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KLOTS SILK THROWING MILL TIME CAPSULE IN THE MARYLAND MOUNTAINS

The village of Lonaconing straddles Georges Creek, deep in a valley lined with the company towns of Western Maryland's coal country. The visitor is immediately aware of Lonaconing's industrial heritage; the rows of hastily constructed working-class housing, the site of the former glass manufactory, and, most impressively, the massive iron furnace of the Georges Creek Iron & Coal Co. They have witnessed decades of economic decline in the valley and, more recently, the first signs of rebirth.

Beyond the creek, across the tracks of the Cumberland & Pennsylvania RR, stands the most compelling testament to Lonaconing's industrial past. As it has since its doors were closed on July 7, 1957, the Klots Throwing Mill stands solid and silent. With the exception of broken windows and a

leaky roof, the mill has changed little since then.

Henry Durrell Klots and George Klots began throwing silk in New York in the 1880s. The brothers joined with Marcus Frieder to move the operation to Carbondale, PA, after a fire in 1894. Silk mills often located near coal fields to make use of the transportation infrastructure and a ready supply of labor in the form of miners' wives and daughters. The Klots Throwing Co. went on to build additional mills in Pennsylvania, Virginia, West Virginia, and Maryland. Frieder was later involved in the development of the General Silk Corp., a holding and sales company for the General Silk Importing Co., the National Spun Silk Co., and the General Silk Dyeing Co.

The Klots Throwing Mill in Lonaconing was completed in 1907. Much of the cost of construction was borne by

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Joshua Phillips

Klots Throwing Mill, Lonaconing, MD. The mill is intact from its full complement of machinery down to the workers' personal effects, left at work stations when the mill shut down in 1957. Skeins of raw silk, labeled "From Allied Occupied Japan," still rest in their boxes in the basement.

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KLOTS SILK THROWING MILL (continued from page 1)

local businessmen who hoped to provide a more stable source of employment relative to the insecurity of the mines. Their investment proved to be a wise one, and the mill became a steady source of tax dollars and employment for as many as 360 workers in the decades to come. The mill was doubled in size in 1916 to roughly 48,000 sq. ft.

“Throwing” is the process of converting raw silk to silk yarn, later to be knitted, stitched, or woven into cloth at another facility. The Lonaconing mill received shipments of raw silk, primarily from China and Japan, in the form of skeins. The skeins were washed, dried, stretched, and wound onto spools. From the spools the silk was twisted into yarn. The mill could produce a variety of qualities and thicknesses of yarn by “doubling” single-thread yarns together and by modulating the speeds of the winding machines. The silk yarn was dyed prior to packaging for distribution.

Despite successfully withstanding periodic labor strife, the Klots mill steadily reduced its workforce throughout the

1930s. The mill closed briefly at the advent of World War II due to restrictions on imports from Japan. While wartime needs led to a brief increase in production, the development of synthetic fabrics and increased competition hastened the ultimate decline of silk throwing at Lonaconing. A dispute over pay in the summer of 1957 led to a walkout by most of the remaining 67 workers at the facility, effectively ending production.

The closure of the mill was symptomatic of the greater economic malaise already occurring along Georges Creek. Most of the mining operations had ceased by 1957 and the population of Lonaconing was rapidly shrinking. The mill sat idle until 1979, when a pair of local residents purchased the property with the intention of revitalizing industry in the town. While their plans for a viable economic use have gone unrealized, their stewardship has left the mill in startlingly good condition.

Winding, doubling, and dyeing machines remain in their original configuration, likely in near-operable condition. Skeins of raw silk are packed in boxes in the receiving area, and calendars on the wall are still turned to July, 1957. Many of the workers’ personal effects sit by their stations as they did when the mill closed its doors 50 years ago. The mill is a rare and evocative time capsule of industrial history that startles in both scale and integrity.

The exterior fabric of the building is in fair to good condition. Masonry elements (both foundation and walls), structural systems, and exterior water drainage features are

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 biannually. The SIA through its publications, conferences, tours, and projects encourages the study, interpretation, and preservation of historically significant industrial sites, structures, artifacts, and technology. By providing a forum for the discussion and exchange of information, the Society advances an awareness and appreciation of the value of preserving our industrial heritage. Annual membership: individual \$50; couple \$55; full-time student \$20; institutional \$50; contributing \$100; sustaining \$150; corporate \$500. For members outside of North America, add \$10 surface-mailing fee. Send check or money order payable in U.S. funds to the Society for Industrial Archeology to SIA-HQ, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-1889; e-mail: SIA@mtu.edu; Website: www.sia-web.org.

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The *SIA Newsletter* welcomes material and correspondence from members, especially in the form of copy already digested and written! The usefulness and timeliness of the newsletter depends on you, the reader, as an important source of information and opinion.

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Klots Throwing Mill.

Patrick Harshbarger

Philadelphia—Workshop of the World, Take 2

Review of 2007 SIA Annual Conference

The first SIA Annual Conference to be held in Philadelphia was in 1990. More than 230 members returned in 2007 to the city historically known as “The Workshop of the World.” The conference was once again organized by members of the Oliver Evans Chapter (OEC). Over the past 17 years, active manufacturing has gone from uncommon to practically non-existent inside Philadelphia’s city limits. The OEC used the conference as an opportunity to revisit the state of IA in Philly with an addendum to its 1990 survey publication *Workshop of the World*, noting the many factory closings and losses. The original survey and update have been posted at www.workshopoftheworld.com.

Despite the decline of manufacturing, the evidence of industry is visible everywhere in Philadelphia, from the infrastructure to world-class archives. There have been significant efforts to preserve and interpret the industrial heritage, from the magnificent restoration of the Fairmount Water Works to the adaptive re-use of the Philadelphia Navy Yard. As with past conferences, the 2007 event followed the formula of early-bird tours and a reception on

Thursday, all-day tours on Friday, paper sessions and annual business meeting on Saturday, banquet on Saturday night, and post-conference tours on Sunday.

THURSDAY

Center City Philadelphia Post-Industrial Tour. Harry Kyriakodis led a 3.5-mile walk of industrial sites along the route of the **Reading RR’s City Branch**, an open subway completed in the 1890s. Among the highlights was the Reading’s reinforced-concrete grain elevator, built in 1926, abandoned in the 1950s, and adaptively re-used as apartments and offices in the 1970s. The **Philadelphia Mint**, now part of the campus of the Community College of Philadelphia, was built in 1901. It was once the finest, largest, and best-equipped mint in the world. A college representative led a tour of the rotunda and the huge vaults in the basement. **Creative Book Mfg.**, a family-run maker of custom paper binders and organizers, offered demonstrations of binding and cutting machines. The **Willow St. Steam Generation Plant**, built in 1927 by the Philadelphia Electric Co., has been abandoned for over 25 years and the

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all largely intact. The roof is in urgent need of repair or replacement, but to this point patch repairs have been sufficient to protect the structure from water damage.

In recent years, the owners have sought to divest themselves of this considerable financial burden. Upkeep is both physically demanding and expensive. Salvage buyers have begun to make overtures, interested in the value of the raw materials of the machinery and the millions of aluminum and wooden spools. Preservation Maryland named the mill to its first annual Endangered Maryland list in 2007, published in the March/April edition of *Maryland Life Magazine*.

The National Trust for Historic Preservation recently joined Preservation Maryland in sponsoring a conditions assessment to help inform the decisions of those who are

responsible for the maintenance of the mill, both present and future. The organizations are currently partnering with local government, economic development officials, and the Maryland Historical Trust (Maryland’s State Historic Preservation Office) to find a preservation-friendly development plan for the site. Each of these groups is committed to finding a solution that will relieve the current owners of their burden, encourage economic development in Lonaconing, and preserve the essence of this remarkable place.

For more information, contact Joshua Phillips (jphillips@preservationmaryland.org) or Kristen Harbeson (kharbeson@preservationmaryland.org).

Joshua Phillips



Joshua Phillips

Detail of a spool winding machine, Klots Throwing Mill.

Mark Your Calendars for San Jose! May 29–June 1, 2008

The 37th Annual SIA Conference will explore the Silicon Valley’s industrial and technological history. The Samuel Knight Chapter is helping to organize the event. Tours are preliminarily planned for the New Almaden mercury mines and smelters, WWII-era military installations, shipyards, automotive plants, and early computer industry shrines, including the Hewlett-Packard garage and Shockley Semiconductor. The conference hotel will be the Sainte Claire in downtown San Jose. Watch the conference Web site for more details as plans evolve: <http://knightsia.org/sia2008>. ■

boilers stripped out with prospects for adaptive re-use looking very slim. The group walked a set of 300-year-old stone steps, the last surviving of a series built at the direction of William Penn in 1699-1701 to provide access to the Delaware River waterfront. The last stop was the **High-Pressure Fire Service Pump House**, which remained in operation until 2005 and drew water from the river and delivered it to hydrants throughout downtown via 56 miles of pipe. When completed in the early 20th century, the pump house was widely regarded as the finest high-pressure service in the world.

Brewery Tour. Historian Rich Wagner led a tour of ten breweries, starting with what is left of the Brewerytown neighborhood, once home to about a dozen breweries, producing over half of the city's beer prior to Prohibition. The **Poth Brewery** is the largest of the extant complexes and was briefly revived as the Red Bell brewery in the 1990s. The next two stops presented the finest examples of brewery preservation in the city. The **Bergoll Brewery**, designed by Otto C. Wolf, Philadelphia's premier brewery architect and engineer, has been beautifully preserved as condos. The **Class & Nachod Brewery**, a huge complex built in 1911, has been incorporated into Temple University's main campus as offices and dormitories. **Yard's Brewing**, Philadelphia's only production brewery, is located in what was the bottling house of the Weisbrod & Hess brewery in Kensington. Yard's was brewing and bottling when the SIA arrived, which made for an informative process tour, capped off with some much-needed refreshment in the hospitality room. The final stop was in the shadows of the **Ortlieb Brewery** where the group gathered at a new state historic marker commemorating the birthplace of lager beer in America.

Archives & Artifacts. Atwater-Kent Museum curator Jeffrey Ray led this tour to four of Philadelphia's libraries and

research institutions with significant industrial history records, photographs, and architectural plans. At the **Benjamin Franklin Institute**, participants sampled Graff's Fairmount Water Works drawings, William Sellers and Midvale Steel prints and photographs of heavy industry production, and the Wright brothers' aeronautical engineering drawings. The **Historical Society of Pennsylvania** displayed the records of the Baldwin Locomotive Works, J. G. Brill Co. (trolley cars), Frederick V. Hetzel (machine belts), and Horstman-Lippincott (textiles). The **Atheneum of Philadelphia** is noted for its architectural drawings, including Matthais Baldwin's hand drawn plan for his first locomotive works, and the records of Ballinger & Perot, the Philadelphia architects who designed the Atwater Kent radio factory. The last stop was the **American Philosophical Society**, founded in 1743. The APS allowed the group into the stacks of Benjamin Franklin Hall, a significant repository of 18th and 19th-century scientific papers, including those of the hall's namesake.

Opening Reception. The APS's Franklin Hall was also the location of the opening reception. Ed Grusheski, OEC President, announced that Philadelphia Mayor John Street had proclaimed it Industrial Archeology Awareness Week. Following a tasty sampling of appetizers, University of Pennsylvania historian Walter C. Licht presented his thoughts on Philadelphia as a case study of industrialization and de-industrialization, offering up the thesis that history shows that there are many pathways to industrial development, but de-industrialization on the scale seen in Philadelphia and other American cities is unprecedented.

FRIDAY

Benjamin Franklin Bridge, Philadelphia Navy Yard, Sunoco Refinery Tour. When the **Ben Franklin Bridge** opened in



Fairmount Water Works has been beautifully restored as an interpretive center and was the site for the 2007 conference's banquet.

2007 Vogel Prize Winners

Gordon C. Pollard and Haagen D. Klaus

Each year the SIA recognizes outstanding scholarship within the field of industrial archeology with its Robert M. Vogel Prize. The award honors the author of the best article to appear in the Society's journal, *IA*, within the past three years. Articles under consideration have a clearly stated thesis, a well-constructed narrative, and an understandable conclusion. The analysis of material culture plays an important role in articles considered for the prize, as does the use of high-quality illustrations. The prize consists of a cash award and a wooden foundry pattern and plaque engraved with the recipient's name.

At the 2007 Annual Business Meeting in Philadelphia, this year's award was presented to Gordon C. Pollard and Haagen D. Klaus for their article *A Large Business: The Clintonville Site, Resources, and Scale at Adirondack Bloomery Forges*, published in *IA*, Vol. 30, No. 1 (2004).

Pollard and Klaus's article sheds new light on the important Adirondack bloomery iron industry. The authors provide summary data on more than 40 regional iron sites, using this comparative information to develop a broad understanding of the district's patterns of resource use and operational scale. This information about the broader district is then used to frame the results of archeological field research at Clintonville's Lower Forge. These excavations, noteworthy for their scale and complexity, provide detailed new information about a range of industrial features of the ironworks, including the triphammers, tailraces, and bloomery and blacksmith forges. Outstanding illustrations, especially the plan drawings of bloomery forge bases and parts, add to the value of their work. ■

1926, it was the longest suspension span in the world at 1,750 ft. The Rudolphe Modjeski-designed bridge spawned a renewed era of long-span suspension bridge construction that lasted through the 1950s. The Delaware River Port Authority, which owns and operates the toll bridge, provided a rare opportunity to visit the anchorages. The **Philadelphia Navy Shipyard** officially closed on Sept. 27, 1996, ending over 200 years of operation. The Philadelphia Industrial Development Corp. (PIDC) is redeveloping the sprawling complex and is successfully attracting tenants. PIDC shared its master plan for a mixed-use waterfront community that will preserve many of the historic shipyard buildings and features. Active shipbuilding has not completely disappeared; the two, 1,000-ft.-long dry docks, built during WWII, are now the center of operations for the **Aker Shipyard**. Aker is a global shipbuilder with headquarters in Europe. It reopened the drydocks in 2000 and now uses them to build and repair container ships. The **Sunoco Refinery** claims to be the oldest continuously operating petroleum refinery in the world with origins dating back to the 1860s. Sunoco is only the latest of a series of owners, having bought it in 1988 from Atlantic Refining & Marketing. Sunoco offered a guided tour of the massive complex, which can process up to 340,000 barrels of crude oil per day.

Bridging the Schuylkill: From Bartram's Garden to Rittenhouse Town. The bridges of the Schuylkill Valley in Philadelphia have a distinguished history reflecting more than 200 years of advances in engineering and the work of accomplished builders, from the 1805 Permanent Bridge, widely believed to have been the first covered bridge in America, to the 1950-51 Walnut Lane Memorial Bridge, America's first pre-stressed-concrete bridge. The tour began at **Bartram's Garden**, the 1728 home and botanic garden established by John Bartram. Curator Joel Fry explained the Bartram family's significant scientific contributions to natural science. The group then boarded a water taxi, which cruised upriver to downtown Philadelphia, passing under about one-dozen

bridges, including swing spans, bascules, girders, and arches. Historian Patrick Harshbarger provided narration. This was followed by a bus tour of the bridges in Fairmount Park, including the 1908 **Walnut Lane Bridge**, a 233-ft.-span, massed-concrete arch bridge, believed to be the first use of the open-spandrel arch form in the U.S. At **Rittenhouse Town**, the site where William Rittenhouse founded the first paper mill in British North America in 1690, the group was met by archeologist David Orr, who is leading a dig and has found evidence of what may be the foundations of a mill, although as yet unconfirmed whether the first mill or a slightly later iteration.

Philadelphia Transit: Past & Present. Railway and trolley historian Joel Spivak led a tour that featured streetcar barns, generating stations, depots, bridges, and other remnants of Philadelphia's historic transit systems. Among the several dozen sites was the **Woodland Carbarn**, the city's oldest continuously used transit site that began in a small barn and sta-

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The brewery tour examines the ornate doorway of the Cass & Nachod Brewery, built in 1911. It has been preserved as office and dormitory space for Temple University.



James A. Knox

MINUTES OF THE 2007 ANNUAL BUSINESS MEETING

Philadelphia—June 10

President Robert Stewart called the meeting to order in the Liberty Ballroom of the Crowne Plaza Hotel. He thanked the Oliver Evans Chapter, American Philosophical Society, Philadelphia Water Department, Philadelphia Center for History, and URS Corporation for hosting the annual conference.

Secretary's Report: In the absence of Secretary Richard Anderson, Director Dennis Furbush recorded the minutes. The minutes for the 2006 annual meeting were published in *SIAN* (Summer 2006). There being no additions or corrections, President Stewart accepted them on behalf of the board.

Treasurer's Report: Treasurer Nanci Batchelor reported that the SIA is tax-exempt under the IRS Code 501(c) as an educational organization, and files a Form 990 tax return. The SIA maintains its books and records on a cash basis, and maintains a calendar year for tax and reporting purposes. The following report is for the year that ended Dec. 31, 2006. The SIA began 2006 with a total fund balance of \$236,955. Cash receipts for the year totaled \$107,006. The majority of annual income is from the various membership dues categories. In 2006, the total dues received were \$74,920. The remaining balance is comprised of interest income (\$4,028), publication sales (\$1,102), contributions (\$2,355), and the transfer of restricted funds to income for the SIA Preservation Grants program (\$17,094). Total expenses for the year were \$118,201. The production costs of the newsletter and journal combined for a total of \$46,404. The balance of \$71,797 was spent on a combination of labor (\$34,238), postage (\$5,586), insurance and legal fees (\$1,285), prizes and awards (\$1,300), preservation grants program (\$13,500), the publication of the member directory, and a few miscellaneous items. The SIA closed 2006 with expenses exceeding revenues by \$11,195 and a total fund balance of \$213,476 of which \$30,238 is in restricted funds. The SIA has expended all of the reserved funds in the Preservation Grants program. To date in 2007, the SIA has had a total of \$34,109 in cash receipts and has expended \$35,286. The President accepted the treasurer's report.

Grants Program. Director Rick Greenwood reported that the SIA had received eight applications and four had been accepted by the board. The 2007 grants were funded from the general fund, the restricted fund having been depleted in 2006. Greenwood suggested that the SIA needed a campaign to build a dedicated fund for grants. The 2007 grants are: (1) Richard Carnevale, Peabody (MA) Historical Society - \$1,500 for research and planning phase of the restoration of a 1941 Porter 0-6-0T steam switcher locomotive for display on a rails-to-trails pathway; (2) Frederick Southerland, University of Massachusetts/ Boston

& Taconic State Park - \$2,939.10 for a field survey of Copake Iron Works in New York; (3) Philip Mosier - \$1,500 for photographic documentation of the Bellwood Quarry in Atlanta, GA; (4) Amy Roache, Syracuse University, Mackinac State Historic Parks, MI - \$1,500 for X-ray analysis of metal artifacts from two 18th-c. fur trading posts.

Student Scholarships. Patrick Harshbarger reported that four scholarships were awarded to students to defray the costs of attending the conference. The recipients were Elizabeth Cahill (University of Tennessee), Amanda Ciampolillo (University of Vermont), Scott See (Michigan Technological University) and Wesley Thompson (Eastern Michigan University).

Election. Jet Lowe, chairman of the Nominations Committee, thanked the nominees who ran for office. He announced that Christopher Marston was elected to the Nominations Committee and that Diana Bouchard and Betsy Fahlman were elected to the Board of Directors.

President Stewart thanked for their service Jet Lowe, who is rotating off of the Nominations Committee, and Ken McIver and Rick Greenwood, who are leaving the Board of Directors.

Local Chapters: President Stewart announced that a new chapter, the Chicago Industrial Chapter, has been formed and accepted by the board. As is the tradition at annual meetings, he then called on members of each chapter to stand for recognition.

Awards: Greg Galer presented the Vogel Prize to Gordon C. Pollard and Haggan D. Klaus. Bill McNiece presented the General Tools Award to Patrick Martin (see articles in this issue).

Headquarters Report: Executive Secretary Patrick Martin reported that membership has been dropping but revenues are up. He recognized Don Durfee for his services to the SIA as administrative assistant and announced that the *IA Journal* is online at the History Cooperative. Access is free until Dec. 2007. He also noted that a study tour to Puerto Rico in the Fall 2008 is in the planning stages.

Tours and Conferences: Director Jay McCauley reported that planning for the 2007 Fall Tour in Ely, Nevada, from Sept 27- 30, is going smoothly. He also said that the 2008 Annual Meeting will be held in San Jose, California from May 29 to June 1 and a Web site is up with a survey asking members about their interests.

Upon motion and unanimous vote, the meeting was adjourned.

Respectfully submitted
(with thanks to Director Dennis Furbush),
Richard K. Anderson, Jr.
Secretary

PHILADELPHIA *(continued from page 5)*

ble built in 1858 by the Philadelphia & Darby Ry. In 1975, a fire heavily damaged the carbarn, and it was replaced with a modern structure that is now SEPTA's main car repair shop. Other stops included the 1906 **46th St. Station**, one of the few remaining original stations on the Market Street El, and the 1877 **West Philadelphia Passenger Ry. Steam Dummy Carbarn**, adaptively re-used as an art studio. The tour crossed the **Strawberry Mansion Bridge**, a three-hinge steel arch built in 1896 to carry trolleys, and then continued to the **Luzerne Carbarn**. When built in 1913, it was the largest building in the world with a roof supported by precast reinforced-concrete girders; it could hold 355 streetcars. It is now home to **American Box & Recycling**, which provided a tour of its operations sorting and preparing trash for recycling.

The Jersey Side of the Delaware. Linn Schenk led this tour east of the Delaware River to New Jersey in search of some active manufacturing. First stop was the family-owned and operated **Lehigh Press Lithographers** in Pennsauken. It was established in 1924 by Valentine R. DePaul, who ran a letterpress shop in Philadelphia, and, in a pattern very typical of the region, relocated to larger facilities in the suburbs in 1962. Lehigh specializes in highly decorated covers and book jackets, endpapers, inserts, and plastic components. Sworn to secrecy, SIA members were privy to a run of jackets for the soon-to-be-released Harry Potter book. Another supplier to the publishing industry, **Rembrandt Stamping & Embossing**, demonstrated foil stamping, die cutting, embossing, bookbinding, and automatic gluing and folding. Next up was the **National Gypsum** wallboard plant in Burlington. It is one of twenty similar plants operated by NG throughout the U.S. Gypsum is delivered to the plant, then crushed, calcined, and mixed with starch, water, and other additives to form a slurry that is sandwiched between sheets of paper to harden, forming wallboard. **Centryco**, also of Burlington, produces metal and fabric safety shields and covers for machinery. These protective shields are to

New Philadelphia IA Web Site

The Oliver Evans Chapter with the assistance of Torben Jenk has launched a new Web site with information from the SIA's two annual conference guidebooks: *Workshop of the World* (1990) and *Workshop of the World Revisited* (2007). Philadelphia industrial sites can be searched by category and location. Each site has relevant links, including detailed Hexamer surveys. There is also information on the chapter and its activities. Info: www.workshopoftheworld.com.

customer specifications, and require a variety of skills to manufacture, from hand-stitching to machining.

Kensington & Frankford—Textiles, Metals & Beer. The Philadelphia neighborhoods of Kensington and Frankford were once a center for the small-scale workshops and manufacturing that gave Philadelphia its title of "Workshop of the World." Torben Jenk led this tour of workshops past and present with a focus on textiles, metals, and beer. **Churchville Fabrics** is one of the few survivors of Philadelphia's textile industry. It specializes in reproduction fabrics, including upholstery for antique cars wool for reproduction Civil War uniforms. Owner Harry Lonsdale demonstrated weaving and finishing processes, including the double-headed Jacquard loom. When it closed in 2003, **H. Riehl & Son** was the city's last woodworking shop specializing in the manufacture and repair of textile machinery, including the harnesses, shuttles, and comber boards of looms. Former owners Paul Wagner and Amos Tomlinson, approaching age 80, were on hand to share their experiences and stories. In 2003, the shop was sold to Matt and Ian Pappajohn, who now use it to make custom millwork for kitchens and bathrooms. They demonstrated a variety of cabinetmaking tools. Active metalwork-

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James A. Knox

G. J. Littlewood & Sons in Manayunk have been dyeing textiles since 1869.



Perry Green

SIA members participate in a papermaking workshop at Rittenhouse Town, site of the first paper mill in British North America in 1690.

PHILADELPHIA (continued from page 7)

ing is hard to find in Philadelphia, but **Ward Elicker Casting** is a foundry specializing in sculptures of bronze or iron. Owner Jeb Wood demonstrated the lost-wax casting process. Rounding out the tour were visits to **Yard's Brewery** and the remnants of the **Cramp Shipbuilding Co.**, including the graving dock (filled in) and the turret and machine shop.

Manayunk and East Falls. Jane Mork Gibson led this tour exploring the industrial past and present of Fairmount Park, Nicetown, East Falls, and Manayunk. **Fairmount Park's** impressive mix of monumental, transportation (rail and highway), and recreational features was the subject of a drive-by along the Schuylkill River, which also brought out the park's role in protecting the city's water supply. This was followed by a tour of Nicetown, which in the early 20th century featured some of Philadelphia's best-known manufacturers, including the **Tastykake** bakery (est. 1914), the former **Budd Manufacturing Plant** (est. 1912, the well-known maker of all-steel rail cars), the vast expanse of **Midvale Steel** (est. 1867), and **Atwater Kent Radio** (est. 1902, relocated to Nicetown in 1923). At **Philadelphia University** in East Falls, the group was treated to the school of engineering and textiles, with demonstrations of fabric design, weaving, knitting, and printing. The school is the direct descendant of the Philadelphia Textile School, established in 1884 to educate textile workers and managers. In Manayunk, the dyeworks of **G. J. Littlewood & Son** is a family business, founded in 1869 by the great-great grandfather of the current president, David Littlewood. In the early days, the plant primarily bleached and dyed cotton, but today a wide range of natural and synthetic fibers are dyed in large, sealed, stainless steel vats, and modern-day lab equipment is used to control quality and

check for color match and fastness. Over lunch at the Manayunk Brew Pub, Kay Sykora, director of the Schuylkill Project, spoke on efforts to maintain and preserve the 1819 **Manayunk Canal**, including the locks and dams that were part of the Schuylkill Navigation Co., formed in 1815 for the purpose of making the river navigable from the coalfields in Port Carbon to the port of Philadelphia. The day wrapped up back in Fairmount Park and at the grounds of the **1876 Centennial Exposition**, which showcased America's industrial prowess to the world. One of the few remaining exhibition buildings is Memorial Hall, which is now undergoing conversion into a children's museum.

SATURDAY

Saturday's paper sessions at the Crowne Plaza Hotel featured a three-track program with topics including the Fairmount Water Works, the West Point Foundry, cement and concrete, artifacts and education, theoretical IA, and western industrial landscapes. The SIA's annual business meeting was held over lunch. Saturday evening, the **Fairmount Water Works** was the site of a buffet, sporting such Philly foods as Tastykakes and cheesesteaks. While munching, members enjoyed the historic displays, including the 1851 Jonval turbine. The water works, which was a technological marvel when it opened in 1815, stopped pumping water in 1909. The past several decades have seen a sustained effort by the Philadelphia Water Dept. and its many public and private partners to preserve and restore the works. It is now the site of an interpretive center with exhibits, theater, and a popular restaurant with a three-month-long waiting list for reservations.



Perry Green

The 1894-5 Falls Bridge spans the Schuylkill River in Fairmount Park.



Michael Hoyt

SEPTA's Woodlawn shop.



Patrick Martin

2007 General Tools Award Recipient

At the Annual Business Meeting in Philadelphia, Committee chair Bill McNiece announced that Patrick Martin was the 2007 recipient of the General Tools Award for Distinguished Service to Industrial Archeology.

The General Tools Award was established in 1992 through the generosity of Gerry Weinstein, Chairman of the Board of General Tools Manufacturing and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools.

The General Tools Award is the highest honor that the SIA can bestow. It recognizes individuals who have given sustained, distinguished service to the cause of industrial archeology. It consists of a citation, a commissioned sculpture "The Plumb Bob," and a cash award.

Criteria for selection are as follows: (1) The recipient must have given noteworthy, beyond-the-call-of duty service, over an extended period of time, to the cause of industrial archeology. (2) The type of service for which the recipient is recognized is unspecified, but must be for other than academic publication. (3) It is desirable but not required that the recipient be, or previously have been, a member of the SIA. (4) The award may be made only to living individuals.



Patrick Harshbarger

Patrick Martin (center), 2007 General Tools Award recipient receives the "Plumb Bob" from Bill McNiece (right), committee chair, and Gerry Weinstein, chairman of General Tools.

This year's recipient exemplifies the criteria for selection. Pat Martin has been active in the cause of industrial archeology for some thirty years, making substantial contributions in a wide range of areas, including beyond North
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SUNDAY

Delaware River Cruise. Unfortunately, it was canceled due to a last-minute mechanical failure aboard the charter boat.



Michael Hoyt

Examining rails at the 1886 Hancock carbarn.

Light Rail to Roebbling: the Model Company Town. An intrepid group led by Ingrid Wuebber crossed the Ben Franklin Bridge to Camden and boarded New Jersey Transit's RiverLINE, a \$1.1 billion light-rail line completed in March 2004 between Camden and Trenton, on what was once the right-of-way of the 1834 Camden & Amboy RR. Following a one-hour ride, the group disembarked in Roebbling, the company town founded by **John A. Roebbling's Sons Company** in 1904. There they were met by George Lengel, vice president of the Roebbling Historical Society, for a walking tour. Roebbling's Sons turned out tons of wire products used in many applications, but was best known for its work on suspension bridges. The Roebbling works had nine open-hearth furnaces, a blooming mill, a rod mill, and three large wire mills. The works has been closed for more than 30 years, and many of the buildings razed, but the model company town remains largely intact.

Acknowledgments. The SIA's sincerest thanks go to the OEC for organizing the 2007 annual conference, especially on such short notice. The organizing committee included Ed Grusheski (chair), Larry DeYoung, Reese Davis, Muriel Kirkpatrick, Fred Quivik, Nikki Marx, Ruth Cowan, Jane Mork Gibson, Patrick Harshbarger, Torben Jenk, Jeffrey Ray, Linny Schenck, Ingrid Wuebber, Joel Spivak, Tom Brady, Harry Kyriakodis, Rich Wagner, Tim Mancl, and Frank Weer. Thanks also to the many other volunteers and contributors who made the conference a success. ■

Indiana IA Update

Covered Bridges. Jackson County is home to one of the longest covered bridges in the U.S.—the Medora Bridge. However, due to decades of neglect the bridge is on the verge of collapse and has been closed to pedestrian traffic. Another long-neglected covered bridge, the Bells Ford Bridge, which was one of the last remaining Post-truss bridges in the world, succumbed to similar neglect, collapsing on January 2, 2006. The truss was able to be largely salvaged, however, County Commission President Gary Darlage has been quoted as saying: “There is nothing left of the Bells Ford Bridge and I will not spend another tax dollar on it. Ninety percent of the people in this county think it is asinine to even consider rebuilding that bridge. By asking for any amount of money to be used on it, you are asking me to do something I don’t believe is right.” Although it has been brought to Darlage’s attention that federal funds could be used to restore the bridge, Darlage has refused to request federal funds, saying, “I guess I’m just not a historic person.”

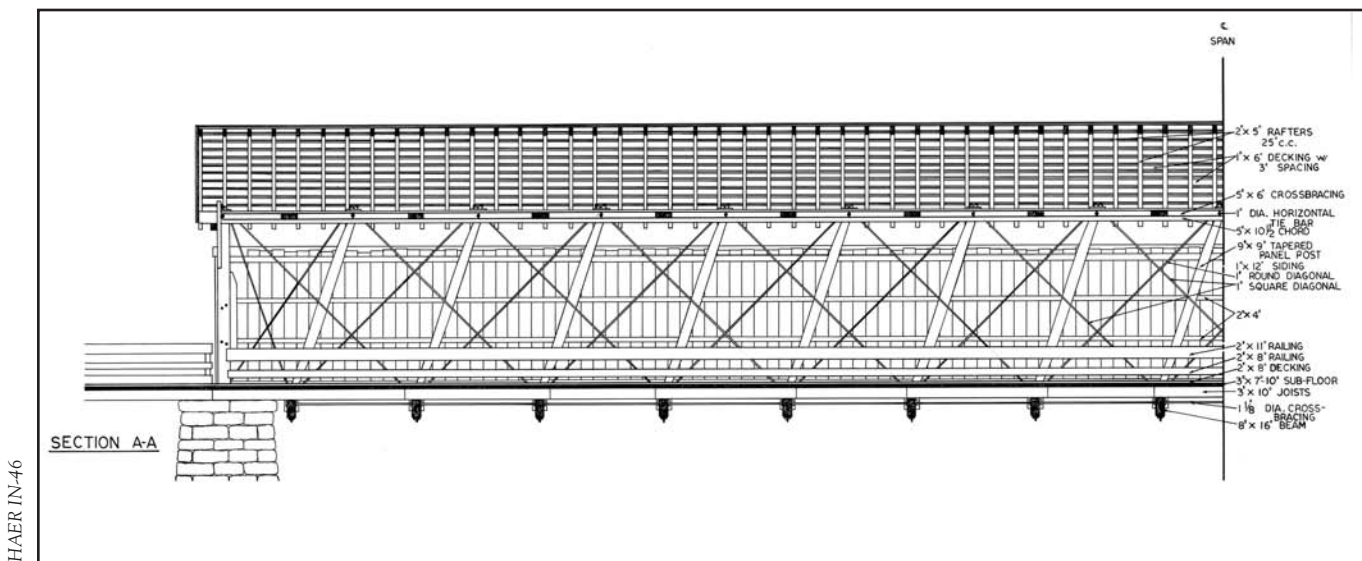
Moser Tannery. One of the last operating vegetable-method tanneries in the U.S., located in New Albany, recently lost its battle to be converted to a museum. The

tannery, which hasn’t produced commercially since 2003, uses basic technology from the 1870-1900 period. Not only did the owners try to destroy it (by order of their bankers and lawyers), but community support to save it as a museum with much of the operating 19th-century equipment failed.

Becks Mill. Indiana’s last privately owned, 19th-century water-powered mill has been listed on the National Register. The project was underwritten by local billionaire Bill Cook. The mill in Salem will be restored at a cost of at least \$500,000

The last early-19th-century iron works with extant ruins in the state, the **Virginia Iron Works** in Monroe County has been recognized in the environmental impact statement for the new I-69 highway corridor with a buffer zone that will keep the expressway at least a few hundred feet from the iron works. Indiana DOT may provide some funds to preserve it and its mines. A full National Register nomination is being prepared by Bob Bernacki [SIA] with the assistance of Curtis Tomak, the Indiana DOT archeologist.

Bob Bernacki



Detail of the Bells Ford Bridge (Jackson County, IN, over the East Fork, White River), a Post combination iron-and-wood, through-truss covered bridge, built in 1868. The only known extant example of its type, the bridge collapsed in 2006, and although salvaged, county officials do not desire to rebuild it. The bridge was documented by HAER in 2003.



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

PUBLICATIONS OF INTEREST

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COMPILED BY

Mary Habstritt, New York, NY; and Patrick Harshbarger, SIAN editor.

GENERAL INTEREST

- ◆ Martin Aurand. **The Spectator and the Topographical City.** Univ. of Pittsburgh Pr., 2006. With Pittsburgh as a case study, the author, an architectural historian and archivist at Carnegie Mellon, suggests that the city is best understood through its topography of rivers, hills, and valleys, in essence a landscape painting on a grand scale with each vantage point a vignette offering a visual experience that informs the whole. Includes perspectives on Pittsburgh's industries. Winner of the 2006 Worldwide Books Award for Publications from the Research Award Committee of the Art Libraries Society of North America.
- ◆ Domenico B. Meli. **Thinking with Objects: The Transformation of Mechanics in the Seventeenth Century.** Johns Hopkins Univ. Pr., 2006. 352 pp. \$29.95. Gives center stage to levers, inclined planes, beams, pendulums, springs, and falling and projected objects to provide a portrayal of mechanics as practitioners understood it at the time.
- ◆ Robin Pogrebin. **Brooklyn Waterfront Called Endangered Site.** *NY Times* (June 14, 2007). The Brooklyn waterfront (tour site—2002 Annual Conference; SIAN, Spring 2007) was named to the National Trust for Historic Preservation's 11 most endangered historic places.
- ◆ Giles Slade. **Made to Break: Technology and Obsolescence in America.** Harvard Univ. Pr., 2006. 330 pp. \$27.95. Changes in engineering and marketing practices starting in the 1930s that led to planned obsolescence as well as ethics that would encourage consumers to replace products that have yet to wear out. Rev.: *T&C* (Apr. 2007), pp. 428-9.
- ◆ **TICCIH Bulletin** No. 36 (Spring 2007) includes Eusebi Casanelles, *Conservation Through Re-use and Adaptation* (a critique of adaptive re-uses that are not sensitive to the industrial heritage); Frederic Pillet, *Using Geographic Information Systems in Industrial Heritage Research: The Example of Saint-Quentin in France* (identifying and managing textile, metallurgy, and foodstuffs sites); Richard K. Anderson, Jr. [SIA], *Using CAD to Restore the Model T Design Room* (documenting Ford's Piquette Ave. Plant); and Caterina Vatteroni, *In Volo Nel Presente: Aerial Photographs and the GIS Platform for Documenting Industrial Archeological Sites* (examining the potential of recording Italy's industrial heritage using English-derived experiences with GIS), as well as other notes on the industrial heritage from around the world. Quarterly with membership. Info: www.mnactec.com/ticcih.
- ◆ Erik van der Vleuten and Arne Kaijser, eds. **Networking Europe: Transnational Infrastructures and the Shaping of Europe, 1850-2000.** Science History Publications, 2006. Building transnational networks of railways, telegraphs,

highways, and power lines and their complex effects on the economic and political integration of Europe. Rev.: *SHOT Newsletter* (Apr. 2007).

TEXTILES

- ◆ Karen Johnson Freeze. **Innovation and Technology Transfer during the Cold War: The Case of the Open-End Spinning Machine from Communist Czechoslovakia.** *T&C*, Vol. 48,2 (Apr. 2007), pp. 249-85. Czechs were decades ahead of their western counterparts in the development of a reliable high-speed spinning machine.
- ◆ Colleen E. Kriger. **Cloth in West African History.** Rowman & Littlefield, 2006. 214 pp. \$32.95. Technical details and history of cloth produced by artisans in Nigeria. Rev.: *T&C* (Apr. 2007), pp. 431-3.
- ◆ Angela Lakwete. **Inventing the Cotton Gin: Machine and Myth in Antebellum America.** Johns Hopkins Univ. Pr., 2005. 232 pp., illus. \$25. Cotton gin technology and how the history of its development was manipulated by sectional rivalries prior to and following the Civil War. Makes the point that Whitney was just one of several important inventors of the gin, but that northern myth-makers promoted him into a symbol of Yankee ingenuity coming to the rescue of southerners. Rev.: *H-Southern-Industry Review* [On-line] (Feb. 2007).

MINES & MINING

- ◆ Marionne Cronin. **Northern Visions: Aerial Surveying and the Canadian Mining Industry, 1919-1928.** *T&C*, Vol. 48,2 (Apr. 2007), pp. 303-30. Following WWI, the Canadian Air Force surveyed vast territory for mining companies. The goal wasn't complete accuracy, but "good enough" maps for the development of the Canadian Shield.
- ◆ John Henry Devereux. **"In Death-Like Silence"—Touring a Coal Mine in 1852.** *Timeline* (January/March 2007), pp. 60-71. Edited and introduced by David Simmons [SIA]. Transcribed from Devereux's diary, an amazingly detailed and perceptive description of a mine near Cuyahoga Falls, OH. Also biography of Devereux who managed railroads in northeastern Ohio from 1864 until the mid-1880s.
- ◆ Bill Haller. **Atlas Powder, Senter, Michigan, 1910-1960.** 2007 (Available from the author: 13677 Bete Grise Rd., Mohawk, MI 49950; billhaller@pasty.com). 162 pp., illus. History of the 1,815-acre explosives manufacturing complex in Michigan's copper country with almost 200 special-purpose structures and 11 miles of narrow-gauge railway. The structures

were spread out over a vast area and surrounded by earthworks to a height of almost two stories to protect them from potential explosions. In its 50 years of operation, the plant employed over 300 workers in a self-contained community. Photos can also be viewed on-line: <http://gallery.pasty.com/haller>.

- ♦ Jim Robbins. **Artistic Revival Takes Root Amid Relics of Copper Mines.** *NY Times* (Jan. 26, 2007). Civic leaders in Butte, MT, are attempting to transform the city into a refuge for artists by offering up empty historic buildings at bargain prices.

IRON & STEEL

- ♦ Karen Olson. **Wives of Steel: Voices of Women from the Sparrows Point Steelmaking Communities.** Penn St. Univ. Pr., 2005. 240 pp. \$45. The roles women played, especially in the shift from homemakers to workers in two-wage families beginning with the layoffs at the Bethlehem Steel Plant in the 1970s. Compiles and analyzes over 85 interviews with spouses and workers. Rev.: *T&C* (Apr. 2007), pp. 446-47.
- ♦ Carl A. Zimring. **Cash for Your Trash: Scrap Recycling in America.** Rutgers Univ. Pr., 2005. 220 pp. \$39.95. History of scrap recycling with a focus on iron and steel trade, from its origins in mostly immigrant-owned junkyards to large corporations allied with automakers and steel companies. Rev.: *T&C* (Apr. 2007), pp. 426-27.

RAILROADS

- ♦ Mark Aldrich. **Death Road the Rails: American Railroad Accidents and Safety, 1828-1965.** Johns Hopkins Univ. Pr., 2006. 446 pp. \$59.95. Inventory and analysis of railroad accident and safety statistics reflecting the everyday accidents that plagued American railroads and took hundreds of workers' lives each year. Rev.: *T&C* (Apr. 2007), pp. 448-9.
- ♦ Richard C. Carpenter. **A Railroad Atlas of the United States in 1946: Vol. 2: New York & New England.** Johns Hopkins Univ. Pr., 2004. 320 pp. \$60. Detailed, hand-drawn maps of each state with an index of all stations. Rev.: *NRB*, Vol. 69,5 (2004), p. 44.
- ♦ John D. Denney, Jr. **The Care and Feeding of a Trolley Fan.** *NRB*, Vol. 69,5 (2004), pp. 4-23. Illustrated history and reminiscences of trolley service in and around Lancaster, PA.
- ♦ John Freeman Gill. **The Charming Gadfly Who Saved the High Line.** *NY Times* (May 13, 2007). Retrospective on efforts to preserve Manhattan's West Side elevated railway (*SIAN*, Spring-Summer 2004) with a focus on preservationist Peter Obletz, an eccentric who lived under the High Line in a Pullman dining car during the late 1970s and first suggested preserving the viaduct as public space.
- ♦ George W. Green. **Exhibit Trains and Cars.** *NRB*, Vol. 69,5 (2004), pp. 4-23. Special cars devoted to displays and exhibits of consumer, industrial, or educational offerings from the 1880s to the present.
- ♦ Jill Jonnes. **Conquering Gotham: A Gilded Age Epic: The Construction of Penn Station and Its Tunnels.** Penguin, 2005 (<http://conqueringgotham.com>). The engineering, architecture, and behind-the-scenes politics and real-estate transactions surrounding the construction of NYC's Penn Station (1901-10). Meticulous history brings to life the project's leaders, based on exhaustive research in the PRR archives in Harrisburg. In a sad epilogue, chronicles the decline of the PRR and Penn Station's demolition in 1963. Several dozen period photos and diagrams round out the book. Also, Peter A. Hansen. **The Kansas City Penn Station Maidens.** *R&LHS Newsletter*, Vol.

27,2 (Spring 2007), pp. 6-9. To blunt criticism for its demolition of Penn Station, the PRR distributed bits and pieces of statuary and architectural remnants around the country. Article describes former Penn Station tableau in KC park and lists the disposition of about 20 other remnants.

- ♦ Ken Kobus [SIA] and Gary Rauch. **Pennsy's Conemaugh Division—Pittsburgh to Johnstown and Oil City.** PRR Technical & Historical Society, 2007. 128 pp. (Avail: kksteel@verizon.net). 341 well-reproduced and thoroughly-captioned rare b&w photos from archival and personal collections illustrate the history of the railroads that ultimately came to form the PRR's northern alternate route into Pittsburgh. The lines continue in use today by Norfolk-Southern and short lines. Color maps on inside front and back covers show the railroad scene in four different eras from 1864 to 1952.
- ♦ Gary Krist. **The White Cascade: The Great Northern Railway Disaster and America's Deadliest Avalanche.** Henry Holt & Co., 2006. 315 pp., illus. \$26. Recalls the 1910 avalanche near Wellington (WA) that claimed nearly a hundred lives. Rev.: *NY Times* (Feb. 9, 2007).
- ♦ Takashi Nishiyama. **War, Peace, and Nonweapons Technology: The Japanese National Railways and Products of Defeat, 1880s-1950s.** *T&C*, Vol. 48,2 (Apr. 2007), pp. 286-302. The move from wood to all-steel cars motivated by concerns for passenger safety, and the employment of aeronautical engineers in the national railway following the forced demilitarization of Japan in 1945, led to the development of world-class high-speed trains during the 1960s.
- ♦ Brian Solomon. **CSX.** MBI Publishing, 2005. 160 pp. \$34.95. Background histories of the railroads that became CSX and its rise as one of today's dominant carriers. *NRB*, Vol. 69,5 (2004), p. 56.

AUTOMOBILES & HIGHWAYS

- ♦ Christopher Foster. **The Stanley Steamer: America's Legendary Car.** The Stanley Museum (Kingfield, ME), 2004. 548 pp. \$79.95. Comprehensive history of the Stanley company and family, including production data and specifications for every model. Rev.: *T&C* (Apr. 2007), pp. 468-70.
- ♦ Stephen Hart. **The Last Three Miles: Politics, Murder, and the Construction of America's First Superhighway.** New Press, 2007. The back story of New Jersey's Route 1 Extension from the Holland Tunnel to Newark. Follows the clash of boss politics and organized labor in the construction of the highway's last three miles, the series of viaducts now known as the Pulaski Skyway.
- ♦ Richard A. Johnson. **The Outsider: How Robert McNamara Changed the Automobile Industry.** *I&T* (Summer 2007), pp. 29-37. A review of McNamara's career at the Ford Motor Co. prior to becoming the Secretary of Defense in 1961. He opposed the ill-fated Edsel project and argued that cars should be made much safer.
- ♦ Peter D. Norton. **Street Rivals: Jaywalking and the Invention of the Motor Age Street.** *T&C*, Vol. 48,2 (Apr. 2007), pp. 331-359. Efforts by automobile clubs and business associations to "claim" American city streets for cars over unruly pedestrians in the 1910s and 1920s. The street was redefined as a place for the cars, and not for children's play, street vendors, or pedestrians.
- ♦ Rudi Volti. **Cars and Culture: The Life Story of a Technology.** Johns Hopkins Univ. Pr., 2006. 192 pp., illus. \$19.95. Succinct history highlights the technical changes that altered the appearance and performance of automobiles.

WATER TRANSPORT

- ◆ Elsa Brenner. **From Arms to Art: The Charleston Navy Yard Is Becoming an Artists' Colony with Housing and Business.** *NY Times* (Jan. 31, 2007). Charleston (SC) Navy Yard, which opened in 1901 and closed in 1996, is being converted to artists' studios and 9,000 housing units.
- ◆ Edwin L. Dunbaugh. **The New England Steamship Company: Long Island Sound Night Boats in the Twentieth Century.** Univ. Pr. of Fla., 2005. 406 pp. \$59.95. Account of overnight steamboat service between Boston and New York. Rev.: *T&C* (Apr. 2007), pp. 466-68.
- ◆ Patrick McGeehan. **Look Out, Below! Intrepid Plots a Course High and Dry.** *NY Times* (Apr. 11, 2007). The *USS Intrepid*, the 64-yr.-old aircraft carrier normally docked as a floating museum in Manhattan, has made its way to dry dock in Bayonne for some badly needed repairs.
- ◆ Robert Trumbull. **A Day of Infamy, Two Years of Hard Work.** *NY Times* (Dec. 7, 2006). 64 years late, excerpts from a dispatch sent in Dec. 1943, unpublished due to wartime censorship, describes in detail the remarkable reclamation and repair of the ships damaged by the Japanese attack on Pearl Harbor two years earlier.
- ◆ George Werneth. **Historic Shipyard Engine Finds New Home at Railroad Museum.** *Mobile (AL) Press-Register* (May 21, 2007). 65-yr.-old switch engine, originally owned by the Alabama Dry Dock & Shipbuilding Co., will be preserved at the Dixie RR Museum in Calera.

AVIATION & AERONAUTICS

- ◆ **Aviation 1910.** Lindsay Publications (www.lindsaybooks.com), 1910, reprint ed. 2006. 64 pp. \$8.95. Reprints two articles from *Scientific American Supplement*. The first by Grover Cleveland

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With Thanks.

Loening on the practice and theory of aviation, and the second by Octave Chanute on recent progress in aviation. Very detailed descriptions of early airplane technology.

- ◆ Erik M. Conway. **Blind Landings: Low-Visibility Operations in American Aviation, 1918-1958.** Johns Hopkins Univ. Pr., 2006. 256 pp., illus. \$45. Evolution of aircraft landing aids that made landing safe and routine in almost any weather.

ARMS & MUNITIONS

- ◆ **Ashland Firm Delivers Large Civil War Reproduction Cannon.** *Daily Independent (Ashland, KY)* (Apr. 15, 2007). Steen Cannon & Ordnance Works specializes in casting reproduction cannons. Describes the manufacture of a functioning 4,200-lb. artillery piece (30-pounder Parrott) for the Ft. Pulaski National Park in Savannah, GA.
- ◆ Joseph G. Bilby. **A Revolution in Arms: A History of the First Repeating Rifles.** Westholm Pub. (Yardley, PA), 2006. 270 pp. Technological development of the Henry and Spencer rifles and analysis of their use and impact on Civil War battlefields. Rev.: *T&C* (Apr. 2007), pp. 457-8.
- ◆ Walter E. Grunden. **Secret Weapons and World War II: Japan in the Shadow of Big Science.** Univ. Pr. of Kansas, 2006. 335 pp. \$39.95. Japan's covert nuclear weapons, radar, rockets, jet aircraft, and chemical and biological weapons programs were hampered not so much by lack of knowledge or technology as by organizational failures. Rev.: *T&C* (Apr. 2007), pp. 460-2.
- ◆ Herbert C. Houze, Carolyn Cooper [SIA], and Elizabeth Kornhauser. **Samuel Colt: Arms, Art, and Invention.** Yale Univ. Pr., 2006. 260 pp. \$65. Beautifully illustrated book, accompanying the exhibit of the same title at the Wadsworth Atheneum. Focus is on the material culture of the Colt company—the guns invented and produced and the art objects used to market them. Rev.: *T&C* (Apr. 2007), pp. 455-7.
- ◆ Mark R. Wilson. **The Business of the Civil War: Military Mobilization and the State, 1861-1865.** Johns Hopkins Univ. Pr., 2006. 306 pp. \$45. The organization of the U.S. Army's quartermaster department, and its ability to mobilize to take advantage of new manufacturing technologies, especially in the production of uniforms and weapons. Rev.: *T&C* (Apr. 2007), pp. 453-55.

COMMUNICATIONS TECHNOLOGY

- ◆ Nick D'Alto. **The Inflatable Satellite.** *I&T* (Summer 2007), pp. 38-43. The story of NASA's Echo satellites project (1956-69), large spherical balloons launched into space by rocket and designed by their reflective surface to bounce signals back to earth.
- ◆ Don Bedwell. **Crosley Story.** *Timeline* (January/March 2007), pp. 18-37. Powell Crosley, a Cincinnati entrepreneur who became a world-renowned manufacturer of radios in the 1920s. He later branched out into a wide assortment of home products.
- ◆ Miguel Helft. **(A Fading Signal) Will Dits Be Dashed as F.C.C. Moves Away from Morse Code.** *NY Times* (Dec. 27, 2006). The Federal Communications Commission has announced it will no longer require Morse Code proficiency for an amateur license. Many ham operators fear it spells the end of the code, since other modes of communicating, like voice and video, will take over.
- ◆ David L. Morton, Jr. **Sound Recording: The Life Story of a Technology.** Johns Hopkins Univ. Pr., 2006. 232 pp., illus. \$19.95. The principles involved in recording sound waves and a chronological account of the technological, economic, and cultural factors surrounding its development.

- ◆ **Radio Pioneers 1945.** Lindsay Publications (www.lindsaybooks.com), reprint ed. 2006. 64 pp. \$8.95. Originally published by the NY section of the Institute of Radio Engineers for a commemorative dinner in Nov. 1945, includes history of the IRE; biographies of early developers, users, and manufacturers of wireless technology; and chronology of wireless developments in the U.S. prior to 1926.

BRIDGES

- ◆ Bruce Clouette [SIA]. **Where Water Meets Land: Historic Movable Bridges of Connecticut.** CT Dept. of Transportation, 2004. Compilation from the state's historic bridge inventory of about two dozen surviving movable bridges and those recently replaced. Chapters cover historical background, highway bridges, and railroad bridges. Includes glossary, map, and lists of those bridges on the National Register and documented by HAER. Avail: Dave.Poirier@ct.gov.
- ◆ **Covered Bridge Topics**, Vol. 65,2 (Spring 2007). Articles and photos of Oregon covered bridges; rebuilding the Bridgeton Bridge in Parke County (IN); reprint of a Norwegian covered bridge plan (c.1860-75); and the Hyde Hall Bridge in Cooperstown (NY), the oldest covered bridge in North America. CBT is available with membership to the National Society for the Preservation of Covered Bridges (\$15/yr. c/o Pauline Prideaux, 4856 Spencer Oaks Blvd., Pace, FL 32571).
- ◆ Matthew Kierstead [SIA] and John Daly. **Leete's Cattle Pass (Amtrak Structure No. 86.79), Guilford, Connecticut.** *SIA New England Chapters Newsletter*, Vol. 28,1 (2007), pp. 5-9. Narrow stone-arch underpass, built about 1851 by the New Haven & New London RR.
- ◆ Robert W. Passfield [SIA]. **Philip Louis Pratley (1884-1958): Bridge Design Engineer.** *Canadian Journal of Civil Engineering*, Vol. 34, 5 (May 2007), pp. 637-50. Overview of the career of Canada's foremost designer of long-span highway bridges, inclusive of an assessment of the engineering significance of his outstanding bridges; all of which are extant.
- ◆ Barry Sanford. **Royal Metal: The People, Time and Trains of the New Westminster Bridge.** British Columbia Chapter, National Ry. Historical Society (Box 33763, Station D, Vancouver, BC, V6J 4L6). 256 pp., illus. \$39. History of 100-yr.-old, 380-ft.-long swing span over the Fraser River, which remains in service for Canadian National Ry.

MACHINES & MACHINE TOOLS

- ◆ John Cantrell & Gillian Cookson, eds. **Henry Maudslay & The Pioneers of the Machine Age.** Tempus, 2002. 192 pp., illus. Maudslay (1771-1831) started an engineering works in London and became famed for his machines and the engineers he trained. The book is a collection of biographies and previously unpublished documentary research on the firm of Maudslay Son & Field. Rev.: *IA News* (Summer 2003), p. 18.
- ◆ David R. Meyer. **Networked Machinists: High Technology Industries in Antebellum America.** Johns Hopkins Univ. Pr., 2006. 320 pp., illus. \$49.95. The development of skilled-labor exchange systems, showing how individual metalworking sectors grew and moved outward.

MISC. INDUSTRIES

- ◆ Carol M. Front [SIA], John Minton Christopher, and Martha Capwell Fox [SIA]. **The Lehigh Valley Cement Industry.** Arcadia (www.arcadiapublishing.com), 2006. 128 pp., illus. \$19.99. Pennsylvania's Lehigh Valley (tour site—2002 Fall Tour) was the

birthplace of the Portland cement industry in the U.S. This illustrated history traces cement making from its beginnings through its boom-and-bust years in the 20th century to modern-day consolidation and high technology. Over 200 historic b&w photos of quarries, kilns, crushers, trains and trucks, mills and workers, and towns and industries that emerged because of the cement industry. The collection includes several rare photos of the Schoefer kilns in Coplay, the only remaining examples in the world, and an early photo of Samuel Traylor's Cement Gun. Also included is a chart of the Lehigh district's mills, owners, and companies.

- ◆ Roy Hoffman. **Turpentine Days: Alabama's Turpentine Days Are Mostly Gone Now, But Ennis Rainwaters Remembers Them Well.** *Mobile (AL) Press-Register* (June 3, 2007). Hoffman, age 94, recalls labor-intensive process of turpentine in the 1920s to 1940s. The price of rosin escalated from \$2/barrel to \$100/barrel during WWII, promoting a brief revival of turpentine.
- ◆ P. Juuti, T. Katko, and H. Vuorinen, eds. **Environmental History of Water: Global Views on Community Water Supply and Sanitation.** IWA Publishing (www.iwapublishing.com), 2007. Survey of water and sanitation services from ancient to modern times. Rev.: *SHOT Newsletter* (Apr. 2007).
- ◆ Northwestern Film School at Western Washington University. **Smells Like Money: The Story of Bellingham's Georgia Pacific Plant.** Documentary film includes interviews with former workers, the history of the Bellingham Pulp Mill through the 7-month strike in 1978, and finally the environmental concerns in the 1990s that led to the plant's closure in 2001. See a trailer and info on showing or purchasing: <http://myweb.students.wvu.edu/~albrigd2/smellslikemoneymainpage.html>.
- ◆ Roy G. Neville. **Historical Chemical Library: Annotated Catalogue of Printed Books on Alchemy, Chemistry, Chemical Technology, and Related Subjects.** Chemical Heritage Foundation (www.chemheritage.org, 1-800-247-6553), 2006. 2 vols., 1500 pp. \$250. Philadelphia-based CHF's library is one of the richest deposits of books on the history of chemistry in the world.

ABBREVIATIONS:

- I&T = *American Heritage of Invention & Technology*
- IA News = *Industrial Archaeology News*, published by the Assn. for IA (UK)
- NRB = *National Railway Bulletin*, published by the National Railway Historical Society
- R&LHS = *Railway & Locomotive Historical Society* (www.rlhs.org).
- T&C = *Technology & Culture*, published by the Society for the History of Technology (SHOT)
- Timeline = Published by the Ohio Historical Society (614-297-2315)
- TICCIH = The International Committee for the Conservation of the Industrial Heritage

Publications of Interest is compiled from books and articles brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books and articles, especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. *Publications of Interest*, c/o SIA Newsletter, 305 Rodman Road, Wilmington, DE 19809; phsianews@aol.com.

San Antonio's First Iron Bridges

In 1871, 14 teams of oxen hauled the parts for an iron bridge from the Indianola docks on the Gulf Coast of Texas to San Antonio. It was then assembled over the San Antonio River at Houston St. under the guidance of Gustave Schleicher, a German-born engineer, who eventually went on to serve two terms in Congress. It was San Antonio's first iron wagon bridge. The then existing timber bridge at Houston St. was used as scaffolding for the erection of the new iron structure. Two years earlier a short iron bow-string-truss footbridge on St. Mary's St. had obtained the distinction of becoming the town's first iron bridge. The railroad, along with its iron bridges, would not arrive until 1877.

The iron wagon bridge remained at the Houston St. location for only 14 years. In 1885, Grand Avenue, then in the process of being upgraded by the addition of a trolley line, needed a stronger bridge. The Houston St. Bridge was appropriated and moved to Grand Avenue, where it remained for the next 42 years. The original 1871 iron bridge was moved once again in 1927, when it was relocated over a small stream on Hildebrand St.

The configuration of the 1871 bridge falls into the broad structural category known as "suspension trusses." It is a short-span variation of a fairly popular truss configuration patented seventeen years earlier by Albert Fink (1854: U.S. Patent #10,887). The San Antonio's truss panels are considerably longer in proportion to their height (the distance between verticals is proportionally greater) than those of a standard Fink. Half of the standard Fink truss's heavy vertical struts have been eliminated, and a pair of light-weight

diagonal ties support the bottom chord at a point half way between each remaining vertical. The net result is a savings in weight. This variation makes sense for a short-span bridge where the overall stiffness of the bridge is not as critical as it would be in longer spans.

The only other bridge known to have been built using this modification of the Fink configuration was erected in 1868 over a canal in Dover, OH (the extant Zoarville Bridge; *SIAN*, Winter 1997). The single observable difference between them is that the Ohio bridge's end posts have a slightly different design than the Texas ones; however, the portal design connecting the end posts is the same for both bridges. The pattern of the truss members is the same.

Who designed the San Antonio Bridge remains a mystery. Fred Frie, a San Antonio city clerk, informed the local newspaper that it had been transported by rail from St. Louis to New Orleans, where it was loaded onto a ship bound for Indianola, TX. What is not known is whether it was manufactured in St. Louis, or if St. Louis was merely a way station on its journey from further east. One can only speculate as to its true origins and wonder whether there was a connection with the Baltimore-based firm of Smith, Latrobe & Co., which built the Ohio truss in 1868. Latrobe was associated with the Baltimore & Ohio RR, and the disassembled bridge could have been shipped by rail from Baltimore to St. Louis and then south to New Orleans. While the bridge's birthplace and its designer remain undocumented, we fortunately know when and where it was erected and what it looked like.

(continued on page 16)



Amon Carter Museum

1873 bird's eye drawing showing San Antonio's first two iron-truss bridges.

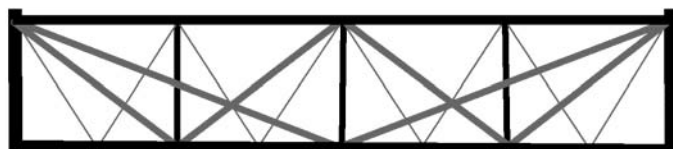
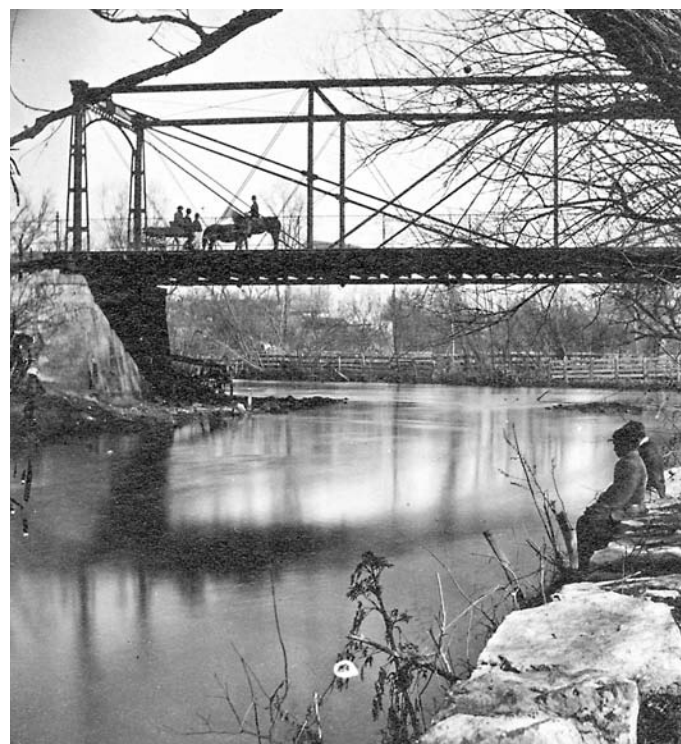


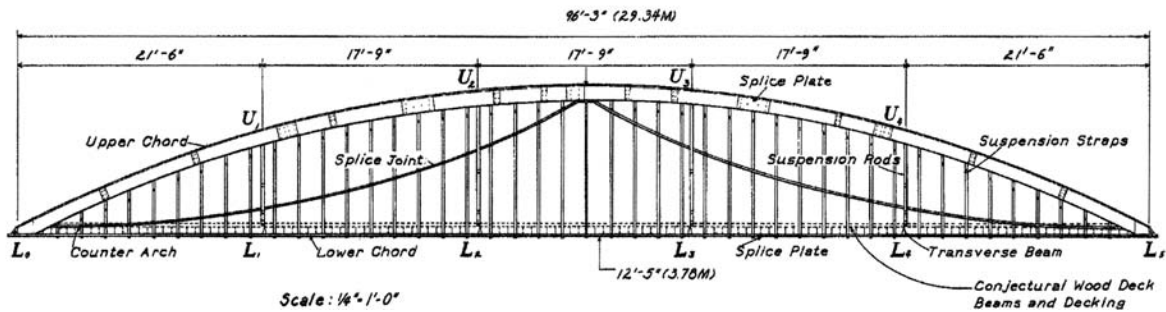
Diagram of Houston St. truss configuration. Alternate verticals of the "standard" Fink configuration have been eliminated.



San Antonio's first wagon bridge.

University of Texas, Institute of Texas Culture

UPPER PACIFIC MILLS BRIDGE LAWRENCE, MASSACHUSETTS · 1864



1864 Moseley truss bridge at the Upper Pacific Mills, Lawrence, MA, is similar to the 1869 truss once located on St. Mary's St. in San Antonio.

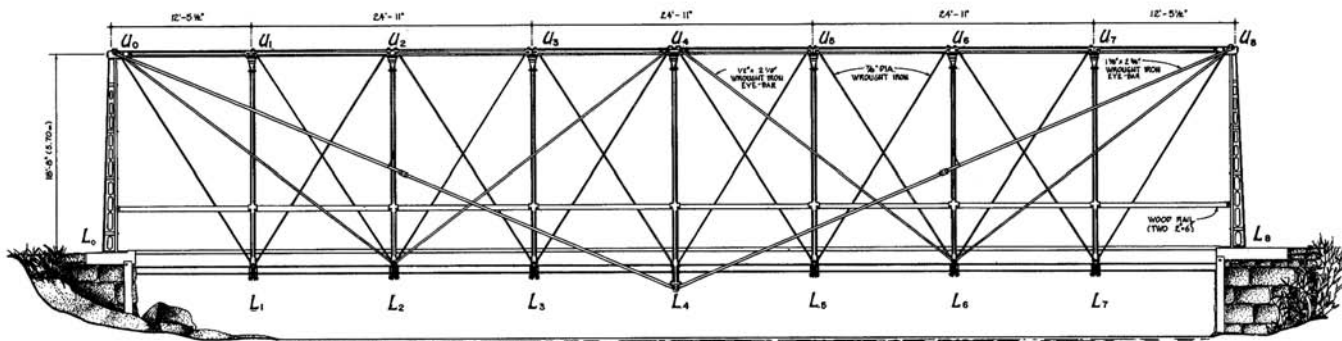
The town's first iron bridge at St. Mary's St. had an eastern connection. The engineer who supervised the erection of the Houston St. Bridge, Gustave Schleicher, was an agent for the Moseley Iron Works, and in 1868 successfully arranged for the town to purchase the 82-ft.-long bridge from the Boston firm. Thomas Moseley, a Kentuckian and a self-educated engineer who firmly believed that "an arch was the foundation for all good bridge designs," patented a number of tied-arch and bowstring trusses. He founded a successful bridge company that he relocated to Boston during the Civil War, marketing and building a large variety of light-weight tied-arch and bowstring truss bridges.

The St. Mary's St. footbridge's appearance was unusual. Not that bowstring trusses were uncommon at that time, or not practical, but this particular variation contained a

reversed, lightweight arch that Moseley thought would help prevent the main bowstring arch from deforming under asymmetrical loading. It was not an efficient engineering solution, and very few of these truss configurations were built. The majority of the bridges produced by the Moseley firm utilized a variety of other web configurations that Moseley had patented.

An extant example of the San Antonio design is a 96-ft. bridge built in 1864 over the power canal at the Pacific Mills in Lawrence, MA. It was restored by Frank Griggs [SIA] in 1989, and now spans a pond on the campus of Merrimack College.

David Guise with assistance from Andrew Crews and Gretchen Grunenfelder



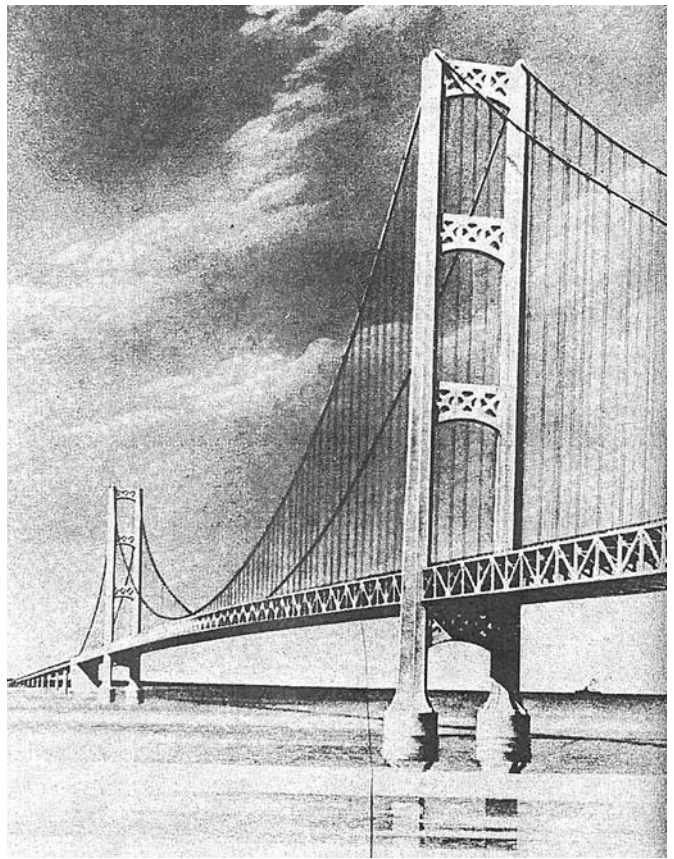
A short-span "standard" Fink truss bridge. A lacework of lightweight diagonal ties slope up from the bottom of each web vertical, transporting load to the top of the adjacent verticals. Then a second set of diagonal ties support the bottom chord at the base of the alternate verticals and carries the load up to the top of every fourth vertical. Ultimately, long diagonal ties reach from the top of the end posts to support the bottom chord at mid-span.

HISTORIC BRIDGE NEWS

The State of Michigan has been celebrating the 50th anniversary of the **Mackinac Straits Bridge** with a summer-long series of events. The suspension bridge was the culminating design of David B. Steinman, incorporating many of his ideas of aerodynamically stable design following the collapse of the first Tacoma Narrows Bridge. The Mackinac Straits Bridge united Michigan's upper and lower peninsulas. The total length is 8,614 ft. from anchorage to anchorage, with a center span of 3,800 ft. When built, the bridge was second in clear-span length only to the 1933-37 Golden Gate Bridge, which has a center span of 4,200 ft. but an overall length of about 2,000 ft. less. Among the programs celebrating the bridge have been an exhibit and opportunities for the public to meet ironworkers, who gave a demonstration of riveting skills at the dedication of an ironworkers statue and monument in St. Ignace. There have also been a bridge walk, a bike-across-the-bridge day, and an antique automobile parade. 50th anniversary posters are also available for a nominal fee. Info: www.michigan.org.

An engineering and underwater inspection of the **Poughkeepsie-Highland RR Bridge** (SIAN, Summer 2006) has found that the superstructure and piers are basically in good shape, removing a barrier to opening the 7,000-ft.-long bridge over the Hudson River as a pedestrian and bike way. The walkway friends group is now soliciting public and private funds to undertake the repairs necessary to open the bridge by 2009. The bridge was the longest cantilever truss in the world when it opened in 1889. Info: www.walkway.org.

Available: The **Lindford Bridge**—the NR-eligible, 180-ft.-span, Pennsylvania-design, through-truss bridge with two pony-truss approach spans is located on rural Koochiching County Highway 1 in northern Minnesota. This is the last well-preserved, state highway department-designed Pennsylvania through-truss bridge in Minnesota. Yet the bridge would need significant repairs to remain in its current use. Even if the county addressed rusting, damage to the portals from over-height trucks, and deterioration of the concrete deck, the bridge would still be too narrow and lack the load capacity to carry logging trucks. The bridge's removal has been reviewed under Section 106 and the structure has been documented for the Minnesota Historic Properties Record. Koochiching County can offer \$25,000 towards the bridge's relocation to an appropriate site by a responsible party. Info: County Engineer Doug Grindall; (218) 283-1186; doug.grindall@co.koochiching.mn.us. ■



Mackinac Straits Bridge, conceptual drawing by D. B. Steinman, 1954. The State of Michigan has been celebrating the 50th anniversary of Mighty Mac.



Lindford Bridge

OBITUARIES

It is with sadness that the SIA marks the loss of several active members.

Walter P. Gray III was an expert in railroad history and a preservationist, remembered by the SIA as the lead organizer of the 1996 SIA Annual Conference, Sacramento, and former director of the California State RR Museum. Born in 1952 in San Francisco, Walter moved to Sacramento in the 1970s and after graduating from the California State Univ., Sacramento, joined the staff of the railroad museum in 1977. He rose to the position of director in 1990 and worked diligently to elevate the quality of the museum's exhibits and the public accessibility of its collections. He initiated Old Sacramento's rail excursion and was host to many national railroad history conferences and "fan" fairs. In 1998 Walter was appointed the California State Archivist, and in 2004 he joined California State Parks as chief of archeology, history, and museums. He passed away in May following a year-long battle with liver cancer.

Carter Litchfield passed away suddenly on May 9. He was a long-time SIA member (over three decades) and a member of the Roebling and Oliver Evans chapters. Carter was a professor of chemistry who taught at Rutgers Univ. for many years. In retirement he ran Olearius Editions, a small press that specialized in the history and manufacture of vegetable oils and fats. Among his several outstanding publications was *The Bethlehem Oil Mill, 1745-1934: German Technology in Early Pennsylvania* (1984). The study of the Moravian mills presented for the first time English translations from German text, highlighting in detail the artisanship and craft of these colonial settlers. It was a model of meticulous scholarship with outstanding graphs and illustrations. For the past decade, Carter had been working on a comprehensive gazetteer of New Jersey linseed oil mills, which was nearing completion. He was always very generous with his in-depth knowledge of the oil industry and of milling in general, and he took an earnest interest in others' IA research, often with a helpful tip or clue to a hard-to-find source. Carter and his wife Carol, a biology professor and an expert in the history of salt, moved from Pennsylvania to Virginia some years ago. He was a regular at

SIA conferences and tours, presented papers, and served on several SIA committees, including the Vogel Prize Committee. Carter's will stipulates that a portion of his publishing enterprise will devolve to the SIA.

Bill Wilkie passed away on June 4 due to an unexpected complication of recent cardiac bypass surgery. Bill was an authority on the Rockaway Valley RR, affectionately known as the "Rock-a-Bye Baby" due to its poor construction and light ballasting. He researched the railroad by walking nearly all 24 miles, searching for adaptive reuse of railroad structures, chatting up the locals, and photographing whatever he could find. Personable and enthusiastic, Bill easily engaged others in his project. The Rock-a-Bye Baby project led him to research the applejack or Jersey Lightning industry, including a visit to Laird's Distillery in Colt's Neck. He served on the board of the Ralston Cider Mill in Mendham Twp., NJ, and, a year ago, provided the Roebling Chapter with a tour of the restoration-in-progress. It was either his interest in apples or through his collection of century-old NJ Dept. of Agriculture reports that Bill came upon his next project: New York City road apples. His presentation, "Horse Apples: The IA of Manure," was an entertaining and memorable program at the Roebling Chapter Annual Symposium in 2002. A civil engineer and businessman, Bill seemed prouder that he was descended from Cornish hard-rock miners than his professional success. He was born during World War II at the Copper Range Hospital in Michigan's Upper Peninsula and grew up in the Ann Arbor-Detroit area. The 1997 SIA Annual Conference in Houghton seemed like a personal homecoming as he revisited the places of his early youth and childhood family vacations. At the Painesdale Mine, he met a retired miner who had worked with his uncle. Bill served on the committee for the 2002 Annual Conference in Brooklyn.—*Bierce Riley*

We also note the passing of German industrial photographer **Bernd Becher**, 75, on June 26. Becher, a favorite of many SIA members, was known worldwide for his photographs of industrial subjects, from studies of concrete cooling towers to blast furnaces. He is survived by his wife and collaborator, Hilla. ■

GENERAL TOOLS (continued from page 9)

America as the SIA's representative to the International Committee for the Conservation of the Industrial Heritage (TICCIH). He has provided many private and governmental agencies with analysis and reports on archeological investigations of industrial sites, and he has made substantial academic contributions to the field. While the General Tools Award is made for types of service other than academic publication, it also does not hold it against you! Pat Martin has given substantial service to the SIA as editor of the journal, executive secretary, and organizer of several meetings and tours.

As a faculty member in Michigan Tech's IA program, Pat

Martin has modeled, guided, encouraged, fostered, and, in some cases, prodded younger individuals to broaden and expand the range and depth of their knowledge and quality of service. It is in this area where this year's General Tools Award recipient has truly excelled. He was instrumental in establishing the IA Master's program at Michigan Tech where he currently serves as the Director of the IA Program. In that capacity, he has been a key figure in the professional development of a new generation of industrial archeologists who will carry the field further, wider, and deeper into still more areas, communities, and countries for many years into the future. ■

IA ON THE WEB

Aluminum (www.histalu.org). The Institute for the History of Aluminum is a French organization founded in 1986 to make collections more accessible. The site lists archival and photographic resources in French and English. Rev.: *TICCIH Bulletin* (Spring 2007).

Atlantic Cable & Submarine Telegraphy Co. (www.atlantic-cable.com). History, along with an extensive collection of memorabilia.

Canadian Museum of Making (www3.museumofmaking.org/dbtw-wpd/machine_aboutus.htm). In 2001, the Calgary museum began acquiring machinery and tools that were built and used from 1750 to 1920 in Canada, Britain, and the U.S. To date, it has about 300 objects on exhibit and in a “virtual on-line” gallery.

Capt. Pearl R. Nye: Life on the Ohio & Erie Canal (<http://memory.loc.gov/ammem/collections/nye/index.html>). Through Nye’s letters and songs, the Library of Congress captures the culture and music of the men, women, and children who worked the canal. Nye, who was born and raised on a canal boat, devoted considerable time to preserving songs and stories after the O&E closed in 1913.

An Engineer’s Guide to Baltimore (www.ce.jhu.edu/baltimorestructures/). Photographs, brief history, and site map to bridges, buildings, and monuments.

European Route of Industrial Heritage (<http://en.erih.net/>). The ERIH network is an initiative to link sites in Europe as tourist destinations. Info on abandoned production plants, industrial landscape parks, and interactive technology museums, many of which will be familiar to participants of SIA study tours. The backbone of the route are so-called “anchor points,” the outstanding industrial monuments in the heartlands of the Industrial Revolution: Great Britain, Belgium, Netherlands, and Germany.

Ford Rouge Plant (<http://www-personal.umd.umich.edu/~jonsmith/rougeplantmed.mov>). Video of Will McDonough’s Technology & Culture Forum lecture, *The Ford Rouge Plant: The History of Sustainability Manufacturing*. Sponsored by the Society for the History of Technology (SHOT).

History News (<http://historycoalition.org>). The National Coalition for History brings real-time access to news as it is made in Washington with briefs and links to Congress, federal agencies, and NCH member organizations.

(continued on page 22)

IA EXHIBITS

New York Rises: Photos by Eugene de Salignac. From 1906 to 1934, de Salignac shot over 20,000 8x10, glass-plate negatives as photographer for the NYC Dept. of Bridges, Plant & Structures. While he focused upon the monumental components of the city, he also lingered on cracks and imperfections, isolated rivets and signs, and played with light and composition. For years the photos have been used in books and films, but rarely ever credited to de Salignac. *New York Rises* is an exhibit and book by the NYC Dept. of Records & Municipal Archives. It is on display at the Museum of the City of NY through Sept. 4 and is available for additional venues through 2011. Info: Annette Rosenblatt; (212) 946-7128; arosenblatt@aperture.org.

American Textile History Museum Renovations Underway. ATHM (*SIAN*, Spring 2007), in Lowell, MA, closed its galleries in July to begin a major renovation of its *Textiles in America* exhibit. The collections department and Osborne Library remain open by appointment. ATHM has reached its goal of raising \$1 million for its endowment. The funds will be matched by an anonymous donor through the

Maine Community Foundation. ATHM is also working on raising \$1.5 million for renovations and \$1.4 million for the general operating fund. Info: www.athm.org.

Showboat 'Round the Bend! is an exhibition at the Waterfront Museum’s historic Lehigh Valley RR Barge in Brooklyn, NY, through December. The exhibit depicts the history and development of the showboat as an indigenous and popular form of American entertainment—both along our nation’s waterways and within NY Harbor. Showboats were the way people in small river towns got their entertainment from vaudeville to drama to moving pictures. Curated by Mary Habstritt [SIA] and Virginia Willets, the show features informative panels, video clips, and a painted scrim. A grand **Showboat Weekend Oct. 20-21** will provide accompaniment to the exhibit of history and artifacts. A panel of experts, both scholars and former showboat operators and family members, as well as vintage showboat entertainment, from vaudeville to calliope performances, will bring history to life over the two-day festival. Public open hours are Thursdays 4-8 pm. Info: www.waterfrontmuseum.org. ■

SITES & STRUCTURES

Saved

The only building that remains of the **Merchant Shipbuilding Corp.** shipyard at Bristol, PA (SIAN, Winter 2001) was listed on the National Register on July 31, 2003. This shipyard was one of only three facilities where pre-fabricated steel freighters were assembled in the U.S. during WWI. The general stores and mold loft is a three-story, concrete building now being used for commercial purposes. The mold loft was a large open floor upon which full-size drawings of structural and mechanical components were prepared, from which wood or steel templates (“molds”) were created. The general stores and mold loft is located in the southern portion of the site. The central portion of the site consists of a large paved parking lot. The northern portion of the site has been redeveloped for residential use. Relic structures remain awash in the Delaware River, including the concrete shipway foundation, and a small portion of the ramp used during the 1920s and 1930s by amphibious passenger aircraft constructed at Keystone Aircraft’s Bristol plant.—*Mike Bernstein*

The **Ellis Island Ferry Building** has been restored and opened to visitors. It was the departure point for immigrants who successfully passed their legal and health inspections. The Art Deco-style Ferry Building was built in 1934 as a Public Works Administration project, replacing an earlier ferry building. Closed for 50 years and in deplorable condition, it has been rehabilitated by the National Park Service and the State of New Jersey in partnership with Save Ellis Island, a non-profit group. Info: www.nps.gov/elis/parknews/index.htm.

After a \$14 million restoration lasting more than three years, the schooner **C. A. Thayer** has returned to the San Francisco Maritime National Historical Park. The restoration took place at Bay Ship & Yacht Yard in Alameda. The 156-ft.-long wooden schooner’s main structural timbers were all original material from 1895. Although massively



HAER CA-61

Schooner C. A. Thayer has recently undergone restoration and has been returned to dock in San Francisco.

built of tight-grained Douglas fir, vessels of her type were designed for a working life of about 20 years. By the mid-1990s, the timbers were soft with dry rot, the hull was sagging down at bow and stern, deforming the keel by 16 inches. The vessel had to be rebuilt from the inside out. After extensive documentation, the individual timbers were cut away piece by piece and replaced with in-kind material using traditional methods. Workers eventually replaced nearly 85% of the ship’s original timbers. Info: www.nps.gov/safr.

The **North Carolina Transportation Museum’s** newest display will be the steam power plant and stern paddle wheel of the **H. G. Wright**, a 102-ft.-long snag boat that was built in 1882 for the U.S. Army Corps of Engineers to remove debris from the Cape Fear River. The *Wright* ceased opera-



Mike Bernstein

The general stores and mold loft building at the former Merchant Shipbuilding shipyard in Bristol, PA.



Ellis Island Ferry Terminal, prior to restoration.

tions in the 1930s and was rotting away in Wilmington when a group of volunteers salvaged the machinery and paddle wheel and restored it to working order on compressed air in the late 1980s. The paddle wheel became an outdoor display at the Cape Fear Museum, but the museum found it was unable to protect it adequately from the elements. The NC Transportation Museum, which is housed in the former Southern Ry.'s shops in Spencer, has ample interior space for the massive paddle wheel.

Threatened

The **Muir & McDonald Tannery** (Dallas, TX), which has been in continual operation since 1863, will close. The tannery is one of only two in the U.S. that continues to use the "vegetable method." Vegetable-method tanning uses the tannins in tree bark to convert hides into leather, as opposed to the "mineral method" which typically uses chromium and is faster acting. In the vegetable process, the hides are stretched on frames and immersed for several weeks in vats

of increasing concentrations of tannin. Vegetable-tanned hide is flexible and is used for luggage and furniture. The family-owned Muir & McDonald Tannery cited rising energy, shipping, and daily expenses as the tipping point in its decision to close.—*Statesman (OR) Journal* (May 21, 2007)

Lost

The 1887 **Globe Elevator** in Superior, WI (tour site—2000 Annual Conference, Duluth), believed to be one of the only pre-1900 wooden grain elevators remaining in the U.S., is in the process of being dismantled. A salvage company has begun auctioning off cast-iron pulleys and other equipment, as well as advertising for sale the more than two million board feet of white pine that comprises the structure. The salvage company's Web site includes numerous photos: <http://wisconsinwoodchuck.net/gallery.htm>.

In May, Phelps Dodge Corp. demolished the twin concrete smokestacks of its former copper smelter in Hurley, NM. The **Hurley stacks** stood 625 ft. and 500 ft. and towered over the desert landscape in New Mexico's southwestern corner. They were the latest casualties of the region's declining copper industry. Over the past decade, Phelps Dodge has demolished smelters in the Arizona towns of Morenci, Ajo, and Douglas, and BHP Billiton has demolished the smelter and twin stacks at San Manuel, AZ.—*Gainesville (GA) Times* (May 13, 2007).

The U.S. Department of Energy has undertaken a massive demolition and clean-up effort at the **Oak Ridge National Laboratory** in Tennessee, where the original uranium for the Manhattan Project was processed. The latest casualty is the 10-acre **K-1401 Building** that was used to condition processing equipment before it was installed in the K-25 uranium-enrichment plant. The two-story building was built in 1944. The DOE has prepared an excellent history of the site and its buildings: www.ornl.gov/info/swords/swords.shtml. ■

MEMBER NEWS

John "J. K." Folmar was the subject of a *Pittsburgh Post-Gazette* feature article (Apr. 8, 2007) on the history of the Monongahela River. J.K. is a retired history professor *emeritus* from California Univ. of Pennsylvania, who has spent years researching the river's history. His recently published book, *Gleanings from Pittsburgh and W. Pa.: Newspapers &c., Views, 1786-1886* (Avail: www.trbooksellers.com), uses old newspaper accounts to show how local writers viewed the river.

Richard O'Connor has been selected as Chief of the National Park Service's Heritage Documentation Programs Division, which includes the Historic American Engineering Record, the Historic American Buildings Survey, the Historic American Landscape Survey, and the Cultural Resources Geographic Information Systems facility. O'Connor served as Acting Chief of the division before being officially appointed to the new position in early 2007. He started with HAER in 1990 as a field team leader and historian on a project docu-

menting the historic glass industry of Jeannette, PA. He then worked as a program manager for a range of assignments including the Birmingham, AL project, which focused on coal, coke, iron, and steel industries. ■

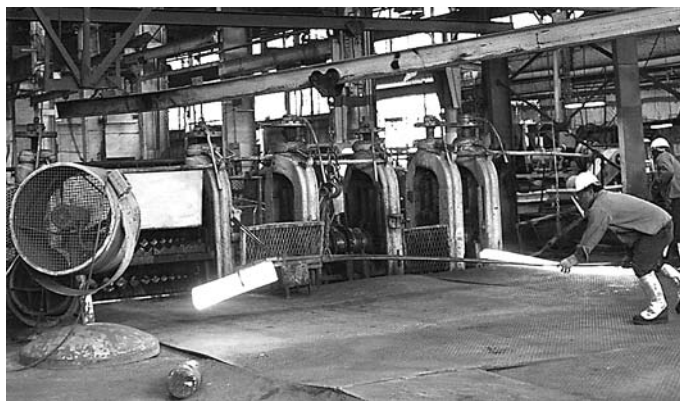
Calling All Members in the Chicago Area!

The SIA Board accepted a petition to form the **Chicago Industrial Chapter** at its meeting in Philadelphia on June 8, 2007. It will draw members from the entire Chicago-land area, and will be offering local IA tours and events. For more info or to join (\$10/yr.): Adrian Stanislovaitis, Box 392, Bedford Park, IL 60499-0392; (773) 586-5422; calumetcar@aol.com.

CHAPTER NEWS

Northern New England held its spring meeting and tour in Lincoln and N. Woodstock, NH, on June 2. Members visited the ruins of the Parker-Young pulp mill with its early 20th-c. turbines, then proceeded to the Hobo RR for a tour of the 1934 *Flying Yankee*, a rare three-car articulated train undergoing restoration. Next it was to Clark's Trading Post to see a private collection of steam locomotives, a Lombard log hauler, a steam shovel, and a 1904 Howe-truss covered bridge. This was followed by a ride on the Hobo RR excursion and a walk-about of various industrial ruins in the White Mountain National Forest.

Northern Ohio. On August 10, 38 members toured the Central Facility of Cleveland Track Material, Inc. Using an array of older and historic machinery, CTM produces a complete line of railroad track work, including joint bars, compromise joints, bridge joints, paneled turnouts, crossing diamonds, frogs, switch points, rocker clips, slip switches, lap turnouts, and hook flange guard rail. The highlight of the tour was an 1898 rolling mill purchased in 1987 from the Tredegar Iron Works in Richmond, Virginia, believed to be the oldest—if not the only—hand-operated rolling mill still in service in the U.S. What's more, the mill is still profitable, according to CTM President Bill Willoughby Sr., who led the tour and, afterward, discussed the company's operations and answered questions. Joining in the discussion were several workers who relocated, with the mill, from Richmond to Cleveland in order to continue their work as rollers. Located on Cleveland's East Side, CTM's Central plant occupies a building historic in its own right: the 1901 plant of the former Wellman-Seaver-Morgan Co., a pioneer manufacturer of steel plant equipment founded by Cleveland steelmaster Samuel T. Wellman in 1896. Here Wellman-Seaver-Morgan manufactured some of the largest materials-handling facilities ever built, including all of the Hulett iron-ore unloaders that once dotted the ore ports on the lower Great Lakes.—*Carol Poh*



The Northern Ohio Chapter recently toured Cleveland Track Material, Inc. where members were treated to a demonstration of the 1898 rolling mill.

Roebling (Greater NY-NJ). The summer has included a full slate of chapter events. In June, the chapter screened two films—*Brooklyn Matters* and *Made in Brooklyn*—critical of the planning and review processes that have allowed many industrial landmarks to be demolished. In July, members toured the McDonalds-Kline Mill in Bedminster, NJ, a rare up-and-down saw mill, which has its original drive system. In August, the chapter offered a walking tour of Brooklyn's Williamsburg and Greenpoint neighborhoods, followed in September by the annual corn roast.

Samuel Knight (N. California) members have been at work planning for the 2008 SIA Annual Conference in San Jose, scouting out sites, and making arrangements for tours, food, &c. Regular updates are at <http://knightsia.org/sia2008>. In addition, the chapter found time for a presentation on the 1927 Carquinez Straits Bridge by Andy Hope from Caltrans.

Support Your Local Chapter. For info on a chapter near you or to start one, contact Jay McCauley, SIA Director, Local Chapter Chair (mccauley3@sbcglobal.net) or check out the local chapters section of the SIA Web site (www.sia-web.org) ■

IA ON THE WEB (continued from page 19)

Lenticular-Truss Bridges (www.ecs.umass.edu/cee/cee_web/bridge/1.html). Alan Lutenege [SIA] keeps a running account of extant bridges built by the Berlin (CT) Iron Bridge Co.

Penny Postcards (www.rootsweb.com/~usgenweb/special/ppcs/ppcs.html). IA views (bridges, buildings, factories, city scenes, etc.) mixed in with generic views from around the U.S. Indexed by state and county.

The Real Steel (www.dakotaridgegallery.com). Photographs of Bethlehem Steel operations by Peter Treiber.

S. S. Columbia (www.sscolumbia.org). History of the 1902 steamer and efforts to restore her to full working order as a floating museum on the Hudson River.

Vermont Historic Bridge Program (www.aot.state.vt.us/progdev/Sections/LTF/VermontHistoricBridgeProgram/HBP00VermontHistoricBridgeProgram.htm). Considered to be one of the most comprehensive and forward looking historic bridge management programs in the U.S.

"IA on the Web" is compiled from sites brought to the editor's attention by members, who are encouraged to submit their IA Web finds: phsianews@aol.com. ■

NOTES & QUERIES

Big-10 Universities Microfilm RR Collections. Four libraries (Illinois at Urbana-Champaign, Iowa, Northwestern, and Wisconsin-Madison) have just completed reformatting a large collection of endangered paper copies of railroad journals and books dating from 1832 to 1975 to archival-quality microfilm. The 46 journal titles (1,319 volumes) and 217 books will be available for interlibrary lending and purchase. Many of the original paper copies had become too fragile for circulation. Info: www.library.northwestern.edu/transportation/cic8/cic8.html.

James J. Hill Library Closes Archive. After more than 30 years of operation, the James J. Hill Reference Library in St. Paul, MN, closed its archive on June 6. The archive was the location of the personal papers of James J. Hill (1838-1916), the railroad magnate and founder of the Great Northern Ry., and his son Louis W. Hill. It is considered one of the most complete archives of any business leader of the Gilded Age, and included sale receipts, correspondence, telegrams, political writings, and diaries. As of this writing, the disposition of the archive, which measures 470 linear ft., is undisclosed, but it is hoped to be transferred to another institution. The James J. Hill Library will remain open but focused on its mission of "providing practical information to the global business community."—*Library Technology Reports* (June 8, 2007)

For Sale: Early American Industries Assn. Library Books. For many years the EAIA Library was housed at the Mercer Museum in Doylestown, PA. The collection of books and periodicals, manuals, and encyclopedias from the 18th through the 20th centuries covers the mechanical and decorative arts, early tools and trades, manufacturers' catalogs, traditional craft industries, science, engineering, mate-

rial culture, and related subjects. The time came when the Mercer Museum could no longer provide a home for the library, due to its own increasing collections and the fact that there was considerable duplication between its own books and those of the EAIA. A couple of years ago the two institutions came to an agreement whereby EAIA would transfer ownership of select books to the Mercer Museum in return for which EAIA members would receive free use of the library and admission to the museum. The rest of the books were removed and are now for sale. For an Excel file of the titles available: eaia@comcast.net.

In a meeting of IA and art, the **West Linn Paper Co.** and the City of West Linn (OR) are working on a collaborative project to produce a heritage monument from old **pulp stones** salvaged from the mill. The six stones range in age from the 1950s to the 1980s, and are cylindrical with diameters of about 6 ft. and widths of about 4 ft. to 6 ft. In operation, as the stones rotated the logs were pressed against them to be ground into pulp. The city's arts commission is interested in information about similar public art projects using salvaged machines or machinery components. Info: Sandy Carter, willamettefalls@msn.com.

Iron Roof Trusses. The Brookline (MA) Preservation Commission is interested in knowing of any examples of the following pre-dating 1848 in the U.S.: a) fully wrought-iron roof trusses (other than those reported in the 1837 Philadelphia Gas Works retort house); b) wrought-iron roof decks (especially flat and continuously riveted but also corrugated); c) cast-iron stair cases (other than in lighthouses or PA & NJ penitentiaries); d) any of the above associated with the engineer John B. Jervis. Dennis J. De Witt, djdwitt@rcn.com. ■

CONFERENCES & WORKSHOPS

The **National Canal Museum** presents its series of fall lectures, which are free and open to the public, on the third Thursday of the month at 7:30 pm in the auditorium at 30 Centre Sq., Easton, PA. On Sept. 20, Jane Mork Gibson [SIA] will give an illustrated lecture on *Early Water Powered Mills Along the Wissahickon Creek*. On Oct. 18, Lance Metz [SIA] will show films from the museum's Bethlehem Steel Collection. On Nov. 15, industrial photographer Henry Schmidt will present an illustrated lecture on transportation and industrial sites of the mid-Atlantic. Info: (610) 559-6613.

Call for Papers. The Vernacular Architecture Forum (VAF) invites paper proposals for its annual meeting in Fresno, CA, May 7-10, 2008. The conference theme is *In the Garden of the Sun: California's San Joaquin Valley*. Papers may address any aspect of the cultural landscape

worldwide, but topics related to the theme are especially welcome, including those that deal with the valley's railroads and irrigation canals. Deadline: Oct. 1, 2007. Info: <http://vernaculararchitectureforum.org>.

Call for Papers. The Hagley Museum and Library (Wilmington, DE) will hold a symposium on the theme of *Commonplace Yet Extraordinary: Design Histories of Everyday Objects* on May 16, 2008. Papers are requested that look at the design history of appliances, tools, equipment, and miscellaneous things commonly used in houses, offices, factories, and public spaces. Papers should analyze the interactions between designers, producers, and users. Perspectives from history, art history, sociology, and material culture studies are welcome. Presenters' travel expenses will be covered. Deadline: Dec. 1. Info: Carol Lockman, clockman@hagley.org. ■

CALENDAR

2007

Oct. 3-7: Assn. of Railway Museums Annual Conference, Pennsylvania Trolley Museum, Washington, PA. Info: www.pa-trolley.org.

Oct. 10-13: Pioneer America Society: Assn. for the Preservation of Artifacts & Landscapes, Annual Meeting, Hagerstown, MD. Tours of the C&O Canal and B&O Martinsburg Roundhouse. Info: Paula S. Reed, paula@paulasreed.com; (301) 739-2070.

Oct. 11-13: International Preservation Trades Workshop, Frederick, MD. Co-sponsored by the NPS, Historic Preservation Training Center. Info: www.iptw.org.

Oct. 17-21: Society for the History of Technology (SHOT) Annual Meeting, Washington, DC. Info: www.shot.jhu.edu.

Oct. 18-20: Labor and Freedom in Global Perspective: 29th Annual North American Labor History Conference, Wayne State Univ., Detroit, MI. Info: Janine Lanza; (313) 577-2525; jmlanza@wayne.edu.

Oct. 27: 27th ANNUAL DREW SYMPOSIUM ON INDUSTRIAL ARCHEOLOGY, MADISON, NJ. Sponsored by the Roebing Chapter, SIA. Info: tflagg@sunopt.edu or Allison.Rachleff@earthlink.net.

Nov. 29-30: Sound in the Era of Mechanical Reproduction Conference, Hagley Museum & Library, Wilmington, DE. Info: Carol Lockman, HML, Box 3630, Wilmington, DE 19807; (302) 658-2400, x243; clockman@hagley.org.

2008

Apr. 10-12: Business History Conference, Sacramento, CA. Info: www.h-net.org/~business/bhcweb.

May 7-10: Vernacular Architecture Forum Annual Meeting, Fresno, CA. See article in this issue. Paper proposals requested. Info: vernaculararchitectureforum.org.

May 16-19: Railroad Station Historical Society Annual Meeting, Charleston, SC. Tours, auction, banquet. Info: Ted Xakellis, 3216½ 13th St., Washington, DC 20010.

May 18: Design Histories of Everyday Objects Symposium, Hagley Museum & Library, Wilmington, DE. See article in this issue. Paper proposals requested. Info: Carol Lockman, clockman@hagley.org.

May 29-June 1: SIA 37th ANNUAL CONFERENCE, SAN JOSE, CA. Sponsored by the Samuel Knight Chapter, SIA. Info: <http://knightsia.org/sia2008>.

Oct. 9-12: Society for the History of Technology (SHOT) Annual Meeting, Lisbon, Portugal. Info: www.shot.jhu.edu.

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