

AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 15

Editorial Address — Box 842, Shepherdstown, W. Va. 25443

NOVEMBER, 1975

ACS OFFICERS TRAVEL ENGLISH CANALS



The Shanks and the Hahns on the Thames River near its head of navigation. Gale force winds had pinned us to this curve the day before. (Clague photo.)

Once again the American Canal Society was represented in England, this time with the visit of ACS attorney Bill Clague; Vice President Secretary Bill (and Ruth) Shank; and President Tom (and Nat) Hahn. For the Shanks and Hahns it was a business trip as well.

The waterway portion of our trip started at Little

Venice in London on the *Regents Canal* and took us on the *Thames River* from London to the head of its navigation at Lechlade and back to Oxford, up the *Southern Oxford Canal*, down the *Grand Union Canal*, back up the Thames to Shepperton, and up the *Wey Navigation* to Guildford, a total of 4 tunnels, 217 locks and 363 miles. Bill

Clague left the boat at Oxford and the Shanks left us at Banbury. Visiting on the boat for varying lengths of time were the Dennis Hurchings of the Kennet & Avon Canal Trust, Bob Shopland (Editor of *Waterways News*), John Atkinson (ACS Director for the United Kingdom) and the Brian Hutchings (English friends who formerly lived in Washington).

Our boat this time was the *Phobos*, owned by ACS Member Tom and Mrs. Sewell. *Phobos* is a 72-foot narrow boat, built by the well-known firm of Harland and Wolff in their Woolwich yard in 1934 in traditional composite construction (1/4" iron sides, 4" elm bottoms), launched in time for the Silver Jubilee of King George and Queen Mary (1935) and was thus painted in the Jubilee livery of red, white and blue to take part as flag-ship in the ceremonial cruise down the newly-



Bob Shopland, Editor, *Waterways World*, has no trouble with the old mechanical ratchet gate paddle gear of Marsworth Lock 41 on the Grand Union Canal.

opened wide locks on the Grand Union Canal. She later carried corn from East Anglia and coals from the Midlands. The Sewells hire out their boat, with a steerer (this year with Mick Franklin, who was more like a member of our family than an outsider). Normally the passengers help out with the working of the locks, as the steerer is kept busy operating the boat, except on navigations like the Thames, where the locks are worked by lock-keepers. Some of the lock mechanisms are tough to operate and take a bit of elbow grease, making one appreciate (especially in bad weather) some of the work that went into operating a canal boat on a commercial basis. Also one needs to be alert on the water and in and around locks, as attested to with a broken rib by Bill Shank at a Thames lock and an injured back by Tom Hahn falling back into the boat (on a Sunday morning, *not* after returning



Rural settings, such as Osberton Lock on the Chesterfield Canal in Yorkshire, are common to most English canals. John Atkinson's *Mary Jane* is shown in the foreground.

(Concluded on Page Two)

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

AMERICAN CANALS is issued quarterly by the American Canal Society, with headquarters at Box 842, Shepherdstown, W.Va. 25443. 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.

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SHUBENACADIE CANAL

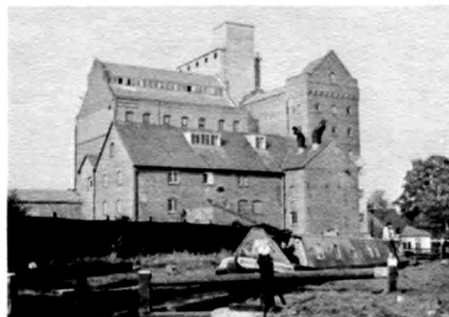
In 1856 and 1857, Civil Engineer William Hubbard Talcott visited Halifax to advise on the Shubenacadie Canal in Nova Scotia. Talcott was a well known American Canal Engineer whose projects included the *Genesee Valley Canal* (1837), the *Erie Canal Enlargement* (1843), the *Western Division of the Morris Canal* (1845), Chief Engineer of the *Morris Canal* (1846) and President of the *Morris Canal* (1864). Anyone having information of the specific role or information of Talcott's visit to the *Shubenacadie Canal* is requested to send details to ACS Member Robert Leggett (Author of the *Rideau Waterway* and the *Ottawa River*), 531 Echo Drive, Ottawa K1S 1N7, Ontario, Canada, with info copy to Editor, *American Canals*. Mr. Leggett is also the author of the *Canals of Canada*, expected to be in print by the end of the year.

A reminder that ACS canal-theme sew-on badges are still available. The red-white-and blue colors are those used in the national ensigns of the United States and Canada, the principal countries represented by the American Canal Society. The border is red, the field or background white, the words *American Canal Society* are red, and the central figure, a packet boat, is blue with red and white trimming. One does not have to be a member of ACS to wear the badge, and we find that it creates attention wherever we go and causes people to ask about our historic canals. Buy several for holiday presents and at the same time help support the American Canal Society. \$1.00 each plus self-addressed stamped envelope to ACS Treasurer Bill Trout, 1932 Cinco Robles Drive, Duarte, CA 91010.

ACS OFFICERS IN ENGLAND



Attractive lock scenes are common, as this one at Leighton Lock on the Grand Union Canal.



The waterways of England offer outstanding examples of industrial archeology, such as Coxes Mill, standing near Coxes Mill Lock on the Wey Navigation.

(Concluded from Page One)

from a visit to a local pub) on the Grand Union Canal.

There are many ways one can take a canal boat vacation, from using a canal boat which one operates (as we did the past two years through the generosity of ACS Director John Atkinson in the *Mary Jane*) to having meals catered in the luxury of a hotel boat, as did a group from the United States we ran into on the Oxford Canal on a rainy day. I think they thought I must have been mad, or lying, when I disrupted their lunch in the butty (the boat towed by the other narrow boat with a motor) with a lock key in one hand and ACS literature in the other, explaining that I also was an American, and the President of the American Canal Society, and they should all be interested in preserving the historic canals of the Americas so that someday we could do the same thing they were doing in England. To appreciate this scene, you would have to envision the passengers of the boat sitting at an elegant luncheon, dressed in coat and tie, and such, for the most part, with the intruder dripping water and trailing mud and then rushing out to set up the next locks. I have probably set the society back two years with such encounters.

The *Phobos* is available for hire next year, with rates around \$40 per day for the boat for four persons, plus a modest sum for heating/cooking gas and fuel. The Sewells give a 10% discount for paid-up members of the American Canal Society. From experience, we can tell you that this compares very favorably with any other type vacation in England, and has the distinct advantage of providing both transportation and lodging. Hotels alone for four persons would be much more than the daily rate of hire for the boat.

Interested parties should contact: The Sewells, East Whitley Farm, Shamley Green near Guildford, Surrey GU5 0TE, England.

This year we got re-acquainted with Tam and Di Murrell, who operate two pairs of working narrow boats carrying coal. The Murrells offer canal enthusiasts a canal vacation on a pair of working boats in which two people live in the motorboat cabin which is 7' x 8' and has a coal range, table, cupboards, seating, a double bed and little else. The cost is about \$55 per person per week, with all meals provided. One can help work or not as he wishes. The trip is wherever the boats happen to be operating at the time. This is probably the only place in the world where one can take a trip on a working boat, and would be just right for those who might want to rough it a bit more and get a better taste of what canal life was like in its operating days. Write T and D Murrell, Canal Traders, N/B ASH, Benbow Bridge, Cowley-Midde, Uxbridge 52019, England.

However you go, it is an experience you will never forget. But caution, it is contagious and the urge to do it again recurs about once a year!

As a sort of postscript to the trip, was a one-day trip on the *Chesterfield Canal* in Yorkshire by Bob Shopland and me, provided by ACS Director John Atkinson in his *Mary Jane*, followed by a beautiful dinner catered to a group of leading canal enthusiasts. The Shanks were John's guests earlier as well.

Tom Hahn



Crew members Ruth Shank, (left), and Tom and Nat Hahn enjoying the culinary delights of "Cook-for-the-Day" Bill Clague, (right), aboard the *Phobos*. Bill Shank was the photographer.

THE CHAMBLY CANAL

by SANDRA GILLIS

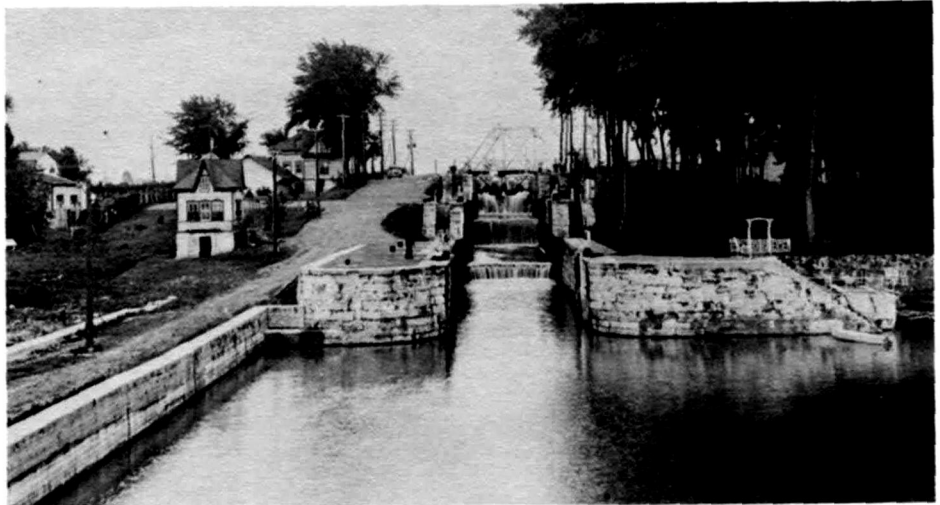
The Chambly Canal was begun by the government of Lower Canada (now Quebec) in 1831 and was finally opened in 1843. It still operates today, thus making it the second oldest continuously operating canal in Canada. (The oldest is the Rideau Canal built by the British Ordnance Department between 1826 and 1832.)

The 12-mile Chambly Canal was designed to overcome a series of treacherous rapids between St. Jean and Chambly on the Richelieu River. Previously timber rafts from Vermont had been able to pass down these rapids, but other vessels going either up or downstream had been forced to portage their cargoes around this 12-mile obstruction. Canadians hoped that improvement of the navigation along this artery would promote a large two-way traffic between the St. Lawrence ports (Montreal and Quebec City) and the port of New York. Motives for the Chambly Canal, then, were entirely commercial. Rather than being a military device against possible American attack like the Rideau Canal, the Chambly was a work designed to promote interchange between the United States and the (then) colony of Lower Canada. In fact the British military, responsible for the defence of Canada, was not at all happy about the construction of the Chambly Canal and tried to dissuade the local authorities from completing the work.

The initial plans for the canal were drawn up in 1830 by Peter Fleming, a civil engineer from Albany, New York. Fleming was a difficult and volatile man. In the end he was fired by an exasperated board of commissioners, a group of prominent local citizens appointed to supervise construction. Another engineer William Hopkins was hired to build the canal. But Fleming was proved to be an ingenious engineer. It was he who had proposed that, rather than cutting the canal entirely across country, that it follow the course of the river for 7 miles. This was to be accomplished by placing an embankment between the canal and the river proper. This embankment would also serve as the towpath. He also proposed that they utilize the western shore of the long Isle St. Therese to remove the necessity of building an artificial embankment there. It was also Fleming's idea to embank the line of canal when it finally did cut across country south of Chambly in order to reduce the amount of excavation. Obviously Peter Fleming's measures allowed the saving of thousands of pounds, and, in the end, the canal cost only about twice the original estimate of 60,000 - not a bad record in the annals of canal construction. Yet Fleming never seems to have received any credit for his ingenuity.

When the canal was finally completed by the contractors in 1843 there were 9 locks in total, a guard lock at St. Jean and 8 lift locks at Chambly (of which 3 were combined). Total lift was 74 feet. The locks were masonry structures with framed timber gates operated with balance beams. Minimum dimensions of the chambers were 120 by 24 feet, while the depth of water on the mitre sills was 6 feet.

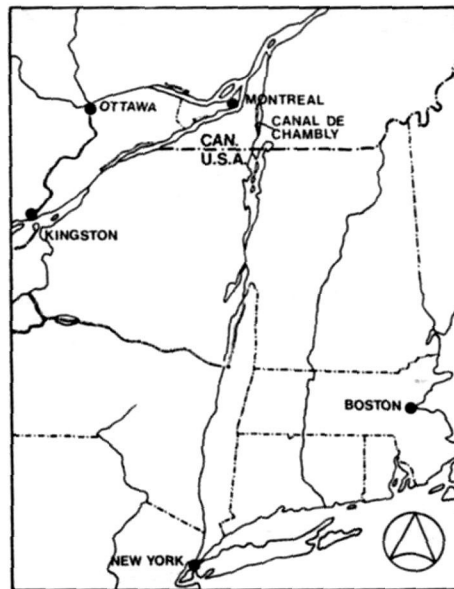
From the beginning the canal was busy. Unfortunately the class of vessel which began to see service on it bore little resemblance to those common when it was designed. In early 1830s sailing barges, which would be towed by horse along the 12-mile stretch of navigation, were seen as the principal users. By mid-century, however, lake and river steamers, and soon powerful paddle-wheelers, were making their way up and down the inland waterways of the continent. As these heavy steamers thudded into the chamber walls and as the paddles thrashed along the top of the too low coping, the masonry shuddered under the impact. After the passage



Flight of three locks at Chambly as they looked a few years ago.

of not too many years, the lock structures began to show, all too evidently, signs of wear.

Despite the dilapidated condition of the locks, they received only minimal maintenance and emergency repair from an economy-minded government only when imminent collapse of a wall threatened to close the canal. By the 1880s, however, the Department of Railways and Canals was forced to dismantle and reconstruct almost all the lock structures. This time the locks were rebuilt, not entirely in masonry but in square timber to the water line with the courses of masonry above.



During this century repairs, patching and replacements have been almost entirely in concrete. Engineers had been slow to accept this convenient material in lieu of masonry, but once concrete was shown to be stable and hardwearing, its use was embraced with a vengeance. Since World War I many of the entrance walls, floors, sills and two of the chamber walls have been rebuilt in concrete. Moreover, a new guard lock was built in 1973 at St. Jean south of lock 9; it is built entirely of concrete in a design bearing little resemblance to the original locks.

In 1973 the operation of the Chambly and other historic canals was transferred from the Department of Transport to Parks Canada in the Department of Indian and Northern Affairs. No

longer was the Chambly to be administered only as a commercial waterway. Henceforth it was to be recognized as a functioning historic waterway with considerable recreational and cultural potential.

When the jurisdiction of the Chambly was transferred in 1973, the locks were found in many cases to be in serious state of dilapidation. As a result of their condition and in keeping with the canal's status as a national historic site, Parks Canada proposes over the next decade to preserve, restore or reconstruct the 8 locks at Chambly to their 19th or early 20th century appearance. In addition the department proposes to open a visitor's centre for the information of the public.

In keeping with this new policy, historical research was begun in the fall of 1973. A structural history of the locks has been completed, while social, economic and oral histories are in progress. We have found some of the original contracts and specifications and some of the mid-19th century plans for gates and gate machinery. In addition, many turn-of-the-century documents and photographs have survived. Fortunately some of the gate machinery dating from the 1850s is still in use and we do have the locks themselves as our most valuable evidence of the past.

There was also the prior experience gained from the uncovering of the west wall of lock 8 in 1966-67 when it was demolished to be replaced in concrete. It was not encouraging for the preservationist - restorationists. Behind the wood planks at the base of the chamber walls was found only earth fill. It is truly amazing that the wall stood as long as it did.

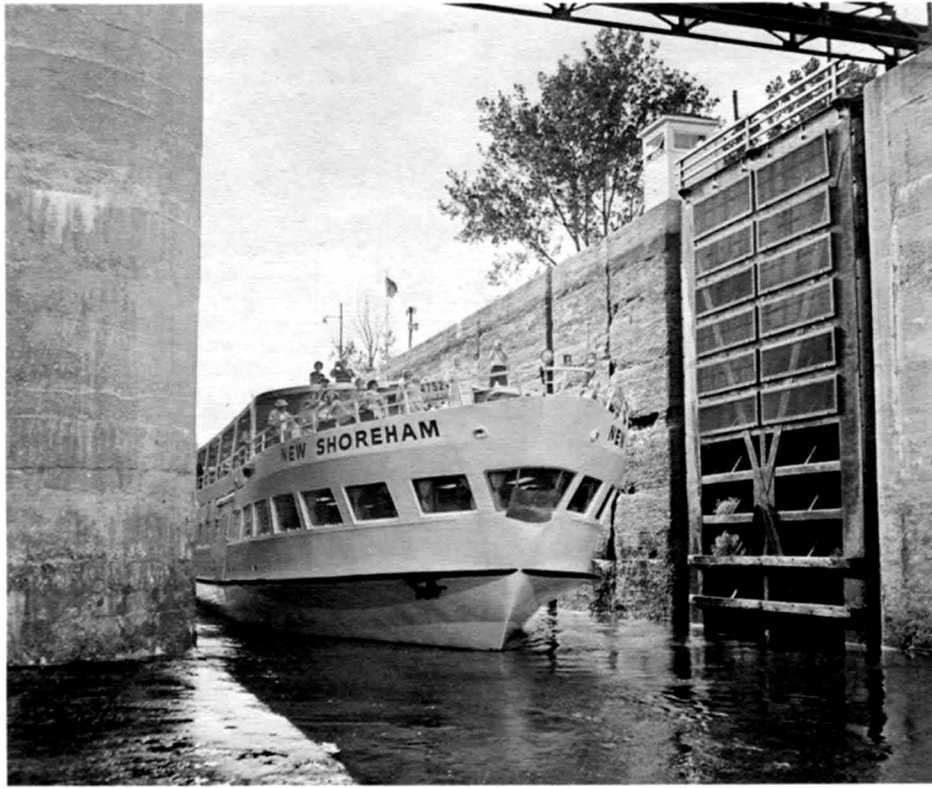
Fortunately exploratory investigations of locks 6 and 7 in 1973-74 were more encouraging. Here were found solid masonry walls and counterforts, in relatively good condition, extending down to the timber foundations, also well preserved. The timbers on the lower portion of the walls were found this time to be merely a facade on a masonry backing.

It was decided to begin the reconstruction programme this past winter (1974-75) on the east wall of lock 8. When uncovered, this wall proved to be very similar to the walls of locks 6 and 7 and not to the other wall of lock 8. The recess wall, however, was found to be in a shambles.

A design for the stabilization - reconstruction of the wall was drawn up by the engineers of the

(Concluded on Page Four)

WATERFORD "FLIGHT"



In the August issue of *American Canals* we included a brochure on the Waterford Flight Locks of the New York State Barge Canal. Commenting on the brochure, ACS Director Alexander C. Brown said, "Coming down the Waterford Flight a couple of years ago when we were returning from the St. Lawrence and Erie Canal cruise in the *New Shoreham* was a highlight. I stepped off the boat at Lock 5 and took some pictures, having run ahead. Here, then, is what one sees today in passing through the famous Waterford Locks."

CHAMPLAIN CANAL

by GARRY F. DOUGLAS

The 1823 Champlain Canal in historic Waterford, New York may have a new future in store. A recent meeting of community leaders and officials resulted in the creation of the Champlain Canal Study Committee. This body will work over the next several months on determining the potential of the canal as a park and recreational facility, and will make eventual recommendations accordingly. The Committee will work closely with Saratoga Associates, architectural consultants from Saratoga Springs, N.Y., whose services have been secured by the Hudson-Mohawk Industrial Gateway, a regional organization concerned with the adaptive use of industrial landmarks in the Troy-Waterford area. The Committee is being chaired by Garry F. Douglas, Waterford Historian. Serving as co-chairman are Mrs. Marjorie McNally and Dr. William Grattan.

As early as 1792 a group of New Yorkers chartered the Northern Inland Lock Navigation Company for the purpose of linking Lake Champlain to the Hudson River. \$100,000 was spent in an attempt which proved unsuccessful. After further study and much more debate, a law was enacted by New York State on April 17, 1816 authorizing \$20,000 for surveys preliminary to construction. The canal was planned to be 40 feet in width at the surface, 28 feet at the bottom and 4 feet in depth. 12 miles of the new canal were completed by 1818. In 1822 there was water in the canal bed from Waterford to Whitehall although construction was not yet complete. On September 10, 1823 the entire length of 66 miles was ready for navigation. The Champlain could be entered at two points: one at a series of locks off the Hudson River in the Village of Waterford and the other at the Cohoes

junction with the Erie Canal via Waterford's southern tier.

The new canal was a great boon to the Champlain Valley, Vermont and Canada as well as to Waterford. The latter, already established as a center of river activity, now became a canal center as well. Many industries and businesses flourished with the opening of the canal. One of these was the Friedrichsohn Cooperage in Waterford. Founded in 1791, this operation became a major supplier of barrels for the transport of goods on the canal and remains today as one of the oldest business operations in the area. Also benefiting, of course, were the saloons and taverns where the "mule skimmers" could eat and drink while their mules or horses were quartered in one of Waterford's great line barns.

The Waterford stretch of the Champlain Canal is in an excellent state of preservation, still being maintained and used as a backwash and surge basin for the Erie Division of the N.Y.S. Barge Canal in Waterford. The old canal runs directly through the populated areas of the town and village, yet is secluded enough to provide a very scenic and pleasant retreat with tremendous potential as a linear parkway. The Committee welcomes advice and information from groups who have undertaken similar studies. The Committee may be addressed in care of its Chairman at 123 Fonda Road, Waterford, N.Y. 12188.

1976 DUES

With this issue of *American Canals* you may find a pink invoice form as a reminder that your 1976 dues are now due and payable. Repeated invoicing drains our limited funds, so a prompt check will be appreciated. If NO pink form is enclosed, this means your 1976 dues are already paid.

CHAMBLY CANAL

(Concluded from Page Three)

Quebec regional office of Parks Canada and work was begun and completed in time for the opening of the canal this spring. The chamber wall was left intact and was regouted and re-pointed. To the rear of the masonry wall and attached to it is a reinforced concrete wall to provide additional strength. The lower recess wall was completely dismantled. The wall was rebuilt in reinforced concrete, with a facade of masonry to duplicate its former appearance.

The future of lock 9, the original guard lock at St. Jean, is not as clear as that of the other 8 locks of the Chamblay Canal. Recently application has been made by the Canadian government to the International Joint Commission to activate dams in the Richelieu River to allow navigation in the river for a further distance of about 4 miles north of St. Jean. Should such measures be adopted a new concrete lock will be constructed at Isle St. Thérèse. The present lock 9 will be removed and about 4 miles of the historic canal, in effect, abandoned. The whole issue of the water level of Lake Champlain, as a result, is receiving considerable discussion in that area, particularly in Vermont. Public hearings were recently held in both Canada and the United States to receive representations from interested citizens and groups but the I.J.C. has not yet announced its decision on the application.



"Side-wheeler" of the type in use on the Chamblay Canal in the late 1800's.

MEMBER NUMBER 800

As we go to press, we are happy to announce that ACS Membership Application Number Eight Hundred has just been received. We ask the help of every member in making this "ACS Number One Thousand" by the end of 1976.

Cross-Florida Barge Canal

An updated economic study of the canal indicates traffic would be five times as heavy as estimated in 1962, but high construction costs, 50% higher than in 1971, when President Nixon stopped work on the canal, may make it unfeasible to finish the project, Army Engineers have reported.

The following letter regarding this canal was received by the Editor: "In response to your article on The Cross-Florida Barge Canal System, I have requested that the National Wildlife Federation and the Wilderness Society send a position statement to ACS. . . I urge ACS to continue to voice strong opposition to the Cross-Florida Barge Canal. The environmental damage would be catastrophic to the native flora and fauna of all of Florida were the canal to be completed." Ed Merrell, ACS, Instructor, Clemson University. (No position statements have been sent to date. - Editor)

CUMBERLAND AND OXFORD CANAL HISTORY

(Last part of a three-part article)
by JOEL W. EASTMAN

Reprinted from *Maine Life*, October 1973

In 1858 the company had defaulted on its mortgage payments and been taken over and sold by the bank. The cause of the canal's financial problems was the railroad, a competitor which had first appeared in 1842, when the Portland, Saco & Portsmouth Railroad went into operation with its track passing over the canal at Clark Street in Portland. The first real damage to canal traffic came in 1846 when the York & Cumberland Railroad was built west from Portland through Westbrook to Gorham and Buxton, for some of the freight which had previously used the canal was diverted to the railroad, which was faster and offered service in the winter months when the waterway was closed down.

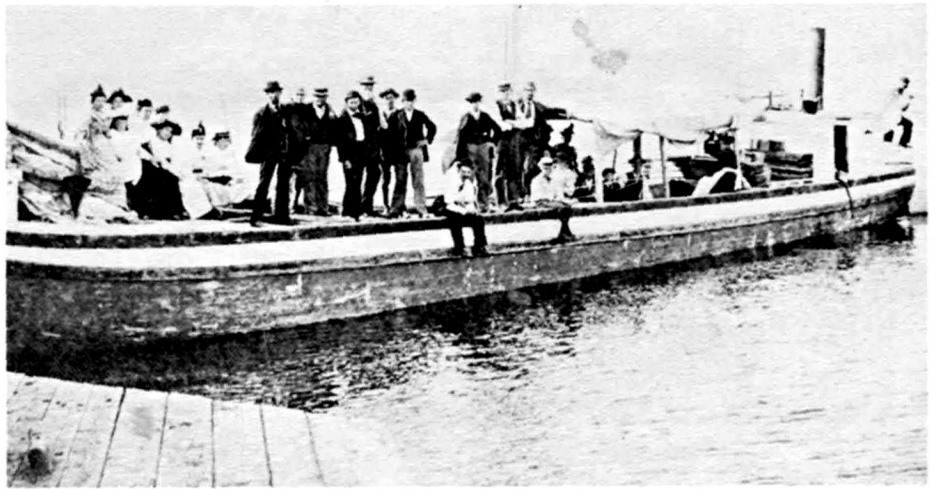
The opening of a section of the Atlantic & St. Lawrence Railroad (now the Grand Trunk) through several Oxford County towns in 1848 was apparently the thing that put the Canal Corporation into the red by diverting enough traffic which had previously used the canal so that income from tolls dropped below expenses. The management kept the books balanced for a few more years by cutting back on maintenance, but finally, in 1853, it began defaulting on its mortgage payments to the Canal Bank. After five years the bank reluctantly foreclosed and sold the \$206,000 corporation to Isaac Dyer for \$40,000.

Dyer, an important businessman and a founder of the Maine Republican Party, immediately sold a controlling interest in the canal to Francis O. J. Smith, another prominent Portland lawyer, businessman and politician. Dyer's main concern appears to have been to keep the canal open because he was then engaged in extensive lumbering operations in the area served by the waterway. Smith, on the other hand, was a bold promoter who had a large number of ideas for developing the canal and the region it served through the encouragement of manufacturing. The coming of the Civil War interrupted Smith's work, but after the conflict he resumed his plans, proposing, among other things, the use of the canal to supply drinking water for Portland, the conversion of the canal to fish hatcheries, and the use of the towpath as the road bed for a narrow gauge railroad. There were a number of interested purchasers, and the owners did sell portions of the canal along the Portland waterfront, to allow the extension of Commercial Street, but Smith's big plans came to naught and efforts to sell the entire waterway always fell through.

The canal continued to operate for another thirteen years, despite declining use, because of



An abandoned canal boat skeleton, above Naples, in the early 20th century.



The Canal Boat *Bluebird*, used after the closing of the Cumberland and Oxford Canal. It was outfitted with an auxiliary steam engine.

the reduced overhead. But in 1868, the end of the waterway was apparent when the Portland & Ogdensburg (N.Y.) Railroad (now the Mountain Division of the Maine Central) was proposed which was to directly compete with the canal in the area it had served for nearly forty years. Ironically, when the railroad was built, its tracks apparently began at the foot of Clark Street in Portland, just where the canal had originally started, and then followed the route of the canal to Thompson's Point, forcing the relocation again of the Lower Guard Lock (which had been moved twice previously, first to Vhaugh's Bridge and then to Thompson's Point) to a spot about one half mile below Stroudwater Village on the Fore River. The railroad then paralleled the canal up the Presumpscot, crossing the waterway and following the lower edge of Sebago Lake - which had supplied so much traffic to the canal - for several miles.

When Smith learned of the railroad, he stepped up his efforts to sell the canal. One interested purchaser was William Jackson, owner of the Oriental Powder Company at Gambo Falls, who wanted the canal kept open to serve his operation, but negotiations bogged down in differences between Smith and Dyer. When the Portland & Ogdensburg Railroad opened as far as Sebago Lake on September 1, 1870, the days of the canal were numbered, and it officially ceased operations in 1872. Some of the canal boat owners kept their crafts in service hauling freight to and from the railroad at Sebago Lake Station. A few of the boats were converted to steam, and some shipbuilders constructed larger boats along similar lines when the Songo Lock - which continued to be heavily used - was enlarged to handle bigger vessels. Today the lock is operated by the State Park Service and handles more traffic - mostly pleasure craft - than it did at the height of the use of the canal.

Although most of the canal was soon abandoned, a substantial section from the Basin to Steep Falls was enlarged and used to supply water to a hydro-power station, and a small stretch at Mallison Falls was used for a similar purpose. The dams at Great Falls, Dundee and Gambo were raised flooding the portions of the canal running along the Presumpscot above them, but significant portions of the canal have survived to the present day - although the towpath is grown up with trees and bushes and most of the locks have fallen in. The most important stretches which remain are at Stroudwater - where the canal is visible running along the east bank of the Fore River across from the Village - the "Long Level" which runs from above Westbrook to the Little River in Gorham, and between Little Falls and Gambo Falls - a portion

which includes the fascinating remains of the Gambo Powder Mill complex.

Greater Portland Landmarks, Inc., proposed sometime ago that the canal be placed on the National Register of Historic Places, and the Maine Historic Preservation Commission has nominated the canal, along with Songo Lock and the Oriental Powder Mill, to the National Register. Just as important, the Greater Portland Council of Governments is coordinating the efforts of area communities and organizations to plan a useful future for the canal. Proposals include turning the Stroudwater section into a combination historic site and nature park where visitors could hike along the towpath, which skirts the edge of Stroudwater marsh - the only salt water marsh left in the city; utilizing the long level as a bicycle path; and developing the Powder Mill area as an historic park. If these ideas ever reach fruition, the incorporators of the Cumberland & Oxford Canal would be justified, for then, their "stupendous" undertaking would be sure, as they predicted, "to endure beyond the ravages of time and of revolution" and be of "infinite value to posterity."

CANAL INFO SHEETS

The following canal information sheets (all submissions of ACS Director Alden Gould) are now available from: Bill Trout, 1932 Cinco Robles Drive, Duarte, CA 91010 for 25c each plus a self-addressed legal-sized envelope or the equivalent for the mailing:

Canal Index: Nashua Mfg. Co. (Power Canal) NH
Blodgets Canal NH

Canal Structures:

Blackstone Canal (3 locks at Lincoln, RI)

Cross Florida Barge Canal (Rodman Dam, FL)

Merrimack River Navigation:

Blodgets Canal & Locks, NH
Garvins Falls 4 Locks, NH
Griffins Falls & Lock, NH (Sec. I)
Griffins Falls & Lock, NH (Sec. II)
Hooksett Falls 3 Locks, NH
Merrills Falls Diversion Canal, NH
Moor's Falls 3 Locks, NH

Nashua Mfg. Co. Power Canal (Mine Falls Park), NH

WASHINGTON'S CANAL FALTERS



Lock #1 on "Washington's Canal", several years ago.

The remaining locks of the Patowmack Canal at Great Falls, Virginia are in dire need of help. The Patowmack Canal is under the jurisdiction of the National Park Service. The following letter was sent by the American Canal Society in an effort to direct attention to the importance and needs of these locks:

26 June 1975

Manus J. Fish, Director
National Capital Parks, National Park Service
1100 Ohio Drive SW, Washington, DC 20242

Dear Mr. Fish:

I am writing on the behalf of canal enthusiasts throughout the Americas for concern for the Great Falls Skirting Canal of the Potomac Company at Great Falls, Virginia.

The Potomac Company, organized in 1785 by our first president, George Washington, carried out the first corporate work in the United States on an improvement of navigation for public use. The principal work of the Potomac Company was the building of the canal and locks at Great Falls to overcome a 76-foot difference of elevation of the Potomac River. To do this, five lift locks were constructed, initially under the direction of Chief Engineer James Rumsey, the inventor of the steam boat. The canal and locks at Great Falls were opened to traffic in 1802.

The locks were among the first constructed in the United States and are unique from several points of view: They may represent the only engineering structures built under the supervision of George Washington; Locks One and Two may represent the only extant stone masonry lift locks under construction in the United States in the 1700s; Lock Three is the only known lock anywhere to have been built with a bend in it (as the canal changed course in direction); and, Locks Four and Five cut through solid rock probably represent the remains of the deepest locks in our historic canals.

In September 1973, Joseph Prentice and I made an industrial archeological study of the Great Falls Skirting Canal and its structures. Our physical examination revealed the poor condition of the guard gate and locks one and two. We pointed out that lock two in particular was liable to collapse and the lower berm recess and lower berm extension wall did indeed collapse in part in 1974. *Further collapse of lock two is imminent!*

These locks represent engineering and transportation achievements of a technical and historical nature not duplicated elsewhere. In these locks is an important part of the development of American technology, pioneered by early de-

veloping U.S. engineers assisted by English canal engineers. The locks represent a transition from British and European Continental canal technology to that of a type developed in the United States and Canada. For this reason, they are of interest to technologists and canal enthusiasts throughout the world.

We have within easy commuting distance of the capital of the United States an immensely important engineering work originated by our first president and built by the early engineers of our country. We shall soon have only a pile of rubble if something is not done soon. My contention is that a work of this importance in history and technology should rank with and above new works such as gardens and visitor centers as a part of celebrating our American Bicentennial. *I recommend that immediate consideration be given to the stabilization of lock two and that consideration also be given to the restoration of lock one as the only remaining early lift lock in the United States.* Other stabilization at the guard gate and lock three is needed but at a lower priority than locks one and two. The immediate stabilization work could be considered as a possibility for the Bicentennial. The other work is of a more long-range project in time and *I recommend that thought be given to a planned*



Locks #4 & #5. Note the deep cut for these locks leading to the Potomac River in the background.

project for this canal with the work to be completed in 1985, the 200th Anniversary of the organization of the Potomac Company and the beginning of the work at Great Falls, Virginia.

We recently lost (in 1974) the first three locks of Washington's other canal company - on the James River and Kanawha Canal - to a highway project, largely through the apathy and lack of historical appreciation by the citizens of Richmond, Virginia. This was considered a tragedy by preservationists throughout the country. The canal and locks of the Great Falls Skirting Canal are, of course, the property of the Government of the United States under the guardianship of the Department of the Interior. To lose these locks through neglect would be unforgivable by historically-minded citizens.

The American Canal Society would be most happy to support the National Park Service in any effort to preserve this most important historic canal. Would you please advise the American

CAPTAIN GODFREY AND THE CANADIAN CANALS

After reading our recent articles on the history of the Canadian Canals, Captain Frank H. Godfrey, our venerable ACS member from Rome, N.Y., and author of *The Godfrey Letters*, had these comments:

"All this was somewhat before my time, but when I was on the Ottawa run, I was told at various times, by older reliable boatmen that when they were young men, in low water seasons on the *Grenville Canal* the boats (draft 4'-2") could only go as far as stone farm, a short distance below Grenville lock on the upper level of the canal, so the tow would pass through the lock (all gates opened). Then the side-wheel towing steamer would turn around, back into the lock, tie with lines on each side of the lock and start with full steam ahead forcing water into the canal which would raise the water in the level six to eight inches. This would allow the tow to clear this shallow spot of boulders and proceed down the canal.

"When I was a boy approximately 15 years old, or about 1906 or 7, we arrived in Quebec with our four boats (uncle and Grandfather Walrod's boats) with coal from New York. The boat I was on was *J. Archer* unloaded at *Mt. Morancy Falls*. There was an old stone lock there, the size of the old *La Chine* or old *Welland* locks 278' long x 45' wide. The gates were rotted out and gone, and a bed above the lock was leveled for the boat to sit on, as there was no water within a half mile of the boat when the tide was out (tide at *Mt. Morancy* 24 feet). The boat discharged its cargo of coal at an old dock made from slab wood with a road of slab and sawdust.

"Apparently timber was cut at one time on the river and the logs floated down river and over the Falls into a boom and sawed at a mill when the *Archer* unloaded. Then canal ships, or schooners, came in on rising tides, locked up into the basin above the lock, loaded without contacting the bottom and were in safe harbor from the heavy North-east storms of that Area. The lumber, or timber, as the case might be, was probably loaded onto old square-rig sailing ships at Quebec for England.

(Captain Frank H. Godfrey and Captain Daisy Godfrey live at R.D. 3, Lake Delta, Rome, NY 13440. - Editor)

Canal Society of the interest and intention of National Capital Parks or the National Park Service on this subject.

Very sincerely,
T. F. Hahn
President, American Canal Society

P.S. Because of the confusion between Great Falls, Maryland and Great Falls, Virginia, I suggest that consideration be given to calling the locks and canal in Virginia the Potomac Company's George Washington Canal, or, simply, the George Washington Canal. TH

In reply to this letter, Mr. Fish indicated that funding was the major problem and that restoration of the canal was submitted as a Bicentennial project in 1974 by National Capital Parks, but no funding was approved. *The time appears to be right for another push in the long series of pushes to do something about restoring the canal.* I suggest we support the National Park Service in its desire to do something about restoring this old canal. Those interested in doing this should write to their congressmen, with a copy (if you can), to: Director, National Capital Parks, 1100 Ohio Drive SW, Washington, DC 20242, to show our support.

Tom Hahn

"CAPTAIN'S CORNER"

The American Canal Society announces the second list of ACS "President's Awards" for outstanding achievement in the fields of canal preservation, canal research or the dissemination of canal information. The awards go to persons well-known in waterways circles in the United Kingdom. The awards noted by the gift of bronze and silver proof Erie Canal Medals, were presented to the recipients by ACS President Tom Hahn during his visit to England this fall. The recipient's are:

John Barratt – John, an ACS member, is Chairman of the Inland Waterways Amenity Advisory Council of the United Kingdom. Through the efforts of his committee, models of canal preservation priority documents, which can be used as models for the American Canal Society and others, are now in use in the United Kingdom.

Robert Shopland and Russell Godwin – Bob and Russ operate *Waterways World*, the leading international publication on canals and other inland waterways. Through this magazine, they have enhanced the exchange of canal information on an international basis.

We earlier carried an item on the Georges River Canal Association's efforts to purchase land at the locks in Warren, Maine. Their problem was solved by the purchase of land by the town, a move appreciated by the association even though it meant their not being the immediate proprietors. We congratulate the town on the recognition of the canal site being essential to its heritage.

In the last issue of *American Canals* we announced that the *American Canal Guide Part 2 – The South: North Carolina to Florida* had been published. I don't think, however, that we said quite enough about its being a real "break-through" as far as regional canal coverage is concerned and the fact that the real driving force for these "guides" is Dr. Bill Trout. The 12-page guide is the 'Buy of the Year.' Send \$1 (with a self addressed stamped envelope) to: Bill Trout, 1932 Cinco Robles Drive, Duarte, CA 91010.

Either we are good weather prognosticators or else someone is looking out after us, as the Hahns moved into Lockhouse 6 on the Chesapeake & Ohio Canal in August 1972 just after hurricane Agnes and moved out again in June 1975 a short time before hurricane Eloise. And a good thing we did, as all the American Canal Society files were in the basement, which was mighty wet on both occasions.

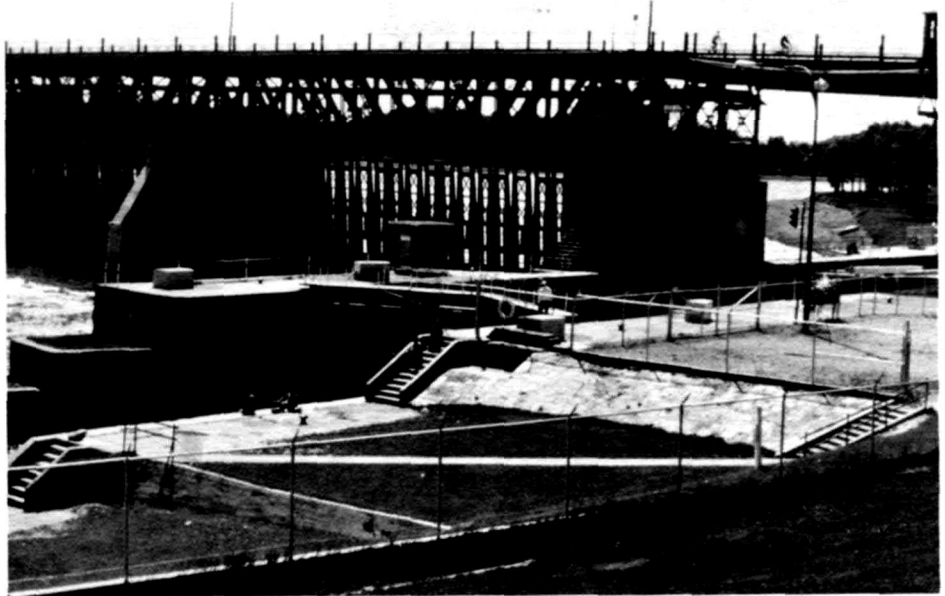
Tom Hahn

Waterways European Trips

Summer Trip Afloat in France offers high school students the unusual opportunity to experience the rhythm and atmosphere of river boat life in France. Students speak and learn French while visiting many parts of France that are rarely seen by tourists. A similar trip in Burgundy may be offered to adults in September 1976. For information write: Summer Trips Afloat in France, 2811 Terrace Drive, Chevy Chase, MD 20015.

The Canal Society of New Jersey is planning its second three-week canal trip to England in June (after school) 1977. Open to members of the Canal Society of New Jersey (there is no better time than the present to join). For further information, write to: Ed Douglas, PO Box 255, Rockaway, NJ 07866.

ST. ANDREW'S LOCK, MANITOBA, CANADA



St. Andrews Lock and Dam, Lockport, Manitoba, Canada. (Photo by Herb O'Hanlon)

by Herb O'Hanlon

One of the most interesting rivers of the United States is also one of the least known. The *Red River of the North* that forms much of the border between Minnesota and North Dakota actually flows north into Canada and Hudson Bay! As one of the main waterways of the Canadian fur trade, the history of this waterway is an epic in itself.

For the modern canal historian, attention is centered in a small town on the Red River of the North located fifteen miles downstream from the city of Winnipeg, Manitoba. Here at Lockport is the modern, and still operating *St. Andrew's Lock*. Constructed prior to 1910, the lock was officially opened to navigation on May 2, 1910. Before 1910, consideration was given to the building of a canal to facilitate fuel procurement for the city of Winnipeg. At that time wood was the prime source of energy used by that emerging prairie metropolis. Moving log rafts upstream

from Lake Winnipeg to the city itself was an unremitting struggle with fast water descending from the south. As a result, the Canadian Department of Public Works built a dam 820 feet long across the Red River at Lockport. On the west bank of the river, upstream from the dam it constructed a side-cut canal 1,000 feet in length.

To compensate for the difference in water elevations created by the dam, a single concrete lock was built opposite the dam; the dimensions of which are 45' x 203' with a lift of 22'. Regulations governing the use and operations of the lock, dated January 25, 1950, state, under Rule #9, "No vessel drawing more than 9 feet of water will be allowed to enter the lock."

On June 17, 1975, the water level behind the dam was officially listed at 728 feet above sea level. Because of the northern latitude of *St. Andrew's Lock*, the dates for opening of navigation vary. In 1973, navigation began on April 27; in 1974, it began on June 27; in 1975, the canal was clear of ice and operating on June 11.

Primary users of the lock at present are excursion boats that shuttle tourists between Winnipeg and Lower Fort Garry, the latter is an historical relic of early fur trade, located near the town of Selkirk which is close to the southern end of Lake Winnipeg. The largest vessel to use the lock at the present time is the *M.V. Lord Selkirk II* that offers cruises of five day's duration on the lake. On summer weekends, the lock is overwhelmed with wall-to-wall pleasure craft. However, the *Lord Selkirk II* is the most difficult to lock through. Before it can make passage, an ancient and stubborn bascule bridge spanning the lock must be raised.

According to Mr. C. Truthwaite, the Assistant Lock Superintendent, the greatest obstacles to efficient operations are the numerous fishermen who frequent the area. Because of their infringement on the lock, a large chainlink fence has been erected around the lock. Affixed to the fence are signs governing anglers. Of the six rules listed, rule #6 is most emphatic; it reads as follows: "The use of obscene or abusive language to the operational staff or boat crews will not be tolerated!"

Over the years the canal has been upgraded and modernized. All controls are operated by electricity and, at present, are under the capable hands of a crew of three – Mr. C. Truthwaite and his two able assistants Mr. Mabey and Stan.

ERIE CANAL MEDAL

Through a special arrangement with the Franklin Mint, the American Canal Society has arranged for the sale of a commemorative medal (otherwise available only to the members of the mint's *Commemorative Medals Issues*), for the 150th Anniversary of the Completion of the Erie Canal. The bronze mint medal, measuring 39mm in diameter – approximately the size of a U.S. silver dollar – may be purchased for \$3.50 (plus 50c mailing charge, totals \$4.00) from: American Canal Society, Box 842, Shepherdstown, WV 25443. The medals are now in hand. We would like to point out that these medals are collectors items available only through the American Canal Society. They make excellent presents and help support the American Canal Society at the same time. The design depicts the celebration of the Opening of the Erie Canal on one side and the logo of the American Canal Society using the western hemisphere as its theme on the other. A truly handsome medal, indeed.

"WEDDING OF THE WATERS"



Taking part in a ceremony commemorating the 150th anniversary of the original Erie Canal (left to right) are: William McLoughlin of DOT Albany Regional Office; Commissioner Schuler, Bruce Heineman, president of the Businessmen and Boaters for the Restoration of the Great Erie (BARGE); Captain Samuel Herrington of the Sundowner, Frank Thomson, Director of the Canal Museum, Syracuse; and Ellen Schuler, daughter of the Commissioner, with a friend. A cask of Lake Erie water was dumped into the Hudson to re-create the original opening of the Erie Canal in 1825. (From *Transportation Newsletter*, submitted by ACS MEMBER John Hulchanski, Regional Waterways Engineer.)

"OUR BILL TROUT"

by DAVID D. RYAN

(Richmond Times Dispatch)

When Dr. William E. Trout III makes his annual 3,000-mile trip from his California home to Richmond, one of the first places he visits is the *James River and the Kanawha Canal*. But that would seem a natural thing for Dr. Trout to do, for it was the canal here that began an interest for Dr. Trout that has grown into nearly a full-time avocation of studying and writing about canal systems throughout the country. Dr. Trout is a genetics researcher at the City of Hope Medical Center in Duarte, Calif., near Los Angeles.

Trout first began to pay attention to the James River and Kanawha Canal when as a Boy Scout he hiked along the river in the Westham area. Everybody he talked to about the canal seemed not to know much about it, even where it went or why there was water in it, he said.

As his interest in the James River and the Kanawha Canal grew, Trout began spending his spare time at the State Library and at courthouses searching through old records. "And then I finally got around to writing up an essay on each of these canals, in which I set down what I knew about them so I could add more."

Trout is preparing written guides on each of the canal systems in the country, and that is one reason he went back in Virginia for a month last spring. He also is interested in how best to use the canals, and wants them to be incorporated as parts of park or scenic river systems.

Trout also is interested in canal systems on the Roanoke (Staunton) and Dan rivers in Virginia. He has found the interest in canals in the state has grown in recent years, and he sees the interest in the upcoming bicentennial celebration as helping to increase interest in preserving and

restoring the canals. "There would be enthusiasm in any case, but certainly the bicentennial is just right for this and many other [historic] projects that need to be done," Trout said.

A small, slight man, Trout said that if he had his way, he would retire now at the age of 36 and work full time in researching, writing about and promoting the restoration of canals. "It's really difficult working on canals from 3,000 miles away," he says.

BOAT MODEL BUILDER AT DARTMOOR

Sam T. Cash, a member of ACS, is building up a reputation as one of England's finest boat model makers. One of his models, that of a motor canal narrow boat built for the British Waterways Board, was used recently as the center piece on the table at a luncheon given by the BWB for Queen Elizabeth the Queen Mother aboard the *Lady Rose of Regent's* on the Regents Canal. His models built for use in the United States include Illinois & Michigan canal boats built for John Lamb and a Birmingham Canal Navigation lock and a pair of 1/4" - 1" narrow boats, built for Reynolds Metals in Richmond, Virginia. He now has under construction a mammoth 12' model of the Tidewater Connection Locks in Richmond for Reynolds as well. His next American project is four boat models of the Chesapeake & Ohio Canal for Tom Hahn.

The surprising thing about Sam Cash is that he is in Her Majesty's Prison at Dartmoor, Princetown, Yelverton, Devon. On his release, he plans to continue with his boat model building at which time his reputation as a model boat builder should ensure him orders for some time to come. Sam and his models were featured recently in the September issue of *Waterways News*, and we are proud to have him as a member of the American Canal Society. With this article, we are pleased to announce the addition of Sam Cash to Carroll Gantz' Canal Boat Committee.

CLASSIFIED ADVERTISEMENTS

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Sam T. Cash at work on his canal boat models in Dartmoor Prison, England - 1975.