

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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RARE IA GEM MAY NOT SURVIVE

Gas pains in Oberlin



Oberlin's rare 1889 brick gasholder, the only one west of the Alleghenies. It is threatened by a controversial shopping-center project. *Photo courtesy of David Perrotta.*

OBERLIN, Ohio. This town of 8,500 and home to Oberlin College is engulfed by an escalating public battle over historic preservation and appropriate economic development.

At the center of the storm is a circular brick gasholder house built in 1889 for a coal-gas operation to light city streets and private homes.

A local developer threatens to demolish the gasholder and historic railroad structures on the eight-acre site to make room for a 60,000-sq.-ft. strip shopping center—the first development of this sort in Oberlin.

The gasholder is similar to, although much smaller than, the Troy, N.Y., gasholder that serves as the SIA logo. Although it was designated a local historical landmark in 1975, it is not on the National Register. Representatives from the Ohio Historic Preservation Office have testified as to its eligibility.

Only 13 other gasholders are known to survive, and all are in New England [see Mary E. Pyne, "New England's Gasholder Houses, *IA* 15 (1989): 54-62]. The Oberlin gasholder appears to be the only one of its kind in the entire trans-Appalachian west.

The developer of the proposed shopping strip announced his plans in December and has stated that, despite its designation as a local landmark, he was unaware of the structure's historical significance until after his plans were well under way. The struggle to save the gasholder has become a major battle involving the developer and city's Historical Preservation Commission (HPC), city manager and council.

As the crisis has escalated and news of the gasholder's significance has spread, individual SIA members have commented on the building. Speaking to members of the HPC, city council, and preser-

vation organization have been Historic American Engineering Record Chief Eric DeLony, SIA Director and Ohio resident Carol Poh Miller, and *SIAN* Editor Bob Frame.

In addition to the concerns raised by historic preservationists, the proposed shopping strip has given rise to expressions of concern from people in the primarily low-income, primarily African-American residential area which borders the site. Most residents say that they believe the shopping strip will destroy their neighborhood. Petitions opposing the project have been circulated, and attendance at city council meetings has broken all records.

Many in Oberlin have questioned the true economic value of strip development, charging that strips will destroy the downtown business district. A full-blown debate is now under way over what kind of growth best serves the economic and aesthetic needs of the community.

An ad hoc citizens' group has formed under the name of Citizens for Appropriate Development. In addition to initiating a suit for an injunction against release of the city demolition permit, CAD members have begun publishing the *Gashouse Gazette* and financed a visit from a Minnesota preservation consultant to testify before city council as to the purpose and value of conducting a comprehensive re-use study.

CAD hopes to bring about an alternative mixed-use development, which would give the developer a fair return, preserve the historic



Railroad freight-house located on the same development site with the gasholder house. *Photo courtesy of David Perrotta.*

structures on the site, and allow Oberlin to have economic growth in a way that doesn't intrude upon the residential neighborhood.

This 101-year-old gasholder could easily be lost. Letters from SIA members testifying to the gasholder's significance of the structure and the value of studying possibilities for its re-use are urgently needed, and should be addressed to Citizens for Appropriate Development, M.P.O. Box 95, Oberlin OH 44074 (216-775-4561). Financial contributions to help cover legal and publicity expenses also are welcomed.

D.P.

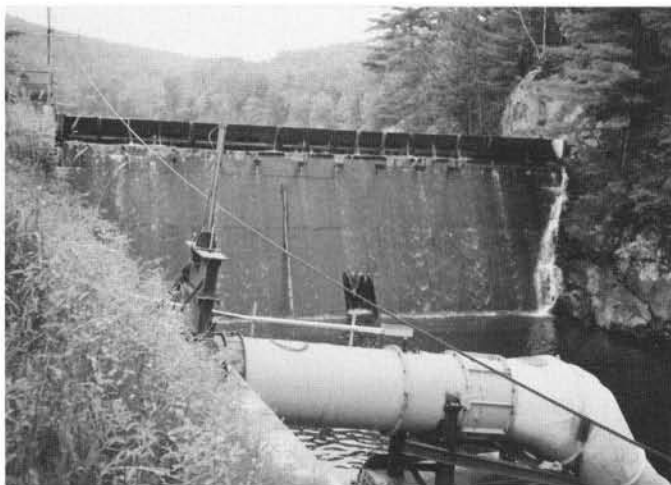
The Paper Mill Power Plant

The energy crunch of the 1970s sparked a revival of interest in small hydro-electric power plants, especially in New England. The Connecticut River had been fully developed by the large public utilities, but old deactivated plants and undeveloped sites on tributaries offered additional power sources. A number of them have been developed and make significant contributions to meeting local power needs.

One such plant is located in an unused paper mill on the Wells River near where it joins the Connecticut River. The gravity dam and mill were built around the turn of the century. A single water turbine in the mill's basement supplied mechanical power to the paper-making machinery. The mill was converted to electricity after World War II, and the plant ceased operation in the 1970s, when it was no longer competitive and there was increased concern over stream pollution.

The 1987 hydro-electric project required reinforcement of the dam, classed as F.S.3 (significant hazard) despite the fact that it had survived the New England hurricane and floods of 1927. In order to meet government safety requirements, post-tensioned rock bolts were installed in the crest of the dam, tying it to the underlying rock. Other improvements included a new trash rack and inlet to the five-ft. penstock, and a modern substitute for flash boards.

On the crest of the dam are hinged gates, raised and lowered by inflating or deflating an airbag stretching across the full width of the dam—far superior to flash boards. When the crest gates are fully



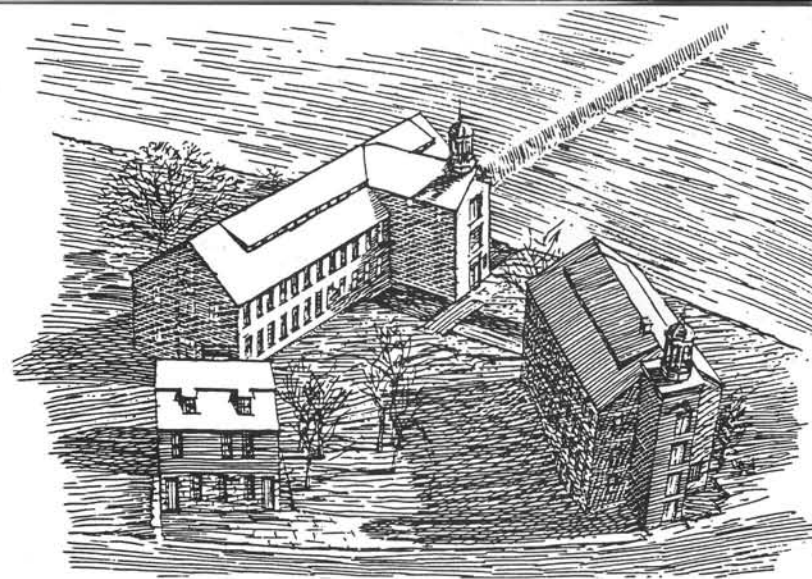
Paper-mill dam at Wells River, Vt. W.J. Ellenberger photo.

raised, 32 ft. of head are available at the two hydraulic turbines in the basement of the paper mill building. One turbine is a Leffel double-runner driving a Westinghouse 250-kW generator; the other is a Hydropac fixed-blade turbine driving a Kato 60-kW generator.

Of special interest is a third turbine in a branch off the penstock between the trash rack and the mill building, where a head of 20 ft. is available. The unit consists of an Essex hydraulic turbine driving a 120-kW Louis Allis generator. It runs continuously to pass the minimum quantity of water in the stream below the dam bypassed by the penstock. All three generating units run unattended but receive periodic inspection and maintenance. The units are manually started and stopped but the generated output depends upon water flow in the river.

The output of the three generators is fed to a transformer bank which raises the voltage to the level of the local public utility distribution system. Each generator has the usual relays, electrical protection, and auxiliaries. The output is metered at the point of connection to the utility system. This installation is an excellent example of using the potential from a river having a basin area of 100 sq. mi. and good flow characteristics.

W.J.E.



Stamp features Slater Mill

On May 29, the U.S. Postal Service issued a Rhode Island statehood bicentennial commemorative stamp (*below*) featuring the Old Slater Mill, the nation's first successful textile factory and centerpiece of the Slater Mill Historic Site in Pawtucket, R.I. 1990 also is the 200th anniversary of Samuel Slater's successful yarn production in Pawtucket and America. The stamp was unveiled during a formal ceremony at the museum.

To celebrate this historic occasion, Slater Mill Historic Site has produced a series of special commemorative cachet envelopes with the Slater Mill stamp and the coveted "First Day of Issue, Pawtucket, RI, May 29, 1990" cancellation. The souvenir cachets feature a unique "bird's eye view" of the site (*above*) drawn by noted illustrator and museum trustee David Macaulay, author of *The Way Things Work and Mill*, which recounts Slater Mill's early history.

The special Macaulay covers are available by mail order at \$4 each or \$35 for ten, postpaid. Orders placed before mid-June are appreciated. Also available is a 12 x 18-in. poster version of the Macaulay illustration, with or without the stamp and cancellation. All sales benefit Slater Mill preservation. For info. and orders, contact Steve Kasierski, SMHS, POB 727, Pawtucket RI 02862 (401-725-8638).



Miami, Ohio, Conservancy IA featured in *Timeline*



MIAMI, OHIO, CONSERVANCY DISTRICT. *Left:* Concrete-block manufacturing plant, Dayton, 1919. *Right:* Building flexible concrete mats, Great Miami River, 1920. Photos courtesy Dept. of Archives & Special Collections, Wright State Univ.

The Miami Conservancy District was created within the drainage area of the Great Miami River in southwestern Ohio in the wake of the disastrous flood of March 1913. A four-day rainfall of between nine and eleven inches throughout the region caused a flood of Biblical proportions. In response, private citizens and public officials combined efforts to form a conservancy district that resulted in one of the first flood control projects in the U.S. Under the direction of Arthur E. Morgan, later chairman of the Tennessee Valley Authority, the Miami Conservancy District led to myriad engineering projects, including the first use of earth dams to create retarding basins for holding and gradually releasing floodwaters. The entire system was

designated a Civil Engineering Landmark in 1972 by the American Society of Civil Engineers.

The construction history of the district is included in a photo essay in the Oct.-Nov. 1989 issue of *Timeline*, published by the Ohio Historical Society. The article, "They Gathered at the River," includes 24 images, two of which are reproduced here, from the extensive photo archives maintained at Wright State Univ., Dayton. All phases of the construction are included, from the initial surveys to the completion of the work in the early 1920s. Info.: *Timeline*, OHS, 1985 Velma Ave., Columbus OH 43211 (614-297-2414).

D.A.S.

Anaconda Copper Archive opened

Sometimes events coincide so neatly that one wonders if they weren't planned. The SIA Fall Tour of Anaconda operations in Butte, Mont. [*SIA* Winter 89:1-5], was followed by Daniel N. Miller Jr.'s article in the Feb. *Mining Engineering* reporting that the archives of the Anaconda Copper Corp. are now in the custody of the Int'l Archive of Economic Geology, a section of the Univ. of Wyoming's American Heritage Center. The files are now open to the industry and the public, albeit on a fee basis.

The Anaconda collection comprises 1.8 million documents, including: 18,000 geologic reports of conditions at specific mines, 6,500 maps dealing with undeveloped properties and mining prospects, and 10,000 items containing geological, geophysical, drilling, engineering, and commodity data from the U.S. and 110 other countries.

An on-line database inventory provides access by country, state, county, mine/project, author, and date. Printouts of customized searches can be generated. Future plans include regional inventories available for review at selected regional offices of the U.S. Bureau of Mines and the U.S. Geological Survey.

Financial support for the archive came initially from Arco Coal, Inc. It is maintained and operated as a self-supporting system by the university through user fees and contributions from the mineral industry. Currently, access is limited to members only, with occasional "one time only" research requests. Fees are charged for searches and reproduction services.

For info. on the Anaconda Archive and the Int'l Archive of Economic Geology, contact Daniel N. Miller, director, or Brigid MacGowan, archival asst., IAEG, POB 3924 University Sta., Laramie WY 82071 (307-766-6506 or -3704).

M.W.DeL.

Money shortage halts British "pneumatic rwy" IA project

An IA project to uncover the remnants of the station of the world's first pneumatic railway in Crystal Palace Park was prematurely halted early this year when funds ran out, according to the *Daily Telegraph*. The problems caused by a steam locomotive's smoke and fumes in underground travel were solved by engineer Sir Thomas Rammel, who designed a pneumatic railway where the cars were blown and sucked along a tunnel, using steam-generated compressed air.

Rammel built a prototype pneumatic railway between the Sydenham and Penge gates of the park in 1864. A single carriage was ringed by wood and horsehair to form an airtight seal with the tunnel wall. For sixpence, the public could enjoy a smooth 50-second journey.

A shortage of cash led to the railway being dismantled and the location of its remains was unknown until rediscovered last summer by a Berlin-born archeologist, the Marquis du St. Empire. Beginning in Aug., he put 5,000 of his own money into the project, whose ten-member team has now been reduced to three, including the marquis.

On Christmas Eve, the marquis found a retaining wall which would have led to the station platform and the engine shed. He believes that the remains of a second station were destroyed when a tennis court was built nearby.

The Crystal Palace prototype would have been the first step in a plan to build a commercial pneumatic underground line running for a half-mile beneath the Thames from Great Scotland Yard to York Road. By 1866, the brick tunnel from Whitehall to the river and parts of the river tunnel had been completed, but the backers ran into debt and the venture was called off.

R.J.C.

Hugh Moore Museums' recording projects tackle Pa., N.J. IA

Bethlehem Steel Drop Forge

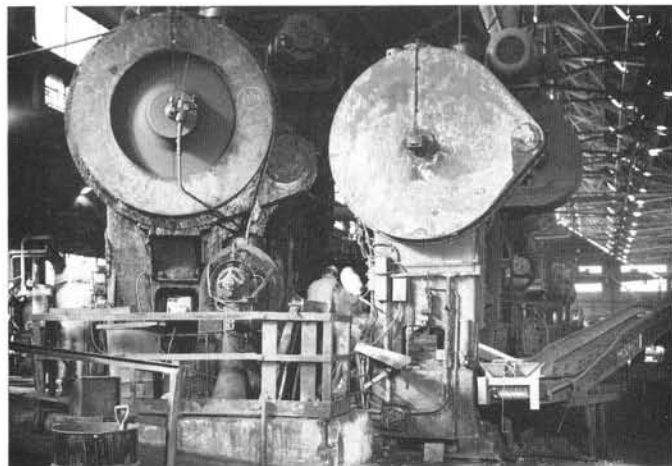


BETHLEHEM
STEEL, DROP
FORGE DEPT.

Left: The 2,500-ton
Ajax mechanical
forging press.

Below: From left to
right, the Ajax forging
press, the 300-ton
Minster trimming
press, and discharge
conveyor.

Joseph Elliott photos.



The recording of the Bethlehem Steel Corp.'s Bethlehem, Pa., plant continues to be a primary activity of the Hugh Moore Historical Park & Museums in Easton. Last year a major effort was launched to record the plant's Drop Forge Dept. before operations ceased in Oct. Permission to photograph the complete cycle of the Drop Forge operation was obtained through the courtesy of Lynn Rankin and other members of the Beth-Forge division management.

The record photos were taken by Joseph Elliott of Muhlenberg College, Allentown, and Jim Mitchell. Elliott completed a series of 4 x 5-in. b/w views while Mitchell recorded the operation on slides. Through the efforts of Bethlehem Steel's Video Production Dept., the forge was documented in 3/4-in. video format.

HMHP&M also obtained copies of all existing plans of the Drop Forge's production machinery and copies of its product promotion photos. Among the significant examples of the forgings that it produced, and which were collected, were materials related to the cylinders that it produced for the Wright Whirlwind radial engine that powered Charles Lindberg's *Spirit of St. Louis* on its epic 1927 Atlantic flight.

Among the machinery recorded was a 2,500-ton Ajax mechanical forging press; a 300-ton Minster trimming press; a gas-fired, 14-ft., Selas circular tunnel-type rotary-hearth furnace, with attached charging manipulators and charging-discharging conveyors. All of this production machinery was installed during a 1958 upgrading of the Drop Forge.

Mt. Hope Iron Mine

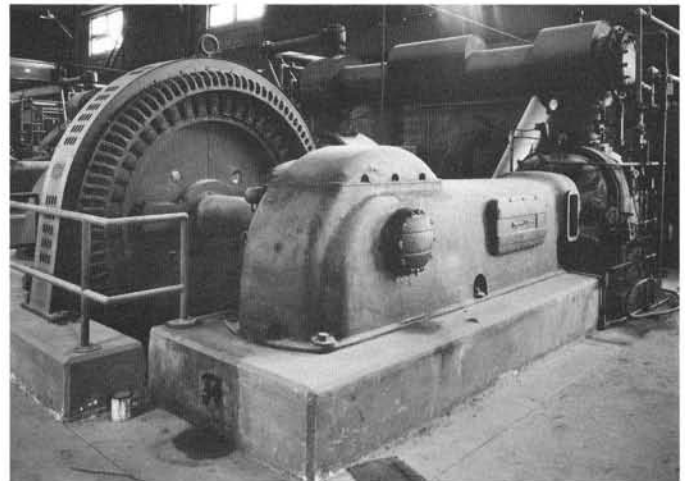


MT. HOPE MINE

Right: Nordberg mine hoists and
control console.

Below: Ingersoll Rand reciprocating
air-compressor.

Joseph Elliott photos.



The historic Mt. Hope iron-ore mine in Morris County, N.J., recently was recorded as part of HMHP&M's continuing effort to record significant Pa. and N.J. sites that are related to the development of the iron and steel industry.

Iron mining at Mt. Hope began in 1772 to supply a charcoal blast-furnace. Since the Mt. Hope ores proved to be among the richest of N.J.'s magnetite deposits, mining activity continued after the 1825 shutdown of the furnace. In 1853 the Mt. Hope mines were purchased by the N.Y. financier Moses Taylor. Since he also owned a controlling interest in both the Delaware, Lackawanna & Western RR and the Lackawanna Iron & Coal Co., much of the magnetite mined at Mt. Hope was shipped through Scranton, Pa., to be utilized in large anthracite-fueled blast furnaces.

In 1899 the Empire Steel & Iron Co. of Catsauqua purchased the Mt. Hope mine. For the next two decades, ore from Mt. Hope was used by Empire's Lehigh Crane Iron Co. In 1922 Mt. Hope fell under the control of Replogle Steel Co., and in 1924 it was purchased by the Warren Pipe & Foundry Co. The Mt. Hope mine remained in operation until 1966. Under the ownership of the Halecrest Corp. an abortive attempt was made to restart production in 1976-77.

The virtually intact facilities of the Leonard Shaft at the Mt. Hope mine are among the most significant monuments to the once great underground iron-mining industry of N.J. During the 1940s and '50s these facilities were erected to modernize the Mt. Hope mine. The recording project is being conducted by Joseph Elliott and Lance Metz [SIA], historian for HMHP&M, assisted by SIA former president Thorwald Torgersen and Ken Cramer of Halecrest Corp. The project also involves the copying of all historical records and photos at the site. All record materials from this project are housed at the HMHP&M Archive & Support facility in Easton.

For additional info. on all recording projects, contact Lance Metz, HMHP&M, 200 S. Delaware Dr., POB 877, Easton PA 18044-0877 (215-250-6700).

Detroit IA update No. 3: It's good and bad news for Motown

Since my last report on Detroit's diminishing IA collection [SIAN 88:2], the pace of plant closings and demolition has slackened a bit and there are more hopeful indications that developers are discovering the economic advantages of rehabilitation. General Motors is converting parts of the long-closed Cadillac Clark Street plant (1921) into offices, although the Fisher Body Fleetwood plant (1917-22) is mostly demolished. The Michigan Central RR Station (Warren & Wetmore, 1913), closed in 1986, remains unused. Even worse, the developer who was in the midst of converting the Ireland & Matthews Mfg. Co. complex (1892-1907) into apartments went bankrupt six months into the project.

Detroit has suffered two additional closings of major IA sites in the last few years. In early 1988, the Detroit Edison Co. mothballed its Connor's Creek Generating Plant (1914, 1951), a tour stop during the 1980 SIA Annual Conf. This huge coal-fired operation is a local landmark known as the "Seven Sisters plant" because of its seven stacks. The "Two Brothers" arrived in 1951.

Chrysler Corp. closed its venerable Jefferson Avenue plant (1907-34) this Feb., about two years before the replacement facility will start production. The Jefferson plant last assembled the doomed Omni/Horizon twins. It was easily the oldest automobile assembly plant operating in the U.S., with reinforced-concrete segments built for the Chalmers Motor Car Co. in 1907, designed by Albert Kahn. This vacant plant has a dim future.

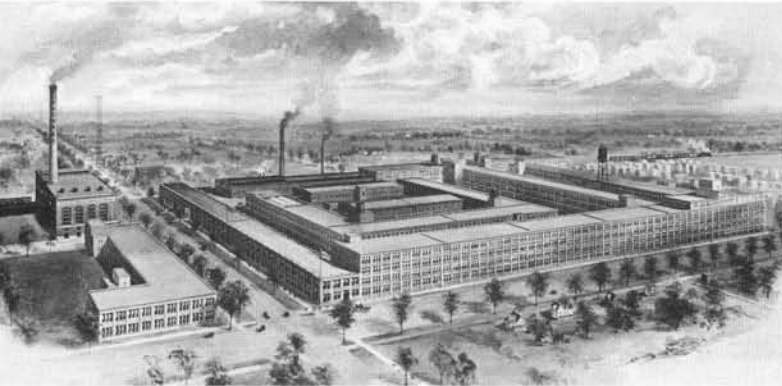
All is not doom and gloom for Detroit's IA. The rehabilitation of the former Parke-Davis pharmaceutical complex by the Stroh Brewery Co. progresses, despite Stroh's problems in the beer business. The most recent phase of this project, the conversion of the

former laboratory buildings (1902, 1941) into a luxury hotel, concluded with the opening of the hotel last Sept. The Albert Kahn addition of 1941, called the Animal House because it housed thousands of rabbits and mice, will treat its new guests more kindly. The conversion of another Detroit drug center, the Frederick Stearns & Co. factory, into luxury apartments was completed last Oct.

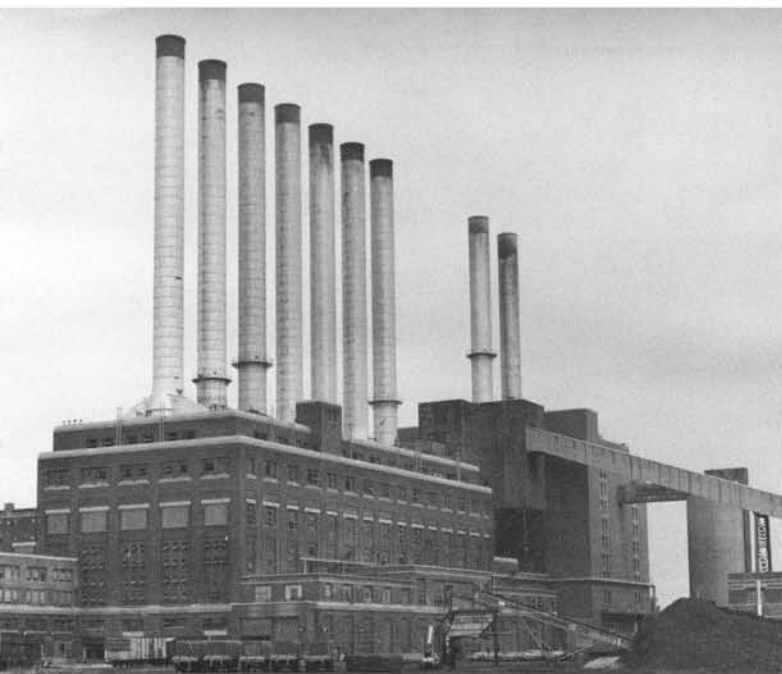
Two substantial new rehab projects are under way. The massive six-story D.M. Ferry & Co. seed warehouse (1887, Gordon W. Lloyd) near Detroit's Greektown, reopened in 1989 as an office building. The proposed reuse of the Packard Motor Car Co. complex (1903-c1920), another SIA tour stop in 1980, is ambitious. The new owners, Bioresource Inc., have dubbed the property the Packard Technology Center and already have converted the two-story Packard HQ building into offices for various research and consulting operations. They plan to convert this sprawling two-million-sq.-ft. complex, now used mainly for warehousing, into a research center. Three cheers and good luck, boys!

The most important preservation battle (war?) under way in the Motor City concerns the fate of our beloved Tiger Stadium, AKA Navin Field and Briggs Stadium (1912, 1923, 1936). The Forces of Evil, mainly Domino's pizza king and Tigers owner Tom Monaghan, along with Detroit's Mayor Coleman A. Young, want a new stadium, possibly—horrors!—to be domed. The well-organized Forces of Good, the Tiger Stadium Fan Club, have attacked these plans pretty effectively, at least for the moment. The final outcome of this struggle, still in the early innings, is not at all clear. This reporter will provide box scores, with analysis, in a later issue. Stay tuned.

C.K.H.



Top left: Packard Motor Car Co. in 1910. Top right: Chalmers Motor Car Co. (Chrysler Jefferson Ave. plant), about 1923. Below left: Connors Creek Generating Plant, 1913-14. Below right: The "Animal House," Parke-Davis pharmaceutical complex, 1941. Photos courtesy Charles K. Hyde.



NOTES & QUERIES

THE "1990 ARCHAEOLOGY FIELD SCHOOL," sponsored by the Univ. of Vermont, will be held June 25-Aug. 3 at Mt. Independence in Orwell, Vt. Archeologist David Starbuck, editor of *IA, The Journal of the SIA*, will conduct the school. Mt. Independence is considered to be one of the most intact major military sites of the Revolutionary War period. In 1776-77 it was linked by a massive floating bridge to Fort Ticonderoga, N.Y., and successfully blocked the movement of British shipping south on Lake Champlain. The program includes credit for Anthropology 200, Field Work in Archaeology. Cooperating institutions include the Vt. Div. of Hist. Pres., the Fort Ticonderoga Assn., and the Town of Orwell. For registration and fee info., contact Archaeology Field School, Continuing Ed., Univ. of Vt., 322 S. Prospect St., Burlington VT 05401-3505 (802-656-2085).

1991 SULLIVAN FELLOWSHIPS. Applications are solicited for 1991 William F. Sullivan Fellowships at the Museum of American Textile History, North Andover, Mass. The MATH trustees are particularly interested in aiding doctoral students who are writing dissertations and young historians who are preparing their first books. Topics of special interest include but are not limited to the following: history of cloth-making techniques in the U.S.; role of the corporation in community development; impact of the industry on the regional economy; architecture; engineering; and labor systems. Biographies and institutional histories are also of interest. Those interested should first contact MATH Director Thomas W. Leavitt and describe the nature and scope of the research, after which a formal application may be submitted. Applications will be received until Aug. 31 for projects beginning no earlier than Jan. 1, with final decisions announced about Dec. 1. Info.: Editorial & Research Committee, MATH, 800 Massachusetts Ave., North Andover MA 01845 (508-686-0191).

CANIND71 DATABASE COMING ON LINE. The Canadian Industry in 1871 project (CANIND71), based at the Univ. of Guelph since 1982, has made machine-readable all the manuscript data for over 45,000 industrial establishments recorded in the first Census in Canada in 1871. The work has been partly supported by funds from the Social Sciences & Humanities Research Council. The project methodology has been designed to make this information accessible in systematic, standardized and readily retrievable format, to support a wide range of academic and applied historical research. The four provinces enumerated were New Brunswick, Nova Scotia, Ontario, and Quebec. Includes transcription of all data from the schedules in the natural terminology and language that were used by the original enumerator. Added to the basic records are precise geographical references and Standard Industrial Classification codes to provide points of access to individual establishments as well as the capability of aggregating data for places and industry types. Accessible in various hardware and software environments. Price not currently available, but there will be a substantial discount for orders placed before Sept. 30.

The following reports on the project and the data are being published: 1. *Industry in Ontario Urban Centres, 1870: Accessing the Manuscript Census* (60p); 2. *Water Wheels & Steam Engines: Powered Establishments in Ontario* (53p); 3. *The Ontario Urban System at the Onset of the Industrial Era, 1871* (65p); 4. *Creating CANIND71: Procedures for Making the 1871 Industrial Census Machine-Readable* (70p); 5. *Glossary of Industrial Language* (58p); 6. *French-English Dictionary of Industrial Language* (31p); 7. *Standard Industrial Classifications Applied to Historical Data: the Case of the 1871 Industrial Census* (70p); 8. *Industrial Leaders: The Largest Manufacturing Firms in Ontario, 1871* (75p); 9. *The Hum of Industry: Millers, Manufacturers & Artisans of Wellington County* (70p); 10. *Boundaries of Canadian Census Units* (50p). Info.: Gerald & Elizabeth Bloomfield [SIA], Dept. of Geography, Univ. of Guelph, Guelph, Ontario N1G 2W1, Canada.

3rd HISTORIC BRIDGES CONF. is scheduled for Oct. 5 at the Radisson Airport Hotel, Port Columbus, Columbus, Ohio. It is co-sponsored by the Ohio Hist. Pres. Office of the Ohio Hist. Soc. and the Civil Engineering Dept., Ohio State Univ. Presentations include: "Rehabbing Historic Stone & Concrete Bridges," by Richard C. Kreppeel; "Structural Evaluation of Historic Concrete Bridges," by Emory Kemp [SIA]; "Repair of Historic Concrete Bridges," by Carolyn L. Searls; "Considerations in Concrete Rehabilitation," by Russell S. Fling; "Bridges, Canals & Aqueducts," by Abba Lichtenstein; "Early Concrete Patents: Useful & Otherwise," by Howard Newlon, Jr.; "The Consulting Engineer & Early Concrete Bridges in Calif.," by John W. Snyder; "Set in Concrete: Zanesville's 1902 Y Bridge," by David A. Simmons [SIA]; and a panel of county highway engineers, moderated by Eric N. DeLony [SIA]. Registration of \$75 (\$95 after Sept. 14) includes lunch and a copy of the proceedings. Info.: OSU Dept. of Civil Engineering, Historic Bridges Conf., 470 Hitchcock Hall, 2070 Neil Ave., Columbus OH 43210-1275 (614-292-7339).

"BY HAMMER & HAND: N.Y. TRADES TRANSFORMED, 1788-1842," is an exhibit examining the history of N.Y.C.'s artisans and skilled workers. Through Sept. at South Street Seaport Museum, 207 Front St., NY NY 10038 (212-669-9430).

"GETTING FROM HERE TO THERE: A PICTORIAL HISTORY OF ROADS & BRIDGES," is a travelling exhibit prepared by the Mont. Dept. of Hwys. and the Mont. Hist. Soc. for a two-year tour of the state. It includes about 40 b/w photos documenting the history of road and bridge construction and maintenance. Several members of the Klepetko Chapter SIA worked on the project for MDH and MHS. Info.: Mitzi Rossillon [SIA], MDH, Environmental Unit, 2701 Prospect, Helena MT 59620 (406-444-6258).

"LA VIEILLE MINE: THE ENDURING COMMUNITY" is a travelling exhibit depicting rural French-American mining communities of Washington County, Mo., that have maintained French identity and traditions for at least 200 years. Info. & availability: Ray Brassieur, Cultural Heritage Center, Univ. of Mo., Conley House, Columbia MO 65211 (314-882-6296).

"THE RAILROAD ENVIRONMENT" (June 23-24) is one of five courses offered as part of the Univ. of Vt.'s Historic Preservation Summer Institute. Others are "Restoring Old Houses" (May 31, June 2, 5), "Environmental Simulation Workshop" (June 8-9), "Conserving Historic Farm Buildings" (June 11-15), and "Conserving the Countryside" (July 23-27). All courses emphasize fieldwork. Info.: UV Summer Session, 322 S. Prospect St., Burlington VT 05401 (802-656-2085).

"THE YEAR OF THE TUNNEL" is the theme of the Michigan Railroad History Conference, scheduled for Aug. 25 in Port Huron. It will celebrate the centennial of the completion of the St. Clair River Tunnel linking the Grand Trunk Western and the Canadian National railways. Paper presentations will chronicle the development of Mich. RRs, their impact on the economy and life of the state and its people, and historic preservation. Info.: Year of the Tunnel Committee, The Museum of Arts & Hist., 1115 6th St., Port Huron MI 48060, or the Sarnia Historical Society, POB 2611, Sarnia, Ontario N7T 7V8.

"IRON" is a new exhibit at the State Museum of Pennsylvania in Harrisburg. It provides a comprehensive view of Pa.'s role in the industrial development of the U.S. Info.: Pa. Hist. & Museum Commn., Box 1026, Harrisburg PA 17108-1026 (717-787-4978).

WE-MUST-BE-GETTING-OLD DEPT. The Amtrak Historical Society was founded in Jan. and will publish a quarterly, *The Amtraker*. Membership is \$15/yr. Info.: AHS, POB 1019, St. Johns AZ 85936. The same group reportedly is forming a Conrail historical society.

NOTES & QUERIES

IA IN THE ARCHIVES. New accessions at the Wisconsin State Historical Society include the following: papers (1898-1939) of **Marshall W. Hanks** (1875-1952), an electrical engineer and inventor, primarily concerning his work for the Westinghouse Company on the development of the **Nernst Lamp**, a street light; records (1863-1952) of the **Island Woolen Co.**, a family-owned woolen mill in Baraboo, documenting fabric design, production processes, mill operations, labor issues, the physical plant, sales and marketing, and Frank Lloyd Wright's little-known observation platform for the company's dam on the Baraboo River; records (1911-87) of the **West Bend Co.**, mfr. of aluminum cookware, small appliances, outboard motors, military supplies, and other products. West Bend items include photos and films showing production processes.

A \$140,000 grant from the Nat'l Endowment for the Humanities enabled WSHS to begin a massive preservation project in Jan. involving three IA-related collections: the **Cyrus H. McCormick Family & Business Records**, the **Singer [sewing machine] Manufacturing Co. Records**, and the **Wis. agricultural and manufacturing schedules of the 1880 census**. The three-year project will produce some 1,444 reels of microfilm, including all the census records and deteriorating portions of the other two collections. Info.: Archives & Research, WSHS, 816 State St., Madison WI 53706 (608-262-7304)

A NAT'L COALITION FOR RR PRESERVATION was launched at an organizational meeting in Strasburg, Pa., last Oct. The idea was originally suggested in an editorial by Mark Smith of *Locomotive & Railway Preservation* [SIA], and the initial get-together was chaired by William Withuhn. The initial goal is to build a forum where the leading RR historical societies, tourist RRs, RR museums, RR station preservationists, locomotive restoration groups, and other related organizations can join together to promote the preservation of the RR heritage. Info.: William Withuhn, NMAH, Smithsonian Inst., Wash. DC 20560.

SWEET SOUNDS OF IA AT SLOSS. Sloss Furnaces Nat'l Historic Landmark has received a grant from the Ala. State Council on the Arts to preserve the culture of Birmingham's labor through song. Recording labor songs native to the city will provide a fuller understanding of Birmingham's industrial heritage. The forthcoming album will contain a wide range of songs typical of labor and the labor movement, including songs of protest, organization, and unionism, as well as songs of work. A folklorist from Bowling Green State Univ and a select group of recognized folklorists and labor-music experts will advise Sloss on the project. Info.: Randall Lawrence [SIA], Director, Sloss Furnaces, Birmingham AL 35222 (205-324-1911)

TEACHING HISTORICAL ARCHEOLOGY. As part of an examination of the educational setting of historical archeology in America, Robert Schuyler is collecting data on the general orientation and technical organization of all courses in historical archeology. He is seeking the following from anyone who teaches (or has taught) such classes, either graduate or undergraduate: (1) class outline, (2) class syllabus, (3) reading list, (4) other available items considered important. Schuyler is interested in both general courses and more specific offerings, such as "Industrial Archeology," "Archaeology of Historic New England," "Historic Artifacts," "Historical Archaeology Laboratory," and "Historical Archaeology Fieldschool." If a class has been taught over several years, it would be helpful to send the above materials for the first offering and any intermediate offerings that show major changes between the first and current courses. Robert L. Schuyler, Univ. Museum, Univ. of Pa., Phila. PA 19104.

ARCHEOLOGY LEGAL QUERY. The National Park Service, Interagency Resources Div., is beginning a project to update the Fall 1980 Special Issue of *11593*, "Legal Tools to Preserve Archeological Sites" by Geoffrey M. Gyrisco. Archeological protection needs and approaches have changed in the past decade. For example, there are increased efforts to combat looting, laws on repatriation and reburial have been adopted, archeological sites face intensified pressures from privately funded projects not subject to Section 106 compliance, and an increasing number of local communities are establishing local archeology programs and need guidance on resource protection. So that the article's revision can be as current and comprehensive as possible, information is requested on legal tools now used to protect sites, including: state and local legislation; innovative applications of legislation not normally associated with archeological protection; and articles, case studies, and written program procedures that show how the laws actually work. Send info. (copies of documents preferred) and contact name, address, & phone to Susan L. Henry, IR Div. (413), NPS, POB 37127, Wash. DC 20013-7127 (202-343-9505).

CANAL HISTORY CALL FOR PAPERS. The Hugh Moore Historical Park & Museums, Easton, Pa., is soliciting paper proposals for the 10th Annual Canal History & Technology Symposium to be held in cooperation with Lafayette College in March 1991. The full text of each paper will be included in the *1991 Canal History & Technology Proceedings*. Eligible topics include canal history, folklore and technology, anthracite coal mining, iron and steel production, cement production, and water power. Info.: Lance E. Metz [SIA], Editor, HMHP&M, POB 877, Easton PA 18044.

CANADIAN RR HISTORICAL ASSN. 1990 ANNUAL MEETING, Aug. 24-Sept. 3, will be hosted by three western divisions: Crowsnest & Kettle Valley (Cranbrook), Selkirk (Revelstoke), and Calgary & South-Western. Also taking part will be the newly formed Nelson Electric Tramway Society. Seminar topics include steam operation in the 1990s, passenger car restoration, railway signals, and museum planning. Info.: CRHA Conf. '90 Committee, 632 Oakwood Place S.W., Calgary, Alberta T2V 0K5.

NEH OPENS FELLOWSHIPS FOR 1991-92. Fellowships from the Nat'l Endowment for the Humanities support six to twelve months of full-time, uninterrupted study and research that will make significant contributions to the humanities. Important changes for this year include an increase in the maximum stipend to \$30,000, applicable to any award between six and twelve months. While NEH Fellowships cannot be used to catalog or organize collections or to prepare exhibitions, they can be used to work on books, monographs, series of articles, series of public or scholarly lectures and presentations, and interpretive catalogs to accompany exhibitions. Work which is not eligible for fellowship support may, however, be eligible through programs in the Div. of General Programs, the Div. of Research Programs, and the Office of Preservation Programs.

There are two competitions for NEH Fellowships. One is for scholars in undergraduate colleges and universities, for independent scholars, and for scholars associated with museums, libraries, historical societies, or institutions having no connection with the humanities. The second program is for scholars in Ph.D.-granting institutions.

Beginning this year, individuals who have recently held major fellowships or grants are now eligible to apply for an NEH Fellowship, although preference may be given in the selection process to applicants who have not recently received a major grant. June 1 is the deadline for NEH Fellowship applications for 1991-92.

There are additional grant programs. The "Travel to Collections" program supports travel to use research collections and helps to defray expenses such as transportation, subsistence, lodging, and photoduplication. The stipend is \$750. Application deadlines are July 15 for travel after Dec. 1; Jan. 15, 1991, for travel after June 1, 1991.

For info. and application materials, contact the Div. of Fellowships & Seminars, NEH, Rm. 316, 1100 Pennsylvania Ave. N.W., Wash. DC 20506 (202-786-0466).

SITES & STRUCTURES

NYC'S CAST-IRON DISTRICT FIGHTS HOTEL INVASION.

The SoHo Cast-Iron Historic District of Manhattan (named for its location south of *Houston St.*) is threatened by developers planning to erect at least seven new hotels in the area. The SoHo district contains the largest remaining group of cast-iron structures in the world and is recognized internationally for its unique architectural character. SIA members won't forget the SoHo cast-iron walking tours led by the indomitable Margot Gayle [SIA] during the 1972 and 1985 Annual Confs. in Newark/New York [see *SIA* Suppl. #2 & 14(2):6]. The community fears an onslaught of out-sized hotels, with current drawings projecting structures 2-1/2 times the average SoHo heights. In addition, the "hospitality industry" would create an unchecked influx of tourists and tourist-oriented shops and businesses, driving out the community of artists and related residents and businesses that have made the district their home since the 1960s. Info.: SoHo Alliance, 22 Wooster St., NY NY 10013 (212-903-4302).

OTTAWA SAVES ABERDEEN PAVILION. After months of acerbic discussion the city council of Ottawa has decided to proceed with restoration rather than demolition of the Aberdeen Pavilion at Lansdowne Park, the city's exhibition and recreation complex. Designed by Moses Eddy, the 150 x 310-ft. steel-framed, metal-clad structure, capped by a 115-ft.-high dome, was erected in 1898. Known locally as the "Cattle Castle," it is reputedly the last remaining example of the 19th-C agricultural exhibit halls that were once a feature of so many towns and cities across North America. Designated in 1984 as a national historic site by the Canadian government, the building also has served as a hockey arena and a wartime personnel depot. Work will begin this year at a cost of \$C 8.6 million, 3 million of which will come from federal and provincial sources. This is not the only Eddy creation in the news. Elsewhere, Ottawa's only example of the Chicago School of commercial architecture is getting a major facelift. The Daly Building in the heart of downtown was originally a department store, but has been boarded up for many years.

R.J.C.

HALF-MILLION \$\$\$ FOR SLOSS. The City of Birmingham, Ala., has announced a special appropriation of \$558,000 to Sloss Furnaces National Historic Landmark. According to Director Randall G. Lawrence [SIA], the appropriation is budgeted for repairs to the No. 2 Furnace, the stock trestle, and for the rehabilitation of the spray pond. Engineering studies have already begun. Info.: Randall G. Lawrence, Sloss Furnaces, POB 11781, Birmingham AL 35202 (205-324-1911).

JOB OPENING: CURATOR OF INDUSTRIAL HISTORY. The Historical Society of Western Pa., a private, non-profit educational institution, seeks applicants for this position to become part of a growing, multifaceted public-service organization, soon to open a major new 160,000-sq.-ft. facility and involved in converting former steel-mill site to museum use. Applicants should have background in history of technology, industry, and labor. Duties include managing object and oral-history collecting projects, documenting steel industry in Pittsburgh region, serving as member of various exhibit teams, involvement in public programming, researching and collecting objects documenting the history of business, industry, and workers in Western Pa., and direct involvement in planning future museum programs, facilities, and exhibits. Attractive benefits package. Qualifications: MA in American history, related field, or museum studies, and three years experience preferred. Send letter and resume to Bart Roselli, Asst. Dir. for Museum Programs, Hist. Soc. of Western Pa., 4338 Bigelow Blvd., Pittsburgh PA 15213 (412-681-5533)

NEW MUSEUMS FEATURE IA. The new **Arkansas Oil & Brine Museum** conserves and exhibits changing oil and brine technology and focuses on the 1920s oil boom in south Arkansas. Info.: Don Lambert, Director, AOBM, Rt. 1, Box 116, Smackover AR 71762 (501-725-2877)

The **Cole Land Transportation Museum** opened this spring at I-95 & I-395, Bangor, Me. Dedicated to the preservation of land transportation vehicles, it features logging sleds, farm wagons, over-the-road trucks, and a RR locomotive—all used in Maine or made in Maine. The museum is open 9-5, every day through Oct. (207-990-3600).

In Youngstown, Ohio, the **Historical Center of Industry & Labor** is built, but lacks an additional \$1.2 million for steel-mill exhibits and furnishings in order to open. Situated in the declining steel area of the Mahoning Valley, the center was designed by post-modern architect Michael Graves. IAers might wonder why a region with empty mills would need, or even want, to buy a new building designed, in typical postmodern manner, with industrially inspired themes and motifs when they could have the real thing. At any rate, unless the state legislature advances the funds, the steel history center will remain empty.

In Willimantic, Conn., the **Windham Textile & History Museum** has opened in two structures, including an 1877 brick mill building and a "replicated Victorian Mansion." The mill reportedly contains an overseer's office and textile machinery, along with exhibits and a living-history interpretation depicting tenement row-house life. The mansion is intended to show the family life of the mill owner. The period is late 19th C. Info.: WT&HM, 157 Union-Main St., Willimantic CT 06226 (203-456-2178).

B.F. et al.

Britannia Cannery recorded in Richmond, B.C.

Intense development prompted the Township of Richmond, British Columbia, to hire a project team to record the site of the Britannia Cannery. The former salmon cannery, operating from 1890 to 1926, is considered to be one of the oldest in the province. It is one of several turn-of-the-century canneries on the Fraser River threatened by development. The township hopes to use the study to formulate a preservation policy for the area. The interdisciplinary team includes an engineer, architect, photographer, and preservation consultant. The study consists of photographic recording using orthophotography, structural investigation, measured drawings (primarily interiors), and architectural research.

Orthophotography is an accurate, cost-effective method of producing scaled photographs from which measurements can be taken. A special camera is required. A facade is marked with reference points, usually at each of the four corners of the building. Distances are measured between these points for scale reference. Photos of this facade and measurements, taken from the reference points, are fed into a special computer. The computer is able to enlarge or size the photo to whatever scale is needed, such as 1/8 in. to 1 ft. Distortions are removed and all parts of the facade are placed within the same plane. One can then take measurements from the photo itself without need for measured drawings.

Orthophotography is less costly than photogrammetry, which is used in mapping and in creating measured drawings of objects or structures. Photogrammetry is a stereophotographic procedure, which has the advantage of being able to record depth. Elevation drawings produced photogrammetrically are extremely accurate and can be produced on floppy diskette for use on computer systems.

Orthophotography can be an important tool for developers, curators of historic sites, small architectural firms, builders, etc. The cost of producing measurable records is much reduced and the process is more accurate and less labor-intensive than hand recording. As well, it is useful in recording a streetscape or a series of buildings, both in photographic detail, and in scale.

For info. on the Britannia project and the orthophotographic process, contact Ken Waldie, M.P.D. OnSight Ltd., Suite 109, 2416 W. 3rd Ave., Vancouver BC V6K 1L8 (604-737-0887).

IMPACT, Heritage Canada

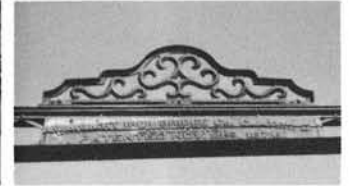
Move bridge or lose it, says WisDOT

Once the handmaid of frugal public officials, the relocation and reuse of metal bridges has recently become a favorite tool of preservationists intent on saving a historic structure from the scrap pile. Responding to the desire to replace the narrow, 80-year-old N. Ferndale Rd. Bridge over the Peshtigo River just above Green Bay, Wis., Bob Newbery [SIA], staff historian of the Environmental Analysis section of WisDOT, devised a plan to offer the bridge to anyone willing to help pay for its move.

Officials from Marinette County, where the bridge is located, had asked the Federal Hwy. Admin. (FHWA) to assist in replacing the 154-ft. Pratt through-truss built in 1910 by the Elkhart [Ind.] Bridge & Iron Co. They were stymied when the structure was found eligible for the National Register. Federal law now allows the cost of demolition in federal-aid projects to be put toward the preservation of a historic bridge. Based on preliminary estimates by contractors, \$35,000 in demolition costs can be applied toward preservation. The remaining \$15,000 of the estimated \$50,000 necessary to move, repair, and prepare new abutments and approaches would have to come from a prospective owner.

Newspaper ads brought five responses, the most serious from a real estate broker planning a golf course and country club. Extensive negotiations beginning last summer unfortunately fell through and no one has yet stepped in to take the bridge. Without a benefactor, it is likely the bridge will be documented for HAER and destroyed. Info.: Robert Newbery [SIA], WisDOT BEDA, POB 7916, Madison WI 53703-7916 (608-266-0369).

D.A.S.



Left: North Ferndale Rd. Bridge over the Peshtigo River, near Green Bay, Wis. HAER photo. Right: 1876 Pratt truss near Millfield, Ohio, with ornate portal ironwork. Photos courtesy Athens County Engineers Office.

1876 OHIO BRIDGE AVAIL. A Pratt through-truss fabricated by the Wrought Iron Bridge Co. is avail. free to anyone willing to dismantle, remove, and relocate it. Located near Millfield, the pin-connected truss is 88 ft. long, 15 ft. wide, 15 ft.-4 in. high, and features ornate ironwork above the latticed portal. Info.: Bob Eichenberg, Athens County Engineer's Office, 555 E. State, Athens OH 45701 (614-593-5514).

MORISON RR SWING-SPAN BURNS. A major Mississippi River RR swing bridge 100 mi. downstream from St. Paul at Winona, Minn., designed by engineer George S. Morison, burned last Dec. 17, leaving the ends of the 440-ft. pivot truss sagging in the water (see photo in *Trains*, Mar. 1990). The bridge [NR, HAER] was built in 1890-91 by Union Bridge Co., Athens, Pa., for the Winona Bridge Rwy. Co., which was incorporated solely for building and operating the structure, which carried the traffic of the three true owners: the Chicago, Burlington, & Quincy, the Winona & Southwestern, and the Green Bay & Western. In the 1980s, the bridge belonged to the Burlington Northern and the GB&W, although it no longer carried traffic. Linking Minn. with Wis., it was

the second bridge at Winona, the first having been erected in 1871 for the Chicago & North Western (razed). Morison designed a five-span structure with four fixed-span Parker through-trusses and a single, movable Pratt through swing-truss. Originally it was powered by a 20-hp. steam engine. At the time, its length was exceeded by only one other Mississippi swing-span, the 446-ft. 1873 bridge at Louisiana, Mo., and by only two others in the U.S., the 500-ft. Arthur Kill Bridge in N.Y., and the 503-ft. New London Bridge over the Thames River in Conn. It was recorded for HAER, as part of a collection of Morison spans, by Clay Fraser [SIA] of FraserDesign, Loveland, Colo.

Clay Fraser's sublime image of George S. Morison's RR swing span over the Mississippi at Winona, Minn.



SIA AFFAIRS

NEWS OF MEMBERS

Jonathan J. Woodman, of Woodman Associates, Architects, Newburyport, Mass., was elected president of the Massachusetts Council of the American Institute of Architects (MCAIA) for 1990.

For the American Society of Mechanical Engineers, historical consultant **Carol Poh Miller** is compiling a book describing and illustrating some 130 historic mechanical engineering landmarks designated by the ASME's History & Heritage Committee since 1973. She is coauthor (with Robert Wheeler) of *Cleveland: A Concise History, 1796-1990*, recently published by Indiana Univ. Pr.

New officers of the Society for the History of Technology include **Bruce Seely**.

Christopher Andreae is the consultant for a project to microfilm copies of the Canadian Official Railway Guide (originally the Int'l Railway Guide), and is missing issues from Jan. 1871 through July 1893, thanks to a fire. Help him out at 61 Lonsdale Dr., London, Ontario N6G 1T4 (519-657-1851).

SIA President **Emory Kemp** participated in a panel session entitled "Interpreting Our Industrial Heritage" at the annual meeting of the American Historical Assn.

John P. Hankey has been appointed chief curator/director of interpretation of the B&O Railroad Museum in Baltimore, Md.

CHAPTER NEWS

ROEBLING (greater N.Y.C. area). Spring tours for RCSIA include "The IA of Sludge," an April 24 day-long visit to New York City's Wards Island and North River sewage disposal plants. The North River plant, still under construction, is one of the largest civil engineering projects of recent years.

On May 10 was a tour of the Noesting Co. factory, founded in 1913 and once the largest manufacturer of paper clips and related wire products in the U.S. While now reduced in size, the plant retains an interesting machinery collection. The heart of the operation is the "four slide," which uses cam-activated arms to push, pull, and bend wire into any desired shape. The "Improved Brightwood Box [gluing] Machines" are a Rube Goldberg delight. After lunch was "kitchen IA," a tour of the Farberware Co., factory with deep drawing operations on cookware with 15,000-ton presses.

A spring high point was the May 12 harbor cruise on the tug *Pegasus*, hosted by Capt. Pamela Hepburn, who also is the owner. The 4-5-hr. trip visited numerous waterside nooks and crannies in Brooklyn and Queens, including Brooklyn army terminal, Erie & Atlantic basins, Gowanus bay, and the back channel around Roosevelt Island.

KLEPETKO (Montana). A March 23-24 tour included the Columbia Falls and Kalispell area. Sites were the Plum Creek sawmill, 1911 Old Red Bridge, Hungry Horse Dam, Pacific Power & Light Hydroplant (1906) at Bigfork, and the 1894 steel bridge at Kalispell. The tour ended with the Clyde Fisher Mint Distillery, Columbia Falls, one of two in the valley which together constitute the second largest producer of mint oil in the U.S.

A tentative schedule for the annual chapter spring tour, May 19-20, includes the Ideal Cement Works at Trident, a company town established in 1908. At Three Forks, either the flour mill or the talc mill may be visited, along with a stop at a former substation on the Gallatin Valley Electric Ry.

NEW ENGLAND CHAPTERS. The New England Chapters, with the Inst. for New Hampshire Studies and Plymouth State College, held the 3rd Annual Conf. on New England IA in Feb. Presentations included: "Recent Research & Educational Use of Rural Mills in N. Central N.H.," by Duncan C. Wilkie; "IA Survey of Vt. Furnaces, Forges & Kilns," by Victor R. Rolando; "The Forestdale Ironworks:

19th-C Ironmaking in Brandon, Vt.," by David Starbuck; "Mill Hill at Crystal Lake Falls, Barton, Vt.: Grist Mill, Piano Action Factory, Ironworks, and More," by Darlene Young & Robin Tenny; "The Justin Morrill Ice House: Archeological Investigations," by Allan Yale; "The Decline of Water-Powered Industry & the Problem of Rural Abandonment: the View from Central Vt.," by James C. Garman; "Brick Yards & Historic Landscapes in the Central Merrimack Valley," by Victoria Bunker; "Attempts at Refloating S.S. *Ellis Island*," by Dick Ping Hsu; "Historical Perspectives on IA sites in Killingly, Conn.," by Jeanne A. Ward & Anne S. Dowd; "Clarence E. Kinne & His Collection of Water Turbines," by Jane Mork Gibson; "In & Out of Historic Hazardous Waste: Understanding Process Technology in IA," by Jeffrey C. Howry; "Window Glass Analysis: Its Potential Historical & Archaeological Contributions," by Gary McGowan, Nadia N. Shevchuk, & Marie-Lorraine Pipes; "Pottery Production in Greater Boston, 1640-1940," by Steven R. Pendery; and "A Survivor of the Mid-19th-C Shipbuilding Industry: The Clipper Ship *Snow Squall*," by David Switzer. For additional info., contact Dennis E. Howe, 22 Union St., Concord NH 03301 (603-225-6649 work; 603-224-7563 home).

Yukon Fall Tour Sells Out!

Much to the (delighted) surprise of tour organizers, the Fall Tour to the Yukon was fully booked by the end of February, and a waiting list is available for latecomers. Six dedicated individuals also opted to take the six-day pre-tour hike of the Chilcoot Trail. SIA tourers are coming from the U.S., Canada, and England. The U.S. and Canadian parks services and the Yukon Territorial Gov't have gone to considerable effort to make the ten days a memorable experience.

C.A.

Oliver Evans Press debuts at Phila.

The Oliver Evans Press, publishing arm of the Oliver Evans Chapter SIA, unveils its first major publishing effort at the 19th Annual Conf. in Phila. In a significant publishing event, OEP has undertaken the reprinting of first editions of two books by Oliver Evans, *The Young Mill-Wright & Miller's Guide* (1795) and *The Abortion of the Young Steam Engineer's Guide* (1805). Eugene S. Ferguson [SIA], Evans scholar, has written a foreword for each volume. Until now, the only reprints of *The Young Mill-Wright* have been of the 13th edition (1850). Chapter member John Keabian allowed the use of personal copies of the two books for the reprint editions.

Both volumes have traditional, hard-cover bindings similar to the originals. *The Young Mill-Wright* (\$24.50) has 472 pages and 26 plates. *The Steam Engineer's Guide* (\$16) has 159 pages and includes the original engravings.

Copies of the Evans books can be ordered during the Phila. conf., along with *Workshop of the World: A Selective Guide to the Industrial Archeology of Philadelphia*, the special conf. publication co-authored by Oliver Evans Chapter members. *Workshop* is a 368-page, soft-cover guide with 209 photos and maps of 137 IA sites in 16 Phila. neighborhoods. Each conf. registrant will receive a copy and additional copies can be ordered for \$25.

All volumes are available postpaid from OEP, c/o John R. Bowie, 204 W. Rose Valley Rd., Wallingford PA 19086 (215-565-1268).

CONTRIBUTORS TO THIS ISSUE

Christopher Andreae Historica Research Ltd., London, Ont.; R. John Corby, Gloucester (Ottawa), Ont.; Mark W. DeLawyer, Syracuse, N.Y.; William J. Ellenberger, Escondido, Calif.; Betsy Fahlman, Arizona State Univ.; John Gruber, Mid-Continent Rwy. Hist. Soc.; Charles K. Hyde, Wayne State Univ.; Lance Metz, Hugh Moore Historical Park & Museums, Easton, Pa.; David Perrotta, Oberlin, Ohio; David A. Simmons, Ohio Hist. Soc.; and Helena E. Wright, NMAH, Smithsonian Inst.

With thanks.

IA in Art



This time the featured artwork is sculptural, a lady battered by the elements and adaptively reused. She began her working life above 1880, gracing the Saint Paul Street Bridge in Baltimore. Now in retirement, put out to pasture, so to speak, she gazes out over Clyburn Park in the same city. Just in case she needs to go back to work, however, she's brought along her flyball governor, gear wheel, hammer and anvil.

John W. McGrain photo.

H.E.W.

SIA MEETS IN PHILLY

Philadelphia's welcome mat is out for the 19th Annual Conf., May 31-June 3. Hosting events will be the Oliver Evans Chapter SIA and the Mid-Atlantic Region of the Nat'l Park Service. Special additional tours are planned for Thurs. early arrivals and for Mon. late-stayers.

Registration opens at 11 a.m. Thurs. at the conf. HQ hotel, the Sheraton University City, near the Univ. of Penn. Ten pre-conf. tours for small groups begin between noon and 1:30. Eight are tours of industrial neighborhoods, while two are thematic tours for those with special interests in breweries and bridges. There also will be SIA-hosted open houses from 1-5 p.m. at the American Philosophical Society and the Atwater Kent Museum.

The welcoming reception will be at the Atwater Kent, and will feature a special array of "Philly foods." Archeologist David Orr [SIA] will present an "Introduction to Phila. IA."

There will be six different thematic process-tours on Fri., which participants will pre-select on their registration forms. An evening barbeque at the spectacular Fairmount Water Works, hosted by the Phila. Water Dept. and Fairmount Park, will include buildings open for viewing the Jonval turbine, gear train, and pump, along with a newly built "wet model" of the water-power system. Back at the hotel, the tradition "show-'n-tell" will commence at 9:30 p.m. Prospective presenters should contact Frank Weer (215-473-6853) before the conference, if possible, or Weer or Hal Spaulding upon arrival.

Sat. papers will include fifty presentations in four concurrent sessions, with special sessions on Phila. IA, Oliver Evans, bridges, and iron and steel. The Annual Business Meeting will be at the noon luncheon, and includes a presentation on the Hopewell Furnace Nat'l Historic Site by Richard N. Pawling. Immediately following the day's sessions will be a "Networking on Iron & Steel Preservation" meeting.

A conf. high point will be the Sat. evening dinner dance aboard Admiral Dewey's flagship, the USS *Olympia* (1892). The ship will be open for inspection, including the starboard engine room with its



Sevill Schofield's Economy Mills (1857) on the Manayunk Canal in Manayunk, Pa. *Larry A. DeYoung photo.*

triple-expansion engine. Tied up alongside is the USS *Becuna*, a 1945 guppy-class submarine that was the flagship of the South Pacific fleet, and there will be one special tour available for the SIA.

Sunday tours—drive-bys, photo opportunities, and walk-throughs—will cover the city, from South Phila. to the Great Northeast, then west to Germantown, Manayunk, and East Falls. All busses will visit the same sites. Sites include: Reading Terminal, 30th-Street Station, Sparks Shot Tower, Benjamin Franklin Bridge, American Street Corridor, Disston Saw Works, Frankford Arsenal, Budd Co., Midvale Steel, and Manayunk Canal.

Although the conf. officially ends about 4 p.m. Sun., those staying till Mon. can sign up for post-conf. bus tours to the Hagley Museum & Library or the Mercer Museum in Doylestown. The Mercer includes the Moravian Tile Works [1911-12; HAER] and Henry Mercer's 1908-12 concrete home, Fonthill.

Conf. & regis. info.: Jane Mork Gibson [SIA], 32 Rex. Ave., Phila. PA 19118 (215-242-4971).

Henry Disston & Sons, Keystone Saw, Tool, Steel & File Works, Phila. Featured on the Sun. tours.

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, *IA*, published annually. SIA promotes the identification, interpretation, preservation, and re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual \$25; couple, \$30; institutions \$30; contributing, \$50; sustaining, \$100; student, \$20. Send check payable to SIA to Treasurer, Room 5020, National Museum of American History, Smithsonian Institution, Washington, DC. 20560; all business correspondence should be sent to that office.

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

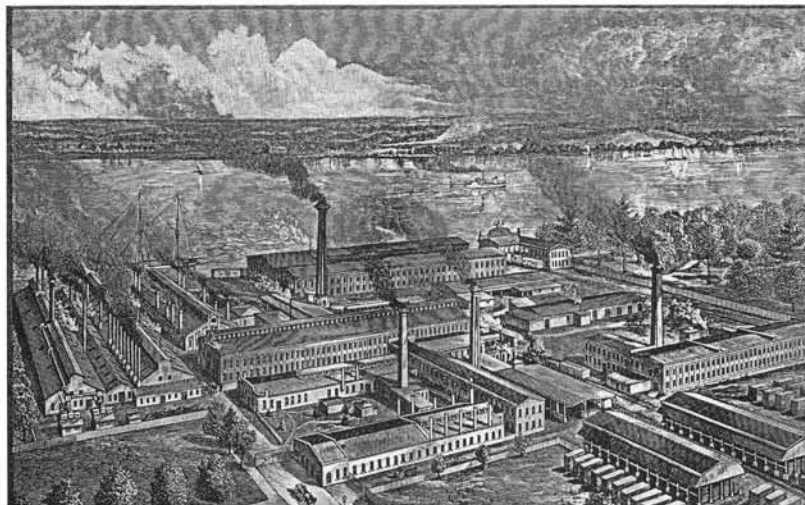
The *SIA Newsletter* is included in the *Avery Index to Architectural Periodicals*, Avery Architectural & Fine Arts Library Columbia University.

Mailing dates for Vol. 19 (1990): No. 1, May. If you have not received an issue, apply to SIA-HQ, Rm. 5020 NMAH, Wash. D.C. 20560 for replacement copy.

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

USE ELECTRONIC MAIL! If you are a computer user and subscribe to MCI Mail, you can send messages directly to the SIA Editor. Address your MCI Mail to Robert M. Frame III, MCI ID 258-5345.

USE FAX! Transmit to Bob Frame at TeleFax phone 612-222-4139.

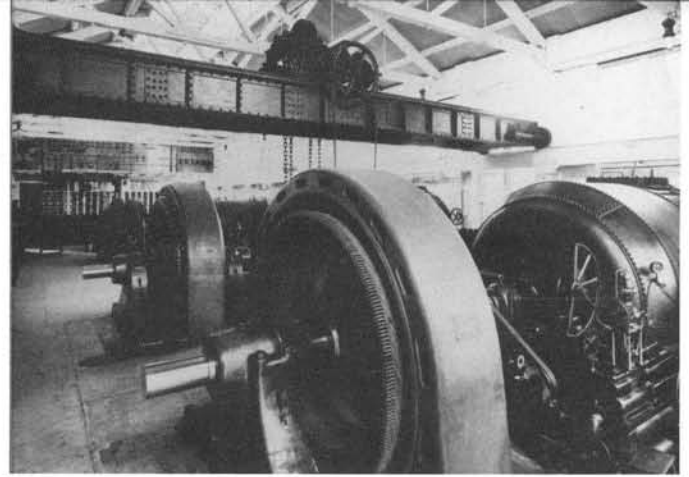


1903 Turbine-generators Free

The Washington Water Power Co. (WWP) plans to redevelop its Monroe Street hydroelectric powerhouse in Spokane. Since the State Historic Preservation Officer has determined that turbine-generator units Nos. 4 and 5 are eligible for the National Register, WWP is documenting them for the Historic American Engineering Record. Additionally, WWP will sell or donate the units to anyone interested in using or otherwise maintaining the units' historical integrity.

The General Electric units are have been in service since their original installation in 1903, and reportedly are the oldest generating units still operating in the state. Both were rewound in the mid-1960s. Each has a rated capacity of 1,250 KW. The associated hydraulic turbines are horizontal, double-Francis type, and were manufactured by Stillwell-Bierce & Smith Valve Co. Each is rated at 4,000 hp. at the design head of 65 ft. The 43-in. runners were replaced in 1972.

The first Monroe Street powerhouse, using DC equipment for a street railway, came on line in 1891. The AC powerhouse with units 1-5 was added after 1900. Units 1, 2, and 3 were replaced in 1948, 1937, and 1936 respectively. In the early 1970s, the DC house and



1920s view of WWP's Spokane powerhouse, with units 4 and 5 in foreground. Photo courtesy WWP.

two-thirds of the AC house were demolished in an upgrade ordered by the Federal Power Commn. The remaining structure will be razed this summer.

Anyone interested in the historic turbine-generators must contact Roger D. Woodworth, Hydro License Administrator, *immediately* at WWP, POB 3727, Spokane WA 99220 (509-482-4138; FAX 509-482-4060).

CALENDAR

MAY 31-JUNE 4: SIA 19TH ANNUAL CONF., PHILA., PA. Info.: Jane Mork Gibson, Oliver Evans Chap. SIA, 32 Rex Ave., Phila. PA 19118 (215-242-4971).*

Aug. 10-12: Conf., "Western Railroads: Then & Now," in Flagstaff, Ariz. Info.: Al Richmond, Center for Colorado Plateau Studies, Northern Ariz. Univ., Box 5613, Flagstaff AZ 86011.

Aug. 18-26: "THE TRAIL OF '98": SIA STUDY TOUR OF YUKON & ALASKA. For brochure & regis. form, write SIA HQ, Rm. 5020 NMAH, Smithsonian Inst., Wash. DC 20560, or phone Chris Andreae [SIA] at 519-657-1851

Sept. [date TBA]: Third Textile History Conf., Museum of American Textile History. Info.: Thomas W. Leavitt, Director, MATH, 800 Massachusetts Ave., North Andover MA 01845 (617-686-0191).

Sept. 2-9: 7th Intl. Conf. on the Conservation of the Industrial Heritage, Brussels, Belgium. Info.: Stephen Victor, TICCIH U.S. Rep., 166 E. Rock Rd., New Haven CT 06511 (203-789-8223) or Guido Vanderhulst, TICCIH Belgium, rue Ransfort 27, B-1080 Brussels, Belgium.

Sept. 3-9: Annual Conf., Assn. for Preservation Technology, Le Chateau Champlain, Montreal. Info.: APT Montreal 1990 Conf., Heritage Montreal, 406 Notre-Dame est, Montreal, Quebec Canada H2Y 1C8 (514-842-8678; FAX 514-842-8670).

Oct. 3-6: Nat'l Conf., Society for Commercial Archeology,

Pittsburgh, Pa. Theme is "Highways to History: The Automobile Age," with one session devoted to the Pa. Turnpike, in commemoration of its 50th anniv. Other topics include road/hwy. engng. & design. Info.: Jan Jennings, 485 College of Design, Iowa St. U., Ames IA 50011 (515-294-8913).

Oct. 5: 3rd Historic Bridges Conf., Columbus, Ohio. Info.: Ohio St. Univ. Dept. of Engineering, Hist. Bridges Conf., 470 Hitchcock Hall, 2070 Neil Ave., Columbus OH 43210-1275 (614-292-7339).*

Oct. 12-14: Annual Meeting, Assn. of Rwy. Museums, New Haven, Conn., hosted by Branford Electric Rwy. Assn. and its Shore Line Trolley Museum. Info.: ARM, POB 3311, City of Industry CA 91744-0311 (818-814-1438).

Oct. 18-20: 12th Annual N. American Labor History Conf., Wayne State Univ., Detroit. Paper proposals due May 1 to Stanley D. Solvick, Program Chair, Dept. of Hist., WSU, Detroit MI 48202 (313-577-6145 or -2525).

Oct. 18-21: Annual Meeting, Society for the History of Technology, Cleveland, Ohio. Info.: Lindy Biggs, Dept. of Hist., Auburn Univ., Auburn AL 36849 (205-844-6645 or Bitnet electronic mail HIST@AUDUCVAX).

Nov. 8-10: 22nd Annual Meeting, Pioneer America Society, Williamsburg, Va. Paper proposals due Sept. 1. Info.: Marshall Bowen, Program Chair, Dept. of Geography, Mary Washington College, Fredericksburg VA 22401 (703-899-4329).

*Find details on this event elsewhere in this issue.

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PUBLICATIONS OF INTEREST

A SUPPLEMENT TO VOL. 19, NO. 1,

SPRING 1990

Compiled by John M. Wickre

GENERAL SUBJECTS

- E. Ashtor, "The Factors of Technological and Industrial Progress in the Later Middle Ages." In *J. of Eur. Econ. Hist.* 18, Spring 1989, p7-36.
- Ronald Bayer (ed.), **The Health and Safety of Workers: Case Studies in the Politics of Professional Responsibility.** Oxford U. Pr. (NY), 1988. 317p, notes, index. \$30. Lead, coal-mining, & asbestos industries. Conclusion: professionals (doctors, engineers, etc.) cannot be relied on to behave professionally. Rev.: *T&C* 31, Jan. 1990, p149-50.
- Business History** 32, Jan. 1990, includes shipping in the Port of Sunderland, demand for electric appliances in England, review of recent periodical literature. [British, avail. from Frank Cass, c/o Allen Press, POB 368, Lawrence KS 66044.]
- Business History Review [BHR]** 63, Spring 1989 [rec'd May 1990] focuses on entrepreneurs in business history, incl. colonial Amer., Brazil, blacks in N.C. (1865-1880); as well as articles by O'Brien & Schweninger listed elsewhere in this PofI.
- The CIO Files of John L. Lewis.** University Publications of America (Frederick MD), 1988. From United Mine Workers of America archives. UMW support for other unions, incl. organizing drives in steel, autos, rubber; much on local level. Rev.: *JAH* 76, Mar. 1990, p1339-40.
— **Part I: Corresp. with CIO Unions, 1929-1962.** 25 reels 35mm microfilm with printed guide. \$1700.
— **Part II: CIO General Files, 1929-1955.** 20 reels 35mm microfilm with printed guide. \$1400.
- Samuel K. Coleman, "Riken from 1945 to 1948: The Reorganization of Japan's Physical and Chemical Research Institute under the American Occupation." In *T&C* 31, Apr. 1990, p228-250.
- N.F.R. Crafts, "Revealed Comparative Advantage in Manufacturing, 1899-1950." In *J. of Eur. Econ. Hist.* 18, Spring 1989, p127-37.
- Gary Cross (ed.), **Worktime & Industrialization: An International History.** Temple U. Pr. (Phila. PA), 1988. 258p, notes, index. \$35. Reduction in hours of labor, 1830s - 20th C.; essentially a political history. Rev.: *T&C* 31, Apr. 1990, p319-21.
- Stephen H. Cutcliffe & Robert C. Post, **In Context: History and the History of Technology: Essays in Honor of Melvin Kranzberg.** Lehigh U. Pr. (Bethlehem PA), 1989. 278p. \$39. Historiographic essays on dev. of Hoft since its beginnings 30 years ago. Rev.: *JAH* 76, Mar. 1990, p1258-60.
- Sally Hacker, **Pleasure, Power & Technology: Some Tales of Gender, Engineering & the Cooperative Workplace.** Unwin Hyman (Winchester MA), 1989. 208p, tables, notes, references, index. \$40/13 pap.
- George F. W. Hauck, "Civil Engineering During the Enlightenment — **ICOHTEC Symposium, Madrid, Sept. 5-9, 1988.**" Conference report in *T&C* 31, Jan. 1990, p114-120. Intl. Commit. for the History of Technology; 1750-1850 period, world-wide.
- David Freeman Hawke, **Nuts and Bolts of the Past: A History of American Technology, 1776-1860.** Harper & Row (NY), 1988. 320p. \$19. Semi-popular account of the mechanic/inventor's role; 2-3p vignettes of Evans, Whitney, Morse, Colt, et al. Rev.: *JAH* 76, Mar. 1990, p1258-60.
- Stephen Innes (ed.), **Work and Labor in Early America.** U. of N.C. Pr. (Chapel Hill), 1988. 307p. \$30/10 pap. Rev.: *JAH* 76, Mar. 1990, p1249.
- Robert F. Johnston & Christopher G. Edwards, **Entrepreneurial Science: New Links between Corporations, Universities, and Government.** Quorum Books (Greenwood Pr., Westport CT), 1987. 157p, notes, bibliog., index. \$38. Incl. mfg. technology. Rev.: *T&C* 31, Jan. 1990, p147-49.
- Hartmut Kaebler, "Was Prometheus Most Unbound in Europe? The Labour Force in Europe During the Late XIXth and XXth Centuries." In *J. of Eur. Econ. Hist.* 18, Spring 1989, p65-99. Argues that only in Europe did a true industrial society exist, with industrial employment predominating over service employment.
- Eric R. Laithwaite, **A History of Linear Electric Motors.** San Francisco Pr. (Box 6800 SF CA 94101), 1987. 399p, illus., references, bibliog., index. \$30. Topological interpretation of history of rotary and linear electric motors, 1830-present; uses of linear motors, from propelling flying shuttles in the textile industry to propelling maglev trains; effect of engineering fashion (such as fashionable field of electronics attracting engineers from field of heavy electrical engineering and making more difficult the introduction of linear motors). Rev.: *T&C* 31, Apr. 1990, p337-38.
- Rhonda F. Levine, **Class Struggle and the New Deal: Industrial Labor, Industrial Capital, and the State.** U. Pr. of Kans. (Lawrence), 1988. 245p. \$25. Rev.: *JAH* 76, Mar. 1990, p1310-11.
- Thomas A. Lyson, "Industrial Change & the Sexual Division of Labor in New York and Georgia: 1910-1920." In *Social Science Q.* 70, June 1989, p356-74.
- E. Kimbark MacColl, **Merchants, Money and Power: The Portland Establishment, 1843-1913.** Georgian Pr. (Portland OR), 1988. 532p. \$30/20. Portland, Ore.; incl. road, water and rail transport; woolens, iron, paper; city utilities. Rev.: *JAH* 76, Mar. 1990, p1267.
- The Men They Couldn't Hang (rock band), "Rain, Steam & Speed." The first rock-and-roll treatment of tunnels and tunneling appears on the first album by this British "celtpunk" band. It also marks the first appearance on an LP of I. K. Brunel: "underneath the ocean there is limestone, chalk and sand, but coming up through the virgin rock will be the human hand."
- MIT Commission on Industrial Productivity** (MIT Pr., Cambridge MA), 1989:
— Michael L. Dertouzos, et al, **Made in America: Regaining the Productive Edge.** 344p, bibliog., index. \$18. U.S. industries; background, recommendations; summaries of the 8 industry-specific working papers.
— **Working Papers:** avail. for \$50 as 2-vol. set, or as below:
Vol. 1: Automobile, chemical, commercial aircraft, and consumer electronics industries (408p, \$30); Vol. 2: Semiconductors/computers/copiers; machine tools, steel, and textile industries; education and training (416p, \$30).

Published by the Society for Industrial Archeology Editor: Robert M. Frame III

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B. R. Mitchell, **British Historical Statistics**. Cambridge U. Pr. (NY), 1988. 897p, illus., charts, tables, index. \$135. Incl. metals, textiles, coal. Rev.: *BHR* 63, Spring 1989, p228-30.

Timo Myllyntaus, et al, **Teknologinen muutokset Suomen teollisuudessa 1885-1920 [Technological change in Finnish industry, 1885-1920]**. Finska Vetenskaps Societen (Helsinki), 1986. 277p, figures, tables, notes, bibliog. Mk167 (pap.) Incl. machine tool mfg., ship-building, timber. Rev.: *T&C* 31, Apr. 1990, p328-9.

"New Jersey Legacy" film series and New Jersey History Pamphlets funded (in preparation). Noted in *NJ Historical Commn. Newsletter* 20, Mar. 1990, p1,5. 10 films, incl. factories, workers, RRs, etc.; 11 pamphlets (high school level) + teachers guide, incl. economy, labor, architecture.

Richard Jules Oestreicher, **"Solidarity & Fragmentation: Working People & Class Consciousness in Detroit, 1875-1900."** U. of Ill. Pr. (Urbana), 1986. 282p, illus, charts, tables, notes, index. \$25. Incl. "trouncing" suffered by labor in 1886-7, helping explain why Detroit was a notorious open shop city after 1900. Rev.: *BHR* 63, Spring 1989, p202-4.

Charles E. Orser, Jr., **The Material Basis of the Postbellum Tenant Plantation: Historical Archaeology in the South Carolina Piedmont**. U. of Ga. Pr. (Athens), 1988. 340p. \$35. Structure and material culture of Millwood, the only tenant plantation in the southern Piedmont that has been excavated and studied in detail. Rev.: *JAH* 76, Mar. 1990, p1277.

Popular Science 236, June 1990, includes articles on new heat-tolerant materials for 21st-century jets, English channel tunnel constr., conducting polymers (used in lithium polymer batteries, static-dissipating textiles; eventually in windows to control heat & light, & as robot muscles).

R. Alan Richardson and Bertrum H. MacDonald (compilers), **Science and Technology in Canadian History: A Bibliog. of Primary Sources to 1914**. HSTC Publications (POB 154, Thornhill Ont. L3T 3N3), 1987. 105 microfiche with booklet (v+18p). \$60. 58,000 sources indexed. Rev.: *T&C* 31, Apr. 1990, p356-57.

St. Anthony Falls Heritage Trail; An Interpretive Plan. Summary, 1990. St. Anthony Falls Heritage Preservation Board (Minneapolis, MN), 1990. 12p, illus., maps. Gratis from the Board (c/o Elisabeth Doermann, Minn. Hist. Soc., James J. Hill House, 240 Summit Ave., St. Paul MN 55102).

Carl B. Schedvin, **Shaping Science and Industry: A History of Australia's Council for Scientific and Industrial Research, 1926-49**. Unwin Hyman (8 Winchester Place, Winchester MA 01890), 1987. 393p, illus., tables, notes, index. \$45. Rev.: *T&C* 31, Apr. 1990, p353-55.

Wolfgang Schivelbusch, **Disenchanted Night: The Industrialisation of Light in the 19th Century**. U. of Cal. Pr. (Berkeley CA), 1988. 227p, illus., notes, bibliog., index. Orig. pub. in Germany in 1983. Candles to electric light; almost exclusively European; factories pushing the technology due to need for better lighting. Rev.: *T&C* 31, Apr. 1990, p335-36.

Loren Schweningen, **"Black-Owned Businesses in the South, 1790-1880."** In *BHR* 63, Spring 1989, p22-60. Incl. categories of "artisan" and "small-scale mfr."; building trades, cabinetmakers, blacksmiths, draymen, shoemakers; black slaveowners.

John Kenly Smith, Jr., **"The Scientific Tradition in American Industrial Research."** Rev. essay in *T&C* 31, Jan. 1990, p121-31.

Donald H. Snyder, **"My First 1000 Wrenches."** D. H. Snyder (12925 Woodworth Rd., New Springfield, Ohio 44443), 1990? 1000 photos. \$13 ppd. Incl. collecting, preservation, price guide by category.

David R. Starbuck & Nicholas Westbrook [both SIA], **Alphabetical Index to IA Volumes 1 through 14**. In *IA* 15, No. 1, 1989, p68-74.

Michael Stratton, **"Integrating Technological and Social History: 'Engines of Change' at the National Museum of American History."** Exhibit rev. in *T&C* 31, Apr. 1990, p271-7. Somewhat negative review does not mention time period covered (1790-1860) nor existence of related 309p. book (Brooke Hindle & Steven Lubar, *Engines of Change: The American Industrial Revolution, 1790-1860*), Smithsonian Inst. Pr., 1986, \$15) previously noted in *SIAN* 17-1, Spring 1988, but does note a 69p. illus. exhibit booklet by Lubar, **Engines of Change** (Museum Shop, NMAH, Smithsonian, Wash. DC 20560, \$6). The booklet suffers from some of the same problems noted in the exhibit review.

Donald E. Thomas, Jr., **"Nazi 'Coordination' of Technology: The Case of the Bavarian Polytechnical Society."** In *T&C* 31, Apr. 1990, p251-64. From 1933 Nazi takeover to 1938 incorp. of BTS into Office of Technological Sciences; but also incl. general history from founding of BTS in 1815.

R.P.W. Visser & C. Hakfoort (eds.), **Werkplaatsen van Wetenschap en Techniek: Industriële en Academische Laboratoria in Nederland, 1860-1940**. Editions Rodopi (Amsterdam), 1987. 184p, illus, notes. F38 pap. Rev.: *T&C* 31, Jan. 1990, p145-47.

Eric von Hippel, **The Sources of Innovation**. Oxford U. Pr. (NY), 1988. 229p, tables, notes, app., bibliog., index. \$27. Rev. in *T&C* 31, Apr. 1990, p333-34, notes that the author's concepts of mfr./user/supplier innovation and of the "functional relationships" of firms and individuals to innovation could be used by scholars interested in historical patterns of innovation, although book is aimed at current managers.

[Two books on **occupational health and industrial safety in Germany**, rev. together in *T&C* 31, Apr. 1990, p352-53:]

— Wolfhard Weber, **Technik und Sicherheit in der deutschen Industrie gesell schaft 1850 bis 1930**. Bergische Universität (Wuppertal), 1986. 227p, notes, bibliog. Paper.
— Wolfhard Weber, **Arbeitssicherheit: Historische Beispiele—aktuelle Analysen**. Rowohlt (Reinbek), 1988. 248p, illus., bibliog., index. Paper.

Richard S. Westfall, **"Floods Along the Bisenzio: Science & Technology in the Age of Galileo."** In *T&C* 30, Oct. 1989, p879-907. Florence vic., 1630s.

William Worthington, Jr., **"Research Note: Belting Technology."** In *IA* 15, No. 1, 1989, p63-4. Leather belts, leather dressings, metal and other joints, pulleys, operating data.

Shoshana Zuboff, **In the Age of the Smart Machine: The Future of Work and Power**. Basic Books (NY), 1988. 487p, notes, appendixes, index. \$20/11 pap. Incl. paper mfg. & phone repair work, but of IA importance esp. for contrasting "automating" (which extends management control and requires increasingly less knowledge of the system by front-line workers) and "informating" (where electronic information becomes transparent from top to bottom of the organization, and workers at the bottom have a greater need to understand the whole system). Conclusion: "Informate (learn to live within the uncertain new world of open access to data) or go under." Don't be put off by the terminology — this is an important book. Rev.: *T&C* 31, Jan. 1990, p192-4.

MISC. INDUSTRIES

Patrick H. B. Aldwell, **Technological Rejuvenation & Competitiveness in the Wash. State Woodpulp Industry, 1960-1985: A Global Perspective**. Ph.D. thesis, U. of Wash., 1988.

Eric Batstone, et al, **New Technology and the Process of Labour Regulation**. Oxford U. Pr. (NY), 1987. 271p, tables, bibliog., index. \$50. Incl. British chemical plant, brewery and machine shop. Rev.: *T&C* 31, Jan. 1990, p151-52.

Peter Bleed & Christopher M. Schoen, **"The Lincoln Pottery Works: A Historical Perspective."** In *Neb. History* 71, Spring 1990, p34-44. Lincoln, Neb., c.1880-1906; archeological project.

Robert Bothwell, **Nucleus: The History of Atomic Energy of Canada Limited**. U. of Toronto Pr. (Toronto), 1988. 544p, illus., notes, bibliog., index. \$35. Rev.: *T&C* 31, Apr. 1990, p349-50.

John L. Campbell, **Collapse of an Industry: Nuclear Power and the Contradictions of U.S. Policy**. Cornell U. Pr. (Ithaca NY), 1988. 244p, tables, references, app., index. \$33/12 pap. Rev.: *T&C* 31, Apr. 1990, p346-49.

Jon Clark, et al, **The Process of Technological Change: New Technology and Social Choice in the Workplace**. Cambridge U. Pr. (NY), 1988. 264p, illus., tables, notes, bibliog., appendixes, index. \$50. Modernization of British Telecom, studied at the workplace level. Rev.: *T&C* 31, Jan. 1990, p152-54.

Fred H. Colvin, **60 Years with Men and Machines**. Lindsay Publications (POB 12, Bradley IL 60915), 1988. 306p, illus., index. \$25/15 pap. Professional recollections of a reporter and editor (from 1892) considered to be a central figure in the American machine tool industry; orig. pub. in 1947. Rev.: *T&C* 31, Apr. 1990, p322-24.

Verna L. Cowin, "Let's Hear It for the Tinman." In *Pittsburgh History* 72, Summer 1989, p96-101. John Dunlap & Co., tinsmiths, c.1840-1910; enamelware, 1902-?

John T. Flanagan, **Theodore Hamm in Minnesota: His Family and Brewery.** Pogo Pr. (Stanton Publication Services, Minneapolis, MN), 1989. 127p, illus., bibliog., genealogy, index. \$???. Incl. chapter on the Hamm's beer bear and other advertising collectibles.

George Gilder, **Microcosm: The Quantum Revolution in Economics & Technology.** Simon & Schuster (NY), 1989. 426p, bibliog., index. \$20. Incl. electronics mfg. from 1940s: transistors, integrated circuits, large-scale integration, computers; implications for future.

Steve Golin, **The Fragile Bridge: Paterson Silk Strike, 1913.** Temple U. Pr. (Phila. PA), 1988. 314p, illus., notes, index. \$35. Bridge between Paterson strikers and NY intellectuals; strength of mill owners with separate mills in Pa. Rev.: *T&C* 31, Jan. 1990, p158-9.

David Goodman, et al, **From Farming to Biotechnology: A Theory of Agro-Industrial Development.** Basil Blackwell (NY), 1987. Coherent synthesis of agl., industrial, technical & biological factors; "appropriationism" (industrializing agl. processes) and "substitutionism" (industrialized products supplanting natural ones). Rev.: *T&C* 31, Jan. 1990, p180-81.

Martin Green, **New York 1913: The Armory Show and the Paterson Strike Pageant.** Scribner's (NY), 1988. 332p. \$25. Rev.: *JAH* 76, Mar. 1990, p1298-99. Incl. reenactment of the 1913 Paterson, N.J., silk strike; "the momentarily common cause of the shock tactics of modernism and the syndicalist politics of Big Bill Haywood" and the IWW.

Gordon Hak, "British Columbia Loggers and the Lumber Workers Industrial Union." In *Labour/LeTrevail* 23, Spring 1989, p67-90.

Richard W. Judd, **Aroostook: A Century of Logging in Northern Maine.** U. of Maine Pr. (Orono), 1989. 365p. \$28/18. Rev.: *JAH* 76, Mar. 1990, p1266.

Nancy Frances Kane, **Textiles in Transition: Technology, Wages, and Industry Relocation in the U.S. Textile Industry, 1880-1930.** Greenwood Pr. (Westport, Conn.), 1988. 201p, tables, notes, appendixes, bibliog., index. \$38. Mass. & N.C.: effect of the adoption of ring spinning (vs. "mule" format) on cotton mill survival. Rev.: *T&C* 31, Jan. 1990, p157-8.

Cathy L. McHugh, **Mill Family: The Labor System in the Southern Cotton Textile Industry, 1880-1915.** Oxford U. Pr. (NY), 1988. 154p, tables, notes, appendixes, bibliog., index. \$25. Rev.: *T&C* 31, Apr. 1990, p325-7.

Linda K. Menton, "Hawai'i Sugar Plantations", p34-35, & "Saving the Historical Sugar Records of Hawai'i" p36,38, in *History News* 44, Sept./Oct. 1989. Incl. list of 7 museums & archives, p38.

Linda Menton & Eileen Tamura, **A History of Hawai'i.** U. of Hawaii College of Ed. (1776 Univ. Ave., Honolulu HI 96822), 1989. 458p, illus., \$21. High school level; teachers manual avail.; incl. sugar & pineapple industries.

Gail Fowler Mohanty, "Putting Up with Putting-Out: Power-Loom Diffusion and Outwork for Rhode Island Mills, 1821-1829." In *J. of the Early Republic* 9, Summer 1989, p191-216.

John Hebron Moore, **The Emergence of the Cotton Kingdom in the Old Southwest, 1770-1860.** La. State U. Pr. (Baton Rouge), 1988. 335p, tables, notes, appendixes, bibliog., index. \$40./18 pap. Focus on Miss. Rev.: *T&C* 31, Jan. 1990, p177-8.

Joseph G. Morone & Edward J. Woodhouse, **The Demise of Nuclear Energy? Lessons for Democratic Control of Technology.** Yale U. Pr. (New Haven CT), 1989. 184p, notes, index. \$23/7 pap. Rev.: *T&C* 31, Apr. 1990, p346-9.

P. Ranganath Nayak & John M. Ketteringham, **Breakthroughs!** Rawson Associates (NY), 1986. Describes a breakthrough as an "act of doing something so different that it cannot be compared to any existing practices or perceptions", in contrast to innovation, "doing the same thing you are doing now but doing it better". Includes JVC and the VCR, Sony Walkman, EMI and the mfr. of CAT scan machines (the foundation of the first machine was an industrial lathe bed), the Toyota Production System, polypropylene. Popular level but some good IA.

Eugene Ostroff (ed.), **Pioneers of Photography: Their Achievements in Science & Technology.** Northeastern U. Pr. (Boston MA) for Soc. for Imaging Science & Technology, 1987. 285p, illus., references, no index. \$65. Mostly narrowly focused on technical developments of interest to specialists, with little on social, political, and intellectual history, but also incl. Helena Wright [SIA] on the Bierstadt brothers and 19th C. Amer. landscapes, Ostroff on mobile and other photographic darkrooms before 1880, and Reese Jenkins on "Science, Technology, and the Evolution of Photography, 1790-1925."

J'Neil L. Pate, **Livestock Legacy: The Fort Worth Stockyards, 1887-1987.** Texas A&M U. Pr. (College Station), 1988. 352p. \$30. Rev.: *JAH* 76, Mar. 1990, p1285.

Richard L. Porter & Carter Litchfield [both SIA], "The Clinton Linseed Oil Mill, 1779-c.1852." In *Hunterdon Historical Newsletter* (Hunterdon County Hist. Soc., 114 Main St., Flemington NJ 08822) 26, Winter 1990, p686-88.

J. Sanford Rikoon, **Threshing in the Midwest, 1820-1940: A Study of Traditional Culture and Technological Change.** Ind. U. Pr. (Bloomington), 1988. 230p. \$35. Rev.: *JAH* 76, Mar. 1990, p1261-2; *T&C* 31, Jan. 1990, p178-80.

Craig H. Roell, **The Piano in America, 1890-1940.** U. of N.C. Pr. (Chapel Hill), 1989. 426p. \$36. Rev.: *JAH* 76, Mar. 1990, p1289-90. Incl. emergence of NY, Chicago, Boston & Cincinnati as leading piano mfrs.

Herman Ronnenberg, "Idaho on the Rocks: The Ice Business in the Gem State." In *Idaho Yesterdays* 33, Winter 1990, p2-8. Mostly 1890s-1920s.

John Schreiner, **The Refiners: A Century of BC Sugar.** Douglas & McIntyre (1615 Venables, Vancouver BC V5L 2H1), 1990. 288p, illus. \$30. Corporate history of the British Columbia Sugar Refining Company, with operations in Vancouver (the first major industry in BC not based on logging or fishing; est. 1891 with help from CP RR; using raw cane sugar from Java and other sources). The firm expanded into beet sugar with refineries in Alberta (1931) and Manitoba (1956), as well as cane operations in Fiji (1905-22) and the Dominican Republic (1944-55). Run for almost its entire history by B.T. Rogers and his descendants, it has now expanded into the chemicals industry. Also avail. direct from the company (BC Sugar, POB 2150, Vancouver BC V6B 3V2) is **BC Sugar: The Hundred Years, 1890-1990**, 24p, gratis; incl. factory and transport illus., many full-color.

David Shayt [SIA], "Manufacturing Secrecy: The Dueling Cymbalmakers of North America." In *IA* 15, No. 1, 1989, p35-53. Discusses bronze casting, cymbal manufacture and the related traditional production of gongs; focuses on the current manufacturers Alvedis Zildjian Co. (est. 1623 in Turkey; with Mass. operations from 1929) and Sabian Ltd. (New Brunswick, Canada, est. 1968 as a Zildjian Co. operation but since c.1979 a rival company due to a family split); notes opportunities and problems of doing IA research in active, competing sites.

Robert Louis Stein, **The French Sugar Business in the 18th Century.** La. State U. Pr. (Baton Rouge), 1988. 200p, tables, notes, bibliog., index. \$28. Rev.: *T&C* 31, Jan. 1990, p174-7.

Peter Temin with Louis Galambos, **The Fall of the Bell System: A Study in Prices and Politics.** Cambridge U. Pr. (NY), 1987. 406p, illus., figures, notes, index. \$28/14 pap. Rev.: *AHR* 94, Dec. 1989, p1512-13; *T&C* 31, Jan. 1990, p133-7.

Anthony S. Travis, "Perkin's Mauve: Ancestor of the Organic Chemical Industry." In *T&C* 31, Jan. 1990, p81-82. English firm of Perkin and Sons and 1850s commercialization of the aniline (coal tar) dye "Tyrian purple"; incl. intermediate nitration process for production of benzene; application of dye to wool and silk, problems with cotton.

J. F. Wilson, **Ferranti & the British Electrical Industry., 1864-1930.** Manchester U. Pr. (Manchester) and St. Martin's Pr. (NY, distr.), 1988. 174p, appendix, bibliog., index. \$40. Rev.: *T&C* 31, Jan. 1990, p169-70.

STRUCTURE

Polly Wynn Allen, **Building Domestic Liberty: Charlotte Perkins Gilman's Architectural Feminism.** U. of Mass. Pr. (Amherst MA), 1988. 205p, illus., notes, index. \$25/12 pap. Gilman (1860-1935), advocate of housewifeless architecture with commercialized kitchens, laundries, and child care. Rev.: *T&C* 31, Apr. 1990, p308-9.

Paul Bairoch, **Cities and Economic Development: From the Dawn of History to the Present.** Translated by Christophy Braider. U. of Chicago Pr. (Chicago), 1988. 596p, tables, references, app., bibliog., index. \$50. Worldwide; "abstract, analytical, mathematical in places, and overwhelming in its factual detail"; describes 6 functional types of cities. Rev.: *T&C* 31, Apr. 1990, p295-7.

Gunther Barth, **Instant Cities: Urbanization and the Rise of San Francisco and Denver.** U. of N.M. Pr. (Albuquerque), 1988. 339p, notes, bibliog., index. \$13. Rapid urban growth; typically western at first (wild, unplanned) but becoming "eastern" with incorporation of technology (RR, telegraph, street rwy., telephone). Rev.: *T&C* 31, Apr. 1990, p302-4.

John A. Burns (ed.), **Recording Historic Structures.** Amer. Inst. of Architects (Waldorf MD 20601), 1990? 240p, illus., bibliog., index. \$30/20 pap. How-to, incl. initial survey, historical research, documentary photographs, and measured dwgs.; using examples from HABS/HAER collections.

Richard M. Candee [SLA], **"The 1822 Allendale Mill and Slow-Burning Construction: A Case Study in the Transmission of an Architectural Technology."** In *IA* 15, No. 1, 1989, p21-34. Dissemination of heavy internal timber system in New England textile mills dating probably from 1825-1826 published reports of its use in Manchester, England; importance of availability of planing machinery; physical and documentary evidence that Zachariah Allen's mill in N. Providence, R.I., was not first to use the system, as previously thought.

Jane Lamm Carroll, **"Dams and Damages: The Ojibway, the United States, and the Mississippi Headwaters Reservoirs."** In *Minn. History* 52, Spring 1990, p2-15 + cover. Incl. descr. & photos of dams at Winnibigoshish (built 1884, NR 1982), Leech Lake, and Pokegama Lake, north central Minn.

Michael H. Ebner, **Creating Chicago's North Shore: A Suburban History.** U. of Chicago Pr. (Chicago), 1988. 368p, illus., notes, appendixes, bibliog., index. \$30. Social history; incl. residents' resistance to transport technology as a threat to their exclusive communities. Rev.: *T&C* 31, Apr. 1990, p304-5.

Michael W. Fazio, **"Benjamin Latrobe's Designs for a Lighthouse at the Mouth of the Mississippi River."** In *J. of the Soc. of Architectural Historians* 48, Sept. 1989, p232-47.

Roman Fodchuk, **"Building the Little House on the Prairies: Ukrainian Technology, Canadian Resources."** In *Material Culture Bull.* 29, Spring 1989, p89-97.

André E. Guillerme, **The Age of Water: The Urban Environment in the North of France, A.D. 500-1800.** History of 18 cities in the Paris basin (not incl. Paris) in relation to waterways networks that were comparable in density to those of Venice; the clean, healthy cities of the High Middle Ages (with gristmills and woolen mfr: as representative technologies) giving way to humid, "excremental" and "fungal" processes (linen, hemp, gunpowder, paper, leather) by the late Middle Ages. Rev.: *T&C* 31, Apr. 1990, p297-8.

Bill Helsel & David A. Simmons, **Ohio Historic Bridge Guide.** Southern Ohio Covered Bridge Assn. (3155 Whitehead Rd., Columbus, Ohio 43204), 1990. 15p. \$4.50 ppd. Lists all covered bridges; selected stone, metal & concrete bridges built before 1941; 300+ total, with date, descr., location.

Josef Konvitz, Mark H. Rose, and Joel A. Tarr, **"Technology and the City."** Review essay in *T&C* 31, Apr. 1990, p284-94. Incl. "Chicago School" of sociologists, 1915-40; Lewis Mumford, 1934-61; Sam Bass Warner, Jr., 1970s; and since 1970s, a variety of approaches: urban technology / public works history; development of structures in terms of their significance for urban space; technology / public policy / politics; and city building as a process.

Russell Martin, **A Story That Stands Like a Dam: Glen Canyon and the Struggle for the Soul of the West.** Henry Holt (NY), 1989. 354p, maps, bibliog., index. \$25. Colorado R., Ariz., impounding Lake Powell. Dam, power plant and bridge built 1956-c.1964.

Peter Nabakov & Robert Easton, **Native American Architecture.** Oxford U. Pr. (NY), 1989. 431p, illus., glossary, bibliog., index. \$50. Incl. technology, building methods. Rev.: *T&C* 31, Apr. 1990, p305-6.

Mary E. Pyne, **"New England's Gasholder Houses."** In *IA* 15, No. 1, 1989, p55-62. Describes 13 intact structures in Mass., Conn., R.I., Me., & N.H.; notes difficulties of adaptive reuse.

Terry S. Reynolds [SLA], **"A Narrow Window of Opportunity: The Rise and Fall of the Fixed Steel Dam."** In *IA* 15, No. 1, 1989, p1-20. Only 3 built: Ash Fork, Ariz. (1897-1898), Redridge, Mich. upper peninsula (1900-1901), and Hauser Lake, Mont. (1905-1907; failed 1908). Article discusses the two remaining dams (esp. Redridge) and others with a substantial steel component, and challenges previous explanations for the demise of the steel dam.

Benjamin D. Rhodes, **"From Cooksville to Chungking: The Dam-Designing Career of John L. Savage."** In *Wis. Mag. of Hist.* 72, Summer 1989, p243-72.

Witold Rybczynski, **The Most Beautiful House in the World.** Viking Penguin (NY), 1989. 211p, bibliog. \$19. An architect's account of his self-designed and -built home, with delightful digressions, incl. the anthropology of building and the history of construction toys (Lincoln Logs, Legos, Erector sets...). Rev.: *T&C* 31, Apr. 1990, p310-11.

Daniel Schaffer (ed.), **Two Centuries of American Planning.** Johns Hopkins U. Pr. (Baltimore), 1988. 335p, illus., notes, index. \$49/15 pap. Rev.: *T&C* 31, Apr. 1990, p301-2.

Todd Shallat, **"Building Waterways, 1802-1861: Science and the U.S. Army in Early Public Works."** In *T&C* 31, Jan. 1990, p18-50. U.S. Army Corps of Engineers; European influence; civil engineering science, hydraulics; technology transfer, rivers, harbors, canals (incl. C&O canal).

Todd Shallat, **"Engineering Policy: The U.S. Army Corps of Engineers & the Historical Foundations of Power."** In *Public Historian* 11, Summer 1989, p7-27.

MATERIALS

Robert L. Bates, **Industrial Minerals — How They Are Found and Used.** Enslow Publishers (POB 777, Hillside NJ), 1988. 64p. Young people's book. Rev.: *Pa. Geology* 20, Oct. 1989, also notes 2 related Bates books: **Stone, Clay, Glass—How Building Materials Are Found and Used** and **Our Modern Stone Age**.

Terrence Cole, **"Golden Years: The Decline of Gold Mining in Alaska."** In *Pacific Northwest Q.* 80, Apr. 1989, p62-71.

Michael Crow, et al, **Synthetic Fuel Technology Development in the U.S.: A Retrospective Assessment.** Praeger (NY), 1988. 187p, figures, tables, notes, appendixes, index. \$40. Retrospective technology assessment (RTA, which includes technological, public policy, and economic issues) of direct coal liquefaction from 1913 invention in Germany through U.S. start and stop cycles due to crises in WWII, 1960s, and 1970s. Rev.: *T&C* 31, Apr. 1990, p350-51.

Alan Derickson, **Workers' Health, Workers' Democracy: The Western Miners' Struggle, 1891-1925.** Cornell U. Pr. (Ithaca), 1988. 269p. \$27. Western Federation of Miners; incl. safety. Rev.: *JAH* 76, Mar. 1990, p1289.

Keith Dix, **What's a Coal Miner to Do? The Mechanization of Coal Mining.** U. of Pittsburgh Pr. (Pittsburgh PA), 1988. 272p. \$30. Transformation of the labor process in bituminous coal mining, 1920s-30s, esp. as a result of mechanized coal loaders; deskilling; shift of control from local workplace to bureaucratic industry-wide practices; increased safety and health problems. Rev.: *JAH* 76, Mar. 1990, p1306-7; *T&C* 31, Jan. 1990, p163-4; *Labor History* 30, Fall 1989, p630-31.

Abbreviations used in this Poffi:

- **AHR:** American Historical Review
- **BHR:** Business History Review
- **IA:** IA, The Journal of the Society for Industrial Archeology
- **JAH:** Journal of American History
- **T&C:** Technology & Culture

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