

# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

Volume 9 Numbers 5 & 6

September & November 1980

### LAST-DITCH EFFORTS BUY TIME FOR MASSACHUSETTS MACHINE SHOP

#### PRESERVATIONISTS FACE FEB. 1 DEADLINE

On Tues., Sept. 23, the Institute of Conservation Archaeology (ICA) of Harvard Univ. was involved in a preservation effort which may be a first of its kind. Having run out of time to locate preservation funding, the ICA agreed to a unique eleventh-hour arrangement to at least temporarily preserve what its staff members believe is an important historic resource: the Gardner Machine Works.



The Gardner Machine Works, located in the central Mass. town of Gardner, greatly aided that community's successful attempt to become a major American chair-making center. The shop, which opened in 1894, produced specialty chair-making machinery. Gardner soon contracted with such prestigious local manufacturers as Heywood-Wakefield and Nichols & Stone. During both World Wars, the GMW was under contract to the U.S. Navy.

The Mass. Dept. of Environmental Management, aware of the shops' precarious future since its 1978 closing, contacted the ICA late in Aug. to help determine the commercial and historic value of its machinery. Since the entire contents of GMW was scheduled for an Oct. 1 public auction, time was of the essence. William DeMarco, an ICA staff historian, and Ted Penn, an ICA consultant employed by Old Sturbridge Village, visited the site on Sept. 5. Both quickly realized that this shop, with its array of fully operational belt-driven equipment in place, must be preserved. The discovery of a "company archive" greatly added to the site's historical value.

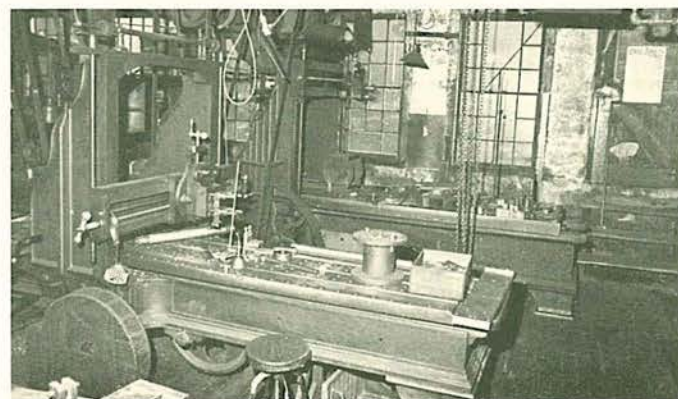
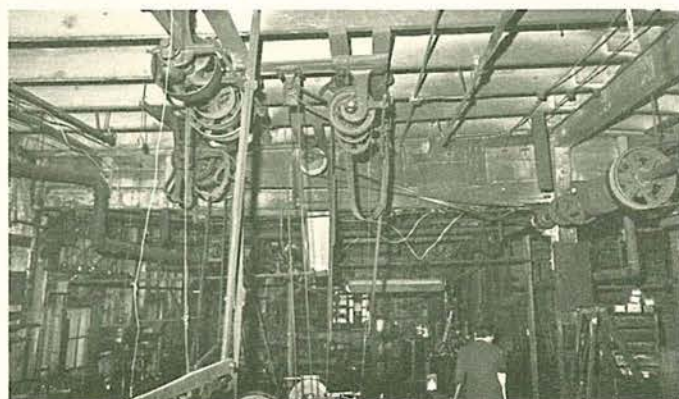
Penn felt that, while no individual machine was unique, taken together this might well be the most completely preserved facility of its type anywhere in New England. DeMarco realized that the surviving employees possessed a vanishing skill that, because of their advanced age, required immediate oral-history documentation. This mutual agreement of purpose caused ICA director Michael Roberts immediately to launch a drive to preserve the shops in place.

Within ten days solicited letters of support were received from Bernard Finn, Chairman of the Dept. of the History of Science and Technology, Smithsonian Institution; Dean Lahikainen, Curator of the Essex Institute; and Patrick Malone, Director of the Slater Mill Historic Site. Each of the letters expressed genuine interest in the project and pledged to aid in the identification of sources of financial support.

On Sept. 18, the ICA was told that the auction date had been moved up to 10:30 A.M., Sept. 23. Non-stop negotiations immediately began between DeMarco (who was assigned by the ICA as project director) and the James F. Murphy Machinery Co., owner of the shop. By 2 A.M., Sept. 23, an agreement was reached whereby the auction would be suspended provided the ICA put up \$1,000 by 10:30 A.M. the same day and promise to raise an additional \$24,000 by Feb. 1, 1981. If the full amount is not paid by Feb. 1, the ICA's liability would extend no further than the \$1,000 deposit, and the machinery would be auctioned at that time. The agreement depended on a signed letter of intent arriving at Gardner prior to the 10:30 A.M. auction deadline. Secretaries were awakened from their sleep, and financial officers were alerted. The necessary documents arrived at the auction site at 10:26 A.M.

The real work has just begun. If you would like more information on how to help in this most worthwhile of preservation efforts, please contact: Michael Roberts, Director, Institute of Conservation Archaeology, Peabody Museum, Harvard Univ., 11 Divinity Ave., Cambridge, Mass. 02138.

*Gardner has been selected as one of the few Mass. towns to receive funding for the development of downtown Heritage Parks. The ICA and its consultants are hopeful that some way can be*



found to include the Gardner Machine Works within the park for, certainly, it is a valuable and unique part of the town's heritage. I greatly appreciate Michael Roberts's willingness to put \$1,000 of his own operating funds on the line in the attempt to gain time to preserve this shop. I have sent him my personal check for \$50 in the

belief that, sometimes, the struggle to preserve our industrial heritage requires a commitment that goes beyond words. My thanks to Roberts for leading the way. I hope that you will support the effort to save the Gardner Machine Works with your own contribution. Theodore Z. Penn, Past President, SIA

## UDAG THREATENS BALTIMORE CAST-IRON LANDMARK

Although the great Baltimore Fire of 1904 destroyed over 70 percent of the city's cast-iron fronted buildings, an equally insidious force now threatens one of the most important remaining buildings of this type, the Wilkins-Robins Building. While Baltimore has received some attention for its highly successful inner city renaissance, it is ironically this same rebirth—fueled in this instance by the U.S. Dept. of Housing and Urban Development's Urban Development Action Grant (UDAG) program—that poses an immediate threat to one of Baltimore's twelve remaining cast-iron fronted landmarks.

The Wilkins-Robins Building—more commonly known as the Robins Paper Co. Building after its most recent occupant—is located at 303-312 W. Pratt St. on the edge of the Inner Harbor, one of the city's most spectacularly successful revitalization areas. The building faces an open field, which will be developed in a future expansion of Camden Station [HAER], the country's oldest continuously used railroad station.

The building was constructed in 1871 as the office and warehouse of the Wilkins Brush Co., a pioneer of large-scale industrial production in Baltimore. William Wilkins, a German immigrant, began his operation as a simple brushmaking facility in 1847. By the time this building was erected, he had organized an integrated manufacturing facility that contained highly specialized machinery for making haircloths and wigs as well as brushes. The building's cast-iron front probably was fabricated by the best-known of all Baltimore foundries, Bartlett-Hayward, in their Scott St. shop. The remarkably well-preserved facade contains design elements of the North Italian Renaissance Revival style, used in a manner reminiscent of the design of Robert G. Hatfield's *Baltimore Sun* Building of 1851.

It is the recent action of the building's owner, the City of Baltimore, that has threatened the building. The city, in an application for a \$4 million UDAG grant dated Jan. 31, 1980, requested HUD assistance to renovate and expand the Holiday Inn, whose property abuts the lot on which the Wilkins-Robins Building stands.

At a public hearing on Jan. 16, the city indicated that a decision had not been made regarding the use of the Wilkins-Robins Building in the expansion plans. Many preservationists testified regarding the importance of the building to the city's architectural legacy, most notably John C. Murphy of the Baltimore City Committee of the Maryland Historical Trust. The city's preservation office, the Commission for Historical and Architectural Preservation, commented that while the Baltimore Dept. of Housing and Community Development's pledge to dismantle and re-erect the facade, if necessary, was admirable, it did not guarantee its reuse. The commission recommended approval of the UDAG application contingent upon the following:

The cast-iron facade should be reused in its entirety as part of a new Holiday Inn expansion. However, if the reuse of the facade would hinder the expansion of the Holiday Inn, it



Wilkins-Robins Building, looking northeast. Holiday Inn, whose proposed expansion threatens the building, can be seen at the extreme left. Mark R. Edwards photograph for Md. Historical Trust.

would be unreasonable to attempt to preserve it as part of the project. The city, in this case, should specify a new, appropriate site within a compatible environment . . . The City should actively seek developers for that new site. In either case, the facade must be used properly: it must be reused in its entirety and as a facade.

Members of the SIA's Latrobe Chapter helped publicize the plight of the Wilkins-Robins Building. David Wright, AIA, first described the threatened landmark in his pamphlet "Baltimore City Cast Iron: Architectural Glimpse Past and Future," published in 1978 by The Friends of Cast Iron Architecture. More recently, in a letter to the *Baltimore Sun* he eloquently pleaded for the building's reuse on its existing site:

Baltimoreans familiar with the Fava Fruit Co. Building are aware of the six-month struggle that occurred in 1976 to save intact that building with its six-bay cast-iron front. It sat on a corner segment of the proposed new Convention Center site. Developers proposed to integrate the building with the Convention Center and were rebuffed by the city. As a consolation, the city arranged to dismantle and store the pieces. This was accomplished in Dec. 1976. The pieces still sit. In fact, nationally, the fate of dismantled iron fronts is pathetic. Examples of dismantled pieces sit in St. Louis, Philadelphia, Richmond, and New York. Pieces have been lost and stolen. Of over 20 buildings dismantled and stored since 1940, only two have been re-erected.

The Latrobe Chapter also wrote to HUD, voicing concern for the building's reuse in any scheme for the property. Copies of the letter were sent to appropriate city agencies, the Mayor, and to Maryland legislators. Concurrently, the Maryland Historical Trust requested the Baltimore Industrial Museum to prepare a form nominating the building to the National Register of Historic Places. Museum historian Dennis Zembala [SIA] prepared the nomination, which was approved by the Governor's Consulting Committee (the state review board) in May.

Preservationists nationally have criticized the UDAG program because of the point at which review by State Historic Preservation Offices takes place. With most federally-funded or licensed undertakings, compliance with federal law must come *before* a grant is actually awarded and is initiated by the agency through whom the grant is given; this process protects National Register and NR-eligible properties through the regulations of the Natl. Historic Preservation Act of 1966. With UDAG grants, the process is reversed. Once HUD approval is given, the *applicant* (a local government), rather than the federal agency, must cope with environmental review and public comment. By this time, plans calling for the demolition or alteration of NR or NR-eligible structures already may have been built into the plan. Comments from local citizens and SHPO offices then are construed as "interference."

The SIA Newsletter is published six times a year (January, March, May, July, September, and November) 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 reuse of historic industrial and engineering sites, structures, and equipment. Annual membership: individual, \$20; couple, \$25; institutions, \$25; contributing, \$50; sustaining, \$100; students, \$12. Send check payable to SIA to Treasurer, Room 5020, National Museum of History and Technology, Smithsonian Institution, Washington, D.C. 20560; all business correspondence should be sent to that office. Editorial correspondence should be sent to CAROL POH MILLER, Editor, SIA Newsletter, Program for the History of Science and Technology, Mather House, Case Western Reserve University, Cleveland, Ohio 44106.

Local preservationists have succeeded in postponing the current UDAG request. In June, the city's Dept. of Housing and Community Development reported that HUD had extended consideration of its request beyond the current UDAG funding cycle, so that the city might continue negotiations with a developer for the parcel on which the Wilkins-Robins Building is located.

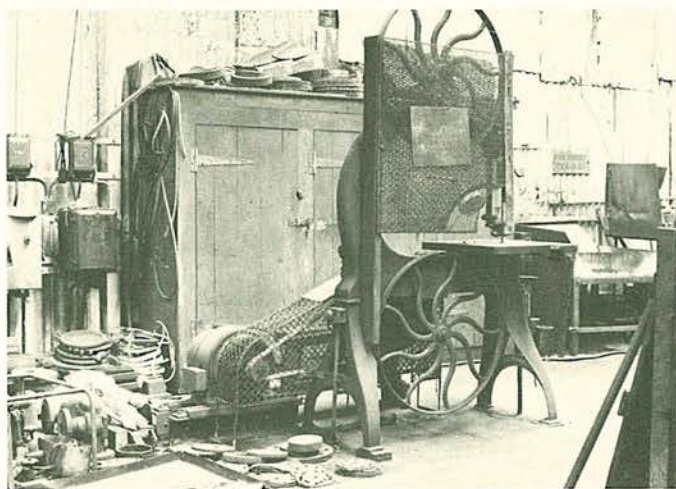
Although the immediate danger has abated, SIA members can support the preservation of this important part of Baltimore's history by writing to: Mr. M. J. Brodie, Commissioner, Dept. of Housing and Community Development, 222 E. Saratoga St., Baltimore 21202. So that the Latrobe Chapter might have a record of your letter, please send a carbon copy to the chapter at: 36 Maryland Ave., Apt. 1-A, Annapolis, Md. 21401. *Mark R. Edwards, Pres., SIA Latrobe Chapter*

## BAND SAW PLAYS ON

London is not now a center of heavy engineering. But until the 1860s, the Thames still was a major shipbuilding river, many of the yards being situated on the Isle of Dogs, the site I.K. Brunel chose to build his giant steamship *Great Eastern*, launched in 1858 and not surpassed in length until Harland & Wolff launched the 28,000-ton White Star liner *Oceanic* at Belfast in 1899. The completion of Brunel's monster coincided with the decline of shipbuilding on the Thames, and activity shifted thereafter to the Clyde and the Tyne, where raw materials such as coal and iron were close at hand. The closure of the Thames Iron Works at Canningtown in 1912 virtually ended shipbuilding in London, and only very small vessels have been built since.

Ship repairing, however, has continued to the present. Contraction of that activity has been steady over the past decade, with three surviving up-river yards at Royal Albert Dock, Blackwall Yard, and Prestons Road being nationalized two years ago as part of River Thames Shiprepairers Ltd., a Government-owned company. Now RTS has closed all these up-river yards (the Blackwall Yard, formerly managed by R. & H. Green & Silley Weir Ltd., dates from 1661), and the sites will be redeveloped for industry, housing, or leisure. Antiquated machinery continued in use right up to the end, its provenance often complicated by the scramble that must have taken place each time a yard was closed or re-equipped during the past century. A Docklands History Group is busy recording as much as possible before the bulldozers move in, and a full-time survey officer, Robert Carr, has been appointed to this task.

Among the machines cataloged by the DHG is a Pratt & Whitney band saw, marked "Hartford, Conn., Jan. 1881" and still operable in its 100th year. Possibly a refugee from the Thames Iron Works yard, this plain but elegant machine (its aesthetics altered by a mesh safety guard) was still at work at the Royal Albert Dock works of R. and H. Green & Silley Weir, modified with an electric motor to cut brass strip and plate, when that yard closed last year. On his way



Pratt & Whitney band saw (1881) in the machine shop of River Thames Shiprepairers' Royal Albert Dock, London. *Robert J. M. Carr photograph.*

back from a pilgrimage to the industrial-archaeological delights of the Indian railways, John Bowditch [SIA] of the Henry Ford Museum at Dearborn cast covetous eyes at this siren with the seductive spokes, but the resources of even that omniverous institution could not take on the logistics of repatriation. Intent though they may be on selling their history to anyone who needs a historic structure, from London Bridge downwards, the wily Brits know a good machine when they see one. This treasure likely will find a new home at the Dolphin Sailing Barge Museum at Sittingbourne, a few miles down the motorway into the Kent countryside. There the saw will revert to its original wood-cutting role in Charles Burley's old barge-building yard on Milton Creek, where the survivors from London's fleets of spritsail barges have repair facilities in a working museum. *J. R.*

## SUPPORT YOUR SIA FUNDRAISER!

The SIA has initiated an energetic campaign to raise money for special projects such as emergency recording, film productions, reprints of important out-of-date IA texts, field handbooks, and curriculum development. There is much that the society could do if some supplemental cash reserves were on hand, obviously, and we plan to leave no stone unturned in our efforts to attract corporate memberships and grants.

Each member can assist our fundraising efforts by keeping alert to "media opportunities" and seeing that they are used to maximum advantage. This means publicity for SIA wherever and whenever possible.

For example, the founding of the Northern New England Chapter should be the occasion for a "mass" mailing of press releases to every newspaper in New England, especially the smaller ones. One doesn't have to be a PR specialist to write a press notice; all one needs are the basic facts and an accompanying snapshot, if available, of a standing IA structure or the chapter members. The news editor will rewrite if necessary; the key is to provide full information, clearly written, and to label it "press release." In addition to what, where, when, and why, be sure to include the names of at least two members with enough information to enable the editor to contact them if he or she wants to know more about SIA. Don't forget to send copies to your congressional delegation! It is especially important now to work on bringing recognition to the term "industrial archeology" in legislative circles at every level.

It's going to be a long time before people cease to chuckle, stare, and express incredulity at the mention of "SIA," but press coverage is a powerful tool for achieving recognition, a larger membership, political influence on preservation policy, and — eventually — corporate support. *Nan Sumner, Development Chairman, Hawaii Loa College, 45-045 Kamehameha Hwy., Kaneohe, Oahu, Hawaii 96744; (808) 235-3641.*

## ANNUAL CONFERENCE POSTSCRIPT



Courtesy the *Detroit News*, submitted by Craig Morrison.

## 1980 FALL TOUR: NORTH CAROLINA, Sept. 26-28

The 1980 SIA Fall Tour brought a small but enthusiastic group to the Piedmont of N.C. We arrived at tour headquarters in Winston-Salem on Fri. evening, Sept. 26. After registration we enjoyed two short slide talks by Jon Larsen on the IA of Old Salem and by Fam Brownlee on the industrial development of Winston. Amid sunny skies and cool autumn temperatures, we set out early Sat. morning for the quarry of the North Carolina Granite Corp. in Mt. Airy. The plant's general manager, Sam Brintle, and an informed staff led us through the quarry, cutting shed, and finishing

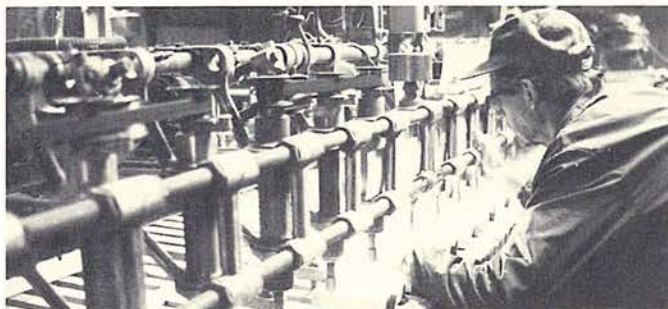
has been established. Before we left the factory, we received complimentary samples of chewing and smoking tobacco, company history brochures, commemorative ashtrays, and tin press plates from "Brown's Mule" plug chewing tobacco. We ended the afternoon with a brief walk around the tobacco manufacturing district of Winston where many of the older buildings, including the Piedmont Leaf Tobacco Co. and S.J. Nissen Wagon Repair shops, are either abandoned or in limited use. At day's end those with reserve energy walked along the street to photograph the original factory



North Carolina Granite Corp. quarry, Mt. Airy. (L) The largest open-face quarry in the world. (C) The quarry staff explaining the "lifting process" used to separate the stone on the horizontal plane. (R) A demonstration of stone finishing in the cutting shed.

room. They also treated us to machinery demonstrations and a generous supply of coffee and pastries. Our visit coincided with the presentation of a plaque by John Little, N.C. Deputy SHPO, recognizing the NCGC's listing in the National Register.

At the Mt. Airy Furniture Co. we saw some of the old techniques of making hand-crafted furniture wedded to more modern machine processes. At both the quarry and the furniture factory we were impressed by the survival of manual skills associated with the industry and the transmission of these skills from one generation to another.



A gang carving machine at the Mt. Airy Furniture Co.

After a picnic lunch at Pilot Mountain State Park, we returned to Winston-Salem for a tour of Factory #8, a chewing and smoking tobacco facility of the R.J. Reynolds Tobacco Co. Reynolds rolled out the red carpet for our group. With factory-like precision, our guides whisked us from station to station to explore examples of early tobacco processing machinery, some of which had been specially exhibited for our benefit. The tour ended in the restored original office of F.J. Reynolds, where a small company museum

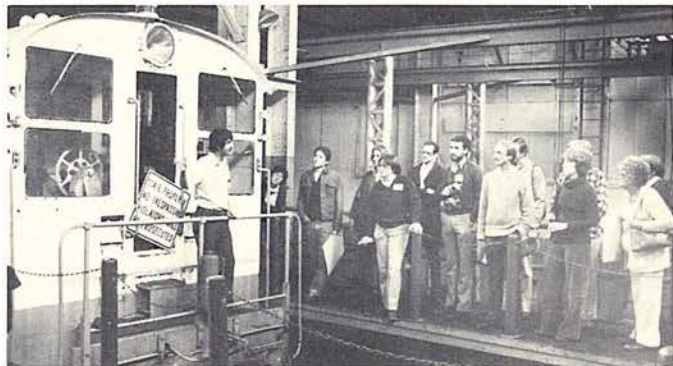
of the Hanes Hosiery Co., a small building with saw-tooth roof now slated for conversion as offices of the Arts Council of Winston-Salem.

Sat. evening's Southern-style banquet was held at Brookstown Mill, formerly a textile factory known as Arista Mill. Both the 1839 and 1881 sections of the factory complex are being renovated as offices, retail stores, and a restaurant. Although the mill will not officially open until the spring, its owners generously allowed us to tour the work-in-progress and to hold our reception and dinner in the former weave room. Dinner consisted of indigenous fried chicken, barbeque, baked beans, slaw, green beans, corn bread, iced tea, pecan pie, and coffee. No one counted the carbohydrates and everyone ate heartily. We returned to our motel where a late movie was screened: "The Gardener's Son," filmed in N.C. and based on a true-life tragedy in a southern mill village in the 19th c.

Despite overcast skies and predictions of rain, our bus left Winston-Salem early Sun. morning destined for the Southern Ry's. repair shops at Spencer. Before arriving at Spencer, however, we made two quick stops in Salisbury—at Grimes Mill, a turn-of-the-century roller mill, and the Southern Ry. Station, designed by Frank Milburn. We warmed up with coffee and doughnuts at Kryder's Railroad Cafe and then undertook a two-hour tour of the shops. Alan Paul, historic sites specialist with the N.C. Divn. of Archives & History, led the tour and offered an avalanche of facts about railroading in general and the repair work conducted at Spencer in particular. We also learned of the plans by the state to operate the shops as a Transportation History Museum. The planning and implementation involved in creating this museum will be enormous, but there are signs of accomplishment even at this early stage: a visitor's center is open; a slide program has been produced; and the engine-repair shop is getting a new roof at a cost of \$1.5 million. The development of this museum will bear close



Hubert Klutzz, proprietor of the W.A. Davis Milling Co. in Salisbury, gives Fall Tour participants some historical background on this 1890 roller mill, formerly known as Grimes Mill.



Alan Paul, historic sites specialist with the N.C. Divn. of Archives and History, provides details on repair work conducted in the 37-stall roundhouse at the Southern Ry. repair shops in Spencer.

attention in the future. Back in Salisbury, the Historic Salisbury Foundation had prepared a fine lunch for us and opened its headquarters at the Hall House (c. 1820) for our group.

By the time we left Salisbury and Spencer, a thin mist had begun to envelop N.C.'s Piedmont, and we reached the final stop on our tour—Old Salem—in the midst of a cold drizzle. Nevertheless, we were able to duck in and out of the buildings of the restored Moravian village and see most of the important sites, including the Single Brothers Shop and Workshop, the Bakery, and the Tobacco Shop. Our numbers had dwindled by the end of Sunday afternoon, but our spirits remained high. The 1980 Fall Tour ended with a general feeling of good times and added wisdom of the industrial heritage of the Piedmont. *B.D.G.*

## NEGATIVES OF 1896 HYDROELECTRIC PLANT CONSTRUCTION PRESERVED

Thanks to the efforts of the Fresno City and County Historical Society, over two hundred 5" x 7" glass plate negatives documenting the construction of the San Joaquin Electric Company's 1896 power plant near Fresno, Calif., are being maintained and catalogued. Taken by A. W. Peters, a prominent local photographer, the photographs provide detailed visual information about America's premier 19th-c. high-head hydroelectric plant.

As described in the Apr. 1896 *Journal of Electricity*, the plant operated under a head of 1410 ft. (by far the highest in the world at the time), and water was delivered to the high-speed Pelton turbines through a steel penstock over 4,000 ft. long. Water was diverted from the North Fork of the San Joaquin River to the top of the penstock by seven mi. of ditches and flumes. The turbines powered three 340 kW, 3-phase, 60-cycle General Electric generators that delivered current to the transformers at 700 volts. The GE air-cooled transformers stepped this up to 11,000 volts for transmission to the SJEC's Fresno substation over 34 mi. away. At the time of the plant's initial operation in the spring of 1896, it transmitted 3-phase electricity for commercial purposes farther than any other hydroelectric plant in the world.

Designed by John S. Eastwood, the plant operated successfully for three years, until the great Calif. drought of the late 1890s dried up the North Fork and brought its turbines to a standstill. The company was forced into bankruptcy, and the plant was sold to the San Joaquin Light & Power Co. (SJL&P later was absorbed into Pacific Gas & Electric.) Today, the original powerhouse survives, minus equipment, as an office/storage building next to the A.G. Wishon Power Plant on the shores of Lake Kerchoff.

Peters's photographs record practically all aspects of the plant's construction. He carried his camera everywhere, from the beginning of the ditch/flume system, to the holding reservoir and penstock intake, to the powerhouse, to the 34-mi. transmission line. The photographs include many views of workers, providing a fascinating glimpse of this aspect of late-19th c. Calif. culture. The significance of the SJEC plant, and early Calif. hydroelectric development in general, has largely gone unrecognized in electrical history. But, as material like these photographs comes to light, a more accurate picture of the 19th-c. hydroelectric power industry



Work on the 4,200-ft. penstock stops for a short "photo break." Construction of the penstock had to be of high quality because of the great pressure exerted by a column of water 1400 ft. high. At the powerhouse, the water was under a pressure of 609 psi.



Interior view of the powerhouse with the air-cooled transformers in the foreground. In the background, one of the three generators (right) and the switchboard (left/center) may be seen. All electrical equipment for the plant was supplied through GE's Pacific Coast office.

can be drawn. Further information on the SJEC photographs may be obtained from Diane Seeger, Director, or Sharon Hiigle, Chief Archivist, Fresno City and County Historical Society, 7160 W. Kearny Blvd., Fresno 93706. *D.C.J.*

*SIAN hopes to report on other archival "discoveries" made by SIA members. Ed.*

## ASME LANDMARKS

*Ten sites recently were designated National Historic Mechanical Engineering Landmarks by the American Society of Mechanical Engineers:*

**EAST WELLS POWER PLANT (ONEIDA STREET STATION)**, Milwaukee, Wis. In this station pulverized coal was first successfully burned continuously and at high efficiencies in furnaces of stationary steam boilers Nov. 11-19, 1919. Historian Forrest McDonald emphasized the importance of the Oneida St. experiments in his book *Let There Be Light*: "The development of pulverized fuel . . . constituted a monumental achievement ranking with Edison's lamp and multiple distribution system, Stanley's transformer, and Parsons' steam turbine as one of the four fundamental technological developments that made low-cost central-station service possible."

**WALTUS L. WATKINS WOOLEN MILL [HAER]**, Lawson, Mo. The mill, designed and built by Watkins, is "among the best preserved examples of a mid-19th century woolen mill in the U.S. Its variety of machinery for preparing, spinning, and weaving . . . presents an unsurpassed cross-section of textile technology at that time and is the finest collection of early textile machines *in situ* in North America."

**FIRST WELDED BOILER DRUM**, Combustion Engineering, Inc., Chattanooga, Tenn. This fusion-welded drum, tested during 1930, was the first of a series tested at Combustion Engineering, which led to the industrial acceptance of welding for the fabrication of boiler drums. Welding, which replaced riveting, permitted increased efficiencies through higher working pressures and temperatures and the fabrication of larger units of improved safety.

**GEORGETOWN STEAM PLANT [HAER]**, Seattle, Wash. This surprisingly complete and still operable steam power plant marks the beginning of the end of the reciprocating steam engine's domination in the electrical generation of light and power. The plant's three Curtis turbines were manufactured by the General Electric Co. between 1907 and 1917.

**HEAT PUMP SYSTEM, EQUITABLE (now COMMONWEALTH) BUILDING**, Portland, Ore. This building pioneered the use of heat pumps for heating and cooling in 1948. The theoretical conception of the heat pump was described by a young French army officer, Sadi Carnot, in 1824; its practical application on a large scale is attributable to designers J. Donald Kroeker and Ray C. Chewning, building engineer Charles E. Graham, and architect Pietro Bellushi.

**EDISON "JUMBO" DYNAMO NO. 9 & TRIPLE-EXPANSION ENGINE-GENERATOR**, Greenfield Village, Dearborn, Mich. The 1882 dynamo was the first to generate power in the first central power station in the U.S. It operated in Thos. Edison's Pearl St. Station in N.Y.C. and is still fully functional. The triple expansion unit, which is representative of the type of direct-connected engine-generator which provided power during the 1890s, is the only known example of its kind surviving.

**PORT WASHINGTON POWER PLANT**, Milwaukee, Wis. Cited as "the most thermally-efficient steam power plant in the world for many years following its opening in 1935."

**COOPERATIVE FUEL RESEARCH (CFR) ENGINE**, Waukesha, Wis. This engine, developed c. 1929 by the Waukesha Engine Divn., of Dresser Industries, is still used worldwide as a standard test engine for fuels research and standardization.

**SATURN V LAUNCH VEHICLE**, John F. Kennedy Space Center, Cape Canaveral, Fla. The launch vehicle was dedicated as a landmark on the eleventh anniversary of the first manned moon landing, bringing the total number of ASME landmarks to fifty.

## ODDMENTS

Trafalgar House, the British real estate and newspaper conglomerate, is at the center of a furor after demolishing the best architectural features of the former **Firestone tire factory** in Hounslow, West London, over a holiday weekend. The company only recently had purchased the 1928 building, which English conservationists considered to be one of that country's finest examples of Art Deco architecture. According to the *Manchester Guardian Weekly* (Sept. 7), the Borough of Hounslow and the Dept. of Environment had begun efforts to save the building only the week before. The building was demolished the day before the latter agency was to have considered listing it as a historic landmark.

An unusual example of adaptive use has come to our attention. According to the Aug. issue of *Headquarters Heliogram*, a newsletter of military history and historic preservation published by the Council on Abandoned Military Posts, the giant underground silos at Grandview, Idaho, that once housed the **Titan 1 nuclear missile** are now the final resting place for thousands of tons of toxic chemicals. The three silos, built in 1960 for the U.S. Air Force, are each 160 ft. deep and 40 ft. in diameter. Their 6-ft.-thick walls and 13-ft.-thick floors, of reinforced concrete, provide an "ideal place" for the chemicals, according to a company spokesman. The Air Force abandoned the site in 1965 when the Titan became obsolete. The facility has been the headquarters of Wes-Con, a concern specializing in hazardous waste disposal, since 1973. The silos handle "everything imaginable" for 6¢ a pound, including PCBs, electronics waste, and manufacturing sludge.

**Manhole covers** must rank high on the list of "unsung artifacts." The following quote from an article by Mimi and Robert Melnick ("Manhole Covers: Artifacts on the Streets," *Calif. Historical Quarterly* 60 [Winter 1976]) appeared in a recent issue of the *Public Works Historical Society Newsletter*:

"A vast unheeded repository of industrial art, the assorted metal lids embedded in our city pavements, await discovery as veritable treasures of urban history. These lids, though usually relegated to the position of mere street hardware, reflect a distinct aspect of our cultural milieu, a singular body of design that is not apt to appear in the same manner again. . . . While the lids—particularly the older ones which reflect bygone aesthetic fashions—display distinctive patterns, their designs transcend the picturesque. Beyond decorative appeal, the covers offer fascinating historic revelations. Their logos and insignias provide a register of names and places prominent in our urban past. The inscriptions stamped [sic] amidst the swirls and spirals on the antique lids recall the obsolete business firms, extinct foundries, and vanished utility companies that once flourished in the cities that were. Tracing the company name illuminates milestones in early utility services and foundry practices and, possibly, identifies the age of the manhole covers, as well."

## VERMONT BLAST FURNACE SITE THREATENED

A major hydropower project now being planned for northern Vt. threatens the site of a partially-collapsed early 19th-c. blast furnace. The Missisquoi Hydro Project calls for the construction of a new dam and powerhouse in the town of Troy, about four mi. south of the community of North Troy (Orleans Co.) near the Jay Branch of the Missisquoi R. It will inundate approximately 1200 acres of land, including the site of the old Troy Furnace. The Vermont Public Power Supply System, Inc., sponsor of the project, has applied for a license from the Federal Energy Regulatory Commn. In compliance with federal environmental laws, the Univ. of Vermont contract archeology team, headed by Peter Thomas, has begun an investigation of this potentially sensitive site. They have reported their findings to the Vt. Divn. for Historic Preservation.

In the context of Vt. blast furnace sites, the Troy Furnace site is significant for the quality and quantity of surface remains. The charcoal-fueled furnace was built in 1837 and abandoned in 1846. It stands immediately downstream from a falls of the upper Missisquoi R. where a narrow gorge forms a right-angle bend in the river. A 300-ft. flume cuts diagonally across the inside of this bend, affording a good head at the waterwheel pit, 20 ft. from the stack.

The stack, approximately 24 ft. square at the base and 30 ft. high, is constructed of unmortared rubble stone. A few slot-end stabilizing rods protrude from the uncollapsed wall, but none is pinned. An iron end-plate was found nearby. What archways there were are buried beneath the collapsed walls. Directly east of the furnace stack are stone walls, foundation remains, glazed bricks, slag, and iron artifacts scattered in holes and depressions.

The furnace was built by the Boston & Troy Iron Co., formed in 1835. The company then owned 1200 acres of land; curiously, this is the same quantity of acreage to be flooded. In addition to the furnace, documentary and on-site evidence indicates that there once were other structures here, including a charging house, engine



Troy Furnace, Orleans Co., Vt. Peter Thomas photograph.

house, foundry, boarding house, and post office. The community was known as "Troy Furnace."

The company failed in 1841, but the furnace was refired in 1844 by Francis Fisher of Boston, producing 600 tons of pig iron that year. One important product was boundary markers, some of which still stand along the international boundary three mi. away. Stove castings also were produced but, because of unfavorable tariffs, the furnace shut down again in 1846 and was never again fired. The Troy Furnace post office closed its doors in 1851.

If plans for the Missisquoi Hydro Project prove "successful," the Troy Furnace site eventually may find itself about 30 ft. underwater, the height of the furnace itself. Officials of the Vt. Divn. for Historic Preservation at least have been notified of the significance of the site both through written communications and an on-site inspection made last spring. The Troy Furnace site is not listed in the Natl. Register, but it has been included in the Vt. Inventory of Archeological Sites. *V.R.R.*

## IA IN THE NATIONAL REGISTER

Compiled by Carol Dubie

**ALASKA.** **Eklutna Power Plant**, Anchorage vic. 1928-29 concrete powerhouse, part of first hydroelectric plant in Anchorage region.

**ARIZONA.** **El Conquistador Water Tower**, Tucson. 1928 steel-frame elevated tank encased in stuccoed sheetrock shell in Spanish Colonial Revival style. Significant in growth of Tucson in providing water storage needed for residential growth and illustrative of the aesthetic issues raised by the metal elevated tank.

**DISTRICT OF COLUMBIA.** **Lightship Chesapeake**. 1930 navigational aid built by Charleston Drydock & Machine Co. Steel-hulled, 133 ft., representative of mid-20th-c. lightships.

**GEORGIA.** **Athens Factory**, Athens. 19th-c. brick three-story "wool building" and "cotton building" (formerly housing carding and spinning operations) characteristic of late 19th-c. factory complexes in region. Now shops and restaurant. **Cave Spring Multiple Resources**, **Carroll-Richardson Grist Mill**, Cave Spring. Two-story mill building, c. 1857, frame on masonry piers; some surviving equipment and early 20th-c. millrace and overshot water-wheel, an unusual survival.

**INDIANA.** **West Washington St. Pumping Station**, Indianapolis. 1871, 1909 brick pumping station housing 1908+ pumping machinery; the city's oldest pumping station and one of its oldest public buildings.

**IOWA.** **Forrest Milling Co. Oatmeal Mill**, Cedar Falls. Complex of 1866, 1885, and 1892 stuccoed ashlar limestone buildings, last remnant of Cedar Falls' original industrial center on the Cedar R.

**MAINE.** **West Quoddy Head Light Station**, Lubec vic. Circular 49-ft. stone tower and frame keeper's house, oil house, and service building. One of the earliest installations (1808, 1858) on the New England Coast.

**MASSACHUSETTS.** **Union Wharf**, Boston. 590-ft. bulkhead, granite block pier, and seawall; six buildings including 1846-47 granite-faced warehouse. Representative of Boston's role in 19th-c. shipping.

**MICHIGAN.** **Second Ave. Bridge**, Allegan. 1886 King Iron Bridge Co. double-intersection Pratt through truss over Kalamazoo R. 200 ft. span is among largest surviving examples of King Co.'s work. [Prepared by Janet Kreger, SIA.]



Marsh Concrete Rainbow Arch Bridge, near Mankato, Minn. *Dennis Grimmestad photograph.*

**MINNESOTA.** **Kern Bridge**, **Marsh Concrete Rainbow Arch Bridge (Blue Earth Co. Multiple Resources)**, Mankato vic. Kern Bridge: 1873 single-span bowstring arch, 189 ft., built by Wrought Iron Bridge Co., only known example of bowstring through truss in Minn. Marsh Bridge: 1911 concrete rainbow arch bridge consisting of two 60-ft. arches; oldest known of its type in Minn. as well as one of the earliest constructed by Marsh Engineering Co. of Des Moines, an important promoter of the design. **Frank's Ford Bridge**, Rochester vic. 72-ft. pin-connected Pratt through truss erected 1895 by Horace Horton, first president of Chicago Bridge & Iron Works, who earlier in his career had established the H.H. Horton Bridge Co. in Rochester. [Prepared by Robert Frame, SIA.]

**NEW YORK.** **Radio Central Complex**, Rocky Point. Two poured-in-place reinforced concrete buildings, 1921, 1931, constructed by Radio Corp. of America (RCA). Site of pioneering experiments in long wave radio transmissions and first overseas radio transmission, Nov. 5, 1921. The twelve 410-ft. antenna towers have been demolished. Transmission equipment not original.

**NORTH CAROLINA.** **North Carolina Granite Corp. Quarry Complex**, Mt. Airy. 266-acre site in operation since 1889. NCGC was identified by SHPO as the largest open-face quarry (1 mi.-long, .3-mi. wide) in the world and assessed to be of national significance. Bldgs. include 1927 cutting shed; 1930 saw shed; blacksmith shop; and 1928 office building of company granite. Early equipment includes 1928 Patch-Wegner gang saw; 1926 and 1927 Pauling & Harnischfaeger travelling cranes; and 1926 Ingersoll-Rand air compressor. Granite for hundreds of significant structures has been cut here, including the Arlington Memorial Bridge and the Wright Bros. Memorial.



Ashley & Bailey Silk Mill, Marietta, Pa. *Richard LeBlanc photograph.*

**PENNSYLVANIA.** **Ashley & Bailey Silk Mill**, Marietta. Three-story brick building with smokestack and elevated water tank, 1897; important to Lancaster-area economy in 1890s. **Bell's Mill Covered Bridge**, Yukon vic. 1850 single-span 95-ft. Burr arch, only wooden truss in Westmoreland Co.; features unusual Greek Revival pilasters and pediment at portals. **City Park Brewery**, Philadelphia. Three-block complex of brick factory buildings, 1856-1908, now abandoned; includes bottling plant, brewing house, beer storage house, cooperage, and administrative offices. Formerly housed the Louis Bergdoll Brewing Co., closed by prohibition in 1920. **Clinger-Moses Mill Complex**, Chester Springs. 18th- and 19th-c. former gristmill complex, now apartments. **Covered Bridges of Bradford, Sullivan, and Lycoming cos.** Six covered bridges, all of Burr arch construction: Knapp's Bridge (1853), Bradford Co.; Forksville Bridge (1850) and Sonestown Bridge (c. 1850), Sullivan Co.; Buttonwood Bridge (1898), Cogan House Bridge (1877), and Lairdsville Bridge (1888), Lycoming Co. **Kreider Shoe Mfg. Co.**, Elizabethtown. Four-story brick factory building, erected 1905. **Lawrence Co. Covered Bridges:** Banks Bridge (1889 Burr arch), Wilmington Twp., and McConnell's Mill Bridge (1874 Howe truss), Slippery Rock Twp., largest of four remaining Howe trusses in state. **Neuweiller Brewery**, Allentown. Brewery complex, 1913, consists of office building; brew, stock, pump, and bottling houses; and fermenting cellar. One of three breweries in Allentown.

**RHODE ISLAND.** **Davol Rubber Co.**, Providence. 1880-1920s complex of brick factory buildings in Romanesque Revival style. One of four rubber companies in Providence and, until it closed in 1977, one of the city's oldest operating companies. **Lawton's Mill**, Exeter. Two-story frame mill on fieldstone foundation, a surviving small-scale early 19th-c. (1819-32) rural textile mill.

**TENNESSEE.** **Bashor Mill**, Johnson City vic. Three-story, 1830s weatherboard and stamped-tin mill building, with two runs of stones remaining from corn grinding operation, as well as roller mill machinery. Bashor mill was powered by an overshot wheel until closing in 1954; now contemplated for restoration as operating mill. **Ringgold Mill Complex**, Clarksville vic. 1874 frame mill with 1918 turbine, roller mills, and feed grinder; 1876 grain elevator; 1937 warehouse and corn sheller house; 1850 limestone dam. **Tennessee Valley Railroad Museum Rolling Stock Thematic Resources**, Chattanooga. Thirty-five examples of rolling stock, including #630 consolidation locomotive (1906), #35 Lima 3-truck Shay (geared) locomotive (1910), #1040 mail-baggage-dormitory car (1917), #3 Alco 0-4-0T steam locomotive (1923), four baggage cars and nine coaches (all 1920s), and #41 twenty-seat caboose (1924). Many used on Southern Ry. and other regional lines. Set on 3-mi. section of track, equipment represents technological advancement from the turn of the century to dieselization after WWII.

**UTAH.** **Elsinore Sugar Factory**, Elsinore. Brick warehouse and company office (1910-11) of Utah-Idaho Sugar Co., "the single most important agri-business in Sevier Co. history." **Mountain Dell Dam**, Salt Lake City vic. 1917/1925 reinforced-concrete multiple-arch dam, 565 ft. long, 145 ft. high. Initially designed by John S. Eastwood, one of the West's most innovative hydraulic engineers of the early 20th c., it was the first reinforced-concrete multiple-arch dam built for municipal water supply service. [See Donald C. Jackson, "John S. Eastwood and the Mountain Dell Dam," *IA*, Vol. 5, No. 1 (1979)]. **Joseph Wall Gristmill**, Glenwood. 1874 fieldstone structure with 1900 frame addition, one of the first gristmills built in Sevier Co. and one of the few remaining pioneer mills in the state.

**VIRGINIA.** **Breckinridge Mill**, Fincastle vic. 3½-story brick gristmill built in 1822, now used as apartments. **Nininger's Mill**, Daleville vic. 1847 brick gristmill, now used as a restaurant.

**WISCONSIN.** **Janesville Cotton Mill**, Janesville. Complex of 1874-1888 three-story brick mill buildings, associated with the birth of the textile industry in Janesville, early Wis. textile center; no remaining machinery.

### MISC. NOTES

**VERNACULAR ARCHITECTURE FORUM—CALL FOR PAPERS.** Eastern New England Meeting, Apr. 23-26, 1981. Proposals for presentations to the Spring Meeting of the VAF are being eagerly solicited. The 1981 Meeting will include an expanded format for formal papers (20 to 30 min. in length) and reports on works-in-progress (10 min.). Please send single-page abstracts by Jan. 15 to: Bernard L. Herman, College of Urban Affairs, Willard Hall Bldg., Univ. of Delaware, Newark, Del. 19711. Abstracts should specify whether a paper or progress report. Authors will be notified of acceptances no later than Feb. 15.

**THE MODERN TRANSPORT TECHNICAL & HISTORICAL SOCIETY** is a new organization aimed at the interests of "the transport enthusiast, historian, and modeler," according to its founder, David G. Casdorff [SIA]. The Society is interested in all modes of transportation, primarily the era from 1900 to the present, both foreign and domestic. Information: Mr. Casdorff, MTHS, P.O. Box 1458, Monrovia, Calif. 91016.

**SAH ANNUAL MEETING.** The 34th annual meeting of the Society of Architectural Historians will be held at the Empress Hotel in Victoria, B.C., Apr. 1-6, 1981. This will be a joint meeting with the Society for the Study of Architecture in Canada. Information: SAH, 1700 Walnut St., Philadelphia, Pa. 19103.

**THE EDITOR** of *Essays in Public Works History*, a publication of the Public Works Historical Society, seeks documented articles relating to the broad field of public works (transportation, water, power, waste collection and disposal, energy, public buildings, parks, military installations, and the public works/engineering profession). Send manuscripts or inquiries to Suellen M. Hoy, PWHS, 1313 E. 60th St., Chicago, Ill. 60637.

**THE DIRECTORS OF THE EARLY AMERICAN INDUSTRIES ASSOCIATION** announce three annual grants to provide \$1,000 to each of three individuals or institutions engaged in research or publication projects relating to the study and better understanding of early American industries in homes, shops, farms, or on the sea. The EAIA's purpose is to assist individuals, serious students, and scholars in research or publication activities at the post-graduate level. [See *SIAN* May 80:6 for an announcement of grants awarded in 1980.] Grants are non-renewable and may be used to supplement existing financial aid, scholarships, fellowships, or other awards. Individuals may be sponsored by an institution or engaged in self-directed research. Applications for 1981 awards will be accepted up to Mar. 15. The Grants-in-Aid Committee meets in early Apr. to consider proposals and to make awards. Information and applications: Charles F. Hummel, Chairman, Grants-in-Aid Committee, c/o Winterthur Museum, Winterthur, Del. 19735.

**WANTED:** News articles for possible publication in *SIAN* under the broad rubric of "The Work of IA": field investigations, inventories, preservation projects. Photographs especially welcome. Contact the Editor (see box, p.2).

**KUDOS** to *The New Yorker* for its cover for the Oct. 13 issue depicting a (moonlight?) tour group admiring the cast-iron architecture of, presumably, the SoHo district. For ten years, the Friends of Cast-Iron Architecture has introduced New Yorkers and others to the wealth of 19th-c. iron bridges and commercial buildings which survive in that city and has championed the cause of cast-iron preservation in other cities as well.

**F.Y.I.** What has been known historically as the National Museum of History & Technology henceforth shall be known as the National Museum of American History.

### EXHIBITIONS

**"AMERICAN REALISM AND THE INDUSTRIAL AGE,"** Nov. 12-Jan. 18, Cleveland Museum of Art, 11150 East Blvd., Cleveland, O.; (216) 421-7340. Exhibition explores the use of industrial subject matter by 19th- and 20th-c. American artists. It consists of about forty paintings and prints, including works by Thomas P. Anshutz, John Sloan, George Bellows, and H.N. Han. Organized by the museum's Dept. of Art History and Education, the exhibition is supported by a grant from the Natl. Endowment for the Arts.

**"PATERSON: A SOCIAL AND INDUSTRIAL HISTORY"** has been prepared by the Paterson (N.J.) Dept. of Community Development. "The subject is Patersonians—where they worked, lived, and socialized as they went about the business of creating a modern industrial city." Exhibit includes more than 200 original photographs, many taken by 19th-c. Paterson photographers, as well as drawings and maps illustrating the growth of America's first planned industrial city. Objects made in Paterson and the machines which made them are included. Jane Carolan [SIA] is exhibit curator and coordinator. Exhibit was assisted by grants from the Natl. Endowment for the Arts and the N.J. Dept. of Labor and Industry. It is located in the Thomas Rogers Bldg., corner of Spruce & Market sts., a four-story former locomotive erecting shop built in 1871 and adaptively restored last year by the City of Paterson for use as an office building. Exhibit is open to the public on a permanent basis from 10 A.M. to 5 P.M., Thurs. through Sun.

**"YANKEE BRICKS AND MICHIGAN MORTAR: THE CONSTRUCTION OF KALAMAZOO'S PAPER MILLS, 1867-1924."** Photographs, graphics, and literature illustrate the place of paper mills and paper mill leaders in the city's history. Nov. 5-Apr. 30, at the Kalamazoo Public Museum, 315 S. Rose St.; (616) 345-7092.

**"SEE THE POWER THERE MOVING': THREE CENTURIES AT THE FALLS OF ST. ANTHONY,"** at the Minnesota Historical Society, 690 Cedar St., St. Paul, Oct. 10-Sept. 10, 1981. Exhibit celebrates the 300th anniversary of Father Hennepin's naming of the falls and the centennials of the Washburn-Crosby Co.'s gold medal for flour and the completion of the Pillsbury Co.'s "A" flour mill (1881—largest in the world and the first to be electrically lit). Coordinated by MHS curator Nick Westbrook [SIA], the exhibit uses a variety of illustrative materials and a 12-ft. long, 2500-lb. cutaway model of the Pillsbury "A" mill to trace the evolution of the falls from tourist attraction, through lumber and flour milling center, to its current role in the revitalization of the city of Minneapolis.

### NEWS OF MEMBERS

**ERIC N. DeLONY** has returned to Washington, D.C., as Acting Chief of the Historic American Engineering Record. He formerly was Project Architect with the Savannah (Ga.) Landmark Rehabilitation Project, Inc.

**ROBERT M. FRAME III, NICHOLAS K. WESTBROOK, and JOHN M. WICKRE** are jointly teaching a course on "Twin Cities Industry: An Introduction to Historical Sources" at the Univ. of Minnesota. In addition to lectures, the course features field trips to various manuscript repositories and tours of IA sites in the Twin Cities. Frame and Westbrook took their show on the road on Oct. 23, when they spoke on "Manuscripts, Mills, and Machines: Sources for Researching and Teaching Industrial History" at the 15th annual Northern Great Plains History Conference, held in Duluth.

**DISCOVERY HALL MUSEUM**, South Bend, Ind., has received a \$179,140 grant from the National Endowment for the Humanities, matched by an equal appropriation by the City Council. Funds will be used for the design and construction of permanent exhibits that will interpret the story of South Bend/Mishawaka's industrial growth. According to museum director Gust A. Saros, Jr., "This grant will make possible a new exhibit recognizing the contribution that workers in industries like Studebaker, Bendix, Oliver, O'Brien Paint, and others have made to our community and to the industrial growth of our nation." The grand opening of the new exhibits is scheduled for Apr. 1981.

#### AVAILABLE

**ARCHEOLOGICAL RESEARCH** on the St-Maurice Ironworks has been recorded on videotape. Among those available for loan to researchers: Archaeological research at the S-M.I. (17 min.); evolution of technology at S-M.I. (25 min.); cast-iron manufacturing at S-M.I. (18 min.); wrought-iron mfg. at S-M.I. (20 min.); and a day in St. Anselme foundry (10 min.). Black-and-white, open reel, 1/2 in. videotape machine. Contact Claire Mousseau, Archaeologist, 1141 route de l'Eglise, P.O. Box 10275, Sainte-Foy, Quebec G1V 4H5; (418) 694-3123.

**A CALENDAR** for 1981 illustrating twelve bridges, aqueducts, and viaducts that have been designated Natl. Historic Civil Engineering Landmarks is available from the American Society of Civil Engineers. Calendar, 14 in. x 22 in. in size, is printed on heavy ivory textured stock. Cost is \$4.95 ppd. (reduced price for quantities of 3 or more). Write ASCE, 345 E. 47th St., N.Y.C. 10017.

**TWO BRIDGES RD. BRIDGE** over the Pompton R. in Morris and Passaic cos., N.J. built by I.P. Bartley & Co. of Bartley, N.J., in 1887. Two-span Warren pony truss, 167 ft. long, 17 ft. wide, with stone pier and abutments. New owner may maintain the bridge at its present location in Lincoln Park or dismantle and move it to another location; state and federal assistance may be available. If no owner is found, the bridge will be demolished. Contact: Gary Toth, Project Engineer, Bureau of Environmental Analysis, Dept. of Transportation, 1035 Parkway Ave., Trenton 08625; (609) 984-2835.

**SLIDE/SOUND PROGRAM**, "Preservation and Energy Conservation," produced by the Advisory Council on Historic Preservation. Available for loan (\$8.) or sale (\$90.) through the Smithsonian Institution's Office of Museum Programs. The 15-min. show is based on the findings of a recent Council study, "Assessing the Energy Conservation Benefits of Historic Preservation: Methods and Examples." Program includes 73 slides, audio cassette, script, and instructions for use. Contact the Conservation Information Program, Office of Museum Programs, S.I., 2235 Arts & Industries Bldg., Wash., D.C. 20560; (202) 357-3101. A copy of the Council study can be purchased for \$2.75 from the Supt. of Docs., U.S.G.P.O., Wash., D.C. 20402. (Specify stock no. 024-000-008-56-8.) (The study will be reviewed in the next issue of *IA*.)

#### RESEARCH QUERIES

For a HAER inventory of Missouri, suggestions are sought on sites and structures that should be included. H.J. Eisenman, Dept. of Social Sciences, Univ. of Mo., Rolla 65401; (314) 341-4808.

For an IA inventory of N.Y.C., source material and photographs are sought for the Morris Canal and the PSCT trolley line up the Palisades. Also sought is a copy of the *Railroad Gazette* for 1891. Thomas R. Flagg, 547 Tilden Ave., Teaneck, N.J. 07666.

#### SIA AFFAIRS CHAPTER NEWS

**NORTHERN NEW ENGLAND.** On July 26, an organizational meeting was held at the New Hampshire Historical Society at Concord to establish a Northern New England Chapter. The Chapter, formally recognized by the National Board on Aug. 9, will represent the states of Maine, New Hampshire, and Vermont. It is anticipated that the NNEC will collaborate frequently with the existing Southern New England Chapter in activities of mutual interest.

Highlight of the day was a tour of the 1888 Concord Gasholder House, built of brick and the only one in the country with its gasholder intact. The other dozen or so have been converted to alternative uses. The facility is owned by the Concord Gas Service Corp., and the tour was led by employee David Buttrick. In addition



Concord (N.H.) Gasholder House, looking north. David Starbuck photograph.

to the round brick gasholder house, there is a small octagonal wooden gasholder house (of unknown age) on the site. It is hoped that both can be studied and drawn to HAER standards at the earliest opportunity.

The first official meeting of the NNEC was held on Oct. 25. The meeting featured a tour of the extensive rural mill system at Shaker Village in Canterbury, N.H. *D.S.*

**ROEBLING.** On Oct. 4, a group of six Chapter members spent a day in the field tracing and photographing the remains of the once-extensive Franklin (N.J.) Zinc Mines and the site of the Edison Iron Ore Concentrating Plant near Ogdensburg. The group had been told that nothing remained of the latter site. Providentially, they happened upon Robert Streelman, of Stockholm, N.J., who has made an extensive study of the site. He led the group to the foundations of the major buildings, as well as to the major mining pits and railroad sites and a hoard of iron briquettes produced at the plant some seventy years ago. According to Chapter Pres. Thorwald Torgersen, the Edison facility "ought to be the subject of a massive recording project before it is too late."

Upcoming Chapter events include a process tour on Nov. 1 of two Newark, N.J., recycling facilities (in conjunction with the North Jersey Chapter of the Sierra Club) and, the same day, a look at N.Y. Central's fabled West Side Freight Line, considered a model of freight delivery to the heart of an industrial city when it was rebuilt in the 1930s. On Nov. 22, the Chapter will host a tour of the Hackensack Water Co. Pumping Station, where some steam equipment remains in operation, followed by a visit to the Marcal Paper Co. in Elwood, N.J., to see its steam-powered air compressor and high-speed papermaking machinery at work.

On Jan. 13, the R.C. will again be guests of ITT in Nutley, N.J., for its annual meeting and show-and-tell session. The SIA film "Working Places" will be shown. For further information on Roebling events, or to join the chapter, contact T. Torgersen, P.O. Box 429, Hackettstown, N.J. 07840; (201) 852-8630.

#### CONTRIBUTORS TO THIS ISSUE

Brent D. Glass, Durham, N.C.; Donald C. Jackson, HAER; John Robinson, The Science Museum, London; Victor R. Rolando, Pittsfield, Mass.; David A. Simmons, Ohio Historic Preservation Office; David Starbuck, Univ. of N.H.

## STALEY FARM ILLUSTRATES OHIO FARM INDUSTRIES

Prior to the Civil War, farm economics in Ohio necessitated the widespread local processing of agricultural products. Extensive corn production forced farmers to look for ways to rapidly convert it to products like whiskey or feed for livestock, which could be easily marketed. Consequently, the rural Ohio landscape was literally filled with small industrial complexes combining a gristmill, distillery, and, often, a sawmill. Few of these complexes remain today, and none compares to the Staley Farm in Miami Co. in southwestern Ohio. Here a remarkably intact industrial complex surrounds a fine Federal-style brick farmhouse and handsome frame barn, along with several other pre-Civil War outbuildings and two stone bridges spanning the mill stream.



Staley Farm, Miami Co., Ohio. Federal-style farmhouse (1835) at left, sawmill (1831) in center, and barn (1857) at right. The mill stream parallels the drive to the right. *Ohio Historic Preservation Office (OHPO) photograph.*

The late-18th-c. designs and inventions of Oliver Evans resulted in the complete mechanization of the American milling industry. Evans's *The Young Mill Wright and Miller's Guide* (first published in 1795) set the pattern for mill construction in the U.S. at least until the mid-19th c., and virtually all the features of the Staley mills were copied from various plates in Evans's book. Despite conversion from water to steam power late in the 19th c., the grist



Gristmill (1818). Double overshot waterwheels have rotted away, although the shafts remain. Family tradition indicates that the top story was added after the initial construction. At right is the mill's "hopper boy". Invented by Oliver Evans, it was designed to cool and dry the meal after grinding. *OHPO photographs.*

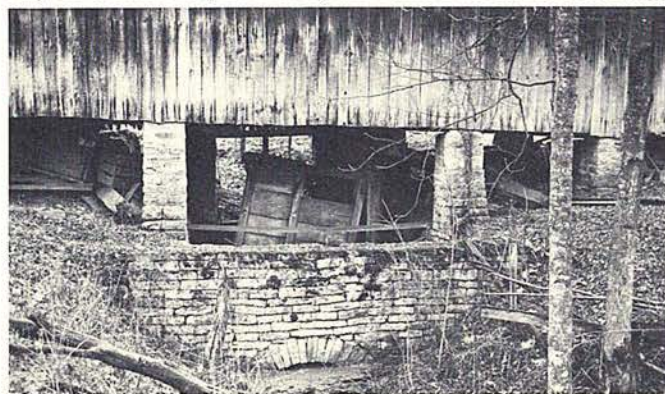


The sawmill (1831). *Donald Hutslar photograph.*



Stillhouse (1831) ruins and large bondhouse (c. 1832). *OHPO photograph.*

mill still contains all of its Evans-inspired machinery and reputedly is the oldest extant mill in Ohio. The sawmill is the only known reciprocating (or up-and-down) saw extant on its original site in the state. The distillery complex, unfortunately, is not nearly as intact; only the bondhouse, malthouse, and ruins of the stillhouse remain



Sawmill forebay and tailrace. *Donald Hutslar photograph.* Saw frame and part of log-carriage feed mechanism. *Donald Hutslar photograph.*



Saw frame and part of log-carriage feed mechanism. *Donald Hutslar photograph.* from a larger grouping that helped Ohio lead the nation in the production of corn whiskey in 1850.

According to family tradition, the gristmill was built in 1818 by the three Staley brothers—all skilled millwrights—for a "John Rensch." Elias Staley bought the farm from Rensch in 1825. The sawmill first appears in the tax duplicate in 1832 and the distillery in 1835, although family tradition indicates that they probably were constructed somewhat earlier. The present sawmill machinery apparently is the third works within the structure, built at least prior to Elias Staley's death in 1866. [Donald Hutslar's "Ohio Waterpowered Sawmills" (*Ohio History*, vol. 84, 1975) contains a detailed description of the Staley sawmill.]



The distillery and gristmill ceased operations in 1905 and the sawmill in 1915. The farm has remained in the Staley family since 1825 — probably accounting for its excellent state of preservation — and is today occupied by the great-granddaughter of Elias Staley. Taken together, the Staley Farm provides a remarkable picture of the farm industries of Ohio during the first half of the 19th c. The complex has been nominated to the National Register of Historic Places. *D.A.S.*

## PUBLICATIONS OF INTEREST

Compiled by Robert M. Frame III, Minnesota Historical Society,  
and Robert M. Vogel, Smithsonian Institution.

Irving Abella & David Millar (eds.), **The Canadian Worker in the 20th Century**. Toronto: Oxford Univ. Press, 1978. 310 pp. \$8.50 (paper). Rev.: *Tech. & Culture*, Apr. 1980:257-59.

Mia Ball, **The Worshipful Company of Brewers: A Short History**. Salem, N.H.; Hutchinson, 1977. 143 pp. \$11.95. Six centuries of English brewing and the Brewers' Company. Rev.: *Bus. Hist. Rev.*, Spring 1979.

Joshua Brown & David Ment, **Factories, Foundries, & Refineries: A History of 5 Brooklyn Industries**. Brooklyn, N.Y.: Brooklyn Rediscovery (57 Willoughby St., 11201), 1980. 75 pp., illus. \$3.00. The variety and extent of Brooklyn's 19th-c.-industries set it on a par with many American cities better known as industrial centers. Solid descriptions of the glass, porcelain, architectural-iron, book-publishing, and oil-refining industries, the latter the largest concentration in the U.S.—source of much of the nation's lamp oil and terminal of several of the earliest pipe lines. Lots more there, once, than bridges, trees, and odd pronunciations.

N.G. Calvert, **Windpower Principles**. England: Chas. Griffin & Co., Crendon St., High Wycombe, Bucks, HP13 6LE. 121 pp. £6.85 (c \$16.) Historical and the present.

James E. Clark, **The Impact of Transportation in the Chicago Region, 1830-1920**. Ph.D. thesis, Northwestern Univ., 1977.

Richard F. Dole, **The Portland Company**. In *Railroad History*, Autumn 1978, pp. 5-38. Portland, Maine, locomotive builder, 1818-1906; includes company construction list.

Theresa Ducato, **Spotlight on an Old Lighthouse**. In *Historic Preservation*, Oct./Nov. 1978, pp. 32-37. 1873 Grosse Pointe, Mich., lighthouse and keeper's house.

Michael Fowler and William A. Herbert, **Papertown of the Pine Barrens: Harrisville, N.J.** Environmental Education Publ. Service (6 Hampton Ct., Neptune, N.J. 07753), 1976. 52 pp., maps, photos, drawings, bibl.; paper \$5.

Leslie H. Gilette, **The First 60 Years, the American Inst. of Steel Construction, Inc., 1921-1980**. Chicago: AISC (400 N. Michigan Ave., 60611), 1980. \$40. (\$30. to libraries). Development of the structural steel industry and the AISC.

Roger H. Grant, **The Combination Railroad Station in the Old Northwest**. In *The Old Northwest* (Upham Hall, Miami Univ., Oxford, Ohio 45056), June 1978, pp. 95-118.

F. Hart, W. Henn, & H. Sontag, **Multi-Story Buildings in Steel**. (G.B. Godfrey, ed., English edition.) Halsted Press (John Wiley & Sons, 605 Third Ave., N.Y.C. 10016), 1978. 359 pp.; \$67.50.

Emory Kemp [SIA], **Thomas Paine and His 'Pontifical Matters.'** In *Transactions of the Newcomen Soc.* Vol. 49 (1977-78), pp. 21-40. The final word on TP's heretofore somewhat misunderstood cast-iron bridge designs.

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Rex Wailes, **A Source Book of Windmills & Watermills**. Ward Lock (116 Baker St., London W1M 2BB, England), 1979. 128 pp. £3.50 ppd.

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Ellen Weiss, **The Iron Tabernacle at Wesleyan Grove**. In *Dukes County (Mass.) Intelligencer*, Aug. 1979, pp. 3-14. 1879 iron building for the Martha's Vineyard Camp Meeting Assn.

David Weitzman [SIA], **Traces of the Past: A Field Guide To Industrial Archeology**. N.Y.: Scribner's, 1980. 229 pp., \$17.95. (To be reviewed.)

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Robert Winthrop, photos by Katherine Wetzel, **Cast & Wrought Architectural Metalwork in Richmond**. Valentine Museum Shop, 1015 E. Clay St., Richmond, Va. 23219. 126 photos. \$11. ppd. (\$11.40 in Va.). Intro. by Margot Gayle [SIA].

Bobbe Wolf, **First Impressions: A Photographic Essay**. In *Inland, The Magazine of the Middle West* (Inland Steel Co., 30 W. Monroe St., Chicago, Ill. 60603), 1979, No. 3, pp. 8-17. Mills and process at Inland's Indiana Harbor Works.

George H. Yater, **Two Hundred Years at the Falls of the Ohio.** Heritage Corp., Louisville, Ky., 1978.

Nancy Zaroulis, **Call The Darkness Light.** N.Y.: Signet Book (Doubleday & Co.), 1979. 659 pp. \$2.95. Yes, an IA historical novel, and not too bad a one. Lowell from 1838 to 1860 through the eyes and miseries of a 'mill girl.' Ends with the Pemberton Mill collapse in Lawrence (her daughter was in it).

Robert H. Zieger, **Madison's Battery Workers, 1934-1952: A History of Federal Labor Union.** N.Y. State School of Industrial & Labor Relations, Ithaca, 1977. 126 pp. \$6.25/4.50. Rev.: *Bus. Hist. Rev.*, Winter 1978.

**Homecoming** [in Paterson, N.J.]. In *The New Yorker*, Jan. 15, 1979, pp. 26-8. E.M. Frimbo talks about Paterson, old and new.

**Sources in Energy History: The Underground Coal Mining Industry, 1890-1935.** In *Energy History Report-3* (U.S. Dept. of Energy, Historian's Office, Wash., D.C.), Dec. 1979, pp. 1-2.

### REPRINTS

Charles E. Peterson (ed.) [SIA], **Building Early America.** Radnor, Pa.: Chilton Book Co., 1976. 387 pp., 352 illus., index. Reprinted in paper: \$9. 20 essays on antebellum building history and building preservation.

Allan Pinkerton, **The Mollie Maguires & the Detectives** (c. 1878). N.Y.: Haskell House Publs. Ltd., 1972. 552 pp., few woodcut illus. Facsimile of lawman's account of the struggle with radical coal miners' organization.

**Russell & Erwin Illus. Catalog of American Hardware, 1865.** Intro. by Lee H. Nelson. Assn. for Preservation Technology (Box 2487, Station D. Ottawa, Ont. K1P 5W6), 1980. 450 pp., 3300 cuts. \$16.45 ppd. Builders' hdw., fastenings, house furnishings, etc.

### SPECIAL PUBLICATIONS

John Obed Curtis, **Moving Historic Buildings.** U.S. Dept. of the Interior, Technical Preservation Svcs. Divn., 1979. 50 pp., illus. \$2.50. Avail.: Supt. of Docs., USGPO, Wash., D.C. 20402. Stock No. 024-016-00109-5. Superb study, with good historical section and essay by Chas. Parrott [SIA] on the Gruber Wagon Works move.

Anne E. Grimmer, **Dangers of Abrasive Cleaning to Historic Buildings.** *Preservation Briefs* 6, HCRS, 1979. Avail.: Supt. of Docs., as above. Stock No. 024-026-00112-5. 8 pp., illus., bibl.

Robert E. Haynes, comp. & ed., **Historic Preservation Bibliography.** 2nd rev. ed. U.S. Dept. of Interior, HCRS, July 1979. 28 pp. Avail.: Supt. of Docs., as above. Stock No. 024-016-00113-3.

Marcella Sherfy and W. Ray Luce, **How To: Evaluate and Nominate Potential National Register Properties That Have Achieved Significance within the Last 50 Years.** Summer 1979. Avail.: U.S. Dept. of Interior, HCRS, Wash., D.C. 20243. 7 pp., illus.

**Four Landmark Buildings in Chicago's Loop.** HCRS, 1979. Avail.: Supt. of Docs., as above. Stock No. 024-016-00104-4. Profitable adaptive use of the Marquette, the Monadnock, the Old Colony, and the Manhattan, all built 1889-94.

**Ecotour of the Rideau Canal.** Supt. Rideau Canal, Parks Canada, 12 Maple St. N., Smiths Falls, Ont. K7A 1Z5. Cat. no. F025-28/1978. 16 pp., color illus., maps. Lists 49 sites along the Rideau Route, natural & historical.

**Handbook for Preservation of Local Railroad Service.** U.S. Dept. of Transportation, Wash., D.C., 1977.

**Mechanical Engineers in America Born Prior to 1861: A Biographical Dictionary.** American Soc. of Mechanical Engineers (345 E. 47th St., N.Y.C. 10017). 330 pp. \$20.00. Listing of 1688; short essays on 500.

**National Register of Historic Places, Vol. II.** Avail.: Supt. of Docs., as above. Stock No. 024-005-00747-4. 700 pp., 560 illus. \$14. Describes c. 5000 properties added 1975-76.

**Problems in the Northeast Corridor Railway Improvement Project.** 1979. Avail.: U.S. General Accounting Office, Distribution Section, Rm. 1518, 441 G St., NW, Wash., D.C. 20548. 133 pp. \$1. Publ. No. CED-79-30.

### MICRO REVIEW

**MILIEUX** is the new review published by the Ecomusee of the Communaute Le Creusot/Montceau. It follows in the footsteps of the "Bulletin du Centre de recherches sur la civilisation industrielle." The experiment undertaken by the urban community of Le Creusot-Montceau les Mines reveals a new conception of the role and the very nature of museums. This museum was created with the active help of the local population it serves. The review aims to provide some general information on the Ecomusee activities and research experiments undertaken by the community.

The research activities of the Ecomusee have been directed, up to this point (1979), at identifying the community's 19th-c. industrial remains with a view to conserving France's architectural heritage. The first step was to draw up a systematic inventory of all buildings (industrial, commercial, public and private) in the three towns of Creusot, Montchanin, and Montceau-les Mines. Drawing on local and national archives and private sources, an inventory was made of all industrial sites dating from the 12th c. to 1850, especially in the categories of metallurgy, ceramics, glass, lime, and paper.

The major contribution of the first number of **MILIEUX** is a complete listing of the research involved in the different scientific studies of the industrial community. This is followed by an inventory of the written, photographic, and oral-historical documentation in their library. **MILIEUX** seeks to play a small part in filling the regrettable lack of technical reviews in France. It will also deal with such areas as technological history, industrial archeology, the work environment (both rural and urban), and human behaviour. Subscription: Ecomusee de la Communaute, Chateau de la Verrerie/B.P. 53, 71202 Le Creusot Cedex, France. **MILIEUX** is available only in French. *Claire Mousseau, Archaeologist, Forges du Saint-Maurice, Parks Canada*

### WHOA!

*We may have been too hasty in reprinting an item from Smoke & Cinder, the newsletter of the Tennessee Valley Railroad Museum. "A Steam Revival" [SIAN Mar. 80:3-4] reported that Winterthur Locomotive Works in Switzerland held a firm order from the Indonesian Rys. for a new steam locomotive to replace the diesels currently in use. Roger L. Robertson [SIA], of Kensington, Md., has brought the following letter, published in the July 1980 issue of Live Steam, to our attention:*

"This report is a response to Mr. H.A. List's article published in the March 1980 issue of *Live Steam*. Mr. List refers to another article which tells about a new "super" steam locomotive being built by Winterthur Locomotive Works in Switzerland for the Indonesian Railways. However, Mr. List apparently had some doubts about the authenticity of this story and wanted it confirmed.

"I am sorry to report that this story cannot be confirmed! My inquiries at the SLM (Swiss Locomotive Works) at Winterthur revealed that the SLM actually have a firm order from Indonesia for six 42-inch gauge rack and adhesion locomotives. These engines, however, are diesel-electric locomotives replacing the 0-10-0T rack and adhesion steam engines which SLM delivered back in the 1920s and onward to Indonesia.

"The SLM sales manager whom I contacted did not seem surprised by my inquiry at all. He told me that the SLM people know about these rumors being spread around the world. SLM already had inquiries from the U.S., England, Australia and many other countries. Among those people most interested in this project were owners of coal mines expecting new business opportunities.

"'It is a dream,' I was told, 'and will be a dream for a long time to come, simply for efficiency reasons. In addition, if steam will ever be utilized on a locomotive again, this engine will hardly have any resemblance to a conventional steamer with reciprocating parts.' *Carlo G. Corbella, Jona, Switzerland*"