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NEWSLETTER

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REWRAPPING ROEBLING'S DELAWARE AQUEDUCT

Last Oct. 8, a small group of construction workers gathered on the downstream side of the Pennsylvania abutment of John A. Roebling's Delaware Aqueduct. They uncorked a bottle of champagne and cheered as they witnessed completion of the total rewinding of the 137-year-old cables on the oldest surviving Roebling suspension structure.

His first suspension bridge, an aqueduct carrying the Pennsylvania Main Line Canal across the Allegheny River and into the heart of Pittsburgh, had been completed a few years earlier, in 1845. Despite fears about its strength, the seven-span structure was successful and led to a commission to build four others for the Delaware & Hudson Canal Co.

The D&H opened in 1828 and soon was busy floating boatloads of anthracite and other cargo from the Moosic Mts. to the Hudson River. With the "improvement" of the canal in the late 1840s, the Delaware Aqueduct was one of four suspension structures erected by Roebling to increase the system's capacity and relieve bottlenecks. It was built to carry the canal over the Delaware River, doing away with haulage of the boats across the river by rope ferry. Roebling's design called for three piers instead of the five that would have been required for a conventional masonry and timber aqueduct, thereby allowing more clearance for ice floes and timber rafts.

The Delaware Aqueduct was completed in 1849 and operated for the next half century. Eventually the N.Y. & Erie Railroad cut into the canal profits and in 1898 the aqueduct was abandoned and sold to a timber dealer, who converted it to a roadway for his lumber wagons

while collecting tolls from other users. For the next 82 years, through several owners, it remained a privately owned toll bridge, until the National Park Service acquired it in 1980.

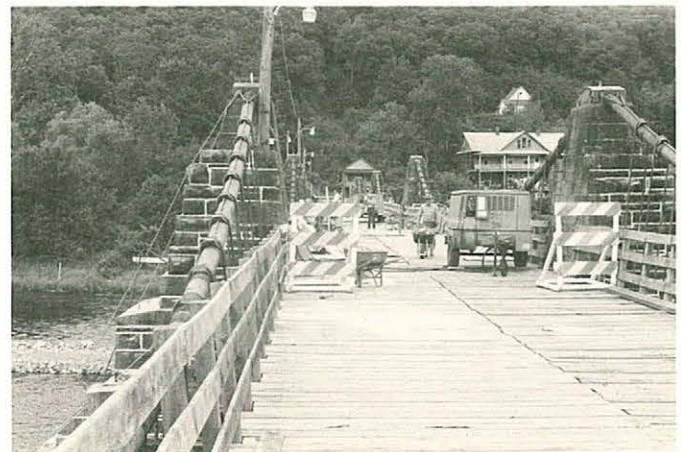
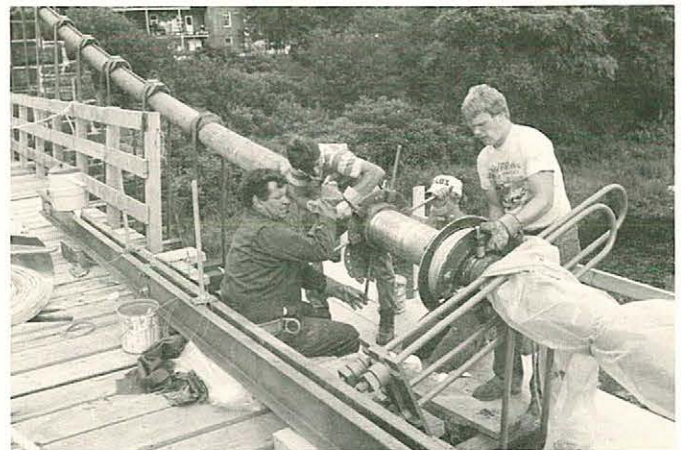
In 1968, as part of the D&H Canal, the aqueduct was designated a National Historic Landmark and a year later it was recorded by HAER. In 1972 it was designated a National Historic Civil Engineering Landmark by the ASCE.

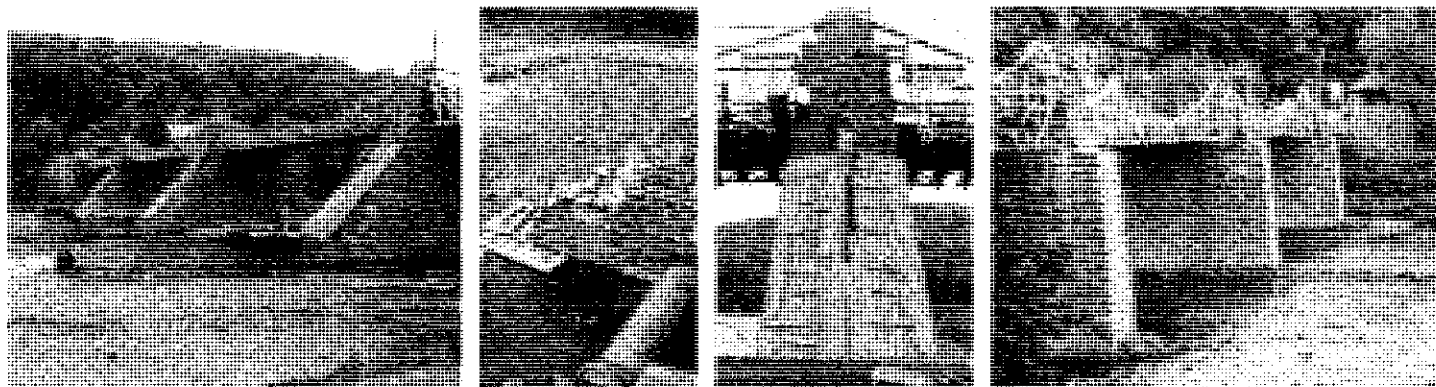
Despite the growing recognition, the bridge had reached a serious state of disrepair. Vandalism was increasing. These financial and structural problems coincided with the river valley's designation as part of the National Wild and Scenic Rivers system. The NPS bought the structure from the last private owner, Albert Kraft, in 1980.

Although Kraft had closed it in 1979, the NPS made a commitment to reopen it for vehicular use. The agency spent \$26,000 to replace the railings and 50% of the deck timbers and to repair the

Continued on next page

THE DELAWARE AQUEDUCT. *Below:* In service, c1885. View from Minisink Ford, N.Y. looking toward Lackawaxen, Pa. *Above right:* Rewrapping the south cable with a wrapping machine loosely following the design of Roebling's original. At left is the cleaned, unwrapped cable with temporary banding. The new wrapping is seen between the wrapping capstan and the wrapping-wire reel. To the right of the reel are two of the original wrought-iron-rod suspenders, temporarily disengaged to allow the wrapping machine to pass by. The floor system is temporarily supported by the steel beam which carries the loads to the adjacent floor beams. *Below right:* General view of cable-restoration work; view along deck toward N.Y. *Robert M. Vogel photographs.*





THE DELAWARE AQUEDUCT. Above far left & right: The upstream and downstream faces, looking toward N.Y. Above left center: Repairing the upstream pier faces by repointing the joints and replacing missing stones with originals found in the river. Above right center: Installing a wooden icebreaker. Below left: Cable at an anchorage. Below right: Sandblasting off the rust, old paint and oil. Center-left photograph by Robert M. Vogel; other photographs by Sandra Hauptman.



lighting system. When reopened in Oct. 1980, only pedestrian traffic was allowed because of serious structural support problems.

After a safety inspection by the Federal Highway Admin., consultation with engineers specializing in wire cable and historic bridges, and a rehabilitation study done by A.G. Lichtenstein [SIA] & Assoc. the historic cables were found to be sufficiently strong to proceed with the original rehab commitment. NPS funds were allocated for two engineering studies, one focusing on the cables and masonry, and the other on the superstructure and approaches.

Lichtenstein received the first award and prepared the technical specs for restoration of cables and masonry, and reconstruction of the timber icebreakers. Construction work was begun by Coastal Structures, Inc., of Manasquan, N.J., with a crew of 35 carpenters, masons, and laborers. They cut away the old cable wrapping wire and then sandblasted the accumulated layers of rust, dried lead paste, paint, and linseed oil off the cable wires. It took two four-man crews nearly all summer to rewrap the two cables with new galvanized steel wire. The rewrap process was slow—ten feet a day—because it was done entirely by hand using a system copied from Roebling's original designs. Meanwhile, nearly 12,000 linear feet of masonry joints on the three piers and two abutments were repaired.

Lichtenstein's divers located over 130 dimension stones that, over the years, had been dislodged from the piers by floods and ice. Where possible, the stones were salvaged from the river bottom, cleaned, and used to repair the upstream pier faces. Carpenters fabricated large icebreakers that were brought downriver and installed, filled with riprap, and armored with steel nosing plate. The entire system was tested—prematurely—when hurricane Gloria raised the river level nearly 12 ft. over normal summer low water. Much to everyone's relief all was intact when the waters receded.

The work now completed, the cables are restored to their original semigloss "Spanish Brown," selected by paint-chip analysis and historical research. The NPS has contracted with architects and engineers to develop the specs for the design of a new road deck and approaches, with construction planned for this summer and reopening scheduled for the fall.

S.H.

VIEWPOINT

Checking Out HAER

A new National Park Service publication is available that provides the first listing of the Historic American Engineering Record collection since the 1976 *HAER Catalog* (193 pp.). Users of the *HAER Checklist: 1969-1985* (Wash. D.C.: N.P.S., 1985, 91 pp.) will discover that, in both design and content, it is very different from its predecessor. Devoid of site descriptions, dates of construction, and illustrations (except for a few of postage-stamp size on the cover), it includes only the most basic information about sites: name, location, and number of photos, drawings, and pages of historical data. Arrangement is by state and county, with no subject index. Literally a 76-page computer printout followed by a county code list, the checklist is a somewhat cryptic reference tool geared toward management of the collection rather than toward introducing researchers to the nature of its resources.

One major purpose of the new checklist is to heighten awareness of HAER material so that it will find greater use in publications. Ironically, most use of the HAER collection in articles, books, etc., has been by those who actually worked on preparing the documentation—witness numerous articles in *IA: Journal of the SIA*. Aside from a few popular surveys of industrial archeology, HAER documentation is seldom cited in published research on the history of technology. In the future this may change, but it is possible that historians' use of illustrative material is either so idiosyncratic or so historically specific that there will be little general use of the HAER collection. If this trend holds true, it will be unfortunate as there is a wealth of good HAER material available for the asking.

As of May 1985 the HAER collection contained documentation on almost 1,200 sites, including 17,072 large format photographs, 1,430 ink-on-mylar drawings, and 11,603 pages of historical reports. Thanks to an extensive "Reduction and Transmittal" project in 1983-84, the vast majority of the collection is now retained by the Prints & Photographs Division of the Library of Congress. It is available to the public without copyright restriction, and copies of documentation can be obtained for fairly reasonable fees. However, it is worth noting that photocopies cost 45¢ if done by library staff while researchers can do it themselves for 10¢. Clearly, direct examination of the collection by researchers is to their distinct economic advantage. Whether proposed cutbacks in the Library of Congress budget will limit access to the collection or increase copy fees remains unknown. Also, library staff are still processing many of the HAER records and cuts may reduce their ability to respond to research inquiries.

A final note: The checklist does not include reference to the numerous regional and state HAER inventories undertaken in the 1970s. Except for projects focussing on specific sites, such as U.S. Army bases, the HAER inventory program has remained inactive for several years. For copies of the *HAER Checklist: 1969-1985* write HABS/HAER, National Park Service, P.O. Box 37127, Wash. DC 20013-7127.

D.C.J.

ALEXANDRIA CANAL TIDELOCK EXCAVATED

An early 19th-C tidelock of the Alexandria [Va.] Canal was excavated last fall by Thomas Hahn and Emory L. Kemp [both SIA]. The seven-mile canal, built 1832-43, connected the Chesapeake & Ohio Canal at Georgetown, D.C., with Alexandria. The canal's outstanding feature was the eight-pier, 1,100-ft. aqueduct crossing the Potomac R. at Georgetown. The AC ran at the aqueduct level to Alexandria where it was lowered 38 ft. to the Potomac by four 9½-ft. lift locks, each separated by a pond.

After operations ceased in 1886, the canal and locks gradually silted in and, by 1982, two of the locks were beneath buildings, a third was under a public park, while the tidelock was covered only by vacant ground. That year the city, with Nat'l Trust Maritime Preservation funds, retained Hahn to locate and excavate the lock and basin. Work revealed that the lock was in very good condition except for missing coping stones and some cut stones from the wing walls. It was reburied after a brief examination.

The tidelock and basin land were obtained by Savage-Fogarty, Inc., under the condition that the construction of the TransPotomac Canal Center include any feasible preservation of the lock itself. Thus the canal and basin will become the focal point of the four-building complex under way on the Potomac waterfront. Following Alexandria's recommendation, S-F retained Hahn and Kemp as IA consultants.

They excavated last Sept. and Oct., finding the lock as it was in 1982. In addition, most of the downstream gates and one of the upstream gates were discovered, as well as lock hardware. The original gates were reburied in the lock with bank-run gravel when the city declined to use them in the museum space to be donated by S-F, citing insufficient funds for gate restoration. Based on



The excavated tidelock of the Alexandria Canal in 1985. *Thomas Hahn photograph.*

measurements taken, shortened gates with accompanying ironwork are being built while the lock is being refitted with a new concrete floor some four ft. below the coping. The basin above will be rebuilt to the same depth, with the entire project scheduled for completion late this year. Other artifacts recovered will be exhibited in the Waterfront Museum to be designed and run by the city.

T.H.

AND IN OTHER CANAL NEWS . . .

CANAL MUSEUM EXPANDS, RESTORES WEIGHLOCK. The Erie Canal Museum in Syracuse has opened a \$400,000 addition, featuring a full-size 40-ft. reconstructed canal "line boat." The opening last Nov. was scheduled to coincide with the 160th anniversary of the Erie's original opening. Visitors may board the boat and view its recreated interior, including the crew's quarters, exhibits in the cargo hold, and the forward cabin, which housed European immigrants. The new addition actually is the restored 1850 Weighlock Building, with the boat housed in the original weighlock portion. Says museum director Vicki Quigley, The "Erie Canal was where Erie Blvd. is now [in front of the building], and the boats would detour into the weighlock. Then, they would close lock doors on either end and drain the water out of the weighlock. The boat would come to rest on giant scales at the bottom and they could determine how much toll to charge." The Syracuse Weighlock is the only survivor of seven such structures on the Erie Canal.

D.J.M.

ON NOT FORGETTING CANALS. William E. Trout [SIA], president of the American Canal Society, reminds us that the ACS still has available their three-part American Canal Guide: Part 1, "The West Coast," including British Columbia, Washington, Oregon, and Calif.; Part 2, "The South: N.C. to Florida," including N.C., S.C., Georgia, and Fla.; and Part 3, "Lower Mississippi & Gulf States," including La. (especially New Orleans), Texas, Arkansas, Tennessee, and Alabama. Avail. from Bradley L. Haigh, 4926 Herkimer St., Annandale VA 22003. Trout: "These are inventories designed to be a basis for further historical work, park planning, and canal hunting. Anyone involved with these regions should also check with me for

corrections and additions [35 Towana Rd., Richmond VA 23226]. For the rest of the hemisphere, from the Yukon Lock to fossil canals in Mexico and the Lost Canal of the Rapsadura, we have information sheets available from our Canal Index Chairman, Terry K. Woods, 6939 Eastham Circle, Canton OH 44708. We can also help find local experts for those doing site surveys so there is no excuse for leaving some of the canal sites out of surveys and and environmental impact statements anymore!"



CONTRIBUTORS TO THIS ISSUE

Anne Booth, Boston; Bernard A. Drew, Great Barrington, Mass.; Aron F. Eisenpress, New York City; Mark T. Fiege, Dale L. Martin, and Fred Quivik, Butte, Mont.; Thomas Hahn, Shepardstown, W.Va.; Sandra Hauptman, Upper Delaware Scenic & Recreational River, Nat'l Park Service; Jeffery A. Hess, Minneapolis, Mn.; Daniel J. Mordell, Binghamton, N.Y.; Charles E. Peterson, Philadelphia; Roger L. Robertson, Kensington, Md.; David L. Salay, Anthracite Museum Complex, Scranton, Pa.; Donald C. Jackson, Helena Wright, and Robert M. Vogel, NMAH, Smithsonian. With thanks.

NOTES & QUERIES

SEE IA THE BRITISH WAY. IA theme weekends are offered as package tours by a British firm from April through Sept. Prices include excursions, meals from Fri. dinner through Sun. lunch, two nights in a three- or four-star hotel, and evening lectures. Offerings:

—“**The Cradle of Steam**” features a steam rail trip across the North Yorkshire moors from Pickering to Grosmont; shed and station visits on the Stockton & Darlington Rwy.; D'ton Rwy. Museum; and D'ton Rwy. Preservation Society site visits. £ 97. May 16-18, July 25-27, Sept. 19-21.

—“**Canals of the Midlands**,” with Anthony Burton (author of *The Canal Builders* and *Waterways of Britain*, and known for British TV programs “Gt. Western Journey” and “The Past Afloat”) will be based at Higher Disley near Stockport. Day trip by horse-drawn canal boat along the Caldon Canal, legging through Froghall Tunnel. Visits to Ellesmere Port, the Nat'l Waterways Museum near Liverpool; Canal Museum at Llangollen; and Pontcysyllte Aqueduct. £ 110.75. May 9-11, July 11-13.

—“**When Cotton Was King**” with Anthony Burton (see above; noted for TV program “The Rise & Fall of King Cotton”). Visits to Quarry Bank Mill, Styal, and Greater Manchester Museum of Science & Industry; Queen St. Mill, Burnley, with steam-powered looms; Samuel Crompton's home “Hall i' th' Wood.” £ 110.75. April 18-20, June 13-15.

Info.: Piers Plowman Tours, 23 Halfkey Rd., Malvern, Worcs WR14 1UL, Gt. Britain. Phone Leigh Sinton (0886) 32487, Mr. or Mrs. Haisman.

H.W.

WE ALWAYS KNEW IT DEPT. Ironbridge, arguably the premier IA site internationally, is being officially recognized at last as world class. The British government has announced that the whole of the Ironbridge Gorge in Shropshire is to be nominated as a World Heritage Site under the terms of the UNESCO World Heritage Convention. News of the nomination came in a written statement issued to Parliament last Nov. by Lord Elton, Minister of State for the Dept. of the Environment. Six other GB sites will be nominated, including Stonehenge! When approved, Ironbridge will be entered on the World Heritage list alongside Australia's Great Barrier Reef, Germany's Aachen Cathedral, and the historic centers of Florence and Rome.

And in other **Ironbridge News**... The Institute of Industrial Archaeology, run jointly by the Univ. of Birmingham and Ironbridge Gorge Museum Trust, has announced its annual program of some 20 short courses. Several are of particular IA interest:

—“Int'l Seminar on Wrought Iron,” July 14-17, led by Barrie Trinder, with possible demonstration of wrought-iron manufacture at the newly reconstructed puddling furnaces at Blists Hill Open Air Museum, Ironbridge.

—“Ironbridge Training Excavation in IA,” Sept. 8-19, led by Philip Barker, with fieldwork within Ironbridge Gorge.

—“Recording Industrial Sites: Aims, Methods, & Results,” Nov. 7.

For a complete schedule and other info. write Ironbridge Gorge Museum, Ironbridge, Telford, Shropshire TF8 7AW, England.

And, finally...Ironbridge recently opened a fully equipped **19th-C locksmith's shop** at the museum's Blists Hill site, where a complete working Victorian Industrial Township is being recreated.

“**THE HISTORY OF SCIENCE & TECHNOLOGY IN GT. BRITAIN**” is a six-week, two-course program in London by the Duke Univ. Summer Programs Abroad. It will deal with cultural and technical aspects of the planning, design, analysis, and execution of large engineering projects and structures. Seymour Mauskopf (history dept.) will teach “Structures, Science, & Society,” and Henry Petroski (civil engng.) will teach “Structural Engng. in Perspective.” Includes field trips to sites illustrating scientific and technological achievements and principles. Dates & info.: S. Mauskopf, Dept. of Hist., Duke U., Durham NC 27706.

THE BRITISH ASSN. FOR IA ANNUAL CONF. will be Sept. 12-14 in Loughborough, Leicestershire, reports Roger L. Robertson [SIA], who attended the 1984 AIA meeting in Aberystwyth, Wales. The conf. site “is near the cities of Leicester, Nottingham, Derby, Birmingham, and Coventry, and within easy range of the beautiful Peak District National Park, where lead-mining sites are preserved and open to visitors.” A preliminary program is Sept. 8-12. Booking info.: J.R. Fletcher, 7 Shenton Close, Whetstone, Leicester LE8 3NZ, England.

IA IN [CAST-IRON] ART AT SLOSS. The 1988 Nat'l Conf. on Cast-Iron Art will be held at Sloss Furnaces [NHL] in Birmingham, Ala., site of the 1985 SIA Fall Tour. The conference will involve artists from N. America, Japan, and Europe who work with molten metals and will feature actual iron pours by visiting artists and an extensive exhibition of iron art in galleries around the city. All this reminds us, as one of the organizers says, that “modern foundry art came from the foundry industry.” Info.: Paige McWilliams, Sloss, P.O. Box 11781, Birmingham AL 35202 (205-324-1911).

IA IN THE ARCHIVES. The papers of the N.Y. **Architectural Terra Cotta Co.** (1911-20) have been donated to the Avery Library by the Center for Building Conservation. NYATCC supplied terra cotta for buildings throughout the U.S. and Canada, including 2,000 in N.Y.C. An NEA grant funded cleaning, cataloging, and rehousing. Info.: Janet Parks, Curator of Drawings & Archives, Avery Library, Columbia Univ., N.Y. 10027.

The Earl W. Hayter Regional History Center at Northern Illinois Univ. has acquired the records of the **Matthiessen & Hegeler Zinc Co.**, LaSalle, Ill. (1858-1970), and the records of the **Wurlitzer Co.** of DeKalb, Ill. (1860-1980).

The Hagley Museum & Library has opened the records of the **Phila. Quartz Co.**, manufacturer of soap, candles, detergents and industrial silicates, 1831-1960 (40 lin. ft.).

The Center for Canal History & Technology, Easton, Pa., has received a grant from the Pa. Historical & Museum Commn. to preserve the remaining films of the **Mauch Chunk-to-Summit Hill “Switchback” RR.** Constructed in 1827 by the Lehigh Coal & Navigation Co., the Switchback was the third railroad built in America, and the first of any significant length (9 mi. along the mainline). For four decades it carried millions of tons of anthracite and between 1872-1933 was a nationally known tourist attraction, taking riders through the breathtaking mountain scenery around Mauch Chunk. In 1937 it was sold for scrap.

INT'L PRESERVATION BIBLIOGRAPHY. The *Bibliography on Swiss Art & Preservation of Old Monuments & Sites* has been published annually since 1980 by the Inst. for the Preservation of Old Monuments & Sites at the Swiss Federal Inst. of Technology in Zurich. The institute monitors some 40 preservation/restoration-oriented publications, almost all European (and not yet including *SIAN*), and lists articles, books, conference proceedings, reports on meetings, etc. All are indexed according to authors, people, places, and subjects, with headings in German, French, and Italian. Coverage is international. Issues are Sfr. 35 each ppd. (sample copies available) from Institut für Denkmalpflege, ETH-Zentrum, CH-8092, Zürich, Switzerland.

STANLEY AC CENTENNIAL

The centennial of William Stanley Jr.'s first successful demonstration of an AC power distribution system was celebrated in Great Barrington, Mass., site of the Mar. 20, 1886, experiment, and in Pittsfield, Mass., home of his later Stanley Electrical Mfg. Co., which became General Electric's power transformer works. Festivities included a week of activities, publications, and speeches, all sponsored by the Berkshire Co. Hist. Soc. and supported by the Berkshire Museum, the Gt. Barrington Hist. Soc., IEEE, and General Electric.

Stanley (1858-1916) was born in Brooklyn, N.Y., and grew up in Englewood, N.J. After a year at Yale and two years with a nickel-plating firm, he joined Hiram Maxim, chief engineer at the U.S. Electric Light Co. in N.Y.C., working on commercial DC lighting. Stanley went on to work briefly for Edward Weston at Weston Arc Light Co. in Newark and Swan Electric Light Co. in Boston before establishing a private laboratory.

When George Westinghouse decided to enter electrical manufacturing, he hired Stanley, who was convinced that AC would overcome the serious distribution problems that were inhibiting DC's growth. He was aware of similar AC investigations by Gaulard & Gibbs in England and by Deri, Blathy and Zipernowski in Hungary. In 1885, in declining health and frustrated at Westinghouse's seeming disinterest in his AC approach, Stanley moved to Gt. Barrington where he had visited as a child.

Still under contract to Westinghouse, he set up a lab in an abandoned rubberwear factory (now gone). He borrowed a Siemens AC generator from Westinghouse and constructed about 18 transformers. In the experiment, he stepped up from 100 to 500V for transmission to participating stores and businesses, then stepped back down to 100V. Stanley tested the equipment and had a public demonstration on Mar. 20, 1886, on Gt. Barrington's Main St. Westinghouse witnessed the operation in April and within a year had AC equipment in manufacture.

The Gt. Barrington experiment marked both the first commercial use of AC and the first "battle of the currents." A few months earlier, a DC system was installed in a mansion (Searles Castle, now a private school) then under construction, and lines were run to several Main St. stores. Viewers walked up and down the street comparing the two lighting systems for brilliance.

Stanley remained with Westinghouse until 1890, when he established an electrical manufacturing business in Pittsfield. This firm, which made SKC [Stanley, Kelley, & Chesney] transformers, merged with General Incandescent Arc Light Co. in 1903 to become the Stanley G.I. Mfg. Co., later absorbed by General Electric. One building in Pittsfield's huge GE complex today still bears the Stanley emblem.

While remaining a consultant to his electrical firm, Stanley in 1895 established in Gt. Barrington a new venture, Stanley Instrument Co., which made watt-hour meters and other electrical equipment. This factory was closed in the early 20th C after losing a long patent battle to Westinghouse.

In 1893 Stanley's lab set up one of the first polyphase power transmission stations at a power station on the Housatonic R. for Monument Mills. Several MM buildings survive today. A 1903 power station, upriver from the MM site and originally equipped with Stanley products, has been restored to operation in recent years.

With the forced closing of the watt-meter plant, Stanley found a practical use for his investigations into immersion welding and brought out a vacuum bottle (an all-metal type of thermos still manufactured today by Aladdin). This SuperVac was made in Gt. Barrington until 1933, when a successor company moved to Conn. The enameling building from the Stanley plant remains in use by Berkshire Paper Co.

A major exhibit has been mounted by the Berkshire Museum and another exhibit is in the Mason Library in Gt. Barrington. BCHS and IEEE sponsored a dinner at the Stanley Club in Pittsfield with guest speaker Thomas P. Hughes, whose 1983 *Networks of Power: Electrification in Western Society 1880-1930* describes Stanley's work. Another celebratory dinner was held by GBHS at Brookside, the former Stanley estate, and a local radio dramatization based on Stanley's own words was broadcast. Publications include a special issue of the *GBHS Newsletter*, a historical booklet (see "Letters" in this issue), a souvenir newspaper supplement in *The Berkshire Courier*, a commemorative poster, and a cacheted postal envelope. Finally, there was an official proclamation by the Mass. governor.

B.A.D.

RR Documents Endangered

WHITE URGES, 'SAVE ICC RECORDS'

The following important letter from John H. White, Jr., Curator of the Div. of Transportation, National Museum of American History, Smithsonian Institution, Wash. D.C. 20560, is reprinted from The Lexington Quarterly of the Lexington Group in Transportation History. Ed.

We are all aware, at least vaguely, of the Interstate Commerce Commission Valuation Records project conducted 1915-21, yet I think few historians appreciate the value of this material.

Recently I learned that the field notes and other original papers are still in the hands of the ICC. The agency may soon disappear and the National Archives has shown rather little interest in taking over the material. I fear it may be dumped. It now is stored at the Federal Records Center in Suitland, Maryland (suburban Washington). Space is an ever-present problem at this facility and I am sure they would be only too happy to dispose of this mountain of old papers. The Reagan Administration is pushing the paper elimination program.

A first hand inspection has convinced me that it is far more than just old paper. It is, perhaps, the finest single collection available on the American railroad system. And they are more than lists. There are thousands of photographs, measured sketches and track plans. The depth and breadth of information available is simply amazing. The collection covers the entire American railroad network and records the system in every conceivable way. Nothing has been overlooked, from land to finances to traffic to rolling stock to bridges, stations, roundhouses, tracks, signals, telegraphs—in short, everything.

Some of the data dates well before the 1915-21 period for some of the financial materials go back to the origins of the earliest corporations. Many of the buildings, locomotives, cars and bridges date well before 1915. There is something for every American historian interested in the past of American railroading. Business, economic, technical, and architectural historians would find an abundance of source material in these files.

The richness of the collection is unquestioned. That is the good news. The bad news is that it is very massive. One estimate claims 11,000 linear feet. Another counts 2,200 boxes just for the field notes. One could hardly expect the record for so gigantic a system to occupy only a few file drawers. I have heard rumors that the Archives wants to cut it by 90%. No matter how selective a process is devised, I can only believe that such a draconian reduction would discard the body of the collection.

I hope the Archives can be persuaded to accept and keep this collection. Your letters and those from other scholars and leaders in the field of history would do much to assure the safety of this valuable material. I urge you (and your friends) to write to Kenneth F. Rossman, Director of the Records Appraisal & Disposition Office, National Archives, Wash. D.C. 20408.

John H. White, Jr.

NOTES & QUERIES

INSIDE LIBERTY'S PHYSIQUE. A special conference on Sept. 22-24 in New York City, "Statue of Liberty—Today for Tomorrow," will take a unique historical/technological look at the monument and plan for its restoration. Sponsored by the Nat'l Assn. of Corrosion Engineers and the Nat'l Park Service, the conference will review the 19th-C French metallurgy and technology that determined how the statue would be built and materials to be used. Sessions will feature the new design aspects of the restoration project, and the corrosion problems of the statue and their solutions. A final session will cover particular construction/restoration projects such as skin repair, replacement of the torch and flame, armature replacement, coatings removal and cleaning, and scaffolding and rigging. Info.: NACE, P.O. Box 218340, Houston TX 77218 (713-492-0535).

An ASCE designated International Historic Civil Engineering Landmark, the Statue is featured in the 1986 Am. Society of Civil Engineers' Centennial Calendar. Info.: ASCE, Herb Hands, 345 E. 47th St., NY NY 10017 (212-705-7671).

"THE TECHNOLOGY OF HISTORIC ARCHITECTURE" is the theme of a Summer Institute (July 28-Aug. 22) at the Princeton Univ. School of Architecture that will explore the application of modern engineering analysis to amplify traditional historical study. Led by Robert Mark, professor of architecture & civil engineering, this NEH-supported program of lectures, seminars, and research will focus both on the engineering approaches and on how the findings alter the historical perceptions of pre-industrial architecture. Info.: Cynthia Winkelman, NEH Summer Inst., School of Architecture, Princeton U., Princeton NJ 08544.

ROEBLING MEMORIAL. A \$250,000 bronze memorial to the Roebling family is slated for an empty pedestal now overlooking the Brooklyn Hts. Esplanade where planners in 1944 had envisioned a statue at the site near the former home of Washington and Emily Roebling, several blocks south of the Brooklyn Bridge. Recently a wax model of the proposed sculpture was chosen in a competition conducted by the Brooklyn Hts. Assn. According to *The New York Times*, the artist Marisol's "9-foot-tall model portrays a realistic image of a mostly imaginary event commemorating the completion of the bridge [1883]: the Roeblings standing in a carriage, suggested by a platform and two wheels, with John A. Roebling...pointing toward" the bridge.

The New York Times

TECHNOLOGY TEACHING PROJECTS. The Technology Studies & Education Div. (TS&E) of the Society for the History of Technology (SHOT) is collecting materials for two publication projects in technology teaching:

1. **A new or updated collection of course syllabi:** the collection of representative syllabi, published by TS&E in 1983 as *The Machine in the University*, is now almost out of print and some of the included materials are now out of date. New submissions are sought. Course materials submitted should include a statement of the course goals, a list of topics covered on a daily or weekly basis, and readings assigned or recommended for each topic. Study and exam questions or paper topics would be welcome. All bibliographical materials should include complete citations.

2. **A collection of useful teaching techniques for technology studies:** TS&E seeks short descriptions of teaching techniques which faculty in the areas of history of technology or technology studies have found useful in the classroom. Submissions should be processed on a letter-quality printer or typewritten using 8½ x 11-in. paper, one side only, and double spaced.

Those wishing to submit materials for consideration should send eight copies to Terry S. Reynolds [SIA], Program in Science, Technology & Society, Dept. of Social Sciences, Michigan Tech. Univ., Houghton MI 49931 (906-487-2722).

AC'S GARVEY RETIRES. Robert R. Garvey, Jr., executive director of the Advisory Council on Hist. Pres. since 1967, retired in March, following 22 years of Federal service. He has been the AC's only ex. dir. since its creation in 1966. From 1960 to 1967 Garvey was ex. dir. of the National Trust for Hist. Pres. and was an important contributor to *With Heritage So Rich*, the seminal study that resulted in the passage of the 1966 Nat'l Hist. Pres. Act.

"IA IN THE SOUTHEAST" was the subject of a special symposium sponsored by the Southeastern Archaeological Conference, Nov. 7-9, 1985, in Birmingham, Ala. It was the first IA effort in SAC's 20-year history. Papers included "The Central of Ga. Train Shed [Savannah]: Continuity Buried," by Lawrence E. Babits (Armstrong St. Coll., Savannah); "Investigations of Willink's Marine Rwy., Savannah," by Julie A. Barnes (Armstrong S.C.); "The Succession of Hydraulic Power Installations at a Rural [Putnam County] Ga. Gristmill: Technology & Environment," by R. Bruce Council (Univ. of Tenn., Chattanooga); "Innovation & Change in the Southern Iron Industry: An Example from Chattanooga, Tenn.," by Nicholas Honerkamp (Univ. of Tenn., Chattanooga); "A Survey of Cultural Resources Pertaining to Tennessee's Western Highland Rim Iron Industry, c1795-1940," by Samuel D. Smith (Tenn. Div. of Archaeology); and "The Industrial Archeology of Antebellum Ala.: Steam-Powered Coal Mining in a Slave Labor Regime [n. central Ala.]," by Jack Bergstresser (Auburn Univ.). For further info. on the symposium and Southeastern IA, contact R. Bruce Council, Jeffrey L. Brown Institute of Archaeology, Univ. of Tenn. at Chattanooga, 615 McCallie Ave., Chattanooga TN 37403 (615-755-4325). [*The Brown Institute at the Univ. of Tenn. memorializes the life and IA work of the late Jeffrey L. Brown, SIA board member. Ed.*]

AVAILABLE

HISTORIC DUPONT PHOTO GUIDE. Copies are still available of *Corporate Images: Photography at the Du Pont Company—1865-1972*, catalog for the exhibit two years ago of historic Du Pont photos from the Hagley Museum collection. Send \$5 to Hagley Museum Store, P.O. Box 3630, Wilmington DE 19807. A similar volume is being prepared on Hagley's iron- and steel-related photos, prints, and drawings.

1986 STEAM RR CALENDAR. "Whistle on the Wind," is available for \$6 ppd. from the Mid-Continent Rwy. Museum, P.O. Box 55, North Freedom WI 53951. Each month features an 8x12-in. recent or historic b/w photo of steam-engine operations.

NEW PUBLIC WORKS BOOK AWARD. If you're planning to publish a book on a public works subject this year, take note. Such works published in 1986 will be eligible for a \$1,000 award from the Public Works Historical Society. This new award has been established to encourage historical research and publication on the development of public works structures, facilities, technologies, and services that have played a significant role in the transformation of modern society. The Abel Wolman Award, named for one of the 20th-century's leading public works figures, will be presented to the author making the most outstanding contribution to public works history.

Authors or publishers may submit a book for consideration. Historical publications on water resources, transportation, public buildings and grounds, or public works equipment will be eligible. Submission deadline is Feb. 15, 1987. Applications and details from PWHHS, 1313 E. 60th St., Chicago IL 60637 (312-667-2200).



SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

PUBLICATIONS OF INTEREST

A SUPPLEMENT TO VOL. 15 NO. 1

1986

Compiled by Sandra L. Norman, Slater Mill Historic Site and Marguerite A. Darroch & Robert M. Vogel,
National Museum of American History

GENERAL SUBJECTS

CATALUNYA, LA FABRICA D'ESPANYA. UN SIGLO DE INDUSTRIALIZACION CATALANA, 1833-1936. Ajuntament de Barcelona (Servei d'Exposicions, Palau de la Virreina, Rambla, 99, Barcelona 08002 Spain), 1985. 201 pp., illus., maps. 4,000 pesetas (\$30 post-paid.) Handsome and well-illustrated catalogue of an exhibition celebrating a century of industrialization in Catalonia, the "workshop" of Spain. Essays on traditional mfrs., formation of modern industry, social transformation of the Indus. Rev.; much on textile industry, steam power, and IA in art, Spanish-style. In Spanish; Ole!

Ronald W. Clark, WORKS OF MAN. Viking (NY), 1985. 352 pp., illus., \$24.95. Comprehensive history of technological invention and engineering achievement from prehistoric to modern times, chronicling human events to disarm and exploit nature's laws. Offers lucid, often surprising proof of the inextricable links between technological and social history.

Bernard I. Cohen, INSIDE THE BURNDY LIBRARY. In *American Heritage of Invention and Technology*, Fall 1985, pp. 42-48. A warm look at one of the best archives documenting the history of science and technology.

Richard Dennis, ENGLISH INDUSTRIAL CITIES OF THE NINETEENTH CENTURY: A SOCIAL GEOGRAPHY. Cambridge U. Press (Cambridge & NY), 1984. 368 pp. £27.50 and \$49.50. Rev. by Asa Briggs: *Journal of Historical Geography*, Vol. 11, No. 2, Apr. 1985. pp. 210-11. Useful, interesting book on Victorian cities. Interpretations of cities are scrutinized and current methodologies are applied to surviving quantitative data.

FAIRE HISTOIRE DU MONDE DU TRAVAIL. Champ Vallon (Inst. J.B. Dumay, Le Creusot; distrib. by University Presses of France), 1985. 52 pp., illus. 35 Ffr. A practical guide for local history of the worker's world. Where and how to preserve objects and documents and oral histories.

THE FEDERAL ENGINEER: DAMSITES TO MISSILE SITES--A HISTORY OF THE OMAHA DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. N.P., N.D. (Omaha, NE, 1985?). 279 pp., illus. The work of the District during its first 50 years, both civil and military. The District covers much of the northern Midwest, Montana to Indiana; Colorado to the Canadian border. Many large earthfill dams, flood-control, missile complexes, and the like. Impressive volume of work. Wonder who wrote it?

Elliot J. Feldman, CONCORDE AND DISSENT: EXPLAINING HIGH TECHNOLOGY PROJECT FAILURES IN BRITAIN AND FRANCE. Cambridge U. Pr. (32 East 57th St., NYC 10022), 1985. 207 pp., illus. \$34.50. Instead of comparing British and French technological expertise, the author blames the failure of certain projects on political instability.

D. Fraser (ed.), MUNICIPAL REFORM AND THE INDUSTRIAL CITY. St. Martin (175 Fifth Ave., NY, NY 10010), 1982 \$32.50.

Robert Friedel & Paul Israel, EDISON'S ELECTRIC LIGHT: BIOGRAPHY OF AN INVENTION. Rutgers U. Pr. (Distr. Center, Box

4869 Hampden Stn., Baltimore, MD 21211), 1985. 256 pp., illus. \$27.95. "... happy balance between style of writing and presentation accessible to the general reader and the professional demands of professional scholarship. . . generous profusion of drawings from the laboratory notebooks: the significance of nonverbal thinking in the inventive process could not be better documented."

J. R. Harris, THE ROLT MEMORIAL LECTURE, 1984: INDUSTRIAL ESPIONAGE IN THE EIGHTEENTH CENTURY. In *Industrial Archeology Review*, Vol. VII, No. 2, Spring 1985, pp. 127-38. Examines evidence about international industrial espionage which affected Great Britain.

Brooke Hindle (ed.) [SIA], AMERICA'S WOODEN AGE: ASPECTS OF ITS EARLY TECHNOLOGY. Sleepy Hollow Restorations (Tarrytown, NY 10591), 1985. 224 pp. \$14.95. Paperback reissue of 1975 edn. Seven essays explore numerous applications of wood in American technological development.

Edgar Jones, INDUSTRIAL ARCHITECTURE IN BRITAIN, 1750-1939. Batsford (4 Bakers Mews, London W1M 1DD), 1985. 240 pp., 114 illus. £25. Architectural history discovers industrial structures: this is the story of the "gradual admission of factories & warehouses to the circle of arch. respectability." Welcome to the world of IA, Mr. J.

Naomi Lamoreaux, THE GREAT MERGER MOVEMENT IN AMERICAN BUSINESS, 1895-1904. Cambridge U. Pr. (32 E. 57th St., NYC 10022), 1985. 208 pp., illus. \$29.95. The 1800 firms absorbed by merger, more than 70% of the markets in which they operated, and the particular historical combination of circumstances that caused them.

Benjamin Lawless, WORKING WITH WORKING MODELS. In *American Heritage of Invention and Technology*, Fall 1985, pp. 10-17. A look at patent models from the patent examiner's point of view.

Michael Lecsese, AMERICA'S DAREDEVIL DOCUMENTARIAN. In *Historic Preservation*, Oct. 1985. pp. 46-53. Jet Lowe, photographer for Park Service's HAER takes industrial photos.

William B. Meyer, THE LONG AGONY OF THE GREAT BORE. In *American Heritage of Invention and Technology*, Fall 1985, pp. 52-57. The digging of the four-and-a-half mile Hoosac Tunnel in NW Massachusetts, 1853-1876.

Henry Petroski, TO ENGINEER IS HUMAN: THE ROLE OF FAILURE IN SUCCESSFUL DESIGN. St. Martin's Press, 1985. Drawing on examples from large structures to such commonplace items as paper clips and cutlery, without jargon explains the basic precepts of design, noting that the occasional failure is an unavoidable element of the broad process.

Marc Rothenberg, THE HISTORY OF SCIENCE AND TECHNOLOGY IN THE UNITED STATES: A CRITICAL AND SELECTIVE BIBLIOGRAPHY. Garland Publishing (New York), 1982. 242 pp., \$35. Covering materials

published between 1940 and 1980. Selective in the topics it covers, it points out the very good and the very bad.

Witold Rybczynski, *TAMING THE TIGER: THE STRUGGLE TO CONTROL TECHNOLOGY*. Viking Penguin (NY), 1985. 256 pp. \$5.95. A provocative examination of our uneasy relationship with technological innovation--from the Luddite sabotage in the early 19th C to today's debates on nuclear resources.

Charles F. Sabel, *WORK AND POLITICS: DIVISION OF LABOR IN INDUSTRY*. Cambridge U. Pr. (32 East 57th Street, NYC 10022), 1982. 336 pp., \$29.95/9.95. A suggestive look at contemporary Western European and U.S. industrialism.

SIXTY INDUSTRIAL ARCHAEOLOGICAL SITES IN SCOTLAND. Assn. for Industrial Archaeology in conjunction with the Scottish Industrial Heritage Soc. (Dept. of Technology, National Museums of Scotland, Chambers St., Edinburgh EH1 1JF), 1985. 28 pp., illus. Good selection of key sites countrywide and IA-wide: bridges, railway structures, quarries, textiles, water mills, a gas works, &c &c.

STRUCTURES

Rachel Cox & Michael Bowker, *THE LIGHTHOUSE: ENDANGERED SPECIES?* In *Historic Preservation*, Dec. 1985, pp. 52-29. Restoration of lighthouses.

Wilbur Cross, 75 YEARS OF FOUNDATION ENGINEERING. The Benjamin Co. (One Westchester Plaza, Elmsford, NY 10523), 1985. 192 pp., illus. An excellent history of consulting engineers Mueser Rutledge and their predecessor firms (NYC), from the founding in 1910 to the present. The unseen but nonetheless interesting aspect of construction, calling for a remarkable variety of solutions according to the subsurface conditions. Buildings, bridges, factories, &c.

Thomas W. Dixon, Jr., *HUMPBLOCK BRIDGE: LAST REMNANT OF THE JAMES RIVER & KANAWHA TURNPIKE*. C&O Historical Soc. (Box 146, Alderson, WV 24910), 1985. 8pp., illus. \$2.40 PPD. Curious covered bridge of 1856 over Dunlaps Creek near Covington, Virginia, with a heavily cambered deck. Now preserved and has been recorded by HAER. Data also on the turnpike.

David Starbuck [SIA], *THE INDUSTRIAL ARCHEOLOGY OF NEW HAMPSHIRE*. In *Historical New Hampshire*, Vol. 40, Nos 1&2, Spring/summer 1985, pp. 84-99. Discusses NH's industries, surveys, and recording projects, with recommendations for future work. Special double issue on archeology in NH.

Studio Scala, *IL PRIMITO DELL'INDUSTRIA: ARCHEOLOGIA INDUSTRIALE NEL VALDARNO DI SOPRA* (I P: IA in Valdarno di Sopra) Fuori Edizioni for the Banca Popolare di Etruria (Florence), 1985. 70 pg. 100 illus. Photo essay with brief introduction in Italian and English. Photos arranged by type of site: furnaces, factories. Interior details and exteriors of buildings, mostly in various stages of dilapidation.

Meredith H. Sykes, *MANUAL ON SYSTEMS OF INVENTORYING IMMOVABLE CULTURAL PROPERTY*. UNESCO (Unipub, DC II, Room 900, United Nations, NYC 10017), 1984. 180 pp. illus. \$22.50.

V. Nasce & A. M. Zoragno, et al., *IL PONTE DI PADERNO: STORIA E STRUTTURA* [The Paderno Bridge: its history and structure]. In *Restauro* 73-74. Edizioni Scientifiche Italiane (via Chiatamone 7, 80121 Napoli, Italy), 1984. 226 pp. illus. 12,000 lire. In Italian. Special issue of *Restauro*, a journal of restoration of monuments & sites. The bridge is a metal-arch RR bridge blt. 1887-9, NE of Milan. Includes discussion of European metal-arch bridges, Italian iron industry, civil eng. problems with the site, (a deep gorge of the river Adda), and structural calculations for the bridge's repair.

POWER

L'ARCHEOLOGIE INDUSTRIELLE EN FRANCE. No. 11, 1985. CILAC (c/o Louis Bergeron, E.H.E.S.S., bureau 906, 54, blvd. Raspail, 75006 Paris, France). 164 pp., illus. 100 FF. (annual membership in CILAC, the Committee for Information and Liaison for Archeology). Six articles on aspects of hydro-power including regional use and conflict; inventories by type of wheel. In French.

Warren D. Devine, Jr., *THE PRINTING INDUSTRY AS A LEADER IN ELECTRIFICATION, 1883-1930*. In *Printing History* 14 (journal

of the Am. Printing Hist. Assn.) Vol. VII, No. 2, 1985., pp. 27-36. Application of electricity to printing via electric motors for line shafting and individual machines, lighting, and air-conditioning. Useful graphs compare printing industry with total mfg. sector, and technological and electric milestones in printing, 1880-1935.

_____, *FROM SHAFTS TO WIRES: HISTORICAL PERSPECTIVE ON ELECTRIFICATION*. In *Journal of Economic History* 43:2 (June 1983).

MISC. INDUSTRIES

D. R. Beirne, *HAMPDEN-WOODBERRY: THE MILL VILLAGE IN AN URBAN SETTING*. In *Maryland Historical Magazine* 77 (1982), pp. 6-26. The Baltimore area's extensive canvas and sail-cloth industry, concentrated largely in the Jones Falls valley, preserving remarkably its 19th-C rural character despite being surrounded entirely by the city.

BILLHEADS AND BROADSIDES: JOB PRINTING IN THE 19th-C. SEAPORT. South Street Seaport Museum (207 Front St., NYC 10038), 1985. 64 pp. illus. \$5.50 PPD. Six short essays on the trade and practice of job printing in the Fulton St. area. Emphasis on variety of work produced for maritime custom. Glossary of techniques and presses. Incls. essay by Elliot Willensky [SIA] on "Learning from Ephemera."

James C. Cobb, *INDUSTRIALIZATION AND SOUTHERN SOCIETY, 1877-1984*. U. Press of Kentucky (Lexington), 1984. 185 pp. \$19.00. Rev. by Charles S. Aiken: *Journal of Historical Geography*, July 1985. Interpretation of the development of manufacturing commencing with the beginning of New-South era & extending into Sun Belt South of the present.

Karyl Lee Kibler Hall & Carolyn Cooper [SIA], *WINDOWS ON THE WORKS: INDUSTRY ON THE ELI WHITNEY SITE, 1796-1979*. Eli Whitney Museum (Hamden, CT), 1985. 75 pp., illus. Catalog, beautifully gotten up, of an exhibit on the history of doings on this intensely interesting site. Here Whitney made guns, giving rise to the controversy concerning his precise contributions that still swirls, and a small string of other industries flourished. Nearby, too, was the prototype of Ithiel Town's celebrated timber truss.

C. Heywood, *THE LAUNCHING OF AN INFANT INDUSTRY: THE COTTON INDUSTRY OF TROYES UNDER PROTECTIONISM, 1793-1860*. In *Journal of European Ethnic History* 10 (1981), pp. 553-581.

E. H. Horton, *THE MANUFACTURE OF TINPLATE AT REDBROOK, 1930-1961*. In *Industrial Archaeology Review*, Autumn, 1985, pp. 59-69. Redbrook Tinplate Mills was the last 'hand-mill' works operating in GB, making the thinnest tinplate in the world at the time. Good description of the process: rolling, pickling, plating.

Douglas R. Hurt, *PORK AND PORKOPOLIS IN The Cincinnati Hist. Soc. Bulletin* 40:2 (Fall 1982), pp. 191-212.

William G. Scheller, *THE COMB INDUSTRY IN NEWBURYPORT AND WEST NEWBURY*. In *Essex Institute Historical Collections*, July 1985. pp. 202-209. The early history of the comb industry in America--Massachusetts.

Philip B. Scranton (ed.), *SILK CITY: STUDIES ON THE PATERSON SILK INDUSTRY, 1860-1940*. (NJ Hist. Soc. series, Thomas Alva Edison Studies in NJ Econ Hist) 250 pp. \$22.50. 1985.

J. Seder, *VOICES OF KENSINGTON: VANISHING MILLS, VANISHING NEIGHBORHOODS*. Whitmore Pub. Co. (Ardmore, PA), 100 pp. \$6.95. 1982.

Roger Smith, *ISSUES IN URBAN INDUSTRIAL CONSERVATION: THE NOTTINGHAM LACE MARKET*. In *Industrial Archaeology Review*, Vol. VII, No. 2, Spr. 1985, pp. 139-53. Facilitating conservation & preservation work by public agencies. Excellent examples of 19th-C industrial bldgs.

Richard F. Snow, *THEY'RE STILL THERE*. In *American Heritage of Invention and Technology*, Fall 1985, pp. 6-7. The Tremont Nail Co. in Wareham, Mass., founded 1819. The current factory, built in 1848, still turns out square cut nails.

Peter Stanier, *THE GRANITE QUARRYING INDUSTRY IN DEVON AND CORNWALL. Part One, 1800-1910*. In *Industrial Archaeology Review*, Vol. VII, No. 2, Spr. 1985, pp. 171-89. The industry from its most active period to the depression of 1905-10.

G. P. Stell & G. D. Hay, *BONAWE IRON FURNACE*. HMSO (Avail: Bernan Assoc., 9730 E. George Palmer Hwy., Lanham, MD 20706), 1984. 32 pp., illus. \$4. Guide book to the Bonawe site, "longest-lived blast furnace in the Scottish Highlands," beautifully preserved and interpreted by the Secretary of State for Scotland. The ironworks was estab. in 1752 by Cumberland men, and was located there due to its proximity to timber supplies for charcoal. Good brief account of iron industry in Scotland.

RAILROADS

Robert Adley, *TO CHINA FOR STEAM*. Sterling Publ. Co. (2 Park Ave., NYC 10016), 1984. 153 pp. \$24.95. China? To be sure. Not only are 70% of China's locomotives steam--a consequence of much coal and little oil--but they are actually building them, surely the sole remaining place in the world where this is so. It's not clear from a brief review whether this work, which is largely photographic, contains views of the locomotive works or only action shots along the line, but whichever, it is recommended.

Ira J. Bach & Susan Wolfson, *A GUIDE TO CHICAGO'S TRAIN STATIONS PAST & PRESENT*. Swallow, 1985. About 300 pp., 100 illus. \$32.95.

Douglas E. Booth, *TRANSPORTATION, CITY BUILDING, AND FINANCIAL CRISIS: MILWAUKEE, 1852-1868*. In *Journal of Urban History*, May 1983, pp. 335-364.

Thomas R. Bullard, *STREET, INTERURBAN & RAPID TRANSIT RAILWAYS OF THE U.S.: A SELECTIVE HISTORICAL BIBLIOGRAPHY*. Harold E. Cox (80 Virginia Terrace, Forty Fort, PA 18704), 1984. 89 pp. \$10. Alphabetical arrangement by state, with separate geographical and subject indexes.

H. Roger Grant, *THE CORN BELT ROUTE: A HISTORY OF THE CHICAGO GREAT WESTERN RAILROAD CO.* Northern Illinois U. Pr. (DeKalb), 1984. 231 pp., illus., maps, appendix, notes, bibliog., index. \$29. Rev.: *Ohio History*, Summer-Autumn 1985. Demonstrates how relatively small Class-I RR survived the competitive late 19th C and the regulated 20th. Much detail and numerous photos. Reviewer believes it overstates this railroad's impact on the industry.

Jack Simmons (ed.), *THE MEN WHO BUILD RAILWAYS: A REPRINT OF F. R. CONDER'S PERSONAL RECOLLECTIONS OF ENGLISH ENGINEERS*. Telford (London), 1983. £9.95. First published in 1868. Conder was active in the early railway building, knew all the greats: Stephenson, Brunel, et al. Simmons has fully annotated the text. (Avail. from ASCE, 345 E. 47th St., NYC 10017. \$18.50)

Mark W. Summers, *RAILROADS, RECONSTRUCTION, AND THE GOSPEL OF PROSPERITY: AID UNDER THE RADICAL REPUBLICANS, 1865-1877*. Princeton U. Pr. (Princeton, NJ), 1984, 361 pp., notes, bibliog., index. \$37.50. Rev.: *Ohio History*, Summer-Autumn, 1985. Analysis of state-by-state history of aid to railroads & collapse of these efforts under the Republicans. Repetitious and no maps but excellent bibliography, says reviewer.

John H. White, Jr., *ONCE THE GREATEST OF BUILDERS: THE NORRIS LOCOMOTIVE WORKS*. (Reprint from) *Railroad History* 150, Spring 1984. (Avail: the author, Rm. 5010, NMAH, Smithsonian Instn., Wash., D.C. 20560). 69 pp., illus. \$3.00. White's usual accurate and readable account of an important early works, featuring a facsimile reproduction of the description of Norris' in the Oct. 1855 *United States Magazine*, in which all aspects of the plant are laid bare in exquisite detail, including many woodcuts of the main departments and the individual machine tools. Concludes with a detailed listing of Norris' products.

The following doctoral dissertations and masters' theses have been published by the Ayer Co., Box 958, Salem, NH 03079:

Hobart C. Carr, *EARLY HISTORY OF IOWA RAILROADS* (master's) State of Iowa, 1938. \$15.00. From the end of the covered wagon era to the beginning of airlines, a study of the development of railroading in Iowa.

Waldo Crippen, *THE KANSAS PACIFIC RAILROAD: A CROSS SECTION OF AN AGE OF RAILROAD BUILDING*. (master's), U. of Chicago, 1932. 1981. \$12.00. Not only the construction of the railroad, but also the violent politics, the controversies, and Jay Gould.

Thamar Emelia Dufwa, *TRANSCONTINENTAL RAILROAD LEGISLATION, 1835-1862* (master's), U. of North Dakota, 1933. 1981. \$18.00. Congressional legislation that led to the use of public lands for the transcontinental railroad.

Peter James George, *GOVERNMENT SUBSIDIES AND THE CONSTRUCTION OF THE CANADIAN PACIFIC RAILWAY* (doctoral); U. of Toronto, 1967. 1981. \$18.00. More an economic than a construction study.

James Fredric Hamburg, *THE INFLUENCE OF RAILROADS UPON THE PROCESSES AND PATTERNS OF SETTLEMENT IN SOUTH DAKOTA* (doctoral), U. of North Carolina, Chapel Hill, 1969. 1981. \$45. In the great plains, unlike the rest of the country, the railroads were built into unsettled country and the population followed.

John L. Harnsberger, *JAY COOKE AND MINNESOTA: THE FORMATIVE YEARS OF THE NORTHERN PACIFIC, 1868-1873*. (doctoral) U. of Minnesota, 1956. 1981. \$35. A good study of Cooke, who provided the financing and detailed plans for a railroad empire in Canada and the northern U.S.

Clarence A. Reeder, *THE HISTORY OF UTAH'S RAILROADS, 1869-1883* (doctoral), U. of Utah, 1970. 1981. \$45. Not only the building of the railroad but the development of the territory as encouraged by the railroad.

OTHER TRANSPORT

Mark Baldwin, *CANAL BOOKS*. M.&M. Baldwin (London), 1984. 98 pp., £3.95 paperback. Rev.: *The Journal of Transport History*, Sept. 1985.

Illinois Canal Society. Annual Publications:

John Lamb [SIA], *THE CITY OF PEKIN STORY*, 1980 \$1.50, 10 pp., illus. History of probably the most important canal boat on the Illinois & Michigan Canal.

_____, I. & M. *CANAL LOCKS*, 1981, \$2.00. 16 pp., illus., map. Particularly Locks 1 & 2; other locks in relation to the canal design for maximum hydraulic-power potential.

_____, WILLIAM GODDING, CHIEF ENGINEER, I. & M. *CANAL*, \$1.50, 1982, 16 pp.

_____, *THE CHICAGO AND KANKAKEE PORTAGES, A COMPARISON, 1673-1848*, 1983, 11 pp., illus., \$2.50. Compares two important crossing points connecting Lake Michigan and the Mississippi.

Louis J. Spitznagel, *THE ILLINOIS & MICHIGAN CANAL: CANAL OR RAILROAD, 1830-1835*, 1984, 18 pp., \$1.50. The arguments used by railroad proponents who were defeated by the canal proponents.

Donald W. Griffen, *THE HENNEPIN CANAL, COMMERCIAL WATERWAY TO STATE PARK*, 1985, \$2.00, 36 pp., illus. The history of this late-19th-C canal, the first to use poured concrete for its structures, and the last of the narrow cross-country canals.

Normand Lafrenière, *THE OTTAWA RIVER CANAL SYSTEM*. Parks Canada. 96 pp. \$6.30. Rev.: *The Journal of Transport History*, Sept. 1985. Development of the Ottawa River plus survey of the users and uses of the canals. Detailed description of canal construction, including photographs.

G. Livet, *ROADS AND TRANSPORT IN PRE-INDUSTRIAL EUROPE*. Harvester (Brighton, UK), £15.95. 1982.

Adrian G. Osler, *THE SHETLAND BOAT: SOUTH MAINLAND AND FAIR ISLE*. Marine Monographs and Reports, No. 58, National Maritime Museum (Greenwich), 1983. 120 pp., £5. Rev.: *The Journal of Transport History*, Sept. 1985. Excellent photos, detailed diagrams--a description from neolithic times onwards.

David Tew, *CANAL INCLINES & LIFTS*. Alan Sutton Publ. Ltd. (London), 1984. 135 pp., illus. £8.95. (ISBN 0 86299 031 9) The various ways of getting boats between levels other than by locks, and there are quite a few, including some being built today.

SOCIAL & LABOR HISTORY

Marjorie Ruzich Abel, *PROFILES OF NINETEENTH CENTURY WORKING WOMEN*. In *Historical Journal of Massachusetts*, Jan 1986, No. 1, pp. 43-52. Interrelationship between household & factory production & economic position of women in Connecticut River region of western Mass.

Robert Asher, *CONNECTICUT WORKERS AND TECHNOLOGICAL CHANGE*. Center for Oral History (Univ. of CT, Storrs 06268) 1983. 100 pp., illus. Comprehensive coverage of Connecticut's many industries from the worker's viewpoint. Based on oral history interviews with workers today, looking back to 1930 and change since then in more than a dozen industries.

Awty, B. J., *FRENCH IMMIGRANTS AND THE IRON INDUSTRY IN SHEP-FIELD*. In *Yorkshire Archeological Journal* 53 (1981).

Maxine Berg (ed.), *TECHNOLOGY AND TOIL IN 19th-CENTURY BRITAIN*. Free Association Pr. (Humanities Press, 171 First Ave., Atlantic Highlands, NJ 07716), 1979. 246 pp. \$26/\$10.50. Reprints 52 documents and contemporary accounts on division of labor & skill; response to machinery; individual trades; from sources like Dodd, Ure, Nasmyth, Samuelson. Covers entire century.

M. Cruikshank, *CHILDREN AND INDUSTRY: CHILD HEALTH & WELFARE IN THE NW TEXTILE TOWNS DURING THE 19th CENTURY*. Manchester U. Pr. (Manchester, UK), £18.00.

Edward J. Davies, *LARGE-SCALE SYSTEMS AND REGIONAL LEADERSHIP: WILKES-BARRE'S UPPER CLASS & URBAN ELITES IN THE NORTHERN ANTHRACITE REGION, 1920-1930*. In *The Public Historian*, Fall 1982, pp. 39-69.

David M. Gordon, Richard C. Edwards & Michael Reich, *SEGMENTED WORK, DIVIDED WORKERS: THE HISTORICAL TRANSFORMATION OF LABOR IN THE UNITED STATES*. Cambridge U. Pr. (32 E. 57th St., NYC 10022), 1982. 288 pp., illus., \$39.50/\$10.95. A good effort to develop an overall conception in the evolution of labor markets and industrial capitalism based on Marxist theory.

T. J. Hatton, *THE BRITISH LABOR MARKET IN THE 1920s: A TEST OF THE SEARCH-TURNOVER APPROACH*. In *Explorations in Economic History*, July 1985, pp. 257-270. Relationship between vacancies & unemployment.

R. S. Joby, *THE RAILWAYMEN*. David & Charles (Newton Abbot), 1984, 166 pp. £7.95. Rev.: *The Journal of Transport History*, Sept. 1985. Myths of railway work must be dispelled--they were based on overworked, underpaid work force.

Gereth Stedman Jones, *LANGUAGES OF CLASS: STUDIES IN ENGLISH WORKING CLASS HISTORY, 1832-1982*. Cambridge U. Pr. (32 E. 57th St., NYC 10022), 1984. 260 pp., \$39.50/\$11.95. The nature of class consciousness and the interrelation of politics and class in English history.

Wolfgang Kleber, *LABOR FORCE CHANGE IN GERMANY SINCE 1882: A LIFE CYCLE PERSPECTIVE*. In *Explorations in Economic History*, Jan. 1985, pp. 97-126. Long-run changes in structure of employment in Germany since late 19th C.

Wilma J. Pesavento, *SPORT AND RECREATION IN THE PULLMAN EXPERIMENT, 1880-1900*. In *Journal of Sport History*, Summer 1982, pp. 38-62.

A. Pucci, *CANADIAN INDUSTRIALIZATION VERSUS THE ITALIAN CON-TADINI IN A DECADE OF BRUTALITY, 1902-1912*. In Harney & Scar-paci, *Little Italies in North America*. Multicultural History Society of Ontario (Toronto), 1981.

Ian Roxborough, *UNIONS AND POLITICS IN MEXICO: THE CASE OF THE AUTOMOBILE INDUSTRY*. Cambridge U. Pr. (32 E. 57th St., NYC 10022), 1984. 209 pp., illus., \$39.50. The role of unions in Mexico and how and by whom they are controlled, using the industrial militancy of the 1970s and the automobile industry as the model.

John Smart & John Griffiths, *COVERING UP*. The Science Museum, London (Avail.: Bernan Assoc., 9730 E. George Palmer Hwy., Lanham, MD 20706), 1982. 24 pp. illus. \$4.00. Full-color catalogue of superb exhibit of work clothing, particularly of the protective type needed for extremes of heat, cold, chemicals, etc. Some earlier 19th-C examples shown, and the 20th-C outfits are going rapidly "out of style" as the industries disappear. A longer, hardback version entitled *CLOTHES FOR THE JOB* (1984) is available @ \$11.50.

Steve Turner & Charles P. Scullion, Jr. *WORKING THE WATER: LIFE AND LABOR ON LOWELL'S CANALS*. Authors (Avail.: Lowell Nat'l. Hist. Park, Bookstore, Market Mills Visitor Center, Lowell, MA 01852), 1985. 21 pp. \$1.00. Maps, drawings, and memories embellish this short history of Lowell's power canals; bringing the story up to date.

J. M. Winter (ed.), *THE WORKING CLASS IN MODERN BRITISH HIS-TORY: ESSAYS IN HONOR OF HENRY PELLING*. Cambridge U. Pr. (32 E. 57th St., NYC 10022), 1982. 315 pp., \$44.50. Thirteen essays reflecting the dual character of recent writings about the history of the British working class.

BIBLIOGRAPHIC NOTES

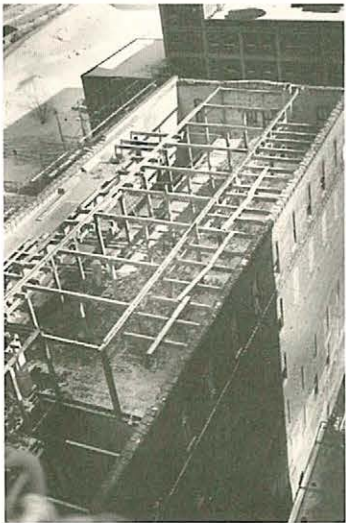
INDUSTRIAL ARCHAEOLOGY. Vol. 1 to Vol. 11, No. 3. 43 issues in all, plus 'Craig & Donald' supplement. 1964-74. £100.00. From The Book House, Grey Garth, Ravenstonedale, Kirkby Stephen, Cumbria, UK CA17 4NQ. Also, odd single issues usually available. Librarians please note: another 10-vol. set soon may be available. This is the old original serial in the field, with a complicated publishing history, to wit: Lambarde Press, David & Charles, Bratton Publishing, and West of England Press, to 1974. Three years later irregular issues appeared from another house: Graphmitre. This run includes up through the Bratton issues, Vol. 11, no. 3, plus one of the two supplements. Indexed.

INDUSTRIAL ARCHAEOLOGY REVIEW. Vols. 1-6, 1976-82, 18 issues. £18.00 from The Book House [see above]. This is the academic successor to *INDUSTRIAL ARCHAEOLOGY* [above] now published by Oxford U. Pr. for the Assn. for Industrial Archaeology. Our British cousins' version of our *IA*.

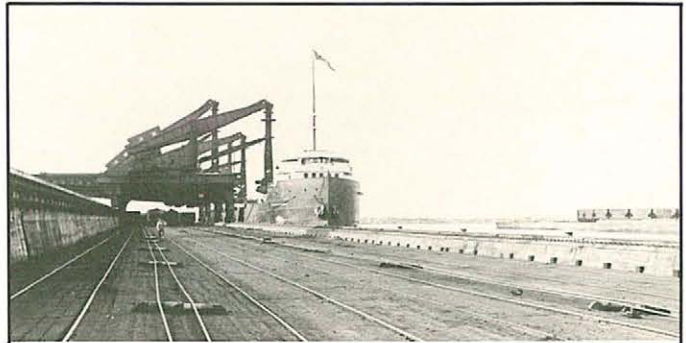
Availability update: The volume of proceedings for the 4th TICCIH conference held in France in 1981 and published in 1985 is available from Scientific & Medical Publications of France, 16 E. 34th St., 7th floor, NYC 10016. (212) 683-4441. Title of TICCIH volume again is *L'ETUDE ET LA MISE EN VALEUR DU PATRIMOINE INDUSTRIEL*, Published by Centre National de Recherche Scientifique. No price information given.

A NOTE ON (IN)CONSISTENCY. You will have noticed that the citations in Ps. of I. vary wildly in their coverage, extent of commentary, information on pricing, location of publishers, and in all other possible ways. This is due to many causes and we hope is not troubling to our readers. As noted many times earlier, we obtain our entries from an astonishing number of sources that, too, vary wildly. These range from very complete notations in publishers' catalogs on down to scrawlings on the walls of public conveniences. On occasion we actually do see the book or article itself and the commentary is first-hand; sometimes we are quoting a review; sometimes the notations are based solely on rumor; sometimes we set down the not disinterested musings from a dust jacket. You can have no way of knowing. Every so often we receive an order for a book cited. Except for the SIA's own publications--which always are clearly identified--we do not provide such service. In short, it is our intention to provide evidence of all publications of which we are aware that bear more or less directly on industrial archeology and its immediately related fields of interest. We set down all information on each that comes to hand but cannot, regrettably, go to very great lengths to fill in gaps.

MINNESOTA MILL REHAB



A \$40-million project is rehabbing two flour-mills and a grain elevator (*above*) in Minneapolis's St. Anthony Falls Hist. Dist. [NR]. Visible are the 1880 Crown Mill (L), burned in 1983; the tall, million-bushel 1908 Consolidated Elev. "A" (R); and the 1879 Standard Mill (C). A striking view (*left*) from the elevator into the roofless Standard Mill reveals its wood frame. It will be a luxury hotel. The elevator will be a theater, keeping its massive brick walls windowless and unbroken. HAER level 2 documentation was done by Jeffrey A. Hess [SIA]. No firm plans yet for the Crown. *R. Frame photographs.*



Hulett unloader, installed 1911, at Lake Shore Dock, Ashtabula. In June, Ashtabula's new Marine Museum (1071 Walnut Blvd.) will have a large Hulett model on display. *Western Reserve Hist. Soc. photograph.*

CLEVELAND CONFERENCE UPDATE

Confirmed Cleveland tour sites for the SIA's 15th Annual Conf. (June 12-15) now include the Pennsylvania RR Ore Dock, with its Hulett unloaders; General Electric's Euclid Lamp Plant, mfr. of specialty light bulbs; LTV Steel's 80-in. hot strip mill; and the Joseph & Feiss Co., mfrs. of Geoffrey Beene/Cricketeer garments. Sunday tours of Akron include the giant Goodyear Air Dock, and Quaker Square, where grain silos were converted to a Hilton Hotel in one of the nation's first adaptive-use projects.

United Airlines has been appointed Official Conf. Airline, offering 30% off normal coach (Y) fare, or a 5% reduction on the lowest applicable fare for which you qualify. Reservations and tickets must be purchased through Lydon & Assoc., Inc. (800-331-2428, or 216-861-7175 in Ohio).

BAKING INDUSTRY LANDMARK LOST

We've always heard about ships' biscuit, but where did it come from? A lot of biscuit probably emerged from the dark cellar of 108 Sansom St. (formerly Norris Alley), Phila., where a great brick oven was discovered. No. 108 was one of the twin James McCrea Houses erected in 1798 and, until 1984, stood at the east entrance to Independence Nat'l Historical Park, where the two made a highly visible introduction to the historic area and an important element of the streetscape.

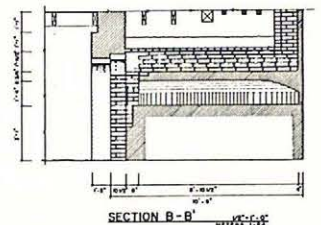
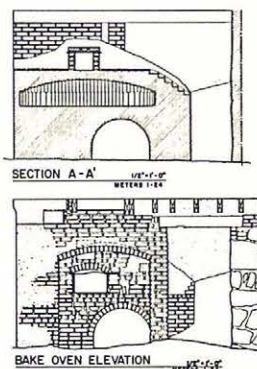
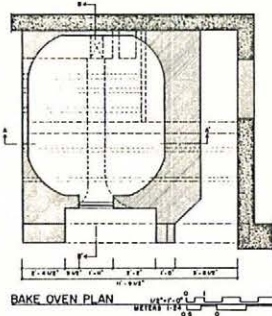
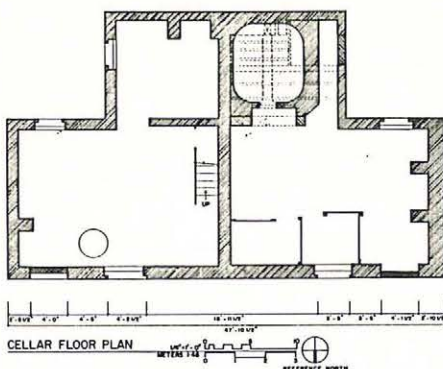
It was known that commercial baking had been carried on in 108's cellar oven for nearly 300 years, and so Charles E. Peterson [SIA], having become involved with the project, thought that the houses should be recognized as industry landmarks. He was astonished to discover that neither SIA nor anyone else had ever recognized commercial baking as an industry, although some research had been done in classical archeology. "There is lots of material on it," says Peterson. "For instance, Robert Morris's industrial town (built around the iron rolling mill called 'The Delaware Works' in the 1780s and renamed 'Morrisville' after the new proprietor in the 1790s) had a bakery as well as a sawmill, snuff mill, and brewery. There was the mill near Providence Forge in New Kent County, Va. (before the

Revolution referred to as 'Kennon's on Coleman Creek') with a large brick building which served as a bakery and furnished supplies to ships in the James River."

Peterson rightly observed that baking was essential to Phila.'s maritime industry, supplying needed bread and biscuit, as well as to the grain and milling industries of the surrounding counties. While a preservation battle swirled around the houses, Peterson contacted the Senior Director of Public Relations of Nabisco Brands, Inc., at Parsippany, N.J., with the proposal that they develop the site as a national landmark. This they took under advisement in the highest echelon but ultimately failed to embrace the idea. Their decision came too late to approach another baking company. [*Nabisco, Inc., owns and operates the pristine 1927 Cream of Wheat plant toured during the 1983 Annual Conf. in Minneapolis, and their PR dept. was responsible for granting the SIA's unique visit. Ed.*]

Legal efforts to halt demolition failed. The houses were photographed and HABS drawings made in 1983-84. In late 1984 they were torn down for make room for ten parking spaces. The HABS history was completed in 1985 by Ellen Miller.

James McCrea House cellar and bake-oven: plans, elevation, and section. *James S. Collins drawing for HABS.*



EXHIBITS

LOWELL BOARDINGHOUSE EXHIBIT PLANNED. The Lowell Nat'l Historical Park is seeking assistance in preparing an exhibit in a boardinghouse which was built in 1835 to house operatives of the Boott Mills, one of Lowell's early cotton mills. It housed about 25 "mill girls" recruited from New England farms. The exterior restoration is complete and the acquisition process has begun for furnishing the interior, to be interpreted at about 1850. Extant boardinghouse inventories are guiding the search, but the Nat'l Park Service still needs to acquire a wide variety of household furnishings c1835-50, or to locate items that could serve as models for reproductions. Also needed are personal effects and clothing reflecting both the simple and out-of-date items the girls brought from the farms, and the more sophisticated articles purchased in town. The exhibit is scheduled to open in 1987. For a list of needed items contact Park Curator Andrew Chamberlain, LNHP, 169 Merrimack St., Lowell MA 01852 (617-459-1027).

"CHARLES SCHWAB: MAN OF INDUSTRY, MAN OF CULTURE" opened in January at the Canal Museum, Center for Canal History & Technology, Easton, Pa. Schwab (1862-1939), working under Andrew Carnegie, became the first president of U.S. Steel. Not content with his role there, he took the helm at Bethlehem Steel and transformed it into an industrial giant. The exhibit features materials from Bethlehem Steel's Schwab Memorial Library and is accompanied by a lecture series and guide booklet.

The Locktender

"AT HOME ON THE ROAD: AUTOCAMPING, MOTELS, AND THE REDISCOVERY OF AMERICA" was organized by the Div. of Transportation at the Nat'l Museum of American History, Smithsonian Inst., Wash. D.C., where it is open through Aug. 1986. It portrays changes in tourist travel from 1870 to the present, showing travel systems, tourists' activities and tourist travel trappings—highway route markers, motel furnishings, rail travel period setting, and the like.

"PERFECT IN HER PLACE: WOMEN AT WORK IN INDUSTRIAL AMERICA," opened in Feb. at the American Labor Museum, Haledon, N.J., and runs through July 5.

"GEARS & WHEELS: TRANSPORTATION & INDUSTRY IN THE ANTHRACITE REGION" is the Scranton Anthracite Museum's new 20,000-sq.-ft. exhibit tracing transportation developments from Indian footpaths and river travel to turnpikes, canals, railroads, and highways. These are related to the exploitation of human and natural resources, with emphasis on two major regional industries, coal and textiles.

The mining unit includes major pieces never before displayed, such as an Ingersoll Rand undercutter and a silver-plated Mine Rescue first aid competition trophy. On display is the 1889 Thomson-Houston electric mine locomotive (the 2nd underground mine locomotive put in operation) used at Mayfield, north of Scranton, and acquired from the Henry Ford Museum. While coal was king, the silk and lace industries were the area's second largest employers. The machinery in the exhibit shows the full manufacturing process, from cocoon to finished product.

Open through 1986, the exhibit was designed and built through the Pa. Conservation Corps, a training program for 18-to-21-year-olds with no previous training or job experience. Staff and interns supplemented the PCC program in building panels and platforms, photography, silkscreening, and mounting. Info.: Scranton Anthracite Museum, RD 1 Bald Mt. Rd., Scranton PA 18504.

D.L.S.

& ON A RELATED NOTE... *The Exhibit File* is a newsletter aimed at more effective exhibit production, including, for example, display systems, new books, and exhibit-related organizations. \$12/yr. Info.: J.P. Harrington & Assoc., 1117 Talleyrand Rd., West Chester PA 19382 (215-399-1280)

WANTED

CAST-IRON FIRE TOWER info. is needed for project to restore the 1856 Mt. Morris [now Marcus Garvey] Park Fire Watch Tower in Harlem, N.Y.C. The 45-ft. cast-iron tower, last remaining of three erected in Manhattan, stands on a 75-ft. hill. The engineer, Julius Kroehl, underbid James Bogardus for the work but followed the



design that Bogardus had used in the other two. Similar structures reportedly were used for shot towers and lighthouses. Are there any other cast-iron towers extant anywhere? Need historic photos, drawings, or any other documentation of like towers. Contact Gregory Dreicer, 722-10th Ave., Apt. 5-C, NY NY 10017 (212-757-6698 or 718-939-6700).

VIDEODISC SLIDE COLLECTION. Do you have a personal collection of non-copyrighted 35mm color slides in a particular research area? Would you like to see your collection and those of others put on a videodisc so that you will have an immediately accessible archive of 20,000 to 50,000 images for teaching or research? A study is under way to determine the feasibility of a project that would make use of the expertise of those in various areas of material culture by putting on videodisc some 100-200 color slides from personal collections. Each collection would be accompanied by a brief commentary on the significance and potential use of the images. This collection would be available to researchers and teachers. Payment for those contribution to the project might be a copy of the disc. If interested in the application of videodisc technology to material culture studies, contact Paul Douglas, English Dept., Towson St. Univ., Baltimore MD 21204 (301-321-2943).

Vernacular Architecture Newsletter

SLA Newsletter, Vol. 15, No. 1, Spring 1986

SITES & STRUCTURES



OLDEST IN-SERVICE METAL BRIDGES? Victor Darnell [SIA and author of the SIA-published *Directory of American Bridge-Building Cos.*] submits the above photo of one of three surviving metal truss spans in Villanova, Pa., across the ex-PRR tracks. Still carrying cars and trucks daily, they reportedly were built between 1851 and 1861 (pre-Civil War and only a decade or so after Howe's first composite spans!) for service on the PRR mainline. When they became too light for RR loadings they were moved, to become overgrade spans for local road traffic. Notes Darnell, "They get only a passing mention, if that, in bridge histories."

NPS SPRINGFIELD ARMORY PROJECT. A two-year history of the Springfield [Mass.] Armory [NHL] has been undertaken for the National Park Service by Michael Raber, Carolyn Cooper, Pat Malone, and Robert Gordon [all SIA]. Although aspects of the armory's history have been covered, there is no comprehensive account from its 1795 founding through the 1968 closing. In this project, the evolution of manufacturing technology will be related to the physical plant, the surrounding community, and private industry, along with changes in management and labor relations.

NAT'L ROAD 1918 SEGMENT ON NR. A brick-paved portion of the old Nat'l Road in Guernsey Co., Ohio, has been added to the Nat'l Register. The historic stretch, now known as Peacock Rd., follows the Nat'l Road's 1828 right-of-way for six-tenths of a mile. In 1918, as part of an effort to accelerate WWI transportation, five miles of the original road were paved with brick. The Peacock Rd. segment was edged with a concave brick curb to protect travelers from an unusually sharp curve on a steep hill and is believed to be the only such curb remaining on any Nat'l Road portion in Ohio (or elsewhere?). It was nominated to the NR as an unusual example of 20th-C road-building technology.

MAJOR NEW NOVA SCOTIA MUSEUM. Plans are under way to construct a \$9.6 million, 50,000-sq.-ft. Nova Scotia Transportation & Industrial Museum near the historic Cornish Pump House in Stellarton, a site once thought doomed. The location along the Trans Canada Highway is special in more ways than one. Not far from the pump house was made the first trip by British North America's first steam operated railway, and in the Stellarton mine shops the first cast-iron rails were made for the first standard-gauge railway in British N.A. In Trenton the first steel manufactured in Canada was poured. The museum will be the 24th and final facility of the N.S. Museum system, whose board will administer and operate it. Funds will come from the federal and provincial governments and private donation.

SIA Newsletter, Vol. 15, No. 1, Spring 1986

DC TRACKS PAVED OVER. The Dist. of Columbia's last remaining side-by-side example of two different streetcar tracks was paved over at the end of last year as one more part of America's endless effort since the 1950s to obliterate all evidence of rails in the streets. Of the two sets, one had a center slot for underground electric third rail while the other, with two rails, was meant for a conventional overhead trolley system. They were located at the bus loop at the east end of the Duke Ellington (Calvert St.) Bridge on the No. 92 line.

Washington Post

REMEMBERING SOLID WASTE. The solid-waste sanitary landfill at Fresno, Calif., turned 50 last summer. No other landfill in the U.S. has served longer. According to the Am. Public Works Assn., sanitary landfills originated in Gt. Britain in the 1920s and were first used in the U.S. in the 1930s, in N.Y.C. and Fresno, with the former long since closed. Previously, most municipal garbage and other wastes were either dumped or burned in the open. Maintaining its avant-garde position, Fresno plans to close its historic site and contract with a private firm to generate electrical energy by tapping the methane gas in the fill. Future waste will be sent to a new landfill.

APWA Reporter

OLDEST TRUSS STAYS IN STOCKBRIDGE

Butler Bridge in Stockbridge, Mass., the oldest surviving metal truss bridge in Berkshire Co., will stay, thanks to local approval of \$15,900 for restoration design work. Determined to maintain Stockbridge's historic character, Selectmen rejected a bridge replacement offer from the Mass. Dept. of Public Works. Designed by George S. Morison (1842-1903) of Morison, Field & Co., the 88-ft. pinned half-deck Pratt bedstead truss was built in 1881-82. It crosses



Bernard A. Drew photograph.

the Housatonic R., providing access to an estate which eventually will house the new Norman Rockwell Museum. It's quality if not quantity in Berkshire Co., where the dwindling count of trusses also includes three Charles H. Ball iron-pipe "tubular" bridges [*SIA* Sept. 1977, p. 2], and three lenticular "pumpkinseed" trusses by the Berlin Iron Bridge Co. [*IA* 5(1979):69].

B.A.D.

SIA AFFAIRS

LETTERS

Editor:

I am writing in regard to a brief mention in the "IA Anniversaries in 1985" column [*SIA/N* 14(1985)2:8] about inventor William Stanley. I am particularly interested in him as he conducted his transformer experiments in Gt. Barrington, Mass., a short distance from where I now live.

I believe the entry to be in error, as Stanley didn't actually invent the AC transformer; rather, he was the first to demonstrate its capability. More of the story appears in *William Stanley: Lighted a Town and Powered an Industry* which I recently wrote with Gerard Chapman.

Even Stanley himself admitted, a few years after his experiment, that work going on simultaneously in Hungary would likely have led to the development of AC transformers.

One interesting aspect of the Stanley experiment in March 1886 is that just a month before, an Edison DC system was installed in a mansion then under construction. This was, in fact, the first skirmish in the battle of the currents. When Stanley's system was in operation, people would walk up and down the streets, admiring the lights and commenting on which—Stanley's or Edison's—they thought the brighter.

*Bernard A. Drew
Managing Editor, The Berkshire Courier
Great Barrington, Mass.*

William Stanley by Drew & Chapman is available for \$3.50 as a special issue of Berkshire History, Fall 1985, from the Berkshire Co. Historical Society, 780 Holmes Rd., Pittsfield MA 01201. See article in this issue about the William Stanley centennial celebration. Ed.

NEWS OF MEMBERS

Brenda Barrett, who serves as SIA Honorary Counsel and is a former SIA national secretary, has been appointed Director of the Bureau of Historic Sites & Museums at the Pennsylvania Historical & Museum Commission in Harrisburg. She will have jurisdiction over 27 sites and museums, including locomotives, blast furnaces, sailing ships, battlefields, and oil rigs. **Donna L. Williams** was appointed director for the PHMC's Bureau for Historic Preservation with National Register program oversight.

Now resigned from his position at HAER, **Donald C. Jackson** has been enjoying the fruits of a Smithsonian Fellowship at the National Museum of American History, working on his Ph.D. dissertation for the Univ. of Penn. His topic concerns the history of water in the West and the development of the multiple-arch dam. Jackson reports that he is interested in, and available for, consulting work on historical projects, especially those related to engineering and technology, particularly bridges and dams.

FALL TOUR '86

Headquartered in Mystic, Conn., and hosted by the Southern New England Chapter, the Fall Tour will be Oct. 3-5. The theme is 350 years of maritime New England history and will feature IA sites in southeastern Conn. and neighboring coastal Rhode Island. Organizational work is largely by SNEC members in the Conn. Hist. Commn. and the R.I. Dept. of Environmental Management.

LOCAL CHAPTERS

SOUTHERN NEW ENGLAND CHAPTER (SNEC) travelled to New Bedford, Mass., for their 1985 spring meeting. The day began at the historic Zeiterion Theater, an ornately decorated vaudeville theater constructed in 1923 and restored in 1982-83 under the aegis of the *Waterfront Historic Area League (WHALE)*. After a business meeting held on the Zeiterion stage, former WHALE agent and now Mayor John K. Bullard gave a lively introduction to the "Revitalization of New Bedford's Waterfront Historic District" with slides and commentary that alternately drew applause and groans from veterans of that process in their own cities. Congratulations are due to John on his recent election.

Next stop for the SNEC group was the New Bedford Whaling Museum for a compelling introduction to the maritime industry that made the city famous. Lunch on the top floor of the museum provided a bird's-eye view of the still-working harbor and of the New Bedford-Fairhaven Bridge (1896-1903), currently the object of controversial replacement plans. The crossing includes three separate bridge structures. The two outer units are comprised of simple stringer and deck plate-girder spans. The Middle Bridge (1897-98; NR elig.), which crosses the navigation channel between Fish and Pope islands, includes a through-truss swing span flanked by five deck plate-girder approach spans. Distinctive for its decorative ironwork and bulbous finials, the Middle Bridge drawspan is a 289-ft. rim-bearing swing span. Its pinned through-truss arms are linked across the central tower by pinned eyebars; when the bridge is closed, each arm acts as a simple span. The Middle Bridge is the longest of 13 swing span bridges under the Mass. Dept. of Public Works purview, and they have 55 original shop drawings of the structural steel layout.

Because of deteriorated condition and inadequate clearances, it is scheduled for replacement by a double-leaf bascule which, it is hoped, will foster development of the city's northern harbor. A constituency for the historic bridge has arisen which advocates rehabilitation and continued use of the existing swing span, arguing that the northern harbor has developed significantly since 1978 without benefit of a new bridge. There is also much concern about the economic impact that an 18-mon. bridge closure would have on Pope Island's business community. If demolition is inevitable, the bridge will be documented to HAER standards.

SNEC members ended the day at the New Bedford Water Works in Rochester where they toured the chateausque, granite Quittacas Pond Pump House (1899, Charles D. Austin) and, in contrast, the modern filtration plant (1974-77).

On Nov. 9, SNEC held its fall meeting in Rockville, Conn., with the business meeting at the Maxwell Memorial [Rockville Public] Library, a grand neoclassical marble building designed in 1902 by Charles A. Platt. George R. Maxwell was a Rockville mill owner. A walking tour of Rockville mills and associated housing followed, led by historian S. Ardis Abbott.

The Saxony Mill (1836), oldest remaining mill in the city, was toured in the afternoon. Originally a textile mill, it has been renovated for production of expanded polystyrene products. Sid Shane, president of the Plastifoam Corp., led the group through several connected frame buildings while explaining the process whereby expanded polystyrene beads are molded for a variety of uses, including furniture, or polystyrene blocks are cut into specified patterns.

New SNEC officers elected for 1986-87 are Anne Booth, president, and Richard Greenwood, program chairman.

A.B.

More Chapter News on next page

KLEPETKO CHAPTER ORGANIZED IN MONTANA

On Feb. 22 in Anaconda, 34 Montanans met to organize the first viable (everyone hopes) and only active SIA chapter west of the Mississippi. [A now-comatose Calif. effort was the first formal western chapter. Ed.]. At a morning business meeting the charter members chose a chapter name, elected officers, planned future meetings and activities, and viewed several slide presentations. There were tours in the afternoon and an evening dinner and party in Butte.

After reviewing biographies of engineers important to Montana's industrial past, the new chapter's vote went to **Frank Klepetko**. A noted copper metallurgist, Klepetko (1856-1934) distinguished himself as a designer of copper smelters, including Montana's two premier plants, the Washoe Reduction Works in Anaconda and the Boston & Montana smelter in Great Falls.

Founding officers were elected: Mark Fiege [SIA], president; Fred Quivik [SIA], vice president; Dale Martin, sec.-treas.; Mary McCormick, program coordinator; and Arthur Dolman, newsletter editor.

Margie Smith of "Anacondans to Preserve the Stack" gave a slide overview of the giant Anaconda Stack [SIAN, Fall-Winter 1984, 13], the world's largest free-standing masonry structure, which once served the Washoe Reduction Works. It became a state monument this March.

In the afternoon, Rarus Rwy. president John Greene led a tour of the roundhouse and shops at the HQ in Anaconda. Until last year, Rarus—which still carries freight—was the Butte, Anaconda & Pacific, the mine-to-smelter RR of the Anaconda Copper Mining Co. With ten original 1893 brick stalls augmented by a 1907 brick addition, the 20-stall roundhouse is among the oldest extant in the West. It still houses locomotive maintenance and storage facilities and the 1896 machine shop still handles major engine work.

Across town, the group toured the c1889-1920 AFFCO Foundry complex (formerly the foundry dept. of Anaconda Copper Mining Co.), led by foreman Gary Costle. Highlights included the foundry building, pattern shop and warehouse, machine shop, ball foundry, and blacksmith shop. Much old equipment remains in use. Later, there was a visit to the Washoe theater, Anaconda's 1930s Art Deco masterpiece, with a historical narrative by owner Henry Lussy.

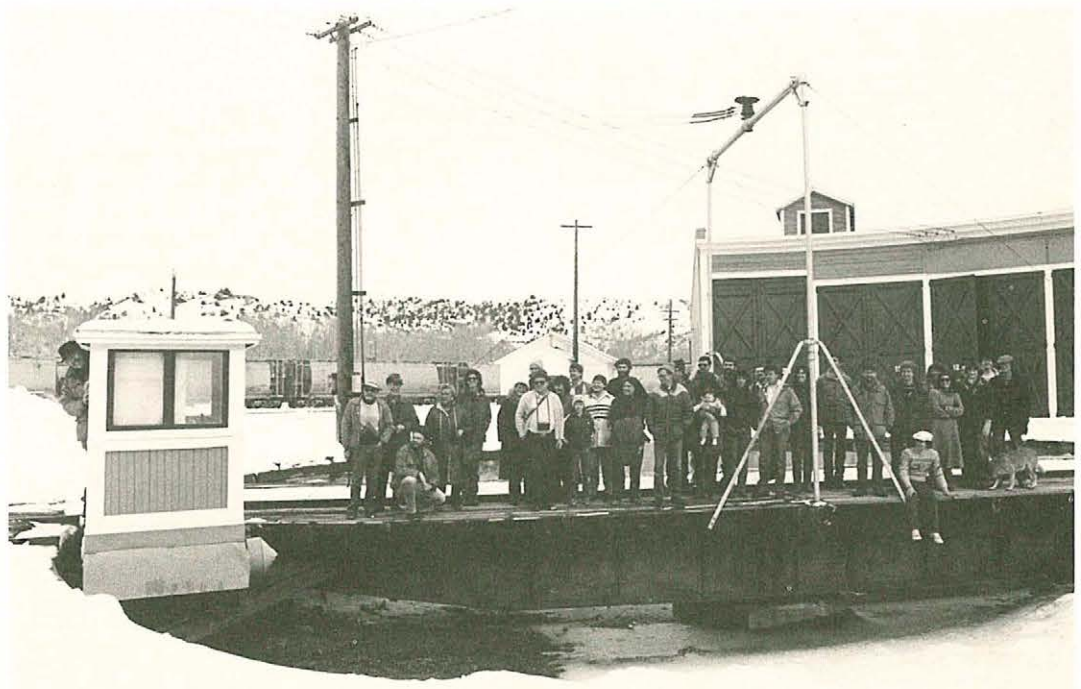
The evening dinner in Butte featured a slide presentation by Paul Anderson, Montana's leading authority on the state's coal mining history. He contrasted the IA of coal with that of hard-rock mining. The hardiest of the new chapter members then attended a party at Fred Quivik's residence.

On Sunday morning the chapter travelled to the Butte Water Co. station on the Big Hole River where water is pumped across the Continental Divide to Butte, 28 miles away. Led by BWC employee Ed Harvey, the group saw the surviving 1906 steam pump, boiler, and 150-ft. steel stack, all now superseded by electric pumps.

Upcoming chapter activities include tours of RR, coal mining, and agricultural sites in the Billings area and a fall meeting in Missoula to visit RR, hydroelectric, and forest-products sites.

New members are cordially invited to join by sending \$5/yr. to Dale Martin, Klepetko Chapter-SIA, P.O. Box 4113, Butte MT

SIA Newsletter, Vol. 15, No. 1, Spring 1986



Members of the newly organized Klepetko Chapter SIA, on the 1893 turntable (mfd. by Lassig Bridge & Iron) of the Butte, Anaconda & Pacific Rwy. (now Rarus Rwy.) roundhouse in Anaconda, Mont. In the control cab is Rarus president John Greene. Paul Anderson photograph.

59702. A chapter newsletter is in the works and submissions should be sent to Arthur Dolman, Dept. of History, Northern Montana College, Havre MT 59501.

M.T.F. & D.L.M.

OLIVER EVANS CHAPTER (Phila. area). It has been a busy fall and winter for the chapter, beginning with a tour in Sept. of the Manayunk National Historic District, led by chapter member Philip Scranton [SIA], author of *Proprietary Capitalism: The Textile Manufacture at Phila., 1800-85* (N.Y.: Cambridge Univ. Pr., 1984). Scranton differentiated the Manayunk mills from those of Lowell and Rockdale. Power came from the Manayunk section of the Schuylkill Navigation Co., built in 1818. There was a tour of the c1896 Harmony Mill, now Byrne Mfg. Co., which manufacturers upholstery yarn, and a look at the now inoperable lower locks.

In Oct. chapter members visited the Schuylkill Canal near Mont Clare, Pa., with tour leader Larry White. The two-mile Mont Clare-Port Providence Reach of the canal, and the Manayunk length noted above, are the last two surviving canal sections. The canal theme was continued in Dec. when OEC hosted Lance Metz [SIA] of the Canal Museum, Easton, Pa., who spoke on "Canals & Economic Development in the U.S." The OEC Annual Dinner in Jan. featured a slide presentation on "The Iconography of Oliver Evans" by Eugene Ferguson [SIA].

ROEBLING. The annual meeting in Jan. featured SIA Fall Tour (Birmingham) slides by Aron Eisenpress and a presentation by Margot Gayle on the restoration of a cast-iron statue in Pottsville, Pa., followed by several historic films. The films included "The Big Little Railroad" (1949, Central NJ RR); a film on NY Central steam locomotives (1942); a semi-promotional film on the Port of N.Y. by the N.Y. Port Authority (1960s); and a 1950s film by the NYC Transit Authority on its subways. Dues were raised from \$3 to \$5 and officers elected: Thomas Flagg, pres.; Gerry Weinstein, VP; Aron Eisenpress, sec.; and Robert Holton, treas.

CALENDAR

Have a meeting, conference, or event of interest to SIA members? Submit announcements to the Editor, SIAN.

May 2: Exhibit opening, "Second Industrial Revolution," Elton Gallery, Ironbridge Gorge Museum Trust, Ironbridge, Telford, Shropshire, England TF8 7AW. Through Jan. 27, 1987.

May 7-10: Annual Meeting, Vernacular Architectural Forum, Kingston, N.Y., focusing on interpretive, interdisciplinary approaches to vernacular arch. Info.: Neil Larson, Program Chair, Box 164, Stuyvesant NY 12173.

May 20-24: Nat'l Meeting, Canadian Museums Assn., Victoria, B.C.

June 8-12: 81st Annual Meeting, Am. Assn. of Museums, New York City. Info.: AAM, 1055 Thomas Jefferson St. N.W., Wash. DC 20007.

June 12-15: SIA 15TH ANNUAL CONF., CLEVELAND, OHIO.*

June 13-17: Special session on the successful rehab of historic bridges, as part of the annual meeting of the Transportation Research Board, Wash. D.C. Info. Howard Newlon, Jr., VH&TRC, Box 3817, Univ. Sta., Charlottesville VA 22903-0817.

June 19-21: Special conf., "N. American Material Cultural Research: New Objectives, New Theories," St. John's, Newfoundland. Co-sponsored by Winterthur Museum & Memorial Univ. of Newfoundland. Info.: Gerald L. Pocius, Dept. of Folklore, MUN, St. Johns, Newfoundland A1C 5S7, Canada.

July 24-26: Annual Meeting, Lexington Group in Transportation History, Vancouver, B.C., in conjunction with Expo '86, world's fair with theme "Transportation & Communications," during Vancouver's 100th birthday. Info: Don L. Hofsommer, 1010 Zephyr, Plainview TX 79072.

Sept. 30-Oct. 3: Nat'l Meeting, Am. Assn. for State & Local History, Oakland, Calif. Info.: AASLH, 172 2nd Ave. N., Suite 102, Nashville TN 37201 (615-255-2971).

Oct. 1-4: Annual Conf., Assn. for Preservation Technology, Austin,

Tex. "Building Technologies, Handcrafted to Machine-Made: Analysis & Preservation." Training course on "Bridge Preservation" precedes conf. Info.: APT Austin '86, P.O. Box 2593, Austin TX 78768-2593.

Oct. 2-5: SIA FALL TOUR, MYSTIC, CONN.*

Oct. 15-19: Nat'l Meeting, Nat'l Trust for Historic Preservation, Kansas City, Mo. Info.: 202-673-4000.

Oct. 23-26: Annual Meeting, Society for the History of Technology (SHOT), Pittsburgh. Paper proposals due May 1, to W. Bernard Carlson, Mich. Tech. Univ., Houghton MI 49931.

Oct. 30-Nov. 1: Lowell Conf. on Industrial History, Lowell, Mass. "Politics & Industrialization." Info.: Robert Weible, Lowell Nat'l Historical Park, 169 Merrimack St., Lowell MA 01852 (617-459-1027).

Nov. 5-8: Special conf., "Built Form & Culture Research: Purposes in Understanding Socio-cultural Aspects of Built Environments," Univ. of Kansas. Info.: David G. Saile, School of Architecture & Urban Design, U. of K., Lawrence KS 66045 (913-864-5127).

Dec. 27-30: Annual Meeting, Am. Historical Assn., Chicago. Info.: 202-544-2422.

**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 \$25; couple, \$30; institutions \$30; contributing, \$50; sustaining, \$100; student, \$20. Send check payable to SIA to Treasurer, Room 5020, National Museum of American History, Smithsonian Institution, Washington, D.C. 20560; all business correspondence should be sent to that office. Editorial correspondence should be sent to ROBERT M. FRAME III, Editor *SIA Newsletter*, P.O. Box 65158, St. Paul, Minn. 55165-0158.

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WE'RE DRAGGING OURSELVES KICKING & SCREAMING INTO THE 1980s...

First, it was computer-generated labels and electronic mail (good-bye Addressograph, sigh...). Now, in our unending pursuit of better and faster service, we are mailing *SIAN* direct, hot off the presses and fresh frozen, from Minnesota. This means, however, that we no longer have access to the labor pool of SIA HQ who, for many years, untiringly stuffed, licked, and mailed the Society's communications to you, the membership. We're also trying a new format: a self-mailing *Newsletter*. If your copy arrives wet, torn, or otherwise damaged, contact the Wash. DC office for a replacement.

Helena Wright, President & Bob Frame, Editor.

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