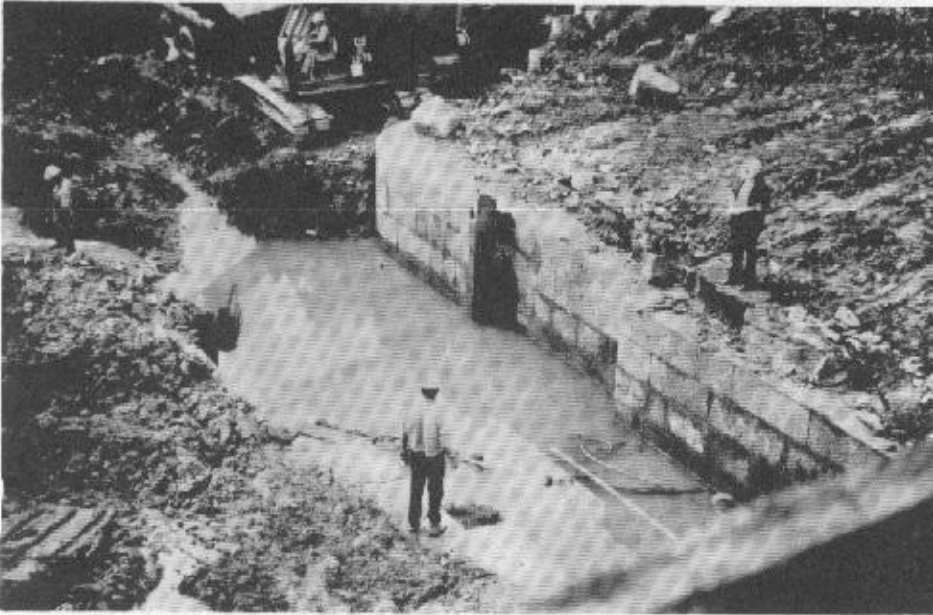


AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 10 EDITORIAL ADDRESS - P. O. BOX 638, GLEN ECHO, MD. 20768 AUGUST, 1974

J. R. & K. CANAL LOCKS #1, #2 & #3 DESTROYED!!



Dismantling of Lock #3, J. R. & K. Canal, Richmond, Virginia — a five-lock combine. (Photo by Alden Gould).

LETTER TO THE PEOPLE OF THE CITY OF RICHMOND:

(Published in the Richmond Mercury)
J. R. & K. Lock Destruction

You can now relax, though it appears that many have been right along — the City of Richmond and the citizens of the Commonwealth of Virginia and persons interested in historic preservation everywhere have lost an important part of one of the most historic structures in the United States — Locks #1, 2 and 3 of the Tidewater Connection of the James River and Kanawha Canal. It seems particularly bizarre just at the time many of us are preparing for our Bicentennial, much of which is centered around our first President, George Washington, also President of the James River and Canal Company. To those who are not particularly interested in history, the loss is felt as a destruction of one of the first and finest examples of civil engineering in the United States. The loss of those beautiful structures is now a reality manifested in ugly holes in the landscape, soon to be paved over. Thank goodness for Reynolds Aluminum of Richmond, a corporate body of great vision, for taking the initiative and saving and restoring Locks #4 and



Dismantling process at Lock #2.

#5. Quite often the situation is reversed, with such a body not heeding the need for responsible corporate bodies to be leaders in the field of restoration. Would

that the City of Richmond and its citizens had had the same vision.

The destruction of historic treasures in Richmond can now serve only one purpose — to warn complacent citizens that "It can happen here" and to encourage others to think in terms other than of commercialism and temporary gain. Usually alternatives can be found to solve major problems without being destructive. Those alternatives were there in Richmond, but the will to seek or explore them was not. Citizens of other cities of the United States, take heed!

Captain T. F. Hahn, USN (Retired)
President, American Canal Society



Dismantling of Locks #2 and #3. Note the height of the lock, dwarfing the workmen below.

JAMES RIVER & KANAWHA CANAL LOCKS

What a depressing feeling to stand at 11th & Byrd Streets, in downtown Richmond on the 10th of May 1974. I never dreamed I would witness the 100% destruction of locks #1, 2 and 3. Those locks were giving the contractors plenty of trouble in dismantling, the bulldozers were at least trying to save all cut granite blocks possible, but many were broken while attempting to dislodge each one.

I talked with several workers and others that were just interested by-standers. "A darn shame to see those locks go" was the general opinion. "But that is Politics for you!" True enough, they are gone but not forgotten.

Alden W. Gould

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

AMERICAN CANALS is issued quarterly by the American Canal Society, with headquarters at Lockhouse #6, Chesapeake and Ohio Canal, P.O. Box 638, Glen Echo, Maryland 20768. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic canals of the Americas; 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 \$4.00. Individual copies may be purchased at \$1.00.

ACS President and Editor-in-Chief — Capt. Thomas F. Hahn, USN (Ret.) P. O. Box 638, Glen Echo, Md. 20768.

ACS Vice President, Secretary and Production Editor — William H. Shank, P.E. 809 Rathton Road, York, Pa. 17403.

ACS Vice President, Treasurer, Associate Editor and Chairman, Canal Parks Committee — Dr. William E. Trout III, 1932 Cinco Robles Dr., Duarte, Cal. 91010.

Chairman, Canal Index Committee — ACS Director, Peter H. Stott, Haines Road, Mount Kisco, N. Y. 10549.

Chairman, Canal Bibliography Committee, ACS Director, Harry L. Rinker, 39 West Springettsbury Ave., York, Pa. 17403.

"CAPTAIN'S CORNER"

You are to be spared most of my usual remarks in this issue, in order to move rapidly in getting the edition out. Some of you may notice that the August issue is late in arriving, and there is a reason for it. One of those unfortunate things happened when much of the copy, including original hand-written material and some hard-to-replace items, were lost in the mail between Maine (where I did most of the editing work for AMERICAN CANALS #10 from our cabin at Lower Lead Mountain Pond) and York, Pa. home of our Production Editor, Bill Shank. I mention this not only to share our frustration and to explain the delay, but also because some material sent me on local, state and individual canal societies may not be reported in this issue. Those of you involved will know who you are — and I send my regrets. The omission is certainly not one of wanting to report your activities. I can only appeal to you to provide me with up-to-date material for the November issue (which I will begin writing in October with a tentative publishing date in early November).

I regret also (but am not apologetic) for the need to increase our membership rates. I regret the deed in that I know there are many of you living on fixed regular or retired incomes and it therefore becomes difficult to keep up with everything in that event. I am not apologetic, as the need is beyond our doing, being based on the increase in price of everything we do, but largely based on increased printing and other reproduction costs — and postage. Several of our Directors recommended a higher membership fee (most national organizations are now a minimum of \$10), but your principals (Bill Shank, Bill Trout and I) decided that we could

manage with the rates announced below. I hope that all of you will support us by remaining members and helping us to obtain new ones. Remember that all the work done in ACS is volunteer and all money received goes directly into ACS activities.

One thing I would like to mention about the Board of Director's Meeting in May is that ACS Director Frank Thomson who is also Director of the Canal Museum in Syracuse, N.Y., was appointed Chairman of an Organization Committee which will be working this year at developing by-laws for the Society, one goal of which will be to formalize our status as a non-profit educational and scientific organization. When that is accomplished, we will have the opportunity of obtaining financial benefits, which will aid in the stability of our Society. Hang in there, all you canal buffs.

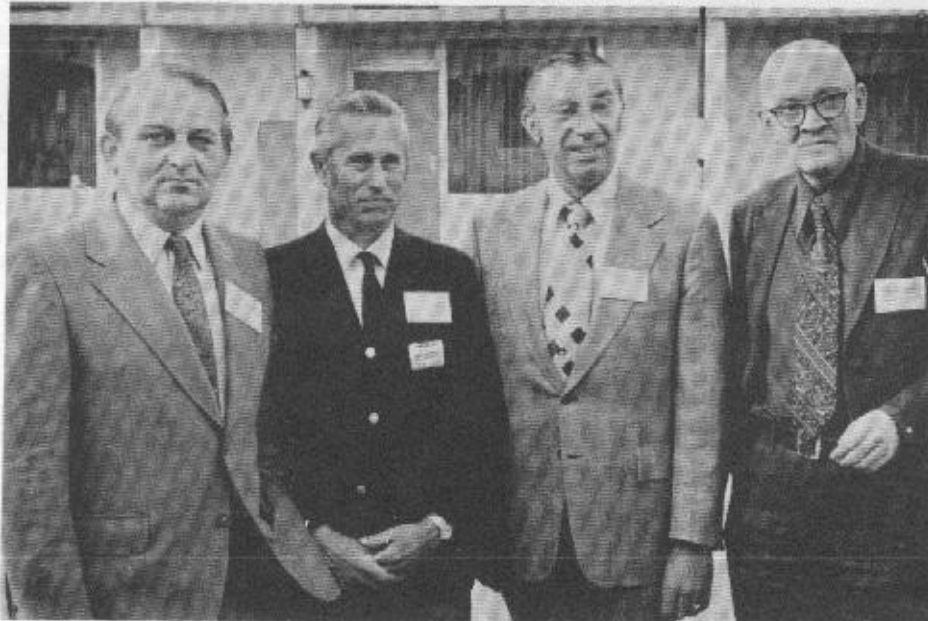
Tom Hahn

DUES CHANGES

Due to increased costs in about everything, but principally printers' costs, reproductive services and mailing costs, the following Membership Rates will be in effect for the 1975 year, effective 1 October 1974:

Regular Single Membership	\$ 6.00
(In U.S.A. and Canada)	
Regular Single Membership	\$ 8.00
(Overseas)	
Active Membership	\$ 9.00
(Includes spouse, or extra person at same address)	
Sustaining Membership	\$12.00
(Includes all members of immediate family)	
Patron	\$25.00
"Canal Boat Captain"	\$50.00

C.S.N.Y.S. and P.C.S. SPONSOR JOINT MEET



Among those present at the combined meeting of the Canal Society of New York State and the Pennsylvania Canal Society were (left to right): John Atkinson, member of the British Government's Canal Advisory Council and a Director of the American Canal Society; Captain Thomas F. Hahn, President of the American Canal Society; Saul Lazovik, Chairman of the Historic Rome Development Authority; and Richard N. Wright, Secretary and Treasurer of the Canal Society of New York State. The meeting consisted of two days of activities in Syracuse and Rome, New York, May 3-4, including a ride on the Canal Boat "Independence", tours of historical sites, followed by a dinner at the Holiday Inn.

(Photo, courtesy of Utica Observer-Dispatch)

CANAL CALENDAR

October 4 - 6 — Allegheny Portage Railroad Tour, a combined outing of the Pennsylvania Canal Society and Canal Society of Ohio. Write Ralph J. Michaels, 394 Bel-Air Drive, Johnstown, Pa. 15904.

October 12-14 — Chesapeake & Delaware boat ride & canal museum and other interesting points sponsored by Canal Society of New Jersey. Trip may be filled but contact Ed Douglas, Box 255, Rockaway, N.J. 07866 if really interested.

October 19 — Ches & Ohio History & Natural History Hike. Tidlock to Lock 5. Meet Thompson's Boat Center (intersection Rock Creek Parkway & Va. Ave., DC.) at 9:30 a.m. Bring lunch.

October 19 — Middlesex Canal, Wilmington Stretch dedication, New Route 129 overpass. 2 p.m. on site & moves to Ramada Inn, Woburn at 4:30 p.m. MCA, Box 333, Billerica, Md. 01821.

November 4 — Potowmack Company Canals talk, Tom Hahn, Washington Co. Free Library, Hagerstown, Md. 7:30 p.m.

November 15 — English trip talk by Bill McKelvey and British canal film. Canal Society of New Jersey. Macculloch Hall, Morristown, N.J., 8:00 p.m.

November 16 — Chesapeake & Ohio Geology Study Hike. Meet 9:30 a.m. at Oldtown, Md. (Lock 70). Bring lunch. Camping optional.

CANADIAN CANALS

(The second of a three-part article)

After the war of 1812, a joint commission of Upper and Lower Canada reported in favor of building a canal system with four-foot depth of water for the **St. Lawrence River** and in 1821 Government Commissioners were appointed to build the first **Lachine Canal**. This canal, which was completed in 1825, provided seven locks with a water depth of 5' at the sills. The locks were 100' long and 20' wide. Between 1843 and 1848 this waterway was enlarged, reducing the number of locks to five with 9' of water. In 1885 another enlargement was completed. These locks were 270' long and 45' wide. The two main locks and part of the reaches had a depth of 17' while the remainder were 14' deep. The Lachine Canal was 8.7 miles in length and provided a total rise in lockage at mean stage of 46, overcoming the difference in level between the Harbour of Montreal and Lake St. Louis.

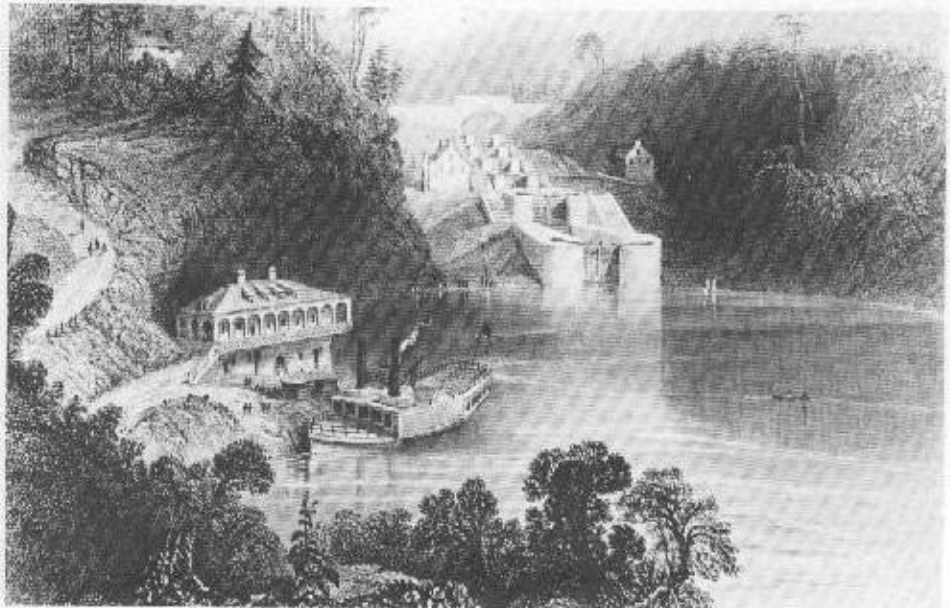
Shortly after the opening of the first Lachine Canal, the Royal Engineers then constructing the **Rideau Canal**, recommended larger and wider locks and a 9' depth of water for the St. Lawrence canals. It was not, however, until 1843 that work began on the construction of the **Cornwall Canal** and 23 years elapsed between the opening of the first Lachine Canal and the completion of the last **St. Lawrence Canal** between Montreal and Prescott. The locks of these canals had a length of 200', a minimum width of 45' and a depth of 9'.

Insofar as the **Ottawa - Rideau Canal Systems** and the **Trent Canal** were concerned, their origin stemmed from a report by the Duke of Wellington on the defense of Canada. They were designed for the transportation of armed forces and as back doors to the Great Lakes in case of another invasion from the south. The Duke of Wellington's report, dated London, March 1, 1819, recommended a series of waterways north of the Great Lakes which would give access to Lake Ontario, Lake Huron and Lake Erie.

The Ottawa - Rideau canals were constructed on this recommendation and the Trent system was largely based on the route selected in this report. The Duke of Wellington's proposals for other waterways, however, never came to fruition. He suggested a waterway from some point on the Rideau Canal to the Black River and thence into Lake Simcoe. He had plans for another waterway from Lake Simcoe to Lake Erie via the Holland River and a canal connecting it with "La Grande Riviere" (the Grand) and to be linked up with the Thames and the Chippewa. While some of the Duke of Wellington's projects were not feasible, due doubtlessly to the confused maps with which he had been provided, his report showed that he placed great reliance on waterways as means of communication and transportation.

In addition to the Lachine Canal, other main-route canals built over the years included some which were later superseded by others while in other cases the operating canals were demolished in 1958 and disappeared during the flooding of a large section of the International Rapids Section of the St. Lawrence River to form a power pool, known as Lake St. Lawrence as part of the **St. Lawrence Seaway and Power project**.

As mentioned before, the Royal Engineers built a series of 2½' canals be-



A very old steel engraving of the "Staircase Locks" on the Rideau Canal at Ottawa, Ontario, where the Rideau drops to the Ottawa River. (Photo-copy courtesy A. C. Brown and W. D. Naftel.)

tween Lake St. Louis and Lake St. Francis from 1779 to 1783. These canals were on the north side of the river and were known as the **La Fauclle, Trou-du-Moulin, Split Rock and Coteau du Lac Canals**. The first two were later replaced by **Cascades Canal**. These canals were later deepened to 3½'. In 1845 they were superseded by the **Beauharnois Canal** built on the south side of the river to provide 9' navigation. Use of this original Beauharnois Canal was discontinued in 1899 on completion of the **Soulanges Canal** on the north side of the river which provided 15' of water on the sills of the five locks. This canal in turn has been superseded by the new **Seaway Canal** between Valleyfield, Que. and Beauharnois on the south side of the river.

The **Cornwall Canal** was built to bypass the Long Sault Rapids and extended 11 miles from the settlement of Cornwall to Dickenson's Landing. Construction commenced in 1834 and was completed in 1843 providing 9' navigation. By the turn of the century, 14' navigation was provided on this canal with most of the locks enlarged. Only the down-stream part of the Cornwall Canal remains, as the upper section was cut off by the power dam of the St. Lawrence power development and the equipment and building were razed prior to the flooding of the power pool.

The **Farran Point, Rapide Plat and the Galop Canals** were all commenced in 1844, first providing 9' depth, then deepened to 10' and, by the turn of the century, to 16' of water on the mitre sills. Originally constructed as two separate canals, the Iroquois and the Galop were joined into one canal in 1856. The upper structure of these canals, with the exception of part of the Galop Canals, were destroyed prior to the flooding of Lake St. Lawrence on July 1, 1958 only a few hours after the last ship had been locked through. The name of the Iroquois Canal was perpetuated with the construction of the new Seaway Canal at the head of St. Lawrence Lake, above the village of Iroquois.

CANALS TAKEN OVER BY THE SEAWAY

When the **St. Lawrence Seaway** was completed in 1959, it took over among others the Lachine Canal which remained in operation until 1967 for the servicing of industries which have been developed along its banks. Likewise, what remained of the Cornwall Canal after completion of the power dam was used until recent years to service City of Cornwall industries located alongside.

The main asset turned over to the St. Lawrence Seaway Authority was the **Welland Ship Canal**, providing locks to Seaway dimensions and requiring minor dredging which has since been completed to deepen the canal channels. Commenced in 1913, construction of Welland Ship Canal was delayed by World War I and it was not until 1931 that it was opened to navigation. The lift of 327' is accomplished by eight locks as against 27 in the 14' canals and 40 in the original 8' canal. Dimensions of the locks are 80' wide and from 859 to 1,380' long. All have 30' depth of water at the sills. Locks 4, 5 and 6 are twin locks in flight, overcoming the steep rise known as the Niagara Escarpment, and permitting uninterrupted passage of upbound and downbound traffic.

Previous to the construction of the **First Welland Canal**, all freight had to be transported overland from Queenstown on the Niagara River to the mouth of Chippewa Creek above Niagara Falls. In 1764 a capstan incline was built on the east side of the Niagara River to the top of the escarpment from which a wagon portage about 6 miles long was used to carry bateaux and merchandise to the head of the Falls.

The First Welland Canal was built between 1824 and 1829 through the efforts of the Honourable William Hamilton Merritt as a result of his work a private company, the Welland Canal Co., was formed. The original plan was to carry the canal by

(Concluded on Page Four)

FLORIDA WATERWAYS



The Franklin Lock at Olga, Florida, largest lock on the Okeechobee Waterway — 400 feet long. View looking west.



Two pleasure boats enter the lower level of the Franklin Lock. Looking east.

WATERWAY LOCK BEGINS

The following item from a recent issue of the Fort Myers, Florida "News Press" was submitted by Alden W. Gould:

CANAL POINT — Surveying has started on a new set of locks in the Okeechobee Waterway, a \$13.4 million structure at the lake entrance of the St. Lucie Canal. Currently only eastern locks are at St. Lucie near Stuart, on the east coast. The St. Lucie Canal maintains the same water surface level as Lake Okeechobee.

Desired lake levels vary during the year, allowing for lower water during hurricane season. Normally, the lake will be allowed to increase to 15.5 feet above sea level, then will be discharged downward as hurricane season approaches.

The lake feeds water three ways: south to the Everglades and recharge areas for east coast municipalities (and to farming lands); east to the Stuart area and west into the Calooshattee farming and residential basin.

The Okeechobee Waterway connects the Atlantic and Gulf of Mexico for pleasure boating and barge traffic. Locks on the western side include Moore Haven, Fort Denard and the W. P. Franklin lock and dam at Olga in Lee County.

Canadian Canals

(Concluded from Page Three)

tunnel through the ridge between Port Robinson and Allanburgh and to descend the slope by means of a railway and thence by canal to Lake Ontario. The original plans were changed several times and, when completed, the route of the First Welland Canal was an all-water route, using the valley of Twelve-Mile Creek and the Welland, Chippewa and Niagara Rivers. There were 40 locks with 8' depths on sills. The 27 mile long feeder canal from the Grand River had a depth of 5'. By 1833, the canal was extended from Port Robinson to Port Colborne.

Full ownership and control of this original canal was assumed by the Government of Upper Canada in 1841 and work commenced the following year on building the **Second Welland Canal**. This involved deepening the canal to 9' depth, the re-building of locks in stone, converting the feeder into a navigable canal and building a branch to Port Maitland with an entrance lock at that point. By 1845 this project was completed, reducing the number of locks to 27 increasing the depth at the sills to 9'. In 1853, the depth of this canal was increased to 10' by raising banks and lock walls as well as dredging.

The **Third Welland Canal** made use of many of the existing facilities. By 1883 the summit level was lowered to permit most of the water supply for the canal to be obtained directly from Lake Erie and the depth of the canal was increased to 12'. Four years later 14' depth was made available to shipping. The Third Welland Canal had its northern terminus at Port Dalhousie, from where the route extended in a southeasterly direction, climbing the escarpment at Thorold, and then generally following the route of the Second Canal to Port Colborne.

During the winter of 1959-60 after one season of operation under Seaway conditions, work was undertaken on the Welland Canal to provide additional tie-up walls to facilitate the smoother operation of traffic. This has proven adequate in controlling traffic during congested periods.

Another canal taken over by the St. Lawrence Seaway Authority from the Department of Transport was the Sault Ste. Marie Canal which overcomes the rapids of the St. Mary River. Built in 1887-1895 almost 73 years after the original locks had been destroyed in the War of 1812, the canal has a total rise of 19' and its one lock has a depth of 18.25' of water over the sills. The lock is 900' by 60' and is mainly used by smaller ships or by larger ones when travelling light to the head of the lakes to re-load with grain.

Across the International Boundary at Sault Ste. Marie, Michigan, there are four United States locks, the newest of which, named the "Poe Lock" has a length of 1200' and a width of 110'. The four United States locks and the Canadian lock handle a very greater volume of shipping more than other canal systems in the world.

(Provided by the Canadian Division of Transport)

(profile) and much interesting information, especially of the organization and mode of operating. Write: MCA, P.O. Box 333, Billerica, Massachusetts 01821.

Middlesex Canal Restoration

The Middlesex Canal Association is completing plans for a program on October 19, 1974 to commemorate the reconstruction of a part of the Middlesex Canal. Relocation of Route 129 in Wilmington, Mass. 20 miles north of Boston — required a railroad overpass, and would have covered the original Middlesex Canal with roadway fill. At the request of Professor Douglas Adams, President, and Colonel W. M. Hoxie, Vice President, the Massachusetts Department of Public Works agreed to incorporate in the new project a stone masonry arch above the Canal wide enough to allow a towpath for use if the future Canal Park can be developed. They also planned to restore to its original condition the waterway and its towpath for 1200 feet westerly from the new bridge.

Work has been carried on by the State despite the inclement weather and fuel shortages, and the contractor is scheduled for completion this fall. To show its appreciation for this significant historical achievement, the Association is conducting this ceremony to show its appreciation for the work undertaken on its behalf by the State Department of Public Works engineers. Plans include towing the first Canal Boat on waters of the Middlesex Canal in over a century after the ribbon-cutting ceremony. Meeting at the site will start at 2:00 P.M. A reception for officials followed by a dinner and evening program will be held at the Ramada Inn on Middlesex Park, North Woburn, starting at 5:00 P.M. All Canallers are invited to this historic event. Reservations will be necessary for the Dinner. Write Middlesex Canal Association, Box 333, Billerica, Massachusetts 01821. (Dues of \$4.00 includes a subscription to TOWPATH TOPICS.)

FREE (for SASE) GUIDE to the Middlesex Canal, being a yard-by-yard walk or drive along the old canal route starting in Boston and ending in Lowell at the Merimac River (27 miles).

FREE (for SASE) Middlesex Canal Brochure with engineering plan of the canal

THE INDIANA CENTRAL CANAL

For anyone who didn't twig to it, the Rosewater Inter-State Ship Canal, described in *American Canals* #7 is a figment of ACS Patron Kurt Vonnegut's fertile imagination, and is a parody of the ill-fated Central Canal which bisects Indianapolis. Although not quite as fantastic as the Rosewater, it includes both excellent material for an urban canal park, and some 70 rare miles of unfinished canal works, abandoned in the midst of construction. Professor Paul Fatout, in *Indiana Canals*, called that last day in the late summer of 1839. "Quitting time: the shovel left thrust into the bank of an unfinished ditch, the wheelbarrow on the plank, half-hewn timber lying helter-skelter, rock and earth piled in fields, fences torn down, the terrain cluttered with the raw confusion of construction jobs, as if tomorrow were another workday." Hopefully this brief note will interest someone in making or revealing a careful reconnaissance of the Central Canal to discover what remains today of the canal workings, and what this can tell us of the process of canal construction during the canal mania.

The Central Canal was part of Indiana's "Mammoth Internal Improvement Bill" of 1836, and was intended to satisfy the central part of the state, linking with the Wabash and Erie Canal at both ends. From Peru at its northern end, there was to be a summit level canal through Marion, Summitville, and Alexandria to Anderson, and from there it was to follow the North Fork of the White River down through Noblesville, Indianapolis and Martinsville, to join the Wabash and Erie extension or "cross-cut" at Worthington. There was also to be a branch from Anderson up to Muncie.

Unfortunately for the canal, however, the state went bankrupt in 1839, as a direct result of its too-Mammoth Internal Improvement program and although the Wabash and Erie Canal was completed, more or less, the Central Canal was abandoned unfinished, leaving scattered bits of canal in progress for 80 miles from Anderson to Martinsville.

The local joke was that the Central Canal was in good condition, "as far as it went". Most of the 80 miles was at least 1/4 complete but the only stretch ever finished and watered was the 11 miles from Broad Ripple Dam down through the center of Indianapolis, of which 8 miles still flows and carries 2/3 of the city's



A completed stretch of the Central Canal, from Wicker Road near Glens Valley (Photo by Iro Gawo, 1962).



Watered section of the Indiana Central Canal, through Indianapolis at 38th Street, west of Michigan Road, 1962.

water supply. In 1971, on the centennial anniversary of this function, the Indiana Central Canal was declared an American Water Landmark, with a plaque overlooking the canal at the Indianapolis Museum of Art, by the American Water Works Association.

The Indianapolis Water Company, which has owned the canal since 1881, has offered part of the canal to the city for use as a park. Much of it has a fine towpath which has been used by cyclists since the turn of the century, and there are scenic stretches not surpassed anywhere. Other parts are not as accessible as they should be, where open space is at a premium. I am not sure if the Broad Ripple Dam abutment is original; the aqueduct over Fall Creek certainly is not, having been washed away and rebuilt 4 times since 1839, the latest in 1904, but still with three arches as in the original. At its lower end, near the State Office Building, the canal turns underground to the river, where mills once used it for water power. At one time the canal continued about 3 miles further south through the city, largely along Mission Street, to debouche into Pleasant Run, over which an aqueduct was planned. There was a stone lock at Market Street, uncovered briefly in 1958 while adjusting the canal to landscape the State Office Building. This was a wise use of the canal by the architects, but it is unfortunate, if the reported lock was really that and not a spillway or less dramatic structure, that it was not also retained and used to spice the downtown area. There were several arms of the canal in the center of the city, including a loop around two city blocks, and two boat basins, and there were two wooden locks further south at Kansas Street. But these signs have long since vanished. The canal through the city did have some use in its day, for in addition to furnishing water-power it was navigated by boats carrying wood, and was used for swimming, ice-skating, Sunday excursions, baptisms, and other water activities.

When work stopped on the Indiana Central in 1839, the 11-mile section through Indianapolis was the only part completed, with water. But usually ignored are the

other 70 miles of partially finished canal between Alexandria and Martinsville, which desperately need exploration and interpretation. According to an 1840 report, on the 10 miles from Alexandria to Anderson, the work was 1/2 done; below Anderson for 8 miles, 1/3 done; from there to Noblesville, 15 miles, 1/4 done; from there to Broad Ripple, 13 miles, nothing done; from there through Indianapolis, 9 miles, complete, with water; from there to Waverley, 16 miles, complete except for locks; and from there to 4 miles above Martinsville, 11 miles, 1/3 done. Except for part of the works at Anderson, revived in 1868 as a private project (the banks caved in and it was a failure), this was the extent of work on the Indiana Central Canal. A section of the canal below Indianapolis was so level that it was used as a race course. The canal dam at Waverley is said to have been used to supply water to a section of canal through that town, and used for water power. Otherwise the canal workings have been undisturbed since 1839 except by urban sprawl, gravel pits, farming and flooding..

I have looked at all of the route below Indianapolis, but above, only between Alexandria and Anderson. Below Alexandria there is in fact a ditch some 4 miles long, paralleling Route 9 on the east, which is called "old canal" on the topographic map. There was apparently to be an aqueduct over Little Killibuck Creek, because there is a good stretch of canal bed for about a mile along the opposite (east) escarpment of the creek, crossed by "Road 400 North" near College Corner School. Few other signs were found down to Anderson.

Below Indianapolis there are signs here and there of canal construction all the way to Martinsville, lying between White River and Route 37, which roughly paralleled each other. Nothing was found in the city itself, below the present end of the canal, but elsewhere there several excellent stretches practically unchanged since 1839. One of these is north of Thompson Road, west of the Illinois Central tracks. Perhaps the

(Concluded on Page Six)

BARGE CANAL 1915



The State Tug "Schenectady" waiting at Waterford, N.Y. to take the "top brass" through the Waterford locks during the formal opening of the Erie Barge Canal May 15, 1915. For other photos of this event see Issue Number 4 of "American Canals", page 8.

CANAL SYMPOSIUM

Syracuse Herald American

"Canals as Living History," a Canal Symposium, jointly sponsored by the Canal Museum and the American Canal Society in April and held at the Canal Museum at Syracuse, N. Y. featured experts who came from all over the country to discuss means of preserving and interpreting the nation's considerable canal history.

What's the use of preserving an old canal? According to Thomas Hahn, president of the American Canal Society the reason is twofold:

"In this state," he said, "you have a canal that is horizontal and vertical. Horizontally, it cuts across the physical space of the state. Vertically, it cuts across time, so to speak."

"When you study a canal vertically," he explained, "you study a large area of a large segment of the population. You study the way people lived, talked and were."

According to John Lamb, from the Illinois-Michigan Canal in Lockport, Ill. "Canals are the only historical sites that lend themselves to more avid recreational ideas," he said. "Things like biking, hiking and canoeing are still possible along canals. They lend themselves to modern day usage."

Another extension of the "modern day usage" possible around canals was offered by Gale Hartel, one of the men responsible for the running of the Canal Fulton in Ohio.

The canal there (Ohio & Erie) he said, was turned over to the historical society to own and operate. "We re-constructed a canal boat," he said, "and since July 1970, we've carried about 85,000 passengers on a two-and-one-half mile round trip."

According to Hahn, these kinds of "pragmatic implications" will be important in determining the future of canals. "The main problem we have with canals," he said, "is that they have been ravaged by flood and by man. They have been allowed to deteriorate without maintenance."

"But it's important to know what we have," he continued. "Before people think about destroying a canal to put something else in its place, we'd like them to think about it, and to assess their actions. Canals are one of those things that if we lost, we may never re-capture."

(Canal Symposium II, sponsored jointly by the Canal Museum and the American Canal Society, is tentatively scheduled for April 1975).

Canal Boats In The Stone Fleet

by L. W. Richardson

The American canal system has been given little notice by Civil War historians. The contribution of the inland waterways to the over-burdened transportation network and the almost complete destruction of those canals within the theatre of war are but footnotes to the accounts of military campaigns. It is then, not surprising, that the canal boats that went to war as units of one of the Stone Fleets are rarely, if ever, mentioned.

The first two Stone Fleets have received a measure of attention but there were, in fact, three such attempts to use vessels loaded with stone and sunk in ship channels, as tools to implement blockades of Confederate ports. The idea, one not generally popular with the regular Navy because it could be a two-edged sword, was promoted by Gustavus V. Fox, Assistant Secretary of the Navy. In 1861, the first fleet, 22 schooners, stripped of all but the most essential gear, was sent to Savannah and Charleston to be sunk in the channels leading to these ports. Because of losses enroute and diversion to other uses, only three were actually used for the intended purpose. Nothing daunted, Fox soon caused the purchase of a second fleet of 45 vessels (40 were super-annuated whalers) loaded them with miles of New England stone fences and sent them south. Most of this fleet was sunk off Charleston and other Carolina ports. However, the action raised a storm of protest from European countries seeking to trade with the south and did little to hamper the blockade runners. The Navy lost all interest and the program was forgotten.

The third Stone Fleet was a child of the Army, more correctly, of an Army General. In May, 1864, a large Union force commanded by Major General Benjamin Butler, sailed up the James and landed below Richmond. Butler was supposed to move on the city from the south while Grant attacked from the north. In a series of inept moves, Butler became hopelessly bogged down at Bermuda Hundred. As Grant expressed it, "he was in a bottle strongly corked." Butler was in no danger of attack but considered himself vulnerable in the event the Confederate Navy came up the James. He demanded that the river be blocked at Trent's Reach, just below the Union lines.

Understandably, the Federal Naval forces took a dim view of this, but on orders from Washington, Commodore C. K. Stribling, assisted by an agent named Bishop, hurriedly bought and loaded 12 canal boats in Philadelphia. The boats were on the way south, via the Chesapeake & Delaware Canal, Baltimore and the Bay, before the bills of sale were signed. Five arrived at Trent's Reach, 20 July, and were sunk in place. Eventually, three more of the canal boats and various other small craft were also resting on the bed of the river. As this blockade was never tested by the enemy, it may or may not have been effective.

The boats obtained in Philadelphia were: BUENA VISTA, COMMODORE STOCKTON, FORT JOHN McHALE, PILGRIM, ROLLING WAVE, JOHN MITCHELL, MARGARET & REBECCA, MARY ANN, MARY LINDA, MUSADORA and RICHARD VAUX. Unfortunately, the owners names and the ports of registry are details still buried in War

Department files. The boats were rated at 112 to 126 tons and each was loaded with 60 tons of stone. Their cost averaged a little less than \$1,200 each. In all records pertaining to the purchase, they are termed "canal boats." Once on the way and under Navy command, they became "coal barges." No doubt a reflection of the salt water sailor's disdain for all fresh-water navigation!

In spite of the possible success of the third and last Stone Fleet, the whole was summed up quite succinctly by Herman Melville in "The Stone Fleet. An Old Sailor's Lament."

"A failure, and complete
Was your Old Stone Fleet."

C & O CANAL BOAT PROJECT

C & O Canal, Cumberland, Maryland has planned the first step in the construction of its Canal Boat to be floated on the C & O Canal. It will be a replica of the boats used on the C & O Canal between 1850 - 1924. Fabrication of the component parts of the boat began this Spring at the Allegheny County Vocational-Technical Center. It is hoped the assembly of the pre-fabricated sections can be done in mid-June in the canal water. Those desiring to purchase souvenir stock certificates can contact Mr. Mark Lazarus, C & O Canal, Cumberland, Maryland 21502.

Indiana Central Canal

(Concluded from Page Five)

most dramatic section is crossed by Wicker Road, near the town of Glens Valley. Many stretches, however, are best seen on aerial photos. The signs stop about 5 miles above Martinsville, just as mentioned in the 1840 report. No definite signs of locks, culverts or aqueducts were found although there surely should be timbers preserved underground.

What should be done with the Central Canal? The Indianapolis section should surely be taken full advantage of as a valuable urban canal park. The rest of the works should be carefully explored and mapped, in conjunction with the canal records, to find out what they tell us and demonstrate of canal construction during the height of the canal era. Are the signs of canal bed in bits and pieces, like a dashed line, because of the system of contracting in sections? The remains seem to demonstrate, in miniature, Indiana's system of "Simultaneous concentrated scatteration" described in an article ("Indiana canals") in the Indianapolis *Sentinel*, where the idea was "instead of selecting one or two works, to dig a hole, here and there, in every one of them, and to concentrate all the energies of the State upon the several holes, until they were all dug!" There were many holes on the Central Canal, but unfortunately only a few were ever finished. I would be glad to discuss these holes — and any other unfinished ones elsewhere — with anyone interested in pursuing the subject.

(With acknowledgements to the Indianapolis Water Company, the American Water Works Association, Professor Paul Fatout, and to Iro Gawo, Mansour Zarafshan, Gontran Philippe and Abdullahi Sarki who took a trip up the canal with me in 1962.)

Submitted by Bill Trout

Robert Louis Stevenson Canal Trip

I have just discovered Robert Louis Stevenson's "An Inland Voyage". This is probably old stuff to old canal enthusiasts, but it was a delightful find for me. As a book, it might not have survived, had not Stevenson later become a famous author.

It describes a trip taken by Stevenson and a friend in two canoes from Antwerp to the outskirts of Paris in the fall of 1876. It is a trip that could be repeated today. The canoes were equipped with sails, so it was partly paddling and partly sailing, and they carried the canoes around the locks. Also, they were exposed to the weather, which was rather wet, and spent their nights in local inns which gave them considerable contact with the people, which became the source of many observations on the course of human nature.

They went up the Scheldt and Rupel Rivers, took the Willebroek Canal to the Sambre River, went up it to the Sambre & Oise Canal, and then went down the Oise River to its junction with the Seine near Paris.

I quote a paragraph: "The canal was busy enough. Every now and then we met or overtook a long string of boats, with great green tillers, high sterns with a window on either side of the rudder, and perhaps a jug or flower-pot in one of the windows; and a dinghy following behind; a woman busied about the day's dinner, and a handful of children. These barges were all tied one behind the other with towropes, to the number of twenty-five or thirty; and the line was headed and kept in motion by a steamer of strange construction. It had neither paddle-wheel nor screw, but by some gear not rightly comprehensible to the unmechanical mind, it fetched up over its bow a small bright chain which lay along the bottom of the canal, and laying it out again over the stern, dragged itself forward, link by link, with its whole retinue of loaded scows. Until one had found out the key to the enigma, there was something solemn and uncomfortable in the progress of one of these trains, as it moved gently along the water with nothing to mark its advance but an eddy alongside dying away into the wake."

Why this peculiar method of propulsion? Maybe the secret is in the last clause, a paddle-wheel or screw would have caused a lot of turbulence, which was avoided by the use of the continuous chain. I never heard of that being used in our canals. Also in heavily locked sections, such long trains must have spent an unconscionable amount of time waiting to get locked through.

Carrol I. Tod, ACS,
Arlington, Va.

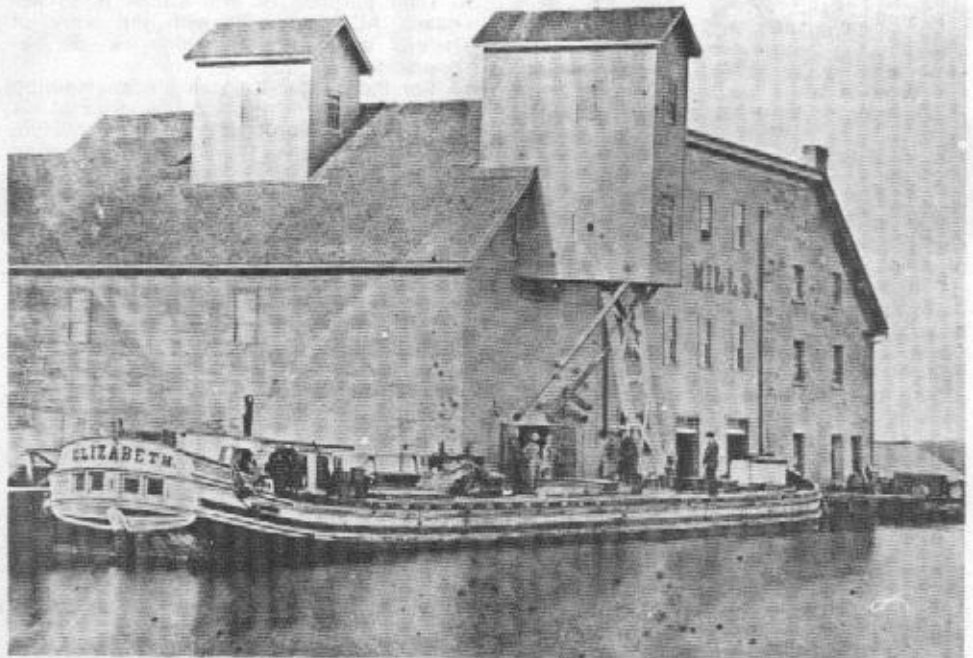
D & H CANAL SOCIETY

On 14 March 1974 the Delaware & Hudson Canal was given Ulster County Historic site designation. Until now only historic homes and buildings have been selected so this was quite a breakthrough for the canal. Much of the work on research and documentation was done by the D & H Canal Historical Society.

Membership for Individual dues are \$5.00 and Family memberships are \$7.50. Mail to 300 N. Ohioville Road, New Paltz, New York, 12561. (Grace Elliott)

AMERICAN CANALS — August, 1974

ILLINOIS & MICHIGAN CANAL IN THE 1800's



The Canal Boat "Elizabeth" on the Illinois and Michigan Canal, preparing to unload at the Old Norton Mill, 10th and Commerce Streets in Lockport, Illinois, circa 1885. (Photo contributed by Bruce T. Anderson).

Dismal Swamp & Canal

The Dismal Swamp Canal is perhaps the oldest operating canal in the United States, and therefore of concern to canal preservationists. When we consider the Dismal Swamp Canal, we also consider its source of nourishment, the Dismal Swamp—one of our great wilderness areas.

One of the steadiest protectors of this area has been the Dismal Swamp Preservation Committee of the Wilderness Society, whose major objectives are: That the heartland of the region lying west of the Dismal Swamp Canal, east of the Suffolk Escarpment, south of U. S. 460 and north of an old railroad grade running west from Elizabeth City through Parkville and Nicanor, N. C., containing some 200,000 acres, be established as a Wilderness Area and preserved as a National Wildlife Refuge for Native Species. Man would not be excluded from the area, but treated as the intruder rather than its inhabitant, and; that the Dismal Swamp Canal, the oldest 'public highway' of its kind still in operation, be preserved as a working model of a means of transportation now all but extinct.

As the Great Dismal is a raised terrain, it is subject to fast and easy drainage. It is obvious, then, that radical drainage of the Dismal or a change in its water element from fresh to salt, would eventually kill living creatures in the swamp and greatly affect the Dismal Swamp Canal. Attorneys reviewed certain statute laws whose text was devised to protect the region from excessive and dangerous drainage and reported the laws as valid. These factors were presented to the Corps of Engineers which recognized the laws as valid and stated they were empowered to enforce them, but has steadfastly refused to do so.

On 22 Feb. 1973, the Union Camp Corporation transferred its Dismal Swamp lands,

through the Nature Conservancy, to the Department of the Interior, thus bringing into being the first segment of the National Dismal Swamp Wildlife Refuge. An array of federal agencies is now conducting various studies in the Dismal Swamp. We are awaiting with great expectation the completion of the study and the recommendation the Department of the Interior will make to the Congress. (Provided by ACS Member Alvah Duke, Chairman, Dismal Swamp Preservation Committee of the Wilderness Society.)

CANAL ORGANIZATIONS INVENTORY

The following canal organizations have been sent an ACS Canal Organizations Form to be filled out so that ACS will be in a better position to contact and advertise canal-related organizations and museums. This information will also go into the American Canal Guide. Organizations not on the following list are urged to contact Bill Trout, 1932 Cinco Robles Dr., Duarte, CA 91010, for one of these forms so you will be made known to the canal world. Don't be left out!

Canal Fulton Heritage Society
Canal Museum, Syracuse
Canal Society of New Jersey
Canal Society of New York State
Canal Society of Ohio
Citizens Canal Restoration Committee
(Lehigh Canal)
Chesapeake & Ohio Canal Association
Cumberland & Oxford Canal Society
D & H Canal Historical Society
Farmington Canal Corridor Association
Georges River Canal Association
Illinois & Michigan Canal Museum
I R & K Canal Parks Inc.
Middlesex Canal Association
Pennsylvania Canal Society

KANSAS CANAL IN LONG FORGOTTEN PAST

Canal enthusiasts and historians have a continuing battle over which was the first canal in the United States. Imagine our surprise when we looked up 'Canal' in the index of the Kansas State Historical Society (we always do this no matter how remote the chance that we will find anything) and found an article entitled "A Kansas Canal in the Long Forgotten Past," carried in the Meade (Kansas) Globe News on 10 January 1924, part of which is quoted:

"Digging away with gouges and paddles, probably made with buffalo bones, pre-historic men, who lived in Meade and Clark Counties, skillfully constructed great artificial embankments which diverted the waters of Four Mile Creek through an ancient canal. Such is the conclusion of a field party representing the Arkansas Valley Archaeological Survey, headed by Warren K. Moorehead, director of the Andover, Mass., Museum of American Archeology . . .

"The builders of these ancient artificial waterways evidently possessed engineering skill of no mean order, as some of their cuts, fills and meanders on sloping ground abundantly prove . . . When running along the face of a declivity at right angles to the slope they invariably piled the excavated dirt on the lower side. When one looks at such a piece of work and reflects that not only was it accomplished without the aid of teams of plows or scrapers, but also that the archaic shovel and wheelbarrow were lacking, he is bound to admit the magnitude of the task. The actual work of excavating seems to have been done by means of gouges and paddles made of buffalo bones, while the earth doubtless was transported by means of wicker baskets or in sacks made of rawhide. The ruins antedated the coming of the Spaniards by hundreds of years, possibly a thousand or more. (Emphasis added, but can anyone blame us?)

"These canal builders probably lived in low, one story pueblos . . . One of the channels inspected was about twenty-five feet wide on the bottom and five feet deep. The excavated earth was carried well back from the banks so that there were no ridges. Lighter color of the soil for several rods back from the canal offers abundant proof of its artificial transportation."

We find it very exciting that a remote canal in Kansas might have antedated by hundreds of years the canals of the eastern portion of the U. S. which have heretofore occupied our interest and speculation as to relative antiquity. A study of the ancient artificial waterways of the U. S. and Western Hemisphere to determine precisely whether any or which were used for transportation would be extremely interesting and useful. Any takers?

Tom Hahn
Industrial Archeologist

CHINESE CANAL LITERATURE

Red Flag Canal postcards, set of 8, cat. No. PO16 (English), 50¢.

Poster, "A Tunnel Through the Clouds—Workers constructing the Red Flag Canal, painting by the Kucin Amateur Art Group," cat. No. P31, 50¢.

Poster, "Harnessing the Yellow River. Chinese workers utilize the spirit of 'the foolish old man who moved mountains' in removing hazards from the upper reaches of the Yellow River," Cat. No. P49, 50¢. All posters about 20 x 15".

Historic American Engineering Record

(The purpose of this article is to acquaint ACS members with the work of federal agencies with which we are cooperating)

For thousands of years the engineering works of man have been one index of his rise to civilization. But it was not until the beginning of the 19thC that engineering began to profoundly shape American civilization; the United States began to change from an essentially agrarian to a highly industrialized society. Great construction feats were accomplished as industry grew rapidly, as transportation was revolutionized and as public works were completed to meet the needs of a growing population. The Historical American Engineering Record (HAER) was established in 1969 under the National Park Service to preserve examples of these contributions to the development of the country. HAER is closely related to the Historic American Building Survey (HABS), which was organized in 1933 to catalog and preserve historic works of architecture.

Besides large-scale surveys, HAER records individual structures and systems of particular merit. Priority is given to engineering monuments threatened by demolition, for documentation by the National Park Service can often lend weight to the cause of preserving them. The actual recording is accomplished primarily during the summer when university student architects and engineers and faculty supervisors are available to measure and prepare architectural and engineering drawings.

In general, to qualify as being of recordable merit, structures must be or must have been one or more of the following:

- Associated with significant events or personages in the cultural, political, or social history of an area.
- Instrumental, either individually or as part of a system, in achieving the settlement and economic stability of an area.
- Built using unique methodologies or materials.
- Significant in the history of a particular branch of engineering.
- Designed or built by famous engineers, architects, or master builders.
- Typical of an engineering structure commonly used throughout an area for a specific purpose.
- Sole remaining example of a type.

HAER archives are deposited in the Division of Prints and Photographs of the Library of Congress. The collection includes precise measured architectural and engineering drawings, professional photographs, historical and technical written data, photogrammetric plates and old drawings, photographs and maps.

The American Canal Society is working with HAER in the indexing of the canals and the canal structures of the United States and has frequent correspondence and conversations with members of HAER. Members of the ACS Canal Index Committee indexing canals and canal structures are also asked to complete the HAER index card for the canal or structure at the same time they complete the ACS forms.

Poster, "Splitting the Peaks. Working above the clouds to build the Red Flag Canal, with an eagle hovering," Cat. No. P40, 50¢.

From China Books and Periodicals, 125 5th Ave., New York, NY 10003.

Minimum order \$2.00; orders under \$5 add 35¢ postage & handling.

CLASSIFIED ADVERTISEMENTS

RECENT AMERICAN CANAL AND TRANSPORTATION ADDITIONS:

THE ORIGINAL ERIE CANAL AT FORT HUNTER - CANAL-TOWN—Describes original 1822, enlarged 1841 and modern State Barge Canal setting. Over 20 photos, illustrations, maps. 19pp. Paper 50¢.

A DESCRIPTION OF THE CANALS AND RAILROADS OF THE UNITED STATES—By Henry S. Tanner. This out-of-print book (1840) now available as a beautiful reproduction. Hardcover, illustrated, maps, 272 pp. \$12.50.

REPORT OF THE SECRETARY OF THE TREASURY, ON THE SUBJECT OF PUBLIC ROADS AND CANALS: (1802)—By Albert Gallatin. This classic now back in print. Hardcover, 123 pp. \$8.50.

WATERWAYS WORLD. British canal pictorial magazine with worldwide coverage. (AC & TC is North American Agent for this publication.) A great buy and guaranteed to interest all canal enthusiasts. 55 pp. \$1.00.

April issue features "Stars and Stripes Cruise" (England) by Tom Hahn.

May: Huddersfield Narrow Canal Saga; Canal Trail-boating; Hotel Boat Cruising; The Scottish Union.

June: Boat Lifts in Britain; Steam-powered Boating; All Quiet on the Ashby; Through Stanedge Tunnel.

July: Britain's Last Canal Packet Boats; Opening the Ashton; The Montgomery Canal; Continental Cruising Services; The Yorkshire Ouse; UK Inland Tanker Traffic.

August: Opening of the Upper Avon Navigation; Black Country Boating; Portrait of the Trent; Canal Cowboys.

THE TECHNIQUES OF INDUSTRIAL ARCHAEOLOGY—By J. P. M. Pannell. Of interest to canal industrial archaeologists and researchers, with chapters on: Written, Printed and Verbal Sources; Maps Plans and Pictures; Surveying; Measuring Machines and Structures; Keeping a Record; The Scope of Industrial Archaeology; etc. Bibliography, Index. Hardcover, 200 pp. \$9.95.

THE INLAND WATERWAYS GUIDE (1973)—Continues to be standard to all navigable canals, rivers and broads of the U.K. Paper, 192 pp. \$2.00.

HISTORIC MAPS OF THE MID-1800's Increased printing and mailing costs force us to increase our price on these beautifully detailed canal and railroad maps from \$2.45 to \$2.95 after November 1, 1974. Please consult our catalog and place your order before the rate increase.

CANALS OF MID-AMERICA—by Leslie C. Swanson. A well-illustrated 42 page paperback, covering history of canals in Ohio, Indiana, Illinois, Iowa, Wisconsin and other states in the mid-west. \$1.75.

In PA add 6% sales tax. 10 page catalog of world-wide canal publications available upon request. Checks payable to Amer. Canal & Trans. Center, 809 Rathton Rd., York, PA 17403.

WABASH AND ERIE CANAL—Hosier Native (Logansport) wishes to establish contact with Wabash and Erie scholars or canal enthusiasts resident in the Wabash Valley. Write: Dennis K. McDaniel, Curator of Museums, Capitol 412 N. Madison, Wisconsin 53702.