet between the tunnel walls. Where only one person was available, and the tunnel ceiling was low enough, a single legger could "walk" the ceiling by laying on the top of a high platform on the boat. "Legging" was the motive power employed to move the 41,000 boats through the Dudley Tunnel in 1853.

During a recent trip to England to study the canals, I had the opportunity to try "legging" through the Dudley Tunnel, along with a number of other students. Among our number was a Miss Mary Casey who was visiting England from "down under". An ancestor of hers had been a "legger" at the Braunston Tunnel, on the Grand Union Canal, and one of her objectives was to find out what that meant. So, on one of our field trips, we took the Electric Boat Tour of the Dudley Tunnel. Part way through, we shut off the electric motor to let students "try their feet" at legging. For a while, Mary Casey and I teamed up. We "legged" against the opposite walls of the narrow tunnel directly from the deck, near the center of the boat. Mary Casey's head was propped up on my shoulder and my head was on her shoulder. We had lit a candle to see by, probably typical of the former era, and were it not for that, it would have been as black as a coal bin at midnight. All told, with Mary Casey and other partners, I "legged" one tenth of the length of that tunnel; and my knees ached for days afterwards. But, of course, ours was a light boat and load, probably not over 7 to 8 tons with 40 or 50 people aboard. By comparison, real "Leggers" typically moved two boats in tandem, each displacing about 30 tons. That's "two-man power" moving 60 tons at ½ mile per hour for four hours. Legger's earned their keep!

There is a song; probably contemporary, possibly folk; that gives some insight into the nature and status of leggers. It is sung by the British MIKRON THEATRE group as a part of their several musicals about English canals. In the song, a not so young woman is telling her father about her new beau (Dad's comment's are in parenthesis). It goes like this:

I've fallen in love with a legger
(Oh no, that never could be)
He's straight and he's 30 and I call him Curly
His legs are as thick as a tree.

Chorus

(If you have been loose with this "legger" I'll take my windlass* to thee)
Oh dad, that I'd never, but you know I'm not clever and a legger is just right for me.

Chorus

I'd want us to leg it together,
each on our own separate wing
I have got strong legs,
so we won't have to beg.
We'll just leg it while the rest of you sing.

Chorus

I'm not neat enough for a boat man.
(Don't be daft!")
But Curly 'd wed me in church
He's not a gung goozler,
not much of a boozer
I don't want to get left in the lurch.

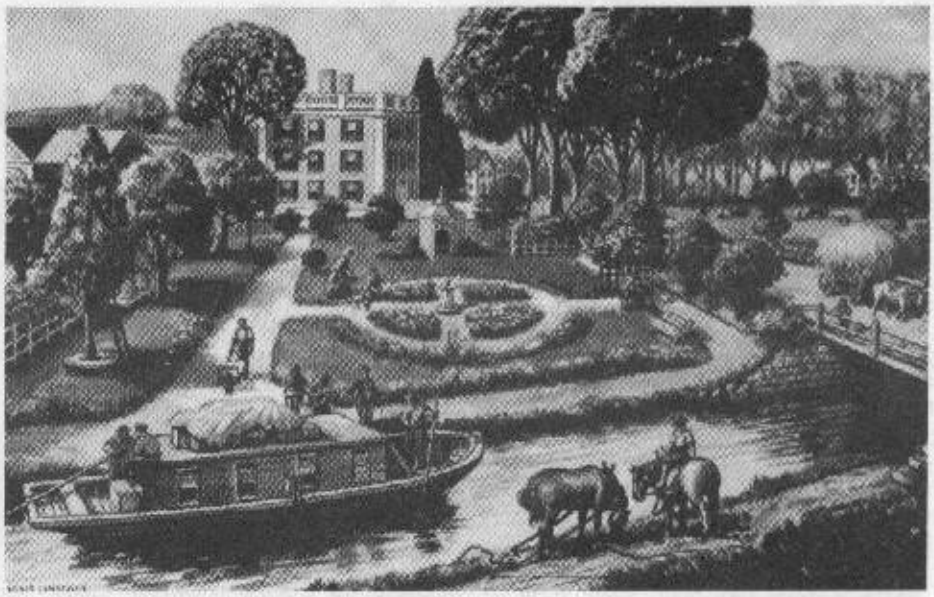
Chorus
– I'm clumsy, I'm plain and I'm 30.
There's not many men 'd have me!

*Windlass – a heavy metal handle used to crank open lock paddle gates.

All of that might lead you to believe that "leggers" were not at the top of the "social heap"!

THE MIDDLESEX CANAL

In reviewing past issues of AMERICAN CANALS recently we found that, except for a few brief references to restoration activities of the Middlesex Canal Association, we had never really published a full description of the Middlesex Canal, one of the first major canals in the United States, and the engineering model for the famed Erie Canal, which followed two decades later. The accompanying article (sent us by Bill Gerber) was published IN PREVIEW MAGAZINE for July, 1984 and does an excellent job of describing this important, early waterway and its historic impact.



The Middlesex Canal, passing Loammi Baldwin's home at Woburn, Massachusetts. From a painting by Louis Linscott. (Courtesy of the Middlesex Canal Association.)

Much has happened to the Middlesex Canal since that Saturday, August 31, 1839, when Henry David Thoreau and his brother John set out from Concord on that trip that was to form the basis of Henry's first book, "A Week on the Concord and Merrimack Rivers," published 10 years later. Henry was then 22 years old, and John 24.

Portions of the once famous canal are still visible for those who take the time to look and stop, but hundreds of thousands of vehicles pass over or by those remains daily without realizing the history they are by-passing.

Once, it was opposite, when the latter-day tourists of the early 19th century rode in luxury atop the Canal Packet "General Sullivan" for a day or two or three of sightseeing up or down the Middlesex Canal, passing through aqueducts which carried their vehicles above the wagon ruts called roads, or across other rivers and streams. There were the ever present locks, 20 to be exact; eight aqueducts and 48 bridges, as well as the necessary safety gates, culverts, sluiceways and waste weirs. At every other lock, or so, there was a tavern where sightseers or boatmen might refresh themselves or spend the night, though most of the crews would tie up along the bank in one of the occasional wider spots and spend the night either aboard the ship or under a timber pile ashore.

Authorized in 1794

This amazing feat of engineering was called "The Middlesex Canal" on which work was begun about 1794 as a result of a bill enacted by the Massachusetts Great and General Court, permitting the canal to be constructed and the incorporation by "The Proprietors of the Middlesex Canal" signed by then Governor John Hancock.

The canal was 27.25 miles in length and for 50 years provided safe, economical water transportation between Charlestown and Middlesex Village in what now is Lowell, and linked Boston Harbor with the Merrimack River. Utilizing the Merrimack and its canals, continuous water passage was possible from Boston, capital of the Bay State, to Concord, the capital of New Hampshire.

It was dependent in the main for its water supply on the Concord River, from which sluiceways carried water to float the vessels both up and down the canal. These sluiceways also provided an inlet from the Concord River for boats so that by taking the canal upstream, as the Thoreaus did, they could escape portaging around the falls at Billerica Mills.

The summit of the canal was 107 feet above the tide water at Boston and 27 feet above the Merrimack. The breadth was 20 feet at bottom and 30½ feet at the water line. The trough was built to carry a depth of 3½ feet; but owing to silting after completion of the canal, the water was seldom more than three feet deep.

Pulled from shore

In the early days (the canal operated from 1804 to 1854) most of the canal boats were hauled by a horse or an ox walking along the tow path next to the canal, pulling a rope. The boats were steered by paddles at both ends. In some places, the boatmen would walk two-thirds the distance of their boat lengths poling with a huge 15-foot paddle, and in some cases, when the winds were favorable, some would raise sails and relax at the tiller as their ships gilded forward to the next lock.

The locks were 10 to 12 feet wide and, though of slightly differing lengths, all were large enough to accommodate canal boats fully 75 feet long. The highest single lift was 10 feet, the average being between seven and eight. Some of the locks were of stone, others of wood.

Billerica aqueduct

One of the most extensive aqueducts, some 188 feet in length, carried the canal some 30 to 35 feet above the Shawsheen River and rested on two abutments and three or more central stone piers. This was one of the most imposing sights along the canal and most of it remains today to be seen along Route 129 in Billerica, near the Wilmington line.

The master sluicegates, bearing the water from the Concord River into the canal and circumventing the falls at North Billerica, can still be seen in the yards of the Talbot Mills off Lowell Street just off Route 3-A near Treble Cove Road in North Billerica.

Baldwin mansion

Perhaps the most magnificent site rests quietly along Route 128 where Route 38 crosses. For those who care to take the time, there stands the original mansion of Colonel Laommi Baldwin, first superintendent of the Middlesex Canal and famed militia commander of April 19, 1775, after whom the Baldwin apple is named.

The mansion, built in 1661, currently being restored by the Woburn Historical Society, has been moved a few hundred yards from its original site to make room for a modern shopping center. However, if you cross the road from the shopping plaza and put them behind you, you can visualize the Baldwin Mansion in its heyday, sitting astride the canal (some of which has been restored at this point for a mile or so) with the canal boats plying back and forth before its doors.

(To Be Concluded Next Issue.)

MIDDLESEX CANAL ASSOCIATION

The present officers of the Middlesex Canal Association are: Nolan Jones of Winchester, President; Laurence Henchey of Wakefield, Vice President; Malcolm Choate of Reading, Treasurer; Jane Drury of Chelmsford, Recording Secretary; and Marion Potter of Billerica, Corresponding Secretary. The Association publishes a newsletter called TOWPATH TOPICS. Their mailing address is P.O. Box 333, Billerica, Massachusetts 01821.

LOCK-HOUSE RESTORATION

By Charles W. Derr

Vandals, the elements and floods, more than age, have nearly destroyed the 150 year old locktenders house at Lock 44 in Freemansburg, Pa, the only remaining cut stone locktenders house along the Lehigh Coal & Navigation Canal.

The interior of the two-story, weathered stone structure has been gutted with ruthlessness, its pitch pine plank flooring torn up, its window panes missing and its fireplaces, staircase and attic destroyed. Rubble consumes every inch of the interior space leaving little vestige here of the life and times of the people of the canal era.

But vandals have not been able to destroy the fortitude of preservationists who have been quietly engaged in an effort to save the historic building that stands solitarily at the very north end of town.

Efforts of the Old Freemansburg Association (a private, nonprofit historic preservation organization) to save the building were rewarded recently when the Borough of Freemansburg gave the group a 99 year lease of the property, enabling us to begin the long process of stabilizing this historic structure.

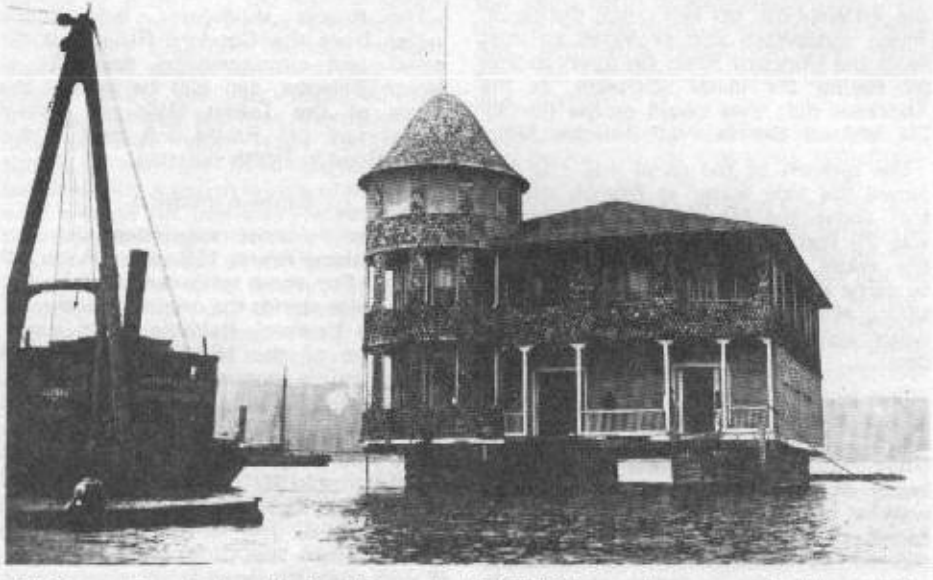
Armed with rakes and other tools and the anticipation that accompanies a long-awaited undertaking, association members, led by President Carl Raub, began the initial task of cutting away the years of untended vegetation that has grown up around the building. A start also has been made on clearing away refuse and debris still cluttering the spillway area.

Eventually windows and doorways will be closed off with masonry and an alarm system installed to secure the building against further vandalism. A temporary roof has been installed to stabilize the 19th century building, with its nearly foot thick stone walls. For association members, those tasks preceded the job of finding the means and money to restore the lock and lock house.

The Freemansburg Lock and Lockhouse as they looked when the Lehigh Canal was still an important artery from the anthracite mines to Philadelphia.

President Raub says that after the building is stabilized, the association will seek grants and donations for the restoration process.

Now subdued, lock #44 lies waterless and divested of its machinery and gates. Its locktenders house, a framework of a bygone canal era. But, most important, the work of preservation has been started. It any one would like to assist with this project, contact President Carl Raub, Old Freemansburg Association, 705 Main Street, Freemansburg, PA 18017.



This interesting photo, obtained for us by Bill McKelvey, shows an entire house being transported on two Lehigh Coal and Navigation Canal Boats April 4, 1903. It is from the Mystic Seaport Museum Collection, from the original files of the Merritt and Chapman Derrick and Wrecking Company, 27 Williams Street, New York. According to the old caption the building is the "Lone Star" Boat House, which is being removed from 125th Street to the Harlem River in New York City. In 1903 there was still heavy traffic over the Delaware and Raritan Canal between the Lehigh Canal and New York harbor, at which point these boats were obviously "borrowed" for the occasion.

GUNBOATS ON THE PORTAGE

(Continued from Page Nine)

cation, your memorialists have, if possible, a more special interest, and would further respectfully represent: That desirable gunboat communication can be established between Lake Michigan and the Mississippi river, with greater cheapness and facility by the way of the Fox and Wisconsin rivers than upon any other route. The whole distance of this route is 280 miles. Of this, the Wisconsin river, the upper and lower Fox, and Lake Winnebago, cover 278, and the canal connecting the Fox and Wisconsin, two miles in length, and already permitting the passage of boats drawing three feet and a half of water, connects and makes continuous the whole route. With natural advantages and existing improvements of this route to begin with there can be but little question but that it can be constructed to pass a given sized craft with less than one-eighth the amount of money that will be required to construct any other.

"Indeed, there are numerous points upon this route where iron, from either the Iron ridge or Lake Superior ore can be manufactured as cheaply as at Cleveland or Buffalo. This route, too, can supply more abundantly and cheaply other material for the construction of gunboats and steamers, such as timber, lumber and wood for fuel, and as a part of continuous communication between the Atlantic seaboard and the Gulf, by the way of the great lakes, will protect more population and more wealth than any other route proposed.

"Your memorialists, therefore, feeling the necessity of this great work, desire to urge upon you, that enlargement of the Fox and Wisconsin rivers improvement, the ship canal around the Falls of Niagara, and the improvements of the Erie Canal, have the aid of the general (state) government at the earliest practicable moment . . . ."

These memorials did in fact lead to the reconstruction of the Portage Canal by the Army Corps of Engineers.

ST. LAWRENCE TOUR

St. Catharines, Ontario — Pleasant autumn weather prevailed the weekend of October 20-21 when 40 marine historians toured the lower St. Lawrence Canals under the auspices of the St. Catharines Historical Museum and the Canadian Canal Society in observance of Merritt Day. The event attracted members of both organizations plus guests from the St. Catharines area, Toronto, Peterborough, Ottawa, and Montreal West Island.

The tour started Friday afternoon October 19 when the chartered bus departed for Cornwall, returning late Sunday the 21st and was guided by **Colin Duquemin,** Museum chairman and also president of the CCS, ably assisted by his wife, Madeleine.