

AMERICAN CANALS

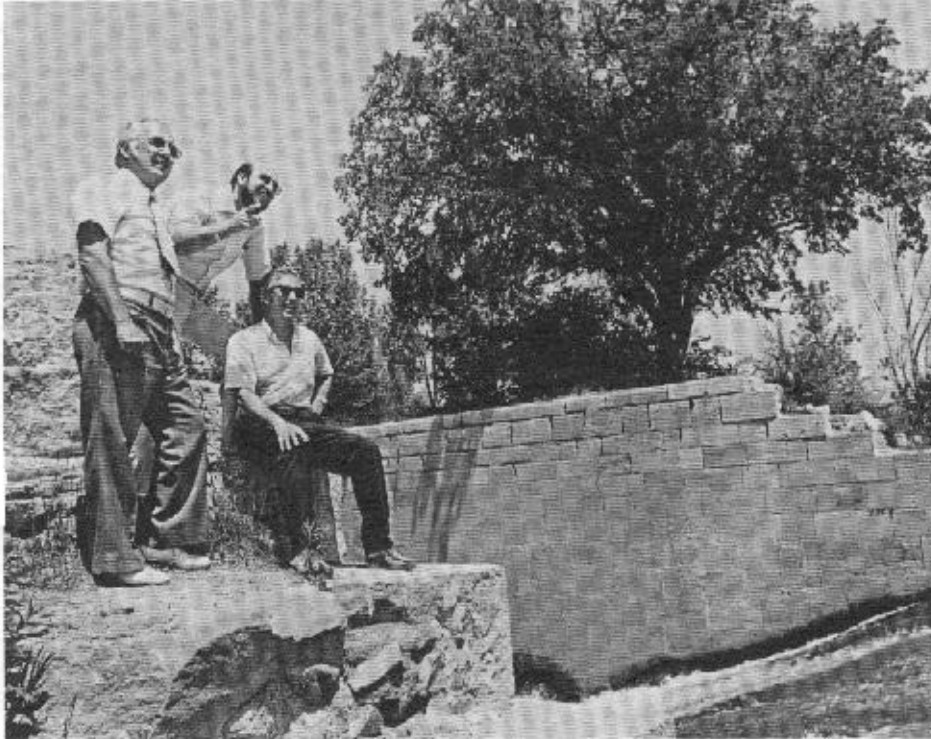
BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 18

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

AUGUST 1976

"WELLAND CANALS — AN INTERNATIONAL TREASURE"



Museum board chairman Frank Caplan points out features of Third Welland Canal to American Canal Society president Tom Hahn. With them, at left, is Malcolm Campbell, western region director of the St. Lawrence Seaway Authority. (Photo by Denis Cahill)

(At the invitation of preservationists in the City of St. Catharines and in the Province of Ontario, ACS President and Mrs. Hahn visited Ontario to help stimulate interest in the preservation of the historic Welland Canals. Local radio stations and newspapers covered the visit which emphasized the international aspects of some of Canada's most historic canals. The following is an excerpt from an article by Reporter Tom Nevens in the St. Catharines Standard.)

Tom Hahn is a canal buff and makes no bones about it. He and his wife Nat spend holidays plying canals throughout the world, and he spends his leisure hours working for the preservation of the historic waterways.

For a long time the 49-year-old retired naval captain and president of the American Canal Society has wanted to see the Welland Canal and the remains of 150 years of canal history.

He saw it yesterday, and was overwhelmed.

"You have something very unique here," he said, surveying the chain of locks running east of General Motors Plant 2. "I don't know any-

where in the world — perhaps other than Birmingham in England — with the potential for urban development of a historic and recreational canal park area."

With the sun beating down, Tom and Nat Hahn toured the remains of the first, second and third Welland Canals with St. Catharines Historical Museum curator Alex Ormston and St. Catharines public relations man Louis Cahill, a director of the American Canal Society. With them were representatives of the city and the Ministry of Culture and Recreation, which has almost concluded a study of potential development of the old canal lands between Port Dalhousie Harbor and the top of the escarpment.

To Tom Hahn, there is so much potential for development that anyone involved in such a project could be overwhelmed by the possibilities.

"There's Port Dalhousie and the buried locks. They'd make wonderful mini-parks. There's the canal valley through the city, which would make a tremendous linear park.

"Then there's this place," he said, indicating the vast acreage to the east of the existing (Fourth Welland) canal.

In fact, he feels that there may be just too much to preserve, and feels any move to work on a project would require a great deal of perspective to decide what should be saved, and what extent of restoration should be carried out.

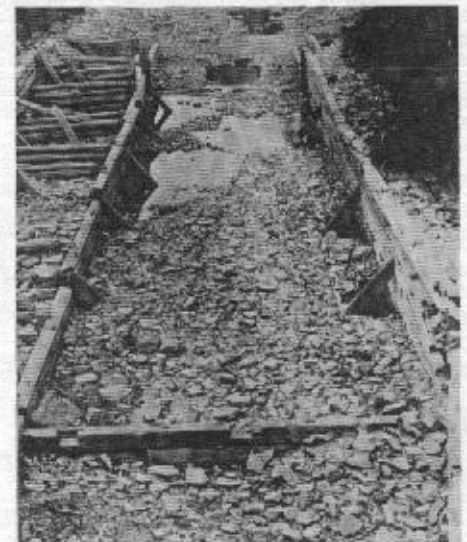
"It's a national treasure . . . no, it's an international treasure. This is important not only to Canadians, but to the people in New York, California and Texas, and there are people in Germany, England and France to whom it's very important," said Capt. Hahn, who lives in Shepherdstown, W. Va. and works for himself in a number of endeavors.

He feels thousands of people who visit Niagara Falls are looking for something else, and the canal is a natural diversion for them.

"It's also of interest to industrial archaeologists, bridge and railway enthusiasts," he said, referring to the old Grand Trunk Railway tunnel which runs under the old Third Canal near the city's southern limits.

Capt. Hahn hasn't always been a canal buff, and in fact, he readily admits he changes hobbies

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Remains of Lock No. 6 of the First Welland Canal uncovered in 1960. Constructed in 1824-29 and in use until around 1844, some of these wooden locks were incorporated as waste weir structures for the cut-stone Second Canal, completed in 1845. (Supplied by Alex Ormston, curator, St. Catharines, Ontario, Historical Museum)

American Canals

BULLETIN OF THE AMERICAN CANAL SOCIETY

"DEDICATED TO HISTORIC CANAL
RESEARCH, PRESERVATION
AND PARKS"

AMERICAN CANALS is issued quarterly by the American Canal Society, 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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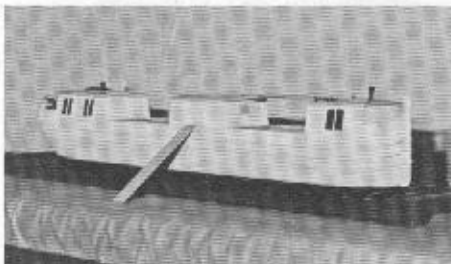
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Chairman, Canal Boat Committee, ACS Director, Carroll M. Gantz, 7100 Oxford Road, Baltimore, Md. 21212.

McKELVEY NEW ACS DIRECTOR

ACS President Tom Hahn announces the appointment of William J. McKelvey, Jr. of 98 Waldo Ave., Bloomfield, NJ 07003 as a national director of the American Canal Society. Bill is the President of the Canal Society of New Jersey, and author of the DELAWARE & RARITAN CANAL: A PICTORIAL HISTORY. He is currently working on a book on the Chesapeake and Delaware Canal and seeks the loan of historical photos for the book.

OHIO BOAT MODEL



This is a 1/4" scale model of the type of canal boat used on the Ohio canals. It was built by ACS Member Capt. Herb W. Dosey, 3076 Lincoln Blvd., Cleveland Heights, Ohio 44118, for the Western Reserve Historical Society and it is a sister ship to the one which he built for the Great Lakes Historical Society in Vermilion, Ohio. Herb is Chairman of the latter's Museum Committee.

FIRST SHIP THROUGH PANAMA CANAL



Both political parties have had considerable coverage of the Panama Canal. Of interest to canal enthusiasts is the above historic photo of the SS ANCON, the first vessel to transit the Panama Canal on 15 August 1914. It (and the SS CRISTOBAL) were owned by the U.S. Government Agency known then as the Panama Canal, and operated by the Panama Railroad Company, which was also a federal agency. The vessels operated between the Panama Canal, Haiti and New York on regularly scheduled voyages. According to the annual reports of the Panama Canal Railroad, both the ANCON and the CRISTOBAL were taken out of service at the time new vessels of the same name were put into operation in 1939. They were temporarily laid up in Gatun Lake, and we assume they were sold for scrap sometime thereafter. (Submitted by Aiden Gould)

CAPTAIN'S CORNER

It hardly seems possible that this is the eighteenth issue of *American Canals* which we have published. Whenever I have finished the collecting and editing of the copy and sent it up to our Production Editor, Bill Shank, for layout, I regret having to leave out certain items, and postpone others until the next edition. When the next edition comes around, then even more items have to be postponed. We have always hoped that *American Canals* could grow to a larger size, but as membership increases, so does the cost of printing and mailing - to the point that we have been stuck at eight pages. Several times I have made an appeal for individuals or groups or companies to sponsor an edition (around \$600), but so far we have had no takers. I would welcome any ideas of how to get out of this dilemma, as we would really like to provide you with more canal information. To increase the size of *American Canals*, would mean that we would have to eliminate all our efforts on canal and canal structure research work, the Canal Boat Construction Index, the *American Canal Guides* now in progress, etc. Each has a very small budget, amounting to actual costs, so that there is no chance for reduction there - only elimination.

With all the millions spent for preservation, not to mention historical heritage, it seems ironic that the small national historic preservation organizations, filled with the talent available on their particular subjects, have to operate on a shoestring. Something is wrong with our scheme of things in this country, and I suspect that if the politicians of either major party were asked to comment at the respective political conventions on their stand on historic preservation and how they would ensure that talent and other resources are properly utilized, we couldn't expect much of an answer.

Frankly, after the "fireworks" of the 200th Anniversary of the Founding of our country, I feel

that in some respects we have "fizzled out". When I saw the bulldozers planting and replanting the shrubs and trees of the Bicentennial Garden in Washington, D.C. (if you didn't like today's plan, wait until next week) as our major effort in the Nation's Capital, while the historic Potomac Canal sat in ruins and the Chesapeake and Ohio Canal limped along due to inadequate funding (in spite of former Secretary of the Interior's public promise in my presence to have the canal repaired to pre-Hurricane Agnes conditions), I began to question our nation's concern at the Federal level for historic preservation. This situation was not helped by halving the budget for historic preservation (ironically enough at the Department of the Interior's recommendation in a somewhat hard to figure out game plan to obtain more money).

The road ahead is not easy, but as I saw in a cartoon in the BOSTON GLOBE recently, "This is the first day of the Tricentennial", we are off on a new century, and we shall just have to try harder!

Tom Hahn

CANAL CALENDAR

We have been asked what happened to the Canal Calendar. We have either had no entries or entries have come in too late to be of use. As the normal "announcement" comes shortly before the event is to take place and therefore of little value for a quarterly publication, we need someone in each organization to see that his society's events are sent early enough to be published.

A LOOK AT THE SUEZ CANAL (Part One)

by J. WAYNE HALSEMA

Touring the Suez Canal Zone a few years after a war is not an easy task. Needed are four or five documents, an updated map, a fairly good knowledge of Egyptian Arabic and a reliable automobile. Last March 26, after almost a month of preparation, eight of us, all teachers at the small American School in Alexandria, Egypt, managed to get permission from the Egyptian authorities to drive the length of the Suez Canal. Since we only had a weekend to make the trip, and because the distance involved from Alexandria to Suez City and back again via Port Said and Cairo is over 600 miles, we set out at the ungodly hour of 5:30 in the morning. Included in the group were a Greek nurse, a Danish photography teacher and couples from West Virginia, Wisconsin and Washington, DC.

Our permission from the Egyptian Government was to cross the Nile Delta to the northern terminus of the Suez Canal at Port Said via the Delta cities of Tanta and Damietta. The route took us across miles of bright green cotton fields, through dozens of small market towns and past literally hundreds of military installations. Egypt in 1976 is a nation obsessed with defense. After four wars and a revolution the Egyptians are not in some cases the easy-going, friendly people that they once were. This fact was brought dramatically home to us in the first hours of our trek to the Canal. All bridges, factories and government offices in Egypt are posted with prominent signs announcing "NO PHOTO" in several languages. A few miles outside of Tanta we were forced to stop on a bridge over a beautiful little barge canal by a truck accident. During the wait one member of our party attempted to photograph the quaint scene below us. Within minutes a large crowd had gathered to demand that our photographer hand over her film at once. She did as they asked and we escaped without harm.

Angry crowds were not the only hazard of our trip. Somewhere on the road to Port Said via Damietta we were sidetracked towards Zagazig and the Suez Canal town of Ismailiya, midway between Port Said and Suez City. I suspect that overzealous Egyptians misled us on purpose, not realizing that large parties of "farangs" (westerners) are now sometimes permitted to travel outside the big cities of Egypt. At one crossroads I jumped out of our brand new Chevy Van (it



Suez Canal Company offices in Port Said, undamaged by the War, but raided by Israeli Commandos on several occasions.

stands out prominently in a country full of Fiat 128's) to ask a policeman the name of the city which we were approaching. The officer looked me up and down and with a straight face said that we were about to enter Mansoura. Behind him, I noticed, was a sign written in Arabic which stated that we were exactly two kilometers from Zagazig, a large Delta city which is nowhere near Mansoura. This kind of obstacle was both common and frustrating. In fairness to the Egyptians, however, it must be noted that over much of the territory which we covered on our Suez Canal tour a war was fought against an invading enemy army a bare 2½ years ago. Our hosts were understandably uneasy about our intentions.

Our first view of the Suez Canal came about 11:30 in the morning, almost exactly six hours after our departure from Alexandria. We approached the Canal Zone at Ismailiya along the Sweet Water Canal which supplies fresh water to the entire Suez Canal Zone from the Nile River at Cairo. The present canal was built in 1859 to supply drinking water to construction workers working on the international waterway. The Sweet Water Canal follows an ancient bed of what was probably the first canal over the isthmus of Suez built in Biblical times. At the present time the Sweet Water Canal is heavily used by the Egyptian army for military transportation purposes. The banks of this freshwater supplier are lined with freshly constructed military docks as the Sweet Water approaches Ismailiya. The quays were covered with ammunition boxes being loaded from barges onto trucks. When I passed along this same route in 1966, a more peaceful year, the Sweet Water was being used to carry vegetables from the Delta to the Suez Canal cities.

Egypt is having problems with the Sweet Water Canal. The April 17, 1976 issue of *Al-Ahram* (The Pyramids) newspaper noted that the water level in the Sweet Water Canal had fallen 20% in recent months due to the heavy demand for water caused by the sudden repopulation of the Canal Zone. The article implied that this drop in the water level was causing severe problems for certain unnamed sectors of the government, i.e. the Army Transportation Group. Leaving the Sweet Water, we turned north toward Port Said on a road through the desert, by-passing Is-

mailiya, and we came out on the canal bank about 15 kilometers north of the city.

To be perfectly frank the first view of the Suez Canal, world crossroads and international waterway, was very disappointing. Instead of romantic scenes of ocean-going vessels sailing through the desert, we were treated to occasional glimpses of the tips of smokestacks barely poking above the hundred foot high fortifications which now line both banks of the Canal for almost its entire length. What the northern sector of the Suez lacks in romantic appeal it certainly makes up for in scenes of spectacular destruction. Throughout the two-hour drive from Ismailiya to Port Said, especially in the sector between Ismailiya and the point where the canal banks begin to divide the brackish waters of Lake Manzalah, the road is lined with shot-up palm trees, devastated villages, hundreds of neat crater holes and miles of decaying slit trenches and tank traps. All were the remains of an unsuccessful Israeli push towards Port Said in the last phases of the October, 1973 Yom Kippur War. Military engineers and others might be interested in the fact that consistently the traditional Egyptian mud-brick villages seem to have survived the fighting far better than any other type of construction on the Canal (save the massive Egyptian fortifications made of sand).

Tired and hungry our party reached Port Said about 1:30 in the afternoon. Before we could get to a restaurant to wash, eat and rest a while we had to go through customs and immigration formalities. Port Said is now one of several "free zones" in Egypt. The free zones are areas which are treated for all practical purposes as if they are not part of the country. Port Said, for example, is full of tax free foreign imports.

After about twenty minutes of red-tape, mercifully speeded by a sympathetic official who could see in our eyes the effects of over eight hours of travelling, we drove into Port Said. Surprisingly the city itself shows few signs of war-connected damage. The Greek Orthodox Cathedral has a large hole in its dome and occasionally wrecked apartment and office blocks are visible. Basically,

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Author of this article, Wayne Halsema, is shown with a Canadian United Nations "M.P." in Ismailiya.

EARLY TRADE ON OHIO'S WESTERN CANAL 1827-1840

by T. K. WOODS, HISTORIAN - CANAL SOCIETY OF OHIO

(Author's Note: Ohio's western canal - the Miami & Erie - wasn't officially known by that name until 1849. It was actually composed of all or part of three separate waterways. These were: The Miami Canal completed from near Cincinnati to Dayton in 1829; The Wabash & Erie Canal completed from Manhattan (Toledo), Ohio to Lafayette, Indiana in 1843; and The Miami Extension Canal completed from Dayton to Junction on the Wabash & Erie in 1845.)

From the earliest days of its inception, Cincinnati, located on the Ohio river, had ready access to the lower river markets and was a handy trading point between Pittsburgh and New Orleans. By 1826, Cincinnati with a population of 16,000 was the "biggest and handsomest town in the state" and had already earned the nickname of "Queen City of the West".

While Ohio's eastern canal, the Ohio & Erie, altered established trade routes by drawing goods to Cleveland and Lake Erie, the Miami Canal simply reinforced the existing orientation of the Miami valley's trade toward the southern river markets and strengthened Cincinnati's position in that trade. The opening of the Miami Canal did, however, initiate commercialized farm production in the area. Prior to the opening of the canal, it was possible to send goods to market only early in the year when spring freshets made the local rivers navigable to flatboats and rafts. With the canal a farmer could ship his produce to market nearly anytime during an 8 to 9 month period. Thus he had an incentive to produce and grow more than he could use, and sell the surplus.

The first section of the Miami Canal was opened from Middletown to Howell's Basin (some 11 miles north of the Ohio river at Cincinnati) in October, 1827. Farmers from a considerable area around Middletown had anticipated the opening and wagoned so much flour and other produce into town that the few boats then operating on the canal were unable to make much of a "dent" in the "pile of produce" even though navigation continued on into the middle of December. Cincinnati newspapers reported that, in addition to other items, 58,000 barrels of flour and 1,800,000 pounds of bacon were shipped on the canal during the final months of 1827.

As the canal inched its way northward, more and more farmers along and close to the route began producing an excess and shipped by



This photo, made north of Miamisburg, looking toward Carrolltown in July of 1904, shows canal freighters reduced to the ignominious task of dumping rubbish along the banks of the canal. Where were the environmentalists, then?

canal. All this activity of course caused many a canal port to "boom". Dayton probably benefited the most since it was the line's northern terminus from 1829 to 1837.

That first year of operation (1829) a Dayton merchant reported, "the country, particularly the farmers, already feel the advantage of the canal in an increased price for their articles and a regular market, as what is not consumed here is now boated to Cincinnati". Traffic was heavy from the beginning. For the first month of boating the next year (1830), 70 boats departed Dayton for Cincinnati and 71 arrived.

The Miami Canal did change the trade patterns of at least a portion of the state. Prior to 1829, farmers from around Piqua (30 miles north of Dayton) sent their products to markets as far away as Fort Wayne and Fort Meigs by keelboat, on narrow, treacherous northward flowing streams. After 1829, the Piqua area's products

were shipped south by wagon to Dayton and the canal. During peak periods, wagon trains from Darke, Miami, Champaign, Clark and Greene Counties crowded Dayton's streets, hauling the surplus of the countryside down to the Warehouses and docks along Second Street.

Most of the freight that flowed down the canal from Dayton to Cincinnati was one or the other of the Miami valley's two staples - wheat and corn - or their products - flour and whiskey. These last two items were the principal cargoes shipped to Cincinnati during the 1830's though there was also enough barreled pork, bulk pork and bacon to earn Cincinnati a less glamorous nickname - "Porkopolis".

Dayton lost its "head of navigation" status in 1837 when the Miami Extension Canal was opened as far north as Piqua. Dayton also lost a considerable amount of warehousing and transient trade, but the city as a whole scarcely noticed for it was now a burgeoning manufacturing center.

When the Ohio country was first settled, enterprising individuals would build a flour mill or distillery at some spot with a convenient and dependable head of water. As a result, these pioneer "factories" were seldom near an established trade route. With the coming of the Miami Canal, all this changed. The canal locks offered excellent sources of waterpower and they were on a trade route - the canal.

These waterpower sites made possible the construction of larger, more efficient mills than the earlier ones built along back country streams. Naturally, farmers near and far brought their wheat and corn to the newer mills on the canal. This, in turn, caused a shift and centralization of

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We are indebted to ACS member James E. Kuhns, Palos Verdes Estates, California, for these fine photos on the M. & E. Canal in the early 1900's.



Remains of old aqueduct on the M. & E., crossing the Mad River at Dayton, Ohio. The "King post" support structure is clearly visible. Photo made March 23, 1911.

FORT FRANCES LOCK

(The following letter was received by Herb O'Hanlon from Robert Legget, 531 Echo Drive, Ottawa, Canada K1S 1N7:

"The enclosed brief account of the Fort Frances Canal may possibly answer your query which appears in the May issue of American Canals. The extract is from a book I have written - Canals of Canada . . . which will be out in a few weeks from Douglas, David and Charles, Publishers, Vancouver, B. C.")

One of the most difficult sections of this long route [to the West] was that between Winnipeg and Lake Superior, through the area dominated by the Lake of the Woods. When steamship services on Lake Superior had begun to speed up and improve journeys westwards as far as the Lakehead (Thunder Bay today), much attention was given to possible improvements of the long and tiresome journey from Prince Arthur's Landing (later Port Arthur) to Lake Winnipeg and the Red River Settlement. A careful survey of the entire route was made in 1857 by Simon J. Dawson, a Scottish civil engineer. He suggested roads for the eastern and western ends, improved portage roads and the use of small steamboats on the larger lakes.



Rock excavation for the unfinished lock at Fort Francis, Ontario. Now used as waste water channel for a paper mill. For a century this lock has been discussed, and investigated, but never completed. (Photo by Robert Legget.)

Early in the winter of 1869 he was given instructions to start work on what was to become known as the "Dawson Road". The dispatch of an army expedition to quell the Red River uprising of the following year put the first part of the uncompleted road to good use in 1870 and focussed attention on the possibilities presented by the combined road and water route. Railway building was in the air, a start having been made by the Government of Canada, with direct labour, at building the transcontinental line that was eventually to be finished as the Canadian Pacific Railway. The mid-seventies in Canada were years of economic difficulties and so work was pushed ahead on the Dawson Road and it was well used, despite its limitations, for the few years remaining until the C.P.R. was completed.

The building of the Canadian Pacific had so caught the public imagination, within Canada and far beyond, that this earlier attempt to provide improved transportation to the West is a chapter of Canadian history but little appreciated even by Canadians. It is, therefore, not too surprising that the inclusion in the Dawson Road of a nav-

igation lock is a part of the overall story almost unknown. But a lock was proposed and almost \$300,000 spent upon it. The location was at the outlet from Rainy Lake into the Rainy River, a strategic spot now occupied by the town of Fort Frances (named after Frances Simpson, wife of Sir George Simpson of the Hudson's Bay Company which maintained a post at this location). The corresponding U.S. town is known as International Falls, indicative of the impediment to navigation provided here by the spectacular falls, the international boundary being formed by the Rainy River for about thirty miles until it discharges into the Lake of the Woods.

A modern bridge connects the two towns. As one crosses over this the excavation for the canal may be seen beneath, on the Canadian side of the Rainy River. It is about 800 ft. long, in solid rock, and is now used as an overflow channel from the adjacent paper mill. A lock, 200 ft. long by 38 ft. wide with 5 ft. 6 in. over the sill, was to be constructed in this channel work on which started in 1876. Total expenditure was \$288,278.51, this modest sum being explained when we note that all work was stopped early in 1879, before the lock proper had been installed. This strange interruption can be explained only in political terms. The canal works were started under the Liberal administration headed by Alexander Mackenzie. On 9 October 1878 this Government was defeated and the Conservatives, under Sir John A. Macdonald, were returned to power, pledged to complete the Canadian Pacific Railway, as a railway, and with no "amphibious" connections such as Mackenzie had approved as an economy measure.

The unfinished canal has therefore stood for almost a century as a reminder of all the hopes then entertained for the water route through this lovely area. The paper company was permitted to build their dam, adjacent to the canal, in 1905 and it is from this date that the canal has been used as a waste channel. Many proposals have been made for completing the canal, even to the extent of establishing (1911) the Western Canal Company with this objective. Steamers sailed regularly between Kenora, on the Lake of the Woods, and Fort Frances until 1914 even though this meant breasting the Long Sault Rapids on the Rainy River, for the improvement of which the Canal Company proposed another small lock. With these improvements, a through water route from the east end of Rainy Lake to beyond Kenora would have been provided, a distance of about 200 miles. Although not yet built, this lock may yet prove to be one of Canada's modern canal works since the steady increase in the volume of pleasure craft in this wonderful lake area would appear to present some possibility to warrant enough for the completion of a canal work started a century ago. And the unveiling of an historic plaque at Fort Frances, in September 1968, indicates clearly the local interest that still exists in this most isolated of all Canada's canals.

CANAL PLAQUE FUND

We are on our way in establishing a Canal Boat Authentication and Registration program, the purpose of which will be to have all canal boat reconstructions in North America registered, and if qualified, authenticated as an authentic canal boat reconstruction by the American Canal Society. Though a charge will be made to help cover the cost of plaques to be used, we need to have a number cast in advance and we haven't the funds (about \$400 to do this). If you would like to support this program, send your check (made out to American Canal Society Registration Fund) to: ACS Treasurer, Bill Trout, 1932 Cinco Robles Drive, Duarte, CA 91010.

OHIO'S WESTERN CANAL



An old packet boat on the Miami and Erie Canal, probably around 1870.

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industry and business to many of the canal ports. Manufacturing centers sprung up at a few of these ports. Middletown, Dayton, Troy, Hamilton (on a short branch of the Miami Canal) and Piqua became the principal industrial towns of the area as distilleries and flour, paper, malt and flaxseed-oil mills were constructed at these sites.

Dayton, through a combination of circumstances, became the predominant milling center of the region. By 1840, half of the flour arriving at Cincinnati by canal came from Dayton.

In Cincinnati, real-estate values rose 20 to 25 per cent in the first three years after the canal was opened, and population increased rapidly. The value of Cincinnati's export trade, estimated at one million dollars in 1826, increased fourfold by 1832, and to about six million dollars by the mid-thirties. Throughout the Miami valley, populations of towns on the canal increased much more rapidly during 1820 to 1840 than did non-canal towns in the area.

In the six counties along the Miami Canal, urban property valuations rose from 4.7 million dollars in 1832 to 6.8 million dollars in 1840. And in 1840, the Miami Canal Counties had a higher proportion of its work force engaged in trade, commerce and manufacturing than any other region of the state. Nearly 30% of the work force in Montgomery County (Dayton) and over 60% of the labor force in Hamilton County (Cincinnati) was so engaged.

In its first decade of operation, the Miami Canal took an already prosperous area, strengthened it, enlarged it and laid the basis for the strong industrialization that exists in the Dayton-Cincinnati region today.



West end of the lock at the Mad River Aqueduct in Dayton, March 23, 1911. The canal channel had been dry for a few years when this photo was made; wood-work of gates still in good shape.

GEORGE WASHINGTON: CANAL BUILDER

by ROBERT S. MAYO, P.E.

We all know of Washington as a wealthy planter, as a victorious general and as our first president. But few people realize that he was also a distinguished engineer and that his success in other fields, particularly in the military, were due in no small part to his engineering training and experience. There were several highways and canals in which Washington played either a direct or an indirect part. The highways are still in daily use and you have probably travelled over them. Of the canals only one is still in use.

In 1748 Washington was employed by Lord Fairfax as an apprentice surveyor in the wilderness south of what is now Cumberland, Maryland. This sixteen year old orphan was faced by all the hardships of the backwoods country but in these three years he learned surveying and the ways of the Indians. What he learned about the Indians was most valuable in the French and Indian wars. At the age of nineteen he returned to Williamsburg and was examined and licensed as a state surveyor of the Virginia colony.

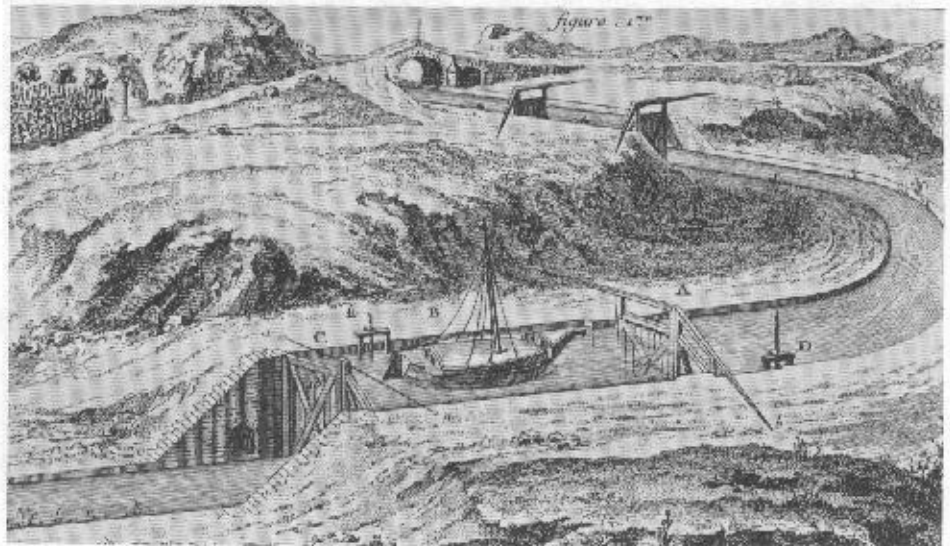
At the urging of his brother Lawrence he returned to the big house along the Potomac to complete his formal education. He was tutored by friends of Lawrence. They must have been excellent tutors and George an apt scholar. He was taught the Social Graces, the outward signs of a gentleman. He was tutored in Military Science and Tactics and it was Washington's skill in this field that won the Revolutionary War for us. And he was tutored in Engineering.

The latter was primarily Military Engineering because there was at that time no clear-cut differentiation between civil and military engineering. It was to be another fifty years before the first college of engineering opened its doors in North America. This was West Point, established on the recommendation of President Washington.

Major Washington was an Engineer on Braddock's ill-fated expedition to capture the French fort at the Forks of the Ohio River. From Fort Cumberland he helped locate a road westward and northward to what is now known as Pittsburgh. In the western part of the state they still call it Braddock's Road but we know portions of it better as US-40.



George Washington, as a young surveyor, is shown here holding a magnetic transit, and at his feet is a surveyor's chain. (From "Waterway to the West" by James Kirkwood, 1963 with credit to the Library of Congress.)



It was in reading about canals such as this that Washington became an ardent promoter of canals in America. Shown here is the Languedoc Canal, built in France in 1681 - one hundred fifty miles long, with one hundred locks. This illustration was first published in 1762 in "Diderot Pictorial Encyclopedia".

In 1758 he was a Lt. Col. on the staff of General Forbes. This expedition was successful in capturing Fort Duquesne, the name used by the French for their Fort at Pittsburgh. General Forbes located a new road from Fort Bedford to Pittsburgh which, around Pittsburgh, is still known as Forbes Road but we know it better as US-30.

For 8½ years Washington was Commander-in-Chief of the American Revolutionary War Forces. At the end of the war, in 1784, he took a trip from Mount Vernon up the Potomac River, over the Allegheny Mountains and down the Monongahela to the infant city of Pittsburgh. Then he continued by boat down the Ohio River, up the Kanawha River and crossed the mountains close to White Sulphur Springs. Then down the James River to Richmond and thence cross-country to Mount Vernon.

He saw on this trip that unless communications were improved the settlers in the rich Ohio Country would ship their products and buy their supplies from New Orleans, and New Orleans was then in the hands of the French.

Washington was a subscriber to all the scientific journals published in France or England. He had read there of the wonderful success of the canals as built in those countries. Therefore, in the years following this trip he was an incorporator, a stockholder and sometimes an officer of several canal companies designed to improve communication between Chesapeake Bay to the west or south.

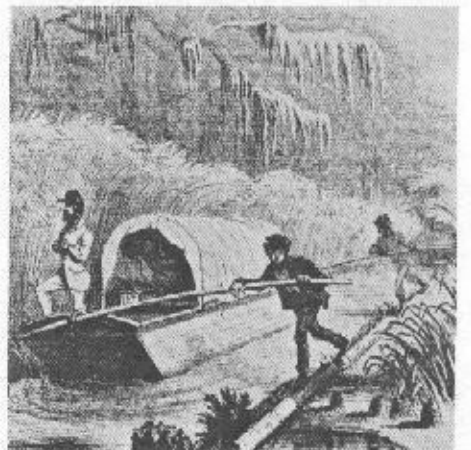
The "Patowmack Canal" passed the Little Falls and Great Falls not far above what is now the city of Washington. This was incorporated in 1774 but work did not begin until after the war. Washington was elected President of the company in 1785. It was finally opened in 1802 but was closed in 1830 when the C & O Canal was opened. A visitor to Great Falls, on the Virginia side can still see the remains of this ancient canal, one of the first built in North America.

George Washington was President of the James River Company which was supposed to build locks around Richmond and open the upper portions of the James River. In later years, long after Washington's death, the name was

changed to James River & Kanawha but work was not started until 1835. It was extended to the foothills of the Allegheny Mountains but it was never successful and was soon abandoned.

The Dismal Swamp Canal connects Chesapeake Bay with Albermarle Sound. Washington, in 1763 made the first reconnaissance of the proposed route in a canoe and later became a stockholder. Work was started in 1787 and it was opened in 1794. It proved invaluable in transporting supplies during the War of 1812 and it is one of the few old canals still in daily use as part of the Intracoastal Waterway.

As President of the United States, Washington never lost interest in canals and while visiting Reading, Penna., in November 1793, he rode out to Womelsdorf, 14 miles away, to inspect the locks of the Susquehanna & Schuylkill Canal, then building. Today we know it as the Union Canal.



This view of the Dismal Swamp Canal shows some of the difficulties which Washington had to contend with. The ground was so swampy that it was impossible to build the ordinary towpath. The boats were first shoved along by men walking on foot logs. (From Harper's Magazine, 1856, and Transportation Revolution, 1951)

A LOOK AT SUEZ

(Concluded from Page Three)

however, Port Said retains most of its pre-1967 colonial charm with broad avenues, frequent traffic circles and miles of New Orleans-style wooden balconies.

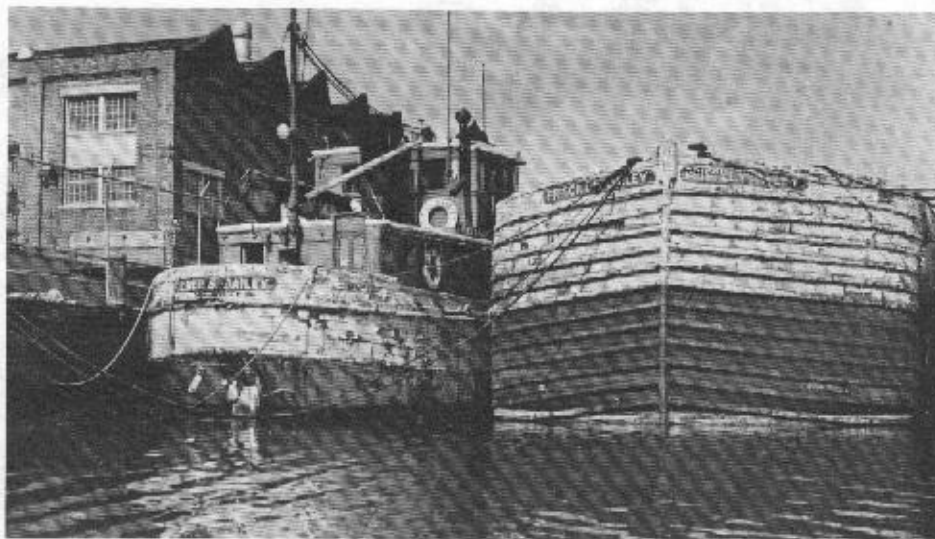
Port Said experienced more than her share of wartime problems over the last decade. During the war period most of her population was in exile in the Nile Delta. Most of these refugees were evacuated soon after the Six Day War in June, 1967 and returned just last year. The few who did stay in the city experienced both hardship and occasional adventure. One of these was the security guard who volunteered to guide us around the Suez Canal administration building during the afternoon siesta period. While taking us around our guide recalled the time when he was doing his rounds of the then-abandoned administration building. As he turned to check the handle on a locked door, a large group of Israeli commandos jumped out of a landing craft on the canal bank a few feet away. The raiders ran through the courtyard and across the street to a small apartment complex, blew it up and departed in a hail of bullets. The bank where this particular group of Israelis landed in 1970 is about fifteen yards from the point where President Sadat stood during the Canal reopening ceremonies in 1974. Our guide claims that this sort of incident was quite frequent during the war years and that it did not disturb him in the least.

Port Said is full of signs that life is finally returning to normal. Workers are everywhere, restoring vital services, repairing damaged buildings and unloading ships full of duty-free goods. The Canal Authority drydocks in Port Fuad on the Sinai side of the Canal opposite Port Said are in full operation. Convoys of ships waiting to transit the Canal are once again being serviced by the usual hordes of souvenir vendors. The seafood restaurants of the city are back in operation. The one where we ate lunch had returned to the city from the Delta town of Mansoura just a few months before. The citizens of Port Said seem to have a lot of confidence in the future. I hope another war does not disappoint them.

One of the most entertaining parts of a visit to Port Said is the ferry ride across the harbor to Port Fuad. The fare makes New York's Staten Island Ferry look greedy. For two millemes (.310 U.S. cents) a person can ride back and forth between the two cities all day long. Aside from the fact that the top deck of a ferry boat in Egypt is a great place to sun oneself and enjoy the breeze, the ferry ride gives the visitor a front row seat on the hundreds of maritime activities which are associated with a crossroads of world shipping.

During our afternoon on the ferry boat we met the Captain, a Mr. Hafez Said. Mr. Said looked like a ferry boat captain. He was large, jolly and talkative. In between narrowly missing the ship convoys gathering in the harbor for the trip to Suez, Captain Said entertained us with stories of the last nine years, hard ones for any citizen of Port Said. He started out by saying that after the 1967 disaster and the evacuation of the civilian population to the Nile Delta and Cairo, the Egyptian Army took over the operation of the ferries. Said, his wife, and nine children moved in with relatives in Cairo. Unable to work, except for a short stretch on a German freighter, Mr. Said spent the last nine years in grinding poverty with only a small government subsidy and the generosity of his relatives to sustain him. There was, however, a good side to this sad story. While they were stuck in Cairo, two of his sons and a daughter became motivated enough

CANAL BOAT REMAINS



Canal Boat PRISCILLA DAILEY built in 1929 at Whitehall, NY on the Champlain Canal (at right) and Canal Boat ELMER S. DAILEY (at left), formerly Canal Boat CLAIRE S. FOLLETTE built in 1915 at Towanda, NY on the Erie Canal. Photo taken 1973. Both vessels are now sunk at their moorings.

(Recently the American Canal Society became interested in the remains of old canal boats. The following letter from ACS Director Bill McKelvey pointed further to the need to locate, identify and create an interest in preserving the remains of North American canal boats.)

"Have come across a most interesting (and perhaps urgent as well) item for the next issue [of *American Canals*]. Recently communicated with friend and fellow author John Kochiss of 99 Trojan Dr., Bridgeport, CN 06610. He told me of some wood hull canal boats . . . and he sent me some photos. The best view is enclosed of the Priscilla Dailey - Canal Boat - U.S. Registry #170368, 311 tons, 111' long x 24' beam x 11.8' depth of hold. She was built in 1929 at Whitehall, NY (the north end of the Champlain Canal). The other boat is the Elmer S. Dailey - Oil (Diesel), screw propeller type Canal Boat. U.S. Registry #166315, 149 gross tons, 101 net, 105.2' long x 17.9' beam x 9.9' depth of hold, 210 horsepower, used in freight service. Built in 1915! at Towanda, NY at the west end of the old Erie Canal. She was formerly the Canal Boat Claire B. Follette.

"We have some real winners here! The photos were taken in Oct. 1973. Unfortunately both have since sunk at their moorings. To the best of my knowledge they are the only known intact wood hull canal boats in this country. I don't

to enter Cairo University (all Egyptian universities are free) where they are now completing their B.A.'s - the first in the family.

Like all Zonlans we met in our travels, Mr. Said was grateful to the Egyptian Army, the USS Inchon and the USA (in that order) for reopening their canal. The USS Inchon, a U.S. Navy helicopter carrier, was based in Port Said for six months in 1974 and 1975 as the flagship of a combined U.S.-U.K.-Egyptian force with the assignment of clearing the many tons of explosives which had fallen in the canal during the long shootout between the Israeli and Egyptian Armies.

(Our Egyptian Correspondent Wayne Halsema is stationed at the Schutz American School in Alexandria. His account will be continued in the next issue of *American Canals*.)

know about present ownership, but they are just screaming for preservation. They are half-way between Mystic Seaport and South Street Seaport (NYC). They are (hopefully) still in one piece.

"I have a strong feeling of duty to stir up some interest to see that these vessels are not destroyed. They were last used (or registered) at New York City by Elmer Dailey and prior to that by Stewart J. Dailey."

(Bill McKelvey, 98 Waldo Ave., Bloomfield, NJ 07003 has been appointed head of the Canal Boat Remains sub-committee of Carroll Gantz' Canal Boat Committee. Bill is setting up a card file to be used and made available to ACS members, having about a dozen entries so far. Send information on any canal boat remains, wrecks, hulks, burials you might know of to Bill to build up our knowledge of the subject. He notes that there is in progress a survey of about 2000 vessel remains in and around New York Harbor prior to the massive cleanup by the Corps of Engineers. We can bet that some canal boat remains will be found!)

CANAL CRUISIN'

Texaco puts out ten map charts for the boatman who likes to cruise our rivers and canals. Just tell them in which navigable waterway you are interested and they will do the rest, with a fine packet of maps and general boating information. Write: Texaco Waterways Service, Texaco, Inc., 135 East 42nd St., New York, NY 10017.

Also when you travel our fine waterways, use KOA (Kamp Grounds of America). A directory listing hundreds of overnight stops in the United States and Canada can be obtained by writing to: KOA, Box 1138, Billings, MN 59103.

If you have information to share or seek help regarding inland waterway travel in North America, write to: Bev Morant, Chairman, ACS Navigation Committee, 61 West Bonita, Sierra Madre, CA 91024.

(Let us know if your canal society or canal-related society was not included in last year's organizational listing. - Ed.)

CSO-PCS Beaver-Erie Canal Tour



Various Ohio and Pennsylvania canal society dignitaries inspecting the Sharpsville Lock on the Erie Extension Canal during the CSO-PCS tour May 8th. From the left: Denver Walton, Tour Coordinator for PCS; Clare Swisher, PCS Director for Erie; John Droege, First Vice President for CSO; Mrs. Marjorie Trevorrow; Stan Dorsett, a visitor from Rugeley, England; Frank Trevorrow, CSO President; and Terry Woods, CSO Tour Coordinator. (Photo by Bill Shank)

About 85 people attended the combined meeting of the Canal Society of Ohio and the Pennsylvania Canal Society, May 7th through 9th, with headquarters at the Holiday Inn at Beaver Falls, Pa.

Friday evening the group gathered for fellowship and an evening of slides and exchange of information on the history of the Beaver-Erie Extension Canal, and what they might expect to see on the morrow.

Good weather prevailed during the tour on Saturday, which extended from the Ohio River at Montgomery Dam, through Beaver, Rochester, New Brighton, Staylesville, West Pittsburg, Mahoningtown, New Castle, Harbor Ridge,

Pulaski, Wheatland and Sharpsville. Remains of seven locks and other artifacts were visited enroute, and a new canal-lock marker was dedicated at New Brighton. A banquet was held Saturday evening with excellent musical entertainment by several young ladies who gave their version of a number of old canal songs, followed by a combined informal meeting and more slides. A well-organized meet!

Smithsonians Tour Union Canal



George Wills (right) explains the history of the Union Canal Tunnel at Lebanon, Pa., to a bus-load of Resident Associates from the Smithsonian Institution, Washington, D.C., who inspected old locks, aqueducts, the 36" diameter brick water-supply pipe of the Union Canal, July 31, 1976. On the left are: Ruth Ann Overbeck, Smithsonian Tour Leader; Lee Struble of the C & O Canal National Historic Park at Sharpsburg, Maryland; and Bill Shank (with conch shell) who assisted George Wills as a tour guide. (Photo by the Lebanon Daily News)

"International Treasure"

(Concluded from Page One)

every two or three years. But canals have grabbed him, ever since he joined a group, headed by U.S. Supreme Court Justice William O. Douglas to fight for the preservation of the Chesapeake and Ohio Canal near Washington, D.C.

It was threatened by a highway development, but the group won, and Capt. Hahn has been fighting for historic canals ever since. In all, he believes there are between 8,000 and 10,000 canal enthusiasts in North America.

How long will he remain president of the American Canal Society?

"I don't know. I'm well past my time limit for hobbies already," he said.

But while he is president, he wants to offer any assistance from the society to local residents who want to preserve the historical significance of the Welland Canals.

"It's too important not to preserve," he said.

CLASSIFIED ADVERTISEMENTS

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Canal Boat to Freedom (Fall). Juvenile novel about the Delaware & Raritan Canal, 244pp, \$2.75.

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Cruise the English Canals this summer in PHOBOS. Genuine ex-working boat, comfortably converted for family living. Reasonable terms. Details from East Whitley Farm, Shamley Green, near Guildford, Surrey, England.

ACS President Tom Hahn announces the appointment of John M. Lamb as a National Director of the American Canal Society. John has been busy for some years on the Illinois and Michigan Canal Committee and has assisted the American Canal Society in many ways. His address is: 1109 Garfield Street, Lockport, IL.