

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 74

Editorial Address—809 Rathton Road, York, Pa. 17403

AUGUST 1990

PRESIDENT'S MESSAGE

Near Lexington, Virginia, in the 1850's, the power canal for the old Buena Vista Furnace ran through the grounds of ironmaster Samuel Jordan's mansion, where it watered a miniature canal with locks and a landing for the amusement of his children.

Does anyone know of other "back-garden canals" in the United States? We know that the English canal engineer James Brindley had a model canal in his backyard; so did Pierre-Paul Riquet, who built the Canal du Midi across southern France in the 17th Century. Riquet's canal, according to L.T.C. Rolt's *From Sea to Sea*, might still be undisturbed, waiting for an archaeological study. Jordan's back-garden canal has probably been washed away by floods, but we'll keep looking for signs of it.

In modern times, Disneyland has a couple of brightly-colored little narrow boats "Registered in Disneyland," but there are no locks or aqueducts to make their canal really significant - but just imagine what the Disney people could do with a "low bridge, everybody down" theme! On a smaller scale, we once hoped to build a working canal system for small boats in a Virginia transportation museum. The idea was to make it at least big enough for kids to walk along the towpath and across an aqueduct, pulling model boats on the end of a string, and working the locks. We'll keep working on it.

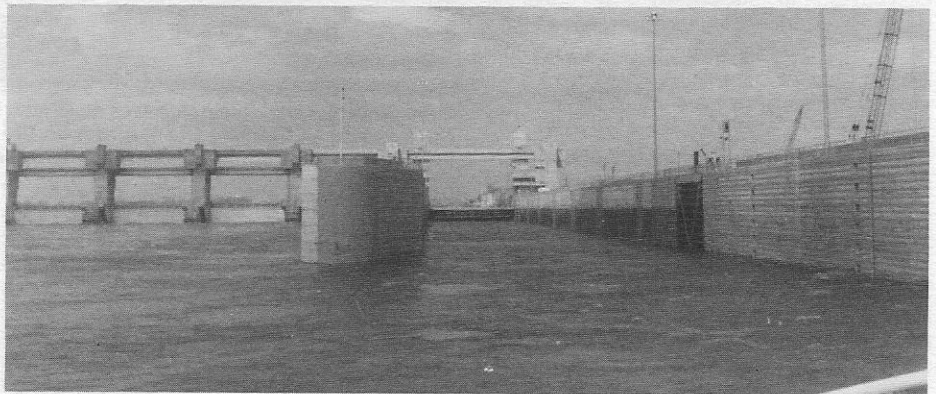
By the time you read this, the First International Conference on Historic Canals, in Canada, will be almost upon us. It reminds me of a couple of Welland Canal/Niagara Falls "in" jokes which deserve to be permanently recorded in these annals:

This one was told by ACS member Emily Madden. Years ago, she and her husband were standing beside one of the Welland Canal locks watching the ships go through. Beside them was a young couple, and one asked the other, "This is all very interesting, but I wonder how these boats get around Niagara Falls!"

Another contribution to Niagara Falls lore was made by Benjamin Franklin two centuries ago, when he discussed the cod and whale fisheries in the Great Lakes, explaining that "Ignorant people may object that the upper lakes are fresh, and that cod and whales are salt-water fish; but let them know, sir, that cod, like other fish, when attacked by their enemies, fly into any water where they can be safest; that whales when they have a mind to eat cod, pursue them wherever they fly; and that the grand leap of the whale in the chase up the Falls of Niagara is esteemed, by all who have seen it, as one of the finest spectacles of nature."

(Visitors to the new museum at Welland Canal Lock 3 may wish to make further inquiries at the front desk!)
Bill Trout

NEW LOCKS ELIMINATE MISSISSIPPI BOTTLENECK



Entering the downstream end of the new main Lock Number 26 at Alton, Illinois. Note the new dam on the left. (Photos by Walter Meseck.)

Walter Meseck recently sent us the following item from the "SIU Seafarer's Log" for June 1990. The accompanying photos are his also, made on a recent trip on the VIKING EXPLORER from Greenville, Miss. to St. Paul, Minn.

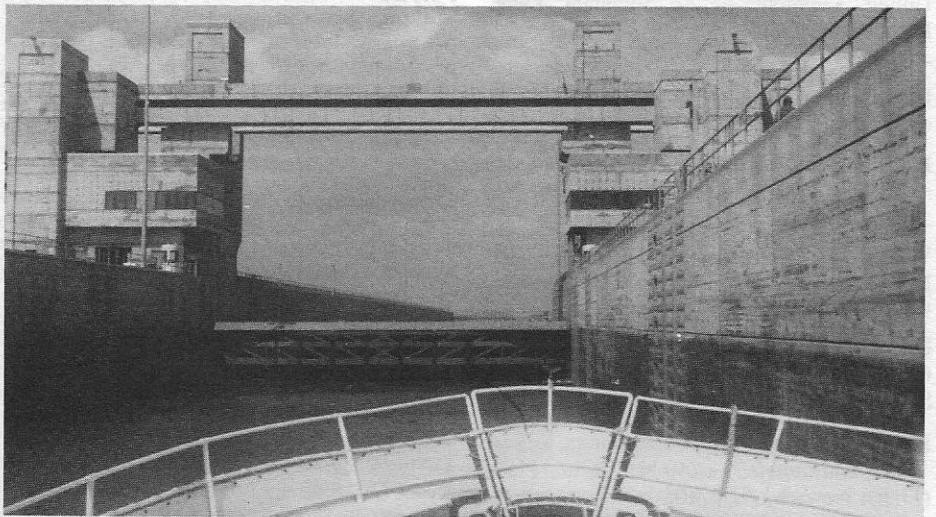
Seafarers were on hand last month at a ceremony held in conjunction with the demolition of the old Locks and Dam 26 near Alton, Ill.

Because traffic up and down the Mississippi River will now move more freely, Seafarers who work on the waterway expressed their support for the demolition. A new locks and dam facility has been completed two miles down river. The locks

have been widened to handle increased traffic on the river.

Work on the new facility, known as the Melvin Price Locks and Dam, began in 1979. About that time, the original Locks and Dam 26 was reaching its peak with 73 million tons passing through it annually. Because of its construction and age, the locks and dam, named for Henry T. Rainey, a former speaker of the U.S. House of Representatives, could not facilitate any more barges going through. It became a bottleneck costing shippers time and money.

The old facility was described as the "crossroad" (Concluded on Page Two)



Upstream gate of Lock Number 26, which drops down into a slot in the bed of the Lock when open. Walter says the gate got "cocked" when it was dropped for his ship, so they had to try again! (Auxiliary lock is to the right of the main lock.)

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 \$12.00. Individual copies may be purchased at \$3.00.

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CANAL BASIN NOW GROWING SHAD



Shad-holding canal basin at Havre de Grace, Maryland filled with water. (See Issue Number 73 of American Canals.) Old towpath on the left; Lock-keepers House (now a Museum) in the center background, adjacent to the outlet lock from the basin.

CCS ELECTS NEW PRESIDENT



Executive officers of the Canadian Canal Society check CCS spring tour program at Port Dover, Ontario, May 1990. Left, Sheila Wilson, St. Catharines, Ontario, vice-president; John Burtiak, Thorold, Ontario, president; George Hume, Toronto, Ontario, past president.

A prominent historian, John Burtiak, Thorold, Ontario, has been elected president of the Canadian Canal Society for 1990-91. He succeeds George Hume, Toronto, president for the past three years. The election took place at the annual general meeting (May 26) at Brock University, St. Catharines, Ontario, where Burtiak is special collections librarian and university archivist.

Sheila Wilson, St. Catharines, a researcher/author recently retired as head of the special heritage collection department of the St. Catharines Library, was elected vice-president. Re-elected were secretary Robert N. Voaden, St. Catharines, and treasurer, Anges Wilson, Thorold. Roberta N. Styran, St. Catharines, was named editor of Canals Canada.

The annual business meeting preceded the 12-hour bus tour of Lake Erie's northern shoreline from Long Point to Port Dover which was con-

ducted by Harry B. Barrett, Port Dover, noted author, historian and naturalist. Port Dover is approximately 45 miles north of Erie, Pa., 45 miles across Lake Erie at that point. It should be noted dogwood trees in full bloom on Long Point nearby Carolinian forest stands provided a distinctive landscape feature for the CCS tour.

Accepting the presidency post, Mr. Burtiak said a major membership drive would be undertaken by CCS to broaden participation geographically and among younger buffs. The Society's autumn program is scheduled for a September 15-16 tour of the Severn Canal and Big Shute system.

NEW LOCKS ON THE MISSISSIPPI

(Concluded from Page One)

of the inland waterway system in the central United States” by the Army Corps of Engineers, a name that will be transferred to the Price facility. It is located just south of where the Illinois River meets the Mississippi and just north of the merger between the Missouri and Mississippi rivers.

The locks for the Price facility have a maximum lift of 24 feet. The size of the main chamber is 110 feet by 1200 feet while the auxiliary chamber measures 110 feet by 600 feet. The main lock began working in October 1989 and became fully operational in February 1990 when the Rainey dam was shut down.

The Corps of Engineers listed farm products, at 65.2 percent, as the number one cargo going through Locks and Dam 26 in 1988, the last year records are available. Petroleum and chemicals made up 18.6 percent while coal comprised 8.6 percent.

Completion for the whole Price facility, including wildlife, environmental and park areas, is scheduled for 1992.

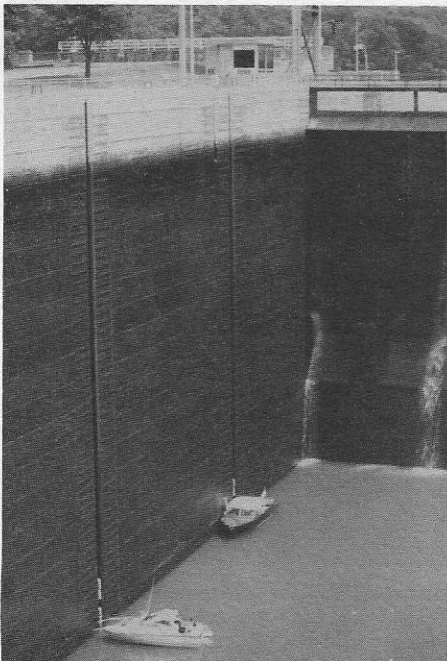
The new facility is named after Melvin Price, former U.S. Congressman and long-time chairman of the House Armed Services Committee. The Illinois elected official served in the House of Representatives until his death in the early '80s.

OLD WATERWAYS: ANTIQUE OR HISTORIC?

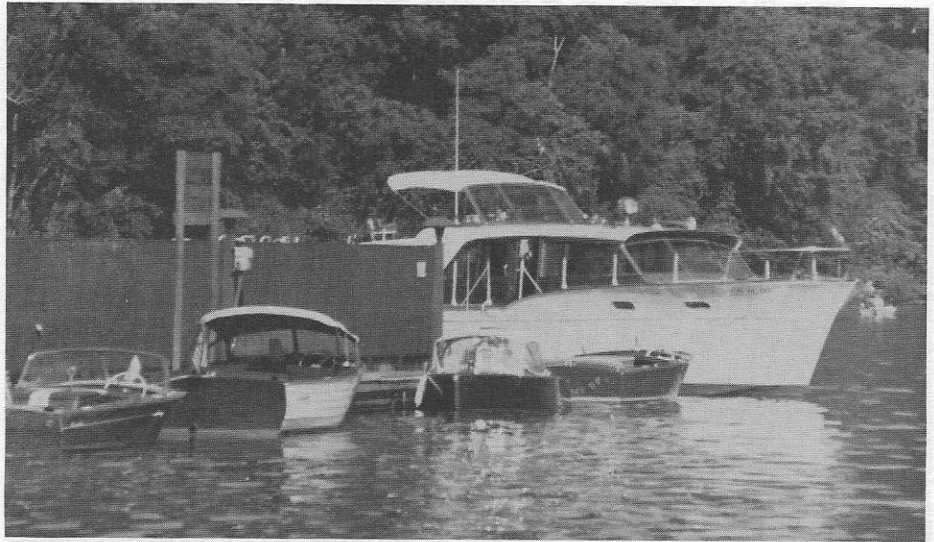
By David F. Ross

Members of the American Canal Society share a common interest in preserving our national heritage of inland waterways, and in particular of those elements in the system which are the products of human engineering. This broad agreement as to purpose may, however, conceal to some extent an inherent conflict over the meaning of preservation. If we are going to "save" the Fox, or the Kentucky, or the Muskingum, or any other waterway that is threatened with closure due to obsolescence, does this mean that we are going to keep it as it is, or keep it as it was built, or keep it open to navigation? These are all objectives which appeal to the kinds of people who join the ACS, and at the stage of rallying support and issuing pamphlets, there is no particular need to differentiate among them. Success in such a campaign, however, may shatter the illusion of a unifying principle, as when a revolutionary coalition loses its coherence on coming to power.

These reflections were prompted by a recent experience in a different but related field. I discovered that a group calling itself the Antique & Classic Boat Society was meeting just 66 miles and two locks up from where my boat, the Rosa Parks, is docked in front of my house at Tennessee river mile 211. Since the Rosa Parks was built by the now-defunct Lone Star boat company in 1955, I thought she might have a chance to meet some old acquaintances if we attended the meeting together. The people were friendly and welcoming without exception, but it took very little conversation to reveal that their reasons and mine for owning old boats were as disparate as pickles and ice cream. One member characterized the meetings as occasions for "fellowship and listening to the engines." As for me, I bought an old cruiser because I wanted to cruise and couldn't afford a modern one. As soon as I acquired it, I started ripping off original fittings that, like the navigation lights, no longer worked well, or like the head that flushed directly into the channel, were no longer appropriate. Instead of trying to make the old Homelite outboard run like a fine watch,



Several antique boats, dwarfed by a modern lock at historic Muscle Shoals. (David Ross photo).



Authentically restored antique boats enjoying a rare dip in the water. (Photo by David Ross).

I traded it in on a new Johnson. All of these alterations made perfectly good sense to me, because they tended toward the objective of a boat for traveling, but from the point of view of the Antique & Classic Boat Society they were acts of desecration, like repainting the ceiling of the Sistine Chapel. I, for my part, was just as intolerant of their reluctance to put their perfect restorations in the water for more than a semiannual ten-mile "cruise."

So it must be also, at least to some extent, with engineered waterways. We can all agree that it would be a tragic loss if the artifacts that made a commercially obsolete waterway navigable were to be ripped out and scrapped or allowed to fall into irreversible decay. Suppose, however, that the State of Wisconsin, or Kentucky, or Ohio, or whatever, is persuaded to undertake preservation, and announces after due study and consultation that two alternative courses are feasible. (1) The locks and dams can be preserved by diverting the water around them, encasing them in plastic, and immobilizing their working parts; or (2) the navigable waterway can be preserved by replacing the ancient locks and dams with new, modern, efficient locks and dams, as has already been done on those equally historic waterways that continued to enjoy heavy commercial use. The two courses could not be combined because the new, modern, efficient locks and dams would be fewer in number and higher in lift, and would submerge the sites of the antique locks and dams. Which course would the membership of the ACS support?

It might seem that the position of the Navigable Canals Committee, at least, would be unequivocal—that this committee would always opt for the preservation of historic navigability at the expense of antique authenticity. It is not that simple. Although I have not polled the membership, I should be surprised if there were anyone on the committee who would not prefer going through an old, small, hand-operated lock to the ordeal of a state-of-the-art lock. At the same time, however, we strive to be reasonable people, capable of understanding the problems of those whom we attempt to influence. When developers destroy the architectural integrity of neighborhoods or campuses, whether philistines or not they are responsible stewards of our economic resources, because erecting Gothic buildings under the cost conditions of the late 20th century would be to pro-

duce space that no one could afford to use. The same could be true of keeping 19th century waterways in operation for late 20th century recreational boaters. Maybe the way to find out is to be historically consistent and revert to the early 19th century system of funding waterway operations by collecting tolls from users. It's a painful thought, but if it could reconcile the conflict between preserving the antique relic and preserving the historic use, it might be worth the discomfort.

ALLEGHENY AQUEDUCT RESTORED

On Saturday, February 24th, one hundred SRGA members and residents of Robeson Township met at St. John's Lutheran Church, Gilbraltar, to celebrate the restoration of the Allegheny Aqueduct on the Schuylkill Navigation Canal south of Reading, Pa. The aqueduct is situated 1,000 feet south of the Schuylkill River. SRGA has promoted this project since 1983.

Attorney Samuel Russell explained the very complicated research he carried out as a volunteer to determine property ownership. The aqueduct is owned by the state. The canal and land under the aqueduct were owned privately. The land necessary to cross to get to the aqueduct for repair work was owned by the Birdsboro Municipal Authority. Mr. Russell was able to acquire and transfer ownership, with the exception of the aqueduct, to SRGA. SRGA in turn, has transferred part of the canal and land under the aqueduct to Berks County.

Local historian, George M. Meiser IX, used rare slides to illustrate the history of the Schuylkill Canal from Jackson's Lock in Reading to Birdsboro. One early scene showed the "Dolphin" crossing the Allegheny Aqueduct.

Rick Miller, the master stone mason engaged by Berks County Commissioners to do the restoration work, spoke of the challenge that the restoration presented. He felt a kinship to the early masons as he attempted to match their work.

Bob Bartmann, planner, provided a vision of future park development around the aqueduct. His plan would include a trail along the river and a pond south of Route 724 to provide water for the canal.

(From the Schuylkill River Greenways Association Newsletter for March 1990.)

NEW JERSEY CANALERS VISIT THE D & H — CONCLUSION



Lock Number 16 on the D. & H. Canal at High Falls, New York. This was one of a series of five locks (Numbers 16-20) that took the canal over a hill. They are part of a re-building of the canal which occurred in 1848-50, by-passing the original right-of-way. (Russell photo.)

By Bruce Russell

On Saturday evening April 28 the group stayed at the Kingston, N.Y. Holiday Inn.

Following an "all you could eat" buffet supper we were treated to an excellent slide show by GAYLE GRUNWALD and DIETRICH WARNER, owners of the SNYDER estate. Using old pictures and other visual aids they explained the process of making natural cement from limestone, and illustrated how it was transported in D&H canalboats. Interestingly a type of "canal siding" veered off from the main channel and went directly into the SNYDER property where coal to fire the kilns was removed and cement put in its place. Natural cement from Rosendale was eventually replaced by Portland type which was considered superior. In 1970 all production at Rosendale ceased. After the D&H CANAL went out of business in 1898 a short section from just north of High Falls to Rondout was maintained for the benefit of the SNYDER cement interests. Thus several of the old and weary locks continued to be emptied and filled each year so that cement laden boats could reach Rondout. A washout in 1905 severely damaged this remnant of the 108 mile long, 110 lock waterway and it wasn't repaired. Apparently by this time a decent road had been built and the cement came out of Rosendale by truck. Thus ended for good the waterway conceived of and built 77 years earlier by MAURICE and WILLIAM WURTZ.

Our first stop on Sunday April 29 was at the site

In connection with the D. & H. Canal Tour, Bill Moss asks us to call attention to the extensive planning work that was done by **Paul Ross** and **Barbara Murry** of Ellenville, New York, not to mention their service as guides during the tour.

of Tidewater Lock #1 in Eddyville just below Rondout. This was the last lock the boats would pass through prior to reaching TERMINAL ISLAND where they were unloaded. The lock itself plus a piece of its wooden gate survives although it's now situated on private property owned by MR. CHARLES OPITZ, a gentleman in his 70s. After the canal quit in 1905 the land around Lock #1 was acquired by the CENTRAL HUDSON GAS and ELECTRIC COMPANY as part of a real estate investment which never panned out. In the 1930s they decided to build at another location a marina and dock for yachts owned by their top executives. In order to complete this facility as fast as possible and within budget they removed the cap stones around the lock plus two other layers of the heavy blocks. At this time no one was concerned with preserving the remains of a derelict canal and no effort was made to prevent this desecration. So away went the blocks! According to LANCE METZ, canal historian and industrial archeologist in residence at HUGH MOORE PARK in Easton, Pa. many lock chambers of abandoned canals had their stones carted away to be used for other purposes such as the foundations of monuments and public buildings. It has only been during the past two decades that the historic preservation movement has entered the picture and enacted legislation against this type of wanton destruction.

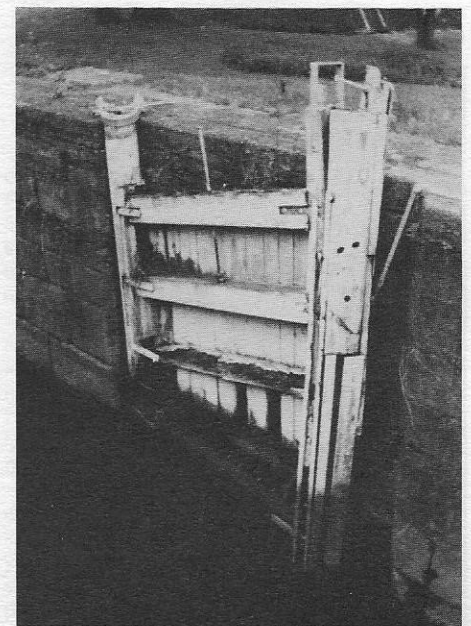
Weighlock Ruins

At the Lock #1 site we visited the remains of what had been the D&H CANAL's weighlock. The actual chamber now forms the basement of Mr. OPITZ'S home, but he kindly opened it to permit tour participants a first hand glimpse. Some of the stones still had boatmen's initials carved in them as well as mason's marks and lifting holes. This weighlock was similar to the one used by the ERIE CANAL at Syracuse, N.Y. which survives although minus its machinery. Boats entered the weighlock chamber, water was drained until they sat inside

a type of wooden cradle. A system of fulcrums, weights and counterweights was employed to somehow arrive at a figure for the vessel's tonnage. Mr. OPITZ explained that during his walks along the old towpath he still finds hunks of coal. His explanation was that the boatmen used to throw pieces of anthracite at rabbits, squirrels, and other animals while waiting to get into either Lock #1 or the adjoining weighlock. While they were usually unsuccessful in striking their intended target it was a means of killing time. He also told of how during the Depression of the 1930s people would board rowboats and canoes and travel to TERMINAL ISLAND where they searched for pieces of coal left over from the days when it was a busy unloading facility.

"Creek Locks"

Besides being the eastern end of the D&H CANAL, Eddyville also contains buildings which once overlooked the waterway. A couple of saloons and a general store still survive but in somewhat altered form. We then moved on to Locks #2 and #3, known as the CREEK LOCKS. Both were in good condition and were examined closely by the group. Then it was on to Rondout which is actually the harbor of Kingston. After visiting the TROLLEY MUSEUM OF NEW YORK which operates a 1921 vintage gasoline railcar over a short piece of the old ULSTER and DELAWARE RR we boarded the RONDOUT BELLE, an old fashioned but diesel powered excursion vessel. From it we were able to get a close up look at TERMINAL ISLAND plus the light house which marks the point where the Rondout Creek merges with the Hudson River. In the 1880s and 90s Rondout was a very busy place with D&H canal boats being unloaded, tows of larger barges being assembled for the trip down the Hudson, and boatmen hanging around between tours of



This wooden gate still remains partly intact on Lock No. 1 at Rondout, New York, almost 85 years after abandonment. At this point, the canal boats left the canal and entered Rondout Creek and traveled downstream one mile to the final terminus at Island Dock, for transshipment to New York City. (Russell photo.)



One of two surviving toll houses on the D. & H. Canal. This 150-year old building is located at Ellenville, New York, but has been moved from its original location when the canal bed was filled in for a local street in the 1920's. (Russell photo.)

duty. A picture in COAL BOATS to TIDEWATER shows hundreds of D&H canal boats laid up at TERMINAL ISLAND during the winter. Rondout was also where the great paddle wheel steamer MARY POWELL docked after her run from New York City. It's a quiet place today but efforts are being made to restore the historic district. A small maritime museum has been built and our group visited it. Several models of the enormous steamboats which once graced the majestic Hudson were on display as well as enlarged photographs. The past is gone and can never be brought back, but at least efforts are being made to capture a tiny portion of it.

Upon departure from Rondout harbor our busses made a 1 hour stop at the historic downtown section of Kingston where many old, stately Victorian buildings were being restored to their previous grandeur. Kingston at the turn of the century was a prosperous community, its wealth coming from the D&H Canal, the steamboats, and the West Shore Railroad which still exists but only as a Conrail freight line. A walking tour and closer examination of its stately mansions, churches, and public buildings attests to this now faded prosperity. Hopefully the city will stage a comeback since the mid-Hudson River region where it's situated is breathtakingly beautiful. From the heights one gets a sweeping view of the lordly Hudson, and while winters are cold, summers are refreshingly cool.

After reboarding our CONOVER BROTHERS coaches it was back to New Jersey, another top notch CANAL SOCIETY of NEW JERSEY field trip completed. Heading south along scenic back roads we once more paralleled the abandoned D&H CANAL and a number of its ancient lock chambers could be spotted. Appropriately someone had put a tape of canal era music onto the bus's stereo/public address system. Our two day journey in D&H country was coming to a close, an event to be savored for many years.

CLARENCE HUDSON

It is with regret that we announce the death of Clarence Hudson, long-time president of the Canal Society of Indiana, on May 11, 1990 after a lengthy bout with cancer. He will be sorely missed by all members of CSI.

THE DELAWARE & HUDSON CANAL HERITAGE CORRIDOR PROJECT

Over the past two years, our members have noticed articles in local papers about a group called the D & H Canal Heritage Corridor Project. Since the goals of this project are so close to our own, and since the project will continue to be in the news this summer, we thought you might be interested in a review of its purposes and progress:

The D & H Steering Committee was formed in the summer of 1988 by NYPCA — The New York Parks and Conservation Association, a non-profit environmental group working for the recognition, promotion, and protection of state parks, open spaces and greenways. The D & H Steering Committee, made up of local residents (elected officials, business and civic leaders), hopes to preserve and revitalize the D & H Canal Corridor in Ulster County and explore its potential for recreational use. The D & H Canal Historical Society has been represented on this steering committee by Trustee Gayle Grunwald since its founding; Ron Schade

of New Paltz is currently serving as Steering Committee Chairman.

After a couple of years of planning, the Corridor project is really taking off. With the assistance of NYPCA, the towns of Rochester, Marblatown and Hurley have received approximately \$300,00 in state matching funds to develop municipal linear parks (along the old O & W route in Hurley and the canal bed in the Town of Rochester). NYPCA has also hired Vicki Schroth, a graduate student in Public History at SUNY Albany, to coordinate local efforts for preservation and revitalization of the canal corridor. Vicki will be working out of the Canal Museum this season, and we are delighted to be able to provide a home for this exciting endeavor. Any members interested in participating in this project should call or write the museum to be added to the mailing list.

(From the D. & H. Canal Historical Society Newsletter for April 1990.)

“WEIGH LOCK SENSITIVITY” (1835)

The object of the greatest interest to me, in Utica, was a weigh-lock — an American invention if I am not mistaken. The toll for freight on the canal is proportionate to weight. To arrive at the weight of a cargo, gauges are commonly used: this is the process of weighing, for instance, in England; another means is used here. A steelyard on a gigantic scale is constructed; the scale, formed in a manner that the bottom of a vessel fits conveniently in it, hangs by three pairs of iron rods on a strong iron beam, which rests and plays on three nice points of steel. To this large iron beam another is fastened perpendicularly in a horizontal plain [plane], forming the arm from which the scale, destined for the weights, depends. The whole is so balanced, that one pound in this latter scale balances one hundred pounds in the large scale; and, with such a degree of nicety is the whole machinery made, that quarter pounds are used as weights, which, of course, counterbalance twenty-five pounds in the large scale. This hangs down into a small basin, communicating with the canal, with which it can be disconnected by a lock. Whenever a boat is to be weighed the lock is opened, and the vessel floats into the basin between the iron rods of the scale, which is now under its bottom. The lock is closed, and by another lock the water is discharged from the basin, so that within a short time the whole boat hangs dry in the scale. Weights are now placed in the weighing scale; the original burden of the boat, the testimony of which every boatman carries with him, is deducted from the gross weight, and the toll is paid accordingly. The weight of the boat and cargo on which I saw the operation performed, was sixty two tons or 136,000 pounds; much heavier cargoes, however, are weighed. When the whole was balanced, I was able, literally, to move by my little finger, 136,000 pounds up and down. When the lock has admitted again a sufficient quantity of water, and the boat is once more set afloat, the first lock is opened, and the boat floats out. The operation of weighing, which I witnessed, lasted from the time the boat entered the lock to its sailing out again, nine minutes; but three or four minutes must be deducted, as the weigh-master had to fetch a lantern, it having grown dark. He assured me that when the people on board the boat understand the details of the whole operation, and no unnecessary delay takes place, he can weigh any boat in less than

four minutes. I could not learn the name of the author of this invention, the more interesting as it is the bold application of a simple principle known to every one. In the cathedral of Pisa, the work of Buschetto, the worthy Greek architect, I found the following inscription on the monument erected in his honor:

Quod vix mille bovum possent juga juncta movere,

Ed quod vix potuit per mare ferre rates,
Busketi nisu, quod erat mirabile visu,
Dena puellarum turba levabat onus.

“A burden, which hardly could be moved by a thousand yokes of oxen, and which the vessel could hardly carry over the sea, has been lifted, a marvel to see it! through the exertion of Buschetto, by ten girls.”

The engineer who invented the weigh-locks, deserves to be celebrated in a similar manner, though, it is to be hoped, in a better style.

Lieber, Francis

The Stranger in America

Carey, Lea & Blanchard, Philadelphia (1835), p. 260

Submitted by William Dzombak

CANAL CALENDAR

September 15-16, 1990 - Fall Field Trip of the Canadian Canal Society on the Trent-Severn Canal. Port Severn and “Big Chute” Ontario.

September 16-17, 1990 - First International Conference on Historic Canals, Rideau Canal, Chaffeys Lock, Ontario. Write: J.W.A. Bonser, Supt., Rideau Canal, 12 Maple Avenue North, Smiths Falls, Ontario K7A 1Z5, Canada.

September 29 (or Oct. 6) 1990 - Fall Tour of the Canal Society of Indiana. Wirth Memorial Park, Oakland City, Indiana. Patoke and White River Aqueducts; Ohio River boat trip.

October 12-14, 1990 - Fall Field Trip of the Pennsylvania Canal Society. New Castle, Delaware. Tour and boat trip through the Chesapeake and Delaware Canal. Write “Zip” Zimmerman, 1361 River Road, Yardley, PA 19067.

ST. MARYS FALLS CANAL

By William Shank and Walter Meseck

The sixty-mile long St. Marys River is the only connection between Lake Superior and Lake Huron. There is a 23-foot differential in elevation between Lakes (Superior the higher) most of which is concentrated in a half-mile section of rapids on St. Marys River at Sault Ste. Marie, Michigan, or Sault Ste. Marie, Ontario — depending upon whether you approach the River from the American or Canadian side. Americans refer to the area simply as "The Soo."

The first attempt at an artificial waterway in Canada was a short canal and lock — one of the oldest in North America, built on the Canadian side of the Soo in 1797. Prior to this all furs and goods passing between Lakes Superior and Huron had to be "portaged" by land around the white water at Sault Ste. Marie. During the War of 1812, the Canadian lock was destroyed by the Americans, so traders again had to portage their goods around the falls, for the next forty years. The Americans gained control of the south side of the river in 1820 with the "Treaty of the Sault," signed with the area Indians.

In 1853, after long prodding by Senators Lewis Cass and Alpheus Felch of Michigan, the U.S. Congress granted the State of Michigan the right to construct a canal at the Soo, and gave them 750,000 acres of public lands which could be sold to finance the project.

An agreement between the State of Michigan and the Fairbanks Scale Company, which had extensive mining interests in the Upper Michigan Peninsula, was signed April 5, 1853 for construction of the canal and locks. Charles T. Harvey, Fairbanks General Agent, was put in charge of the project. The agreement specified that the canal

must be operational in two years or Fairbanks would receive nothing for its efforts.

Ground was broken June 4, 1853. 400 men were on the first payroll, but the labor force soon swelled to 1600. Under summer sun and biting winter cold, Harvey drove his men to meet the completion deadline. Fairbanks Company agents met ships at eastern seaports to recruit immigrant laborers to replace the vacancies in Harvey's labor force created by men quitting and by cholera.

The job was done on time, and turned over to the State, with two 350-foot long, 70-foot wide locks

in tandem, each with a lift of approximately ten feet. This combination was known as "State Lock." On June 18, 1855, the Governor of Michigan and other dignitaries assembled at the Sault to watch the steamer "Illinois" pass through the canal and its locks between Lakes Huron and Superior. Heavy ship traffic began almost immediately.

By the 1870's it was obvious that additional locking capacity was needed, beyond the financial limits of the State of Michigan. At this point the Federal Government took over the operation, which was placed in the hands of the U.S. Corps

CANAL BRIDGE SAVED!

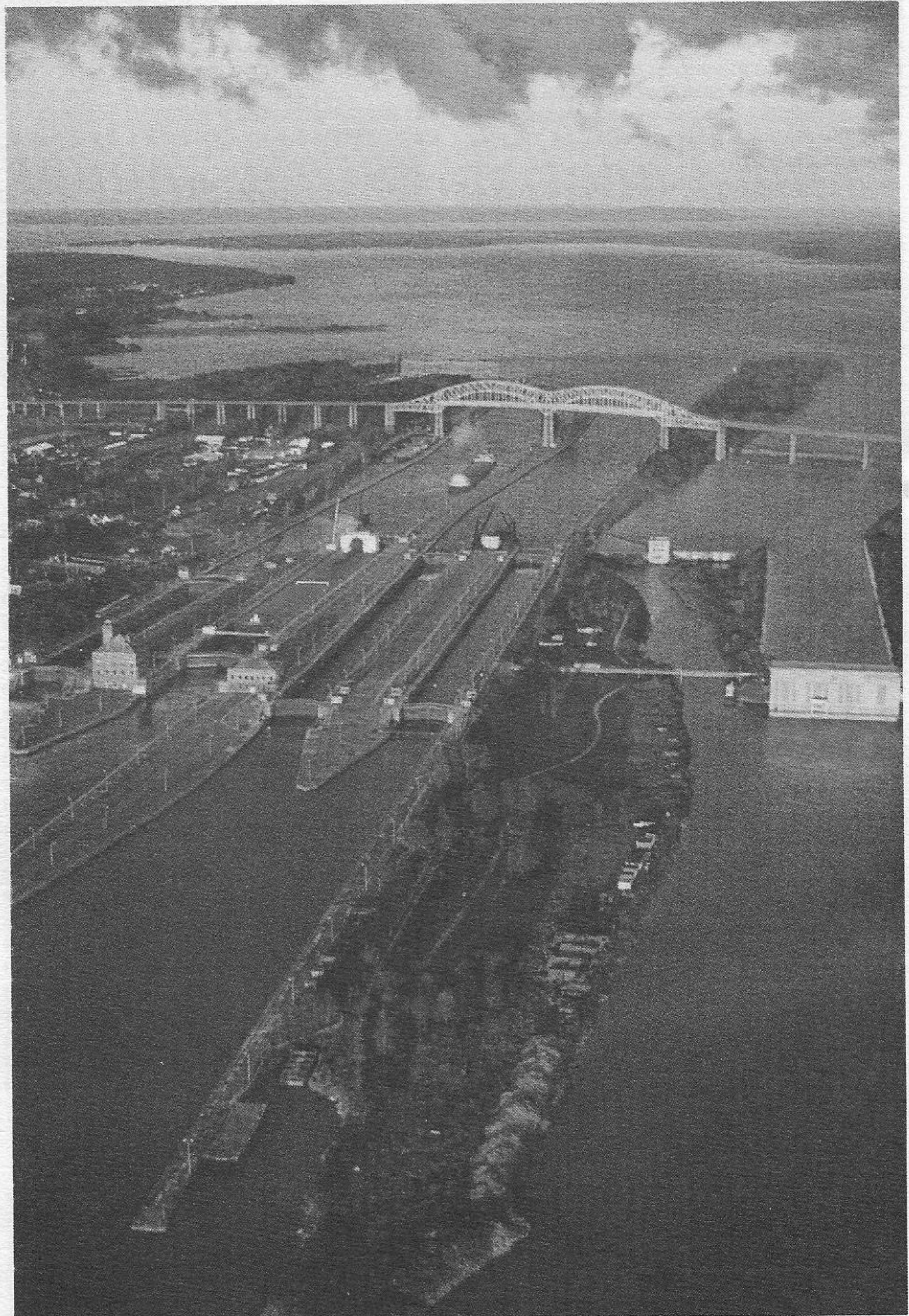
One state and two local historical preservation groups are working together to save an endangered, historic stone-arch bridge that once carried wagon traffic over a by-pass around Lock 14 on the Ohio & Erie canal in Akron, Ohio.

Bruce Norton, Vice President of the Canal Society of Ohio, is spearheading this drive to rescue the bridge. It was slated for destruction when a new bridge is constructed to replace a 1921 highway bridge that had concealed the original stone structure. The Canal Society of Ohio, Cascades Locks Park Project, and Progress through Preservation groups met with County officials in mid July to reach a compromise. The solution was to dismantle the bridge, stone by stone, number and mark each piece, then have the stones transported to a storage site near the Hardy Road Landfill north of Akron.

Future plans call for the bridge to be rebuilt, perhaps near its original location, in a Cascades Locks Park that local citizens hope will become a reality in the near future.

Volunteers from the Canal Society of Ohio, Progress Through Preservation, plus several Archeology students from the University of Akron, have assisted in uncovering, cleaning, and numbering the stones. Hopefully, a future visitor to the City of Akron will be able to view this single-span, stone arch bridge in its new setting along a preserved staircase of Ohio & Erie canal locks in this north-east Ohio town.

(Submitted by Terry Woods)



The American "Soo Locks", looking west. From left to right: MacArthur Lock, Poe Lock (in the South Canal), Davis Lock and Sabin Lock (in the North Canal), and the Power Canal and Power Plant, extreme right. The International Bridge can be seen in the background. (Courtesy of Walter Meseck.)

MORRIS CANAL RESTORATION

of Engineers. The Corps immediately began construction of a second, single-stage lock, named the "Weitzel Lock" in honor of the District Engineer in charge. This lock (opened in 1881) was 515-feet long by 80-feet wide, and was located parallel to, and to the south of, State Lock. Operation of all locks was made toll-free.

In the meantime, Canada got into the act. In 1887 the Canadian Government let contracts for a 3-1/2 mile long canal on their side of the Sault Rapids, with a single lock 900 feet long, 60 feet wide with a depth of 20 feet, 3 inches over the sills. This system was opened for navigation in 1895 to handle traffic from the steadily growing mineral and timber industries along the north shore of Lake Superior. The Canadians were astounded at the tremendous volume of traffic which immediately began flowing through their canal.

Both Canadians and Americans discovered that they could harness the Sault Falls to generate power, and did so as soon as hydro-electric power generating equipment had been perfected. Thus the entire flow of the St. Marys River was eventually controlled, either for power, or navigation.



James Lee, canal historian, looks over a model of the Morris Inclined Plane to be rebuilt at Waterloo. ACS Vice President, Bill McKelvey, sent us this item, written by William Gordon, for the "Star Ledger", a News Jersey newspaper.



Even with the opening of the Canadian canal, traffic continued to out-grow the capacity of locks at the Soo. Ships passing through the locks also grew in size. In 1896 the original "State Lock" was replaced by the Poe Lock, named in honor of Colonel Orlando M. Poe, a Civil War veteran, who was made Superintending Engineer of the Soo Locks in 1883. This lock measured 800 feet long by 100 feet wide. The next major change took place when two new locks, the Davis (1914) and the Sabin (1919) were opened side by side, bringing the total number of American Locks at the Soo to four. The Davis and Sabin Locks, oldest locks still operating, are identical, measuring 1350 feet long, 80 feet wide and 23.1 feet deep.

More recently, the Weitzel Lock has been replaced by the MacArthur Lock (1943) measuring 800 feet long, by 80 feet wide by 31 feet deep; and the old Poe Lock has been replaced (1968) by the New Poe Lock, a gigantic 1200 feet in length by 110 feet wide by 32 feet deep, largest of all the Soo Locks.

As an extension of the St. Lawrence Seaway, the Soo Locks today have become the busiest waterway system in the entire world! Ships of all nations pass through the Soo, carrying wheat, iron ore and other commodities east from the Mesabi Iron Range and the great central wheat fields of Canada and the United States. In 1971 the Soo reported 91.5 million tons passing through the American Locks and 1.5 million tons through the Canadian Canal.

Quite recently the Canadian lock has developed a severe crack in one of the walls, which has caused its closing. No decision has been made on repairs, to date. All small boats, its prime users, will have to lock through the larger American locks.

A history-rich portion of the Morris Canal at Waterloo Village will be restored with funds awarded by the New Jersey Historic Trust and matched by the Waterloo Foundation for the Arts, it was announced recently.

The ambitious project, planned in two stages, foresees the authentic reconstruction of a two-mile section of the canal—including a water-powered inclined plane which enabled canal boats to climb mountains and once was the wonder of the world.

"This will be a piece of New Jersey history come alive," said Percival H.E. Leach, president of the Waterloo Foundation and co-founder of historic Waterloo Village on the Musconetcong River in Sussex County's Bryam Township.

Leach said a grant of \$775,000 by the New Jersey Historic Trust—made possible through the new Historic Preservation Bond Program—will be matched by the Foundation to cover the first phase in restoring the segment of the canal, last used in the 1920s.

"When it is restored, we'll have the only water-powered inclined plane in the world," said Leach.

Work is scheduled to begin this autumn on the first phase of the restoration. The initial funding will cover costs of restoring the lower canal, the guard lock, the stilling basin, the railroad bridge, site grading and part of the inclined plane reconstruction. It will include rails, stone wall repairs and earthwork.

Leach said Waterloo is preparing an application for a second matching grant which would cover costs of the second phase of restoration. This phase will include the inclined plane, which raised canal boats 80 feet, the upper canal, plane tender's house, the brakeman's house, turbine house with winding machinery, cradle car and two canal boats.

The approximate cost of the second phase, which will require more time, was estimated at \$5.9 million in a report to Waterloo by engineering firms engaged for the restoration.

The complete project is expected to take four to five years. When finished, Leach said, visitors to Waterloo will be able to travel the canal in horse-drawn boats, rise to the level of the Musconetcong

River in a lock and cross the stilling basin to a boat cradle which will be hoisted to the upper canal.

Pete Strannemer, president of the 30,000-member Morris and Sussex Building and Construction Trades Council, said his organization will provide volunteered reconstruction equipment and volunteer labor for the project.

It was estimated that the council's contribution to the restoration would be tantamount to a third matching grant.

James Lee of Stewartville, a leading Morris Canal historian who has studied the waterway for more than 50 years, has been engaged by Waterloo as a key consultant on the restoration.

"Waterloo Village is an ideal place for this work," said Lee. "It has most of the major features of the canal—a portion of the canal itself, a general store, lock, aqueduct lock, mule bridge, inclined plane and railroad bridge.

Lee, 73, a retired railroad conductor who has written two books on the Morris Canal, said the waterway traversed 102 miles of the state from Phillipsburg and the Delaware River to Jersey City on the Hudson.

The canal was opened Nov. 4, 1831, and had 23 inclined planes and 34 locks. The canal was conceived by Morristown financier James Macculloch as a means of transporting ore from Pennsylvania to the industrial cities of New Jersey.

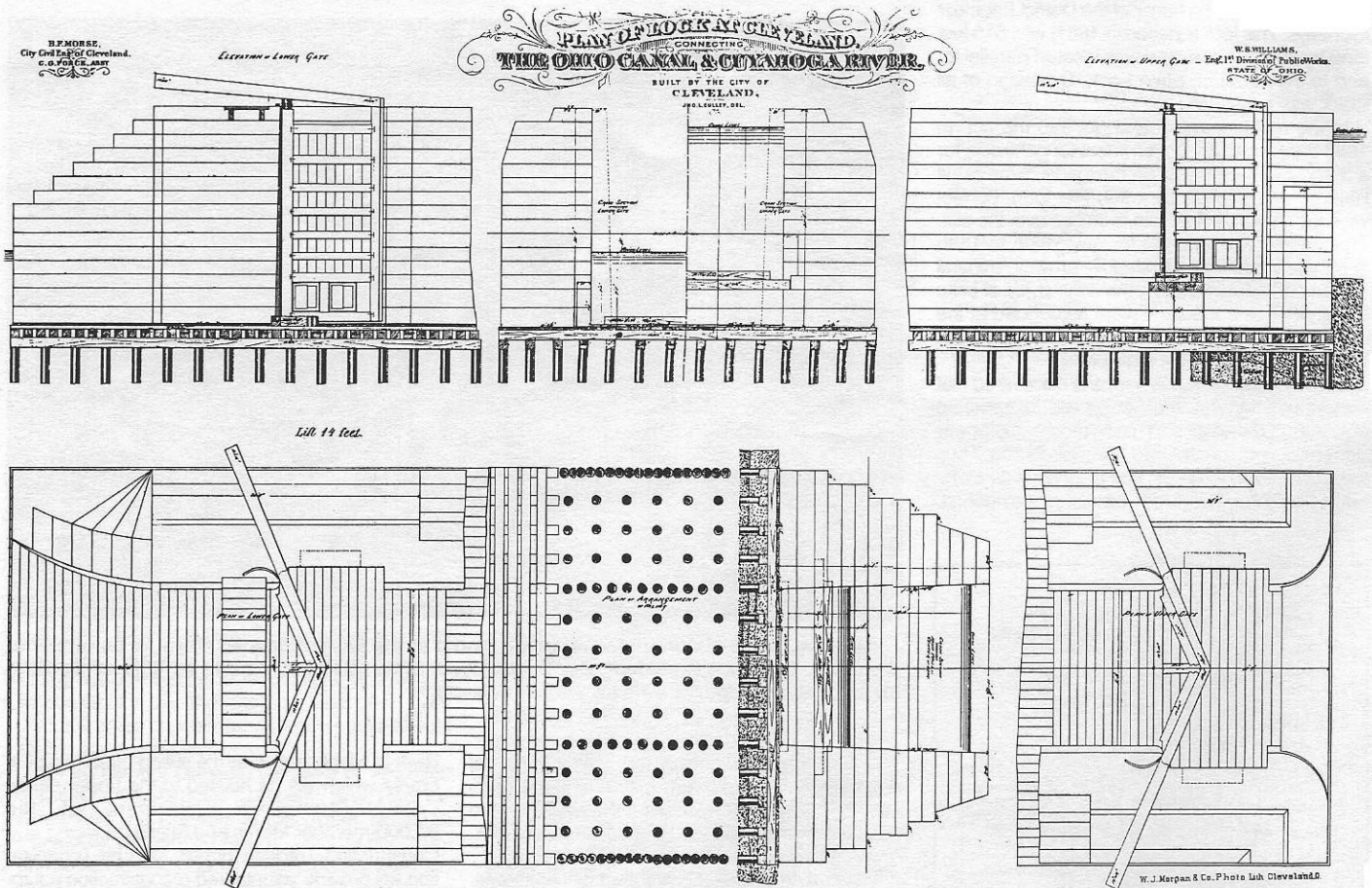
The canal boats eventually carried coal, wood, lime, whiskey, beer and other commodities over New Jersey hills in plane cars via inclined planes, which were actually short boat railways.

CSO FALL TOUR

The Canal Society of Ohio Fall Tour will be held October 5-6, 1990, headquartered at I-75 Holiday Inn in Wapakoneta, Ohio.

The Tour will cover the Miami and Erie Canal from the north end of the Loramie Summit to the City of Delphos. Grand Lake St. Marys, and Spencerville "Deep Cut" are included.

THE 1875 OUTLET LOCK AT CLEVELAND



1875 Engineers design drawing of the unusually large lock opening from the canal into the Cuyahoga River at Cleveland. Note the pilings, driven into the river bed.

By Terry K. Woods

An Act in 1872 by the Ohio General Assembly authorized the City of Cleveland to appropriate for its own use nearly three miles of the Ohio & Erie canal from the approximate location of present day Dille street to the Cuyahoga river outlet locks. Those two outlet locks (numbers 43 and 44) and the weigh lock were abandoned. For its part, the City of Cleveland built a new weigh lock and outlet lock into the river at the new northern terminus of the canal. A member of the Board of Canal Commissioners and the Division #1 Resident Engineer took control of the building of the locks. Plans and specifications were provided to the City's contractors.

The outlet lock was placed under contract in the spring of 1875. The original plans called for it to be operational sometime during the summer of 1876. However, due to the magnitude of the work, it wasn't completed until late in the 1878 boating season. Until then, the old canal channel and outlet locks in Cleveland continued to be used by Ohio & Erie Boatmen.

The lock was larger than standard lift locks on this canal. It was 100 feet long between closed gates and seventeen and one third feet wide. The amount of water on the miter sill (depth of water in the lock at low lift) and the lift of the lock, depended largely upon the water in the river and lake. A north or south wind, blowing steadily for two or three days, would lower or raise the effective level of water in the river below the lock considerably. The lock was designed, under ordinary

water conditions, to have seven feet of water on the miter-sill and a lift of fourteen feet.

Since much of the work on this lock was in the river itself, and part projected onto the canal towpath, it was necessary to have the embankment well secured in order not to interfere with day to day navigation of the canal. After a portion of the new lock pit was excavated, a row of square pilings was driven close together, extending on three sides of the work site. This row of piles was held in position and the towing path embankment supported by heavy, strain-beam trusses placed horizontally one above the other. These trusses were then firmly bolted to wall pieces. Another row of piles was sunk ten feet within the original row. Its piles were also driven close together and, in addition, sheeting piles were driven. The space between the two piling rows was filled with clay, and constituted the coffer dam to the worksite.

The area within the coffer dam was then dredged until a depth of seventeen feet of water was obtained. All logs and driftwood were removed. Bearing, or foundation, piles were then driven. The river bottom here ranged from soft muck to firm earth. Therefore, 200 additional pilings were required over the original estimate, for a total of 1,029. A like number of pilings were used in the coffer dam. The piling timbers averaged 30 feet in length. No piling used was less than ten inches in diameter at its small end. The foundation pilings were cut off ten feet below the surface of normal water.

The fourth side of the coffer dam was then put in and the interior pumped out. A concrete wall was installed across the head of the lock pit to a depth of four feet below the foundation pilings. This

wall was designed to prevent water from filtering through the earth from the upper canal level to the lower. The space between the foundation pilings was puddled to within a few inches of their tops. Concrete was then poured to the tops of the pilings.

A series of 12 x 12 inch timbers, running lengthwise to the lock, were then bolted to the tops of the foundation pilings. A second course of 12 x 12 inch timbers was next bolted at right angles to the first. A four inch thick plank flooring was spiked to this second course of timbers. The masonry walls were built upon this plank flooring.

The masonry of this lock was twelve feet eight inches thick at the base of the lock and, on the exterior of the wall, stepped off toward the top. The interior chamber of the lock was battered, sloped in, 3/8" per foot of rise. The lock walls contained thirteen courses of stone — four courses 24" thick, four courses 22", four courses 18" and the coping was 15" thick. The wing walls at the lower end of the lock had a radius of twenty seven feet four and one quarter inches. The wing walls at the upper end of the lock had a radius of six feet.

Standard, timber miter gates were used on this lock to provide a uniformity of design along the canal. Two 24" x 24" 'butterfly' valves in each gate half provided the means for filling and emptying the lock chamber.

This outlet lock was used steadily by boatmen venturing out into the Cuyahoga river to drop off and pick up cargoes for many years. By 1905, though, this use had dropped off to practically nothing. The 'new' outlet lock was eventually abandoned along with the rest of the canal below Five Mile Lock shortly after the 1913 flood.

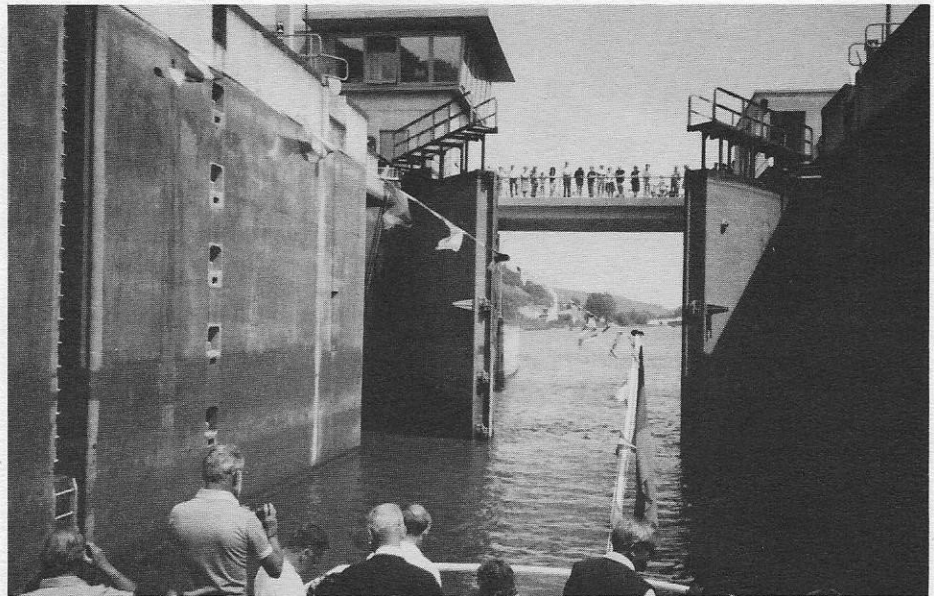
RHINE — MAIN — DANUBE UPDATE.

by Roger Squires

The reopening of the canal link between the Rhine and the Danube is one of the key waterway developments likely to come to fruition in Europe in the early 1990s. A visit to the works in May 1990 identified just how rapidly the construction work is proceeding. All of the construction work on the north of the summit level is now complete and the whole of the summit level is in water to full navigational depth. Work is underway on the Kleine-Roth-Reservoir near Eckersmuhlen on the German side of the summit and is nearing completion on the Durrloh-Reservoir at the southern end of the summit itself. The vast backpumping works at Bachhausen are in position and a small section of the navigation channel is ready below the lock.

The main construction work is now centered on the Bavarian sector of the canal, with the reach above Berching identified by surveyors poles. Excavation has started on the section around Berching itself but the lock at Berching is still situated in open fields, with only short water filled lengths above and below the lock bearing any semblance to a major waterway. Dietfurt lock is under construction and the canal section below it taking shape. The whole section from the junction with the River Altmuhl to Reidenburg is nearing completion and Reidenburg Lock is ready for boats once the water levels have been built up. Trip boats now regularly ply on the section below Reidenburg and Kelheim lock is fully operational. The main works in Kelheim are complete and the channel through the town to the junction with the Danube is used on occasions by commercial craft. All of the works on the Danube between Kelheim and Passau are also operational with commercial traffic in firm evidence.

The upgrading works on the middle River Main locks are underway and will all be completed by the end of 1991 under the published stoppage programme. Clearly the changed political climate in Eastern Europe will play a vital role in getting traffic levels above forecast when the final construction works in Bavaria are completed on

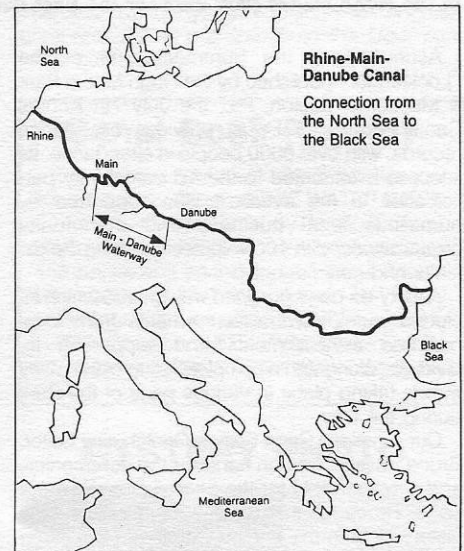


Kelheim Lock, already in operation on the Rhine-Main-Danube Canal. (Photo by Roger Squires).

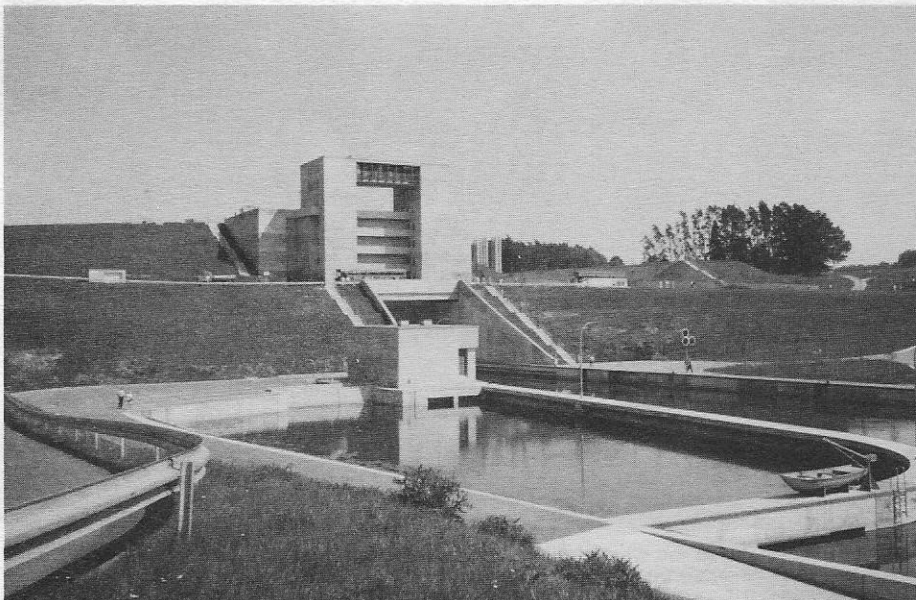
schedule in 1992. One of the key features of the works is the provision of water transfer from the Danube Basin to that of the River Main. This is primarily achieved by a major river management facility on the upper Altmuhl at Gunzenhausen which diverts water into the Rednitz, a tributary of the Main. This will not only overcome potential water shortages on the northern levels of the canal, but will improve the whole water balance in the Nurnberg area to the benefit of both German farmers and industry.

The opening of the Rhine-Main-Danube link in 1992 will create a vast potential cruising ground for commercial and pleasure craft from both the East and West. The facility for 2000 ton craft to move bulk cargos around Europe will be a key feature to the continuing success of inland waterway traffic growth. Likewise the major environmental works undertaken by the waterway constructors have done much to convince doubters of the

wider benefits of new waterway construction. Overall the multifunctional use of the facility created is perhaps its best ambassador.



Map showing how the new canal will provide deep-water navigation through central Europe.



Eckersmuhlen Shaft Lock on the Rhine-Main-Danube Canal, from the lower level. Note water reservoir in the foreground. (Photo by Roger Squires.)

The New York State Canals completed 164 consecutive years of service on November 29, 1989, concluding a season of 213 days. The number of pleasure craft raised or lowered from one level to another during the season totaled 159,141. Commercial cargo shipped on the system totaled 345,735 tons.

PLEASURE CRAFT SUMMARY	
CANAL	1989
ERIE	93,353
CHAMPLAIN	26,756
OSWEGO	24,301
CAYUGA-SENECA	14,731
TOTAL	159,141

(From "The Canawler Barge", Summer 1990)

HUGH MOORE FESTIVAL BREAKS RECORDS



The "Josiah White" has been providing canal boat rides along the restored Lehigh Canal in the Hugh Moore Park area for the past decade. (Russell photo.)

According to the Summer Issue of the "Locktender" published by the Hugh Moore Park & Museums, Easton, Pa., the July 7th Annual Canal Festival broke all previous attendance records, with over 8000 people in attendance. Its success is attributed to the full community participation in the event. It was supported by numerous local business and community organizations, with 100 volunteers staffing the exhibits and concessions.

A thirty-six page program was printed which included many paid advertisements from local business establishments and supporting individuals, along with a complete listing of the many events taking place in various parts of the Park during the Day.

Our American Canal Society Contributing Editor, Bruce Russell, was on hand for the ceremonies, and is responsible for the photos shown on this page. Bruce felt that we should include a brief history of both the Lehigh Canal and the Hugh Moore Park, which follows:

Lehigh Canal — Yesterday and Today

The Lehigh Coal and Navigation Company, which built the Lehigh Canal System, was organized on February 22, 1822, under the direction of Josiah White and Erskine Hazzard. The purpose of this company was twofold: to mine the rich anthracite coal deposits in the mountain areas near Mauch Chunk (now called Jim Thorpe), and White Haven; and to transport the coal to metropolitan areas. Between 1818 and 1829, Josiah White constructed a navigation system for downstream traffic between White Haven and Easton.

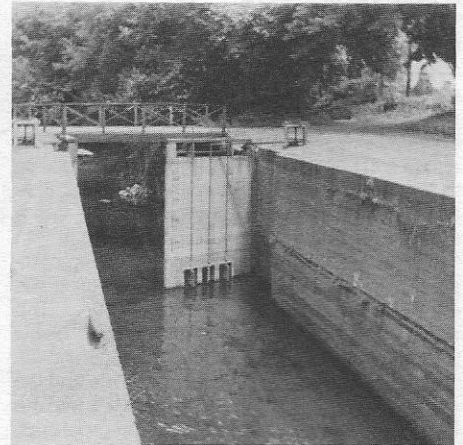
Since the company's charter committed him to ascending navigation, White began construction of a system of canals and slackwater pools for this purpose in 1827. By 1829, a two-way system was completed from Easton to Mauch Chunk, a distance of 46 $\frac{1}{4}$ miles, requiring 52 locks, and 8 dams with slackwater pools, to overcome an elevation of 353 feet. Called the Lower Division, the

closed. The restoration project included the rebuilding of the Chain Dam at the upper end of the park, so that the canal could be re-watered, and the complete rebuilding of a lift-lock, a guard lock, and an outlet lock to their original, operating condition was completed in the spring of 1978.

Canal Museum

The Canal Museum at the Forks of the Delaware contains exhibits on canals, a small gallery, bookshop and restrooms. The main displays highlight "Life on the Canals", showing how the canals operated, explaining the daily activities of the canal people. Other displays feature individual canals, especially the Lehigh, Delaware, and Morris.

The gallery also has a display showing the



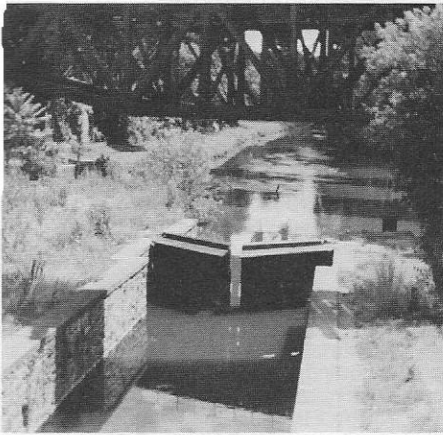
Lock on the lower end of the restored Lehigh Canal in Hugh Moore Park. (Russell photo.)



Locktender's House at the west end of Hugh Moore Park, just south of the restored Chain Dam, which feeds water into the Lehigh Canal at this point. The interior of the lockhouse has been restored to show how the Locktender and his family lived in the 1890's. The photo was made from the bridge of Guard Lock Number 8, where water enters the canal. (Russell photo.)

ERIE LOCK 12 DEDICATION

By Gerard Chapman



Inlet Lock to the Delaware Canal, one of the few historic canals in the USA which has never been dry since it was built in 1832. Adjacent to the Hugh Moore Park Canal Museum. (Russell photo)

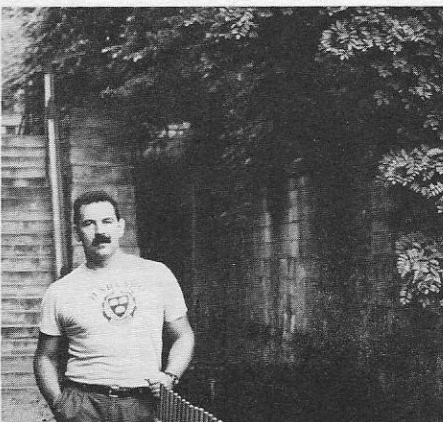
history of the Hugh Moore Park. From the picture windows at the east end of the museum, visitors can see the junction of the Lehigh and Delaware Rivers, the Easton Dam which is the last dam for the Lehigh Canal, Guard Lock #24—the beginning of the Delaware Canal and the stone arch entrance to the Morris Canal on the Jersey side.

The Canal Museum also contains the offices of the Hugh Moore Park and a research center with a sizable collection of literature, a photograph and slide library on canals in America, sponsored by the Pennsylvania Canal Society.

Canal Boat

The "Josiah White" Canal Boat was purchased from a group operating a canal ride on the D. & H. Canal in northeastern Pennsylvania shortly after the locks were made operational, and has been providing boat rides along a three-mile reach of the restored canal for a number of years, back of mules.

ON THE J.R. & K IN RICHMOND



Your Editor's son, J. William Shank, is shown here on a recent visit to Richmond, Virginia to attend an Art Conservators Convention. Someone suggested he should have his picture taken in front of one of the locks of the J.R. & K. Canal in downtown Richmond, which he did. Here is the result!

Lock No. 12 of the Erie Canal was formally named and dedicated on May 19, 1990, as the "James Shanahan Lock," honoring an engineer and superintendent of the historic waterway. The lock is at Fort Hunter, N.Y., between Amsterdam and Fonda, where Mr. Shanahan lived.

James Shanahan (1829-96) was born in Ireland and brought to America at age 8. He became a stonecutter and assisted his brother, a contractor, in building Lock 50 of the canal of that era, as well as Locks 9 and 10 of the tributary Oswego Canal. He also worked on the famous Starucca Viaduct of the Erie Railroad, in Pennsylvania. Of it, Stewart H. Holbrook says in "The Story of American Railroads" (Crown Publishers, 1947), "the Starucca Viaduct, a 1200 foot stone affair" was "one of the great engineering feats" of its time which, "In 1947, a century after it was built . . . still carries the Erie's main line and looks good for another century or two."

As a partner of his brother and others, he built the masonry on parts of the New York Central and Oswego railroads and in 1854 built locks of the St. Mary's Falls Canal — "The Soo."

In 1864 Mr. Shanahan built the first bridge over the Hudson River at Albany, and from 1868 to '70 was superintendent of Section 3 of the Erie Canal. Elected to the Assembly (the lower house of the Legislature of New York) in 1869, he served on its canal committee, and in 1878 was appointed assistant superintendent of public works, having charge of the eastern division of the State canals.

FIRST INTERNATIONAL HISTORIC CANAL CONFERENCE

The First International Conference on Historic Canals will be held September 16-19, 1990 at Chauffeys Locks on the Rideau Canal in Ontario, Canada.

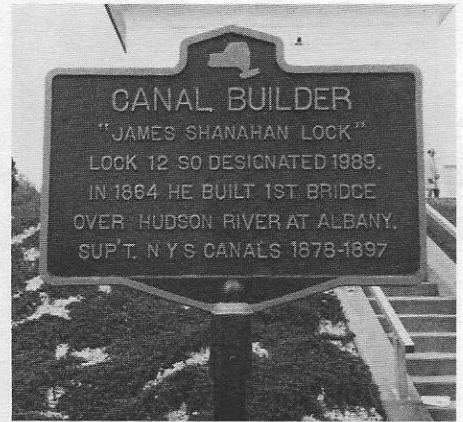
Registration for the full conference is \$80 in Canadian funds; Sept. 17 only - \$50 with box lunch; Sept. 18 only - \$30, no meals; Sept. 19 - \$20, no meals.

Monday activities include a restoration talk on the Rideau and English Canals, and a tour and cruise on the Rideau in Ottawa. Tuesday - morning lectures; afternoon cruise of the Rideau, Chaffeys to Jones Falls, Wednesday - morning lectures.

In charge of the affair is J.W.A. Bonser, Supt., Rideau Canal. Registration forms may be obtained from Friends of the Rideau, 1 Jasper Avenue, Smith Falls, Ont., Canada K7A-4B5.

Rooms are being held at the OPINICON Resort Hotel at \$79.60 single and \$68.10 double.

Our ACS Secretary and Treasurer, **Charles W. Derr**, has been asked to serve on the Lehigh Navigational Canal Heritage Commission. Charlie is also President of the Old Freemansburg Association, which sponsored "Old Market Day" in Freemansburg on June 24th. Charlie also appears frequently in the local newspapers in connection with his regular work as a Park Ranger at the Hugh Moore Park in Easton, Pa.



The new historic marker at Lock 12 of the Erie Canal. (Photo by James C. Shanahan)

Corollary to the dedication of the lock, was a dedication ceremony at Tribes Hill of Sacred Heart Church, which in 1875 had been enlarged and remodeled by Mr. Shanahan and his neighbors.

Several descendants of James Shanahan were present at the ceremonies; the brothers Thomas L. Shanahan of Calhoun, Georgia, and James C. Shanahan of Great Barrington, Mass., are grandsons; and the latter's granddaughter, Brynne Shanahan Kennedy, age 6, presented her great-great-grandfather's shillelagh to the New York Historical Society.

Canal Book Reprint

The University of Kentucky Press has just issued a new edition of *ERIE WATER WEST - A History of the Erie Canal*, by Ronald E. Shaw. First printed in 1966, the new book contains 449 pages and an index, plus a few illustrations, bound at the book's center. An "Essay on Bibliography" is included. Clothbound price — \$30; Paperback \$15. Write The University of Kentucky Press, Lexington, Kentucky 40506.

MYSTERY PHOTO



Mr. Sam Krewatch (above), of West Point, Virginia, found this 41-inch long iron cleat in an antique shop in Howardsville. Howardsville is a canal town, on the old James River and Kanawha Canal, but the cleat is stamped "P&R CANAL." There's no P&R Canal in Virginia or on the ACS canal list, so we have no idea where this came from. Perhaps it's a reject from the D&R Canal! Any better ideas?

WHEN CANAL BOATS CARRIED STEAMBOATS!



By Bruce J. Russell
Contributing Editor

One of the most fascinating exhibits at the SHELburne MUSEUM in Shelburne, Vermont near Burlington is the SS TICONDEROGA, the last vertical beam passenger and freight steamboat still intact in the United States out of a fleet which once numbered several hundred. This vessel, consisting of a wooden superstructure and steel hull, was built in 1907 for the LAKE CHAMPLAIN TRANSPORTATION COMPANY, a wholly owned subsidiary of the DELAWARE and HUDSON RAILWAY which also ran boats on nearby Lake George, N.Y. From the 1870s until the 1920s when the automobile achieved dominance people depended primarily upon railroads and steamboats to travel about the country on business as well as pleasure. In the "Lake Country" of New York state, north of Albany, trains carried vacationers to a number of small communities which contained steamboat landings and docking facilities. Here passengers along with their luggage transferred to steam powered boats to reach their final destinations which were often other portions of the lake shore or islands upon which were located ornate Victorian hotels or more modest cottages. During the summer months the steamboats' melodious whistle was a familiar sound on both Lake Champlain and Lake George.

About 1905 the D&H management decided that a newer, more luxurious vessel was required to serve the long but narrow Lake Champlain and a contract was awarded to a firm in Newburgh, N.Y. on the Hudson River to construct a steel hull for what would later be christened the SS TICONDEROGA. It was to measure 220 feet in

length and be the most palatial of the line's 3-boat fleet operating on Lake Champlain. (Its other steamers were the VERMONT III and the CHATEAUGUAY.) They would be lavishly decorated with panels made from butternut, mahogany and cherry woods, and there would be 10 staterooms for those willing to pay premium fares. In addition to a splendid dining room, the boat would be equipped with a grand staircase, gold stenciled ceiling, etched glass windows, and velvet upholstered chairs and sofas. Furthermore instead of a propeller she would utilize giant paddlewheels on each side since these facilitated maneuverability in shallow water, making it possible to reach any portion of the lake.

After the hull was fabricated in Newburgh during the summer of 1905 it was disassembled and its parts were loaded upon specially modified canal boats. These were then hauled by Hudson River tug to Waterford, N.Y. where they were handed over to mule teams for a journey through the OLD Champlain Canal to Whitehall which marks the beginning of Lake Champlain. This was the Champlain Canal built simultaneously with the Erie Canal in 1825 and which was a towpath waterway in the tradition of America's great canal age. In 1905-06 the Northern or Champlain Division of the NEW YORK STATE BARGE CANAL hadn't been constructed, and thus the only way to get water borne cargo from the Hudson River to Lake Champlain was to transport it on mule-drawn boats or barges traversing 19th century waterways. When the D&H Railway approached the canal authorities and told them what kind of cargo they planned to take through the canal there was probably little shock or amazement. Instead their attitude was likely one of "we can handle it." Hence sections of the TICONDEROGA's great hull plus disassembled paddlewheels were locked through the "Waterford Flight" of the Champlain Canal and over the course of several days slowly headed northward toward Whitehall. People living in the villages along the way must have been curious on seeing this strange cargo moving through the many locks of the old canal.

The plan for the TICONDEROGA was to build an ornate wooden superstructure upon the metal hull once it was reassembled. This work could be done by a Vermont shipyard using indigenous wood and materials.

Not only the 220 foot long hull moved north by towpath canal, but also the engines and boilers for this vessel. In Hoboken, N.J. ANDREW FLETCHER & SONS was given the contract to design and build a reciprocating steam engine to power the TICONDEROGA. When finished it was tested and then disassembled and mounted on canal boats which were towed by steam tug up the Hudson to Waterford, just north of Albany. Here mule teams were attached and the great engine began its long trek north. By the early 1900s business on the 80-year-old Champlain Canal was depressed owing to competition by railroads, so a cargo such as the hull and engine for the TICONDEROGA must have brought welcome revenue.

The hull and engine was reassembled in Shelburne, Vermont at a local shipyard and drydock company and the TICONDEROGA began its life of catering to the luxury tourist trade. Until the 1930s it operated on a regular schedule where it connected with D&H Passenger trains on the railroad's Albany to Montreal mainline at Westport, N.Y. It then traveled north to Plattsburg and St. Albans. In addition it made special moonlight cruises and carried automobiles and other freight across the lake. After 1935 it became more of an excursion vessel rather than a regularly scheduled connection for passenger trains. By the early 1950s improved highways and changing travel patterns plus aging boilers and lack of qualified personnel to handle them made future service impractical. The TICONDEROGA's sister steamboats which had also been transported to Lake Champlain by canal had been removed from service years earlier, and in 1955 the last trips out of Burlington were made. After this the magnificent boat, by then a relic of another age, was permanently laid up, its mighty engines silent forever.

Fortunately the TICONDEROGA was acquired by the Shelburne Museum, an institution founded in the 1940s by ELECTRA HAVEMEYER WEBB as a repository of what she termed "Americana". A genuine steam powered paddlewheel steamboat, representative of many which once operated on the nation's lakes and rivers, was too good a bargain to pass up. The vessel was bought and transported overland about 2 miles to its present resting place at the museum. Moving all 900 tons of her was a fantastic feat but it was accomplished over several months using rollers and winches.

The TICONDEROGA represents a living link with the steamboat as well as the canal era of our nation. Although in its twilight, the old Champlain canal with its numerous locks and mule towed barges provided a practical means of getting the hull and engines of a great lakeboat to its ultimate destination. Less than 12 years later the canal ceased operations forever, but in 1906 it still represented a viable transportation option.

REVISED BIBLIOGRAPHY

Students of the Erie Canal will be pleased to know that Lionel Wyld has revised and updated his Erie Canal Bibliography, printed originally in 1978. It is a 20-page booklet published by Darcy Associates, Ltd., P.O. Box 7171, Cumberland, Rhode Island 02864. Price \$5.00, plus \$1.50 for shipping.

THE FARMER TAKES A WIFE

Bill Hullfish is looking for a copy of the original "Farmer Takes a Wife" Video-Cassette, with Henry Fonda, **not** Betty Graybill, taking a lead part. This of course shows many scenes on the Erie Canal as part of the story. If any of our members know where such a tape may be obtained, please get in touch with Dr. William Hullfish, 98 Lynnwood Drive, Brockport, NY 14420. (Your Editor would like to know also.)