

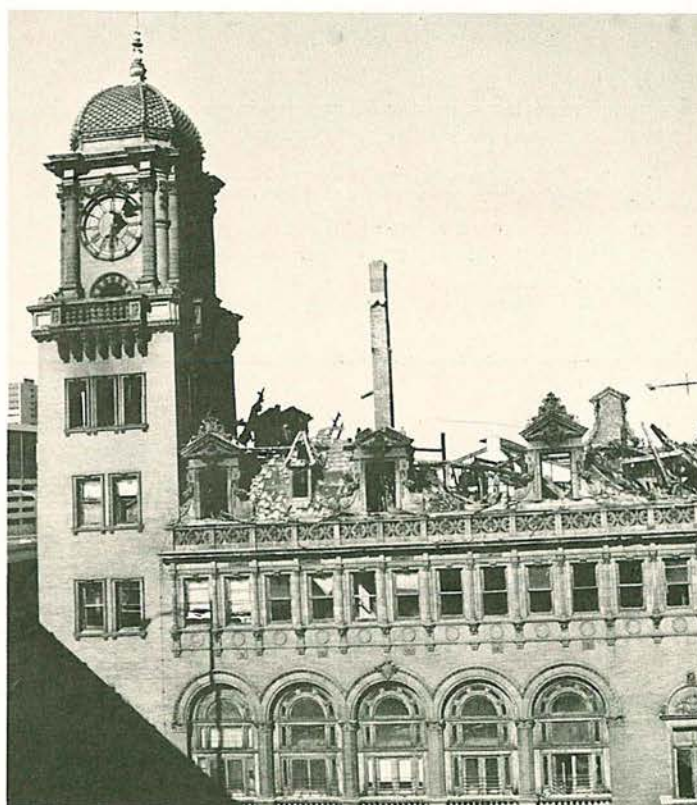
SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume 12, Number 4

Fall-Winter 1983

FIRES RAVAGE RICHMOND DEPOT, MINNEAPOLIS MILL



Richmond's 1901 Main Street Station, before and after the October fire. Jack Boucher photograph for HAER (L), Richmond Newspapers, Inc. photograph (R).

Fires continue to incinerate significant historic industrial structures with mind-numbing regularity. Since Paterson's devastating blaze was reported in the last *SIA*N, fire has damaged or destroyed a railroad station in Richmond and mills in New Hope, Pa., and Minneapolis, including a flour mill viewed during last spring's SIA Annual Conference.

Perhaps most shocking was the damage to Richmond's spectacular **Main Street Station** [NHL], a 1901 French Chateausque depot of the Seaboard Airline/Chesapeake & Ohio RR. The six-alarm blaze on Oct. 7 destroyed the five-story building's top floor and roof and badly damaged the fourth floor. SIA members will be relieved to hear that the adjacent, long span, metal, trussed-roof trainshed was untouched.

Main Street Station was documented by HAER in 1971 and closed to rail service in 1975. Its significant trainshed was among the group of surviving LSMTR trainsheds that received landmark designation in 1975 [*SIA*N Sept./Nov. 76:2]. HAER documentation probably will be used during the structure's restoration, according to Eric DeLony [SIA].

A \$10-million renovation project to convert the depot into an

outlet shopping mall with restaurants and more than 70 shops was expected to move ahead. National Park Service approval for a 25 percent tax credit had been received only a week before the fire, and developers speculated that the fire damage might offer increased tax advantages.

On a Friday evening exactly two weeks later, Oct. 21 (and a mere football field's distance from another significant trainshed), the **Crown Roller Mill** (1880) in Minneapolis was gutted by an awesome four-alarm fire whose flames reached 45 ft. above the 100-ft. building. To the historian-observer, the orange-red nighttime scene appeared as an uninvited living history reenactment of the 1878 Minneapolis Mill Explosion which ripped apart the same industrial neighborhood. The next day's gaping ruin was startlingly similar to photographs of the earlier disaster.

Annual Conference attendees will recall the square, cream-brick flour mill from their walking tour of the West Bank Milling District, part of the city's St. Anthony Falls Historic District [NR] on the Mississippi River. The Crown is one of the five surviving flour mills in the historic waterpower milling district, and is located

Continued on next page



Gutted Crown Roller Mill (1880) in Minneapolis. R.M. Frame III photograph.

within sight of two National Landmark mill complexes, Pillsbury and Washburn Crosby, both untouched by the fire. Conversion of the mill to an apartment/office complex had been planned.

With its timber framework burned to the ground floor level, the question of saving the unstable brick shell from the wrecker's ball proved to be a controversial question of safety versus irreplaceable history. For the present, the city council has authorized funds for structural stabilization while restoration money is sought. Successfully arguing for the mill's preservation were a councilwoman who is also a professional historian, along with Jeffrey Hess [SIA & conf. tour leader], State Hist. Pres. Office representatives, and historic district developers.

The **Union Mill Paper Mfg. Co.** building (1880) in New Hope, Pa., was partially destroyed by fire on Nov. 13. The two-story factory was slated for conversion to a hotel/conference center.

Each of the above fires was of undetermined origin, with arson strongly suspected both in Richmond and Minneapolis.

NEWS IN BRIEF

FAREWELL GG-1. Some 5,000 people watched as the last official trip by a GG-1 electric locomotive in the U.S. was run on Oct. 28. GG-1 engine #4877, repainted in PRR tuscan-red livery and known as "Jersey G," made the final round-trip between Matawan and Newark before being retired by NJ Transit, last remaining operator of the locomotives. They are being replaced by E-60 electric locomotives leased from Amtrak. NJT owns a fleet of 13 GG-1's, of which only six are operable. Built in 1934, the first GG-1, #4800, is restored and on exhibit at the RR Museum of Pa. in Strasburg, along with #4935. [See *SIAN* Jan. 77:5 re GG-1 restoration project.]

T.K.

CONTRIBUTORS TO THIS ISSUE

Eric N. Delony, HAER; Douglas Harnsberger, Va. Hist. Landmarks Commn.; J. Paul Hartman, Univ. of Central Florida; Charles Hyde, Wayne State Univ.; Terry Karschner, Office of N.J. Heritage; Patrick Malone and April Wolf, Slater Mill Hist. Site; Paul J. McGinley, Anderson Notter Finegold Inc.; Peter M. Molloy, Western Mus. of Mining & Industry; Thorwald Torgersen, Hackettstown, N.J.; Stephen Victor, New Haven, Conn.; Helena E. Wright, Natl. Mus. of Am. Hist.; Merrill Wilson, Colo. Hist. Soc. With thanks.

TICCIH REGISTRATION STILL OPEN



4731. The Clock Strikes 12.

There's still time for TICCIH! The clock hasn't struck 12 yet! Stereograph view of Lowell c1890 courtesy NMAH, Smithsonian.

The pre-registration deadline has been extended to Feb. 29 for Industrial Heritage '84, the SIA-sponsored fifth international conference on the conservation of the industrial heritage (TICCIH). Based in Lowell, Mass., IH'84 takes place June 8-14, just prior to the SIA Annual Conference in Boston, June 14-17.

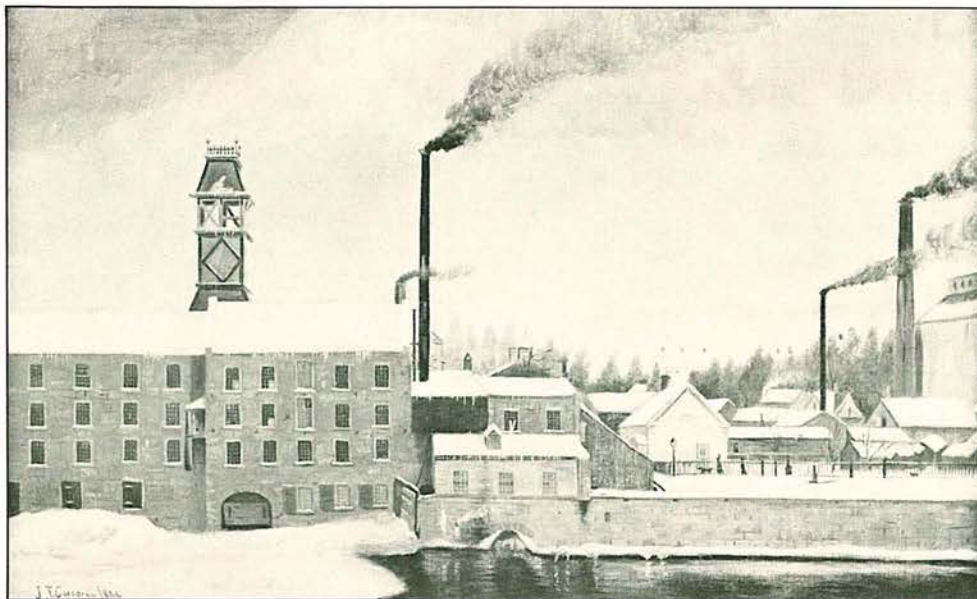
Included are three days of working sessions and general assemblies, involving IA professionals from throughout the world, at which every registrant will have the opportunity to make a 20-min. presentation.

Complementing the working sessions are three days of tours, all organized by SIA members: Lowell (Charles Parrott); North Coast: Mass., N.H., Maine (Laurence Gross and Richard Candee); Merrimack Valley (Paul Hudon); and Rhode Island and S.E. Mass. (Patrick Malone). These are new, expanded tours, covering sites and territory not seen on earlier SIA visits to New England. [See *SIAN* Spring-Summer 83:9 for a detailed conference description, including tours and working session topics.]

Registration is \$300, including a \$50 pre-registration fee to be submitted with a one-page abstract of the intended presentation. The \$250 balance is due April 30. The registration fee covers: all lodging and most meals for six days, including banquet, receptions, Lowell accommodations, and Boston excursions; transportation for tours and meetings; *National Reports*, a published volume on international IA; tour guidebooks; *Conference Proceedings*, a volume of selected papers and summaries of working sessions; abstracts of presentations; program and list of participants.

For info. and pre-registration forms, contact Stephen Victor, Conf. Coordinator, 166 E. Rock Rd., New Haven, Conn. 06511 (203-789-8223), or Helena Wright, U.S. Natl. Rep. of TICCIH, Rm. 5703, NMAH Smithsonian, Wash. D.C. 20560 (202-357-2877).

S.V.



MYSTERY MILL

Can anyone identify the stone mill in this oil painting? Titled "New England Factory Scene," it is signed lower left "J.T. Copcopan 1886," 16 x 25 ins. on academy board, and framed in a 2-in. rosewood veneer frame. If you think you know, write Kenneth M. Newman, The Old Print Shop, 150 Lexington Ave., N.Y., N.Y. 10016 (and send a copy of your letter to the editor, *SIAN*). If you'd like this painting on your wall, it retails for \$3,000.

SIA AFFAIRS

THE '83 JOURNAL. *IA*, the Society's annual journal, will be mailed to members in the first quarter of 1984, reports David Starbuck, editor, who also requests article submissions for the next issue. Write Starbuck at the Dept. of Anth. & Soc., Rensselaer Polytechnic Inst., Troy, N.Y. 12181 (518-266-8503).

NEH CURRICULUM PROJECT. Nicholas Westbrook, chairman of the oversight committee, assumed the duties of project director, following the resignation of Michael Folsom.

CHAPTER NEWS

A report of recent activities comes from chapter coordinator Thorwald Torgersen. Send news notes, especially on upcoming events, to the Editor, SIAN, or to Torgersen (PO Box 429, Hackettstown, N.J. 07840).

ROEBLING. Nine presentations and a buffet highlighted the all-day Third Annual IA Symposium for the N.Y. - N.J. area, at Drew Univ. in Oct. Included were Helen Schenck [SIA], "Forging Iron at the Valley Forge, Pa."; Stephen Hardick, "The 'Saga of 249' — Recovery of a Lehigh Canal Boat"; Michael Gimigliano [SIA], "Schuylerville, N.Y., Real & Idealized: Archeology & History of a Champlain Canal Town"; Patrick Malone [SIA], "America's Love Affair with the Auto—A Cultural View"; Edward Lenik, "Archeology of Black Powder Mills, Wayne, N.J."; Dennis Zembala [SIA], "Baltimore Museum of Industry: Ideas for N.Y."; Lance Metz [SIA], screening of 1928 Lehigh Coal & Navigation Co. film, "The Wonders of Anthracite"; Edward Rutsch [SIA], "Metal & Metal-Working in the Metro Area: The Soho Works, Belleville, N.J., 1795-1805"; James Lee, "Closing the Morris Canal: Recovery of Plane 9W Turbine." Abstracts avail. from symposium planner and moderator Torgersen.

Reprinting of the HAER bridge truss poster, first published by Montgomery C. Meigs Original Chapter, has been financed by Roebbling. Send \$4 + post. to Nanci Batchelor, 203 N. Burlington St., Bordentown, N.J. 08505.

Roebbling will host the 1985 SIA Annual Conf. in Newark.

SOUTHERN NEW ENGLAND. Members are deep into planning and organizing for the 1984 SIA Annual Conf. and TICCII meeting.

PHILADELPHIA. Phila.-area members had an initial meeting

in June with tours of the Reading Terminal and the MASCO laboratories at the Univ. of Pa. For Phila. chapter info. contact Mike Parrington, 136 Hartford Rd., Mt. Laurel, N.J. 08054.

OTHER CHAPTERS. If you live in one of the following areas and are interested in forming a local chapter, write the contact person.

—Pa. Anthracite Region: Mike Costellano, RD #1, Box 298, Tunkhannock, Pa. 18657.

—South Jersey: Don Pettifer, Wheaton Village Museum, Millville, N.J.

—California: Bev Morant, 61 W. Bonita, Sierra Madre 91024 or Wendy Fearing, 7966 Marin Ave., Berkeley 94707.

—Western States: Roger Brevoort, Arizona State Parks, 1688 W. Adams, Phoenix 85007.

NEWS OF MEMBERS

A busy SIA president is **Larry Lankton**, recently appointed head [yes, that's the official title] of the Dept. of Social Sciences at Michigan Tech. **Terry Reynolds**, late of Univ. of Wisc.-Madison, succeeds Larry as director of Michigan Tech's Science, Technology & Society program. Each is assoc. prof. of ST&S. Meanwhile, Larry is now *Technology & Culture's* exhibit review editor, replacing **Merritt Roe Smith**. **Gary B. Kulik** was appointed a *T&C* advisory editor.

"Salt Haying, Farming, and Fishing in Salisbury, Massachusetts: The Life of Sherb Eaton (1900-1982)," by **Betsy Woodman**, won the Essex Institute's third annual *Historical Collections* prize. Betsy's article appeared in the July 1983 issue of *EIHC*.

Richard Candee, an SIA past president, was awarded a \$3,000 grant-in-aid by the American Assn. for State & Local History to study Atlantic Heights, an early 20th-C. planned industrial village in suburban Portsmouth, N.H.

At the Smithsonian's Natl. Museum of Am. Hist., SIA v.p. **Helena Wright**, formerly at Merrimack Valley Textile Museum, now is curator of graphic arts, while **Steven Lubar**, past curator at Charles River Museum of Industry, is serving as research assoc. in the preparation of the NMAH exhibit on American industrialization. **Brooke Hindle** heads that project.

WAY OUT WEST FOR FALL TOUR '83

Taking a quantum leap west for the annual Fall Tour, the SIA headquartered at the Hilton Inn, Colorado Springs, on Thursday, October 13, anticipating a weekend packed with new IA. That evening, Peter Molloy [SIA], tour coordinator and displaced New England Yankee, heartily briefed 40 eager IA buffs on the history of Colorado mining and iron technology. New faces from the West Coast were visible among the tourgoers, many of whom were experiencing their first SIA event.

FRIDAY, our traditional process-tour day, began bright and early in the crisp fall air. During our event-packed day we were completely immersed in both the social and physical history of the gold-mining industry.

Manitou Springs Power Station, since c1900 in continuous operation at the base of Pikes Peak, was the first stop. Detailed inspection of the power house revealed two Pelton impulse water turbines with double buckets which utilize run-off water from Pikes Peak. These wheels operate with low volume (38 c.f./sec.) and high pressure (1,250-ft. head), to produce totally 2.5 megawatts of power.

The base station and equipment of the Pikes Peak Cog Railway was directly across the street. The rigorous schedule permitted only a short inspection before we crowded back onto the bus for the next stop.

CRIPPLE CREEK, once a gold-mining boom town, took us high into the mountains with several photo stops enroute to record the spectacular mountain ranges and golden aspen. In Cripple Creek, we picked up local historian Ray Drake, author of *The Last Gold Rush*, a detailed history of the Cripple Creek and Victor gold-



Scrambling up the hill at the Eclipse Mine, near Victor and Cripple Creek. April Wolf photograph.

mining district.

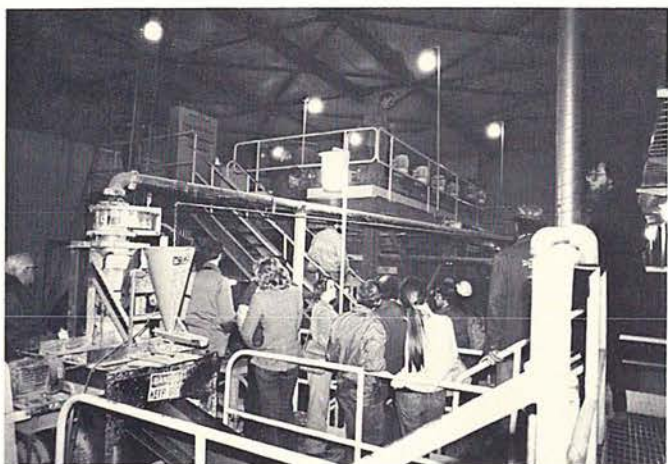
Despite its touristy flavor, Cripple Creek retains its essence and history as a major gold-mining community. Following lunch at the Red Lantern Restaurant, our western adventure took us to a tour of the Carlton Mill, once the largest gold-milling operation in the world. Now being refurbished by the Hecla Mining Co., this mill will be back in operation in 1984. On the road from Cripple Creek we passed many closed mines, often with head frames still intact.

We arrived in **VICTOR**, a semi-ghost town of past mining glory, once home to Jack Dempsey as he trained for his first fight. Walking the silent streets, with remnants of gold mines and head frames visible everywhere, it was easy to imagine the heyday of this important mining town that once saw dozens of trains arrive and depart daily. Today, victim of a dead economy, Victor's significant architecture is steadily deteriorating.

The **MOLLIE KATHLEEN GOLD MINE** provided Friday's high spot—our descent deep into the earth at this intact, former gold mine in Cripple Creek. What an experience! In groups of ten, we were compressed into a miner's cage and lowered, in darkness, 700 ft. to No. 7 drift level. The drifts, timber shoring, and overall close quarters, offered an authentic mine experience. By the time we returned topside we all had mining history and its technology in our veins. Our return trip to Colorado Springs took us through the



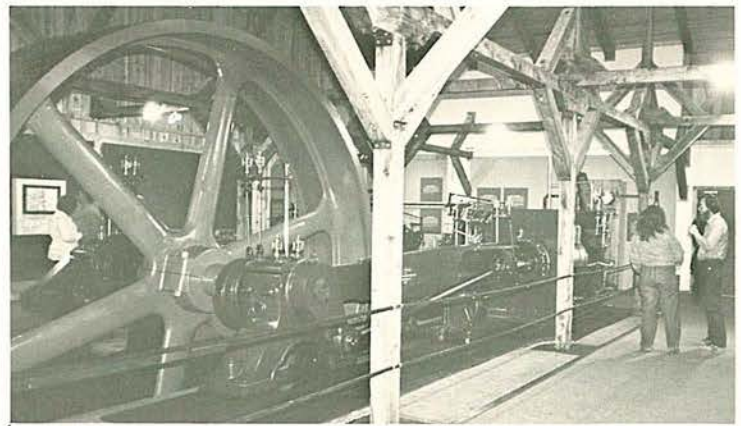
Above: Studying the machinery outside the Cripple Creek Museum. Below: Touring inside the Carlton Gold Mill. April Wolf photographs.



At the Mollie Kathleen Gold Mine, author-historian Ray Drake opens the gate to the mine's car which is about to lower SIA tourers, nine at a time sardine-fashion, 700 ft. down the shaft. April Wolf photograph.



WESTERN MUSEUM OF MINING & INDUSTRY. Left: Director Peter Molloy, Coors in hand at the reception, explains the collections. Right: The big Corliss steam engine dominates the new Exhibit Building. April Wolf photographs.



Garden of the Gods, exciting mountains of sandstone formations and a favorite haunt of rock climbers.

FRIDAY EVENING, Pete Molloy hosted a barbecue at the Western Museum of Mining & Industry, of which he is director. Outside, we were greeted by a recent acquisition, a 1918 Osgood steam shovel which formerly worked at the CFI open pits in Colorado. A sumptuous meal was enjoyed around a Corliss steam engine, the centerpiece of the new Exhibit Building. Opportunities to pan for gold were coupled with a tour of the WMM&I Mill Building and a demonstration of its operating mining equipment.

SATURDAY MORNING, our bus drove us north toward Denver and into the mountains for another western adventure. The Edgar Mine at Idaho Springs, known as the Experimental Mine of the Colorado School of Mines, was the first stop. Led by a gregarious mining student, we ventured into this underground classroom for approximately 1,300 ft. and traversed its various tunnels, which lie 1,200 ft. below the surface.

We learned that the average temperature of most mines is 52°F. Each of the various operations of the mining cycle was fully described, including drilling, blasting, and mucking or removing the blasted rock. Readily apparent were the hazards even of modern mining.

In the 1870's, the Edgar Mine produced high-grade silver and some gold, lead, and copper. Since 1921, it has served as an operating mine for students who undertake actual mining operations, including the testing of new mining equipment and techniques as well as government experimentation and occasional filming of commercials.

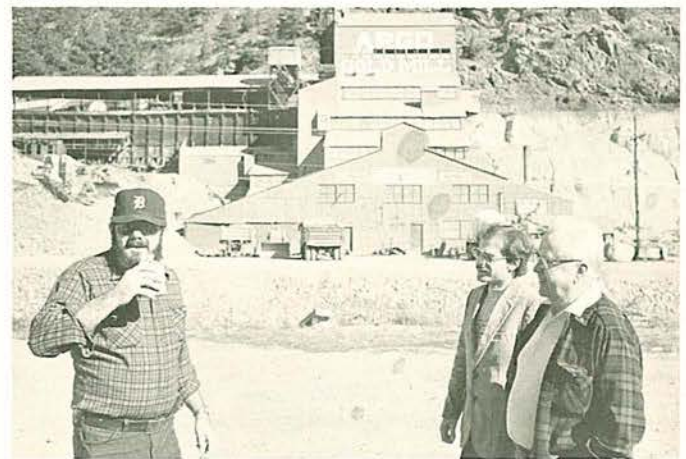
We lunched at the recently restored Teller House in **CENTRAL CITY**, a community encompassing some of the state's earliest Anglo architecture. Merrill Wilson [SIA] directed a tour of this early gold-mining town with its many cast-iron storefronts and the Golden Rose Hotel. We were delighted to receive an impromptu tour of Colorado's oldest extant church, St. James Methodist, with its Steere Organ. Local historian, miner, and retired state mining inspector Norm Blake chronicled Central City's lore and shepherded us through the still-operating **BOODLE GOLD MILL**. On our return ride we journeyed through Golden, home of Coors beer, and into the Colorado sunset.

SUNDAY—informal tours completed our western adventure. While Pete Molloy guided a group of enthusiasts south to Pueblo

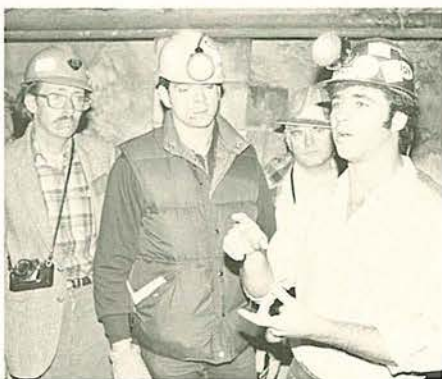
and the Arkansas River's Royal Gorge, Merrill Wilson took others through downtown Denver. The day began with a look at Denver's cast-iron architecture, notably the elegant atrium of the Brown Palace Hotel, and the gold-leafed dome of the State Capitol. Next, the small group walked through the warehouse district in lower downtown, stopping to admire the Cruise Room Bar (a superb, original Art Deco interior with 1930s transportation motifs) in the newly restored Oxford Hotel. Adjacent to the hotel is the grand, neo-classical Union Station (built of terra cotta glazed to imitate gray granite) which is sadly underutilized and a bit shabby. Also observed nearby were a series of steel truss RR bridges over Cherry Creek, and concrete highway viaducts. Following a look at Tivoli Brewery's rehab work, we completed the tour with a windshield survey of the U.S. Mint, Denver Tramway Cable Co. buildings, and several neighborhoods of workers' housing.

Superb weather, new friends, and a great tour will long be remembered. The tour organizers provided a challenge for the coordinators of the 1984 Fall Tour. Our sincere thanks and appreciation for their efforts in planning and executing a Rocky Mountain high.

P.McG. with M.W.



Above: SIA prexy Larry Lankton wets his whistle at the Argo custom concentration mill in Idaho Springs. Completed in 1914, the Argo processed ore from Central City-Blackhawk mines. Below: Marvelling at the Denver & Rio Grande's 1880's "hanging bridge" over the Arkansas River at Royal Gorge. Peter Molloy photographs.



Colo. School of Mines student explains techniques at their Experimental Mine, the Edgar, a solid silver-lead-zinc producer from 1878 to 1920. Peter Molloy photograph.

NOTES & QUERIES

IA VIDEO RECORDINGS of British industries, made with a mobile video crew using professional equipment, are in commercial production in VHS & Betamax formats. Each runs 12 1/2 mins., costs £28.75, and is narrated. Now available are "Hand Rolling of Steel," a record of the last Black Country hand steel rolling mill, made three days before it closed, and "Hand Made Bricks," shot "at one of the few brickyards that still employs women hand moulders." In production are "Telford's Last Canal" (the building of Birmingham & Liverpool Junction Canal), "A Crooked Ditch" (a history of Birmingham Canal navigations), "An Introduction to Railway History," and "The Development of Printing Machinery." For info. contact I.A. Recordings, Unit 3, Maws Tile Works, Jackfield, Shropshire, England.

FULTON DRAWINGS. The N.J. Historical Society is deaccessioning its Robert Fulton drawings of submarine and naval warfare and contracted with Sotheby's for auctions last Oct. and Dec. of nonstate items, primarily manuscripts, maps, and printed Americana, including some Fulton works. Info.: NJHS Library, 230 Broadway, Newark 07104 (201-483-3939).

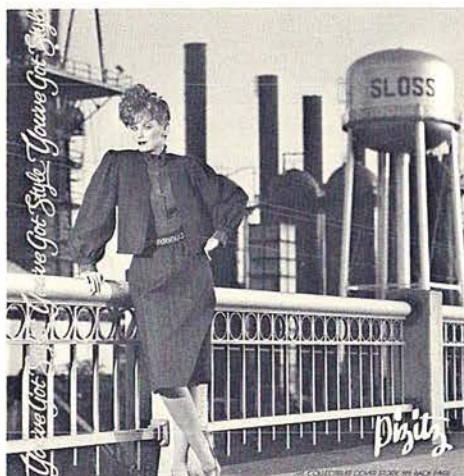
T.K.

GRAY'S TELAUTOGRAPH. J. Paul Hartman writes: "SIA members interested in observing recent hardware directly descended from Elisha Gray's TelAutograph will find an example in Wash., D.C., at Union Station, at the entrance to tracks 24-27 on the upper level. [The TelAutograph was a turn-of-the-century electromechanical device for facsimile transmission and reception of handwriting.] The trainman on duty receives messages from the tower on arrival and departure time, as well as track usage."

LANDSDOWNE REVISITED. Detroit's 1884 side-wheel RR car ferry, the *Lansdowne*, last seen during the 1980 Annual Conf. [*SIAN* July 80:2], has been reincarnated as a floating restaurant. The 319-ft. former boxcar hauler features two dance floors and seating for 1,100 guests. If the new restaurant doesn't gross \$2 million in its second year, the owner, Specialty Restaurants Corp. of Long Beach, is free to break the berth lease with the city and shove off to a new port.

C.H.

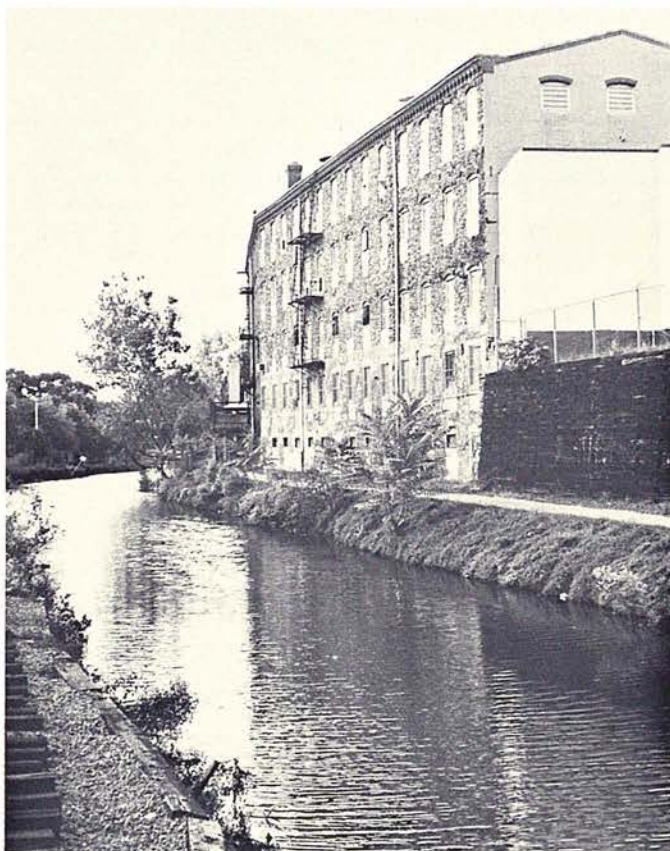
IA IN ADVERTISING? IA perusers of the slick, full-color Pizitz dept. store's Fall catalog (with stores in Downtown Birmingham, Brookwood, Century Plaza, etc.) might have been surprised to see the good-looking ladies and gents sporting their snappy new clothing styles next to huge sections of boiler plate studded with heavy rivets and bolts. Pizitz had its models photographed against



The catalog:
Pizitz pizzazz for Sloss.

the background of Birmingham's newly reopened Sloss Furnaces [1927-29; NHL, HAER; *SIAN* Spring-Summer 83:16]. The story of Sloss in Alabama is strung through the catalog. Industrial site administrators and advertising agencies, take note.

IA AT ASA. "The World's Greatest Workshop: A Bus Tour of Industrial Philadelphia" was an IA highlight at the Biennial Conf. of the American Studies Assn. in Nov. Led by Philip Scranton (Phila. College of Textiles & Science) and Roman Cybriwsky (Temple Univ.), tourgoers walked and drove through the Schuylkill River industrial community of Manayunk. Sites



Philadelphia textiles: Seville Schofield's steam-powered Economy Mills (1868/74) on the Manayunk Canal. R.M. Frame III photograph.

visited included the operating Blankin Yarn Co. mill (machines from Davis & Furber 1896 through Whitin 1950s) and the adjacent Manayunk Canal (1817-23, rehabbed 1979).

LINEAR IA IN L.I. National Register status is sought for Long Island's state parkways, with their attendant stone gas stations, bridges, lighting structures, wood guardrails, landscaping, and other amenities, according to the Soc. for the Pres. of L.I. Antiquities. Designed in the late 1920s and constructed through the 1950s, the parkways were the brainchild of Robert Moses who wanted to provide access from NYC to recreational facilities on L.I. Despite some widening and updating, bridges and structures remain largely as built.

APT '84 AGENDA. The Assn. for Preservation Technology announces its 1984 Annual Conf. program for Sept. 19-23 in Toronto under the theme of "Philosophical Challenges/Technological Responses." The three-part conf. will focus on restoration project planning, management, and technology, including sessions on "Research tools: recording, documentation, archeology"; "Scrape & anti-scrape: the period restoration/preservation debate"; "Program conflicts: e.g. museum artifacts in historic buildings, & energy conservation"; and others. Preceding the conf., Sept. 16-19, will be training courses in "Masonry conservation & cleaning" and "Historical archeology as a tool in architectural conservation." General info.: Jean Simonton, Publicity Committee, APT 1984 Annual Conf., 77 Bloor St. W. (7th Fl.), Toronto, Ontario M7A 2R9.

B&W ENGINE BICENTENARY. On July 22, 1985, the Power House Museum, Sydney, Australia, will steam up a Boulton & Watt engine first operated on July 22, 1795, at Whitbread's Brewery, London. After 102 years of service the engine was donated to the forerunner of the PHM and has not operated since then. It is the oldest surviving B&W rotative steam engine in the world, according to PHM, and is now undergoing restoration to steaming condition. The 1985 Bicentenary Celebrations will include an international symposium on steam technology in the industrial revolution and the conservation of the engineering heritage, along with tours of Australian IA sites and other events. Info.: Louise Crossley, PHM, P.O. Box K346, Haymarket, Sydney, 2007, Aust.

OLD WINE, NEW BOTTLES. Burlington Northern Twin Cities Region has converted surplus tank cars into diesel fuel tenders for both through-freight and local service, according to *BN News*. The tenders automatically pump fuel into the locomotives when their fuel tanks drop to a specified level. Four are in service with two more expected.

Meanwhile, reports *Railway Age*, BN is involved with Chessie System and Babcock & Wilcox/McDermott Intl. in a joint venture partnership formed to study the feasibility of building and testing a prototype ACE 3000 coal-fired steam locomotive using modern industrial boiler technology. The ACE 3000 was designed by American Coal Enterprises, a limited partner. BN and Chessie are America's two largest coal haulers.

[Editor's note: As I write these notes, NBC-TV is broadcasting "Journey to the Heart of China" with Tom Brokaw. Brokaw is visiting a Chinese steam locomotive factory in a city which seems to live for the steam locomotive. Several hundred are built each year. The camera captures welders assembling locomotives. Later, they sing songs praising the steam locomotive. This city's other industry is coal. The workers there sing of coal mining.]

HAGLEY PROGRAM. The Hagley Program in the History of Industrial America, leading to an M.A. or Ph.D. with a focus on the social history of American industrialization, seeks applicants. Available financial aid consists of a stipend of \$4,600 per year the first two years and \$5,000 the second two years, full tuition, and a small travel fund. Info.: Brian Greenberg, Coordinator, Hagley Program, Eleutherian Mills-Hagley Found., P.O. Box 3630, Greenville, Wilmington, Del. 19807.

SMITHSONIAN FELLOWSHIPS. Applications are due Jan. 15 for 1984-85 research fellowships in American history and material culture, and the history of science and technology. Awards are made for research at the Smithsonian on topics related to the institution's collections, facilities, and laboratories and carry stipends for predoctoral, postdoctoral, and graduate levels. Info.: Office of Fellowships & Grants, 3300 L'Enfant Plaza, Smithsonian Inst., Wash. D.C. 20560.

PHONE MONEY. The AT&T Co. will award a \$10,000 fellowship for doctoral research into the history of AT&T, its predecessor and associated enterprises. Students in business history or related fields, with course work completed, are eligible. The fellowship supports research for one year at the AT&T business archives in N.Y.C. The archives are processed for the 1876-1930 period and involve the company's organization, financing, operations, commercial growth, and technological development. Included are 500+ letterbooks for the president's and general manager's offices, and 500+ boxes of general correspondence, reports, and memoranda cataloged by subject. Post-1930 material is being assembled. Application deadline is March 1. Info.: Historical Archives & Publications Group, AT&T, 195 Broadway, Room 01-536C, N.Y. 10007. For archives info.: Richard E. Priest, Corporate Archivist, same address.

ROVENSKY FELLOWSHIPS. The Lincoln Educational Foundation announces three \$3,000 John E. Rovensky Fellowships in Business & Economic History. Graduate students in U.S. business or economic history, planning to acquire a Ph.D., are eligible. Application deadline is March 1. Info.: C. Clyde Jones, Dept. of Management, Kansas State Univ., Manhattan, Kan. 66506.



WANTED

CALL FOR ARTICLES. Arthur D. Dunn [SIA], the new editor of *Tools & Technology*, published by the American Precision Museum in Windsor, Vt., announces an expanded publication policy and seeks articles on machine-tool history and development. For an editorial statement and list of areas of interest, write Dunn at 1287 Castlehill Crescent, Ottawa K2C 2B2, Ontario.



RESEARCH QUERIES

LIMA LOCOMOTIVE. "I am seeking information—design notes, correspondence, biographies, photographs, or reminiscences—about W.E. "Will" Woodard, Lima Locomotive Works engineer and designer of the A-1 Berkshire." David Weitzman, P.O. Box 381, Covelo, Calif. 95428 (or call collect 707-983-6391).

AIRCRAFT MFG. George Williams (40 N. Jackson Ave., Manasquan, N.J. 80736, 201-223-0595) seeks information on aircraft manufacturing during WWII, especially in N.J.



AVAILABLE

OHIO BRIDGE. The 1892 Strout Rd. Bridge in Warren Co., a 226-ft., pin-connected, Baltimore through-truss, is available to anyone assuming moving expenses. Info.: William Temple, Chief Deputy Engineer, Co. Engineer's Office, 105 Market Rd., Lebanon, Ohio 45036 (513-932-6861).

SCHERZER BASCULE. Delaware bridge #153, Rehobeth Ave., Rehobeth Beach, a 1926 two-lane, 87-ft., single-leaf bascule bridge is available to anyone assuming moving expenses. It features a patented Scherzer operating mechanism and currently has a three-ton load limit. Should be claimed by Mar. 31. Info.: Joe Wutka, Location Studies & Environmental Engineer, DDOT, P.O. Box 778, Dover 19901 (302-736-3240).

FREE PENNA. MAPS. A limited number of outdated 7.5' quadrangle topo maps are free to teachers and troop leaders. Also, 50 surplus vols. of the Grand Atlas series of the 2nd Geological Survey of Pa. (1874-89) are avail. free, first-come first-serve, but must be obtained in person. Info.: Arthur A. Socolow, State Geologist, Bureau of Topo. & Geo. Survey, P.O. Box 2357, Harrisburg 17120 (717-787-2169).

LOCOMOTIVE POSTER. The *Locomotive* has blown its Summer 1983 cover up to a 12 x 18-in. poster, avail. for \$1.75 post. Pictured are three renditions of the 4-4-0 Harford & New Haven *Comet*, part of Hartford Steam Boiler's logo since 1866. Write Editor, *Locomotive*, HSB, 1 State St., Hartford, Conn. 06102.

CALENDAR

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

To Mar. 1: Exhibit — "Henry J. Kaiser: Man of Vision," Oregon Hist. Soc., 1230 S.W. Park Ave., Portland. Photos of HJK's works.

To May 13: Exhibit — "The Great CPR Exposition: The Impact of the Railway on Western Canada, 1863-1930," Glenbow Museum, Calgary.

Jan. 15: Deadline, paper proposals, SIA 13th Annual Conf., Boston. Info.: Jeff Howry, Charles River Mus. of Industry, 154 Moody St., Waltham, Mass. 02154 (617-893-5140).

Jan. 15: Deadline, paper proposals, Annual Meeting, Vernacular Architecture Forum, Newark, Del. Info.: Elizabeth Cromley, Papers Chair VAF, 143 Hayes Hall, School of Arch., SUNY, Main St., Buffalo, N.Y. 14214.

Jan. 17: Annual Business Meeting, SIA Roebling Chapter, ITT Conf. Center, Nutley, N.J. Info.: Nanci Batchelor, 203 N. Burlington St., Bordentown, N.J. 08505.

Jan. 21-Mar. 4: Traveling exhibit — "Building Brooklyn Bridge: The Design & Construction, 1867-1883," Univ. of Toronto.

Mar. 1: Deadline, nominations for 1984 Honorary Fellows, Early American Industries Assn. Info.: Howard L. Greenberger, N.Y. Univ. School of Law, 343 Vanderbilt Hall, 40 Washington Sq. S., N.Y. 11012.

Mar. 8-10: Annual Meeting, Business Hist. Conf., Hartford, Conn.

Mar. 29-Apr. 1: 6th National Meeting, American Culture Assn. with 14th National Meeting, Popular Culture Assn., Toronto. Info.: David Wright, Program Chair, 1415 Key Blvd. #406, Arlington, Va. 22209.

Mar. 31: 3rd Annual Canal History & Technology Symposium, Lafayette College, Easton, Pa. Info.: Center for CH&T, P.O. Box 877, Easton 18042.

Apr. 4: Exhibit opening — "Life & Times in Silk City [Paterson, N.J.]," American Labor Museum, Botto House, 83 Norwood St., Haledon, N.J. 17508.

Apr. 4-7: 6th Annual Public Hist. Conf., Los Angeles. Info.: Barbara Howe, Dept. of Hist., W. Va. Univ., Morgantown 26506.

Apr. 4-7: Organization of American Historians, Los Angeles.

Apr. 25-29: 37th Annual Meeting, Society of Architectural Historians, Minneapolis. Incls. Sat. session on "Industrial Architecture" chaired by Robert Brueggmann, Univ. of Ill. — Chicago Circle.

May: Annual Meeting, Canadian Museums Assn., Quebec City.

May 2-5: Annual Meeting, Vernacular Architecture Forum, Newark, Del. Info.: Bernard Herman, College of Urban Affairs, Univ. of Del., Newark 19711.

June: Exhibit opening — "The Livable City: Dr. Abel Wolman & the Continuing Work of the [Sanitary] Engineer," Baltimore Public Works Museum, 701 Eastern Ave., Balt. 21202.

June 7-8: Lowell Conference on Industrial History, Lowell, Mass. Info.: Robert Weible, Lowell Natl. Historical Park, 171 Merrimack St., Lowell 01853.

June 8-14: Industrial Heritage '84, co-hosted by SIA and SIA-SNEC, under auspices of Intl. Committee for the Conservation of the Industrial Heritage (TICCIH), Lowell and elsewhere. Info.: Stephen Victor, Conf. Coordinator, 166 E. Rock Rd., New Haven, Conn. 06511.

June 10-14: Annual Meeting, American Assn. of Museums, Washington.

June 14-17: SIA 13th Annual Conference, Boston. Info.: Michael B. Folsom, Charles River Mus. of Industry, 154 Moody St., Waltham, Mass. 02154.

July 26-29: Annual Meeting, Lexington Group in Transportation Hist., Duluth, Minn. Info.: Don L. Hofsommer, 1010 Zephyr, Plainview, Tex. 79072.

Sept. 18-21: Annual Meeting, American Assn. for State & Local Hist., Louisville, Ky.

Sept. 19-23: Annual Conf., Assn. for Preservation Technology, Toronto. Info.: Jean Simonton, APT 1984, 77 Bloor St. W. (7th Fl.), Toronto M7A 2R9.

Oct.: SIA Fall Tour, Ontario, Canada; specific dates, places, to be announced. Info.: Christopher Andreae, OSIA, 61 Lonsdale Dr., London, Ont. N6G 1T4.

Oct.: "Past Meets Present" Conf., N.Y.C. "Concerning visions of the past presented to the public in museums, historic farms, industrial sites, restored structures & districts." Info.: Jo Blatti, N.Y. Council for the Humanities, 33 W. 42nd St., N.Y. 10036 (212-354-3040).

Oct. 7-8: 16th Annual Meeting, Pioneer America Society, Macomb, Ill. Info.: PAS, Dept. of Geog., Univ. of Akron, Akron 44325.

Oct. 24-28: Annual Meeting, Natl. Trust for Hist. Pres., Baltimore.

July 22, 1985: "Mr. Watt's Stupendous Steam Engine" Bicentenary Celebrations," Sydney, Australia. Info.: Louise Crossley, Power House Museum, P.O. Box K346, Haymarket, Sydney, 2007.

The *SIA Newsletter* is published four times a year (Spring, Summer, Fall, and Winter) 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 \$20; couple, \$25; institutions, \$25; contributing, \$50; sustaining, \$100; student, \$15. Send check payable to SIA to Treasurer, Room 5020, National Museum of American History, Smithsonian Institution, Washington, D.C. 20560; all business correspondence should be sent to that office. Editorial correspondence should be sent to ROBERT M. FRAME III, Editor *SIA Newsletter*, James J. Hill Reference Library, 80 W. 4th St., St. Paul, Minn. 55102.



SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

PUBLICATIONS OF INTEREST

A SUPPLEMENT TO VOL. 12 NO. 4

FALL 1983

Compiled by John M. Wickre, Minnesota Historical Society, & Robert M. Vogel, National Museum of American History

BOOKS & ARTICLES

Richard S. Allen, (SIA), COVERED BRIDGES OF THE NORTHEAST. (Rev. edn.), Stephen Greene Press (Fessenden Rd., Burlington, VT 05301), 1983. \$9.95 paper. The best work on the subject ever--full structural coverage, not of the linen-towel genre. Fully illus. Covers N. Engl., N.Y. and N.J.; incl. roster of standing examples.

Ronald & Julian Cooper Amann, INDUSTRIAL INNOVATION IN THE SOVIET UNION. Yale Univ. Pr. (New Haven), 1982. 526 pp., \$60.00. Rev.: *J. of Economic Hist.*, Dec. 1983; *Tech. & Culture*, Oct. 1983. Incl. case studies of machine-tool and chemicals industries.

Walter S. Andariese, HISTORY OF THE BENJAMIN FRANKLIN BRIDGE. The author, 1981. 80 pp, illus. \$10.40 Ppd. (Avail.: Camden Co. Hist. Soc., Park Blvd. & Euclid Ave., Camden, NJ 08103.) Built as Phila.-Camden Bridge, 1926. Apparent good attention to structural details as well as aesthetics.

Catherine A. Baldwin, MAKING THE MOST OF THE BEST: WILLAMETTE INDUSTRIES' SEVENTY-FIVE YEARS. Willamette Industries, Inc. (Portland, OR), 1982. 172 pp., illus., maps, appendix, price?? Rev.: *J. of Forest Hist.*, July 1983. Lumber mfr. with operations in Oreg., La., Ark., Tex., and Tenn.

William H. Bannock, DESERT MAIN. In *Railfan & RR*, Jan. 1984, pp. 34-46. AT&SF's Needles Dist.

Hervey Benham, SOME ESSEX WATER MILLS. 2d ed. The Mersea Bookshop (P.O. Box 38, Colchester, Essex, England), 1983.

Samuel W. Berkheiser & Donald T. Hoff, THE ARTHUR L. LONG LIME KILN, AN ACTIVE RECORD OF YESTERYEAR. In *Pennsylvania Geology*, Oct. 1983, pp. 9-15. Restored and working batch kiln, c.1850-1936 vintage, Stone Valley, Northumberland Co., Pa.; photos and dwg.; descr. of quarrying, charging, firing, and marketing. Long welcomes visitors to the fall lime burn, esp. strong ones; Mandata-Urban vic.

John Bodnar, WORKERS' WORLD: KINSHIP, COMMUNITY, & PROTEST IN AN INDUSTRIAL SOCIETY, 1900-1940. Johns Hopkins Univ. Pr. (Baltimore), 1982. 200 pp., photos, notes, index, \$19.50. Rev.: *Rev. in Amer. Hist.*, Dec. 1983; *West. PA Hist. Mag.*, July, 1983. A well-written oral history with interpretations.

Michael Bonavia, BRITISH RAIL, THE FIRST 25 YEARS. David & Charles (N. Pomfret VT), 1981. 239 p., illus., index, \$21.00.

Raymond Borczyk & Lorin Lee Cary, NO STRENGTH WITHOUT UNION: AN ILLUS. HISTORY OF OHIO WORKERS, 1803-1980. Ohio Hist. Soc. (Columbus), 1982. 328 pp., illus., biblio., appendix, \$19.95. Rev.: *J. of Economic Hist.*, Dec. 1983. For the general reader: incl. photos, cartoons, poems, handbills, few footnotes; 1000+ entries in biblio.

Alice Bowsher, INDUSTRIAL TOWNS ARE PART OF STATE'S HERITAGE. In *The Preservation Report* (Alabama Historical Commn. (725 Monroe St., Montgomery 36130), Nov/Dec 1983. Late 19th-c and early 20th towns throughout the state. Good essay.

Jim Boyd, RICHMOND'S TRIPLE CROSSING: "IS TWO OVER ONE RAILROAD FARE?" In *Railfan & RR*, Nov. 1983, pp. 34-36. Richmond, Va.: the Seaboard Air Line bridge over the Southern's rail line; both crossed in 1901 by a C&O bridge; 8 photos.

BRIDGE & BUILDING; MOBILE GANGS PUT MUSCLE TO 470 PROJECTS. In *BN News*, Sept. 1983, pp. 8-9. Avail.: Burlington Northern RR Co., Public Affairs Dept., 176 E. 5th St., St. Paul, MN 55101. Addition of "region gangs" to former "division gang" system; new equipment incl. "snooper crane" for looking underneath bridge using crane sitting on rail line.

James P. Brown, NEW LIFE FOR AN OLD QUARRY. In *Down East*, Nov. 1983, pp. 32-37; 70-72. Revival of an important coastal Maine granite quarry that flourished in the early 20th C. Rectifies the depredations of an earlier revival attempt in the mid-1970s. (see *SIAN* July 1978; July 1979).

R.A. Bryer, T.J. Brignall & A.R. Maunders, ACCOUNTING FOR BRITISH STEEL: A FINANCIAL ANALYSIS OF THE FAILURE OF THE BRITISH STEEL CORP., 1967-1980, AND WHO WAS TO BLAME. Gower Pub. Co. (Old Post Rd., Brookfield VT), 1982. 303 pp., biblio., index, \$51.00.

Anthony Burton, THE CANAL BUILDERS. David & Charles (N. Pomfret, VT), 1981. 230 pp., illus. biblio., \$22.00. Rev.: *Tech. & Cult.*, July 1983. Gt. Britain, late 18th-and early 19th-C. Re-issue of 1972 pub.

Patrick Cadell, THE IRON MILLS AT CRAMOND. Bratton Pub. Ltd. (35 Moray Place, Edinburgh, Scotland EH3 6BX), 1973, 84 pp. £2.60. 18th & 19th century water-powered iron works at Cramond, Scotland, on the River Almond on the Forth estuary. Steam-powered mills won out.

Walter A. Cameron, MONTANA EPISODES: BUILDING THE NORTHERN PACIFIC IN 1881. In *Montana, the Magazine of Western History*, Summer 1983, pp. 70-76. RR constr. in the Yellowstone Valley, incl. blasting the Big Horn Tunnel.

Eugene E. Campbell, THE M-FACTORS IN TOOELE'S ECONOMY. In *Utah Hist. Q.*, Summer 1983, pp. 272-88. Tooele, Utah, incl. mining and smelting.

Lynwood Carranco, REDWOOD LUMBER INDUSTRY. Golden West Bks. (San Marino CA), 1982. 218 pp., illus., maps, appendixes, notes, index, \$35.95. Rev.: *J. of Forest Hist.*, July 1983.

William P. Chamberlin, (SIA), HISTORIC BRIDGES--CRITERIA FOR DECISION MAKING. Transportation Research Board (Washington DC), 1983. 77 pp., illus., tables, appendixes, \$8.00. Avail.: National Research Council, 2101 Constitution Ave., N.W., Washington, DC 20418. National Cooperative Highway

Research Program, Synthesis of Highway Practice Report 101: incl. descr. of historic bridge inventories with sample inventory forms, constraints on preservation, and preservation alternatives.

E.F. Chesnutt, LITTLE ROCK GETS ELECTRIC LIGHTS. In *Ark. Hist. Q.*, Autumn 1983, pp. 239-53. Municipal electrical system, 1880s-1958.

Frank A. Clapp, SECHELT QUEEN. In *Steamboat Bill*, Fall 1983, pp. 183-89. Avail.: Steamship Hist. Soc. of Amer., 345 Blackstone Blvd., Providence, RI 02906. Story of the Puget Sound passenger/car ferry known variously as the "Chinook" and "Sechelt Queen," 1946-1982.

Edward J. Cleary, KARL IMHOFF--1876-1965; GERMAN GENIUS IN THE GOLDEN AGE OF SANITARY ENGINEERING. In *APWA Reporter*, Sept. 1983, pp. 4, 8. Avail.: Amer. Public Works Assn., 1313 E. 60th St., Chicago, IL 60637. Biog. of the inventor of the two-story sedimentation tank; worked on water purification projects for the Emscher and Ruhr Rivers.

Susan Colgan, SANDWICH GLASS COLLECTOR RAYMOND E. BARLOW: FROM SHARDS AND RUINS. In *Arts & Antiques*, July-Aug. 1983, pp. 76-81. Incl. much IA on glass mfd. by the Boston & Sandwich [Mass.] Glass Co., 1825-1888, and subsequent unearthing of 1200+ complete pieces, 6+ tons of shards, and 20,000 buttons.

Valerie Jean Conner, THE NATIONAL WAR LABOR BOARD. Univ. of N. Carolina Pr. (Chapel Hill), 1983. 234 pp., \$23.50. Rev.: *J. of Economic Hist.*, Dec. 1983. Incl. case histories of disputes at Worthington Pump, GE, Bethlehem Steel, Smith & Wesson, and Western Union, 1918.

Howard Curry, HIGH BRIDGE, A PICTORIAL HISTORY. The author (Box 22886, Lexington, KY 40522), 1983. 124 pp. \$9.95 Ppd. Photographic survey of America's 1st major cantilever (1876), over the Kentucky River, covering construction, the replacement structure of 1911, and J.A. Roebling's aborted suspension bridge on same alignment (1857), for which the towers only were built and remained until 1929. Considerable material on the surrounding region and its cultural history.

Richard C. Davis, (ed.), ENCYCLOPEDIA OF AMERICAN FOREST AND CONSERVATION HISTORY. Macmillan (NY), 1983. 871 pp. in 2 vols., illus., \$150.00. Incl. articles on mill towns and logging camps; and on the history and manufacture of forest products from pulp and paper to wooden ships and plank roads. Prepared under the auspices of the Forest History Soc.

Stanley S. Davison, THE LEADERSHIP OF THE RECLAMATION MOVEMENT, 1875-1902. Arno Pr. (NY), 1979. 259 pp., biblio., \$24.50. Rev.: *Tech. & Cult.*, Oct. 1983, by Donald C. Jackson (SIA). Orig. a 1951 doctoral dissertation; incl. effect of ideology and politics on form and development of irrigation technology.

Eric DeMare, SWEDISH CROSS CUT: A BOOK ON THE GÖTA CANAL. Allhems Förlag, (Malmö), 1964. 240 pp, color/ b/w illus. Splendid essay on this picturesque canal connecting Stockholm and Göteborg. Beautifully illus.

C.R. Dobson, MASTERS AND JOURNEYMEN: A PREHISTORY OF INDUSTRIAL RELATIONS, 1717-1800. Croom Helm (London), 1980. 212 pp., appendix, \$11.50. Rev.: *Bus. Hist. Rev.*, Summer 1983. Appears to be mostly a catalog in pre-industrial labor disputes, esp. in London vic.

Mary Helen Dohan, MR. ROOSEVELT'S STEAMBOAT; THE FIRST STEAMBOAT TO TRAVEL THE MISSISSIPPI. Dodd, Mead (NY), 1981. 194 pp., \$10.95. Rev.: *Steamboat Bill*, Fall 1983, *J. of the West*, Oct. 1983. Saga of the sidewheeler "New Orleans," built in Pittsburgh by steamboat promoters Robert Fulton and Robert Livingston and engine mfr. Nicholas Roosevelt; 1811-12 trip incl. shooting the falls of the Ohio, "a week of earthquake tormented river," and the birth of Nicholas's son (grandson of Benjamin Latrobe).

Gordon Donaldson, WHEN KINGSTON BUILT THE WORLD'S MIGHTIEST SHIPS. In *Canadian Geographic*, Oct.-Nov. 1983, pp. 55-61. Kingston, Ont., shipyards; the 1814 3-decker "St. Lawrence;" and the Toronto club building an 1812-era Canadian lake fleet in 3/16-in. scale, authentic down to the .060-in.-dia. wooden treenails. Color photos.

James H. Ducker, MEN OF THE STEEL RAILS: WORKERS ON THE ATCHISON, TOPEKA & SANTA FE RR, 1869-1900. Univ. of Nebr. Pr. (Lincoln), 1983. 220 pp., illus., \$17.95. Rev.: *Lexington Newsletter*, Jan. 1984.

H.I. Dutton & S.R.H. Jones, INVENTION AND INNOVATION IN THE BRITISH PIN INDUSTRY, 1790-1850. In *Business History Review*, Summer 1983, pp. 175-93. Delay in adopting new technology, with discussion of specific pin mfg. inventions.

William H. Earle, WILLIAM F. ALLEN AND 100 YEARS OF STANDARD TIME. In *Railfan & RR*, Nov. 1983, pp. 51-53. Allen, editor of The Official Guide of the Railways, and his successful effort to standardize time zones with zig-zag boundaries coinciding with major RR switching points, adopted Nov. 18, 1883.

Wilfried Feldenkirchen, DIE EISEN UND STAHLINDUSTRIE DES RUHRGEBIETS, 1879-1914: WACHSTUM, FINANZIERUNG UND STRUKTUR IHRER GROSSUNTERNEHMEN. Franz Steiner Verlag (Wiesbaden), 1982. 610 pp., graphs, tables, 107 DM. Rev.: *Bus. Hist. Rev.*, Summer 1983. Corporate history of the Ruhr iron and steel industry, based on painstaking archival research in the records of 12 major corporations.

R.W. Ferrier, THE HISTORY OF THE BRITISH PETROLEUM COMPANY: VOL. 1--THE DEVELOPING YEARS, 1901-1932. Cambridge Univ. Pr. (N.Y.), 1982. 801 pp. Rev.: *J. of Economic Hist.*, Dec. 1983. [entered below-JONES, Geoffrey.] The Anglo-Persian Oil Co. in Iran, "rich in new information from BP's hitherto closed archives."

James Foreman-Peck, DIVERSIFICATION AND THE GROWTH OF THE FIRM; THE ROVER COMPANY TO 1914. In *Business History*, July 1983, pp. 179-92. English bicycle and auto mfr.

Marianne Fraser, WARM WINTERS AND WHITE RABBITS: FOLKLORE OF WELSH AND ENGLISH COAL MINERS. In *Utah Hist. Q.*, Summer 1983, pp. 246-58. From interviews with women and men who lived in Carbon Co., Utah, coal camps.

Joseph R. Frese & Jacob Judd, eds., AMERICAN INDUSTRIALIZATION, ECONOMIC EXPANSION, AND THE LAW. Sleepy Hollow Press (Tarrytown, NY), 1981. 251 pp., notes, index, \$25.00. Rev.: *Tech. & Cult.*, Oct. 1983.

David J. Frurip, Russell Malewicki & Donald P. Heldman, COLONIAL NAILS FROM MICHILIMACKINAC: DIFFERENTIATION BY CHEMICAL AND STATISTICAL ANALYSIS. Mackinac Island State Park Comm. (Box 370, Mackinac Island, MI 49757), 1983. Archeological Completion Report Series, No. 7. 83 pp., 32 figs., 2 tables, \$9.50 ppd.

William F. Furter, HISTORY OF CHEMICAL ENGINEERING. Amer. Chem. Soc. (Washington DC), 1980. 435 pp., illus. biblio., index, \$39.00. Rev.: *Tech. & Cult.*, Oct. 1983.

James B. Gardner & George Rollie Adams (eds.), ORDINARY PEOPLE & EVERYDAY LIFE. American Assn. for State & Local History (708 Berry Rd., Nashville, TN 37204), 1983. 215 pp., illus. \$17.95 cloth (\$16 to members). Series of essays in the "new social history", one of which, by David Brody, deals with Workers & Work in America as seen by the historian.

Herbert A. Goetsch, LLOYD D. KNAPP, 1894-1983. In *APWA Reporter*, Aug. 1983, pp. 30-31. Avail.: Amer. Public Works Assn., 1313 E. 60th St., Chicago, IL 60637. Biog. of Milwaukee, Wis., Commissioner of Public Works, c.1926-1962.

Louis J. Goodman, John N. Hawkins, & Ralph Love (eds.), SMALL HYDROELECTRIC PROJECTS FOR RURAL DEVELOPMENT: PLANNING AND MANAGEMENT. Pergamon Pr. (Elmsford NY), 1981. 200 pp., index, \$20.00. Rev.: *Tech. & Cult.*, July 1983. Emphasis on contemporary use; examples from China, New Zealand, Philippines, Hawaii.

Doris Goodrich, STEAMSHIPS IN THE MIDNIGHT SUN. In *Steamboat Bill*, Fall 1983, pp. 173-77. Avail.: Steamship Hist. Soc. of Amer., 345 Blackstone Blvd., Providence, RI 02906. 1983 tour report, incl. "elderly vessels" in Finland, the world's oldest running steamship (the 1856 sidewheeler "Skibladner") in Norway, and the oldest of the Gota Canal boats in Sweden. (The "Skibladner" used 30-in.-dia. rolls of bathroom tissue mounted on floor standards.)

Robert B. Gordon (SIA), MATERIALS FOR MANUFACTURING: THE RESPONSE OF THE CONNECTICUT IRON INDUSTRY TO TECHNOLOGICAL CHANGE & LIMITED RESOURCES. In *Tech. & Cult.*, Oct. 1983, pp. 602-34. Salisbury dist., NW Conn., mostly c.1734-1900.

Edwin Green & Michael Moss, A BUSINESS OF NATIONAL IMPORTANCE: THE ROYAL MAIL SHIPPING GROUP, 1902-37. Methuen (NY), 1982. 291 pp., plates, biblio., index, \$32.00. Gt. Britain.

John Gruber, DEPOT DESIGNS CHANGE WITH TIMES. In *Railway Gazette*, Sept.-Oct., 1983, pp. 10-12. Avail.: Mid-Continent Ry. Hist. Soc., P.O. Box 55, North Freedom, WI 53951. Analysis of depots on the Chicago & Northwestern's 74-mi. Madison-Elroy line, 1870s-present, incl. the North Freedom depot.

_____, ROCK SPRINGS QUARTZITE BALLAST SPREADS ACROSS 11 STATES. In *Railway Gazette*, July-Aug. 1983, pp. 5-7. Avail.: Mid-Continent Ry. Hist. Soc., P.O. Box 55, North Freedom, WI 53951. Sandstone and quartzite quarrying in Baraboo, Wis., vic. since c.1870s, with descr. of C&NW RR ballast quarry that includes a 54x60-in. jaw crusher, largest ever built in a moveable configuration.

John F. Guilmartin, THE GUNS OF THE SANTISSIMO SACRAMENTO. In *Tech. & Cult.*, Oct. 1983, pp. 559-601. Illus. discussion of 16th- and 17th-C. Portuguese, English and Dutch bronze and iron cannon-founding technology as seen in armament recovered from a Portuguese galleon lost off Brazil in 1668.

Guy L. Gullickson, AGRICULTURE AND COTTAGE INDUSTRY; REDEFINING THE CAUSES OF PROTO-INDUSTRIALIZATION. In *J. of Economic Hist.*, Dec. 1983, pp. 831-50. Cotton textile industry in the pays de Caux, Normandy, mostly 18th C.

M.L. Hallett, A NOTE ON WINDMILLS OF THE VICTORIAN GOLDFIELDS. In *Intl. Molinological Soc. Newsletter*. Dec. 1983, pp. 3-4. Avail.: J. Kenneth Major, 2 Eldon Rd., Reading, England RG1 4DH.

Manfred Hamm, (photog.), DEAD TECH--A GUIDE TO THE ARCHAEOLOGY OF TOMORROW. Sierra Club Books (2034 Fillmore St., San Francisco, Calif. 94115), 1982. 130 pp., heavily illus. with color & b/w photos. \$14.95. (Text by Rolf Steinberg; orig. publ. as *Tote Technik--ein Wegweiser zu den antiken Stätten von Morgen*, Berlin, 1981). Provocative essay on today's ruins as tomorrow's archeological objects: Maginot Line; N.Y. and other harbors and their structures; decaying aircraft carriers and locomotives and airplanes; and the "ruins of the atomic state." What price progress?

Tamara K. Hareven, FAMILY TIME AND INDUSTRIAL TIME; THE RELATIONSHIP BETWEEN THE FAMILY AND WORK IN A NEW ENGLAND INDUSTRIAL COMMUNITY. Cambridge Univ. Pr. (NY), 1982. 474 pp., illus., index, \$49.50 cloth, \$17.95 paper. Rev.: *Business History*, July 1983; *Tech. & Cult.*, Oct. 1983. Analysis of the labor force and company policies of the Amoskeag Corp., Manchester, N.H., once the world's largest textile plant. Drawn from a wealth of archival sources, with emphasis on the 1900-1938 period.

Patrick J. Hearnden, INDEPENDENCE AND EMPIRE: THE NEW SOUTH'S COTTON MILL CAMPAIGN, 1865-1901. Northern Ill. Univ. Pr. (DeKalb), 1982. 175 pp., \$18.50. Rev.: *Bus. Hist. Rev.*, Summer 1983. Review suggests good use of "literary evidence," but lack of quantitative framework; heavy emphasis on "shackles of imperialism" and "yellow yankees."

Carol E. Heim, INDUSTRIAL ORGANIZATION AND REGIONAL DEVELOPMENT IN INTERWAR BRITAIN. In *J. of Economic Hist.*, Dec. 1983, pp. 931-52. Decline of export industries (coal, iron and steel, shipbuilding, cotton textiles) in the north and west at a time of expansion in new industries (motor cars, electrical goods, light industries) in the south and Midlands, mostly 1930s.

Edward F. Heite (SIA), THE PIONEER PHASE OF THE CHESAPEAKE IRON INDUSTRY: NATURALIZATION OF A TECHNOLOGY. In *Quarterly Bulletin of the Archeological Society of Virginia*, Sept. 1983, pp. 133-181 heavily illus. (3812 Hawthorne Ave., Richmond, 23222) First-rate account of the geography, administration, technology, operation, and significance of a vital industry in this key region. The real stuff of industrial-archeological exposition.

Clifton Hood, WILLIAM BARCLAY PARSONS. In *APWA Reporter*, June 1981, pp. 4-5. Avail.: Amer. Public Works Assn., 1313 E. 60th St., Chicago, IL 60637. Biog. of Parsons (1859-1932), engineer for major mass transit, RR, tunnel, and canal projects in the U.S., China, and Panama, as well as the French theater during W.W.I. The patrician Parsons was also a prolific writer and an advocate of social responsibility for engineers.

Kenneth Howell & Einar W. Carlson, MEN OF IRON: FORBES & ADAM. Pocketknife Pr. (Lakeville, CT), 1980. 159 pp., illus., notes, appendixes, \$12.50. Rev.: *Tech. & Cult.*, Oct. 1983. Salisbury, Conn., partnership of iron mfrs. Samuel Forbes (1729-1827) and John Adam (1755-1826), drawn from Adam family records and other archival sources.

Suellen M. Hoy, HERBERT D. VOGEL. In *APWA Reporter*, Oct. 1981, pp. 5-6. Avail.: Amer. Public Works Assn., 1313 E. 60th St., Chicago, IL 60637. Biog. of Vogel (1900-), U.S. Corps of Engineers district engineer in Pittsburgh and Buffalo, 1940s; lt. gov. of the Panama Canal, 1950-52; chairman of the Tennessee Valley Authority, 1950s-1963, and engineer advisor to the World Bank, 1963-67.

Sarah S. Hughes, SURVEYORS AND STATESMEN: LAND MEASURING IN COLONIAL VIRGINIA. Virginia Surveyors Foundation/Virginia Assn. of Surveyors (Richmond), 1979. 179 pp., maps, illus., tables, appendix, notes, index, \$25.00. Rev.: *J. of Amer. Hist.*, June 1983.

Thomas P. Hughes, NETWORKS OF POWER: ELECTRIFICATION IN WESTERN SOCIETY, 1880-1930. Johns Hopkins Univ. Pr. (Baltimore), 1983. 474 pp., illus., index, \$38.50. Rev.: *Lib. J.*, Sept. 15, 1983.

Sharon J. Hunt, GREAT LAKES MARINE HISTORY ON DISPLAY. In *Canadian Geographic*, Oct.-Nov. 1983, pp. 49-53. Marine Museum of the Great Lakes, Kingston, Ont.; incl. 20,000 artifacts and 10,000 drawings of Great Lakes ships, 1915 blacksmith's shop, engine house and stepped stone dry dock. Color photos.

Anthony Hyman, CHARLES BABBAGE; PIONEER OF THE COMPUTER. Oxford Univ. Pr. (London), 1982. 287 pp., \$12.50. Rev.: *Business History*, July 1983. Incl. Babbage's plans for the systematic application of science to industry and his promotion of industrial exhibitions culminating in the Great Exhibition of 1851.

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