AMERICAN CANALS

BULLETIN OF
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 25 **Editorial Address – Box 310, Shepherdstown, W. VA. 25443** **MAY 1978**

NEW ACS OFFICERS

Effective 1 July 1978, the American Canal Society will have a change in its principal officers when William H. Shank, P.E., takes over the helm of the Society as President. Bill Shank is known to many canal enthusiasts as a former Vice President of the Pennsylvania Canal Society, Editor of **Canal Currents** for 22 issues, and Vice President, Secretary, and Production Editor of the American Canal Society for nearly seven years. Bill was assisted in all these tasks by Ruth Shank, who aside from her unofficial duties was actually Assistant-Secretary of the American Canal Society. Bill is the author of many canal books and articles concerning not only canals but other forms of transportation, and is a Professional Engineer.

William E. Trout, III, Ph.D., becomes the sole Vice President of the Society and will retain his title as Chairman of the Canal Parks Committee, as Editor of the **American Canal Guide**, and as Associate Editor of **American Canals.** Bill Trout (for those who are new to the Society) is the acknowledged authority on the canals of Virginia, a leading expert on the canals of the world, and an authority on underwater archeology. Being relieved from his duties as Treasurer of the Society will relieve Bill (we hope) for more work in preservation and research.

A part of the duties of Bill Shank and Bill Trout have been taken over by Charles W. Derr, Jr. of Freemansburg, Pennsylvania, who becomes the Secretary-Treasurer of the American Canal Society. Charlie Derr has been active for several years in the Freemansburg area on the Lehigh Canal and in the affairs of the Pennsylvania Canal Society, of which he is a Director. In fact, the entire Derr family is composed of canal enthusiasts, and all will pitch in to help with their new duties in the Society.

Captain Tom Hahn remains **Editor of American Canals** and President Emeritus. Being relieved of the chief administrative duties of the Society hopefully will allow him to delve more deeply into the canal research in which he is particularly interested. He will remain in touch with all of you through **American Canals** and through the "Captain's Corner" which should perhaps now more appropriately be called the "Editor's Corner" or some such, with a new "Captain" at the helm.

The directors named in the last edition of **American Canals** remain in office. Bill Trout, Tom Hahn, and Bill Shank are all the founders of the American Canal Society Inc., which was conceived in 1971 and formally organized in 1972.

Our English member Sam T. Cash repeats his offer of free lectures on the English canals to canal organizations, church groups, schools, or other organizations on his intended trip to the U.S. Sam's new address is: 'Abbeymead', 18 Plymouth Road, Tavistock, Devon, England.

End of Cross-Florida Barge Canal?

Inglis Lock on the Cross-Florida Barge Canal, 84 x 600 feet, built in 1970. This view shows the east gate and control building. Note the "Hyacinths" floating in the lock chamber. (Photo by Alden Gould, March 1975)

An administration task force has recommended a $25-million plan to dismantle the Cross-Florida Barge Canal, drain Lake Oklawaha and restore the Oklawaha River to its pre-canal state. The plan will be submitted to the White House for President Carter's decision. The plan would involve filling in the locks, removing the Rodman Dam and restoring the area as nearly as possible to its natural state. After the White House review, the proposal would be sent to Congress for the ultimate decision. Some $70-million has been spent on the canal, which was one-third completed in 1971 when President Nixon responded to environmental objections and halted it. See additional photos in **American Canals** No. 20. (Submitted by ACS Director Alden Gould, from the Fort Myers News.)

Suez Canal Nautical Charts

The U.S. last fall made a move to increase the efficiency of the Suez Canal by preparing new nautical charts of the approaches to the canal. These charts will permit ships entering or leaving the canal to navigate with confidence. The value of accurate charting becomes increasingly important as more and more vessels use the canal and the numbers of supertankers increase. *(Submitted by Wayne Halsema, ACS, from the* ***Egyptian Gazette.)***

VIRGINIA CANALS & NAVIGATIONS SOCIETY

Virginia's first canal society, supported by the American Canal Society (in spirit, not money, that is), got off to a rousing start at its first meeting on 8 April in Richmond, hosted by Reynolds Aluminum Company (a long-time supporter of canals and a prime example of corporate responsibility regarding the preservation of the community of which it is a part). ACS members Paul Murphy and Tony Perrins (Reynolds executives) carried out the welcome of the organizing group to their usual standard of perfection. Talks, slide shows, and movies were presented by T. Gibson Hobbs, Jr., Richard Davis, J. W. Siegfried, Jr., James Moore, III, and William E. Trout, III, Ph.D. An organizing committee was appointed to investigate the most effective instruments of organization, financing, etc. for the organization. The American Canal Society was officially represented through Virginia canal expert Bill Trout, ACS Vice President and Treasurer, as well as by several ACS members. Our special congratulations go to Robert O. Bush, the principal organizer of the society.

(Several years ago Bob Bush wrote to me asking why someone had not organized a Virginia Canal Society. I suggested to him that he should do so, and so it is with a special feeling of appreciation that he has done so in such a successful manner. Tom Hahn)

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 310, 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.

Annual subscription to "AMERICAN CANALS" is automatic with a minimum ACS dues payment of $6.00. Individual copies may be purchased at $1.00.

ACS President and Editor-in-Chief – Capt. Thomas F. Hahn, USN (Ret.), Box 310, Shepherdstown, W.Va. 25443.

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

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

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

Chairman, Canal Boat Committee, ACS Director, Carroll M. Gantz, 7100 Oxford Road, Baltimore, Md. 21212.

RESEARCHING CANAL BOATS

This is a brief description of three sources of information which can be very helpful in canal boat research. Unfortunately, recording of vessels was limited to those which were required to be registered by the U.S. Government. Powered vessels or mule drawn boats which actively engaged in inter-state commerce needed documentation papers and were assigned a U.S. registry number. However, canal vessels which were captive to one canal or never left the waters of one state usually were not registered.

The primary reference publication is **Merchant Vessels of the United States**, 1868 to the present, printed annually by the Government Printing Office, and usually available only at larger libraries. Unpowered (or mule) canal boats are listed under the "unrigged" section, and are arranged alphabetically by the first letter or initial of the full name – not by last name first. The canal historian can obtain much information by "reading" these lists from end to end. For instance, the lists can be used in reverse to determine names of vessels built at, or with home ports at, towns or cities on canals. Frequently, vessels change names, and/or "rig" and tracing them becomes akin to detective work. The earliest volumes give only the home port and the tonnage of the boat. Later volumes also list the year and place built. By 1910 the information also includes the number of crew members and by 1925, the length, width, depth, type of service or trade, plus name and address of owner.

For steam canal vessels only, the one volume reference work entitled **Merchant Steam Vessels of the United States** is highly recommended. It covers the years 1790 to 1868 and is also known as "the Lytle – Hold camper list," named after the original compilers. The list was revised and edited by C. Bradford Mitchell and was reprinted in 1975 by the Steamship Historical Society of America, Inc.

Generally, if a vessel can be located in **Merchant Vessels of the U.S.**, there is a very good chance that the original documents issued to the vessel are on file in the National Archives. But, they do not have a comprehensive index to vessel documents for canal boats prior to 1890. In many instances, canal boats operated for years without vessel documents, while in other cases they were documented almost as soon as they were built.

Vessel documentation records in the National Archives include certificates of registry, enrollment, and license, issued to American-flag merchant vessels. A typical certificate contains the name of the owner, the name of the master on the date issued, a brief description of the vessel, and the date and place built. Changes in the ownership, home port, name, or description of the vessel, or a change in the type of trade in which it engaged, required the issuance of a new certificate.

The first and last certificates issued to any vessel usually contain enough data to summarize the vessel's career. In addition to the data ordinarily found in each certificate, the first document often contains the name of the builder of the vessel, and the last frequently includes an endorsement containing information about the end of its career as a registered American merchant vessel.

Most researchers require only the information contained in the first and last documents issued to a vessel. Photo copies of the first and last

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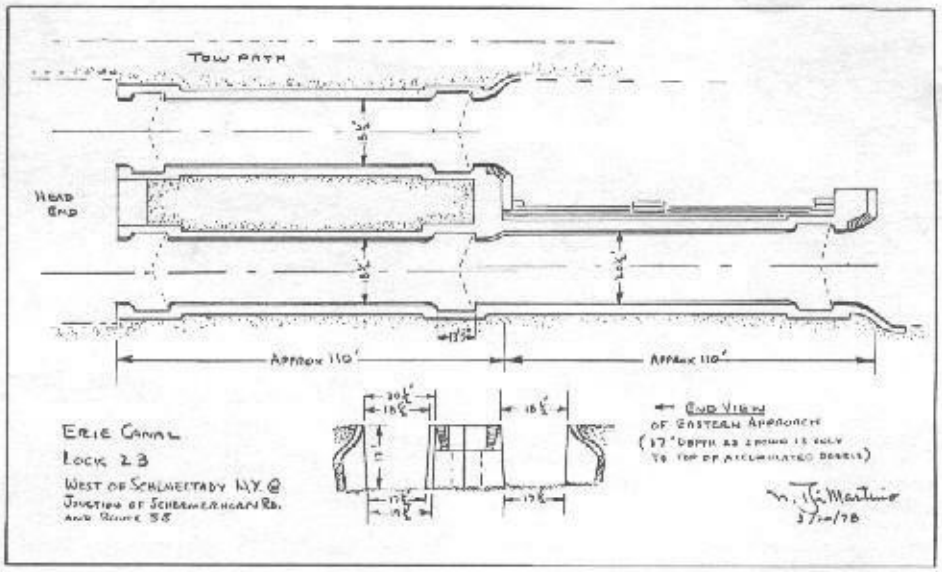
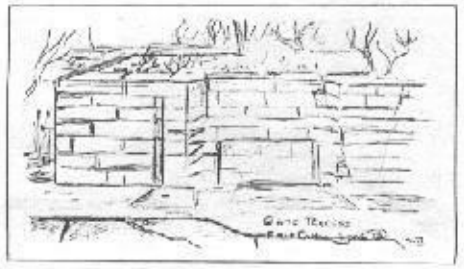
SKETCHES VERSUS PHOTOS

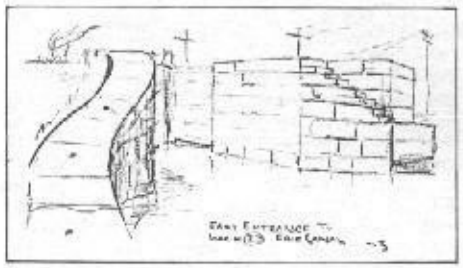


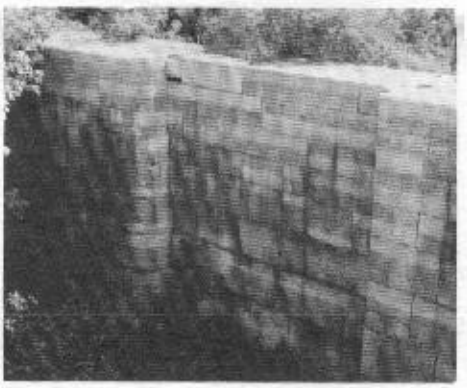
Many of us like to photograph old canal remains. Those of us who do know the frustration of vegetation most of the year obscuring structure details or shots which are next to impossible with a camera to record what we want.

ACS Member Nick DiMartino has solved part of this problem as have many industrial archeologists through the use of sketches and drawings. One does not need to be an artist to do this, but a lot of practice helps. So, we suggest that you might try this on your next trip to a canal remain, and try to pick up some interesting details which do not show up well in the camera.

The sketches, drawing and photo shown here are all of Lock 23 on the old Erie Canal west of Schenectady, New York. Interestingly, the sketches were made in 1939 when Mr. DiMartino was a youngster. He made the photo in 1977, and the more formal plan and end-view in 1978.

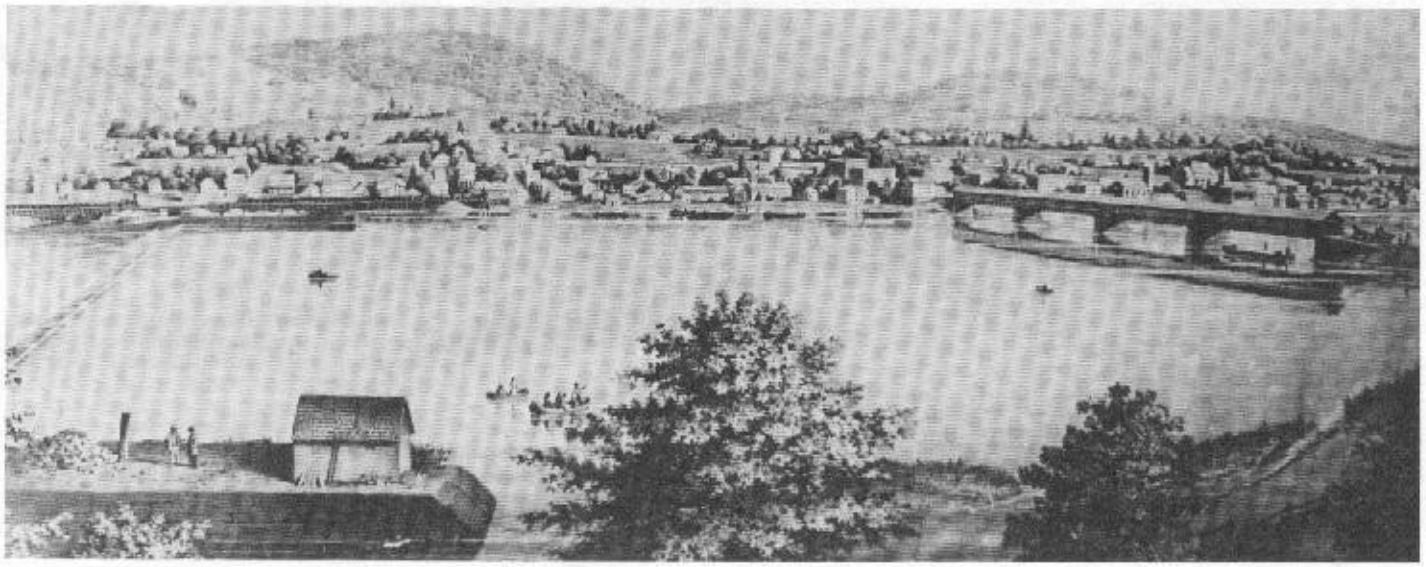






Lock Number 23 on the Erie Canal at Rotterdam, N.Y., showing lock gate recess. Photo made in the Spring of 1977 by N. DiMartino.

Pennsylvania North Branch Extension Canal



Slack-water dam and towpath bridge at Towanda, Pa., on the North Branch Extension Canal, circa 1856. Note dam outlet lock abutment at the lower left. This artist sketch was made from the east bank of the Susquehanna, with Towanda on the opposite bank. (Illustration courtesy of Bob Archer, Silver Spring, Maryland.)

by T.K. Woods

Pennsylvania's officials were confident that in 1854, after more than 18 years of on again, off again construction, the North Branch Extension Canal would be opened to traffic from Pittston to the New York State Line.

The eighteen mile long Junction Canal was constructed by private capital from Pennsylvania's North Branch Extension to New York's Chemung Canal and opened early in 1854. A packet boat was then brought in from the New York System to make regular runs between Elmira New York and Wilkes-Barre, Pennsylvania.

When water was let into that part of the Extension north of Coxton and south of Towanda, though, it was impossible to maintain levels deep enough to carry traffic. The earth is very porous along the upper Susquehanna and the canal channel hadn't been properly lined with clay "puddle." All normal attempts to "fix" the canal failed. Leaking banks became undermined and fell into the river. Whole levels suddenly drained away into underground caverns.

Allegations of incompetent engineering and political corruption were made. Whether or not these charges were true, North Branch Extension Superintendent Mathew A. Gamble resigned in the fall of 1854. His final report estimated that it would take an additional expenditure of $49,000 to open the canal to through traffic.

William Rose Maffet, an engineer with a great deal of experience on canals, railroads and mines was hired as Chief Engineer of the North Branch Extension in November, 1854. He promptly hired Thomas S. McNair, a life-long friend, as Assistant Engineer.

Maffet had become acquainted with a number of good engineers over the years and he now attempted to hire the best of those in a frantic try at getting the Extension Canal running. One such man was J. Bennett Smith, then enjoying a "cushy" job in the Engineering Department of the Lackawanna & Bloomsburg R.R. Maffet had gotten Smith his first engineering job and felt he "owned" him. Smith must have thought so, too, for he soon found himself in Wilkes-Barre with Maffet, facing a cold North-Eastern Pennsylvania winter on the Extension Canal.

A herculean effort was made to get the canal in shape before the end of the year, but the job was more than anyone had figured. It was finally decided to deepen the channel all along the defective section and line it with a good thickness of clay "puddle." For this purpose large clay beds were purchased near Milan.

All this was in the future, however. A heavy snowstorm and cold spell hit the region early in December and Maffet decided to shut down construction for the season. He traveled to Harrisburg to get the money ($14,000) to pay off the crews. The money was given to Smith with the order to take it to McNair who was supposed to be staying at George Saxe's Hotel at the head of the narrows above Coxton. Let's now have S. Bennett Smith, himself, take up the narrative, from an old newspaper interview . . .

"I put the money in an old carpet bag and took the early morning stage line that ran between Wilkes-Barre and Scranton and was operated by Dave Seamons and Dan Roberts. I left that stage at Upper Pittston and traveled the towing path to Saxe's Tavern, but found that McNair had taken his crew and gone up the line to do some engineering work.

"My orders were to deliver the $14,000 to McNair. He had left two days before I arrived and had gone up the line, and it was very uncertain where I would find him. The snow was several inches deep and traveling was pretty tough, but I took the tow path to find him. I put a stick through the handles of the old carpet sack and took it over my shoulder and hoofed it to McKuen's. Bill said McNair had stayed there Monday night and had gone further up the line. I tramped to Tunkhannock where I learned that Mac had stayed the night before, but he had gone further up the line that morning.

"I knew that there was some engineering work to be done on the neck above Vosburg and I would probably find him at some farm house. I got my supper at Billings' Hotel and shouldered my carpet bag and took the tow path like a long eared Beagle hound. I was on the track and I had to get my man before I went to sleep. About 8 o'clock I found McNair at Archy Ballentine's, about a mile above Vosburg tunnel. I had tramped about twenty eight miles that day through the snow and was mighty glad to get rid of that money. Some fools tote around a lot of money and do not have as hard a time to get rid of it as I had."

Some limited through traffic was able to use the Extension starting in November of 1856, but half loads and double teams were the rule through 1857. By the spring of 1858, Gamble's $49,000 estimate to "fix" the North Branch Extension Canal had swollen to more than $300,000 in actual expenditures, but thousands of tons of Anthracite could now be shipped north to New York and Ohio.

The State disposed of all of its Branch Canals in 1858 by selling them to the Sunbury & Erie Railroad. The North Branch and North Branch Extension Canals were later acquired and operated by separate canal companies, but the services of Maffet and McNair were no longer required. They both went on to bigger and better things. Hopefully, so did J. Bennett Smith, a young Engineer who rode and hiked nearly 40 miles through a snow storm to safely deliver a "fortune" entrusted to him.

(Much of the information for this article was obtained from Charles McCarthy – noted local historian of Pittston, Pa. Mr. Woods is now researching the North Branch and North Branch Extension Canals for a book with a tentative publishing date of spring, 1980. Any additional information on these canals would be greatly appreciated by T.K. Woods, 6939 Eastham Circle Canton, Ohio 44718)

Researching Canal Boats

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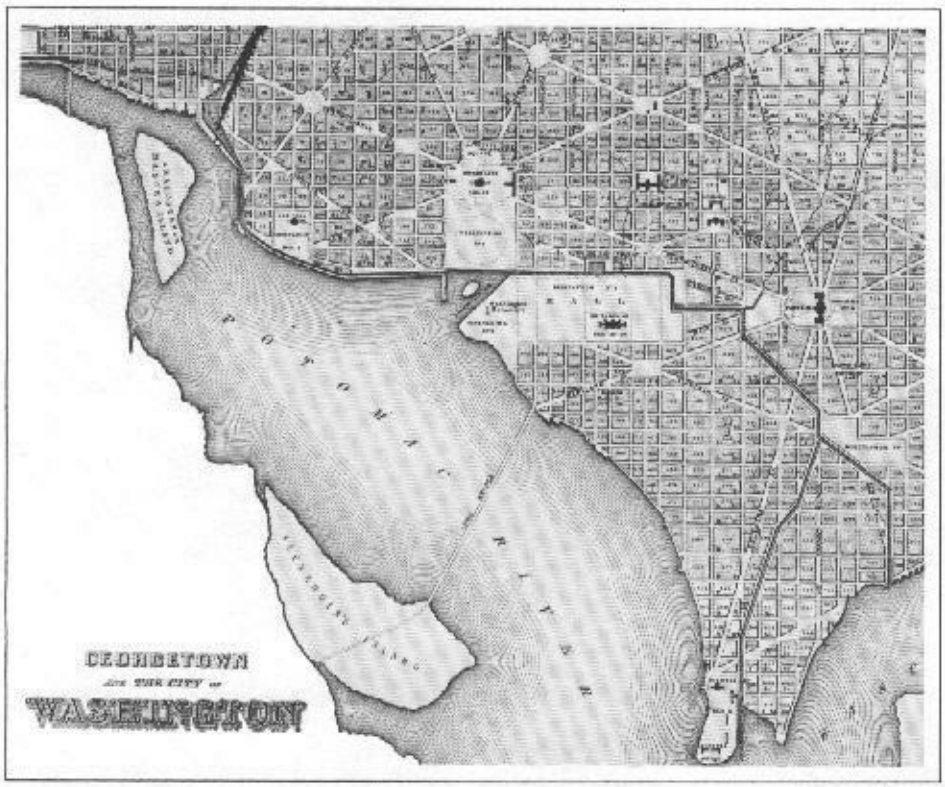
documents can be furnished for a fee of $7.50 per vessel. The procedure is to obtain the GSA form #6779 "order for copies of documents issued to vessel" from the Industrial and Social Branch, National Archives (GSA), Washington, DC, 20408. Now you have a nice new shovel – have fun digging!

The author wishes to thank fellow ACS members Jim and Alice Wilson for their personal instruction, several years ago, in the methods outlined above. Perhaps some day in the future, these voluminous lists will be computerized to make such research faster, easier, and more productive with greater accuracy.

(By Bill McKelvey, Director – ACS Chairman – Canal Boat Hulks, Wrecks and Remains subcommittee.)

Tiber Creek to Murder Bay: Failure of the Washington Canal



This 1855 map of Washington and Georgetown clearly shows the old Washington City Canal and its branches. Note also the Chesapeake and Ohio Canal at the upper left, and the Tiber Creek – Rock Creek canal connection, along the north bank of the Potomac. The Alexandria Aqueduct is also shown, just south of "Georgetown College."

by Ernest H. Schell

If all had gone according to plan, one of the major landmarks of our nation's capital would have been a grand canal. As things turned out, however, this anticipated asset became a major liability, burdened from start to finish with every conceivable miscalculation, an embarrassing monument to expediency in a rapidly growing young country.

In most respects the development of Washington, D.C., itself as an urban enterprise during its first quarter century or so was disappointing. Though planned on a massive scale in 1791 by the French engineer Pierre Charles L'Enfant under the supervision of President Washington and with the approval of Congress, the Federal City failed in its early years to become what many had envisioned as another Paris or another Rome – failed indeed to become much more than a small hamlet by the time the government arrived late in May 1800. Fewer than 10 percent of the lots in the proposed city had been sold, and not many of those had been developed. Aside from the President's mansion and one wing of the Capitol, there were only a handful of small stone and brick government buildings, boarding houses, and commercial establishments. So desolate and unpromising was the site that outside of a few rash speculators neither investors nor settlers had shown much interest in it, despite the optimism of many officials that the seat of government would become the metropolitan focus for the nation. Lack of funds and a shortage of laborers had inhibited construction of many of the major buildings that had been planned. Where the clearing of land had begun, tree stumps and marsh grasses lay idly waiting for the picks and shovels, lumber and mortar, wheelbarrows and saws of construction crews that never arrived. In the meanwhile much of the deforested land turned swampy, making the capital a foul and disease-ridden backwater in the heat of the summer, forcing Congress to adjourn, and sending most of the government personnel packing for home or searching for a more inviting climate.

One of the essential features of L'Enfant's original plan was a canal running through the heart of the city from the Potomac to the "Eastern Branch" of the Potomac, also called the Anacostia. Following the Tiber Creek on its western end, the canal would run eastward past the executive mansion (which was not called the White House until a cosmetic coat of whitewash was applied to it after the War of 1812 to disguise the scorching damage inflicted by the British), turn southeast-by-east upon reaching Pennsylvania Avenue at 6th Street, then turn sharply to run south on 3rd Street behind the Capitol. At Independence Avenue the canal would meet James Creek, which it would follow southeastwardly to a point near South Capitol Street and New Jersey Avenue, head south for a few blocks, and then run again in a southwestward direction to the Navy Yard on the Eastern Branch, a total distance of 2¼ miles from the Potomac. A second branch, ¾ of a mile long, was planned from South Capitol Street running southwest-by-south to Greenleaf Point at the junction of the Potomac and the Anacostia (where the War College now stands), but this spur was never built.

The promoters of the project expected it both to aid the immediate development of the city and to promote its growth in the future as a commercial entrepot. For L'Enfant, the immediate benefits were the most important, for the canal would be available to bring in construction materials for the rest of the city. With scarcely anything in Washington that could be called a road, the canal would have been a boon to personal transportation as well. Those who actually invested in the canal project, on the other hand, were drawn by the prospects of its increasing the city's role in the transport of raw materials from the hinterland. Flour, copper, iron, slate, lime and coal brought down the Potomac were transferred to ocean-going vessels at Georgetown, where imports were loaded onto the river craft for their return voyage upriver. When the Potomac Company completed its canal around the Great Falls above Georgetown in 1802, both Washington and Alexandria hoped to compete for the entrepot traffic. The advantage of the Washington Canal, its promoters asserted, was that it would turn the area of the Navy Yard into a major port, eliminating the dangers of sailing around Greenleaf's Point, a hazardous route that required two tides to negotiate. Besides, the channel at Georgetown was too shallow to accommodate ocean-going vessels safely.

In spite of projections for such a promising future, construction of the Washington Canal met with a number of frustrating delays. In 1792, the newly-appointed city commissioners abandoned all serious plans for the project for lack of funds. Three years later the state of Maryland tried to get construction underway by authorizing a lottery to raise $52,500 to begin work on the canal. Yet, although this was a conventional method of raising funds at the time, like many other opportunities to invest in the new capital, few showed any interest in it. A second lottery held in 1796 also failed to raise sufficient funds.

Chances for successfully promoting the idea were improved in 1802 when the Potomac Company's canal was completed at Georgetown. Inspired by the new waterway, a group of entrepreneurs petitioned Congress for its "aid and patronage" in undertaking work on a canal through Washington, and on May 1, 1802, President Jefferson signed into law a bill to establish the Washington Canal Company, authorizing it to raise a capital of $80,000 at $100 per share. The company was permitted to charge a toll of 50¢ per boat on the completed canal and to collect wharfage fees for fifty years. If, within five years, the canal was not completed to allow passage of boats drawing at least three feet of water, the law stipulated that the company and its property would become a possession of the United States government.

Though one of the country's finest mechanical engineers, Benjamin Henry Latrobe, was hired to execute the design, investors still could not be interested in the project. Thus, after attempts to raise money in England and Holland failed, plans for the canal were once again abandoned. The city as a whole, in fact, was suffering from a lack of capital. The small sums expended by Congress were devoted to building and maintaining official structures. Improvements in the city itself were supposed to be financed by local tax revenues, which were miniscule.

A second canal company, chartered in 1809, at last succeeded where the others had failed. Perhaps because the years from 1802 to 1807 were among the most prosperous of the era, followed by an embargo on trade in 1808 that left large sums of commercial capital idle, the new Washington Canal Company was able to sell half of the $100,000 of its authorized stock. Encouraged by the response, the company decided to proceed with construction, with Latrobe serving as the chief engineer. Had he been entrusted with authority for carrying out the project, it might have become a model waterway. Trained in Europe, Latrobe sought a design for the canal that would insure its permanence, recommending stone construction throughout. The directors of the company, however, working with insufficient capital and impelled by the desire to complete the canal as soon as possible, overruled Latrobe, insisting instead that only wood be used for lining the 150 foot wide canal and in building the locks, of which there were four: one at each end to serve as tide gates, and two intermediate step-locks. Latrobe's suggestions for a tidal dam and a tumbling bay at the Potomac end also went unheeded.

James Cochran of Baltimore, a reputable contractor who had worked on the National Road, was hired to undertake the excavation and construction of the canal, which began on May 9, 1810, with President Madison himself on hand for the ground-breaking ceremonies. Crews composed mostly of Irish immigrants set to work on the digging. When money ran out after about a year and the workers were laid off, a congressionally authorized lottery was successful enough to allow work to resume, but the invasion of the British in 1814 during the War again halted construction.

The British invasion and the shortage of funds created only temporary setbacks. More significant were the structural deficiencies that had been incorporated into the project by the company's short-sighted directors and which seriously threatened the operation of the canal from the day it opened to traffic, Tuesday, November 21, 1815. With great fanfare, two barges, one carrying the company's officials, the other the Marine Band, passed through the completed waterway, but one of the locks near the executive mansion proved to be not only faulty but also difficult to repair, delaying any use of the canal for another two years. Before it could be put into working order, nearly all of the wood lining the canal had rotted and washed away. Instead of correcting their initial mistake, the directors ordered the wood replaced. As none of these developments inspired confidence in the Washington Canal Company, the company's stock fell from a par of $100 to $30. Latrobe, who had been paid for his services with stock certificates, found himself unable to sell them.

These were ominous signs for the future of the project. Barely deep enough to begin with, even at high tide, for boats with a three foot draft, much of the canal was constantly being filled in by tidal action from the Potomac and the Anacostia, for the locks at either end never operated reliably. In 1822, the section of the canal running along Pennsylvania Avenue from 6th Street to 3rd Streets was rerouted to allow for sale of the land along the south side of Pennsylvania Avenue. The new route ran through the center of the Mall, making two right angle turns to reach the western section of the canal which ran along what today is Constitution Avenue. This somewhat awkward arrangement did little to encourage the use of the canal, which had already become a white elephant. With some sections of the canal having become a virtual swamp, the city sought money from Congress in the 1820s to drain the marshy areas and elliminate an obvious health hazard, but Congress declined the appropriation.

Other efforts to improve the canal were of equally little avail. With the chartering of the Chesapeake and Ohio Canal in 1826, many had hoped to rejuvenate the all-but-moribund Washington Canal route, yet even the direct link which was proposed between the two was not enough to encourage the Company to get on with the necessary improvements. The company simply did not have the money, nor could it raise any. Revenues from the canal itself were certainly not sufficient to underwrite the work that needed to be done. When President John Quincy Adams approved a canal boat basin to be built between the canal and the south lawn of the White House, he failed to arouse anyone's interest.

In an attempt to rescue this embarrassing liability and to capitalize on the traffic expected from the Chesapeake and Ohio Canal, the city of Washington itself decided to purchase the Washington Canal from the company in 1831. Having demonstrated its determination to make the needed improvements (such as stone retaining walls), the city received support for the canal from Congress in the form of a $150,000 appropriation, an amount equal to nearly half of the $310,000 the canal originally cost to build. Operation of the canal was put into the hands of a commission appointed by the city, and as a public thoroughfare, the canal was put on a toll-free basis. Best of all, in return for the city's efforts, when the reconstructed canal was opened in 1837 there was heavy volume of barge traffic from the C & O Canal waiting to use it.

The next decade or so proved to be the heyday of the Washington Canal. It was not only commercially successful, but vindicated L'Enfant's original plan for aiding construction in the city. All of the bricks for the Smithsonian Institution, for example, built on the Mall between 1847 and 1856, were brought to the site via the canal. Nevertheless, even before the Smithsonian was completed, the ill-fated trench had already begun to succumb again to the perennial problem of cumulative silting.

Since the canal had proven successful as a municipal enterprise, the city would not abandon it without a fight. Encouraged by a conditional grant of $40,000 from Congress to dredge that part of the canal that passed through public land, the city undertook its part of the bargain by deepening the rest of the route. It proved to be the work of Sisyphus, however, and by the time the dredging was complete in 1852, at a total cost of $140,000, some sections of the canal south of the Capitol had already become impassable again. Canal boats from the C & O, more numerous than ever since the C & O Canal had reached Cumberland in 1850, turned to the aqueduct canal over the Potomac and the seven mile lateral canal on the west bank of the river to reach deep-water wharves at Alexandria. Virtually the only boats to use the Washington Canal thereafter were the barges supplying the coal and lumber yards on the canal's northern bank, west of the Centre Market (present site of the National Archives).

Though periodic dredging continued, the city fathers realized after fighting a losing battle with sediment in the early 1850s that there was little hope of ever operating the canal successfully. They allowed it, instead, to become an open sewer. Pipe was laid to discharge waste from the Patent Office, the Post Office, and other executive buildings directly into the channel, but to the city's dismay, the hapless trench proved to be as inefficient as a sewer as it had been as a canal. Much of the noxious material that washed out into the Potomac at ebb tide washed right back in again as the tide rose, while the constant silting problem frequently prevented anything from draining at all.

In 1866, when the canal dropped only six inches between 17th Street and 12th Street, Secretary of War, Edwin M. Stanton, reported to Congress that "the bottom [of the canal] is covered with a mass of decaying animal and vegetable matter and earth, forming a soft, slimy and offensive compound, mostly bare a good portion of the time." He recommended construction of the tidal dam in the Potomac that Latrobe had unsuccessfully suggested over fifty years earlier, and urged as well that new tide gates be installed. This effort to conquer the sediment, a last attempt to undo past mistakes, was not any more effective than earlier "improvements," however, for the gates at 17th Street still proved to be too weak and unreliable to hold back the water at high tide.

The days of Washington's disreputable ditch were clearly numbered. A Senate document referred to the "miasmic swamp near the Presidential mansion" as a "shallow open sewer of about one hundred fifty feet in width (sometimes called a canal)." Along the edge of this "open sewer" south of the Capitol at about this time there grew up a shantytown slum populated by Freedmen who had poured into the city after the Civil War. Washingtonians referred ominously to that section of the canal and its environs as "Murder Bay."

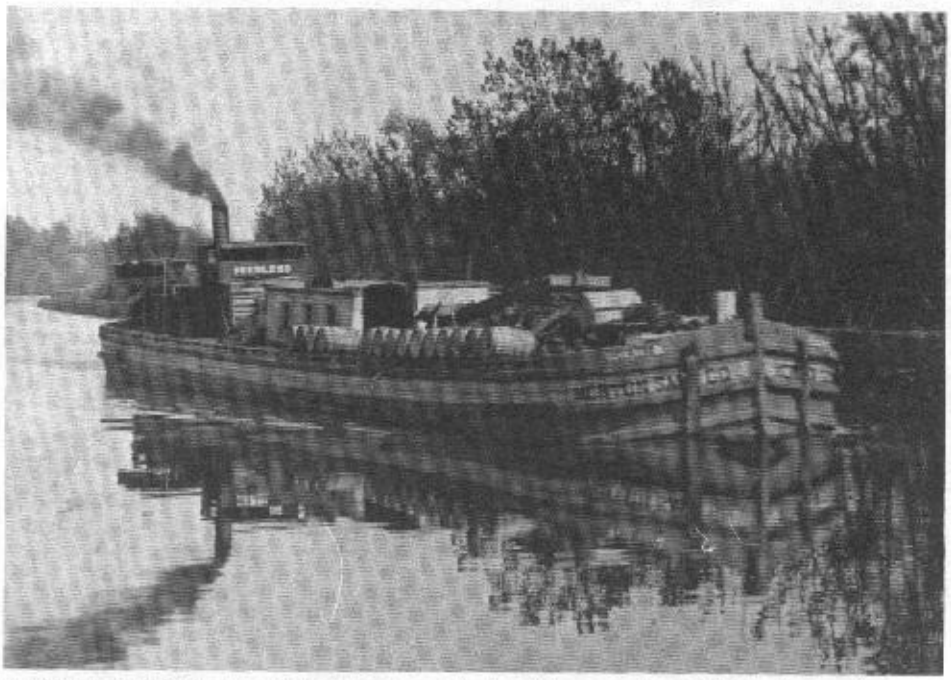
With the entire project now an eyesore and a threat to the public health and welfare, the canal, in all respects, had outlived its usefulness. Thus, proposals began to be submitted for filling it in or covering it over. Protesting vehemently, the canal's chief engineer, Benjamin Severson, a die-hard defender of the project, pointed out that the canal should not be condemned before it had been given a proper chance to prove its utility. Given adequate improvements, such as stone walls and linings laid in hydraulic cement, capped with cut stone of uniform width, a reconstructed canal and refurbished lock system, he stated, would save the city's consumers hundreds of thousands of dollars annually in the cost of coal, food, lumber, and other materials brought into town by the canal instead of overland. A projected link by canal to the C & O terminus in Georgetown, added Severson, would add immeasurably to the effectiveness of the Washington Canal as a major link in the Potomac transport system. (This extension, of course, was a forty-year-old carrot still waiting to attract a very stubborn mule; no one, unfortunately, had been able to find a suitable stick).

To rehabilitate the canal, Severson urged that it be deepened to 4 feet and narrowed to a width of between 60 and 70 feet. The two right angle turns should be eliminated, too, he suggested, to be replaced by a diagonal section that would shorten the overall length of the canal by 869 feet. All of this could be accomplished for a mere

(Concluded on Page Seven)

Washington City Canal, looking east toward the unfinished Capitol Building, at the start of the Civil War. The canal turned south at this point and divided into two branches.

THE HENNEPIN CANAL (Part Six)



In 1912 and 1913 Morton Salt Company packetboat steamers traveled the Hennepin Canal regularly. This is the *Peerless* (Photo courtesy of Ruth Jones (Mrs. Verle), Wyanett, Illinois.)

By Mary M. Yeater

(This article is the sixth of a series on the Hennepin Canal, formerly the Illinois-Mississippi Canal. Part Six is the continuation of "Forty-Four Years as a Commercial Waterway." Mary Yeater is a professional Historical Researcher for the State of Illinois.)

The Hennepin Canal was but one link in a chain which connected the Upper Mississippi Valley and the Great Lakes; it only connected the Mississippi River to the Illinois River. In national economic terms, that was meaningless without an adequate route from the Illinois to Chicago. The original promoters of the Hennepin Canal saw the **Illinois and Michigan Canal** (completed in 1848) and the **Chicago River** as the Great Lakes links which would give the Hennepin significance. And if the Hennepin Canal had been built in the 1830s, (when it was originally suggested), in the 1840s, in the 1850s, or even in the 1860s, the Illinois and Michigan Canal would have been an adequate outlet for it and the canal's economic potential would have been realized.

The Illinois and Michigan Canal was built to accommodate boats with a maximum of 108 feet length and seventeen feet beam drawing a maximum of 4.5 feet of water. By the late 1870s, let alone the 1890s, boats of that size were just too small to compete successfully with the railroads and water-routes that had a greater capacity. After 1878, the state operated Illinois and Michigan Canal had failed to pay even the expenses of its operation and maintenance. By the 1890s, the twenty years of continually deficit operation had taken its toll on the Illinois and Michigan; it had so deteriorated that it was hardly navigable.

Even if the Illinois and Michigan Canal had been in operational condition, the Hennepin Canal was larger, capable of passing boats with a maximum of 140 feet length and thirty-four feet beam and 640 gross tons. Its extreme capacity was probably three boats each way per hour; 144 boats per day of 640 registered tons each; 18,432,000 tons in 200 days, the shortest possible season of navigation.

Plainly, the two canals did not fit. In order to make the maximum use of the Hennepin Canal's capacity, eastbound cargo would have to be transferred into smaller barges at LaSalle, the entrance to the Illinois and Michigan Canal. The westbound cargo would have had to be transferred into larger barges at Hennepin, entrance to the Hennepin Canal. Such a process is time consuming and, therefore, would in and of itself prevent maximum usage of the canal. It was also very expensive and greatly reduced the competitive edge water transportation had over railroads or even through-water routes which involved no change of vessel. So shippers realized that in the long run, it was cheaper to use the extreme capacity of the Illinois and Michigan Canal as the maximum on both canals. Therefore, the enlarged size of the Hennepin was not taken advantage of when the canal was used in conjunction with the Illinois and Michigan.

Of course, this waste was not what the federal government or the Corps of Engineers had had in mind. All the plans, reports and surveys produced by the Corps from 1870 on had tied the success of the Hennepin Canal to an enlargement of the Illinois and Michigan Canal or to the improvement of the **Illinois River** upstream from LaSalle, Illinois. By 1882 they had worked out the details for what they saw as the most economical and adequate connection between Lake Michigan and the eastern terminus of the Hennepin Canal. In 1882 the people of the State of Illinois voted to cede the Illinois and Michigan Canal to the federal government on the condition that the entire canal be enlarged and maintained as a national commercial waterway, but the federal government refused the cession proposed by the State of Illinois. Although portions of the Illinois and Michigan Canal remained open to navigation for another fifty-one years, it never again had a realistic chance to become a truly viable competitor for commercial traffic and it continued to deteriorate.

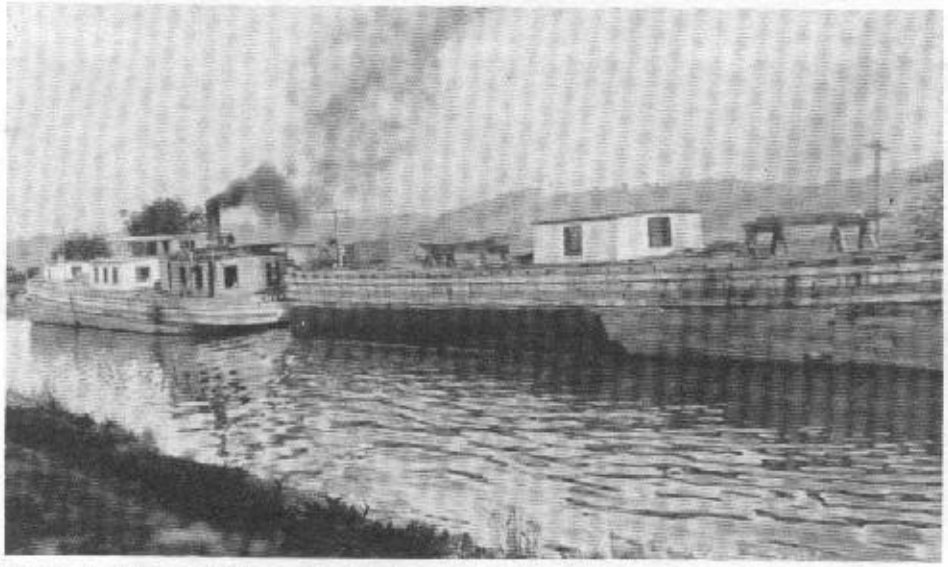
The Illinois and Michigan Canal from Joliet to Chicago was not enlarged as the Corps of Engineers had advised. In fact, the Corp's arguments about the need for an enlarged modern commercial waterway from Chicago to Joliet were ignored altogether. Yet action was taken, independent of commercial considerations, which improved the Hennepin Canal's Chicago connection. By the 1860s Chicago's water supply was contaminated by sewage running down the Chicago River into Lake Michigan, causing typhoid. To deal with the health problem, in 1892 the State of Illinois' Chicago Sanitary District began construction on the Chicago Sanitary and Ship Canal. This capacious canal with a twenty-six foot channel extends from the Chicago River across the divide to the DesPlaines River at Lockport, Illinois. The channel was also deepened in the Chicago River, whose flow was changed in connection with the canal's construction. After water was turned into the Chicago Sanitary Canal in 1900, the Chicago River no longer flowed eastward into Lake Michigan; it flowed westward via the canal into the DesPlaines River.

The bigger and more modern Chicago Sanitary and Ship Canal, although not built specifically for that purpose, then replaced the small and deteriorated Illinois and Michigan Canal as the commercial waterway from Lockport to Chicago. Most of the portion of the Illinois and Michigan Canal that the Corps had wanted to enlarge was instead abandoned in 1900. In 1901, a further section of the Chicago Sanitary and Ship Canal was opened from Lockport to Joliet, causing that part of the Illinois and Michigan Canal to be abandoned as well. (This reach of the Chicago Sanitary Canal was itself subsequently replaced when the Illinois River project was completed in 1933.) On the other hand, the portion of the Illinois and Michigan Canal – from Joliet to LaSalle – which the Corps had wanted to abandon was kept in service even though the new canal severely reduced its water level.

Despite the fact that the Corps of Engineers' detailed plans for the Hennepin to Chicago waterway system had been thwarted, one of the necessary conditions for a successful Hennepin Canal had been met: there was now an adequate connection between Lake Michigan and the Illinois River at Joliet. But necessary as this was, it was not sufficient for the success of the Hennepin Canal. Neither the federal government, the Corps of Engineers nor any other group had done anything about the connection between the Illinois River at Joliet and the Illinois River at LaSalle. An adequate link was also necessary there for such success; neither alone had any significance.

Consequently, by 1908, the first year commercial traffic possible on it, the Hennepin Canal still ended virtually in mid-air. Although this was certainly a far from ideal situation and agitation

Each overseer was provided with a motor launch as part of his standard operating equipment. One of these was the gasoline launch "Snipe" shown here on mile 1 of the Hennepin Canal feeder August 27, 1909. Guard lock and feed gates in background. (Photo courtesy of the Rock Island District, Corps of Engineers.)



Starting in 1910 small shipments of grain were carried from elevators on the Hennepin Canal's feeder line to Pekin and Peoria on the Illinois River. One of the steam power towboats involved in this trade was the *Montauk*. It is pictured here along with its single grain barge, the *Marcellus*. (Photo courtesy of Bessie Goodale (Mrs. Clair), Wyanett, Illinois.)

continued for an adequate LaSalle to Joliet connection, no one foresaw what a total waste the canal would be without the link because it was assumed that coal shipments could keep the entire canal busy. In 1890, when construction began on the canal, Rock Island, its western terminus, was a primary coaling station on the Mississippi River. Shipment of Illinois coal to Rock Island alone kept busy the stretch of canal opened in 1895. Unfortunately, within a matter of months after the 1907 opening of the entire canal, the coal fields of central Illinois closed.

Because the coal shipments ended, the first major use of the canal was merely to pass launches, houseboats and pleasure boats. These boats, however, were only moving from one permanent base to another; they did not represent the beginning of significant tourism. This was not profitable business.

Supplies and construction equipment being used to put the finishing touches on the construction project itself were also shipped on the canal. In 1908, the only commodities hauled on the canal were those used in canal construction and operation: wood; cement; tile; sand and gravel; lumber and posts; coal for heating the overseer and lockmen/patrolmen houses. They made up over half of all the tonnage carried during the first five years of operation.

The most profitable commercial activities associated with the Hennepin Canal in its earliest years of operation did not come from the traffic at all. In 1895 the Corps began to sell ice permits, charging one dollar per thousand square feet of ice cut. They built ice houses along the canal to store the ice for staff use and rented others to commercial ice firms. Ice was even stored in the peat beds along the canal right-of-way on the summit level. In addition, the Corps rented out as pasture those stretches of right-of-way not already allocated to employees for their own use.

Although several freight services were proposed in the earliest years of canal operations, no regular freight service was established.

The situation was partially remedied in 1910 when the firm of Smith-Hippen built two grain elevators on the feeder canal. For some years, small grain shipments made to distilleries in Pekin and Peoria on the Illinois River were carried on single barges powered by steam operated towboats. A few other elevators were constructed and grain transit became the mainstay of Hennepin Canal commerce from 1909 until 1913 (grain accounted for 55% of all commodities carried on the Hennepin Canal in this period). However, no truly significant grain hauling business developed: over the five-year period a total of only 21,073 tons of grain were hauled on the Hennepin Canal.

The transport of salt was another potentially major freight market for the Hennepin Canal. Beginning in 1912, the Morton Salt Company shipped approximately 1,200 tons of salt from Chicago to Davenport, Iowa, via the Hennepin Canal. In 1913, they shipped approximately 2,000 tons. However, in that same year, Joy Morton, president of the company discontinued service of one of its steamboats because the Illinois and Michigan Canal had become so shallow that navigation was nearly impossible. In succeeding years all Morton shipments were phased out.

Although the Corps of Engineers had been promoting the improvement of the Illinois River over thirty years, no progress had been made on the channel between LaSalle and Joliet. Perhaps to force the issue and end the stalemate, in 1915 – only eight years after it was officially opened – serious consideration was being given to abandonment of the Hennepin Canal. By that year, the record commercial tonnage carried on the Hennepin Canal was 12,222 – reached in 1914. Although this 1914 tonnage record is almost inconsequential when compared to the canal's maximum capacity (18,000,000 yearly), the record was not equaled or exceeded until 1921. By 1916 a total of $9 million had been spent on the project. In comparison, its commerce – a total of less than 70,000 tons, not counting construction and maintenance supplies moved – was insignificant.

The abandonment argument was not, however, pushed very far at that time. The Corps explained the canal's difficulties in terms of the lack of a suitable water connection to Chicago, even though the Chicago Sanitary and Ship Canal had solved the problem from Lake Michigan to the Illinois River, a bottle-neck still existed on that river from Joliet to LaSalle. In 1918-1919, the Illinois and Michigan Canal from Joliet to LaSalle underwent a temporary rejuvenation financed by federal funds. But more importantly, in 1919, the Illinois Legislature passed an act authorizing the construction, operation and maintenance of a deep waterway from Lockport to Utica on the Illinois River.

Washington Canal Failure

(Concluded from Page Five)

$320,000, he figured, while the cost of arching over the waterway – an alternative favored by the mayor – would reach as high as $4,000,000.

Although Severson considered the proposal to fill the canal "too absurd to be dwelt upon," the question of the canal's fate was laid to rest when the District of Columbia abandoned self-rule in 1871 for re-organization as a territory under United States government jurisdiction. Several offers from mid-Western states to relocate the national capital following the Civil War had received serious consideration from Congress, for social and political turmoil in Washington had resulted in a general loss of confidence in the ability of the capital's citizens to govern themselves. By abandoning municipal government for territorial administration, the city retained its status as the national capital, while Congress obtained a measure of control short of full responsibility for running the city. The experiment was to last for only three years; when the territorial government went bankrupt, Congress was forced to bring the District under federal jurisdiction. But neither the territorial government nor the federal District had any use for the old Washington Canal. Alexander Shepherd, the free-wheeling head of the territory's Board of Public Works, had grand visions of his own for the city that were a match for either Severson or L'Enfant. The railroad, however had a greater appeal than canals for this grandiose planner, who approved the decision to fill in the canal from 7th Street to the Potomac to make way for the tracks of the Baltimore and Potomac Railroad in 1873. Petitioners to a committee of the House of Representatives then investigating charges of malfeasance and corruption in the Board of Public Works called the decision "arbitrary," but Congress exonerated Shepherd of any wrongdoing, sealing the fate of the canal. In 1878 the section running south of the Capitol was drained and filled in at a cost to the government of only $15,000. Along that part of the former canal route is the present-day Canal Street, running from Independence Avenue and 3rd Street, S.W., to E Street near New Jersey Avenue in the S.E. quadrant, the only reminder that for the better part of a century, Washington, D.C. struggled to rescue a once-promising venture from the inexorable advances of mud, tide, incompetence, indifference, and the railroad.

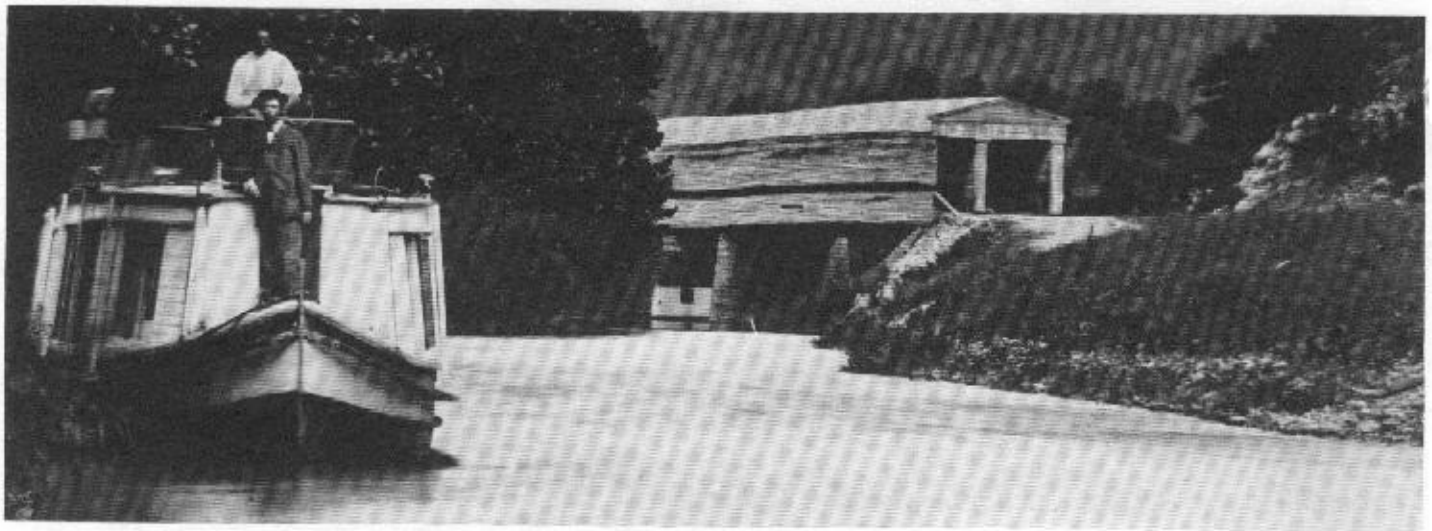
(The author is a Ph.D. candidate in American history at Temple University.)

Wildflower Seeds

Enclosed with this issue of AMERICAN CANALS is a packet of wildflower seeds to be strewn *judiciously* along your favorite canal to provide a spot of color which just might help start a canal park instead of a parking lot. The best method is to push or rake them into the soil in the spring, watering if necessary.

Thanks go to the Clyde Robin Seed Co., P.O. Box 2855, Castro Valley CA 94546 for providing the seeds at cost and donating the envelopes. Bulk quantities can be obtained from them of mixes such as Clyde Robin's Special Roadside Mix (CR-130) or the Eastern States Wildflower Mix (CR-212). Their catalog and price list costs $1 (the seed propagation pamphlet mentioned on the seed packet is for California plants). While they last, additional single packets of CR-130 are available from Bill Trout by sending a self-addressed stamped envelope. Let us know how your horticultural efforts turn out.

OLD CANAL PHOTOGRAPH COMES TO LIFE



A. H. Plecker was one of the early photographers in Virginia. It is thought that he was born in the Valley of Virginia near Staunton prior to the Civil War and he did some photographic work before the war; he served with the Confederate Forces but not as a photographer. Sometime after the war he settled in Lynchburg as a photographer and had a studio there for many years. He left Lynchburg as an old man and went to Richmond, probably with some of his family, where he died at around 90 years of age.

He took many fine photographs in the area and the state in addition to his regular studio portraits. Two of his best known are the pictures of Robert E. Lee on Traveler and the picture of "The Marshall" on the shore of the **James River and Kanawha Canal** at Lynchburg, Virginia, with the old couple who lived in it.

Several of the Plecker photographs are owned by the Dementi-Foster Studios of Richmond, Virginia. Mr. Robert A. Dementi graciously permitted us to print one of the photographs. The original glass plates have been in storage for many years in the possession of his family and to his and his father's (A. L. Dementi, 87 years of age) knowledge they have never been published or even printed for that matter in at least 35 years. The photograph illustrated is printed by permission of the Dementi's with a first one-time publication right.

The North River (now the Maury River) bridge in the picture is described in the 17th Annual Report of 1851 as follows: "The towing path crosses North river by a bridge of two spans of 126¾ feet each. This bridge is also provided with a roadway track over which the company are authorized to charge tolls." This notes that North River is 396 yards above the **Blue Ridge dam.** Instead of being an open pond above the dam a rock and clay embankment formed a canal passage from the guard lock to North River. This was a part of the old Blue Ridge canal. This appears in the photograph as a canal leading up to the bridge.

It is interesting to note the canal towpath on the left and the bridge and its towpath on the right with no means of crossing over at the bridge. The dam pond is to the left of the towpath with North River coming into it from the right under the bridge. The stone bridge pier lying on its side in the river and part of the abutment is all that is left of the bridge. The C&O Railroad bridge now crosses the river to the right of this old bridge. Sallings mountain is in the background. The present town of Glasgow lies on the flat land between it and the river, hidden by the bridge. The white object under the bridge appears to be a houseboat. This bridge is similar in appearance, though much smaller, than the double towpath, roadway bridge on the Susquehanna Canal shown on page 90 of Bill Shank's book "300 years with the Pa. Traveler."

(The arrangement for the photograph and the information supplied with it were done by ACS Member T.G. Hobbs, Jr. Photo credit Dementi Studios.)

Canal Calendar

June 11, 1978 – Annual Meeting, Canal Society of New Jersey and tour of Delaware and Raritan Canal.

June 16-18, 1978 – Old Canal Days, Lockport Illinois.

July 7-9, 1978 – Old Canal Days Festival, Canal Fulton, Ohio.

October 6-8, 1978 – "Gateway Clipper" Boat Tour of the Monongahela Navigation and combined meeting of Pennsylvania, Ohio and New York Canal Societies.

ARNOLD BARBEN

Arnold Barben, a past president of the Canal Society of New York State and a former director of the American Canal Society died on 22 March in Syracuse, New York. He will be missed by his many canal enthusiast friends.

"Chessie" Gives Maps

The Chessie System recently donated nearly 1,350 maps and charts composed primarily of detailed maps of the route of the James River and Kanawha Canal during the nineteenth century to the Virginia State Library in Richmond. For canal researchers, the maps contain details on locks, bridges, and elevations. The maps will be available to researchers as soon as they are arranged and catalogued. This transfer was the culmination of a dream (and hard work) by ACS Vice President Bill Trout, ACS Member Gibson Hobbs, and friends at Reynolds Metals in Richmond. The American Canal Society congratulates the Chessie System for its public spirit and hopes that this will encourage others to do likewise, as Reynolds Metals has with its preservation of canal structures earlier in Richmond. Thanks are also due to J.W. Brent, Chief Engineer, and J. E. Sharper of the Engineering Section (both of Huntington, WV) for their efforts in making the transfer possible.