

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

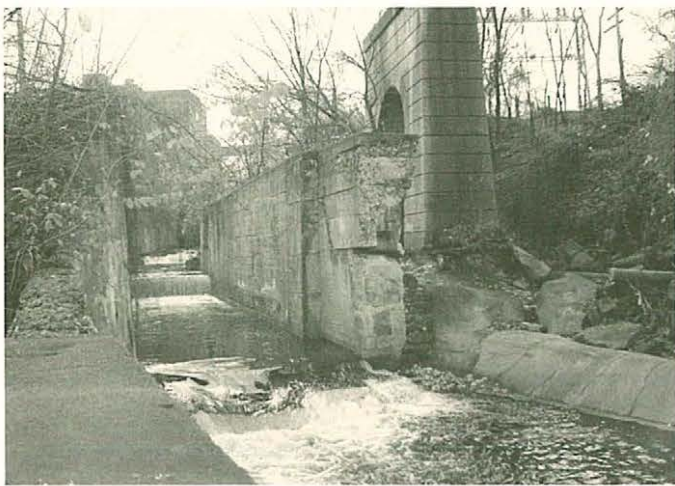
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CASCADE LOCKS PARK

NR status, grants, boost plans for Akron industrial history park



Above: Lock 13 of the seven Ohio & Erie Canal locks that form the core of Akron's Cascade Locks Park. These "staircase locks" carried the canal's steepest section down a hill into the valley of the Little Cuyahoga River. In 1907 most of the original 1825-27 stone masonry was faced with concrete in an unsuccessful attempt to restore the canal to use. *W. Sheppe photo, 1990.*

Akron, Ohio's Cascade Locks Park has received National Register historic district status, giving a major push forward toward establishment of an industrial history park. In addition, according to Walter Sheppe [SIA], the Cascade Locks Park Assoc. received grants from several foundations to fund planning and emergency stabilization of structures. Basic planning should be completed by the end of this year. Development and archeological work are expected to continue indefinitely. A new trail through the park was opened this spring.

The district is significant because of its canal and rail links. It was the site of Akron's mills in the 19th cen. and rubber companies in the 20th cen. Much of the land within the district is owned by the city, which has been planning for the Cascade Locks to be part of the Cascade Valley Park. Included in the district are Locks 10-18 of the Ohio & Erie Canal, five railroad bridges, three large stone millrace tunnels, several historic buildings, and the buried remains of a large grist mill, as well as several operating industrial plants.

The lock structures comprise the spine of the district. The locks originally were constructed of double-walled sandstone. The chamber of each is 90 ft. long and 15 ft. wide, permitting passage of 14 1/2-ft. boats. The original sandstone construction remains visible at the base of most of the lock walls. In 1907 the locks were refurbished with a waterproof lining of



Above: The canal's steep drop and abundant water attracted many mills, including the Cascade Mills (1876) in this historic view. The mill later was owned by Quaker Oats. Archeologists plan to study its remnants, buried c1923. *Summit County Archives photo.*

Below: The millrace's three stone tunnels will be a major interpretive feature of the park. *W. Sheppe photo.*



concrete added during the 1907-11 statewide renovation of the canal system. During the project, the sandstone face was chipped back to provide a base for the concrete while preserving the 15-ft. width of the chamber. These locks featured vertically gated two-ft.-sq. sluiceways above the lock sill that admitted water into an internal conduit in the lock wall. This water flowed into the lock chamber through an opening in the wall. These sluice openings remain visible today.

For additional info. on the locks and industrial history park project, contact Walter Sheppe, Dept. of Biology, Univ. of Akron, Akron OH 44325-3908 (216-762-0623).

BRIDGE NEWS

TRUSS SAVED, REUSED IN EVERETT. Richard Eitel is a marine contractor in Everett, Wash. According to a Mar. 15, 1993 story in *Engineering News Record*, for ten years Eitel had been storing a 144-ft. Warren truss span that he removed from a single-leaf bascule bridge elsewhere in Snohomish County. Originally erected in the 1920s, Eitel warehoused his bridge intact, without disassembling it. Now, in 1993, he was offering it to the county for use at a new site, saving some \$300,000 over new construction. Eitel will tow his truss on a barge, mounted on timber cribbage, much as he removed the truss originally (and visible in an *ENR* photograph).

1876 STONE AQUEDUCT RESTORED IN MASS. The Boston Water Works constructed Echo Bridge in Upper Newton Falls, Mass., in 1878, to carry water from the Sudbury River to the Chestnut Hill Reservoir. At the time, the central 130-ft. span was the second longest stone-arch span in the U.S. after the Cabin John Aqueduct in Montgomery Co., Md., according to Donald C. Jackson [SIA] in *Great American Bridges & Dams*. The current owner, Mass. Water Resources Authority (MWRA), began a restoration program in 1990, contracting with the Society for the Preservation of New England Antiquities as a preservation consultant. The

project is outlined in a recent issue of the SPNEA newsletter, with photographs. In the restoration process, a special sand-blasting process was employed with the concurrence of the Mass. Historical Commission. A special fine sand, applied at 75 psi, removed stains and did not damage the granite surface. The spent sand was collected and disposed elsewhere.

FRENCH KING BRIDGE REDEDICATED. The French King Bridge over the Connecticut River, on Route 2 near Greenfield, Mass. was rededicated last Sept., following a major \$5.2-million renovation. The 783-ft. structure is a high steel-arch deck truss. Built as a Depression-era federal relief project, it earned the Award of Merit from the American Institute of Steel Construction as the "Most Beautiful Bridge Built in 1932." It was designed by the Dept. of Public Works. Its name comes from the legend of French King Rock, which sits in the middle of the river north of the bridge in a gorge bordered by 100-ft. high riverbanks. The scene looking upriver toward the rock is one of the most photographed spots in Franklin County. Today only the top of the rock is visible, but in the mid-19th-cen., prior to construction of a dam at Turners Falls, the rock rose 16 ft. above the water. The newly restored bridge was dedicated as a memorial to former Congressman Silvio O. Conte, who secured much of the renovation monies. During the ceremony, films of the 1932 dedication were screened.

B.D.

Lichtenstein & Assoc. restores big Chattanooga truss in \$4.5-million project

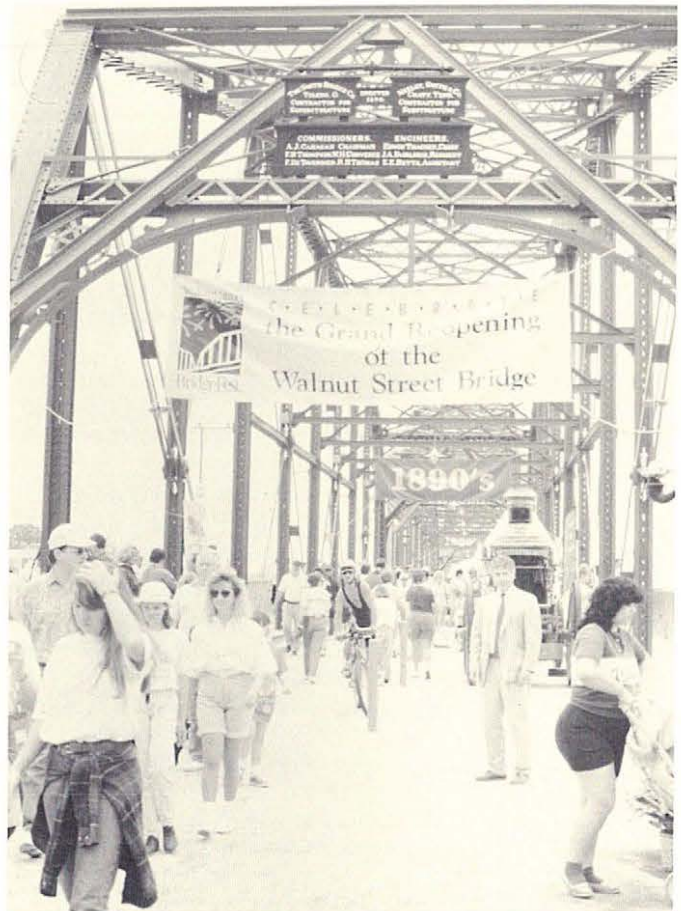
The 102-year-old Walnut Street Bridge in Chattanooga, Tenn., oldest surviving major truss bridge in the South, was refurbished this spring in a \$4.5-million project by A.G. Lichtenstein & Assoc., Fair Lawn, N.J. The six-span, pin-connected camelback Pratt truss is the oldest surviving bridge across the 1,500-mi. Tennessee River. It was designed by consulting engineer Edwin Thatcher of Louisville, Ky., and completed in 1891. Despite numerous attempts at rehabilitation over the years, the bridge was closed in 1978.

In the 1980s community sentiment supported refurbishing the structure as a pedestrian bridge in a linear park. A \$4.5-million reconstruction project was begun in 1991, using a post-tensioning system developed by A.G. Lichtenstein & Assoc., project engineers. It employs straight and deflected strands placed to coincide with the bottom chords and the diagonals fanning away from the mid-span. The strands were deflected at certain lower joints by wrapping them over specially constructed saddles attached to the lower joint pins. The work was completed this spring and celebrated in a great rededication ceremony on May 1. It will be used for festivals, exhibits, and a future riverfront trolley system.

J.J.P.



WALNUT ST. BRIDGE, CHATTANOOGA. Left: The 2370-ft., six-span camelback Pratt truss. Right: Crowds celebrate the \$4.5-million restoration on May 1, 1993. Photos courtesy J.J. Pullaro.

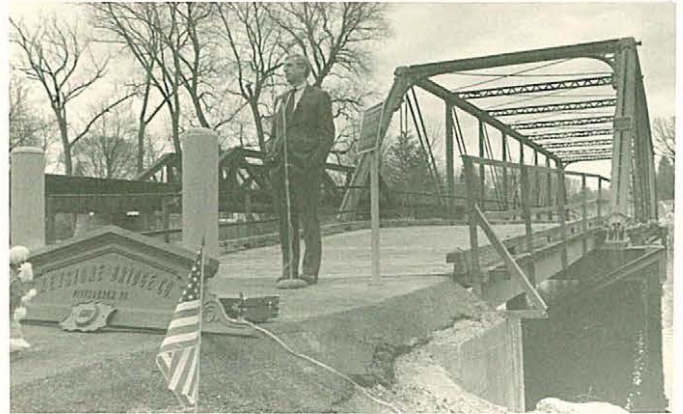


Sen. John Danforth leads rededication of significant Missouri truss

In April, Sen. John Danforth joined county and municipal dignitaries in Kimmswick, Mo. to rededicate the newly refurbished Windsor Harbor Bridge as a pedestrian bridge and recognize its inclusion in the National Register. Danforth celebrated the community effort as “a mission of the people who live here, who wanted to keep the bridge, and who wanted it to not be torn down, and who wanted it to be designated as a historic site.”

The bridge was constructed in Carondelet—now a part of south St. Louis—in 1874 by the Keystone Bridge Co. of Pittsburgh. It stood in Lemay until 1928, when it was scheduled for demolition and replacement. Jefferson County purchased the bridge and moved it in 1930. It served as a vehicular bridge in Kimmswick until 1977, when it was again slated for demolition. Area residents joined together to support preservation of the venerable structure and argue for construction of a new bridge alongside the existing one.

The county was persuaded and placed the Windsor Harbor Bridge in the care of the Kimmswick Historical Society. The 1993 dedication marked the completion of a ten-year effort to



Missouri Sen. John Danforth rededicates the refurbished 1874 truss on April 12. Note the Keystone Bridge Co.'s signature; endpost columns patented by Jacob H. Linville. Patrick Martin photo.

restore the bridge with a new wooden deck, refurbished ironwork, and replication of the original builder's plate.

B.E.

Community effort saves historic camelback in N.C.



The newly restored camelback truss, located near Sanford, N.C. The gateposts of locally quarried sandstone and locally manufactured brick have recesses for sculpture by an area artist. Ms. Baldrick photo courtesy of W.J. Ellenberger.

Historic Cumnock Bridge near Sanford, N.C., was saved from destruction and preserved for recreational use when its replacement, a multi-lane reinforced-concrete highway bridge was constructed nearby on a new alignment. The two bridges span Deep River where it forms the boundary between Lee and Chatham counties.

Last Oct. 3rd was a day of celebration, with representatives of historical associations, service clubs, and the business community joining with the commissioners of the two counties at a parade, speeches, and ribbon cutting ceremonies. An additional ceremony was held to unveil a National Register plaque.

The preserved bridge is a single, 106-ft., eight-panel, pin-connected, camelback through-truss. It was relocated to its present site in 1908 to replace a covered bridge destroyed in a freshet. The camelback was moved 30 miles from Cape Fear river in Lillington and is reported to be over 100 years old.

The Deep River Park Assn. was primarily responsible for saving the bridge, which will form part of the group's recreational trail for walking, cycling, and horseback riding. Before being transferred to the Assn. it was repaired and painted by the N.C. Dept. of Trans.

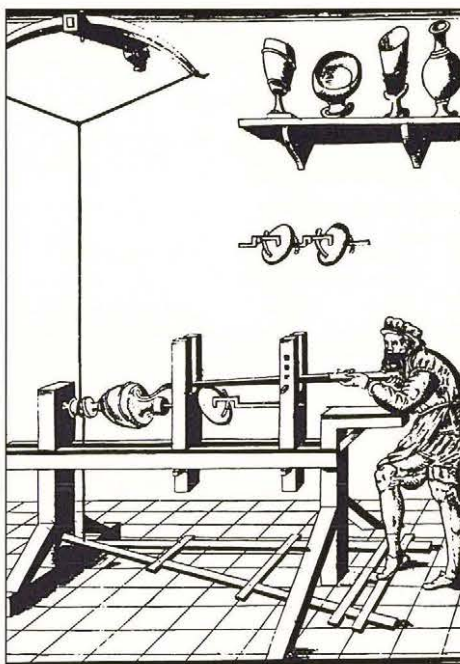
W.J.E.

WHAT TRUSS IS THIS? You won't find this configuration on the classic yellow truss wallchart. The thin truss spans a small stream adjacent to the Thingborg textile center, near the road from Selfoss to Skalholt, in south Iceland. When the local farmers needed a bridge, they simply used the remains



of an old dragline crane for both the span and the piers. Thanks to Ned Heite [SIA] for the photograph of this unusual bridge. Compare this with other bizarre bridge examples, including the Great Northern RR car “covered bridge” in Minnesota [SIAN Spring 84:8] and the “twig & timber” fantasy in a roadside park near Gaylord in Otsego County, Michigan [SIAN 1985(2):14].

Turning the world over at Hagley



Turners and turning historians from distant latitudes and longitudes arrived at the Hagley Museum & Library in Delaware for the "World Turning Conference" held there April 21-24. They brought with them their turnings, tools, and lathes, as well as slide illustrations for talks and demonstrations of ancient and new lathe techniques. British pole-lathe turners traded tips with creators of an American computer-driven ornamental lathe, while art-turners and educators from New Zealand, Australia, Germany, Scandinavia, Japan, and North America pondered the worldwide craft of turning as mental exercise, therapy, and art.

Tree physiology, forest conservation, Jacobean miniature frames, Nordic drinking cups, metal spinning, oval turning, sculpture-copying, chair and spinning-wheel construction, and foundry pattern-making, among many other lathe-oriented topics, received exposition, scrutiny, and discussion by infectiously enthusiastic conferees. Two participants even sported turned wooden hats! Of special interest were presentations by newly mobile East Germans about the turned-toy industry of the Erzgebirge, and the technique of turning rings whose cross-sections have the outline of toy animals.

Concurrently, the co-sponsors of the conference, Hagley Museum & Library and the Wood-Turning Center in Phila., opened "Art From the Lathe," a stunning exhibit of international lathe-turned objects and historic turning lathes. It will stay open to the public at the Hagley Museum through Nov. 1993.

Albert LeCoff, director of the Wood-Turning Center, ably assisted by Tina LeCoff [SIA] and Charles Hummel, Winterthur Museum emeritus, as well as the staff of Hagley, conceived, organized, and presided over the multi-faceted events of the conference with amazing tranquility and good cheer.

The conference proceedings will be published in 1994 as *International Lathe-Turning: New Perspectives* (pre-order for \$30 ppd. from Wood Turning Center, POB 25706, Phila. PA 19144). Nifty cotton tee shirts displaying Besson's 16th-cen. elliptical turner may still be available for \$13 ppd (phone 215-844-2188, fax 844-6116).

C.C.C.

Left: Using seasoned wood, Jon Siegel of West Franklin, N.H., shows how to turn an off-center blank to make Dutch- or spoon-foot table legs on a modern powered lathe.

Center: Jaques [sic] Besson's late-16th-cen. elliptical turning lathe graced the conf. poster and also turned up in a paper by Carolyn Cooper [SIA].

Right: "Bodger" Stuart King from the Chiltern woods of Buckinghamshire, England, demonstrates the use of a springy pole-lathe (updated with overhead bungee cord) to turn Windsor chair legs from local green wood. C. Cooper photos.

SITES

BMI CRANE HONORED. The Baltimore Museum of Industry's newly restored 1942 Clyde whirly shipyard crane installed at the Museum's entrance received one of eight 1993 Preservation Awards from Baltimore Heritage, Inc. In 1991 BMI's 1906 steam tugboat S.S. *Baltimore* won the same award. Both the crane and tugboat are considered excellent examples of the use of volunteer efforts and in-kind donations in the field of preservation. The 60-ft.-tall crane was one of three that dominated the skyline over Key Hwy. at the Bethlehem Steel (repair) shipyard. When the property was purchased for development of Harborview marina and condominiums, the cranes were removed and one was donated to BMI. Restoration and reinstallation at BMI took a year and over \$300,000 of contributed labor and materials from two dozen Baltimore companies. Info.: BMI, 1415 Key Hwy., Balt. MD 21230 (410-727-4808).



The restored 1942 Clyde whirly shipyard crane now installed at the entrance to the Baltimore Museum of Industry.

E.H. Remsburg photo, courtesy of Baltimore Museum of Industry.

Retracing an original ore journey from the Mesabi to Buffalo

In mounting its new exhibition on local industry, the Buffalo & Erie County Historical Society required specimens of natural iron ore as well as the pellets now commonly used as blast-furnace feed. Tom Leary and Libby Sholes [both SIA], consultants on the BECHS project, agreed to unearth suitable ore samples and arrange for their transportation back to Buffalo.

During the summer of 1992 they were quite surprised to discover that an era of iron-mining history had actually terminated. Coincident with the centennial of the first shipment from the Mesabi Range, the last natural ore mine in North America had ceased operations. Leary and Sholes staked a claim to a very small portion of the existing stockpile and later proceeded to Minnesota's Iron Range to collect the prize.

Their destination was the McKinley Extension Mine of LTV Steel's Northwest Ore Div., located on the eastern Mesabi in the vicinity of Aurora and Hoyt Lakes. Here, crude ore from the Donora and Stevens pits was upgraded through screening, crushing, and washing processes at a beneficiation facility transplanted from McKinley, Minn. The Stevens mine discontinued production in 1990. Ore reserves at the Donora property were exhausted the following year. The processing plant, the last active iron-ore washing operation in either the U.S. or Canada, continued to work from stockpiled ore until July 22, 1992. Through the autumn, McKinley Extension shipped sinter feed product through Taconite Harbor for delivery to lower lakes ports.

Sholes and Leary arrived in Duluth just in time to witness one of the "Gales of November" that often have disrupted late season shipping on the Great Lakes. This particular blow sent both vessels and visitors from Buffalo scurrying for sheltered anchorages and harbors of refuge. Several days later, the iron-ore expedition finally made its way up to the Range, through Gilbert and picturesque Biwabik, to the LTV site, which is still surrounded by active taconite mines.

Though much of the natural ore product had been shipped out earlier, LTV personnel had thoughtfully set aside about 150 lbs.—a thimbleful by Mesabi standards—for the BECHS exhibit. These specimens were bagged, boxed, and delivered to Buffalo by a novel mode of iron-ore transport: a 1989 Chevy Cavalier wagon and Roadway Express, Inc., whose Duluth freight terminal is located in the shadow of the historic Missabe RR ore docks. In keeping with Iron Range traditions, that the last car loaded out from a mine also should carry the symbol of a "clean sweep," one of the boxes bound for Buffalo contained a small whisk broom.

The shipment consisted of two varieties of processed natural iron: coarse ore, sized 1 x 4-ins., and minus-3/8-in. beneficiated concentrate. The coarse (lump) ores were used primarily for slag control in electric furnaces. This product had a dry analysis of 58% iron and 7.75% silica. Relatively small tonnages of coarse ore shipments to North American customers often used all-rail routes. Beneficiated minus-3/8-in. fines were blended with minus-1/2-in. crushed ore from another mine to make up sinter feed that was loaded out at Taconite Harbor for LTV Steel's Indiana Harbor Works. The product grading of the sinter fines averaged 58.8% iron and



Above: LTV Steel's McKinley Extension Mine, site of the last active natural iron-ore processing facility in North America. Located on the Mesabi Range, near Aurora and Hoyt Lakes, Minn.

Below: Iron-ore shipping, impromptu vs. tried-&-true, in Duluth. In the foreground are motor vehicles preparing to carry Mesabi ore specimens from Duluth to Buffalo; in the background, cars on the trestles leading to the Duluth, Missabe & Iron Range Rwy. ore docks. *Leary & Sholes photos.*

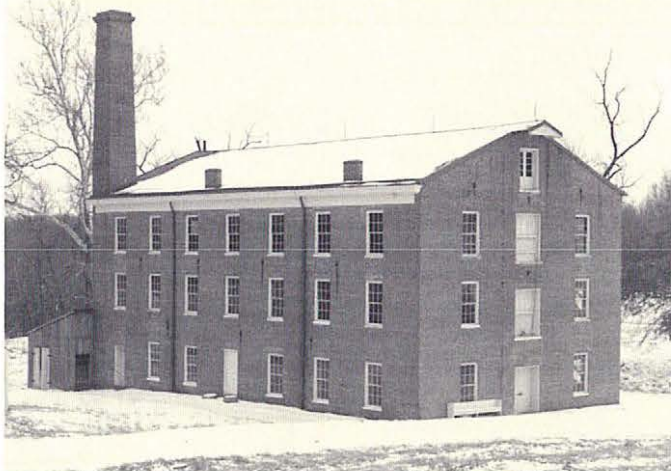


7.9% silica. At the sintering plant the blended natural ore was further mixed with taconite pellet chips. Some blast-furnace managers included natural ore sinter in their recipes rather than relying on 100% pelletized feed, since the blending seemed to prolong the life of refractory linings.

BECHS was fortunate to have secured significant samples of natural ore products at the close of an epoch in North American iron-ore mining. For their invaluable assistance, particular thanks are due to C. Patrick Labadie of the Canal Park Marine Museum in Duluth; Don Wright of Westmoreland, Larsen & Webster, also in Duluth; and LTV's Donald B. Lemay and Eugene G. Garner. Some of the ore is now on display as part of "BFLO. MADE!," a 3500-sq.-ft. permanent exhibit in the Pan-American Building, the venue for the opening reception at the 1992 SIA Annual Conf. A video on the last year of mining operations at McKinley Extension is available from the Iron Range Research Center, POB 392, Chisholm MN 55719 (218-254-3321).

T.L. & L.S.

NOTES & QUERIES

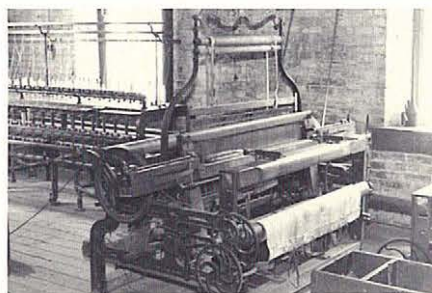


WATKINS WOOLEN MILL.

Above: The preserved 1861 mill in Lawson, Mo.

Right: At left rear, a rare ply-twister for making two- or three-ply yarn; in foreground, a plain loom for simple patterns.

C. Brown photos.



IA IN FILM & VIDEO. "Watkins Mill: Missouri Confronts Industrialism" is a 26-min. video produced in 1989 by the Watkins Woolen Mill State Historic Site in Lawson. The video covers the Watkins family life and the preserved 1861 mill. It follows the life of a mill worker, and changes wrought by the industrial revolution, through to the mill's closing in 1898. Watkins Mill is the only remaining 19th-cen. woolen factory with its original equipment intact. During its four decades of operation it produced a dozen kinds of fabric, several types of blankets, shawls, fine knitting yarns, batting, and custom carding. For the Midwest, it was a large mill, about four times the average, with three sets of carding engines, four spinning jacks, and twenty-four looms. It was powered by a 60 HP riverboat engine and boiler.

In its heyday, the mill employed 40 skilled workers and supplied woolen goods to most of northwest Missouri and northeast Kansas. Fabric production ceased in 1886, followed by yarn production in 1892. In 1898 John Watkins closed the factory for good, but carefully preserved it as a monument to his father, Waltus L. Watkins, the original builder.

In his 1984 study for HAER, Laurence Gross [SIA] concluded that "Watkins Mill contains the finest collection of 19th-cen. textile machinery *in situ* in North America and includes some of the most significant textile artifacts known to survive." The mill was designated a National Historic Landmark in 1966 and a National Mechanical Engineering Historic Landmark in 1980. It is a State Historic Site operated by the Div. of State Parks, Mo. Dept. of Natural Resources.

The video is available for \$22.50 ppd., and is accompanied by a booklet-length viewer's guide. Send checks payable to "State of MO/DNR" to Watkins Woolen Mill State Historic Site, 26600 Pk RD N, Lawson MO 64062 (816-296-3357).

C.B.

IF YOU MISSED THE SIA IN PITTSBURGH IN JUNE, you can get an abbreviated version Oct. 27-31 through "Pittsburgh: the Shaping of an American Vernacular Landscape," 1993 U.S. Study Tour of the Society of Architectural Historians. Each day features a specialized tour: Weds., 27th—"Frank Lloyd Wright in Western Pa."; Thurs, 28th—"Industrial Pittsburgh"; Fri., 29th—"Corporate Pittsburgh"; Sat., 30th—"A City of Neighborhoods"; and Sun., 31st—"Suburbia, Then & Now." Mark Brown [SIA], Pittsburgh IA guide extraordinaire, leads the daylong bus tour of Monongahela River Valley industrial sites. College credit through U. of Pgh. is avail. for student participation. Info.: David Bahlman, Ex. Dir. SAH, 1232 Pine St., Phila. PA 19107 or call Camille Pello at SAH HQ in Phila., 215-735-0224.

CALL FOR AUTHOR. The New York Transit Museum invites applications from writers for a project to prepare a book about the folklore and working experiences of 20th-cen. mass-transit workers in New York City. The book will be written for an adult audience and will draw on oral histories gathered from 150 transit workers. Candidates should have an academic background and/or publications in folklore and oral history, as well as one or more of the following disciplines: labor history, occupational folklore or history, urban mass transit, N.Y.C. history, and the history of technology. If interested, submit a cover letter, resume, and writing samples to Gabrielle Shubert, Dir., N.Y. Transit Museum, 130 Livingston St., Rm. 9001, Brooklyn NY 11201.

CALL FOR PAPERS. The *George Wright Society Forum* is planning a special 1994 issue on the preservation and interpretation of historic sites, landscapes, and environments. Essays of approximately 4000 words on those topics are invited for consideration. The GWS was founded in 1980 as a professional association for those working in protected areas and on public lands. It is not limited to a single discipline or one type of protected area, but cuts across academic fields, agency jurisdictions, and political boundaries. It is named for George Melendez Wright, a noted naturalist, who in 1930 became the first chief of the wildlife division of the Natl. Park Service. The Society sponsors week-long conferences on research and management in natural and cultural parks and publishes the *Forum*, a quarterly publication for the discussion of timely issues related to protected areas, including think-pieces as well as research-based articles. Please send essays to the special issue guest editor, William H. Mulligan Jr., Dept. of Hist., Murray State U., Murray KY 42071-3311 (502-762-2231). For GWS membership info. contact David Harmon, Dep. Ex. Dir., GWS, POB 65, Hancock MI 49930 (906-487-9722).

CALL FOR FOLLIES. Gwyn Headley, president of The Folly Fellowship (22 Mount View Rd., London N4 4HX, G.B.) sends the following:

"I have been invited by the National Trust for Historic Preservation to write a book on Architectural Follies in America, to be published in fall 1994. I would be most grateful to learn of any and all unusual, eccentric, bizarre, or hopeless cases of architecture across the nation, from the earliest times to the present day, from Rodia's Towers at Watts to the Perky Bat Tower in the Florida Keys. Photographs, documents, anecdotes, &c., will be gratefully received, eventually acknowledged, and finally returned if requested. Please send any information to Gwyn Headley, "Follies," c/o Gelfman Schneider Literary Agents Inc., 250 West 57th St., NY NY 10107."

IA IN THE ARCHIVES. At the Georgia Institute of Technology in Atlanta is one of the most complete collections of labor spy documents. The files of the **Fulton Bag & Cotton Mills** include the complete personal correspondence of Oscar Elsas, president of Fulton Bag from 1914 to 1923. Elsas's files contain thousands of reports by spies that the company hired over years to infiltrate the ranks of striking mill workers. Fulton Bag, a cotton mill operation that manufactured bags, tarpaulins, sheets, and twine, was one of Atlanta's largest employers for a century before it closed in 1978. The documents now are in Georgia Tech's Price Gilbert Memorial Library.

The Institute for the History of Technology & IA, IA domain of Emory Kemp and Billy Joe Peyton [both SIA] at W.Va. Univ. in Morgantown, announces several archival collections of research interest. The main body of correspondence and photographs of the **Ward Engineering Co.** are in the W.Va. Collection, while the Institute holds several thousand drawings of boilers, boats, and barges. Ward was a boilermaker and shipbuilder in Charleston from the 1880s through the 1930s. Starting with boilers, the company eventually designed and built tug boats and barges of many sizes. Bridge designer Frank Duff McEnteer, "builder of a thousand bridges," started the **Concrete Steel Bridge Co.** in Clarksburg, W.Va. His company specialized in concrete bridges of 50 to 100 ft., but also built other reinforced-concrete structures such as commercial and industrial buildings, waterworks, dams, tipples, and others. Many of his bridge drawings are housed at the Institute. **Roland Parker Davis** taught at Cornell Univ. before serving as Dean of the College of Engineering at W.Va. Univ., 1932-55. Davis was instrumental in organizing the State Road Commn. in 1919 and wrote the first bridge specs. for the state. He also worked on the Thatcher Ferry Bridge over the Panama Canal. The Davis collection includes a vast amount of engineering reference material. For info., contact the Records Management Unit, IHTIA, Bicentennial House, 1535 Mileground, Morgantown WV 26505 (304-293-3615).

Francois Hennebique (1842-1921) developed a new method of building construction using iron and concrete, perfecting this system in the 1890s through a series of patents and establishing a firm and magazine, *Le Beton Arme*. The Betons Armes Hennebique firm ceased operating in 1967. It had worked on nearly 150,000 projects. The subsequent history of the firm's records was reported in *ICAMNEWS*, newsletter of the Intl. Confederation of Architectural Museums (editorial offices at the Dutch Architectural Institute, Westersingel 10, 3014 GM Rotterdam, The Netherlands).

In 1967, the **archives of the Hennebique company** were salvaged and deposited at the Conservatoire National des Arts et Metiers. Following his retirement, this collection of thousands of files was transferred in its entirety to the Archives d'Architecture du XXe siecle of the Institut Francais d'Architecture. The Hennebique archives relate to all the countries in the world where the firm was established and cover nearly half a century of the company's activities, 1892-1939. The collection includes files numbered from 193 to 130,000, which are generally in fairly good condition. Now that they have been put on shelves, curators estimate that there are some 80,000 dossiers—a run of about 300 metres, representing just over 60% of all Hennebique files. Assembled indiscriminately in the collection are unexecuted projects carried through to differing degrees (sketch schemes, estimates), as well as dossiers for completed buildings. Sample sequences of different dates have now undergone initial inves-

tigations, which give a clear idea of the files' contents. Generally one finds a few pages of correspondence, calculation sheets of various kinds and schedules drawn up to assess the quantities of materials to order, as well as records of transactions, minutes of meetings, specifications and the like. Plans and detailed drawings prepared in the Hennebique office (tracing-paper originals, blueprints, and other types of prints) are among the graphic material, as are papers supplied by architects—mostly prints to enable engineers to draw up sketch schemes.

The Hennebique archives include an impressive photographic collection: some 6,400 items of different formats illustrating the firm's activities in over 30 countries. These photographs were sent to the head office by company agents for exhibition at events organized by the firm or for publication in *Le Beton Arme*, in which most appeared.

PA. SCHOLARS-IN-RESIDENCE PROGRAM. The Pa. Historical & Museum Commn. invites applications for its 1994-95 scholars-in-residence program, which provides support for full-time research and study at any of the PHMC's facilities for a period of 4 to 12 consecutive weeks between May 1, 1994, and April 30, 1995, at a rate of \$1,200/mon. It is open to college- and university-affiliated scholars, including graduate students; independent researchers; public-sector professionals in history-related disciplines; writers, and others. The application deadline is Jan. 24, 1994.

The program aims to promote the interpretation of Pa. history, to encourage research drawing upon the Commn.'s documentary and material resources, and to develop collegial relationships between scholars and PHMC staff.

Applicants are encouraged to conceive of research topics as broadly as possible and research need not be limited to PHMC collections. Particular consideration will be given to proposals that address topics relevant to interpretive themes addressed by PHMC programs, including Pa.'s tradition of religious and political toleration, colonial life, rural and agricultural life, military history, the development of ethnic communities and ethnic relations within the state, the history of communal societies, architectural history, and the history of public policy. Programs addressing the agency's current programmatic initiatives in African-American history, industrial history, and social history are especially encouraged. Projects likely to result in widespread dissemination of research through publications, public lectures, and other means also will be given particular consideration.

For further information and an application form, contact Div. of History, PHMC, Box 1026, Harrisburg PA 17108 (717-787-3034).

NEW VAF GRANT OPPORTUNITY. In recognition of the need for funds to facilitate research of important vernacular buildings, the Vernacular Architecture Forum has announced a program to provide matching funds for the travel expenses of visiting experts assisting local organizations in evaluating vernacular resources. A qualifying project involves a building presenting a problem in interpretation or evaluation, with the potential to make a significant contribution to the understanding of an area's development patterns. A project may receive a maximum of \$500 to be matched dollar for dollar. Successful projects will reviewed in *Vernacular Architecture Newsletter* or presented at an annual VAF meeting. For application details contact Claudia R. Brown, VAF Preservation Officer, N.C. SHPO, 109 E. Jones St., Raleigh NC 27601-2807.

NOTES & QUERIES

WV TRAVEL STIPENDS. Beginning this spring, the Institute for the History of Technology & Industrial Archeology at W.Va. Univ. is offering stipends for travel to research collections through the joint WVU-Smithsonian Project for the Hist. of Tech. Graduate students, faculty, or staff involved in Inst.-sponsored research are eligible to be recipients of up to \$1,000 each for travel expenses. Specific institutions may include, but are not limited to, the Smithsonian, national or state archives, and Library of Congress. Those interested should discuss possible research topics with Emory Kemp or Billy Joe Peyton [both SIA] and submit a written request and travel budget. Contact either at IHTIA, Bicentennial House, 1535 Mileground, Morgantown WV 26505 (304-293-3615).

APT 25th ANNIV. CONF., OTTAWA. The Assn. for Preservation Technology will hold its 25th anniversary conf. in Ottawa, Canada, Sept. 29-Oct. 2. Local preservation issues involving site visits include: ongoing operation & repair of the Rideau Canal system; and the struggle to preserve the city's Aberdeen Pavilion, last large-scale 19th-cen. exhibition palace in North America [see *SIA* Summer 92:17]. Pre-conf. training courses, Sept. 26-29, include a survey of historic roofing, workshop on masonry (cleaning & repointing), and a colloquium on conservation management. On Sept. 29 there will be a day-long introduction training course on using the Conservation Information Network (CIN). Info.: Robert Hunter, APT Conf. Chair, POB 2001, Sta. D, Ottawa, Canada K1P 5W3 (819-997-6974; fax 953-4909).

NEW RESEARCH ASSOC. PROGRAM AT HAGLEY. The Center for the History of Business, Technology, & Society at the Hagley Museum & Library just opened a Research Associate program. Research Associates will be provided free office space, at-cost photocopying, and library stack privileges for up to six months. Scholars working on dissertations or monographs, whose research involves Hagley library or manuscripts collections, are urged to apply for Research Associate status. In addition, up to three months of no-cost housing on the Hagley Museum & Library property will be granted to one scholar whose studies demand extensive use of the collections.

Potential applicants are strongly encouraged to assess the institution's relevant collections through preliminary visits, written queries, or phone calls to the library or archives (302-658-2400). The deadline for 1994 residential scholars is Dec. 1, 1993, with the award made by Feb. 1, 1994. Non-residential Research Associates will be accommodated with application deadlines, as office space allows. Letters of application, with project description and vita (and, for no-cost housing, two letters of ref.) should be sent to Philip Scranton, Dir., CHBTS, Hagley Museum & Library, POB 3630, Wilmington DE 19807.

1993 EAIA AWARD RECIPIENTS. The Early American Industries Assn. has announced the 1993 recipients of its Grants-in-Aid program. Each of following received \$1000:

—Patricia Millen (Prattville, N.Y.), who also was the recipient of the 1993 Winthrop L. Carter Memorial Grant Fund, will research tanning tools and technology and the tanning industry in the 19th cen., using the Prattville tannery as an example. Products include a publication and an exhibit.

—Galan Beale (Loudon, N.H.), will research an exhibit pro-

ject involving the types, uses, and manufacturing of Enfield Shaker baskets in the New England market.

—Monique Bourque (Newtown Square, Pa.) will assess craft practices among artisans employed and aided by an emerging county system of poor relief, and will examine the county's efforts at manufacturing and agricultural production in the Phila. region. Her research will support her doctoral dissertation.

—Donna Rilling (Clifton Heights, Pa.) will conduct doctoral dissertation research on the building trades and materials, particularly craft practices, labor processes, tools & machinery, and the extraction and processing of raw materials for the urban and regional building market around Phila.

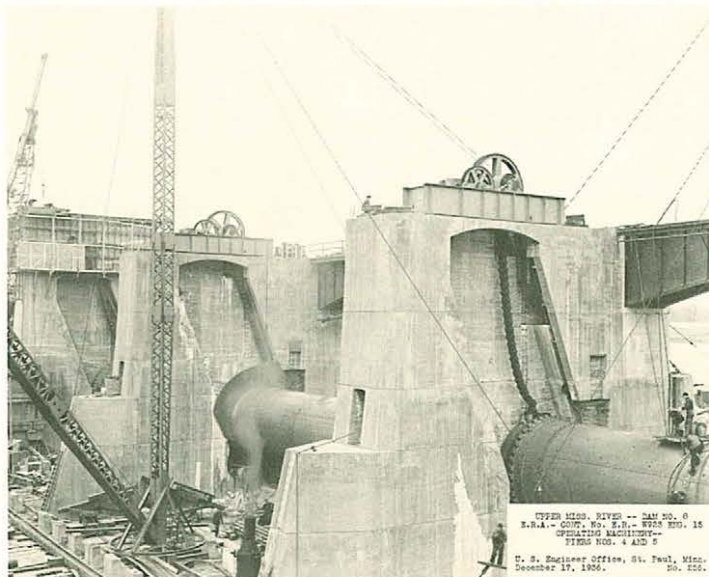
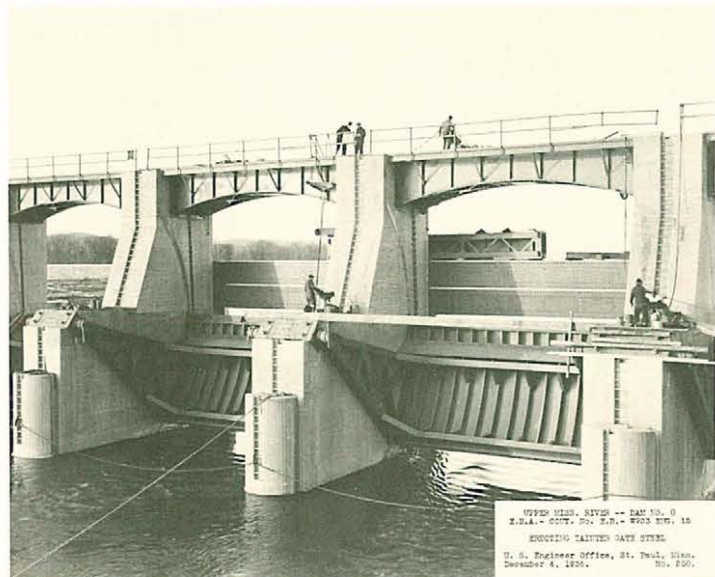
For additional info. on the EAIA grants program, contact Justine J. Mataleno, Coordinator, 1324 Shallcross Ave., Wilmington DE 19806 (302-652-2249). For info. about the EAIA, contact John S. Watson, POB 2128, Empire State Plaza Sta., Albany NY 12220.

CONFEDERATE ENGINEERING INQUIRY. James E. Jacobsen is interested in corresponding with others familiar with the Engineer Troops of the Confederate War Dept, formed in mid-1863. This new service provided centralized and trained engineering support (bridges, road repair, countermining, works engineering) to the field armies. Confederate engineering, he notes, differed from its Federal counterpart, despite common professional roots and norms. Jacobsen also is interested in the identification of related historical sites, including work sites, bridge sites, and winter camps. He studies the regional history of civil engineering and the role of the mechanical arts. Civilians entered this service and later returned to civilian roles. Jacobsen anticipates preparing histories of the four Confederate engineer regiments and other engineering studies. Contact Jacobsen at 4215 Northwest Dr., Des Moines IA 50310 (O: 515-281-4358, H: 515-274-3625).

RESTORATION SLATE AVAIL. Historic roofing slate from Newfoundland is available for historic restoration projects through a state-of-the-art production plant opened last year in Burgoyne's Cove, Newfoundland. Used since the late 19th-cen., and reportedly of the same standard as the best Welsh slate, the non-fading slate comes in three earth tones (plum, blue-green, and olive-green) and a mottled three-color combination. Info.: Newfoundland Slate Inc., 8800 Shappard Ave. East, Scarborough, Ont. (416-281-8181), or NSI, General Delivery, Burgoyne's Cove, NF, A0C 1G0.

C&O HIST. SOC. AWARDED GRANT. The Chesapeake & Ohio Historical Society received a \$3,500 matching grant from the Potomac Chap., Nat. RR Hist. Soc., for the restoration and interpretation of former C&O Combination Car No. 458, last of its type to operate on the C&O and used on the C&O's last mixed train. All-steel No. 458 was delivered in Sept. 1926 by the Bethlehem Shipbuilding Co., Wilmington, Del. It was donated to the C&O H.S. in Dec. 1990 by the B&O RR Museum. The project will include restoration of the car's interior, including light fixtures, door latches, and bathrooms; development of permanent exhibits in the baggage compartment; and development of other interpretive programs. Info.: Phil Shuster, Ex. Dir., C&O HS, POB 79, Clifton Forge VA 24422 (1-800-453-COHS).

HAER publishes massive history of Upper Mississippi locks & dams



GATEWAYS TO COMMERCE: The U.S. Army Corps of Engineers' 9-Ft. Channel Project on the Upper Mississippi River is a major study produced in 1992 by the Historic American Engineering Record, Rocky Mtn. Reg., Natl. Park Service. The 238-page, illustrated history is based on HAER documentation of the nine-ft. channel project by three Corps districts: St. Paul, Rock Island, and St. Louis. For this study, the nine-ft. channel project included Locks & Dams 3-26, which the Corps built during the Great Depression. These locks and dams extend from just below St. Paul to just above St. Louis.

As part of the Natl. Hydropower Study initiated by Congress in response to the 1973 Arab oil embargo, the St. Paul District began evaluating the hydropower potential of its nine-ft. channel locks and dams (Nos. 3-10). Because hydropower development would affect the locks and dams, the St. Paul District evaluated their historical significance in 1981 under Sec. 106 requirements. Based on that study, the SHPOs of Iowa, Minn., and Wis., determined Nos. 3-10 eligible for the National Register. As hydropower proved impractical at each of the sites, however, the historic preservation process then ended.

Soon after, the Corps began planning a rehab project for the same structures, thereby reopening the historical review. After extensive discussions, the SHPOs of Ill., Iowa, Minn., Mo., and Wis.; the Advisory Council; and the St. Paul and Rock Island Districts all signed a Memorandum of Agreement requiring the documentation of Nos. 3-22 to HAER standards. St. Paul District contracted with HAER to complete its part of the documentation in 1986. HAER produced a nine-vol. study, focusing on the engineering history and including hundreds of professional photographs. Rock Island and St. Louis Districts subsequently completed similar documents. St. Louis District then funded HAER to edit and synthesize the three huge studies into one document, now released as *Gateways to Commerce*. Several SIA members participated in the research, writing, and photography.

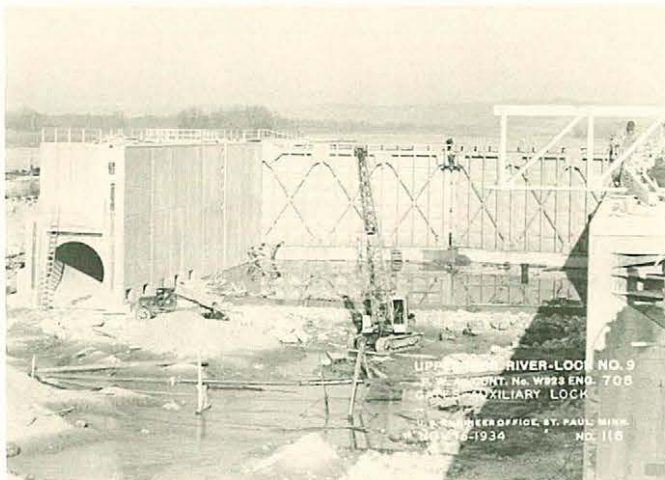
The notes and 17 pages of bibliography alone make *Gateways* a valuable reference. Copies are available free, while supplies last, from John O. Anfinson, Historian, St. Paul District, 1205 U.S. Post Office, St. Paul MN 55101 (612-220-

Above left: Erecting Tainter gates at Upper Miss. Dam No. 8, Genoa, Wis., 1936.

Above right: Roller gate construction, Dam No. 8, 1936. Incorporating both Tainter and roller gates in one dam set a dam engineering precedent.

Below: Construction of Lock No. 9, below Lynxville, Wis., 1934.

Historic photographs courtesy St. Paul Dist., Corps of Engrs.



0260). Anfinson also oversees a significant, untapped collection of historic photographs, engineering drawings, and other materials documenting a wide array of St. Paul District projects, including the locks and dams of the nine-ft. channel. Contact him if you have research questions.

CONTRIBUTORS TO THIS ISSUE

John O. Anfinson, St. Paul, Minn.; Cindy Brown, Watkins Woolen Mill, Lawson, Mo.; Carolyn C. Cooper, Yale Univ.; Bernard Drew, Great Barrington, Mass.; Betty Eldridge, Kimmswick (Mo.) Historical Society; William J. Ellenberger, Escondido, Calif.; Dennis E. Howe, Concord, N.H.; Tom Leary & Libby Sholes, Buffalo, N.Y.; Patrick Martin, Martin Media Services, St. Louis; Joseph J. Pullaro, A.G. Lichtenstein & Assoc., Inc.; and Louise Trotter, Ottawa, Ont.

With thanks.

SIA AFFAIRS

HELP THE NEWSLETTER, BE A COMPILER. The *Newsletter* seeks an energetic volunteer compiler (or compilers) to prepare the "Publications of Interest" supplement. If you can assist with this important ongoing bibliographical effort to further the cause of industrial archeology, please contact the Chair, Publications Committee, c/o Amy Federman, SIA President, 13417 Briar Path Lane, Silver Spring MD 20906.

NEWS OF MEMBERS

With great sadness we report the recent passing of long-time Society stalwarts, Charlie Howell and Roger Robertson. Additional information will be published in the next *Newsletter*.

IXth TICCIH Conf. in Canada, May-June, 1994

The IXth general conf. of The Intl. Comm. on the Conservation of the Industrial Heritage will be held in Canada from May 29 through June 2, 1994, mainly in the Montreal and Ottawa areas, and will be organized jointly by the Canadian Society for Industrial Heritage, the Natl. Museum of Science

& Technology, and the Canadian Parks Service. The first part of the conf. will feature tours of IA sites in the Montreal area, such as the Lachine canal, harbor installations, workers, housing, and hydroelectric plants along the St. Lawrence River.

Between May 31 and June 2, sessions, meetings, and tours will be held in Ottawa and vicinity. Tour sites may include the lumber industry of Hull, the Chaudiere Falls and direct-drive waterpower and hydroelectric sites, and the pulp & paper, electro-chemical, and electro-metallurgy plants of Buckingham and Masson. The delegates also will have opportunities to visit the Natl. Museums of Canada, including the Natl. Museum of Science & Technology, the Canadian Museum of Civilizations, the Natl. Art Gallery, and the Natl. Museum of Contemporary Photography.

TICCIH delegates are invited to participate in the SIA Annual Conf. in Toronto, June 2-5. There will be a tour offered "en route" between Ottawa and Toronto, featuring IA sites such as the Rideau canal and locks, the Museum of the Great Lakes and the Museum of Steam Technology in Kingston, or the Peterborough lift locks along the Trent-Severn waterway.

For addn'l info, contact the Canadian Society for Industrial Heritage/Societe canadienne de l'heritage industriel, c/o Larry McNally, C.P. 551222, 240 Sparks St., Ottawa, Ont. K1P 1A1 Canada (613-996-0769, fax 943-8112).

L.T.

23rd Annual Conf., June 2-5, 1994

Wide range of tours promised for 1994 conference in Toronto

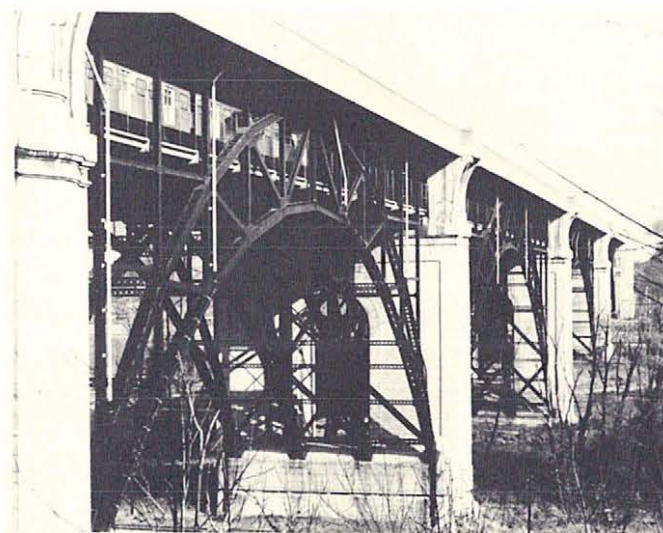
Toronto, Ontario, Canada, will host the 23rd SIA Annual Conference, June 2-5, 1994. The HQ hotel has been selected and a large committee is working on the activities. The traditional Thursday evening opening reception will be at the Gooderham & Worts Distillery complex. Alas, rum is no longer produced at the distillery, but the complex represents both a good example of 19th-cen. technology and an exciting challenge for contemporary use.

The Friday process tours will include a plethora of Toronto's industrial activities: an automotive assembly line, a railway roundhouse, the "CN Tour," a sugar refinery, and a water filtration plant. Bridge enthusiasts will have the opportunity to walk about three miles down the Don Valley to inspect more than a dozen different bridges.

A new conference feature will be a family bus tour to take children of all ages to a cookie bakery, Ontario Place, and the Toronto Islands. Saturday's banquet will be aboard the *Trillium*, a steam-powered paddleboat cruising Toronto Harbour. Sunday's program includes a walk through the city's financial district; a public-transit excursion on trolley, train, streetcar, subway, and bus; and a bus tour of the Niagara region, stopping at the 1859 Keefer Pump House, a winery, and the Welland Canal.

The conference theme advertises "From Fur Trade to Free Trade." The official call for papers inviting abstracts will be issued this summer. For info. on paper sessions contact Julie

Harris, 120 Sunnyside Ave., Ottawa, Ont. K1S 0R1. For general conference info., contact Phyllis Rose, IHPST, Univ. of Toronto, 73 Queens Park Crescent, Toronto, Ont. M5S 1K7 (summer phone: 705-654-3824).



Toronto's Prince Edward Viaduct, built in 1917 to carry vehicles and pedestrians on the top deck; 50 years later, the lower deck was added through the piers to carry the city's subway trains. Photo courtesy P. Rose.

New Hampshire mill towns: foundations of American manufacturing

Mills and other New England manufacturing sites will be featured during the SIA Fall Tour, headquartered at the Hampton Inn in Bow Mills, near Concord, N.H. The opening reception will be on Thursday, Sept. 30, at the New Hampshire State House, and will include an official state welcome.

The Friday, Oct. 1 tour will include: a process tour of Monadnock Paper Mills in Bennington; walking tour by the Antrim Historical Society; walking tour of Historic Harrisville's textile mills; process tour of D.D. Bean, paper matchbook manufacturer; and a process tour of N.H. Ball Bearings, a hi-tech manufacturer. Busses will travel through picturesque historic towns while some of the state's most accomplished historical researchers provide narration.

Tours on Sat., Oct. 2, include: the 1888 Concord Gas-holder; process tour of Page Belting Co.; process tour of the Dorr Woolen Mills; walking tour of Newport IA sites; walking tour of the Cornish-Windsor timber bridge, with a presentation by its restorer; tour of the American Precision Museum, Windsor, Vt.; and a visit to the Saint Gaudens Natl. Historic Site with a spectacular view of the sun setting over the Green Mtns.

On Sunday there will be opportunities for self-guided tours to pursue individual special interests, but a walking tour of the Canterbury Shaker Village mill-system remains, led by David Starbuck, is recommended.

Other process tours and sites of interest will be added as time permits, along with special evening meals featuring unique regional foods. Registration will be limited to 100. Registration materials will be mailed to SIA members during July. For addn'l info., contact Dennis E. Howe, Chair, 1993 Fall Tour, 22 Union St., Concord NH 03301 (W 603-225-6649; H 603-224-7563; fax 226-2548).



The 1888 gasholder house in Concord, N.H., a tour site, is being preserved intact by its owner, Energy North.

D. Howe photo.

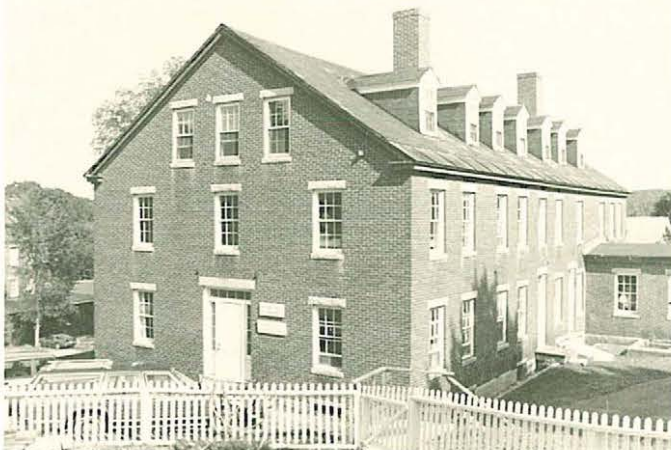


FALL TOUR SITES.

Above: The Page Belting Co. of Concord, N.H., continues to manufacture leather power-transmission belting in this c1893 building. The visit to Page will include a process tour.

Below: There will be a walking tour of Harrisville, N.H., including the M. Harris Co.'s c1830-32 brick Upper Mill [view immediately below] and the Cheshire Mills' c1851 boardinghouse for mill workers [bottom view].

D. Howe photos.



CALENDAR

SEPT. 7-21: SIA STUDY TOUR TO ENGLAND & WALES. Info.: Henry A. Rentschler, POB 962, Paoli PA 19301 (215-644-5343).

Sept. 8-11: Annual Meeting, American Assn. for State & Local History, Columbus, Ohio. Incl. session on IA. Info.: AASLH, 530 Church St., Suite 600, Nashville TN 37219-2325.

Sept. 15-17: Symposium on "Structural Preservation of the Architectural Heritage," Rome, Italy, sponsored by the Intl. Assn. for Bridge & Structural Engineering, co-sponsored by ICOMOS. Info.: IABSE Secretariat, ETH-Honggerberg, CH-8093 Zurich, Switzerland (phone Int. +41 1-377 26 47, fax Int. +41 1-371 21 31).

Sept. 29-Oct. 2: 25th Anniv. Conf., Assn. for Preservation Technology, Ottawa, Canada. Info.: Robert Hunter, APT Conf. Chair, POB 2001, Sta. D, Ottawa, Canada K1P 5W3 (819-997-6974; fax 953-4909).*

OCT. 1-3: SIA FALL TOUR: New Hampshire Mill Towns. Sponsored by Northern New England Chap. & HQ'd in Concord. Info.: Dennis E. Howe, Chair, 1993 Fall Tour, 22 Union St., Concord NH 03301 (W 603-225-6649; H 603-224-7563; fax 226-2548).*

Oct. 8-10: Iron Masters Meeting, Scranton & Cornwall, Pa., cosponsored by the Pa. Hist. & Mus. Commn. & SIA. Info.: Ed Rutsch [SIA], R.D.3, Box 120, Newton NJ 07860 (201-383-6355, fax 383-9377).

Oct. 15-16: Annual Meeting, Pioneer America Society, Pittsford, N.Y. (along Erie Canal). Info.: Brian Coffey, Dept. of Geog., SUNY, Geneseo NY 14454-1401 (716-245-5238).

Oct. 25-27: American Heritage Areas 1993 Workshop, Morgantown, W.Va., co-sponsored by The Inst. for the Hist. of Tech. & IA at W.Va. U., HABS/HAER, and the Natl. Her-

itage Areas Coalition. Info.: AHA'93 Workshop c/o Shelly Mastran, Natl. Trust for Hist. Pres., 1785 Mass. Ave. NW, Wash. DC 20036.

Dec. 6-8: Restoration 93, Intl. Conservation & Preservation Trade Event, Hynes Convention Center, Boston. In cooperation with APT. Info.: Restoration 93, c/o E. Glew Intl. (EGI), 10 Tower Office Park, Woburn MA 01801-9988 (617-933-9699, fax 933-8744)

1994

May 11-14: Annual Meeting, Vernacular Architecture Forum, Charleston, S.C. Info.: Jonathan Poston, Historic Charleston Foundation, 11 Fulton St., Charleston SC 29401 (803-724-8486). Deadline for paper proposals is **Oct. 15, 1993**; contact Greg Hise, Sch. of Urban & Reg. Planning, U. of So. Calif., Von KleinSmid Center 351, Los Angeles CA 90089-0042 (213-743-3739).

JUNE 2-5: SIA 23rd ANNUAL CONF., TORONTO, CANADA. Info: Phyllis Rose, 127 Hilton Ave., Toronto, Ont. M5R 3E8 (416-535-5723).

**Find details on this event elsewhere in this issue.*

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, *IA*, published annually. SIA promotes the identification, interpretation, preservation, and re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual, \$35; couple, \$40; institutions, \$40; contributing, \$60; sustaining, \$125; corporate, \$250; student, \$20. Send check payable to SIA to Treasurer, Room 5014-MRC629, National Museum of American History, Smithsonian Institution, Washington, D.C. 20560; all business correspondence should be sent to that office.

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Submission deadlines: Feb. 1 (Spring), May 1 (Summer), Aug. 1 (Fall), and Nov. 1 (Winter).

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TO CONTACT THE EDITOR: Robert M. Frame III, Editor, *SIA Newsletter*, P.O. Box 65158, St. Paul, MN 55165-0158. (612-291-7882).

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