SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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LESSONS FROM DODGE MAIN

In Jan. 1980, SIAN reported the closing of Chrysler Corp.'s "Dodge Main" Assembly Plant, a four-story complex of reinforced concrete designed by Albert Kahn. At its peak Dodge Main employed 40,000 workers, many of these Poles living in a neighborhood adjacent to the plant. In a series of rapid developments beginning last summer, the City of Detroit acquired the plant and demolished it to prepare a site for a new $500-million Cadillac assembly plant. "Poletown," the neighborhood embracing the former Dodge Main plant, also is scheduled for demolition. The facts surrounding this project provide an instructive case study in the use of public and private money for the purpose of industrial revitalization in a decaying central city. The story of Dodge Main illustrates the significant social and cultural costs of such a project, the least of which, perhaps, is the destruction of a historic factory. Ed.

Machine shop, crankshaft and camshaft manufacture, Dodge Main, 1915. *Chrysler Corp. photograph.*

Last spring, General Motors Corp. approached the City of Detroit with a proposal: GM planned to abandon its Clark Ave. Cadillac assembly plant (1920) and the nearby Fleetwood plant (1917-22), which builds Cadillac bodies; GM would construct a replacement facility to open in Sept. 1983 and provide about 6,000 jobs if the city could furnish a 500-acre parcel with good rail and highway connections, sell the (cleared) site to GM for $6.8 million, and give the automaker a tax break of $120 million over twelve years. The City of Detroit considered half a dozen sites, but settled on one straddling the Detroit-Hamtramck border which included the site of Dodge Main. The project area, dubbed the Central Industrial Park (CIP), comprises 1,600 parcels, including nearly 1,200 homes for 3,500 residents. Under Mich's. "quick take" condemnation laws, the City of Detroit may take the land by eminent domain, clear the buildings, and then turn the parcel over to GM. The cost of land acquisition and site preparation, a tidy $200 million, will come mostly from federal grants and loans. Including the tax breaks, the city will spend at least $300 million to induce GM to build its plant in Detroit.

All has not gone smoothly since the plan first was made public last Sept. 2nd. Residents of the doomed "Poletown" neighborhood at the southern edge of the project area launched a court challenge to the land-taking, which was rejected by a circuit court judge in Dec. They next appealed to the Mich. Supreme Court, which in Mar. ruled that Detroit acted legally in taking property for the plant site. In early Feb. several attorneys from Ralph Nader's Center for the Study of Responsive Law visited Detroit and offered to help Poletown residents. Their battle to avert demolition of this old ethnic neighborhood with its churches, shops, and schools was futile.

The flow of federal dollars began during the last days of the presidential election. HUD approved a $60-million loan under its Section 108 program in Oct., and the Council on Environmental Quality simultaneously granted Detroit an emergency waiver allowing the city to spend the funds on land acquisition before environmental impact studies were completed. The city, the federal Advisory Council on Historic Preservation, and the Mich. State Historic Preservation Officer signed a Memorandum of Agreement

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on Oct. 20th providing that Dodge Main and other eligible industrial buildings in the CIP be recorded in accordance with HAER standards prior to demolition. A professional photographer took two hundred record photographs of Dodge Main and copied another one hundred historic prints and drawings. These materials, along with a historical report prepared by this writer, will be deposited in the Library of Congress, the Mich. preservation office, and the Detroit Public Library. The machinery of "progress" received another dose of federal grease in mid-Feb., when the Reagan administration announced an award of $30 million to Detroit under the Urban Development Action Grant (UDAG) program.

The new Cadillac plant will be a one-story bulding of three million sq. ft., but the plant itself will occupy only one-third of the 465-acre site. The other portion, which requires the destruction of Poletown, will be used for parking lots, access roads, railroad yards, and future expansion. One wonders whether this enormously wasteful use of urban land would be economical were it not for the "free" federal funds available for land acquisition and site preparation. According to one estimate, razing Dodge Main and hauling away its 50 million cu. ft. of debris will alone cost $10 million. Mayor Coleman Young, who once proclaimed that HUD stood for "Hell Upon Detroit," has changed his tune.

In the months following the closing of Dodge Main in Jan. 1980, Chrysler Corp. and the City of Hamtramck made some efforts to find alternative uses and a new buyer for the plant, but its sheer size and dilapidated condition were major drawbacks. One group suggested converting it into a badly-needed state prison. By Sept., however, nobody was proposing that the plant be saved for any purpose. Chrysler sold the complex, with its five million sq. ft. of floorspace, to the City of Detroit for $1, reflecting the facility's practical economic value.

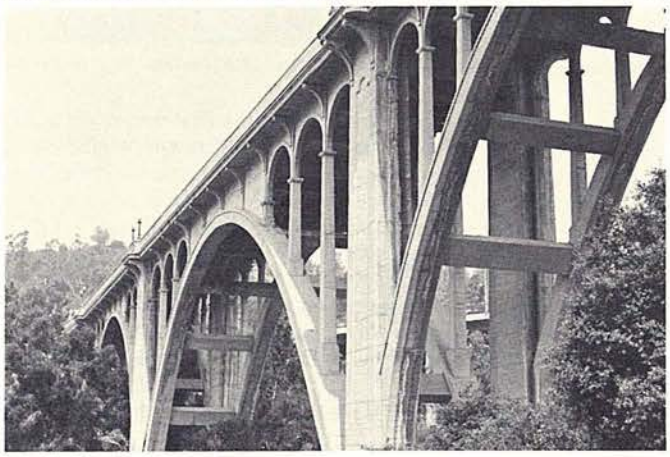
Many may doubt the wisdom of the GM project, but it is too late. For a city like Detroit, which has an unemployment rate of 13 percent, it is impossible to resist the lure of 6,000 new jobs, plus the anticipated spinoff in related industries and services. The costs of this kind of reindustrialization are enormously high. Still, it may well be that the costs of doing nothing are even greater. *C.K.H.*

IA IN THE NATIONAL REGISTER

Compiled by Carol Dubie

National Register listings, Jan. 1-Apr. 31, 1981:

CALIFORNIA. Colorado St. Bridge, Pasadena. Open-spandrel nine-span arch bridge of reinforced concrete, 1912-13, designed by Waddell & Harrington. Among the largest reinforced-concrete highway bridges in U.S. when built. **Los Angeles Pacific Co. Ivy Park Substation,** Los Angeles. Mission Revival-style, 1907, only structure remaining from important early 20th-c. electric railway; equipment removed after end of service in 1953. **Point Conception Light Station,** Santa Barbara. Includes 1881 stuccoed-brick keeper's dwelling and light tower, coal house, power house, and redwood water tower. This is the second lighthouse on this site, an important point of navigation since the Spanish colonial period. **Steamship *Tennessee* Remains,** Marin City vic. Remains of 1848 wooden-hulled side-wheel steamer wrecked Mar. 6, 1853, during the Gold Rush. Site is anticipated to include the boiler, pumps, tools, and gear, as well as a 239 h.p. Novelty Iron Works (N.Y.) sidelever steam engine with 75-inch. x 8-ft. cylinder.



Colorado St. Bridge, Pasadena, Calif. *Michael Zimney photograph.*

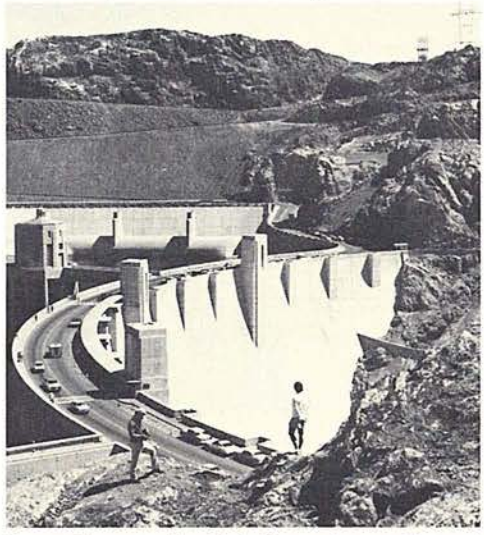
COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS. Nanyo Kohatsu Kabushiki Kaisha Sugar Mill, Rota. Ruins of cane mill, c. 1930, of NKKK South Seas Development Co., which operated tenant-farmed sugar plantations during the period of Japanese control of these islands. Mill was the largest on Rota, with a daily capacity of 700 tons of cane.

FLORIDA. St. Augustine Lighthouse and Keeper's Cottage. Circular brick lighthouse, 165 ft. high, with first-order Fresnel lens and keeper's quarters, 1871-74.

INDIANA. Spencerville Covered Bridge, Spencerville. Spanning the St. Joseph R., 1873. Smith-type truss is a variation on the Howe, with wooden instead of iron verticals, patented by Robert W. Smith of the Smith Bridge Co., Toledo. One of six Smith trusses remaining in Ind.

MAINE. Rockland Breakwater Lighthouse, Rockland. 1902 complex of brick and frame structures including lighthouse, fog-signal building, and keeper's house, located at the end of a 4300-ft. breakwater. Upon completion, Rockland became one of Maine's finest 20th-c. harbors.

MINNESOTA. LeSueur Co. Multiple Resources. Bridge #4846 (1). Pin-connected through Pratt truss, 1875, 115 ft. long. Oldest known Pratt-truss highway bridge. **Elysian Water Tower,** Elysian. 50,000-gal. elevated wooden tank on 75-ft. trestle tower of cruciform plan, fabricated by U.S. Wind Engine & Pump Co. in 1895. Rare example of the small-scale wooden tanks erected in late 19th c. as part of local water systems.



Hoover Dam, spanning Black Canyon between Nev. and Ariz. *Bureau of Reclamation photograph by E.E. Hertzog.*

NEVADA. Hoover Dam, Kingman vic. Nationally significant curved gravity dam, 1933, the western hemisphere's highest concrete dam. Constructed for So. Calif. and Ariz. flood protection, irrigation, hydroelectric power, Los Angeles metropolitan area water supply, and recreation.

NEW HAMPSHIRE, Ashuelot Covered Bridge, Ashuelot. Wooden Town truss, 1864.

PENNSYLVANIA. Berks Co. Covered Bridges Thematic Resources. Four covered bridges, all of Burr arch construction: **Dreibelbis Station Bridge** (1869) and **Kutz Mill Bridge** (1854), Kutztown vic.; **Greisemer's Mill Bridge** (1868) and **Pleasantville Bridge** (1856), Oley vic.

The SIA *Newsletter* is published four times a year (Winter, Spring, Summer, and Fall) 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 American History, 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.

KEEP THE OLD STREET CLOCKS STANDING

For the past ten years the tall cast-iron post clocks on the sidewalks of American cities and towns have been a concern of the Friends of Cast Iron Architecture. The Friends have urged official landmark designation of these useful and picturesque items of street furniture that apparently first appeared about the time of the Civil War and seem to have been an original American idea.

When Seattle recently named its ten iron post clocks city landmarks it was cause for rejoicing. The Friends warmly congratulated Mayor Charles Royer and preservation officer Earl Layman, who says that in the 1920s such clocks were at the height of their popularity in Seattle. The city then had nearly thirty street clocks and often was called "The City of Clocks."

Cast-iron street clock on Fifth Ave. at 43rd St., N.Y.C. *Esther Mipaas photograph.*

In recent times the first city to treat a public street clock with official respect was Milwaukee, where Tom Bliffert rescued that city's last street clock when the jewelry store where it had stood since 1908 went out of business. He gave the clock to a museum, which installed it on its sidewalk. After holding public hearings, the Milwaukee Landmark Commn. proclaimed it a landmark in 1973.

In 1974 Portland, Oreg., which is blessed with four functioning iron post clocks (at least one dating back to 1880), took a similar step. Architect William Hawkins III, president of Portland FCIA, asked the Mayor to designate the iron clocks official landmarks and it was done.

During the Bicentennial in 1976, San Francisco named the handsome Samuels Jewelers' four-dial clock a landmark. It contains the original works which can be observed through glass panels in its pedestal.

For seven long years FCIA has urged N.Y.C.'s Landmarks Commn. to designate the city's eight remaining tall post clocks, one of which is of cast bronze. During this period, while public hearings were being held, a ninth very ornate four-dialed Seth Thomas clock, located on Lexington Ave., disappeared virtually overnight. It is suspected that it was sold by its jewelry-store owner for a pretty penny and will one day show up in a grandiose shopping mall.

An almost identical four-faced clock can be seen at a jewelry store in downtown St. Louis, another in front of a bank in Salt Lake City, and another on Market St. at Philadelphia's Reading Terminal. A four-faced beauty stands near the entrance to the National Zoo in Washington's Rock Creek Park, the gift of a jeweler who was closing his store. Several others are known to exist.

The high-tech shopping center in the new town of Columbia, Md., boasts an old cast-iron post clock. Although it is fine to recycle old clocks that do not have a home, one shudders at the idea of clock-napping from an urban setting where they have been popular and familiar fixtures. Developers should know that they may order clocks in favorite old styles from the I.T. Verdin Co. of Cincinnati, which for years has made tower clocks and carillons. Irreplaceable Artifacts, dealers in N.Y.C., say that they buy, sell, and repair street clocks, and that they are offering a line of such clocks replicating 19th-c. forms.

Although the public town clock was a handsome and vital feature for centuries in Europe, the cast-iron post clock owned by an individual business, usually a bank or jewelry store that considered a public time piece good advertising, seems to have originated in the U.S. during the 1870s and 1880s. The 1890s and early 20th c. saw further expansion of the idea. Very likely the street clock reached its apogee in the 1920s; many new ones were installed while most of the older ones were still standing.

This clock, manufactured by E. Howard & Co. of Boston, stands at 1501 Third Ave. between 84th and 85th sts., N.Y.C. *Maurice Cory photograph.*

Then came a wave of disenchantment. The tall clocks were deemed old fashioned, even ugly and troublesome obstructions on city sidewalks where, it was claimed, they interfered with pedestrian movement. As streets were widened to accommodate automobiles, sidewalks shrank. After World War II, during the period of extensive downtown "urban renewal," many towns required that clocks be removed. With a serious slack in demand, the big clock companies stopped producing street clocks. Today there is much interest and renewed demand, but the old patterns for cast-iron pedestals, shafts, and dial frames are gone, as are the patterns for casting the components of the clock mechanisms.

The N.Y.C. Landmarks Commn. so far has stalled on the designation of the city's eight remaining street clocks, although the necessary public hearings have been held and clock owners are uniformly in favor of landmark designation. These irreplaceable objects deserve prompt consideration. *M.G.*

EARLY MACHINERY IN AMERICA

"To preserve the original forms and features of machines which have been among the foremost in changing the primitive wild aspect of the continent—of opening it to civilization's career—is not simply a matter of passing interest, but one of present duty, and of future recompense; for when an account of the chief agents employed in working out the great things already achieved, and others yet greater in prospect, comes to be written, the principal materials will be looked for, and should be found, in reports of this bureau. As a part of American history, this ought to be done, because the true annals of people, their most reliable, unmistakeable, unpervertible, durable and natural archives, are THEIR ARTS—their contributions to practical and productive knowledge; ideas they disclose and apply, to extend and refine the realities of life, compelling nature to yield up new treasures, detecting in matter new properties, employing it in new combinations, moulding it in new forms, putting it to new uses, and drawing from it novel and beneficent results;—all other knowledge of them might be lost, yet in these their genius, industry, morals, enterprise, and position in the scale of nations, would be seen and acknowledged.

"We are careful, and justly so, to collect reminiscences of patriotic men of the revolution,—why not venerable machines of that day, also; since the industrial arts themselves, were then on the eve of a change, more radical than at any previous epoch, and as marked, extensive, and fraught with blessings to the world at large, as those relating to the civil and political rights of man.

"By putting on file our early mechanisms, we shall have in them, so many data or starting points, from which to measure subsequent advances—to mark off the distances we and our successors may leave them behind."

—*Excerpt from* Report of the Commissioner of Patents for the Year 1850 *(Washington, D.C., 1851, p. 387), submitted by Steven Lubar* [*SIA*].

MISC. NOTES

BLUFF FURNACE OF CHATTANOOGA, INC., an organization of persons committed to the restoration of the Bluff Furnace site [NR] as an interpretive park, is open to the public for membership. Built by ironmaster Robert Cravens and Col. James A. Whiteside in 1854, Bluff Furnace was the first blast furnace in the South to use coke. The furnace site today exists as an archeological ruin; several features of the old foundry buildings are visible, while others probably are hidden beneath the surface [SIAN May 77:5, July 77:6, July 79:1]. Jeffrey L. Brown [SIA], who died last Dec., conducted a preliminary investigation of the site in 1977, and the completed park will be dedicated to his memory. Dr. Nick Honorkamp, who succeeded Brown as Director of the Institute of Archeology, Univ. of Tenn., will continue excavation at the furnace site this summer. Annual membership in Bluff Furnace of Chattanooga, Inc., is $10 for an individual. A brochure summarizing the site's master plan is available. BFofC, Inc., P.O. Box 972, Chattanooga, Tenn. 37401.

THE ASSN. OF SCIENCE-TECHNOLOGY CENTERS is a not-for-profit organization of museums dedicated to furthering public understanding and appreciation of science and technology. It represents more than one hundred North American science museums. Programs include a Traveling Exhibition Service that develops and circulates exhibitions. Wendy Pollock [SIA], coordinator of this service, writes that while they have yet to do a show specifically about industrial archeology, "we are moving in that direction." This fall, for example, ASTC expects to launch an exhibition on Othmar Ammann and long-span bridge-building. An exhibition titled "Lines and Waves: Faraday, Maxwell, and 150 Years of Electromagnetism" is available for booking now. Further information: Ms. Pollock, Coordinator, Traveling Exhibition Service, ASTC, 1016 16th St., N.W. Wash., D.C. 20036; (202) 452-0655.

THE FRIENDS OF TERRA COTTA was founded in Lincoln, Calif., on Apr. 30, 1981, when a group of preservationists toured the Gladding, McBean & Co. factory to observe techniques in the production of architectural terra cotta, of which Gladding, McBean is the last surviving producer. Of special interest were the company's records of terra cotta buildings, which FOTC hopes to microfilm. FOTC hopes to increase public awareness and appreciation of terra cotta by sponsoring lectures and slide presentations on the history of terra cotta and its preservation and maintenance, walking tours, publication of pamphlets and posters, reprints of early terra cotta catalogues, tours of Gladding, McBean, and campaigns to save threatened terra cotta buildings. Although centered in Calif. for now, FOTC expects to form chapters in other states and cities. FOTC will hold two national meetings each year, in conjunction with the National Trust annual meeting and that of the Assn. for Preservation Technology. Dues, $5 per year, should be sent to FOTC, Attn: Beverly Bubar, c/o Calif. Hist. Soc., 2090 Jackson St., San Francisco, Calif. 94109. Anyone sending dues prior to Sept. 1 will be considered a charter member. Additional information: David W. Look [SIA], (415) 556-7741.

BOOKWORM & SILVERFISH (Jim Presgraves, Proprietor) carries scarce, old, and out-of-print books. The firm specializes in technical, pre-1920 volumes and trade catalogues ("industrial archeology from first-hand accounts") for a wide range of products. A recent list included iron, tools, paint, windmills, textiles, pulleys, hoists, and stoves, to name a few. Current catalogue: B&S, P.O. Box 516, Wytheville, Va. 24382.

MYSTERY BRIDGE. The curious boiler-plate-tower suspension bridge about which inquiry was made last issue has been identified by, naturally, Richard S. Allen of Albany, acknowledged living encyclopedia of such matters, to whom we should have turned in the first place. It is, Allen observes, "the Bradford Suspension Bridge of 1857, over the North Channel of the Black River on Mill St., Watertown, N.Y. It was built by Gilbert Bradford (b. 1811) who had an extensive local machine shop making the Hoard & Bradford portable steam engine (which involved a boiler, of course). The bridge was 175 ft. long, 20 ft. wide, and had 17½-ft. towers of ⅝-in. boiler plate. It was badly damaged in the flood of 1869 and replaced in 1898." This use of conical, riveted, boiler-plate suspension-bridge towers seems to be unique. It should have been a serviceable and relatively inexpensive system, leaving us to wonder that it didn't catch on.

STEAM TRAIN EXCURSIONS. An extensive series of both regional and intercity excursions is being conducted through the fall by the National Museum of Science & Technology and Canadian Pacific Ry. in commemoration of the CP's Centenary. The intercity trains will be hauled by CPR No. 1201, their last built. Full information bulletins from NMS&T, 1867 St. Laurent Blvd., Ottawa, K1A OM8; (613) 998-4566.

T-SHIRTS bearing the message "Water Power—Fall For It" are available from the Slater Mill Historic Site for $7./Adult, $6./Child. Children's sizes: small (6-8), medium (10-14), large (14-16); adult sizes: small (34-36), medium (38-40), large (42-44), x-large (46-48). Colors: red w/ black, navy w/ white, gold w/black, black w/ white. Shirts are 100 percent cotton. Please add 50¢ for postage and handling. Orders: SMHS, Box 727, Pawtucket, R.I. 02862.

MUSEUMS

THE CALIF. STATE RAILROAD MUSEUM [SIAN July 74:2] opened in May. The museum is located in Old Sacramento, a restored area along the Sacramento R. The museum's 100,000 sq. ft. of exhibit space is filled with historic locomotives, passenger cars, and other rolling stock dating from the 1860s to the present. The Pacific Coast chapter of the Railroad & Locomotive Historical Society donated much of the museum's equipment. The Society began its collection in the 1930s when such railroads as the Virginia & Truckee, the Nevada Northern, and the Nevada County Narrow Gauge began tearing up their tracks in the face of truck competition. The museum is the third phase of a transportation complex. Already in operation are the restored Central Pacific passenger station and the Big Four Building, where in the 1860s Leland Stanford, C.P. Huntington, Mark Hopkins, and Charles Crocker developed the first visions of a transcontinental railroad.

THE IRON AND STEEL MUSEUM OF ALABAMA [SIAN Nov. 77:3] opened in Mar. Located at Tannehill Historical State Park, midway between Birmingham and Tuscaloosa, the museum will concentrate on the interpretation of the history of technology in the first half of the 19th c. Major themes include pioneer iron work; industrializing the frontier; decorative iron work; pre-Civil War machine shops; and the Civil War and the iron industry of the South. Housed in the museum will be the Walter B. Jones Center for Industrial Archaeology, which will include an achives relating to museum display topics. Tannehill Historical State Park occupies 1,006 acres of a site that was one of Ala.'s first iron producing plantations and a principal source of cast-iron objects for the Confederacy. The Iron and Steel Museum is one of the few museum facilities in the Southeast devoted to the history of technology. The museum is open every day except Mon. from 10-5; admission to the park, which allows one visit to the museum, is $1. for adults, 50¢ for children.

NEWS OF MEMBERS

WILLIAM CHAMBERLAIN, MARGOT GAYLE, JOHN MESICK, and **CHARLES E. PETERSON** participated in "Iron Works," a symposium on the development and use of cast and wrought iron in 19th-c. structures, held at Union College, Schenectady, N.Y., in May.

EDWARD J. PERSHEY, formerly curator of the Howard Dittrick Museum of Historical Medicine in Cleveland, has assumed the position of curator at the Edison National Historic Site in West Orange, N.J.

RESEARCH QUERIES

Information is sought on the "Brown and Owen" foundry whose name is cast on the back of 19th-c. cast-iron garden furniture. Margot Gayle, 235 E. 87th St., N.Y.C. 10028.

For a book on beer in the U.S., information is sought on the ethos and role of the brewer and on the architecture of American breweries. Also sought is a lending copy of *Breweries and Allied or Auxiliary Buildings,* by the Otto Wolf Co. (Philadelphia, 1906). Prof. Lowell Edmunds, Dept. of Classical Studies, Boston College, Chestnut Hill, Mass. 02167.

For an archeological survey report, information is sought on coke production in Ill., with particular emphasis on the Eden/Sparta area. I am also interested in information on the location of coke oven remains in Ill. Edward M. Morin, American Resources Group, Ltd., 127 N. Washington, Carbondale, Ill. 62901.

As historical architect for the S.D. Historic Preservation Center, I am seeking information on turn-of-the-century mining and milling processes in western states, particularly stamp mills, Pelton turbines, and arsenic processing plants. I am looking also for information on manufacturers of mining and milling equipment. I am willing to share the information I already have in the form of research, photographs, and location of artifacts with interested individuals. Jim Wilson, White, Wilson Associates, P.O. Box 222, Vermillion, S.D. 57069.

I am conducting research on the brick industry of the Pacific northwest and would appreciate sharing information with anyone who has bricks, from archeological or other sites, or who has made a study of the industry both here and abroad. Since much 19th-c. fire brick came from overseas, I would be grateful for any information on the brick industries of Belgium, Britain, China, Russia, and Japan. Karl Gurcke, Dept. of Sociology/Anthropology, Univ. of Idaho, Moscow, 83843.

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SIA AFFAIRS

SIA EDUCATION PROJECT:

"'Can't You Hear the Whistle Blowin'?: The World of Work in America"

With the approval of the SIA Board, Michael B. Folsom and Robert M. Vogel have collaborated with member David Weitzman to prepare an application to the Primary and Secondary Education Divn. of the National Endowment for the Humanities for a grant that would enable the Society to develop a pilot project to teach young people about their industrial past. The basic assumption of this undertaking is that, if we are to create a larger constituency for industrial archeology, we must reach the young with our message.

Impetus for the project came from Weitzman, a gifted teacher and missionary for home-made historiography. His previous works—*Backyard History* (Little, Brown, 1975), *Underfoot* (Scribner's, 1976), and *Traces of the Past: A Field Guide to Industrial Archeology* (Scribner's, 1980; review, SIAN Winter 81:12)—are extremely successful popular introductions to historical research. He will serve as Writer for the project. Folsom, who spent three years at MIT working under an NEH grant to develop methods and materials for teaching the history of industrial technology, is Project Director. Helena Wright, Eric N. DeLony, Larry D. Lankton, and Theodore Z. Penn [all SIA] will serve as an advisory committee, and Alberta Sebolt, Director of Museum Education at Old Sturbridge Village, will be consultant.

The project will involve two public school systems and two museums in widely separated parts of the country. On the west coast, where Weitzman is located, the Mendocino, Calif., county schools and the Mendocino Museum will participate. The eastern center will be Waltham, Mass., where the schools will work with the Charles River Museum of Industry, of which Folsom is Director.

The project will develop curriculum materials for both elementary and secondary schools, drawing on the historical resources of each community and utilizing both traditional classroom and new museum-based techniques. Teachers will participate in devising strategies for field work in which students learn the techniques of industrial archeology. Students will create exhibits on the industrial history of their regions, which will be mounted in the local museum and then exchanged with the other museum. Thus, Calif. students and teachers will learn about the industrial revolution in New England, and Mass. students and teachers will contrast what they have studied with the patterns of mechanization in agrarian Northern Calif. With these two very distinct projects available as models, the SIA Education Project hopes to find funding for similar work in other representative industrial centers.

A major element of the project is the development of audio-visual materials for the dual purposes of (1) preserving a record of traditional industrial processes on the verge of extinction, and (2) bringing into educational situations experience of processes that cannot practicably be visited by school groups.

The total project budget—including the NEH grant, a cash contribution from the SIA, and matching "in-kind" services—is $216,350. The application was submitted in Apr., and the NEH will announce its decision in the fall.

The SIA Education Project staff would like members to participate in and comment on its proposals. Further information is available from: David Weitzman, P.O. Box 381, Covelo, Calif. 95428; Michael B. Folsom, Charles River Historic Industries, Inc., 190 Moody St., Waltham, Mass. 02154; or Robert M. Vogel, National Museum of American History, Rm. 5020, Wash., D.C. 20560. *M.B.F.*

WITH APPRECIATION. The Society is pleased to announce receipt of a third royalty check for $117.98 from sales of *Historical Archaeology: A Guide to Substantive and Theoretical Contributions,* edited by Robert L. Schuyler [SIA]. This volume is available for $15. + $1.50 postage from Baywood Publishing Co., Inc., Farmingdale, N.Y. 11735.

SIAN NOTES. SIAN wishes to thank its dedicated team of editorial advisors who read the rough-typed newsletter copy and comment on it before each issue goes to press. They are: John Corby, Eric DeLony, Dianne Newell, David Sherman, Robert Vogel, and John Wickre. . .Deadline for receipt of copy for the Fall 1981 issue is Oct. 15. . .Is there a cartoonist in the house? The *Newsletter* would very much like to carry occasional IA-related cartoons. . .Finally, on behalf of all SIA members, the Editor wishes to thank the Program for the History of Science & Technology of Case Western Reserve Univ. for its continued support of the *Newsletter.* CWRU provides office space for the editor and covers reproduction, telephone, and postage expenses. Their support will continue until summer 1982.

CHAPTER NEWS

SNEC + NNEC. A splendid showing of nearly one hundred SNEC & NNEC members at Holyoke, Mass., on Sat., Apr. 11, provoked the comment that hydropower must be an idea whose time has come (or come again) to New England. Chapter members gathered at the Wherehouse, a former textile mill and warehouse adaptively reused as a food/function facility. After coffee, registration, and introductory remarks by John Hickey, president of Holyoke Water Power Co., staggered tours of small groups were conducted by Bill Crean of HWPCo. We were treated to Bill's informative and jocular commentary as we saw the dam, fish elevator and counting station, and 15,000-kw hydroelectric station. Construction of a second 15,000-kw turbine unit permitted a look at the normally buried but especially impressive 34-ft.-diameter penstock.

Following lunch at the Wherehouse, where we were surrounded by the artifactual remains of Holyoke's industrial past, Tom Dyer and Ed Zimmer presented an interesting slide-tape documenting the history and industrial use of the site to be developed as Holyoke's Heritage State Park. Pres. Betsy Woodman then held forth on items of business, including the NNEC meeting to be held May 16 at Harrisville, N.H., and the Harrisville-Dublin highway controversy; Boston and eastern Mass. inventory progress; and SNEC/NNEC approbation of the Mass. & N.H. Coalitions to Preserve Our American Heritage. Members are urged to write their congressional officials to protest budget cuts affecting historic preservation. Betsy announced that the fall SNEC meeting will be held on Sat., Nov. 7, at the Charles River Museum of Industry, Waltham, Mass. She urged consideration of a proposal to be discussed at the fall business meeting that one meeting per year be held in the Greater Boston area. Members with stamina then toured the Parsons Paper Mill. *H.W.*

MISC. SITES & STRUCTURES

We failed to note, last fall, the demise of the **Rocky River Bridge** [NR, HAER] near Cleveland, O. The bridge, with a clear span of 280 ft., was the last and the longest long-span concrete arch in the U.S. to be built with unreinforced ribs. The bridge was blasted with delayed charges in a $1-million operation—four times the cost of construction. A new structure had been erected next to the old bridge, which spanned the Rocky River gorge and connected the Cleveland suburbs of Rocky River and Lakewood. (See C.P. Miller, "The Rocky River Bridge: Triumph in Concrete," *IA*, Vol. 2, 1977, pp. 47-58.)

At ceremonies held May 6th at the Urban Center in Manhattan, the Friends of Cast Iron Architecture received a certificate recognizing placement of the **SoHo District** on the National Register of Historic Places.

The **Michigan—Lake Superior Hydroelectric Plant** [HAER] in Sault Ste. Marie, Mich., has been designated a National Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers. The plant was cited because it is representative of typical 19th-c. hydroelectric practice in which many small turbine-generator units were used in contrast to the 20th-c. use of a few large units. Its 40,000 h.p. capacity made it the largest in the country using turbines of American design (McCormick-Francis). (The contemporary and larger Niagara installation used turbines of French-Swiss design.)

Old mills reclaimed for housing was the focus of a May 2 feature article in the Real Estate section of the *Boston Globe*. The Waterway Apartments, in Leominster, are nearing completion in buildings that once housed the **Wachusett Shirt Co.** Continental Wingate Co., Inc., of Boston, has turned the property into eighty-nine apartment units. Examples of such recycling projects are everywhere, but they seem especially evident in Mass. Such cities as Haverhill, Lynn, Lowell, Fall River, Peabody, and Boston all boast examples. According to reporter Anthony J. Rudis, old mills and warehouses no longer are considered white elephants, thanks to the federal rent subsidy program, Section 8, historic preservation tax writeoffs, tax-shelter incentives for developers, and the willingness of lending agencies such as the Mass. Housing and Finance Agency to back recycling projects.

The **Boston Edison substation** near downtown Hopkinton, Mass., is slated for demolition. The station, built in the 1880s as a street railway substation, was bought by BE sometime before 1920, and all new equipment was installed. A second major renovation took place in the late 1940s or early 1950s, and most of the equipment in the station dates from this period. BE graciously allowed Charles River Historic Industries to scavenge historical material from the building prior to demolition. Several inch-thick marble switchboards, some workplace miscellany, and a set of wiring blueprints were saved and will be used in an exhibit at the Charles River Museum of Industry.

The following sites recently were designated National Historic Landmarks by Secretary of the Interior James G. Watt:

Sloss Blast Furnaces, Birmingham, Ala. [SIAN Nov. 72:1, Mar. 78:1, July 79:1, Sept. 79:6]

Bethlehem (Pa.) Waterworks [SIAN July 77:6]

Folsom (Calif.) Powerhouse [SIAN May/July 76:3, Sept./Nov. 76:10]

Old Stone Gate, Chicago Stockyards.

These four sites are *publicly owned* and therefore were not subject to the provision requiring owner consent prior to the designation of industrial facilities as National Historic Landmarks [SIAN 80:1-2].

HAER IN W. VA.

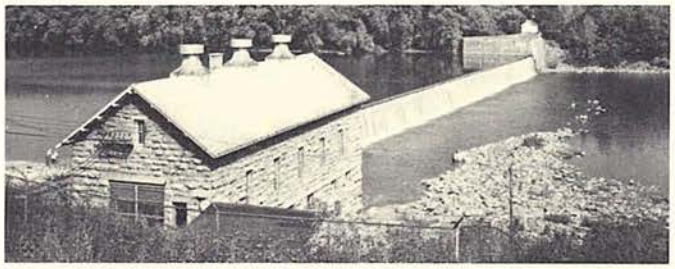
Four important engineering structures in W. Va. were recorded last summer by the Historic American Engineering Record. Working with the W. Va. Historic Preservation Office a HAER team recorded the Potomac Edison dams No. 4 and No. 5 power plants in Shepherdstown [SIAN Mar./May 73:3], the Bunker Hill grist mill in Berkeley Co., and the Cheat Lake (Lake Lynn) power plant in Monongalia Co.

The six drawings produced of the Dam No. 4 power plant show the unique rope-driven generators of this 1909 plant, still in operation using the four original turbines and two generators. The two 1,250-ft.-long continuous rope drives possibly are the last remaining of their kind in the country. The dam was constructed in 1860 to supply water to the C&O Canal.

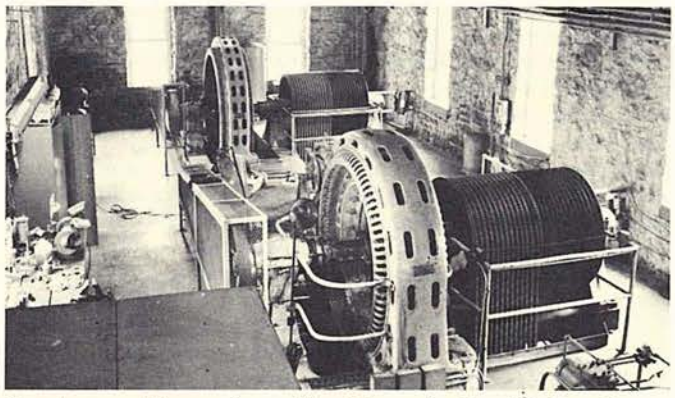
The other structures were recorded by photographs and historical reports only. The Dam 5 power plant (1917) also used a C&O-Canal dam; the Bunker Hill grist mill, with dual Fitz overshot water wheels, was built in the 1780s and rebuilt in the 1870s following a fire; and the Cheat Lake power plant (1920s) is one of the largest hydroelectric power plants in W. Va.

The HAER team included architect John Bowie and chief historian Charles Scott [SIA] and, from the W. Va. Historic Preservation Office, historical engineer Neil Richardson and student historians Robin Floyd and Dean Six. Record photographs were made by HAER staff photographer Jet Lowe.

This project brings to sixty-three the number of HAER drawings done in W. Va. since 1970, covering sixteen structures. In addition, eighty-eight other historic engineering structures have been inventoried, photographed, or recorded through field notes, making W. Va. one of the best documented states in the country. *N.R.,*



Dam No. 4 Hydroelectric Station, Potomac Edison Co. View of the powerhouse and dam from operator's house looking toward Md. *HAER photograph by Jet Lowe.*



Generator room, drive ropes from turbines below passing through the floor. *Potomac Edison photograph.*

GOOD NEWS FOR N.H. TRUSS BRIDGES

The outlook for N.H.'s metal truss bridges may be brightening. Current efforts will save at least three historic spans from demolition.

An 1889 pony truss in Langdon, by the Berlin Iron Bridge Co. (E. Berlin, Conn.), will be moved by the town and opened for pedestrian use, possibly as part of a recreational trail system.

In Shelbourne, a majestic 1897 triple-span Pratt through truss erected by the Groton (N.Y.) Bridge & Mfg. Co. will be retained by the N.H. Dept. of Public Works & Highways (NHDPWH). A new structure capable of carrying fire trucks and other heavy vehicles will be constructed further downstream. Repainting and stabilization of the present span are part of the package.

A similar project is underway in Chichester, where a c. 1887 Berlin lenticular truss will be bypassed by a new span and retained for pedestrian use. While these efforts fail to address the possibility of rehabilitation, at least for light vehicles, they certainly are preferable to demolition.

Meanwhile, in Dover, the future of one of New England's few remaining double-intersection Warren truss bridges remains

uncertain. Erected in 1896 by the Boston Bridge Works, it may be the state's only example of this type. Presently closed, the deck is in sadly deteriorated condition, it is not part of existing traffic patterns and would not necessarily need to accommodate heavy vehicles, which suggests that rehabilitation may be a viable alternative to demolition. City planners are amenable to the concept of rehabilitation, although NHDPWH characteristically favors replacement. The case appears headed for the Advisory Council on Historic Preservation.

NHDPWH has begun a statewide historic bridge inventory. This, the first complete look at the number and type of significant historic bridges surviving within the state, will be of great value to future preservation efforts. *R.B.*

TRENT RIVER—ONTARIO

For a short period during the late 19th c., a part of the Cobourg, Peterborough & Marmora RR extended from the iron mine at Blairton to Trent River (then Trent Bridge), Ontario, on the Trent River and now part of the Trent-Severn Waterway operated by Canada's Dept. of Environment. The railroad operated for only about ten years. During that period, a serious accident occurred at Trent River on Aug. 9, 1881, when five ore cars plunged into the river and one worker was killed.

The accident was revealed during the course of research into operations of the Marmora Ironworks. We decided to investigate whether the cars might still be in place beneath the water. A quick dive confirmed their presence and, later in the year when the water was clearer, we carried out an extensive operation to photograph and plot the position of the vehicles. The Trent-Severn Waterway authorities were asked to assist in raising the cars from the riverbed, some 20 ft. down, so that they could be examined and, if possible, restored.

Late in 1980 four of the five vehicles were recovered. They have been transferred to a laboratory for examination, analysis, and restoration or reconstruction. We hope to recover the other vehicle later this year, as well as any other parts that may remain underwater.

The vehicles are about 120 years of age. Built after the English pattern of mining cars, they have four wheels and operated on a broad gauge of approximately 6 ft. We have been able to trace the origin of the wheels, and even the origin of the pig iron used to cast them. An extensive program of laboratory tests is planned so that the utmost information can be revealed about the cars, probably the oldest vehicles of their type now known to exist in Canada. *A.D.D.*

Ore car—possibly Canada's oldest—is raised from the Trent-Severn Waterway, Trent River, Ont. *Arthur D. Dunn photograph.*

CONTRIBUTORS TO THIS ISSUE

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ARCHIVES & MANUSCRIPTS

Compiled by John Wickre, Minnesota Historical Society

This issue introduces a new column in SIAN. "Archives & Manuscripts" is seen as a companion to "Publications of Interest." Members and others who wish to submit items for possible inclusion in this column should contact Mr. Wickre at the Minnesota Historical Society, 1500 Mississippi St., St. Paul 55101.

St. Paul, Minneapolis & Manitoba Railway Co. Construction Records, 1880-1891.

Great Northern Railway Co. Comptroller. Construction Records, 1889-1932.

The Minnesota Historical Society has cataloged 47 vols. of construction records of the StP, M&M Ry. Co. and its successor, the GN, including construction abstracts and ledgers for lines in Minnesota, North Dakota, Montana, and Washington. Among the vols. are a construction charges abstract for the Seattle Tunnel, 1903-1911, three registers of vouchers covering costs of side tracks and structures, 1905-1928, and seven construction-detail ledgers for the Cascade Tunnel, 1926-1932. (This was the "new" 7.79-mi. Cascade Tunnel, opened Jan. 1929, which replaced a 2.7-mi. tunnel in use since 1900. A detailed discussion of the construction of the new tunnel appears in "The Eight-Mile Cascade Tunnel, Great Northern Railway: A Symposium," ASCE *Proceedings,* Feb. 1931, pp. 183-268.)

Great Northern Railway Co. Advertising and Publicity Dept.

1. Magazine and newspaper advertisements, articles, and other publicity, 1884-1970. 7 microfilm rolls.
2. Advertising literature, 1912-1970. 7.5 ft.
3. Advertising samples, 1921-1970. 23.25 ft.

Included in these three series are many examples of GN handouts, as well as more mundane newspaper and magazine ads. The advertising samples are of particular IA interest, with views of equipment and structures (many in full color) mixed in among the timetables, maps, menus, coasters, tour and vacation booklets and flyers, calendars, postcards, Wenatchee apple booklets, and baggage tags. The samples are particularly rich in items related to the "New Oriental Limited" of 1923-1929 and to Glacier National Park (the Glacier Park Co. was one of nearly 400 GN subsidiaries). The pamphlet "Dedication and Opening of the New Cascade Tunnel" (Jan. 12, 1929) contains not only transcripts of speeches by President-Elect Hoover and engineer John F. Stevens (among others), but describes a 5 x 2 x 2-ft. topographic cake, depicting in relief the Cascade Mountains near Stevens Pass, the nearby GN line, and the old and new tunnels. (This culinary construction feat was accomplished by the cooks of tunnel contractor A. Guthrie & Co.)

For further information on these records, write: Reference Services, Divn. of Archives and Manuscripts, MHS, address as above.

PUBLICATIONS OF INTEREST

SPECIAL PUBLICATIONS

H.G. Jones, **Local Government Records, An Intro. to Their Management, Preservation, & Use.** American Assn. for State & Local History (1400 8th Ave. S., Nashville, Tenn. 37203) 193 pp., 30 illus. $7. ($5.25 members).

Henry Kelso with Joy Dunn, **Preservation and Maintenance of Brick Streets.** Southwest Prologue Series, Oklahoma Historical Soc. (Historical Bldg., Oklahoma City, Okla. 73105), n.d. 5 pp., illus., biblio.

Arnold L. Markowitz, **Historic Preservation: A Guide to Information Sources.** (Vol. 13 in *Art & Architecture Information Guide Series).* Gale Research Co. (Detroit), 1980. 277 pp. $28. 827 entries on all aspects of preservation with subject, author, and organization indexes. Good reference.

Made in South Bend/Mishawaka: Self-Guided Tours Through Our Industrial Legacy. Discovery Hall Museum (120 South St. Joseph St., South Bend, Ind. 46601) 32 pp. $3. Studebaker, Bendix, *et al.*

Preservation Plan. Lowell Historic Preservation Commn. (204 Middle St., Lowell, Mass. 01852), 1980. 2 vols., 84/176 pp., illus. The final, refined version of the grand 8-year scheme for Lowell's preservation.

Rail Abandonments. Interstate Commerce Commn. (Avail.: USGPO, Wash., D.C. 20402. Stock No. 031-000-00188-9) 16 pp. $? "To inform shippers and communities of the abandonment process;" incls. list of all state rail-planning agencies.

Rehabilitation Guidelines 1980. Series of 8 booklets by U.S. Dept. of Housing & Urban Dev. on standards, approval, statutes, egress, electrical work, liability, plumbing, and fire ratings of archaic [sic] materials. (Avail. gratis, individually or the set: HUD USER, Box 280, Germantown, Md. 20767).

Kinderarbeid Van Omstreeks 1800 TOT 1914 (Child Labor c. 1800-1914). Museum voor Industriële Archeologie & Textiel (Abrahamstraat 13, B-9000, Ghent, Belgium), Dec. 1971. 135 pp. $? Catalog of exhibit, extensively describing and illus. children at work, all trades; mostly Europe, some U.S. In Flemish.

Leven Onder De Gaslantaarn (Life Under the Gaslight). Museum voor Industriële . . . (as above), 1980. 126 pp., heavily illus. $? Absolutely superb catalog of exhibit. All aspects of introduction, manufacture, technology, and practical & social use of gaslight, mostly on the Continent. In Flemish. A wonderful collection of illus., incl. some color.

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A thoughtful, useful review of Louis C. Hunter's **Waterpower in the Age of the Steam Engine** [SIAN Sept. 79:7] from the economic historian's viewpoint, by Jeremy Atack, appears in *Business History Review,* Autumn 1980:407-09.

REVIEWS

Marianne Doezema, *American Realism and the Industrial Age,* The Cleveland Museum of Art, 1980. 144 pp., illus., $7. ppd. (Available: CMA, 11150 East Blvd., Cleveland, 44106, Attn: Sales Desk).

Industrial archeologists tend to look at the physical remains of America's industrial past with an interest and intensity based on their individual and collective knowledge, which is often technical and highly specific. So, too, do artists observe and record certain structural elements in the environment, often in the form of a landscape or cityscape. Rarely do these outlooks intersect, yet when they do the occurrence is fortunate for both. Art brings to IA a fresh appreciation of its landmarks seen with different eyes; industry offers art a vibrant and powerful field for imagery and interpretation as yet untrammeled by repetition.

That school of painting called Realism and its relationship to the Industrial Revolution in America has been treated in an exhibition and catalogue by Marianne Doezema of the Cleveland Museum of Art titled *American Realism and the Industrial Age.* Considering the representation of factual imagery as one aspect of Realism, Doezema finds such subject matter an important component of American art, pragmatically related to American society. She follows this concern for facts through the works of generations of American Realists, linking their art to the emergence of industrialization through their representation of attitudes about technical progress.

Social and cultural reflections of the increasing dominance of technology come through very clearly in the works selected. Beginning with Bass Otis's "Interior of a Smith" (c. 1815), the crafts soon give way to the factory, cities develop, and canvases fill with smoke from stacks dotting the formerly rural landscape. From the Centennial to the Depression, the images of industrialization, viewed first as progress and later as possession, illuminate our history with power and precision. Stockyards, steel mills, turbines, and trains are represented in prints and paintings by such artists as Thomas Hart Benton, George Bellows, Joseph Pennell, and Charles Sheeler.

More than fifty works of art in the exhibit are illustrated and discussed in the catalogue, along with twenty-odd comparative illustrations chosen to further enlighten the text. The quality of the reproductions is excellent. Doezema's text is a skillful aesthetic criticism with social history, tempered by her understanding of the Realist tradition and its illumination of our industrial past. The works of art are blockbusters one and all.

A second recent offering in this field is Susan Danly Walther's *The Railroad in the American Landscpae: 1850-1950* (Wellesley College Museum, 1981), $12.50, Address: Wellesley, Mass. 02181. Here, as might be expected, trains appear bisecting canvases and billowing smoke in some otherwise traditional 19th-c. landscapes. Spectacular photographs by A.J. Russell of railroad buildings in the West suggest the human effort involved in that endeavor, as well as the scale and splendor of the right of way. There are more than one hundred illustrations, very well reproduced, and three essays place the railroad in the eastern landscape, 1850-1900; the western landscape 1865-1900; and the industrial landscape 1900-1950. A superb introduction by Leo Marx evokes with beautiful imagery the power of the railroad and its influence on our imagination. *Helena Wright, Merrimack Valley Textile Museum.*

U.S. Dept. of the Interior, Heritage Conservation & Recreation Service, Technical Preservation Services Divn., *Metals in America's Historic Buildings,* Wash., D.C.: USGPO, 1980, 170 pp., 180 illus., $5.50 (Available: Supt. of Docs., Wash., D.C. 20402; GPO Stock No. 024-016-00143-5).

This is a welcome addition to the growing body of information about materials convervation. Masonry and wood have received most of the attention in recent years, but as individuals engaged in conservation work quickly discover, architectural metals, in both structural and ornamental use, comprise a significant amount of this country's historic building fabric.

Part I, "A Historical Survey of Metals," by Margot Gayle and David W. Look [both SIA], contains a chapter on each major architectural metal, with data and many helpful photographs showing the range of uses for the metal. The information on simple identification techniques for each metal, contained here and in Part II, is helpful, as correct identification is vital in determining appropriate conservation procedures. Part I deals not only with the more common architectural metals such as lead, tin, copper and its alloys, and iron, but also with zinc, nickel and its alloys, and aluminum.

Part II, "Deterioration and Methods of Preserving Metals," by John G. Waite [SIA], begins with an explanation of the causes of metal deterioration, starting with a detailed discussion of the most common problem, corrosion. In individual chapters, each devoted to a single metal and its various forms and alloys, specific conservation techniques are explained. The extensive use of case studies is effective. Two tables, "Methods of Surface Preparation of Iron and Steel for Painting" and "Types of Paint Used for Painting Metal," are particularly useful for individuals involved in iron and steel conservation. The photographs in this section are numerous, well-identified, and of good quality. Lacking are line drawings to explain in detail what is actually occurring in the examples of deterioration. The use of substitute materials is addressed.

The extensive bibliography, containing many fine 19th-c. books and periodicals, alone is worth the price of the book. *Judith Kitchen, Ohio Historic Preservation Office*

William Shank, *Historic Bridges of Pennsylvania,* 3rd ed., York, Pa.: American Canal & Transportation Center, 1980, 70 pp., illus., $3.00 ppd. (Available: AC&TC, 809 Rathton Rd., York, Pa. 17403).

First published in 1966, Bill Shank's engaging treatise on the historic bridges of his home state has proven to be an enduring seller. This latest edition includes new information on 20th-c. bridges and new illustrations. The book provides data on a wide range of bridge builders and bridge types and, although some historic bridge aficionados might quibble over a few details, the text is well-written and well-organized. The numerous photographs are nicely reproduced, but they have all been printed in a blue tone that unfortunately only serves to detract from their clarity. Regardless, this small volume will be an excellent addition to any industrial archeologist's historic bridge library. *Donald C. Jackson, Historic American Engineering Record*