

# AMERICAN CANALS

BULLETIN OF  
THE AMERICAN CANAL SOCIETY

BULLETIN NUMBER 49

Editorial Address — Box 310 Shepherdstown, W. Va. 25443

MAY 1984

## PRESIDENT'S MESSAGE

With the full cooperation of the Department of Planning and Community Development of the City of Alexandria, Virginia, we are able to deliver to each of our members the enclosed excellent brochure on the Alexandria Canal. Our former President, Dr. Tom Hahn, had an important part in the archaeological work necessary to explore and makes plans for restoring the long-buried Lock Number One at the foot of the canal. Other ACS members were also involved in supplying material for the brochure, as indicated. We recommend it to your careful attention.

I am happy to report that much interest appears to be developing throughout the Northeast in the stabilization and interpretation of our historic canal remains. As you can see, from separate items in this issue, the important Illinois-Michigan Canal Bill has passed both houses of Congress, two States in New England have pooled their efforts in creating a Blackstone Canal Park, and a national organization is now encouraging the formation of Greenway associations along rivers of the eastern states with canal relic preservation as one of the considerations. All this bodes well for the objectives of the American Canal Society.

Another ACS Member — Franz J. Katz of New York City — has just joined the ranks of our Life Members, bringing this important group to a total of forty-four. His article about travel on our inland waterways appears in this issue.

Bill Shank

## CANADIANS MEET

Colin K. Duquemin, President of the Canadian Canal Society, reports that they had an attendance of approximately forty people at their Spring Meeting and Tour of the Desjardins Canal May 12, 1984, with headquarters in St. Catharines, Ontario. Their evening program included a showing of the British film: "World of the Waterways", and Dr. Roger Squire's slide-lectures on canals of Great Britain — all supplied by the American Canal Society. Colin says they are looking forward to their combined meeting with ACS in the Spring of 1985, which is expected to include a boat-trip through the famous Peterborough Lift-Locks on the Trent Canal.

## LOCK II PARK DEDICATED IN AKRON



Lock II Park Area in downtown Akron, Ohio, as it looks today (Courtesy Akron Beacon Journal, Photo by Dennis Gordon).

*Margot Y. Jackson, Akron*

On October 26, 1983 the city of Akron dedicated a handsome bit of park holding a refurbished canal lock and the skeletal frame of a canal boat.

One hundred and ten years earlier, in 1873, William Payne had opened his own boatyard and dry dock at this same spot, Lock 2 of the Ohio and Erie Canal, just north of Exchange Street. He had previously been in business at Lock 3 and, before that, had built boats in Boston Township. He is credited with building a total of nearly 150 canal boats in his long life.

Now, the land on which he worked, the area that one time held brick or coal or wood or pottery for shipment and/or storage, is the youngest of Akron's city parks, properly sodded and treed and with stone benches for pedestrians' pleasure. The background noise is not of the hooves of horses or the ring of hammers and anvils, but of squealing tires and screaming sirens.

Yet the sight of the water must be quite similar. Again it comes down from Lock 1, dividing at the southern tip of the dry dock site. Some water tumbles down the spillway while the rest narrows through the lock before exploding in a fast drop to the lower canal level. The newly-built walls are a fine, clean sandstone block from the Briar Cliff Quarry at Glenmont, Ohio just south of Millersburg in Holmes County; the skeletal frame of the pseudo-canal boat is of bars of solid steel. There are stone steps so that one may walk down between spillway and lock fall, feeling the mist of the churning water or seeing the droplets as diamond dust in the bright air.

Dedication speeches on that bright October day spoke of the financial and business hopes behind this restoration. Developers committed themselves to building condominiums alongside, so that Akron will be able to offer downtown residences of quality. This park of Lock 2

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# American Canals

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"DEDICATED TO HISTORIC CANAL  
RESEARCH, PRESERVATION  
AND PARKS"

AMERICAN CANALS is issued quarterly by the American Canal Society, Incorporated. Objectives of the Society are to encourage the preservation, restoration, interpretation and use of the historic navigational canals of the Americas; to save threatened canals; and to provide an exchange of canal information.

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## CLAYTON SMITH

1908 - 1984

Bill Moss, of the Canal Society of New Jersey has informed us of the passing (April 23, 1984) of Clayton F. Smith, founder of the Canal Society of New Jersey (1969) and former CSNJ President. Clayton was personally responsible for many of the early activities of the Society, centering around Morristown and Waterloo Village. He also conducted several successful CSNJ canal tours of the British Canals.

## VCNS ANNUAL MEETING



Bill Trout (holding "bull Horn" to the right) tells the Tour Group about the Bernardsburg Locks, one of which appears in the foreground.



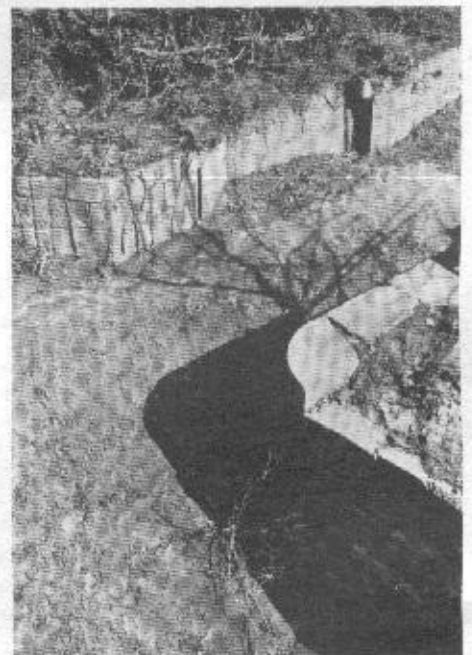
Bird's eye view of the registration area at the Palmyra Court House.

The Virginia Canals and Navigation Society held its 1984 Annual Meeting and Spring Field Trip April 7th and 8th at Palmyra and Columbia, Virginia, a few miles southeast of Thomas Jefferson's home at Monticello. The weekend was beautiful and about seventy some canal buffs from Virginia, West Virginia and Pennsylvania were there to enjoy it.

Saturday's activities included registration at Palmyra's historic Court House, with lunch provided by the Fluvanna County Historical Society, and a tour of some of the town's historic buildings. Then we visited the old Palmyra Mill and Lock on the Rivanna Navigation. Following this, a car-caravan, led by Bill Trout, drove north to the excellently preserved cut-stone Bernardsburg Locks, to which a quarter-mile tow-path trail had been cleared out for us by residents of near-by Lake Monticello. Then a social hour and

buffet-style meal was served at the Lake Monticello Clubhouse, followed by the V.C. & N.S. annual business meeting, entertainment by a local singing group (who offered us some canal ballads) and a talk by Tom Hahn, entitled "The Life and Times of the Canal Boatmen".

Sunday found the group reassembled at the old Canal Town of Columbia for a tour of Colombia's canal-era buildings, the St. Andrew's Street Lock, the remains of the Rivanna Aqueduct and the Columbia Lock — all from the days when Columbia was the junction point for the Kanawha Canal and the Rivanna Navigation. A "Show and Tell" party was held after lunch. The accompanying photos were made by Bill Shank.



Lock on the Rivanna Navigation, near the Old Mill, at Palmyra, Virginia.

# AMERICAN WATERWAYS CRUISING BOOM

By Franz J. Katz, CTC

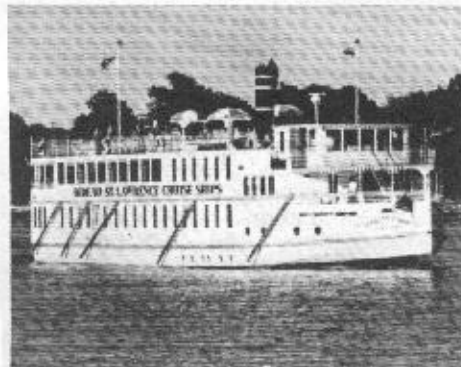
The current surge in North American waterway cruising is phenomenal. It is a dramatic development, eminently visible and geographically pervasive. Its western pivots are Alaska and Hawaii, with Newfoundland at the eastern extreme. The southern outreach areas, on the Atlantic/Caribbean side are Louisiana, Jamaica and the U.S. Virgin Islands. On the Pacific Coast, Mexican Lower California constitutes the terminal stretch.

Waterway cruising, as distinguished from mere excursion sailings, now covers most, though not all, rivers, lakes, canals, inland, coastal, insular and off-shore marine lanes of the North American continent. The waterway cruise fleet consists of both, deep and shallow draft vessels. The shallow water contingent provides the impressive new cruising wave, accounting for a 1983 passenger total of 57,000 persons. Deep water passenger cruising on the coastal and insular waterways functions in well established tourist regions and continues to accommodate numbers vastly in excess of the new shallow water patronage.

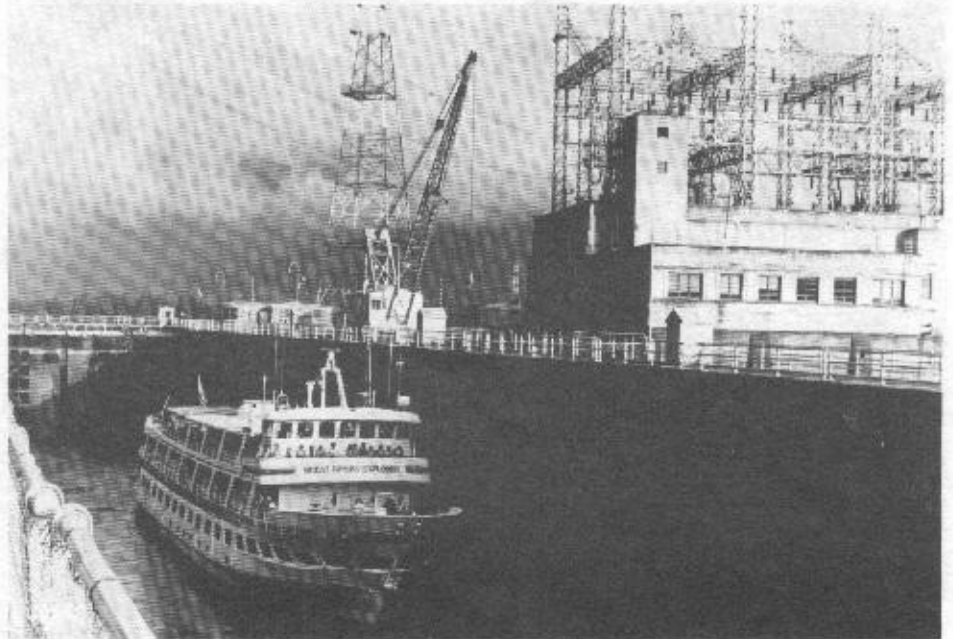
Long distance ferry services on coastal and insular routes employ primarily deep water craft. They function in Canada's "Maritimes," on the sea lanes from the Pacific Northwest to Alaska, through the "Inside Passage," and in the Sea of Cortez which separates the mainland from Mexican Lower California.

Another deep water coastal run is provided by the Delta Steamship Lines' West Coast Cruise, from Los Angeles to Vancouver, and back. Actually, this portion is part of the company's round South America route. The latter will be continued, but under elimination of its passenger service before the end of the year. Each of the vessels employed carried one hundred passengers, i.e., "Santa Magdalena," "Santa Maria," "Santa Mariana" and "Santa Mercedes."

North America's prime insular waterway feature is presented by American Hawaii Cruises. They are operating the 30,000 ton sister ships "Independence" and "Constitution" year round on one week circular cruises around the islands of Hawaii. Once a year, each of the vessels



The "Canadian Empress" of the Rideau - St. Lawrence Cruise Ships, on its run between Kingston and Quebec, on the St. Lawrence Seaway.



"Great Rivers Explorer", of the Exploration Cruise Lines, navigates a Lock at Bonneville Dam on the Columbia-Snake River cruise, out of Portland Oregon. The "Explorer" transits giant locks at eight dams that are from 63 to 105 feet in height. (Photo courtesy Bob and Ira Spring).

makes a trans-Pacific roundtrip, from Honolulu to San Francisco and Los Angeles. The two ships had gained popularity and renown on the Mediterranean route of the erstwhile American Export Lines. In 1983, the two vessels carried no less than 57,000 passengers on their Hawaii cruises.

Ferry services impart all the romance of exotic sea travel. They are a unique genre in the coastal waterway field. They are either government-operated or, at least, government-controlled. Their amenities are excellent and their fares low, expressive of a beneficent public transportation policy.

Canadian National Marine, known as "CN Marine," is an outgrowth of the famous Canadian National Railway system. It functions in Canada's maritime provinces, also linking the latter with the U.S. Northeast. Its star operation is the 31-hour summer season run between the Newfoundland ports of Lewisporte and Goose Bay. This shuttle, in the best sense of the word, is a mini-ocean cruise. The 18-hour voyage from Argentia, Newfoundland, to Sydney, Nova Scotia, is CN's runner up. Americans are most familiar with the line's Maine-Nova Scotia route, from Bar Harbor to Yarmouth, a six hour crossing. CN Marine's coastal and insular sailings offer some of the lowest priced quality sea travel arrangements in North America. CN Marine's 1983 passenger total amounted to 2,251,000 persons.

"Alaska Marine Highway" is the trade name of the Alaska State Ferry System. For years, it has been and continues to be a "bestseller" in the tourist market, setting higher records year after year. Oddly enough, this is accomplished without any standard commercial promotion! The weekly Seattle-Skagway sail-

ing takes 65 hours and is a year round operation. Intra-Alaskan ferry runs range from one to three days duration. The 4,000 ton motor vessel "Columbia" is the System's flag ship. It accommodates 1,000 passengers and 180 vehicles. Nine vessels constitute the System's fleet, serving 26 Alaskan ports, in addition to Seattle, Washington, and Prince Rupert, British Columbia. The Alaska state ferries carried 363,000 passengers in 1983.

Another striking sea ferry venture is the British Columbia Ferry Corporation. It serves fifteen provincial ports, with 25 vessels. Its seaway run proceeds through the "Inside Passage," from Port Hardy, on the northern tip of Vancouver Island, to Prince Rupert, normally negotiated in 26 hours, during the summer season. M.V. "Queen of the North" is the Corporation's flag ship, 9,000 tons in size, with a capacity of 750 passengers and 157 cars. Most of the Corporation's ferry operations cover a circumscribed traffic density area between Vancouver City and Vancouver Island. The Corporation's

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The "Cantamar" in the Sea of Cortez, Mexico.



**"Newport Clipper" of the Clipper Cruise Line, St. Louis, on one of its southern cruises.**

*(Continued from Page Three)*

ferries are modern, comfortable and enjoyable. In all probability, their ferry net is one of the world's largest. Its 1983 passenger total came to the staggering figure of 12,394,000. Obviously, the Port Hardy - Prince Rupert run represents merely a small fraction of this total.

The "Servicio de Transbordadores," a government body with administrative offices at Mexico City, operates ferries from the mainland to Mexican Lower California. The Baja California ports are Santa Rosalia, La Paz and Cabo San Lucas, on the peninsula's southern tip. The Mexican mainland terminals are at Guyamas, Topolobampo, Mazatlan and Puerto Vallarta. Sailings from the latter take eighteen hours and represent the longest Sea of Cortez ferry run. This inland sea is placid throughout the year. The ferries are of recent construction. Aboard, one is able to "meet the people," a feature notably absent from many phases of tourism abroad.

Mere years ago, shallow waterway carriers could be counted on the fingers on one hand. Their number has risen. Construction of new vessels, now in progress, will expand the scope of operations and the number of active lines. The shallow waterway cruising industry, under the U.S., Canadian and Mexican flags, extends to the entire spectrum of the economy. There is small business. There are medium-sized enterprises. There is big business. There is government. All of it orchestrates the response to a growing popular demand, keyed to the unique glamour and attraction exuded by our national and continental home environments. On an overall level, shallow waterway cruising has restored to our attention and enjoyment seasonal and scenic vistas of idyllic regions and historic landmarks which had long languished in touristic oblivion.

Shallow waterway cruising is now largely performed by eight carriers.

The Delta Queen Steamboat Company of Cincinnati operates the country's two largest shallow draft vessels. They are the historic "Delta Queen," a national, historic "landmark," and the ultra-modern "Mississippi Queen." The former accommodates 150 passengers, the latter four hundred. These ships attracted almost 30,000 passengers in 1983. This is tantamount to 53% of the year's shallow water passenger total. The line's all year sailing program takes the vessels as far north as St. Paul/Minneapolis, on the Mississippi River, and as far east as Pittsburgh, on the Ohio River.

Another Mississippi River cruising program is offered by the Padelford Steam Packet Co. of St. Paul. Well known for sightseeing excursions at its home port,



**The "New Shoreham II", of the American Canadian Line, drops its special ship-to-shore gangplank on a southern cruise.**

this company features cruises aboard the 50-passenger "Viking Explorer," formerly based in Little Rock and then known as the "Arkansas Explorer." An unusual attraction of the Viking Explorer cruises is the company's own touring bus. It takes the passengers sightseeing at all stop-overs and also serves as shuttle transportation for one way cruise passengers, taking them back to their home base or vice versa, as the case may be. The Padelford Mississippi program is sold for the entire river itinerary or sectionally, as preferred, covering the St. Paul - New Orleans route in both directions. Upon completion of the Mississippi River program, in the fall, the ship proceeds to Fort Myers, Florida, whence it will return in the spring. During the winter, Padelford's mini-cruiser will offer Trans-Florida cruises, from Ft. Myers to West Palm Beach, across Lake Okeechobee, in both directions. Padelford attracted 1,200 passengers in 1983.

A newcomer to the field of cruising is American Cruise Lines. This line is based in Haddam, Connecticut. It operates four vessels, including the brand new Motor Vessel "Savannah" which commenced operating in mid-April. Lake Okeechobee cruises will also be presented by this carrier, shuttling between Ft. Myers and Hilton Head, South Carolina, in both directions. These programs will be run by three of the company's four vessels, i.e. M.V. "Savannah," M.V. "America" and M.V. "Independence." An equally popular cruise itinerary of American Cruise Lines is its Southern Seaboard waterway run, with Baltimore and Savannah as embarkation points, as well as Oxford, Maryland and Beaufort, South Carolina. New England/Northeast and Hudson River cruises are the summer and early fall programs of this line. The M.V. "American Eagle" will be a major participant in the latter program. Operating with three vessels in 1983, American Cruise Lines accommodated a passenger total of 13,500 persons, establishing it as one of the shallow water front runners of the year! American Cruise Lines' vessels were built by the Chesapeake Shipbuilding Co., at Salisbury, Maryland.

The nation's shallow water cruising pioneer seems to be the American Canadian Line, located at Warren, Rhode Island. Its earliest sailings occurred in 1962. The cruising venture's parent is the famous Blount Marine Corporation, also at Warren. Padelford's "Viking Explorer" and some of Exploration Cruise Lines exceedingly successful ships have the distinction of being Blount-built. The Motor Vessels "New Shoreham II" and "Caribbean Prince" constitute the line's attractive, trim and modern fleet. During the winter season, they cruise in the Bahamas and around Jamaica. During the spring, summer and fall season, a "Northern Cruise" program proceeds through the Long Island Sound, up the Hudson River, through the Erie Canal, Lake Ontario, and the Thousand Islands, onto the St. Lawrence River and into the Saguenay River fjordland. Another one of their summer itineraries features the Welland Canal, as well as Lake Ontario

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and Lake Huron. The line's sailing are distinguished by 12-day programs, in addition to three day weekend quickies. And, of course, there are the trips from the North to the South, and back, at the beginning and end of the winter season, as well as the Florida - Jamaica and Jamaica - Florida runs. American Canadian's vessel twosome offers some of the most variegated waterway tours of the industry. In 1983, it drew a complement of 1,600 tourists.

Exploration Cruise Lines, based in Portland, Oregon, has made a distinct impact on the tourist world. It originated with Exploration Holidays, a major national Alaska tour operator. Its key figure is Robert Giersdorf, who played a major role in the early history of Alaska Airlines. The line's appearance on the tourist scene contributed substantially to the popularization of shallow water cruising. Simultaneously, it helped make the country West Coast-minded. To Alaska tourism it added the attraction of shallow water cruising. Some of Exploration Cruise Line's vessels were built by Blount. The carrier operates four mini-cruise ships. The smallest is the "Glacier Bay Explorer," utilized on lesser, but highly scenic runs in Alaska coastal waters. The other ships are named "Great Rivers Explorer," "Majestic Explorer" and "Pacific Northwest Explorer." In addition to Alaska coastal runs, the line cruises on the Columbia, Willamette and Snake Rivers. Previous programs featured the Sacramento and San Joaquin Rivers, as well as British Columbia waters. The line's vessels are also chartered out to other interests, for Lower California and Alaska cruises. During the inclement weather season, the carrier operates Panama Canal and Tahiti cruises. Its four vessels handled 6,000 domestic passengers in 1983, rendering it the third top performer in the shallow water cruise class.

The Mid-Lakes Navigation Co. of Skaneateles, N.Y. previously confined itself to Finger Lakes sightseeing excursions, on which it coped with 4,000 persons in 1983. Now, it has turned its "Emita II" into an Erie Canal cruiser. It now runs three-day cruises on both the eastern and western halves of the Erie Canal, between Syracuse and Waterford and Syracuse and Lockport, respectively; as well as a three-day cruise on the Champlain Canal between Albany and Whitehall.



Several different regular cruises of the American-Canadian Line in the Great Lakes area are shown here.



The "Emita II", a converted ferry boat, operated by the Mid-Lakes Navigation Company, clearing a particularly low bridge on the western section of the Erie Canal. The pilot-house is taken down for most portions of this cruise.

With the exception of the American-Canadian Line, no cruise operation exists on the Hudson River, Long Island Sound and the off-shore waters linking New York Bay with the coast of New Jersey.

The Clipper Cruise Line was established by waterway enthusiasts in St. Louis, Missouri. It entered the shallow water fray in October, 1983. Its "ultra-yacht," the "Newport Clipper," ran eleven cruises in 1983. All of them were sold out. The passenger total came to 1,100 persons for the three months period! The "Newport Clipper" was built by Jeffboat, at Jeffersonville, Indiana, which also constructed the "Mississippi Queen." The "Newport Clipper's" original sailings covered the Southern Seaboard. They were followed by Caribbean sailings, from Charlotte Amalie, St. Thomas, U.S. Virgin Islands. The latter were so successful that the line contemplates stationing the ship there on a permanent basis. Current plans call for the building of three sister ships to the "Newport Clipper." All of them will cater to an affluent clientele, hence the company's promotional term "ultra yacht." The new vessels, as well, will be constructed at Jeffersonville. Like the "Newport Clipper," they will accommodate 100 passengers.

On the St. Lawrence Waterway and the St. Lawrence River proper, Rideau St. Lawrence Cruises provides a summer season service. The line's original concept called for sailings on the Rideau Canal which, however, is currently non-navigable because of protracted disuse. The "Canadian Empress" has sumptuous accommodations for 66 passengers. It links Kingston, Ontario, with Montreal and Quebec City, on five night runs. The ship's interior is fashioned after turn of the century elegance. 2,400 tourists patronized the "Empress" in 1983.

On a distinctly non-luxurious level, by way of understatement, functions M.V. "Fort Mongan." It is operated by Logistec Navigation of Montreal. It accommodates almost two hundred passengers on its three day St. Lawrence River run, from Rimouski to Blanc

Sablon, with numerous intermediate stops, on a schedule extending from April to December.

Another two-day Lake Okeechobee cruise is available to and from Fort Myers, during the winter season, operated on a regular but infrequent schedule by Everglades Jungle Cruises.

North America's oldest operating steamship is S. S. Segwun. It was constructed in 1887 and twice rebuilt, in 1925 and 1980. It runs two day cruises on Lake Muskoka, from Gravenhurst, Ontario. Its operator is the Muskoka Lakes Navigation & Hotel Company.

The newly built sternwheeler "Columbia Gorge" is owned and operated by the Port of Cascade Locks, Oregon. Once or twice annually, it undertakes two day cruises on the Columbia River, carrying 350 passengers. During the balance of the year, the ship is engaged in excursion sailings.

Additionally, Sea of Cortez cruises are offered from both U.S. Southern California point and Mexican Lower California ports. Some of them are luxurious and expensive. Many cater to naturalists with special proclivities, such as bird watching, whale watching, hiking, etc. Two of the most prominent cruise vessels in this area are the Mexican flag boats "Don Jose" and "Cantamar."

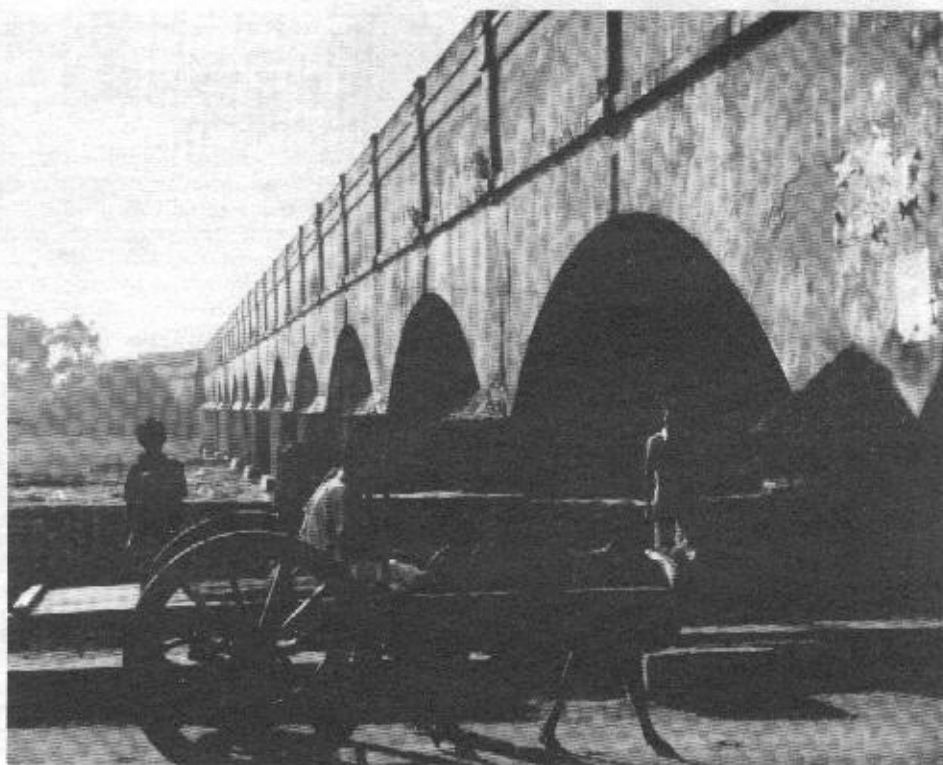
Shallow water cruising will pass another milestone in the fall. On September 29th, to be precise, the recently established Coastwise Cruise Line will enter its virgin vessel, the "Pilgrim Belle," in the cruise field. The line is a division of Hyannis Harbor Tours, one of the nation's major excursion boat operators. The vessel can carry a total of 110 passengers. Its first sailing will start in Hyannis and proceed to Newport, Martha's Vineyard and Nantucket Island. Subsequent destinations will be New England, the Hudson River, the Southern Seaboard and the Florida East Coast, followed by a gradual return to Northern waters. This vessel, too, will appeal primarily to a substantial class of travelers. Advance promotion of the new venture is likely to insure the success of this new entry in the field.

With 57,000 patrons of shallow water cruising in 1983 and a vastly larger number of deep water cruising clients on our waterways, waterway cruising is emerging as a rapidly growing major element within the framework of North American tourism.

Franz Katz is an ACS Life Member and a Feature Writer for Travel and Tourism Research Association International. His address: 33 East End Avenue (1-A) New York, N.Y. 10028.

A feature article, entitled "Those Amazing Pennsylvania Canals", by Bill Shank, has just been published in the PENNSYLVANIA MAGAZINE, Vol. 3, No. 1. It is a two-part illustrated feature, with the second part due several months hence. The magazine has a circulation of 60,000; available on local newstands in the Keystone State.

## A CANAL-WALLAH IN INDIA (Part I)



Hindri River Aqueduct on the Kurnool-Cuddapah Canal in Kurnool. Now that the canal is no longer used for navigation, firewood is carried into town on bullock carts such as this. (Bill Trout).

By Dr. William E. Trout III

*(This is the latest of our reports on foreign canals, designed to help pave the way for others lucky enough to reach exotic places. Readers are urged to contribute.)*

India's navigation canal era corresponded roughly to ours: it began in the early nineteenth century, declined as the railways and then trucks took over, and is now in a relatively quiescent state. The difference is that all of the canals which have been abandoned for navigation were also irrigation canals so are still flourishing even though their locks are derelict.

Someday, perhaps, an archaeologist will find a genuine Indian navigation structure on an early canal, but by all accounts the canals had no locks until the British became the paramount power in India and began building them in the 1820's. India's canal system is therefore a museum of British engineering as adapted to India's geography, geology, and labor force.

While in India in 1983 I had a fortnight to sample different parts of the canal system, and was able to visit the unfortunate Kurnool-Cuddapah Canal in the southern interior, the Krishna River Delta system on the east coast, and the Doab and Upper Ganges canals in the northern plains. This is a report on that brief visit.

My first stop was to be "Hooghly Point" in Poona, the home of Capt. U. Shanker Rao, who was the subject of articles in the British Waterways Board's magazine

back in 1977. Capt. Rao, "The Mark Twain of India," had been a pilot on the Hooghly River for 33 years before he retired in 1966 to found the "Indian Centre for Maritime Economics and Creative Innovations," a personal effort to encourage improvement and appropriate use of more of the inland waterways, and to improve the lot of the boatmen. His motto was "Small is Beautiful" and a favorite proposal was the use of "baby dredgers" to make the small rivers navigable again. Several years ago the Indian Navy invited him to create the National Maritime Museum (unfortunately for us with nothing on canals), located on Maritime Island off the Gateway to India in downtown Bombay. Tour boats at the Gateway can take you there, but make sure first that it is open - in India you need to ask several people and take the majority opinion! Capt. Rao and I were going to work out a grand tour of the canals but I found that he had died a year ago. His files on waterways and canals, and the manuscript of his book on inland waterways, are, I hope, in the museum or another safe place. This article is respectfully dedicated to the memory of Capt. U. Shanker Rao.

### The Kurnool-Cuddapah Canal

My canal explorations began far from the teeming cities in the teeming town of Kurnool (all Indian towns are teeming), a 100-mile, 6-hour, meter-gauge steam-train ride south from Hyderabad, in central southern India. Here the Kurnool-Cuddapah, or "K-C" Canal was constructed in 1863-1870 by the Madras Irrigation and Navigation Co., Ltd. According

to the *Triennial Review of Irrigation in India, 1918-1921* (Calcutta, 1922), the canal was "a chapter of failures on almost as large a scale as the classic works have been successes." It was intended to be part of India's most ambitious irrigation and navigation scheme with 4,000 miles of navigable canals including a trans-continental route through Kurnool. Unfortunately, cost overruns and engineering mistakes forced the work to stop due to lack of funds and the government took it over, with only the isolated 414-mile, 42 lock, K-C section begun. According to the *Review*, the local farmers had been doing quite well without any irrigation, and as for navigation, "The canal runs from nowhere to nowhere in particular, and consequently there is nothing and nobody to carry."

Now, with India's population burgeoning, the canal has regained its importance for irrigation, but navigation has been long abandoned. With no more need to maintain a relatively slow flow for navigation, in 1955 the drops at the locks were eliminated and the canal bed lined with concrete in order to increase the flow to three feet per second. Ironically, the K-C Canal may once again become an artery of commerce as part of the 2,000-mile north-south Ganga-Cauvery Link Canal for irrigation, hydropower and barge tows, if a 1972 United Nations study of the National Water Grid (UNDP #72-45107) is ever acted upon, and if history does not repeat itself!

Next to the local canal office on Railway Station Road I was shown one of the 42 cut-stone locks. There is a drop of only a few inches now at the weir under the bridge, so the lock walls are barely above water but are complete with some gate-post fittings. As the only paleface in Kurnool (and surely the only pukkah sahib canal-wallah in the whole state of Andhra Pradesh) I created quite a gathering while walking around on the lock and had plenty of help estimating the chamber dimensions, 15 by about 105 feet, essentially the same size as canal-era locks in the U.S. The old locks in India generally range from this size up through 20 by 150 feet.

From the lock I took the ubiquitous cycle rickshaw, or pedicab, a few blocks downstream to the canal's best-known feature, the Hindri River Aqueduct. This is an impressively long, 14-arched structure; whether there is stonework under its concrete exterior, I do not know. The banks of the wide river are covered with clothes drying in the sun and by women beating more soapy clothes against the rocks to literally pound the dirt out.

In a country with few cars, the Indian bus system is particularly efficient and inexpensive, so for 70 cents I was able to take an afternoon excursion to the head of the canal, at Sunkesul Anicut (or Dam), 27 km upstream. A bus ride in India is quite an experience, barreling along on one-lane roads with horn blaring

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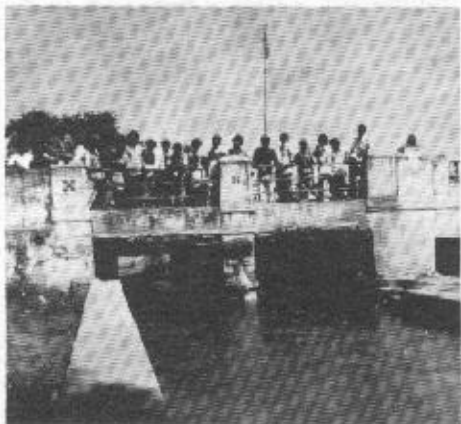
(Continued from Page Six)

to clear the way of trucks and busses, sacred cows, water buffaloes, goats, donkeys, bullock carts, women piled with firewood or hay, and the odd camel, veiled lady, monkey and python, and rarely hitting any of them. In the middle of December this was also a harvest time so there were piles of hay in the road for the bus to run over, to help with the threshing. There was more excitement when my bus had to stop while (I was informed) the driver and a passenger had an argument about the route the bus should take!

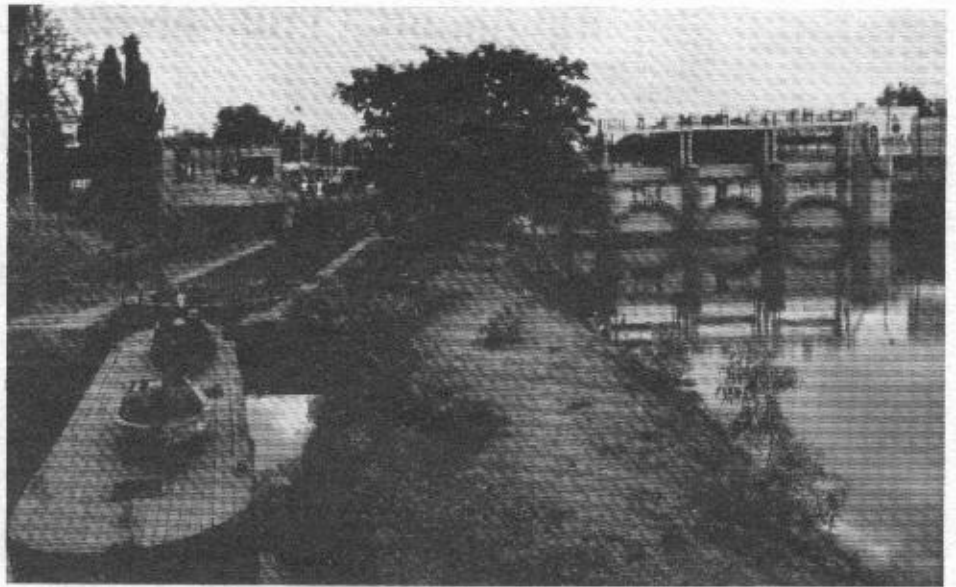
Sunkesula is a little firewood cutters village with several thatched-roof cottages. Sticks and limbs are floated down to the Anicut on reed rafts and carried to the village where everyone in the family spends all day cutting and splitting wood into foot long sections, tying up small bundles with reed, and loading them into bullock carts for a long, slow trip into Kurnool. On the way back at night the bullock carts are tied together in a string so all but the lead driver can get some sleep. In the old days, perhaps, the wood might have been sent down the canal. Nearby is the anicut, an impressive stone and concrete dam spanning the wide Tungabhadra River, from the canal headworks and official's bungalows on one side, to a walled village with temples on the other. There is no sign of any guard lock now, but there is a stagnant canal nearby which I was told was never a success - perhaps it leads up to the original guard lock and anicut, which (as part of the sad story of the canal) were almost completed before the site was found to be unsuitable and had to be abandoned.

#### The Krishna Delta Canals

From Kurnool I spent a day on a bus, climbing over the coastal range to Vijayawada, one of the several towns along the east coast at the head of a river delta canal system. Here where the Krishna (or Kistna) river flows between two solid hills three-quarters of a mile apart, is the Prakasam Barrage, from which fans out a network of 349 miles of main canals and some 2,000 miles of distri-



An abandoned lock in Kurnool on the Kurnool-Cuddapah or "K-C" Canal. From the crowd which developed, canal buffs must be rather rare in these parts! (Bill Trout).



The Ellore Canal Lock, and a canalboat, in Vijayawada on the Krishna Delta canal system. (Bill Trout).

butaries, irrigating over 700,000 acres. In the model museum nearby one can see how the barrage began in 1853 as a low stone structure 15 feet high, built on the river's shifting sands. Planks to raise the water level were added in 1893, then automatic moveable shutters in 1898. A model of a self-propelled steam "plough" shows how it used to rumble along the dam, automatically levering each shutter up to the vertical position. The plough itself (now without its steam engine) is still at the west end of the dam at the Plough House.

All this was superseded in 1953, the anicut's centennial year, by the present barrage, the city's most spectacular sight, a line of some 70 yellow stone piers with lift gates between them, spanning the broad river. It also serves as the highway bridge for the region so one can take a long cycle-rickshaw trip across it, or better, walk, to properly appreciate its length and to see the mason's marks. My favorite mason is "VB" who was skilled at stonework but not at spelling, usually managing to put the "B" in the wrong place - on its back, or backwards, or looking like a pair of spectacles. You'll find his work at Gate 69 near the museum, and also near the middle of the barrage. Someday a study of these marks should tell us something about these otherwise anonymous workmen. You'll also find mason's marks on older structures in India, including the mosques around the Taj Mahal.

There is a stone lock at each end of the barrage, with 16 by 150-foot chambers and (now) metal mitre gates opened by a rack and pinion, and with counter-weighted gate sluices; there is quite a variety of lock architecture in India. The 40 or so locks in the canals which fan out from here are of the usual 15 by 105 feet, some with balance beams. The locks at the barrage are in pleasant parks complete with monuments and shrines. The lock at the west end leads south to the Buckingham Canal in Madras, and is in open, palm-studded irrigated farmland. In its lock park is a little domed pavilion

"In memory of Sri K.V. Sankara Iyer, Superintending Engineer, and his wife, who were drowned in the Kistna Western Main Canal at O.M.3.F. on 15-10-1935."

At the east end of the barrage, in town, is the Vijayawada Lock and the Model Museum. When I was there the lock was being drained to remove a boat which had sunk a few months back in the monsoon season. Since the boat blocked open the upper gate, scores of men and women were busy carrying baskets of sand on their heads from a barge moored in the river, throwing the sand into the canal to build a temporary dam. The pumps had made some headway, revealing a few deck planks and a metal tiller, but the operation was clearly going to take a long time. The Superintending Engineer told me that in any event, few boats used the canal anymore, now that trains and trucks had taken over. I only saw two canalboats during my three days in Vijayawada, and they weren't going anywhere.

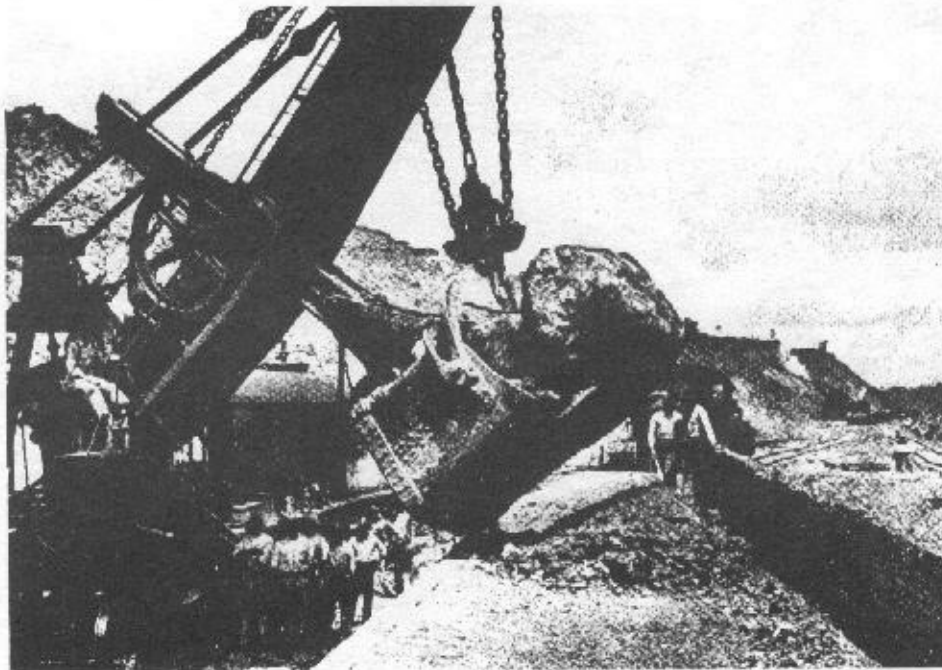
In Vijayawada, the Kistna Eastern Main Canal branches into three navigable canals, each with a lock downtown: the Ellore Canal, which is the main line up the coast; the Bundar Canal next to the river; and Ryves' Canal in between. Together with the river they give a seaside air to Vijayawada and are handy landmarks as you travel by rickshaw or look down on the city from the heights of the Temple and Gandhi Hill.

#### Other Canals in the South

There are scores of other canals along India's east coast, especially in the Ganges, Mahanadi, Godavari, Kistna, and Cauvery deltas. Most of these are linked by the Buckingham, Ellore and other coastal canals so that except between the Mahanadi and Godavari deltas, one could travel by canal along the entire east coast, from Calcutta almost down to Sri Lanka (which also has a canal system), and make use of hundreds of miles of branch canals.

(To be concluded in the next issue of AMERICAN CANALS.)

# STEAM AND THE PANAMA CANAL



A typical steam shovel photographed during Panama Canal construction, handling some particularly heavy loads, circa 1912.

By William T. Richards

*"Steam and the Panama Canal" was originally published as a series of short articles in "Engineers and Engines Magazine." ACS Director William J. McKelvey, Jr. made arrangements with the Author - William T. Richards - to publish it as a series in AMERICAN CANALS. However, we have taken the liberty of putting it all together, with the excellent photos supplied by Mr. Richards, and with some editing. For the complete story of the politics and engineering behind the original building of the Panama Canal, see TOWPATHS TO TUGBOATS (May 1982) as published by American Canal and Transportation Center, York, Pa.*

When Count Ferdinand deLesseps had completed the Suez Canal in 1879, he was hailed as the greatest canal builder in the world. Such praise went completely to his head and he turned his attention to promoting a canal through the Isthmus of Panama. With complete confidence Lesseps brushed aside several engineering surveys and began work at Panama with the excavating equipment which had worked well at Suez. Removing great amounts of sand in the Suez project was vastly different from rock and unstable material encountered at Panama. Result, after bankrupting two companies and squandering the proceeds of a National French Lottery, Lesseps gave up the conquest of Panama and abandoned the equipment to the jungle. Moreover in the 10 years of French effort (1879-1889), 2000 Frenchmen lost their lives to Yellow Fever.

Just as soon as America completed political arrangements with the Republic of Panama, arranged financial payments with the defunct French Company they began a program of sani-

tation to wipe out the mosquito and Yellow Fever. Now attention could be given to 'make the dirt fly!'

With the shortcomings of the French effort and more particularly French digging equipment before them, American engineers designed equipment - all steam powered - to cope with the known difficult project before them.

This article describes the new and specifically designed steam powered machines which - in the hands of intelligent and determined Americans performed the greatest feat ever undertaken by ancient or modern day engineers. The intent here is to share with readers a pride in American ability and a better respect for the might of steam power.

## The Steam Shovel

The introduction of the American Steam Shovel to Canal excavation at Panama takes first place in success of the undertaking - in contrast to failure and abandonment by the French. Against all engineering studies, the French excavating companies brought to Panama steel bucket conveyors which, admittedly had been very effective in moving great quantities of sand at Suez.

The Continental Divide at Panama, however, was rock, interspersed with dirt which became muck during the prolonged rainy seasons. Result - French workman spent much time and dynamite breaking rock to be loaded on conveyors by hand and in cleaning, by hand, conveyor buckets and chains fouled by sticky dirt which stopped further operation. It must be said that the French achieved some progress, foiled only by epidemic deaths from Yellow Fever and from excavating tools wholly inadequate for the work at hand.

Judged by modern standards the American shovels sent to Panama seem primitive. What with greased log chain to hoist the bucket, a pair of operators, one to operate the hoist and swing-engines and a second man on the boom to operate the crowd-engine and the trip rope. In operation this team of operators were able to handle any material in the path of the shovel - on occasion balancing rock weighing 10 to 12 tons and to deftly place such a rock on the dirt train - nudging it into a secure position.

There were 101 such excellent machines shipped to Panama - nearly all railway-mount - a few equipped with wood-faced caterpillar treads for special situations. The total excavation for the Canal was 220,000,000 Cu. Yards of material. Someone has calculated this to be the equivalent of digging a hole, 13 feet square through the earth at the equator. Certainly it is construction of the Canal at Panama that stands as the greatest modification of Nature ever attempted by man - ancient or modern - and this by a factor of 3 to 1.

## The Track-Shifter

As Americans took over from the French to dig a canal at Panama, they took note of and corrected a French weakness which, in itself, would have prevented success in the venture. You see, the French contracted digging by sections, paying scant attention to the light rail and gauges varying at the whim of the several contractors. American engineers, by contrast, viewed the undertaking as a unit - knowing full well that mighty heavy machines were being built for rail transport on the job.

Accordingly, American Railroad engineers laid out standard gauge, heavy rail tracks using standard switches and 161 locomotives - principally 2-6-0 switching type. During the peak of excavation this was the busiest railroad in the world, having 14 parallel tracks and dispatching a loaded dirt train every few minutes.

Obviously, when a steam-shovel completed a cut, a track 9 feet closer to the bank is required for another cut to be reached. This was the function of the track-shifter. With this machine a crew of 9 men could shift 100 feet of track - rails and ties together - normally shifting 5400 feet, or just over a mile of track in a days time. This accomplished the labor of 600 men if the track had to be dismantled and put together again by hand.

Also, when the dirt train reached its destination - a dump site or a site where spoil was used in construction - the track-shifter was used to keep track near enough to deposit dirt in its intended place.

Nine track-shifters were in use at Panama. Early models were complete with boilers while later models took steam from its attending locomotive. It is interesting to note that track shifting was

*(Continued on Page Nine)*



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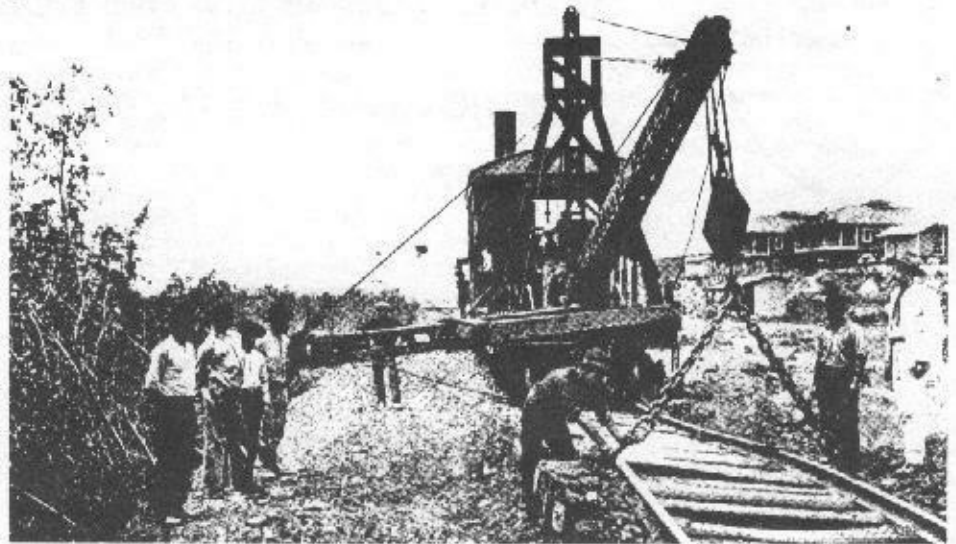
regularly done under torch light at night so come the next morning shovels or dirt-trains found a track in place upon which to resume work. It is also to be noted, in this greatest excavation project ever completed on earth, that ingenuity was matched by a spirit of dedication which has seldom been equalled.

#### The Lidgerwood Unloader

Without a doubt few people have taken time to realize the quantity of water required to operate a lock canal such as the Panama Gateway. For example, one lock full of water is lost to the Atlantic and to the Pacific Oceans for every ship that traverses the Canal. Consider that a Panama lock is 1,000 feet in length, 100 feet in width and 40 feet in working depth; now, realize the locks are double for two lanes of traffic and they operate night and day and you come up with a demand for a considerable and constant demand for water, accordingly, it was determined the flow of the Rio Chagres would do the job.

The result was the Gatun Dam on the Atlantic end of the Canal - an earthen structure far larger than any like structure ever undertaken by man - ancient or modern. Gatun is nearly a mile in total length, half a mile thick at the base and 135 feet in height to maintain a lake of a few hundred square miles at a surface level of 85 feet above ocean level. The amount of fill-earth required for a dam of this magnitude; 21 million cubic yards of material, was transported either from the excavation of the famous Culebra Cut, through the Continental Divide at Panama, or pumped into the core of the Dam from impervious material near the Dam site.

In the 70 years of continuous Canal operation, with the Gatun Dam controlling the Rio Chagres, there has been neither a shortage of water for Lock operation, nor has there been any serious damage from flooding; this is proof of



A "Track Shifter" at work moving railroad track closer to the day's working area, without dismantling rails or ties.

engineering at a high level. Moreover, the Gatun Dam has blended into the terrain so well that visitors, including the author have had to be shown the finished article to realize the Dam really exists.

Material for Dam construction was brought to Gatun by dirt trains consisting of 20 flat cars, side-board on one side only, none on the other. At the unloading site the towing locomotive was uncoupled and shunted aside - in its place a second locomotive then pushed to the lead-car a powerful winding drum, which took steam from the locomotive, this had a cable running the length of the train and attached to the drum, which in turn pulled forward a large plowshare - the 'lidgerwood' plow, which very effectively pushed everything off the cars on the open side. Thus in the usual and normal operation, rocks, muck and dirt - some 500 cubic yards were deposited along side the track - in a matter of 8 to 10 minutes - without hand labor.

The 'Lidgerwood' plow could now be

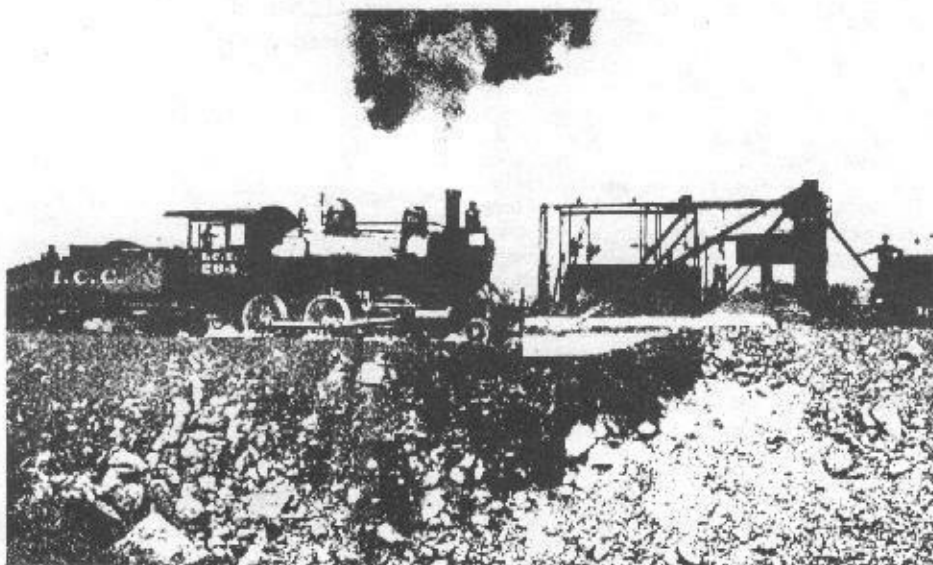
returned to the rear car by steam power, then the train recoupled to the towing locomotive and was now ready for the trip back to the excavating site. This unique application of steam-power stands in contrast to the French methods where the bulk of dirt handling was manual-labor and where much hand-labor and down-time was spent in unclogging and cleaning conveyor equipment, totally unsuited to the material to be handled. Also by the use of such effective and ingenious machines, the project at Gatun Dam, the flood control spillways, and the hydro-electric generating plant were completed and working on schedule.

Press reports and especially comment by engineers from around the world, were full of amazement and commendation at the vastness of this project. Little wonder such praise, all visitors whether they were trained to appreciate the genius and organization they were witnessing, were looking upon the most daring and unique application of power ever undertaken to modify and harness Nature as man had found it.

#### The Spreader

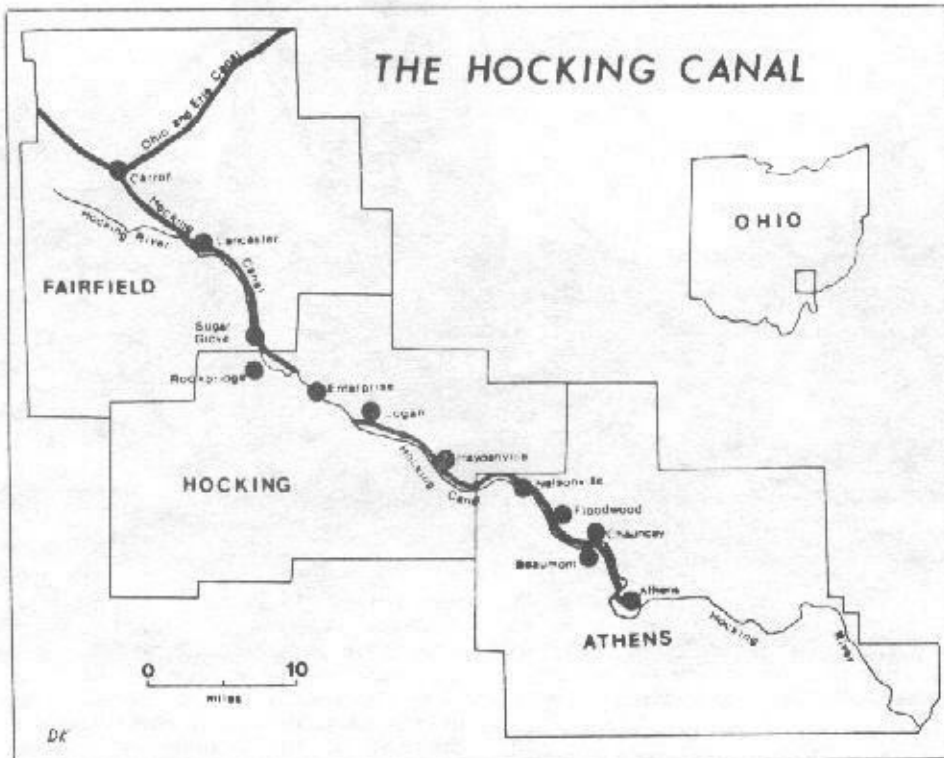
The fourth machine, designed specifically to apply the might of steam to successful completion of the Canal at Panama was the Spreader. This machine, as the picture shows, is essentially a grader blade attached to the side of a flat-car. The angle of the blade, its tilt, and extension from the flat-car were controlled by pistons taking power from the steam locomotive - which in addition could extend the blade tip 11-1/2 feet from the car. The locomotive, quite obviously, also furnished the forward motion. By such a design the spreader blade was capable of moving spoil-dirt at a fill-site as well as placing it precisely where needed to maintain the slope of the dam as the structure rose at Gatun. In addition to such dirt handling, the spreader left a level bed for the track shifter when required - all with little or no hand labor.

(To be concluded next issue.)



This is the "Spreader" at work leveling off ballast and fill, ahead of the steam locomotive. This ingenious device saved many hours of hand labor by the American construction team on the Panama.

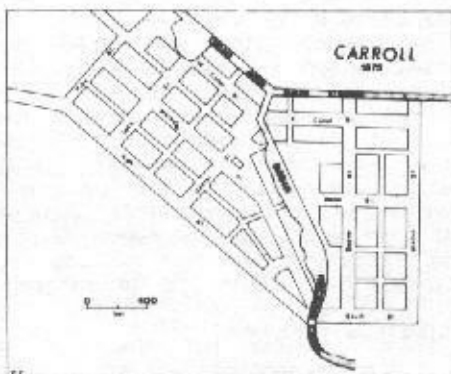
# CANAL TOWNS ON THE HOCKING



By David G. Kimmerly

The Hocking Canal was originally a privately owned canal known as the Lancaster Lateral Canal. The Lancaster Lateral Canal was completed in 1832 connecting Lancaster with the town of Carroll on the Ohio and Erie Canal. In 1836, the State of Ohio took control of the Lancaster Lateral Canal with the intention of widening it and extending it to the town of Athens. In 1841, the canal was completed to Nelsonville and by 1843 it was completed to Athens. The canal covered a linear distance of 56 miles connecting Athens with the Ohio and Erie Canal.

As a result of the Hocking Canal several towns came into existence and existing towns grew. The actual layout of these towns was determined, in part by the Hocking Canal. One natural factor that must be considered is the availability of flat land suitable for development. The Hocking River Valley provided this flat land, but it took the innovation of the Hocking Canal to provide the economic stimulation also necessary for development.



The 1875 map of Carroll shows the arrangement of the streets in the town in relation to the canals. Both the Ohio and Erie Canal and the Hocking Canal played a role in determining the arrangement of the town. Carroll was platted after both canals were completed. The Ohio and Erie dominated the pattern as evidenced by the arrangement of East and West Canal Streets, which are parallel to the canal. The Basin of the Hocking Canal also played a role in that it served an important economic function. While boats were docked in the basin commodities were brought for transport on the canal. The basin was a market place and fittingly the street parallel to it is named Market Street.

Sugar Grove which lies south of Lancaster was laid out in 1836 soon after construction of the Hocking Canal began. Similar to Carroll, Sugar Grove was a market place where goods were brought for transport on the canal. Although there was no basin in Sugar Grove it was the site of several locks. The locks caused delays and therefore there was time for transactions to take place. Main Street in Sugar Grove is wide providing room for horse and wagon to turn around and to provide space for the general activity that occurred along the canal. Perpendicular to the canal are much narrower streets including Canal Street and Market Street which profess the towns function.

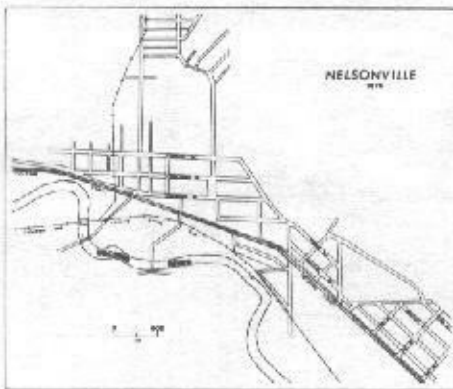
The town of Nelsonville exhibits a variety of factors in its location and arrangement. The original plat, which consists of Franklin, Washington, and Columbus Streets was laid out in 1818. Since this part of town was laid out before the Hocking Canal was built there is no canal influence. The impact of the

Hocking Canal on the street pattern came in 1871 when an addition to the town was made. The addition included Chestnut, Poplar, and Walnut Streets which were placed parallel to the canal and had a completely different orientation than the original plat. Nelsonville was a coal mining town that was stimulated economically by the Hocking Canal and the Columbus and Hocking Valley Railroad. By 1871 the Hocking Canal was losing business to the railroad, but the canal was still a physical landscape element interfering with the street pattern. Today, the Hocking Canal has been paved over through Nelsonville and the street has been appropriately named Canal Street.

The influence of canals on street patterns in towns can be found in other areas of the United States besides the Hocking River Valley. Other towns which exhibit similar patterns: Freemansburg, PA, Lockville, OH, and Hancock, MD. By observing the street patterns in canal towns it is possible to devise a model of a typical canal town. A typical canal town is rectangular or linear in shape with a wide Main Street parallel to the canal. Perpendicular to the canal are narrower streets, which are usually numbered. However there are street names that are commonly used in canal towns, including Lock Street, Water Street, Market Street, and Canal Street.

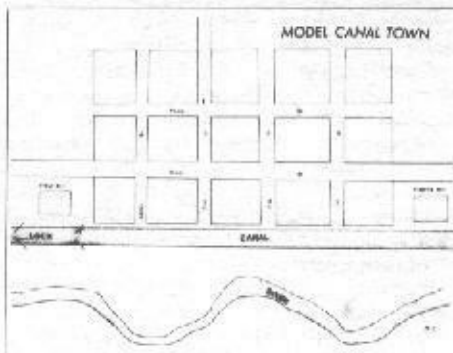
I recommend that all canal enthusiasts make observations when they visit a canal town and make their own model of a typical canal town based on their observations. It is important that we study the towns canals went through simply for the purposes of preservation





and reconstruction. The model canal town is a guide to be used for reconstruction of a canal town for tourism and also to point out the uniqueness of canal towns for preservation. Canal towns need to be protected as much as canal engineering features, because they owe their existence to the economic advantage a canal brought to a region.

There are some excellent examples of successful preservation projects involving canal towns. Roscoe Village, OH is an excellent example of what can be done and New Hope, PA is very successful in attracting tourists. However, there is still a lot of work to be done to protect and preserve the canal town in the United States.



## TWO STATES PLAN FOR BLACKSTONE

The following item, from the Fall, 1983 issue of the *New England Rivers Center Bulletin* was sent us by ACS Life Member Bill Gerber. For previous developments on the Blackstone, see page 8 of our February 1984 issue.

In 1982, the Blackstone River and Canal Commission was created by the Massachusetts legislature to plan for the Blackstone River and Canal Heritage State Park. This spring, according to the Blackstone River Watershed Association, the Commission announced its plans to "restore the Blackstone Canal, establish recreational facilities and highlight the industrial history of the area."

Meanwhile, Rhode Island is planning a Blackstone River Greenway. According to the RI Canoe Association, Congressman St. Germain has announced that funds have finally been approved for the National Park Service to study the feasibility of establishing a national park on the river from Worcester through Providence.

## D & R CANAL CELEBRATION

Several events are being planned for the Sesquicentennial Celebration of the Delaware and Raritan Canal.

On 16 June, the Canal Commission, the New Jersey Historical Commission, and the State Museum are jointly sponsoring a one-day conference on the D & R Canal. The conference will include speakers on the history of the canal, on the life of the canal workers, on the meaning of the canal to the development of central New Jersey, and on the future of the canal in the region. The conference will be held the same day as the opening of a major exhibit on the canal at the State Museum.

The Delaware and Raritan Canal Commission, the Trenton City Museum, and the Princeton Art Association are jointly sponsoring another kind of exhibit. This is an invitational show; one hundred artists have been invited to submit work; one work of art each, that relates in some way to the canal. This show will be mounted in September in Ellarslie.

Several projects that will have a lasting effect are being undertaken in the name of the sesquicentennial.

1. The canal park staff is preparing new milestones to replace those missing or beyond repair.
2. Planned is a catalog project for the location and content of primary source material on the canal.
3. The New Jersey Canal Society plans are covered in a separate item, printed elsewhere in this issue.

## C.S.M.J. TO SPONSOR D. & R. CANAL REUNION

In support of the Delaware & Raritan Canal Sesquicentennial Celebration weekend activities, the Canal Society of New Jersey will host a reunion/reception of Delaware & Raritan Canal Company employees and boaters who used the waterway. The gathering will be held at 2:00 P.M. on Sunday, June 24, 1984 in Morven, Princeton, the former residence of Robert F. Stockton, the first president of the Delaware & Raritan Canal Company, and, more recently used as the Governor's mansion. In addition to the honored workers and boatmen, representatives of historical organizations, the local press, the full membership of the Delaware & Raritan Canal Commission and the Canal Society of New Jersey will be formally invited.

The program will include introductions of honored guests; presentation of "Friends of the Delaware & Raritan Canal", certificates to the boaters and workers, the presentation of a plaque commemorating the canal company's first tug boat — The Robert F. Stockton; an opportunity to reminisce with the "Old Timers"; a group photo session; viewing of the superb period furnishings of the various rooms in the Morven Mansion; and an occasion to visit the interior of Ivy Hall which is located across the street.

(For further details contact: McKelvey 103 Dogwood Lane, Berkeley Heights, New Jersey 07922.)

## "THE GREAT CANAL CAPER"

The City of Rochester, New York, celebrates its 150th birthday on April 28, 1984. There will be a number of festivals scheduled throughout the year. Among them will be the Lake Ontario Festival with a contingent of tall ships arriving from Toronto, and the Canal and Upper River Festival or "The Great Canal Caper".

The "Great Canal Caper" on July 6, 7, 8 will be a "sesqui salute to the City of Rochester from towns along the Erie". In addition to local canalside festivities consisting of band concerts, fireworks, games, sing-alongs and tug-of-wars across the canal, about 15 towns will launch floats depicting their ties to the canal. On July 7 these floats, on barges provided by the N. Y. State Dept. of Transportation will be part of the Sesquicentennial Flotilla parade along the Barge Canal. Also some 15 to 20 steamboats, including some antiques, and some 100 private boats decorated for the event will be part of the flotilla parade. Prizes will be awarded for the best decorated boats and float barges.

At sunset on July 7 and 8 the Sesquicentennial Pageant will be presented on a floating stage in the Genesee River at Genesee Valley Park. The pageant will have as its theme the founding and settling of Rochester and the waterways of Rochester: The Genesee River, the Erie Canal and Lake Ontario.

Genesee Valley Park will be the site for dozens of special events including games and contests, hot-air balloons, Civil War regiment demonstrations, musical entertainment, strolling clowns and musicians, during the weekend. In addition to various craft and ethnic displays, there will be displays on the Erie Canal in Rochester, the history of bicycling in the region and the recreational use of the present day Barge Canal. Also scheduled are bike hikes by the Rochester Bicycling Club and a hike by the Genesee Valley Hiking Club.

Waldo Nielsen, ACS, is on the steering committee for The Great Canal Caper, headed by Judy Kaplan, the prime mover behind the preservation of Erie Canal Lock 62. For further details, write Waldo J. Nielsen, 343 Eaton Rd., Rochester, N.Y. 14617.

## ROY CREVELING

1907 - 1984

Marsha Kleedorfer, of the Canal Museum at Easton, Pa., reports the death (April 27, 1984) of Roy C. Creveling of Phillipsburg, N.J. A writer and movie-maker, Roy's movie film "Paradise Ditch" has been a favorite at the Easton Museum for years. It is probably the only movie film in the country showing actual footage of mule teams and canal boats on a working canal. It shows locks and levels of the Lehigh and Delaware Canals in operation in the early 1930's.

## LOCK II PARK - AKRON

(Continued from Page One)

now formally to be known by its Roman numeral as Lock II - will be a gracious focus. Bankers spoke of the transfusion of vitality into the dying downtown such residences would bring, thus justifying the government grant that paid for the design engineers, construction workers and landscapers who for more than two years had been fashioning the whole.

Present also were members of the Canal Society of Ohio and of The Summit County Historical Society. They knew there had been a dream years earlier. A newspaper of September 23, 1963 carried a sketch of a proposed park at Lock 2. Carl Pockrandt, then president of the Historical Society and a founding member of the Canal Society, wanted the State of Ohio to release this land at the lock rather than allowing a parking lot to jut in. "The lock will slip out of sight beneath rubble and old shrubbery," he prophesied as he spoke of Mr. Payne's work here and the fast-disappearing dry dock. The Historical Society could lead a proposed restoration, he suggested. Mr. Pockrandt had no success.

Years later, William V. Wallace, Jr., then director of The Summit County Historical Society and later president of the Canal Society of Ohio, carried the same engineer's sketch downtown to show Akron's planning engineer. "Interesting," the man said, "but not feasible now." Again the idea was pushed onto the furthest back burner.

Only when Akron followed the path of other cities, asking for out-of-town advice in re-designing its downtown, did Lock 2 reappear as a valuable and historic tool.

Today's version is not much different from that sketch Leonard Hiebel drew for Carl Pockrandt. Only the drydock is now completely missing; the shape of the canal boat appears on its site. The Kenmore Construction Company, successful bidders for the local work, removed much of the rubble that covered the drydock, then followed the designers orders. This was to stabilize the fill and pave over it, then place the steel framework of the boat.

William V. Wallace, Jr., one of whose hats is historical consultant for Akron, enjoyed being watchdog of the proceedings. He sent copies of *Towpaths* articles by Frank Trevor on lock construction to the Boston designers. He arranged and participated in a meeting with their agent, Peter Johnson, and the late Gale Hartel at Canal Fulton's Lock 4 so that the hardware of a lock could be examined, among other details.

Other Canal Society members somewhat involved were Jack Gieck and James and Margot Jackson, who were asked to review the wording of the plaques that will abstract the history of the place and of the canal's role in the growth of Akron. These panels are to be fitted into the canal boat structure, but at this writing have not yet been placed.

## I & M Bill Passes

A unique new federal designation that combines park and recreational planning with commercial and industrial development was approved by Congress. The House and Senate have passed legislation to establish the **Illinois and Michigan Canal National Heritage Corridor**, a 100-mile linear historical park system in Chicago and Northeastern Illinois. The United States Senate passed S. 746 to establish the Corridor Monday, February 27, 1984 and the House of Representatives followed suit on H. R. 2014 on Tuesday, February 28, 1984.

### CANAL CALENDAR

**May 26-Oct. 8, 1984** - Mill and Canal Tours in Lowell; Pawtucket Canal Tours; Write Lowell National Historic Park, 169 Merrimack St., Lowell, MA 01852.

**June 14-17, 1984** - Society for Industrial Archeology Annual Conference, Boston; write Charles River Museum of Industry, 154 Moddy St., Waltham, MA 02154.

**June 16, 1984** - Delaware and Raritan Canal Conference, sponsored by N. J. Hist. Commission, State Museum and CSNJ (See article this issue.)

**June 17, 1984** - Slide Lecture on John B. Jervis, Chief Engineer of the Delaware and Hudson Canal, by Lance Metz, Canal Museum, Easton, PA 18042.

**June 23-30, 1984** - CSNJ Tour of the Black River and Rideau Canals. Contact Emery Carlson, 19 Jay Road, Chatham, NJ 07928.

**June 24, 1984** - CSNJ - hosted Reunion of Delaware and Raritan Canal Company employees at Princeton NJ. (See article this issue.)

**July 6-8, 1984** - "Great Canal Caper", City of Rochester 150th Anniversary. (See article this issue.)

**July 27-Aug. 12, 1984** - "England Afloat, Scotland Afoot" (See article in *AMERICAN CANALS* #47, page 10) Contact Bill Gerber, 16 Princess Ave., Chelmsford, MA 01863.

**August 18, 1984** - "Canal Days, Fort Hunter Canal Society. Write Marion Hovey, Fort Hunter, NY 12089.

And so again canal waters carry a hope for Akron just as they did so long ago - a hope for growth despite the fashionable fancy dress.

*This article was published by Margot Jackson in a recent issue of "TOWPATHS" the quarterly bulletin of the Canal Society of Ohio. We regret to report that William V. Wallace, Jr. referred to in the article, has since died. This fine canal park is a tribute to both Bill Wallace and the late Gale Hartel, who was also involved in the project.*

## BALDWIN MANSION



The Baldwin Mansion was built in 1661 by Deacon Henry Baldwin and altered to its present appearance by his great-grandson, Colonel Loammi Baldwin in 1803. Colonel Baldwin was the builder of the Middlesex Canal; the "father" of the noted Baldwin apple and a Revolutionary War patriot and soldier.

His son, Loammi 2nd, is called the "Father of American Civil Engineering," and was responsible for construction of the first naval drydocks in the western hemisphere. The Colonel's other sons also had careers in civil engineering. George Rumford Baldwin, James Fowle Baldwin, and Benjamin Franklin Baldwin were all early engineers of a national stature.

Construction of the Middlesex Canal commenced in 1793 and it was opened to through traffic from Boston to Lowell in 1803. The Middlesex was the first regional transportation canal in the United States preceding the Erie Canal by nearly two decades. Colonel Loammi Baldwin of Woburn was Chief Engineer and Construction Superintendent.

The town of Woburn Massachusetts was the center of the canal's social and commercial life. Here, at the three sets of double locks at Horn Pond, a thriving tavern, hotel and entertainment complex developed - one of the earliest resort centers in the country. The passage of the canal through the town gave birth to expanding shoe and leather trade, changing the town from an agricultural to a commercial center.

Today, the first water-bearing remnants of the old canal are fittingly found in Woburn.

The Baldwin Mansion is now a National Historic Place.

In the Mansion is now located a gourmet restaurant known as "Baldwin Landing". (Item sent us by ACS Life Member Bill Gerber of Chelmsford, Massachusetts.)

ACS Member Harold Ewald, of Harrington Park, New Jersey, calls our attention to an error in the caption to the photo of Lock 12 on the Farmington Canal on page 8 of *AMERICAN CANALS* #48. Instructions for finding this lock should read "take Route 42" not Route 44, off Route 10, etc. Harold feels that other ACS members may go astray (as he did) in looking for this reconstructed lock.