



# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

Volume 35

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### DOCUMENTING FORD'S MODEL T DESIGN ROOM

*Richard K. Anderson, Jr. [SIA] reports on the completion of an IA project to document the room where Henry Ford designed the Model T in Detroit's Piquette Avenue Plant, now being developed as a museum (The T-PLEX; SIAN, Summer 2005 & Winter 2006). Participants in the 2005 SIA Fall Tour attended a reception in the plant and had the opportunity to discuss the documentation project with Richard.*

**H**enry Ford's 1904 Piquette Plant was the initial site of his meteoric success producing durable, affordable automobiles. From Jan. 1907 to Sept. 1908, he and some trusted insiders worked out the design of the Model T, using a Model N as a test car. They later rolled the first 12,000 Model Ts out the Piquette's doors before production moved to Ford's new Highland Park plant. Ultimately, 15 million were built, and arguably their numbers were a primary impetus for the auto-centric architecture, urban planning, and transportation systems we love and curse today. In Jan. 2006 the Piquette Plant was declared a National Historic Landmark in view of its key role in U.S. automotive history.

In May 2005, I began research and field work at the Piquette Plant and in the archives at The Henry Ford's Benson Ford Research Center in nearby Dearborn. There were several goals for the project, a primary one being to establish the outline and contents of the Model T design room.

Prior to my arrival in Detroit, I read the reminiscences of about a dozen principal Ford employees involved with the Model T. These men were interviewed in the 1950s as part of a company oral history project. The reminiscences contained many things of interest, but none described the room clearly. Some accounts of the room's contents and space conflicted. Ford's orders to Joseph Galamb, his chief designer and draftsman, to "fix a place for yourself on the third floor way back, a special room" might have meant more than one room, and perhaps they resulted in the adaptation of a pre-existing suite. No photographs of the "special room" are known to survive, and given the Model T project's secrecy, none may ever have been taken. Two of the interviewees, H.L. "Pat" Maher (a machinist) and Charles Sorensen (head patternmaker), sketched the

*(continued on page 2)*



Richard K. Anderson, Jr.

*The 3rd floor of the Piquette Plant where Henry Ford and his team designed the Model T. The open-stud walls are a temporary exhibit showing an older conception of the room's size and location. Recent research and documentation of the space by Richard Anderson, Jr. [SIA] has led to the conclusion that the "experimental room" was actually much larger. The Model T on exhibit was built at the Piquette Plant.*

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- Call for Nominations
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- Noble & Cooley

Richard K. Anderson, Jr.



*The Piquette Avenue Plant as seen today from the southeast.*

room's outline on a scale floor plan. Both drew a general square shape in the far northeast corner of the Piquette Plant's third floor, but their sketches differed in area by 400%. The three-story Piquette Plant measures 56 x 402 ft. and is served by two elevator-stair towers, one in the extreme northwest corner, adjacent to the design room, and the other near the southwest corner of the building.

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](mailto:SIA@mtu.edu); Website: [www.sia-web.org](http://www.sia-web.org).

Mailing date for Vol. 35, 4 (Fall 2006), Dec. 2006. ISSN 0160-1067. If you have not received an issue, apply to SIA-HQ (address above) for a replacement copy.

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.

TO CONTACT THE EDITOR: Patrick Harshbarger, Editor, SIA Newsletter, 305 Rodman Road, Wilmington, DE 19809; (302) 764-7464; e-mail: [phsianews@aol.com](mailto:phsianews@aol.com).

Secondary publications offered some insights, but as with surviving company financial records, board minutes, photographs, insurance maps, and *The Ford Times*, they offered general detail only, no specific information on the design room layout or an inventory of its contents.

Apparently no one had examined the Piquette Plant itself. Consequently, my task was to gather and record primary, physical evidence to develop an understanding of the design room. Fortunately, the third floor in this area has undergone extremely little alteration; although equipment and interior walls had been removed, the space apparently hadn't even been painted since Ford sold the building to the Studebaker Corporation in 1911!

As might be expected, numerous layers of clues survive in the ceiling, walls, columns, and flooring. At some point early in the room's history just the northernmost and entire eastern bays of the third-floor ceiling had been plastered, but the lack of a finish coat suggested the job had been cut short. Rabbits had been cut into the overhead beams for the stringers carrying lineshafting, drop hangers, and three sets of countershaft hangers in the northeast corner bays, yet no shafting hardware remains. The maple strip flooring is riddled with small holes, evidently from various tools that had been bolted down. Oil stains from tools and line-shaft bearings abound, and mixed in are clouds of steel tacks, driven perhaps for foot traction where tool operators stood. Anchor-bolt holes in walls, and scant remains of furring, tongue-and-groove wall sheathing, and fastening nails reside in strategic places. Pairs of holes parade along columns, girders, beams, and ceiling deck, resulting from porcelain cleats used to route knob-and-tube wiring for the DC electrical system.

Sheets of field notes were used to record these features, with detailed measurements supplemented by about 400 photographs and some full-size rubbings of floor details. I

(continued on page 7)



Richard K. Anderson, Jr. © T-Plex

*Proposed plan of Model T drafting room and shop.*

*Society for Industrial Archeology*  
**36th Annual Conference**  
**Philadelphia, PA • June 7-10, 2007**

The Oliver Evans Chapter will welcome the national SIA for its 36th Annual Conference from Thursday, June 7 to Sunday, June 10. The hotel is the Crown Plaza at 18th and Market streets in the heart of the city. In addition to a full slate of industrial process and historic sites tours, tentative plans include a boat trip on the Delaware River to view the waterfront and the SS *United States*, a post-war ocean liner that holds the trans-Atlantic speed record but is now tied up and going to seed. In addition, the conference will mark the introduction of a new venture, the Philadelphia Area Consortium for the History of Science (PACHS) formed to encourage use of the city's research libraries and archives. PACHS is a co-sponsor of the SIA conference and two of its member organizations, the American Philosophical Society and the University of Pennsylvania, will play hosts to the opening reception.

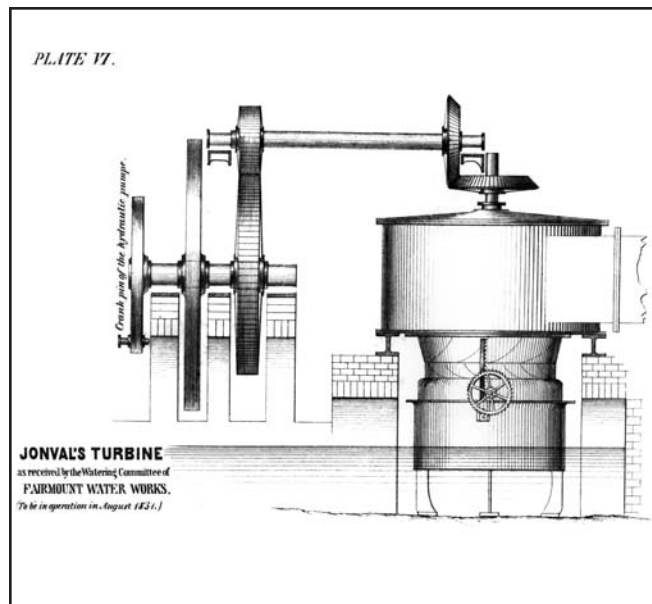
### CALL FOR PAPERS

The SIA invites proposals for papers and poster sessions to be presented at the Annual Conference on Saturday, June 9. Poster sessions can be works in progress. Presentations on all topics related to industrial archeology and bridges are welcome. Papers about industries in the Philadelphia/Camden region are encouraged. All papers and poster sessions should offer interpretation and synthesis of data.

*Presentation Formats:* Proposals may be for individual papers, themed papers filling a 90-min. session, or organized 90-min. panel discussions (formal commentator optional).

*Proposal Formats:* Each proposal must include: 1) title; 2) a 500-wd. abstract with a detailed discussion of points, findings, or conclusions to be presented in hard copy and electronic format (Word or WordPerfect); 3) résumé for the presenter(s), including postal address, telephone/fax, and e-mail; 4) a list of equipment needs. A panel organizer should submit all paper proposals as a group, accompanied by a title and a brief description of the theme or purpose. If any of these items are missing, the proposal will not be considered.

Presenters are encouraged to consider transforming papers into an article for *IA: The Journal of the Society for Industrial Archeology*. No conference proceedings are published.



*The 1851 Jonval Turbine is still in situ at Fairmount Water Works Interpretive Center in Philadelphia.*

**Deadline for paper proposals is Feb. 15, 2007.** Send copies of all proposals to: Fred Quivik, Program Chair, SIA 2007 Paper Sessions, 715 Vernon Rd., Philadelphia, PA 19119; (215) 849-1478 (phone and fax); [Quivik@usfamily.net](mailto:Quivik@usfamily.net).

### STUDENT TRAVEL SCHOLARSHIPS

The SIA awards travel scholarships to help full-time students and professionals with less than three years of full-time experience to attend annual conferences. Those interested in applying for a travel scholarship to attend the annual conference in Philadelphia should submit a concise letter outlining their demonstrated interest in and commitment to industrial archeology or a related field, and one letter of reference. **Deadline for applications is Apr. 1, 2007.** Info: Patrick Harshbarger, SIA Scholarships, 305 Rodman Rd., Wilmington, DE; (302) 764-7464; [phsianews@aol.com](mailto:phsianews@aol.com). Notice of awards will be made by May 1. ■



# Fort Screven, Georgia

## Coast Artillery Fort Becomes Coastal Resort

Neill Herring [SIA] reports on the history of Fort Screven (tour site—1999 Annual Conference, Savannah), prompted by an interest in the Tybee Island resort community's adaptive reuse of the reinforced-concrete batteries and buildings.

Among the early casualties of the American Civil War were masonry fortifications, the primary defense against foreign attack until then. Fort Pulaski, a brick fort at the mouth of the Savannah River, was reduced in a two-day siege by Parrot guns, new rifled cannon emplaced on neighboring Tybee Island; years of coastal-defense design ended with its surrender. For the remainder of the war, masonry forts were supplemented or supplanted by earthworks, which could better resist the new heavy ordnance. After the war, coastal defense took a back seat to other military concerns until the end of the 19th century, when a technology-driven arms race reawakened interest in coastal artillery installations as defense against heavily armed and armored steamships.

Fort Screven was built in stages, commencing in 1897, to protect the Port of Savannah. The fort was one of 29 projected in 1886 by a board under President Cleveland's Secretary of War, William C. Endicott. Forts built during this time are generally referred to as "Endicott" period forts. Later modifications of these, and additional forts added during the Theodore Roosevelt administration, are attributed to the "Taft" period, after Secretary of War William Howard Taft. Endicott- and Taft-period forts are distinguished by massive, reinforced-concrete construction on stone foundations, often supplemented by earthworks.

The Coast Artillery was made an independent command in the Army, separated from the Field Artillery, in 1901, because of the fundamental differences in the ordnance employed by the two branches. The new duties involved serving ever more massive, permanently emplaced weapons

deployed against heavily armored, relatively rapidly moving warships. Attached to the artillery functions were the operation of electric minefields in shipping lanes, and smaller caliber weapons for the defense of these mining operations.

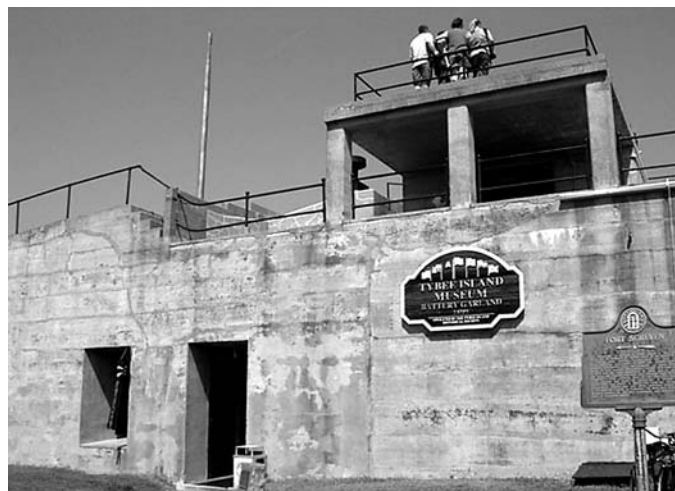
Fort Screven initially was equipped with four 8-in. rifled guns in Battery Brumby, completed in 1898. This battery was in service during the Spanish American War, which had sped fort construction. These guns were mounted on disappearing carriages, which used gas from firing to lower the weapons for safer reloading, behind massive concrete parapets. They had an effective range of 10 miles, and were designed to hammer the sides of warships' hulls, and their reinforced-concrete (on granite foundation) construction contemplated duels with similarly powerful seaborne weapons.

Over the next 10 years, Fort Screven grew with the addition of new batteries. Battery Backus was initially equipped with a 6-in. rapid-fire gun in 1898, supplemented by two 4.7-in. guns in 1900. Battery Gantt was equipped with two 3-in. rapid-fire guns in 1903. Both of these were designed to guard the minefield at the mouth of the Savannah River.

Batteries Garland and Fenwick had one and two 12-in. rifled guns, respectively, and came into service in 1899, after the conclusion of the war with Spain. These guns were designed to pierce the armor on ships' hulls, expressive of the continuing competition between armor manufacturers and gun builders. This competition reached its peak at Fort Screven with the installation of eight 12-in. rifled mortars in Battery Habersham in 1900. These mortars were designed to fire 700-lb. projectiles in high arcs to drop through warship decks, which were less heavily armored than their hulls. These guns were fired in rapid sequence so that shotgun-type patterns of dropping projectiles would tend to thwart evasive maneuvers. Larger guns eventually evolved, but none of those were ever deployed at Fort Screven.



Modern beachfront housing uses a rapid-firing gun battery for a secure foundation.



Battery Garland now houses the Tybee Island Museum of local history.

Coast Artillery installations were politically desirable for several reasons: they assured port communities of federal attention to their defensive needs, and they met those expectations without requiring permanent assignment of high-seas naval vessels in such inefficient deployment. The Coast Artillery developed ranging techniques for aiming their batteries at moving targets, and also the quick mathematics needed to support directing fire from the triangulated position information. By the time of WWI, the threat of aircraft attack on ports and shipping was realized, and the Coast Artillery became the seat of development for anti-aircraft defenses.

Much of Fort Screven, apart from its guns (which are long gone to foundries for recasting) remains intact and accessible to public viewing. The reinforced-concrete batteries are still standing. Interestingly, some batteries now serve as the foundations for residential construction of varying quality, and some have been subject to municipal reuse, one housing a museum and another a Shriner's lodge. The Tybee Island Museum has among its exhibits a beautiful working model of one of the 8-in. guns with its "disappearing carriage" that retracted below its parapet.

A vital component to the fort's construction was the Tybee branch of the Central of GA Ry., which was removed in the early 1930s, but the Fort Screven depot remains, converted for use as a dwelling but still recognizable. Wooden barracks are gone, but the mansions of Officers' Row remain and are now highly desirable as residences. The Fort added a theater in 1930, for the entertainment of its complement, and that structure was recently the subject of local newspaper coverage citing plans for restoration to its "as built" appearance.

Fort Screven is small compared to many contemporary forts on both coasts, and is relatively more integrated into its residential setting than others. The high cost of removal has left most of these facilities largely intact, so they are available for examination, often by families on trips to the many nearby beaches.



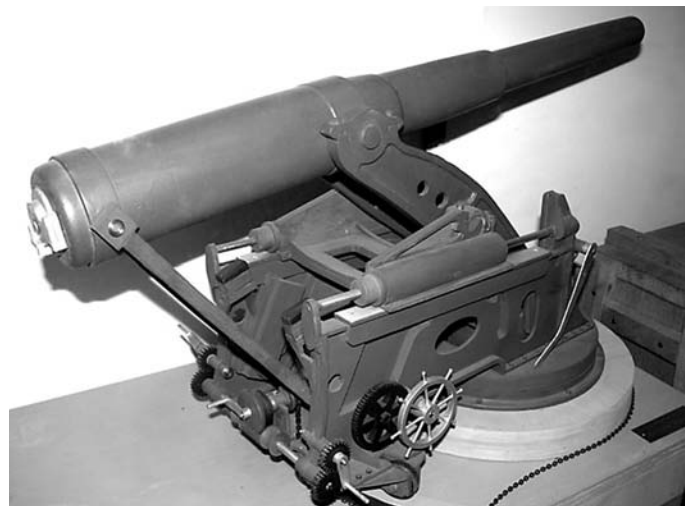
*Emplacement for 12-in. gun paved over for use as an observation platform.*

For information on Coast Artillery forts, and Fort Screven in particular: a general survey is available in *Seacoast Fortifications of the United States*, by Emanuel Raymond Lewis, Naval Institute Pr., 1979. In 1988, the Tybee Historical Society published a tour guide pamphlet entitled *Fort Screven (1897-1945)*, written by Hans Neuhauser. James Mack Adams wrote *A History of Fort Screven, Georgia* in 1996 for JMA Publications of Tybee Island. Those interested in "disappearing" guns can find material in an article on the subject in Lindsay Publications reprint series entitled *American Machinist Memories*, in *Ordnance 1900-01*.

*Neill Herring*



*A battery that was built for 12-in. mortars now supports vegetation and the frame for an abandoned house, with Tybee Island Lighthouse in the background.*



*Scale model of disappearing 8-in. gun at the Tybee Island Museum.*



# Eldean Covered Bridge Rehabilitation

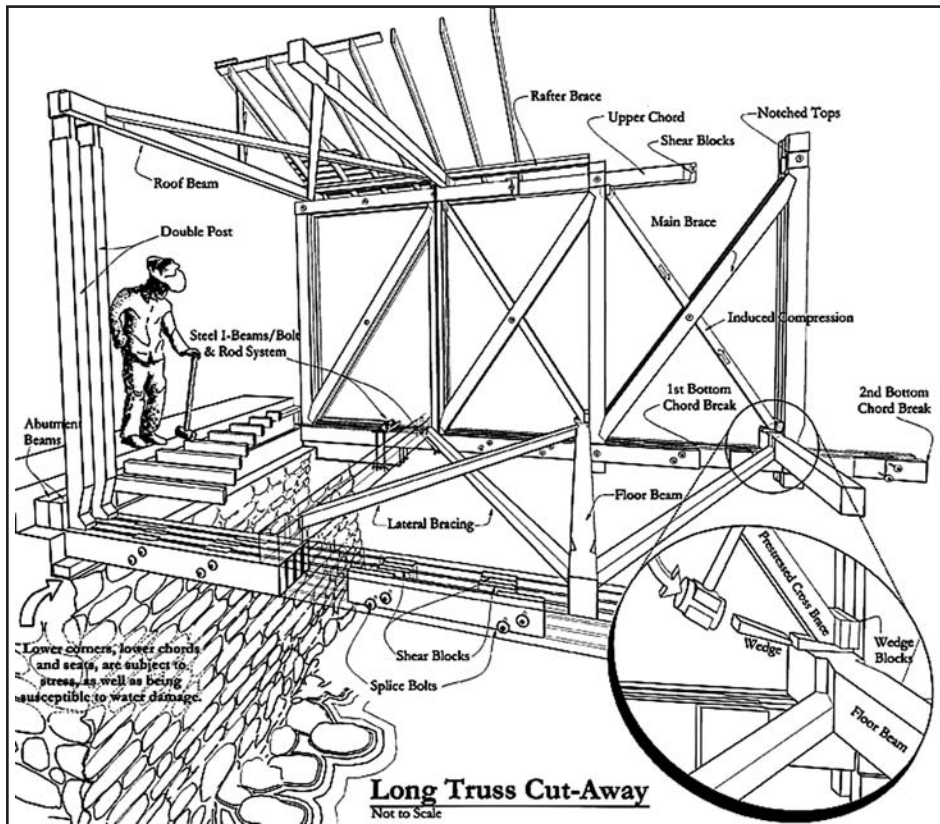
The term “prestressed” has a very modern ring to it and it is used in many new bridges, but the concept is actually quite old, dating back to the early years of the 19th century and the very beginnings of scientific truss design in America. Stephen Harriman Long, the military-trained engineer who began working for the B&O RR in 1829, is given credit for helping move American bridge design away from purely empirical designs, where truss members were sized according to tradition, into a mathematically based technology. He developed his own bridge truss for his railroad work and patented it in 1830. Besides its distinctive configuration of verticals in tension and diagonals in compression, it featured a series of diagonal counterbraces with wooden wedges. A few well-directed taps on these wedges with a sledge, driving them, as Long said, “as hard as they can be driven,” would stiffen and, he claimed, actually “prestress” the truss. This wedge feature was originally common to all true Long trusses, and Long hired a group of agents to represent him and promote the use of his design all across the eastern U.S. Gradually Long’s wedge system fell out of favor as bridge builders began using true fixed connections that did not require periodic adjustment to be tight. While the wedges added strength to the bridge, they also required regular maintenance.

The Eldean Bridge was erected by the Hamilton Brothers

for the Miami County Commissioners halfway between Piqua and Troy, OH, in 1860. The commissioners specified that a Long truss should be built when advertising for contractors. Four years earlier they had required bidders to submit plans for “Howe’s improved plan” and found subsequently that they owed a sizable fee to the Cleveland firm that had purchased patent rights to the invention. A Long truss specification avoided this expense.

The Eldean Bridge is one of only a handful of Long trusses in the country that still retains its original wedge design. Because S. H. Long played such a key role in the nation’s bridge history, the National Park Service’s Historic American Engineering Record (HAER) agreed to fund a special engineering study of the bridge. Professor Dario Gasparini of Case Western Reserve Univ. supervised an exchange student from Italy, Francesca da Porto, to analyze how Long’s original design actually worked. Sensitive instruments were attached to the bridge to calculate the actual stresses in the wooden members as a vehicle was driven across it. This was done both with the wedges tightened and with them loose. The study revealed that Long’s claims of prestressing were valid and that the wedges made it possible to support larger loads on the bridge. The team also discovered that because wood responds to atmospheric conditions, basically changing dimensions in response to temperature and moisture variations, it was necessary to regularly keep retightening the wedges. This type of study would not have been possible on any other bridge in the nation.

Any bridge that is nearly 150 years old has required numerous repairs over the years. The western span of the 222-ft. bridge crosses the main channel of the Great Miami River. High water, especially the famous 1913 flood, brought fast moving debris downstream. As a consequence, almost all the bottom ends of the verticals had been broken off and had been replaced by threaded steel rods and plates. Fortunately the eastern span had not suffered the same kind of impacts and was still largely intact, making the engineering study of the wedges’ effectiveness possible. But the bottom ends of the trusses that rested on the abutments and pier had deteriorated and been replaced by auxiliary steel rods and plates. When Jim Barker of Bloomington, IN, was hired by Miami County to evaluate the bridge and prepare the drawings and specifications for a repair project, these were two of the primary things



In 2002 William Dickinson prepared a cut-away drawing of the Long truss explaining the positioning of the wedges for the HAER documentation.

he hoped to correct. Making all the trusses function as originally designed was a primary goal, although it depended on the availability of funding. Fortunately County Engineer Doug Christian was able to secure adequate federal and local funds to complete a total restoration.

The Righter Co. of Columbus, OH, received the contract for the restoration. As is true with any exemplary restoration project, the specifications prepared by Barker called for the preservation of as much historic wood as possible. Instead of replacing entire timbers whose ends were decayed or had been broken off, new Douglas fir ends were fashioned and attached to the original white pine members with epoxy and bolts. Small areas of rot were also cut out and replaced with new fir patches and held in place with epoxy. These procedures made it possible to maintain the majority of the 1860 timbers. Professor Gasparini was called in again to prepare the final adjustments in the trusses and to instruct county workers in the proper maintenance of the bridge in the future. Thanks to their efforts, Eldean Bridge is now ready to begin another century and a half of service. The newly rehabilitated bridge was rededicated at an onsite ceremony on Oct. 6.

David A. Simmons



Linda Gasparini

Ohio bridge preservationists gathered at the rededication of the Eldean Bridge. David Simmons [SIA] (second from left) holds one of the plaques composed of recycled historic material prepared by county forces as a remembrance of the event. To his left are Dario Gasparini, Jim Barker [SIA], Ohio covered bridge authority Miriam Wood [SIA], Miami County Engineer Doug Christian, and Neil Harnar from Case Western Reserve Univ. Assistant Miami County Engineer Dan Baker is at the far left.

## FORD'S MODEL T (continued from page 2)

combined all of the field information into a CAD system to begin looking for coordinated features which might show the locations of walls, partitions, doors, tools, and lighting. Compared with documentary sources, the results permitted some reconstruction with varying degrees of confidence.

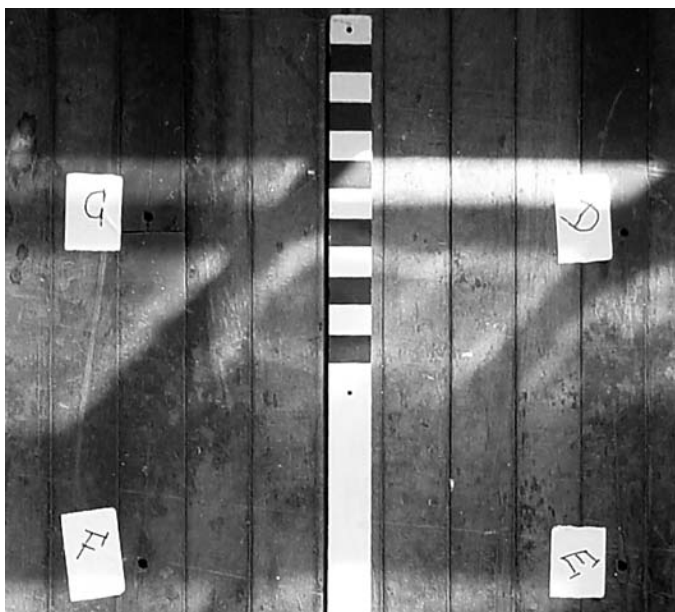
The clues in the plaster as well as nail holes, paint ridges, furring, and nails provided good evidence for the outline of the walls of an L-shaped room in the building's northeast corner that had been later in-filled to create a trapezoidal-shaped

room. The plaster remains probably date from the building's initial construction, since similar jobs had been started and halted in other parts of the third floor. The plaster contractor of record was hired to plaster "offices," but it is possible his crews worked in other areas of the third floor until budget overruns loomed in Oct. 1904. The evidence suggested that the L-shaped walls must have predated the plasterwork, and the plasterwork most likely went up during building construction. I found no record, and I could think of no reason, for Ford to have begun and halted plasterwork under the roof at a later date, given the frenetic car-building activities and financial priorities that shortly ensued.

By the time I considered the space required by Galamb and his team of draftsmen (based on company photos of another Piquette drafting room), the dimensions of a Model N test car and Model T prototype, plus the locations of tools that appear to be indicated by groups of floor holes, this in-filling may have been the result of Ford's order to set up a "special room" for the "new model." The trapezoidal shape also closely matched Sorensen's sketch plan in general square footage and placement, though he neglected the diagonal wall and firestair access. Based on employee remarks and building evidence, the trapezoidal space was very likely subdivided into a drafting room and shop, or "experimental room" as the company called its toolrooms. One of Galamb's draftsmen, Bredo Berghoff, recalled that drawings were passed between the Model T drafting room and shop via a "high" window.

Tool-mounting holes in the floor date from both Ford and Studebaker occupancy. Insurance maps were unavailable for the Ford years, but those for the Studebaker era show that the northern end of the third floor was adapted for a pattern shop. Excluding all hole quadrangles except those inside

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Richard K. Anderson, Jr.

Mounting holes for a machine tool in the floor of the Model T experimental room. These holes may have secured a small bandsaw or drill press. The letters identify the holes in a table of measurement coordinates used to record their location.

# CALL FOR NOMINATIONS OF SIA DIRECTORS & COMMITTEE MEMBERS

## Keep Your Society Moving Forward

The annual Call for Nominations is your opportunity to help maintain the quality, strength, and diversity of leadership that has kept SIA growing for more than three decades. SIA counts on its members to organize activities that bring us together and produce publications that spread our message to others. The Society's role is always expanding, by introducing new programs such as the Industrial Heritage Preservation Grants, by creating ties to similar organizations throughout the world, and by reaching out to increase our membership. We expect our leadership to consider and reflect members' interests and goals in continuing to plan the future of SIA.

In 2007, two openings will occur on the Board of Directors and one on the Nominations Committee. We need candidates willing to give back to the SIA by volunteering their time, knowledge, and experience. The Nominations Committee is depending on you to identify members—friends, colleagues, or perhaps even yourself—who are qualified and willing to serve. (If modesty precludes you from self-nomination, please find someone to nominate you.)

Each candidate must be an SIA member in good standing and must consent to being considered for nomination. Candidates for Director must adhere to and sign the Society's Conflict of Interest Policy prior to the election. The Society has established a policy concerning reimbursement for travel costs associated with Board meetings; it is available from any member of the Nominations Committee.

**The deadline for nominations is Jan. 19, 2007.** If you have any questions or need additional information, please don't hesitate to call or write: Jet Lowe, Chair, Nominations Committee, 221 Stony Run Lane, J-3, Baltimore, MD 21210; (w) 202-354-2138; (h) 410-662-4888; [Jet\\_Lowe@nps.gov](mailto:Jet_Lowe@nps.gov).

## Positions Open in 2007

**Directors** (3-year term), two of seven directors on the Board of Directors, which meets three to four times per year, including during the annual conference. Directors govern official business of the SIA and chair committees that oversee operations, such as publications, tours and conferences, and local chapters.

**Nominations Committee Member** (3-year term), one of three elected members who oversee the annual nominations and elections. The newly elected member will chair the committee during the final year of the term.

All nominations will be reviewed by the Nominations Committee, which will present a slate of candidates to the membership. Each nomination must include the name, address, telephone number, and e-mail address of the person being nominated, the office for which the nomination is being made, and evidence that the candidate consents to being nominated. Once the slate is selected, the Nominations Committee will request a brief biographical statement and a photograph from each nominee.

For summaries of the nomination process and responsibilities of SIA officials view the Society by-laws on the Chapters screen of the Website [www.siahq.org](http://www.siahq.org). If you're unsure about the process or the obligation, please call or write at the address above.

## SIA Officers and Directors

Robert Stewart, President (2006-08)  
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Kevin Pegram, Director (2005-08)  
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Ed Grusheski (2006-09)  
Chris Andreae, *ex officio* (2006-08)







# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

### PUBLICATIONS OF INTEREST

Vol. 35, No. 4

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COMPILED BY

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

#### GENERAL INTEREST

- ◆ Patrick Bonneville and Philippe Hemono. **The World Heritage.** Bonneville Connection ([www.worldheritageboutique.com](http://www.worldheritageboutique.com)), 2006. 464 pp. \$45. A guide to the 830 sites on UNESCO's World Heritage Sites list. A number of world-class IA sites in Europe and Asia are currently on the list.
- ◆ Elspeth H. Brown. **The Corporate Eye: Photography and the Rationalization of American Commercial Culture.** Johns Hopkins Univ. Pr., 2005. 334 pp. \$49.95. How corporate America has used photography as a tool in scientific management and public relations, with special emphasis on the work of Lillian and Frank Gilbreth, Lewis Hine, and Lejaren Hiller. Rev.: *T&C* (July 2006), pp. 648-9.
- ◆ Earth Tech, Inc. **The Cedar Swamp Brook Mill Complex, Hampton, Connecticut.** CT Dept. of Transp., 2006. 20 pp., illus. Publication generated as a result of a state highway project on Route 97 that identified a short-span stone arch bridge and archeological remains of a waterpower system used to operate successively a grist mill, sawmill, bark mill, and tannery from the 1710s to 1870s. Avail.: CT State Historic Preservation Office, [www.cultureandtourism.org](http://www.cultureandtourism.org).
- ◆ Jeff Horn. **The Path Not Taken: French Industrialization in the Age of Revolution, 1750-1830.** MIT Press, 2006. 400 pp., illus. \$45. Takes on the long-running historic debate over whether French industrialization was a failed imitation of the British model or the product of a distinctive policy that over the long term led to a prosperity comparable to Britain's.
- ◆ Steven Lubar. **Was This America's First Steamboat, Locomotive, and Car? I&T** (Spring 2006), pp. 16-24. Debunks the legend of Oliver Evans's *Orukter Amphibolos* (1805), a steam-powered amphibious dredge that is widely regarded as the first motorized, wheeled vehicle to travel a public road in the U.S. (*SIAN*, Spring 2005).
- ◆ John McPhee. **Uncommon Carriers.** Farrar, Straus and Giroux, c. 2006. 248 pp. \$24. Famed author, best known for his writings on the natural environment, describes his experiences catching rides on various forms of bulk transport, including semi-trailer truck, coal train, river barge, and express delivery van.
- ◆ David E. Nye. **Technology Matters: Questions to Live With.** MIT Press, 2006. 280 pp. \$27.95. Technology matters because it is inseparable from being human. Since time immemorial, humans have excelled at using old tools to solve new problems and at inventing new tools for more elegant solutions to old tasks. Essays ask fundamental questions about the relationship of technology to society with wide-ranging historical examples.

- ◆ Tom Rinaldi and Rob Yasinsac. **Hudson Valley Ruins: Forgotten Landmarks of an American Landscape.** Univ. Pr. of New England ([www.hudsonvalleyruins.org/book.html](http://www.hudsonvalleyruins.org/book.html)), 2006. An homage to the many deserted buildings along the Hudson River—and a plea for their survival. Chronicles over 80 selected ruins between Yonkers and just below Albany, including 28 sites through in-depth histories. More than 200 illustrations including historic photos, engravings, and plans, as well as contemporary images. Accompanies an exhibit on Yonkers' Glenwood Power Plant that ran at the Municipal Art Society of NY gallery from Sept. 7 to Nov. 1.
- ◆ **TICCIH Bulletin** No. 33 (Summer 2006) includes Augusto Vitale, *The Shape of Industrial Archaeology in Italy*; Axel Föhl, *The Speicherstadt: Re-use or Misuse?* (threats to the integrity of Hamburg's historic warehouses through adaptive re-use); and Jaime Migone Rettig, *The Frigorifico Bories (Bories Meat Freezing Plant) and Chilean Patagonia*, as well as other notes on the industrial heritage from around the world. Quarterly with membership. Info: [www.mnactec.com/ticcih](http://www.mnactec.com/ticcih).
- ◆ John Vacha. **The Master Carver of Dover: Mooney Warther and the History of Steam.** *Timeline*, v. 23, 4 (Oct.-Dec. 2006), pp. 46-63. Illustrated biography of Warther, founder of the Warther Knife Co. in the 1920s and a carver who made stunning models of locomotives and mills in wood, ivory, and metal. The Warther Carving Museum and the knife company's operational "cottage-industry style" shops are located in Dover, OH.

#### BUILDINGS & STRUCTURES

- ◆ Elizabeth Abbott. **New Condos in Old Spaces Fulfill a Long-Held Dream.** *NY Times* (July 23, 2006), Real Estate, p. 16. Since 1964, local businessmen have been working to redevelop the Brown & Sharpe factory complex (precision-tool and machine-tool maker) in downtown Providence, RI. Recent state and federal tax credits have helped to make preservation a reality.
- ◆ Catherine Bishir. **Southern Built: American Architecture, Regional Practice.** Univ. of VA Pr., 2006. Illus., \$75. Case studies, from an antebellum builder's adaptation of popular architectural books to an early-20th-c. city's cultivation of an architecture representing Old South mythology, demonstrate the complex transformation of national ideas into architectural forms that express a region's identity.
- ◆ J. Ritchie Garrison. **Two Carpenters: Architecture and Building in Early New England, 1799-1859.** Univ. of Tenn. Pr., 2006. Illus., \$48.95. Examines the lives of Calvin and George Stearns, drawing on their written accounts and building legacy. Stylistic influences, family patterns, work habits, social customs, tools, and business practices.

- ◆ Kirk Johnson. **After 4 Decades, a Cold War Symbol Stands Down.** *NY Times* (July 29, 2006), pp. A1, 9. Colorado's Cheyenne Mountain, carved out in the 1960s and bunker-like home of the North American Aerospace Defense Command (Norad), is ceasing day-to-day operations. It will remain as a back-up place of secure retreat should the need ever arise. Historical overview of construction and operations.
- ◆ Cory Kilgannon. **To the Battlements, and Take Sunscreen.** *NY Times* (July 21, 2006), pp. B23, 26. Historical background on the batteries at Fort Tilden (tour site—2002 Annual Conference, Brooklyn), located on the Rockaway peninsula in Queens, NY. Now an “out-of-the-way” place for hiking, exploring the ruins, and enjoying the beach.
- ◆ Antoinette Martin. **Pastoral Site of Historic Inventions Faces the End.** *NY Times* (June 14, 2006). Bell Labs, built in 1962 in a park-like setting in Holmdel, NJ, was a center for the development of the laser, fiber optics, and satellite communications. Lucent, which dispersed the operations of Bell Labs in 2000, has sold the 6-story, glass-encased building to a developer who will demolish it.
- ◆ John S. Sledge. **An Ornament to the City: Old Mobile Ironwork.** Univ. of GA Pr., 2006. Illus., \$34.95. 80 b&w photos document architectural ironwork of Mobile, AL.
- ◆ Stephen Tobriner. **Bracing for Disaster: Earthquake-Resistant Architecture and Engineering in San Francisco, 1838-1933.** Heyday Books, 2006. 330 pp., illus. \$30. Looks at what happened to various buildings during earthquakes and at the subsequent efforts to improve building methods.

## BRIDGES

- ◆ **Best Practices for the Rehabilitation and Moving of Historic Metal Truss Bridges.** Virginia Transportation Research Council, 2006. Avail: [www.trb.org/news/blurb\\_detail.asp?id=6784](http://www.trb.org/news/blurb_detail.asp?id=6784).
- ◆ Richard L. Cleary. **Bridges.** Norton, 2006. 336 pp., illus. \$75. Surveys bridges from coast-to-coast in terms of four fundamental structure types (beam, arch, truss, and bascule), showing how similar structural ideas have been addressed by different designers, refined over time, and rendered in various materials. Forward by Eric DeLony [SIA].
- ◆ John S. Lupold and Thomas L. French Jr. **Bridging Deep South Rivers: The Life and Legend of Horace King.** Univ. of Ga. Pr., 2004. 335 pp. \$29.95. King (1807-85) was a master bridge-builder, responsible for many of Georgia's and Alabama's long-span wood-truss bridges, as well as major buildings including factories and warehouses. Biography of remarkable African-American who was born into slavery only to earn his manumission about 1840 and become a successful businessman and politician. Rev.: *T&C* (July 2006), pp. 695-6.

## AUTOMOBILES & HIGHWAYS

- ◆ Stuart F. Brown. **Taking Delivery at the Plant to See Their Babies Born.** *NY Times* (Sept. 24, 2006). Corvette plant in Bowling Green, KY, has program that allows owners to be present on the shop floor when their cars are assembled. Includes list and contact info for automobile assembly plants in U.S. that regularly offer tours: Ford Rouge Factory (Dearborn, MI); Honda (Marysville, OH); United Motor Manufacturing (Fremont, CA - joint Toyota-GM venture); Nissan (Smyrna, TN); Saturn (Spring Hill, TN); and Toyota (Georgetown, KY).
- ◆ **The Greatest Single Feature ... A Sky-Line Drive: An Illustrated History of a Mountaintop Motorway.** \$16.95.

Celebrates the 75th anniversary of Virginia's Skyline Drive. Avail: [www.snpbooks.org](http://www.snpbooks.org).

- ◆ Glenn Harper. **Helping Build America: The National Road. Timeline,** v. 23, 4 (Oct.-Dec. 2006), pp. 2-17. Illustrated history of the National Road in Ohio from its establishment by Congress in 1806 to its improvement as an automobile highway in the 20th century.
- ◆ John McCloud. **Historic Auto Plant Returns from Ruin.** *NY Times* (June 7, 2006). The Albert Kahn-designed Ford Assembly Plant in Richmond, CA, built in 1930 and vacant since the late 1980s, measures over 517,000 sq. ft. It is being redeveloped as a conference center.
- ◆ Claudette Stager and Martha A. Carver, eds. **Looking Beyond the Highway: Dixie Roads and Culture.** Univ. of Tenn. Pr., 2006. Illus., \$48.00. Essays consider the politics of roadbuilding, roadside entertainment, commercial architecture and landscape, and regional adaptations to the needs and desires of northern tourists traveling the Dixie Highway and other early-20th-c. highways in TN, GA, NC, FL, MS, IN, VA, AR, OH, KY, and AL.

## AIRPLANES & AVIATION

- ◆ Archaeological & Historical Services, Inc. **World War II “Hellcat” Sites.** CT State Archaeological Preserves Series, CT State Historic Preservation Office ([www.cultureandtourism.org/history](http://www.cultureandtourism.org/history)), 2006. Guidebook reviews the history of the Gruman F6F Hellcat, a carrier-based fighter, including its manufacture at Gruman's Bethpage (NY) plant. In 1944, two Hellcats on night-time training maneuver from the Charlestown Naval Air Field crashed in Preston, CT. The debris field has been examined by archeologists and is now a state preserve.
- ◆ Don Bedwell. **Lunken Airport.** *Timeline,* v. 23, 4 (Oct.-Dec. 2006), pp. 32-45. Illustrated history of a Cincinnati airfield established in 1919 and still used by small civil aircraft.

## CONTRIBUTORS TO THIS ISSUE

Richard K. Anderson, Jr., Sumter, SC; Susan Appel, Champaign, IL; Laura Bachelder, Rockford, IL; Ann Bartholomew, Easton, PA; Anthony Bianculli, Rocky Hill, NJ; Patrick Bonneville, Saint-Hubert, QB; George Bulow, New York, NY; Robert Chidester, Ann Arbor, MI; Arlene Collins, Houghton, MI; Jeff Davidson, Iowa City, IA; Eric DeLony, Santa Fe, NM; Bernard Drew, Great Barrington, MA; Don Durfee, Houghton, MI; David Engman, Warwick, MA; Dennis Furbush, Jackson Heights, NY; Linda Gasparini, Cleveland, OH; Rick Greenwood, Providence, RI; Mary Habstritt, New York, NY; Neill Herring, Jesup, GA; Charles K. Hyde, Royal Oak, MI; Mark Kanonik, Albany, NY; Muriel Kirkpatrick, Philadelphia, PA; Keith Kohlmann, Racine, WI; Ken Lavelle, N. Royalton, OH; Christopher Marston, Silver Spring, MD; Jay McCauley, San Jose, CA; John McGrain, Towson, MD; Lance Metz, Easton, PA; Carol Poh Miller, Cleveland, OH; David Page, Kingston, ON; David Poirier, East Granby, CT; Lynn Rakos, Brooklyn, NY; JoAnne Ruscio, Trenton, NJ; Sharon Sanders, Bethlehem, PA; Heinz Schwinge, Evanston, IL; David A. Simmons, Galena, OH; Tom Speziale, Ballston Spa, NY; Justin Spivey, New York, NY; Robert C. Stewart, West Suffield, CT; Patricia Stillwaggon, Amityville, NY; Louise Trottier, Ottawa, ON; Robert Vogel, Washington, DC; Suzanne Wray, New York, NY; Andy Young, Tybee Island, GA.

*With Thanks.*



- ◆ Herbert M. and Ada Kera Friedman. **Shot into the Air.** *I&T* (Spring 2006), pp.26-35. Development of the catapult systems used to launch early airplanes and modern jet fighters.

## **RAILROADS**

- ◆ Glenn Collins. **A Chugger Floats to Stardom.** *NY Times* (Aug. 11, 2006). Preservation of No. 25, a diesel switcher locomotive built in 1946 by the American Locomotive Co. for the Erie RR and known for its work in the Brooklyn harbor yard loading and unloading float barges until retired in the 1990s. This summer the locomotive was floated by barge from Brooklyn to a West Side Manhattan park near 62nd Street where children will be allowed to play on the engine. Article covers the engine's history and its attraction to railroad enthusiasts and children alike, with quotes from Tom Flagg [SIA].
- ◆ Paul Duchene. **Whistle Start Campaign.** *Chicago Tribune* (Sept. 17, 2006), Sec. 7, p. 1+. The remote Northern Nevada Ry. in Ely, NV, is featured as a tourist destination where visitors are allowed (for \$590) to serve as apprentice engineers and drive vintage locomotives at "the most authentic working steam operation in the country." SIA's 2007 Fall Tour will be based in Ely.
- ◆ Neill Herring [SIA]. **What Happened to Macon?** *The Right Way*, v.10,2 (Apr.-June 2006), pp. 4-9. Published by the Central of GA Ry. Hist. Soc. Analysis of why Macon and Atlanta had different fates as railway towns, despite some geographical advantages enjoyed by the relative loser. Suggests that a few key business decisions made by a small number of individuals between 1880 and 1910 sealed Macon's secondary role as the junction of a regional carrier (Central of GA) while Atlanta emerged as a terminus of the South's dominant rail systems (Southern and Louisville & Nashville).
- ◆ Keith Kohlmann [SIA]. **History of Racine's (WI) Depots.** *North Western Lines*, No. 2 (2006) (Magazine of the Chicago & North Western Historical Society). Racine's 1901 depot has recently been restored and re-opened to the public. Designed by architects Frost & Granger, it is the only example of their work to have an intact cross-track platform and waiting shelter out of a body of work of more than 200 stations in the Midwest. The article examines the railroad history, social history, and restoration of the Racine depot.
- ◆ **Railroad Heritage** No. 16 (2006) includes George A. Talbot and John O. Hulzhueter, *What is "Visual Culture" and What Does It Have to Do with Railroads?* (assessing the meaning of railroad photographs and images); and Jeff Brown and Joel Jensen, *Ruminations on a Railroad Town: Glendive, Montana* (photo essay on active railroad town). *RH* is published by the Center for Railroad Photography & Art, a not-for-profit arts organization based in Madison, WI, that preserves and presents significant images of railroading. Info: [www.railphoto-art.org](http://www.railphoto-art.org).
- ◆ **Railway Museum Quarterly** No. 40 (Summer 2006) includes Jack Rush, *A Modern Motorman* (experiences volunteering at the Shore Line Trolley museum); Aaron Isaacs, *New Site for Arizona Railroad Museum* (Phoenix museum moves to expanded quarters); Mike Wahl, *The Realities of Rebuilding Steam* (detailed study of cost and effort to rebuild 4-6-0 locomotive); and a round-up of news notes from railroad museums throughout the U.S. and Canada. *RMQ* is published by the Assn. of Railway Museums, [www.railwaymuseums.org](http://www.railwaymuseums.org).
- ◆ Andrea Sachs. **Catch a Dive on the Subway Cars Off New Jersey.** *Washington Post* (Aug. 6, 2006), pp. P1-5. Guide to scuba diving on old NYC subway cars that have been dumped off the NJ coast to create artificial reefs.

- ◆ David Wolman. **Train to the Roof of the World.** *Wired*, No. 14.07 (July 2006). On-line magazine: [www.wired.com](http://www.wired.com). Extensive coverage and photos of new 1,200-mile railway from Xining, China, to Lhasa, Tibet. Scales mountain passes over 16,000 ft. above sea level and 300 miles of elevated track over permafrost. Passengers are provided with oxygen masks to prevent altitude sickness.

## **WATER TRANSPORT**

- ◆ Lisa Chamberlain. **Recycling a Big Urban Navy Yard.** *NY Times* (May 31, 2006). Challenges and successes of redeveloping the Philadelphia Navy Yard, which was taken over by the city in 2000.
- ◆ Larrie D. Ferreiro. **Ships and Science: The Birth of Naval Architecture in the Scientific Revolution, 1600-1800.** MIT Pr., 2006. 432 pp., illus. \$45. The development of theories and tools to predict a ship's characteristics and performance before it was built, using primary-source and archival information from major shipbuilding nations including Britain, France, Spain, the Netherlands, Sweden, Denmark, and Italy.
- ◆ Marc Levinson. **The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger.** Princeton Univ. Pr., c. 2006. 376 pp. \$24.95. The first container shipping occurred in 1956 on a retrofitted WWII tanker sailing from Newark to Houston. Author presents a serious economic study of the far-reaching effects of the advent of the shipping container. Also, Brian J. Cudahy, **Box Boats.** Fordham Univ. Pr., c. 2006. 338 pp. \$29.95. Author is a maritime historian with the book's focus on the characteristics of various classes of container ships. Includes an index of ships' names.
- ◆ National Park Service, Conservation Study Institute. **Connecting Stories, Landscapes and People: Exploring the Delaware & Lehigh National Heritage Corridor Partnership.** Study of the corridor's progress, strengths, challenges, and future management options. D&L corridor features the canals of the same names and many coal and steel industry sites along the Lehigh River in northeastern PA. Avail.: [www.nps.gov/mab/csi/pub\\_resources/pub.htm](http://www.nps.gov/mab/csi/pub_resources/pub.htm).
- ◆ Katie Zezima. **On Cape Cod, a Land Deal Leaves a Tugboat's Fate Hazy.** *NY Times* (July 3, 2006). *NY Central* No. 16, built in 1924, saw service in NY Harbor and eventually ended up as a landlocked roadside attraction in Bourne, MA, adjacent to the main highway to Cape Cod. The tug was the last surviving NY steam railroad tug, according to Tom Flagg [SIA]. The CVS drug store chain has purchased the property where the tug sits. [In late breaking news, efforts to preserve the tug failed. It is now gone.]

## **ABBREVIATIONS:**

- I&T* = *American Heritage of Invention & Technology*
- T&C* = *Technology & Culture*, Journal of the Society for the History of Technology
- Timeline* = Magazine of the Ohio Historical Society, 1982 Velma Ave., Columbus, OH 43211
- 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](mailto:phsianews@aol.com).

# The Noble & Cooley Center for Historic Preservation Dedicated to Celebrating Yankee Ingenuity

Tucked away in the foothills of the Berkshires is an intact factory with all the machinery necessary to manufacture toy and professional drums. SIA toured the factory during the 1998 Connecticut Valley Fall Tour (SIAN, Spring 1999). The Southern New England Chapter visited the site for an in-depth inspection of the manufacturing equipment in 2005.

In 1854 Noble & Cooley Co., located in Granville, MA, began manufacturing drums. The area has a heritage in small-scale industry and in particular producing vernacular solutions to technological problems. The local farmers, faced with diminishing returns in agriculture and shortages of labor, turned to mechanized manufacturing.

Noble & Cooley is a surviving example of the manufacturing firms that were once plentiful in the remote valleys of New England. Silas Noble, an entrepreneur, and James P. Cooley, a master mechanic, started by making drums in Noble's farmhouse kitchen. The drums sold quickly and in 1856 they built their first factory. Business expanded during the Civil War when the company produced drums for Northern regiments. During this period the factory expanded and the company switched over from waterpower to steam. By 1873, they were producing 100,000 drums a year. Around this time vernacular tooling, jigs, and fixtures were introduced to cut labor costs and increase output. The company developed proprietary technology in steam bending, decorating, and assembly of drums.

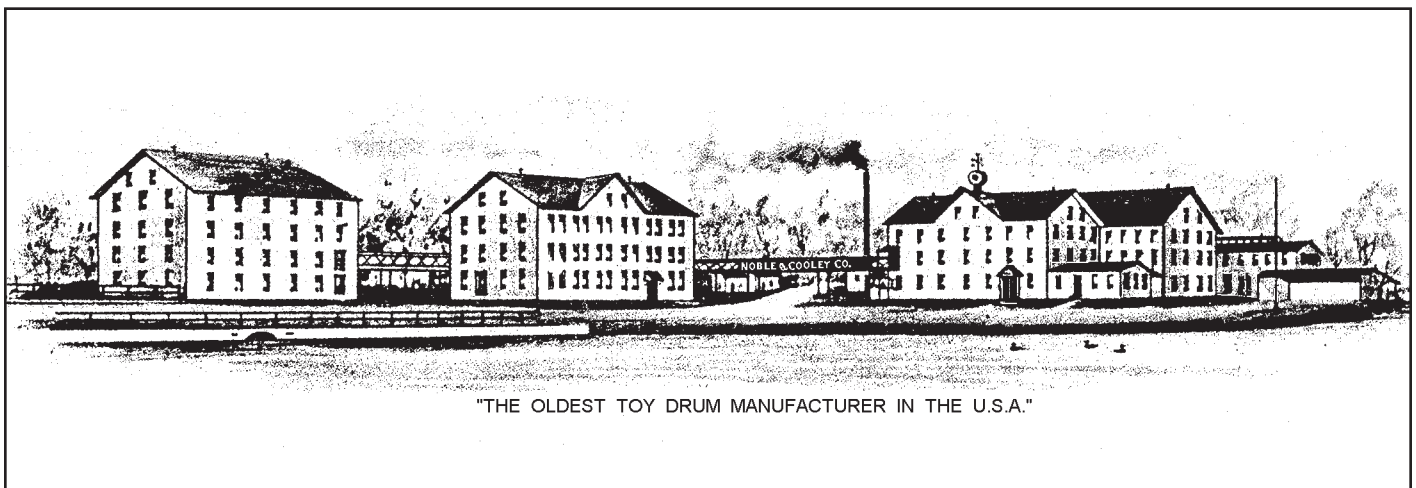
At the turn of the 19th century Noble & Cooley adapted the technology for manufacturing "tin" cans to making toy drums. A machine for printing up to eight colors sequentially was developed and built in the machine shop. Toy drums continued to sell and the company adapted to WWII materials restrictions by building paperboard drums. Mid-20th-century marketing strategies included licensing of Disney and Muppets characters to be printed on the drums to increase sales.

In recent years globalization and a changing market in children's playthings had eliminated the economic viability of toy-drum manufacturing. The future looked bleak. It appeared that the machinery would be sold for scrap and that the buildings either torn down or converted to warehouses. The owners, descendants of the founders, believed that the company was historically significant and should be preserved. They generously agreed to transfer ownership of some of the historic buildings and machinery to a non-profit organization with the objective of preserving the company's history and manufacturing technology.

Local preservationists organized The Noble & Cooley Center for Historical Preservation (NCCHP), a non-profit corporation. The mission of the center is to preserve the regional history of manufacturing, agricultural pursuits, and rural crafts through acquisition and maintenance of significant historical buildings, machinery, historical collections and local artifacts. Initially, the focus will be on dynamic demonstrations of manufacturing toy drums. The corporation will also promote preservation and study of the acquired properties, collections, and artifacts and make them available to the public. The museum will be located within the historic buildings of Noble & Cooley on Water Street in Granville.

The factory will provide the space for an educational facility to share the history of the region. The buildings retain much of the equipment that was used to manufacture toys from the 1850s through the 1950s. The museum will also preserve and demonstrate the progression of factory power sources from water to steam to electricity. The rural character of western Massachusetts will be represented in displays of farming and logging techniques of the 19th century. The center will be a showcase of the "Yankee Ingenuity" that enabled the local area to prosper.

*Robert C. Stewart*





# SIA Industrial Heritage Preservation Grants 2006

The following grants were awarded at the SIA Annual Meeting, June 2, 2006.

*Grantee:* Alicia Batko, Montague Assn. for Restoration of Community History/Montague Twp. Historian, Sussex Co., NJ. Amount: \$1,500. Project: Phase II of grantee's work to research, document, and nominate an expansion to the existing Millville Historic & Archeological District. Nomination will be submitted to the NJ and National Registers of Historic Places. SIA funded Phase I research in 2005 (*SIAN*, Spring 2006). Phase II is to complete the documentation and the National Register nomination.

*Grantee:* Jason D. Moser, Columbia, SC. Amount: \$3,000. Project: A dendrochronology study of timbers from two of four historic ship-building sites recently identified through the Lower Eastern Shore Shipyard Survey (Chesapeake Bay, MD) conducted by Moser, a doctoral candidate at Florida St. Univ. Analysis to be conducted by Oxford Dendrochronological Laboratory.

*Grantee:* Donald Hardesty, Dept. of Anthropology, Univ. of Nevada, Reno. Amount: \$1,500. Project: Archeological investigation of the Virginia & Truckee Ry. section camp, conducted by doctoral candidate

Efstathios Pappas, with particular focus on ethnicity, gender, and class through archeological studies of worker and foremen housing; SIA grant to fund purchase of field supplies, specifically a digital camera and total station surveying equipment.

*Grantee:* Sam Ellenport, President, Harcourt Bindery, Boston, MA. Amount: \$3,000. Project: Production of a documentary video of historic leather bookbinding practices now done by hand that are to be replaced by new machine techniques in 2007.

*Grantee:* Ann Lawless, Executive Director, American Precision Museum, Windsor, VT. Amount: \$3,000. Project: Research and HABS/HAER-level recording of 1840 wheel pit. Information will be used to facilitate restoration/repair of the pit to prevent moisture from permeating the museum structure and collections.

Information on the SIA's Industrial Heritage Preservation Grants can be found at [www.siahq.org/grants/about.html](http://www.siahq.org/grants/about.html). The deadline for applications is Mar. 31, 2007, with the grant awards determined at the Annual Meeting in June.

Rick Greenwood

## CHAPTER NEWS

**Northern Ohio** toured Cleveland's Ferro Enamel Co. in July. The tour included displays of one of the firm's best known products—enameled murals. Chapter members assisted with the 2006 SIA Fall Tour to Youngstown in Sept.

**Oliver Evans** (Philadelphia) held its annual meeting and picnic at the Fairmount Water Works. The group toured the recent restoration work, including the Esplanade and South Garden. A committee of OE Chapter members is busily working on the planning for the 2007 SIA Annual Conference in Philadelphia, June 7-10.

**Roebling** (Greater NY-NJ) enjoyed a curator's tour of the Trenton City Museum and its new exhibit celebrating the 200th birthday of John A. Roebling in Aug. Also, members gathered for a walking tour of industries of the High Line, a look at the warehouses, Nabisco bakery, Gansevoort Pumping Station, and other sites near the elevated freight railway on Manhattan's west side (*SIAN*, Spring-Summer 2004). In Sept., the chapter held its annual corn roast at Gerry Weinstein and Mary Habstritt's place in Croton-on-Hudson, NY. In Oct., the chapter presented the 26th Annual Roebling Chapter Symposium on IA in the NY-NJ

area at Drew Univ., Madison, NJ. Presentations included Lance Metz [SIA], *The IA of the Transistor*; Allison Rachleff [SIA], *Water Supply, Recreation and Transportation: Layered Landscapes in NYC's Highbridge Park, 1840s-present*; Peter Mullan, *From Lifeline to High Line: The NY Central's West Side Elevated Freight Line*; Clifford Zink [SIA], *John A. Roebling: The New Jersey Years, 1849-69*; Charles Deroko, *Wire Rigging on the Bark Peking*; Sandra Schultz, *New Challenges for the NHL 1848 Delaware Aqueduct*; Don Sayenga, *John A. Roebling: Twelve Bridges in 20 Years (and We Thought There Were Only Nine)*.

**Samuel Knight** (Northern California) held its annual meeting at the Western Ry. Museum near Fairfield in early Oct. Following a brief business meeting, members toured the museum's extensive collection of trolley cars.

**Southern New England** gathered for a potluck picnic and business meeting at the Cpt. Wilbur Kelly House Museum in Lincoln, RI, in Oct. The museum interprets the history of local industry and transportation, with access to trails along the Blackstone Canal and Providence & Worcester RR. ■

# Rehabilitation of the Hadley Bow Bridge

The Old Corinth Road Bridge, commonly referred to as the Hadley Bow Bridge, is located in the Town of Hadley, Saratoga County, NY, about 90 minutes north of Albany. The bridge was built by The Berlin Iron Bridge Co. in 1885 atop the foundations of an 1813 bridge. The historical significance of the bridge is well known; it has been listed on the National Register and recorded by the Historic American Engineering Record (NY-292; [www.loc.gov](http://www.loc.gov)). What makes the Bow Bridge unique is that it is the only remaining half-deck (roadway passes halfway between the lower and top chords), lenticular, wrought-iron, truss bridge of perhaps only two or three ever built. Not only is the Bow Bridge an exceptional example of American engineering history, it is an amazingly graceful bridge set within one of the most picturesque vistas in the region.

Unfortunately, the bridge fell into disrepair and was closed to traffic in 1983 when the town could no longer afford the necessary maintenance. For a while, pedestrians were allowed to cross the bridge, but that came to an end in 1999 when large pieces of the timber deck rotted away. In 2000, Saratoga County (which acquired the bridge in 1999) planned to dismantle the superstructure and store it for reuse, citing legitimate safety concerns. However, the county agreed to postpone dismantling in order to allow preservationists the opportunity to seek funds for rehabilitation. The NY State Department of Transportation (DOT) eventually funded the project through the federal TEA-21 enhancement program.

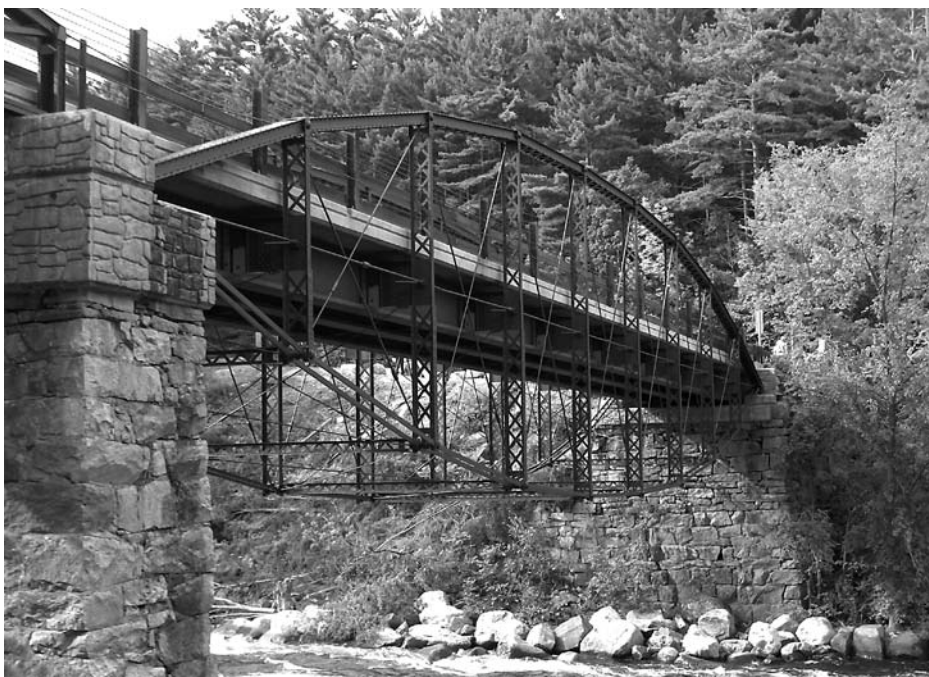
For a while it seemed that the restoration of the Bow Bridge would never occur as Saratoga County, the Town of Hadley, the DOT, and the NY State Office of Parks, Recreation, and Historic Preservation (SHPO) debated several key aspects of the project, including a major sticking

point—the load-carrying capacity required of the rehabilitated bridge. Saratoga County, on behalf of the Town, advocated for an un-posted bridge, capable of supporting all legal truck traffic, defined as a 36-ton truck (obviously requiring significant changes to the bridge), whereas preservationists advocated for either a posted bridge (restricted to passenger cars and keeping changes to a minimum) or for a pedestrian-only bridge (with essentially no changes). DOT would not approve of any scheme that did not permit the passage of all legal traffic. Because of the likelihood that overweight trucks would cross the bridge, this point of view eventually prevailed.

Several alternative schemes were discussed, and the SHPO agreed that an independent structural system, consisting of shallow steel beams and a concrete deck, would not adversely affect the bridge's historic character. As a result, the original lenticular trusses became in essence “ornaments” attached to the sides of a modern steel-and-concrete bridge. This approach had been successfully used on other historic truss bridge projects throughout the nation. Construction documents were prepared, and work on the bridge began in 2005.

In Aug. 2006, the Bow Bridge opened after being closed for 23 years. The community held a dedication ceremony and celebration. While the preservation of the Hadley Bow Bridge is a gratifying accomplishment, the project offers a few important lessons to those thinking about undertaking similar efforts.

*Lesson No. 1: Choose your words carefully.* The TEA-21 grant application was written by two local preservation organizations on behalf of Saratoga County. As reported in the application, one of the key benefits to be realized from the work was opening the bridge to vehicular traffic. It is



*The rehabilitated Bow Bridge in Hadley, NY. Built by The Berlin Iron Bridge Co. in 1885, it is the only remaining half-deck lenticular truss bridge of perhaps only two or three ever built. (A fair number of lenticular truss bridges survive throughout NY and New England, but they are through or pony configurations.)*



doubtful that the preservationists who wrote the application considered that the rehabilitated Bow Bridge would be required to support 36-ton trucks, but they were held to this standard. Installation of the independent structural support system required removal of every floorbeam, every lower diagonal brace, and some bottom chord rods, as well as significant portions of the abutments and pier.

*Lesson No. 2: If you crash it, they will come.* One of the challenges of the project was providing a safe and adequate railing system. The Federal Highway Administration (FHWA) requires new railing systems to be crash-tested before they can be used on any bridge; consequently, the DOT on behalf of FHWA as the funding agency, required beefy, and some would say unsightly, railings for Bow Bridge. The minimum railing system acceptable to FHWA must withstand a 4,400-lb. pick-up truck traveling at 45 mph and impacting the railings at an angle of 25 degrees, yet one approach to the Bow Bridge is posted at 10 mph, and the other approach is posted at 20 mph. Furthermore, the clear distance between the railings is only 13 ft. making it essentially impossible to impact the railings in the way they were tested. More research is needed to develop railing systems that are “friendly” to historic bridges and that balance the competing demands of historical accuracy (and visual unobtrusiveness) and safety.

*Lesson No. 3: Think outside the box.* It is time for engineers, owners, and preservationists to “think outside the box.” The Bow Bridge had been closed to vehicular traffic for 23 years. Nonetheless, many participants in this project argued that reaction times for first responders significantly increased when the Bow Bridge was closed, and in 1983 this was probably true. But the bridge had been posted at 3 or 4 tons since 1933! Most emergency vehicles weighed more than this, even in 1933, so fire companies had knowingly driven overweight vehicles across the bridge for nearly half a century. Today, first responders can be found in the communities to both sides of the bridge, so allowing fire trucks across it probably doesn’t decrease response times much, if

at all. So why did some decisionmakers still insist on having an un-posted bridge? Liability. Overweight trucks cross load-posted bridges very frequently. Roadway signs simply do not work. An active method of preventing overweight trucks from crossing load-posted bridges is necessary. One such method is “low clearance” (i.e., “headache”) bars at the approaches, with the generally accurate observation that lower vehicles weigh less than taller ones. However, the adverse appearance of the low clearance bars must be weighed against the chances of a truck driver ignoring a sign and crumpling an old bridge.

*Lesson No. 4: Sharpen your pencil.* If the Bow Bridge was still able to carry heavy loads such as fire trucks and logging trucks in the 1970s after 80-plus years of negligible maintenance, perhaps the engineering analysis was a little too conservative. If truck drivers know that engineers are over-conservative, they will continue to ignore the load-posting signs.

In conclusion, the Hadley Bow Bridge has been saved for the enjoyment of future generations through extraordinary efforts. Hopefully, the next exceptional historic bridge will be respected enough to be treated with the care it deserves before it reaches critical condition.

Mark C. Kanonik



Tom Speziale

Local officials and citizens celebrate the opening of the rehabilitated Bow Bridge.



Mark Kanonik

Detail showing the connection of the stub of the original floorbeam to a new steel beam that now supports traffic loads.

## SITES & STRUCTURES

**Charleston Naval Shipyard Receives Historic Designation.** Portions of the 340-acre shipyard in N. Charleston, SC were listed on the National Register in Sept. The Navy Shipyard Historic District includes 29 buildings and 27 structures on the north end of the shipyard, which the federal government closed about ten years ago. Included are the powerhouse, storehouses, shops, and slips. The Navy established the shipyard in 1901. It grew to become South Carolina's largest employer during WWII with more than 26,000 civilian workers. The yard built 253 ships and after the war became a repair yard, overhauling nuclear submarines. The historic designation was sought by private developers who are seeking tax credits to redevelop the yard as a corporate business center.

**High Line Update.** The project to convert New York City's former westside railroad viaduct (SIAN, Spring-Summer 2004), built in 1929-34 by the NY Central, into a pedestrian parkway is progressing. A groundbreaking ceremony was held in April. The first phase of construction—removal of debris and non-structural concrete—has been completed from Gansevoort St. to 20th St. Work began in Sept. on lead-paint abatement, structural-steel and concrete repair, and repainting.—*Friends of the High Line E-mail Newsletter* (Aug. 16, 2006)

**Lamson & Goodnow Relocates.** One of the nation's oldest continually active cutlery manufacturers has announced it is leaving its complex of multi-story brick factory buildings built in 1850-51 in Shellburne Falls, MA. Silas Lamson started the company in 1834 with an innovative process for making curved scythe handles, or snaths, that allowed farmers to stand erect while cutting grain. In the years prior to the Civil War, the company expanded to over 500 workers making an assortment of knives and agricultural implements. Many of the skilled workers were recruited from Sheffield, England and Solingen, Germany. The company now employs 30, many of them descendants of the original workers. L&G is not ceasing operations but plans to relocate its machinery to a more efficient one-story modern building.—*Greenfield (MA) Report* (July 18, 2006)

**Fire at Brooklyn Rope Works.** The rope works, said to have been the world's largest, built by the American Manufacturing Co. in 1890 near Brooklyn's Greenpoint neighborhood (cruise and drive-by site—2002 Annual Conference) burned in May. The multi-story brick complex was also used to manufacture oakum, a jute fiber for caulking seams on wooden ships. Some of the 17 factory buildings were abandoned at the time of the fire, but it had been

bought by a developer with a history of converting industrial properties into condominiums. The 10-alarm fire was called the city's largest in more than a decade, excepting 9/11.—*NY Times* (May 3, 2006)

**San Francisco Maritime National Historic Park Closes for Renovations.** Built by the WPA in 1936-39, the building is famous for Hilaire Hiler's brightly colored murals that depict the submerged ruins of the fabled, lost continents of Mu and Atlantis. The NPS will be repairing the deteriorating roof and windows and restoring the adjacent amphitheater. It has been a maritime museum since 1951, with a fine collection of ship models and exhibits on steam technology and communication at sea. The museum is expected to reopen in 2009 with new exhibits to interpret the maritime history of the Pacific Coast. Info: [www.nps.gov/safr](http://www.nps.gov/safr).

**Cannon Mills Lost.** In Aug., the twin smokestacks—labeled "Fieldcrest" and "Cannon"—were demolished at the former Cannon textile mills in Kannapolis, NC. Many residents mourned the loss in the community once synonymous with the linens produced at the mills established by J. W. Cannon in 1906. Kannapolis was a quintessential company town. Cannon rented houses to its workers, sold them electricity, and built the town's first YMCA. Cannon Mills grew through the 1970s, but was sold to a series of owners in the 1980s and 1990s who were unable to compete against cheap imported textiles. The mills closed in 2003. The Cannon Mill site is slated to be redeveloped as a bio-technology research campus with backing from California billionaire David Murdock.—*Charlotte Observer* (Aug. 11, 2006)

The **Jamestown Bridge** (cruise tour site—2004 Annual Conference, Providence) in Narragansett, RI, was demolished in Apr. The 46-year-old bridge's main span was a 1,100-ft.-long, cantilever, through-truss over Narragansett Bay. A parallel replacement bridge opened in 1992 but the old bridge remained in place without the funds to take it down until a federal grant was secured.—*NY Times* (Apr. 19, 2006)

**100th Anniversary of Electric Train Operations.** On Sept. 30, the NY Metropolitan Transit Authority's Metro-North celebrated the first electric train that ran on third-rail power from Grand Central Terminal to the Bronx. The event was held at Grand Central, where MTA officials gave a presentation on the history of the 1906 NY Central Harlem-Hudson electrification. Metro-North then offered the "first ever public tour" of the M-42 substation, an underground facility that houses original rotary converters and control boards.—*Progressive Railroading* (Aug. 2006) ■



## IA ON THE WEB

**Aerofiles: A Century of American Aviation** (<http://aerofiles.com/home.html>) features historic and contemporary info on air museums, aircraft, airports, and much more. Also, **Abandoned and Little-Known Airfields** ([www.airfields-freeman.com/index.htm](http://www.airfields-freeman.com/index.htm)), a historic catalog and images of more than 1,300 airfields in all 50 states.

**Baltimore Streetcar Museum** ([www.baltimoremd.com/streetcar/carstock.html](http://www.baltimoremd.com/streetcar/carstock.html)). Features photos and brief histories of the cars (tour site—1994 Annual Conference).

**Ellicott City (MD) B&O RR Station Museum** ([www.ecb-orail.org](http://www.ecb-orail.org)). Learn about the station's history, exhibits, and programs.

**From the Stove to the Electric Range** ([www.sciencetech.technomuses.ca/english/collections/stoves.cf](http://www.sciencetech.technomuses.ca/english/collections/stoves.cf)). Canada Science & Technology Museum's stove and electric range collection. Topics include fuel choices; kitchen stove manufacturing in Canada; electrification and spin-off industries; early electric cooking, 1900-20; different styles of electric range, 1920-40; industrial design and standardization, 1940-60; innovation and sophistication in the 21st century; marketing and consumerism; and energy consumption and efficiency. Developed by Louise Trottier [SIA].

**IA Recordings** ([www.iarecordings.org](http://www.iarecordings.org)). English-based videographer specializes in industrial subjects. The website includes links to numerous, mostly European, IA sites. Organized by category (iron, canals, etc.).

**Maryland Gristmills, Iron Furnaces, and Tanneries** ([www.mdarchives.state.md.us](http://www.mdarchives.state.md.us)). Links to the McGrain collection of the Maryland State Archives with listings of early industrial sites by county. Click on Special Collections, SC 4300, Series 5, History of Molinography. Also the Bibliography of Industry in Maryland by clicking on Baltimore County Maps and Research Links, Historic Preservation. John McGrain [SIA] is the retired Baltimore County Historian.

**The Mill at Britannia Copper Mine** (<http://theconcentrator.ca/english/index.asp>). History and numerous images, including virtual 3-D walkthrough, of the concentrator, built in 1923, at Britannia Beach, BC. Now a Canada National Historic Site.

**Modern Inventors Documentation (MIND)** (<http://invention.smithsonian.org/MIND>) is a database that identifies the invention-related holdings of hundreds of archives across the U.S. Developed as a guide to researchers by the Smithsonian's Lemelson Center.

**National Cigar Museum** ([www.cigarnexus.com/nationalcigarmuseum/acquisitions/index.html](http://www.cigarnexus.com/nationalcigarmuseum/acquisitions/index.html)). Extensive collection of cigar ephemera, mostly devoted to packaging and advertising, although some coverage given to manufacturing.

**Ohio & Erie Canal Travel Itinerary** ([www.cr.nps.gov/nr/index.htm](http://www.cr.nps.gov/nr/index.htm)). Highlights 49 places from Cleveland south to New Philadelphia, OH, that reflect the history of the transportation corridor.

**Oxford Furnace and Shippen Manor** ([www.wcchc.org](http://www.wcchc.org)). Restored mid-18th-c. iron furnace in Warren County, NJ.

**Photographs of Hedda Morrison** ([www.heddammorrison.com](http://www.heddammorrison.com)). Hong Kong in 1946-47, including many striking images of the working harbor and Chinese manual labor.

**Purple People Bridge** ([www.purplepeoplebridgeclimb.com](http://www.purplepeoplebridgeclimb.com)). Ever wanted to climb the top chord of a long-span truss bridge? Well, here's your chance. Cincinnati's Newport Southbank Bridge, a through-truss bridge over the Ohio River originally built in 1872 by the Louisville & Nashville RR and closed to traffic in 2001, has been painted purple and turned into a tourist attraction. With proper safety precautions, visitors can climb to a height of 140 ft. above the river. The website offers details and photos.

**USS Macon** ([www.mbari.org/news/news\\_releases/2006/macon.html](http://www.mbari.org/news/news_releases/2006/macon.html)). On-going underwater archeology of the wreck of the naval airship that crashed off Monterey, CA, in 1935. The 785-ft.-long dirigible was the largest ever built. The site, some 1,500 ft. below the surface, is described as "industrial in nature," including the Macon's German-built Maybach 12-cylinder gasoline engines.

"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 by e-mail: [phsianews@aol.com](mailto:phsianews@aol.com). ■

## MEMBER NEWS

**Brian Cleven**, an archeologist with R. Christopher Goodwin & Assoc. in Frederick, MD, married **Kate Marston** in Severna Park, MD, on Oct. 21. Brian and Kate met on the post-conference tour of Martinsburg and Harpers Ferry, WV, during the 2001 Annual Conference, Washington, DC. Kate is the sister of HAER Architect **Christopher Marston**, a former SIA director, and is the daughter of SIA member **M. Lee Marston**. Brian is a graduate of Michigan Tech's IA program and first worked with Christopher on the HAER Blue Ridge Parkway recording project in 1997.

**Charles K. Hyde**, history professor at Wayne St. Univ., a past SIA General Tools Award recipient, and a coordinator of the 2005 Fall Tour in Detroit, helped to organize the Automotive History Authors Day and Book Fair at the Detroit Public Library in Sept. Charlie has published *Riding the Roller Coaster* (2003), a history of Chrysler, and *The Dodge Brothers: The Men, the Motor Cars and the Legacy* (2005). The Library of Michigan placed each on its annual list of notable books. Charlie and the book fair were the subject of a feature article in the *Detroit Free Press* (Sept. 13, 2006, p. 3B). ■

## IA EXHIBITS

**Railroads and the American Industrial Landscape: Ted Rose Paintings & Photographs**, which opened at the Haggerty Museum of Art in Milwaukee in Mar. 2006 (*SIAN*, Winter 2006), will be at the California State Railroad Museum in Sacramento from Nov. 4 to Jan. 7. Ted Rose is known for his paintings and photographs of the last days of steam railroading in the 1940s and 1950s.

The **National Museum of Industrial History** in Bethlehem, PA (*SIAN*, Winter 2005), has started offering tours of its in-storage artifacts. The collection features a wide range of machines and models, some acquired from the former Bethlehem Steel Co. and others on loan from the Franklin Institute and the Smithsonian Institution, including some of those originally from the 1876 Centennial International Exhibition in Philadelphia, and later on display in the Arts & Industries Building on the national mall in Washington. NMIH is planning a permanent installation in a new museum to be developed in the former Bethlehem Steel Works' Electric Repair Shop and No. 2 Machine Shop, but more than \$9 million has yet to be raised to restore and make the buildings ready as a museum. The artifacts are currently stored in a warehouse

at the Lehigh Valley Industrial Park III in Hanover Twp. Info: [www.nmih.org](http://www.nmih.org).—*The (Bethlehem) Morning Call* (Aug. 7, 2006)

**The Triborough Bridge: Robert Moses and the Automobile Age** will be on view at the Transit Museum in Brooklyn Heights, NY, through Apr. 2008. The suspension bridge, which opened in 1936, was at the nexus of a highway system designed by Robert Moses to access the metropolis's parks, beaches, and suburbs. The exhibits feature photographs, maps, and historical assessments of the influence of Robert Moses on the development of NYC. Info: [www.mta.nyc.ny.us/mta/museum/index.html](http://www.mta.nyc.ny.us/mta/museum/index.html).

**Under Your Feet: Mining in Bartow County** is a temporary exhibit on display at the Weinman Mineral Museum in Cartersville, GA, through Jan. 13, 2007. The exhibit includes a 2 x 4-ft. model of an 1850s iron furnace, patterned after the ruins of a furnace near White, GA. It also features historic photographs, mineral specimens (ochre, barite, iron ore, gold, and other minerals historically mined in northwest GA), and hands-on activities for children. Info: 770-386-0576—*The Daily Tribune News (Cartersville)* (Sept. 2, 2006) ■

## NOTES & QUERIES

**Turbine Governors Available.** The Midway Village & Museum Center in Rockford, IL, is de-accessioning a portion of its large collection of mechanical hydraulic-turbine governors. The governors, acquired in 1985, fall outside of the museum's current collection policy and will be donated to an organization interested in industrial history. The governors available for donation date from about 1920 and include a Lombard Governor Co. Type F (4-weight, belt-driven, Pickering-type ballhead with horizontal hydraulic cylinder on a 19th-c.-style, arched-leg, cast-iron base); Allis Chalmers (Harting-type ballhead); Pelton Waterwheel Size 0-5 (belt-driven ballhead and pump, horizontal hydraulic cylinder, and a pressure tank and oil sump in the governor base); and James Lumb & Sons (vertical, 2-weight, belt-driven for large gas engines). Info: Laura Batchelder, Curator, 815-397-9112, ext. 108; [laura@midwayvillage.com](mailto:laura@midwayvillage.com).

**Wanted:** A good quality (suitable for publication) photo of the aftermath of the **Pennsylvania RR's accident at Woodbrige, NJ** on Feb. 6, 1951. Contact: A. J. Bianculli [SIA], 3 Toth Lane, Rocky Hill, NJ 08553; (609) 921-2380.

**Canal History & Technology Symposium.** The list of speakers has been set for the annual symposium to be held Mar. 17 at Lafayette College in Easton, PA. The all-day event will feature a variety of canal-related presentations. As in the past, a copy of the *Proceedings* will be distributed to all of those who attend and will be available for purchase

by the general public after the symposium. The speakers are: William Gerber [SIA], *Locks and Canals of the Merrimack River*; Thomas Grasso [SIA], *Canals at Cohoes; Waterpower and Navigation*; Robert Kapsch [SIA], *The Shenandoah River Navigation*; Emory Kemp [SIA], *Adoption of European Engineering Innovations to Create a Modern American Commercial Inland Navigation System*; Robert Passfield [SIA], *Design Evolution: Reconstructed Timber Swing Bridges on the Rideau Canal and Reconstructing Timber Bridges at Parks Canada*; and John Thompson, *Coping with the Elements and Chicago on the Illinois & Michigan Canal, 1848-1943*. Info: [www.canals.org](http://www.canals.org); (610) 559-6616; [chtp@rcn.com](mailto:chtp@rcn.com).

**Help Restore Boston & Maine No. 3713.** The Lackawanna & Wyoming Valley chapter of the Railway Historical Society is heading a fundraising project to restore the steam locomotive built in 1938 and commonly known as the "Constitution." The restored 4-6-2 will be the first American-manufactured engine (Lima) to be used in regular excursion service by the Steamtown National Historic Site, Scranton, PA. To make a contribution and info: L&WV RHS, Box 3452, Scranton, PA 18505; [www.laurellines.org](http://www.laurellines.org).

**Copper Country Research Travel Awards.** The Michigan Tech Univ. Archives & Copper Country Historical Collections is offering awards for the 2007 calendar year. Grants are for up to \$750 and provide support for travel, food, and lodging to carry out research using the collections. Topical

research areas include: Michigan's western Upper Peninsula; industrial history, particularly copper mining and its ancillary industries; social history, including workforce issues, immigration and ethnicity; urban and community development along the Keweenaw Peninsula; transportation; and the environment. Review of applications will begin on Jan. 22, and travel must be completed by Dec. 15, 2007. Info: University Archivist, J. Robert Van Pelt Library, 1400 Townsend Dr., Houghton, MI 49931; (906) 487-2505; [copper@mtu.edu](mailto:copper@mtu.edu).

**Pennsylvania History Research Scholarships.** The Pennsylvania Historical & Museum Commission (PHMC) invites applications for its 2007-08 Scholars in Residence Program supporting up to eight weeks of full-time research and study in manuscript and artifact collections maintained by any PHMC facility, including the PA State Archives, the State Museum of PA, and 25 historic sites and museums around the state. Collaborative residencies fund original analytic or synthetic research that relate to the interpretive mission and advance programmatic goals of a PHMC program or facility. A collaborative residency must be filed jointly by the interested scholar and the host facility. Residencies are open to independent scholars, academics, public sector professionals, grad students, educators, filmmakers, and others. Stipends are awarded at the rate of \$375/wk. Deadline: Jan. 12, 2007. Info: [www.phmc.state.pa.us](http://www.phmc.state.pa.us); (717) 787-3034.

**Gas Lighting Systems.** *SIAN* (Winter 2003) reported on the rare survival of the "isolated" gas-lighting system at the Vanderbilt family's Sagamore estate in NY's Adirondacks. Bernard Drew [SIA] writes that his family toured Sagamore in summer 2005, and for the first time the guided tour included the basement's gas-lighting system. He also writes that another such system survives at the Red Lion Inn in Stockbridge, MA. The venerable country hotel still has its Springfield-made equipment in place. The inn was rebuilt in 1897 following a fire, and it's likely that's when the system was installed. Teddy Roosevelt once stayed there—and may have read by the gas lights.

**Call for Papers: The Effects of Mass Production on the American Clock Industry, 1830-1920.** The National Assn. of Watch and Clock Collectors is seeking speakers and paper presentations for its annual conference in York, PA, Oct. 25-26, 2007. Topics of interest include the development of the brass industry in America; processing of spring steel, 1830-1900; transition from waterpower to steam power in American industry; and machine tools that made mass production possible. Info: [DJGClocks@aol.com](mailto:DJGClocks@aol.com); (410) 987-5915.

**BigStuff2007.** Following the successful Australian conference, BigStuff2004, a sequel, BigStuff2007, will be held Sept. 11-14 in the Ruhr coal and steel region in Germany. It will be organized by the German Mining Museum in Bochum, in partnership with the Westfalian Museum of Industry in Dortmund (tour sites—2001 SIA Study Tour; *SIAN*, Spring 2001). The conference is aimed at all of those who are involved with the preservation of large industrial heritage

objects and sites, and will be international in scope. The conference language will be English. Presentations, workshops, and tours will focus on preservation strategies and interaction with large industrial objects and infrastructure. At the same time, a major emphasis will be the difficult conservation conditions pertaining to industrial objects, in particular those in open-air sites (e.g., pit-head frames, blast furnaces, etc.). One of the goals is reaching an international consensus with the possibility of a proclamation concerning large objects of industrial heritage. Info: [www.iiconservation.org/news/calendar.pho?idnr=92](http://www.iiconservation.org/news/calendar.pho?idnr=92) or [BigStuff07@bergbaumuseum.de](mailto:BigStuff07@bergbaumuseum.de).

**Corrections.** *SIAN* (Summer 2006) incorrectly reported that Susan Appel [SIA], who led the St. Louis brewery tour (2006 Annual Conference), was affiliated with the Univ. of Illinois, Urbana-Champaign. She is in fact a professor of art history down the road at Illinois State Univ. As well, it was reported in the same article that American Steel Foundries in Granite City, IL, produces motor housings for GE's Electromotive Division, when in fact it produces them for the former GM Electro-Motive Division, which was sold to Greenbrier in 2004 and now goes under the name Electro-Motive Diesels. Thanks to David Page [SIA] for pointing out the error.

The SIA is pleased to report the receipt of a check in the amount of \$71.96, royalty payment for **Historical Archaeology** by Robert Schuyler, ed., published by Baywood Publishing. The textbook is a compilation of 35 essays and has been in print since 1978. It is now in its 5th printing. Info: <http://baywood.com>. ■

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## **FORD'S MODEL T** *(continued from page 7)*

the proposed Model T rooms results in placements for four or five principal machine tools. Only one elongated quadrangle is clearly for a lathe; other groupings could indicate a drill press, milling machine or band saw. The lack of detailed invoices in Ford archives and incomplete runs of contemporary tool catalogs severely limit the possibility of identifying specific models, even though some of the manufacturers and suppliers Ford purchased from are known. Some conjectural workbenches are shown, since they would have undoubtedly been useful in shopwork.

Other evidence and observations for lighting and mechanical power are presented in the report's photos and drawings, which encompass Ford's office, the office spaces of his staff, the main third floor drafting room, and the dimensions of auto erection stands appearing in company photographs.

The entire 145-page report with 111 illustrations is for sale by the Model T Automotive Heritage Complex, Inc. For a copy of *Invented Here: An Industrial Archeological Investigation of the Model T Experimental Room and Associated Spaces at Henry Ford's Piquette Avenue Plant*, send a check made out to T-PLEX for \$55.00 (which includes shipping) to T-PLEX, 140 Edison Ave., Detroit, MI 48202-1559.

Richard K. Anderson, Jr.



## CALENDAR

### 2007

**Jan. 9-14: Society for Historical Archaeology Annual Conference, Williamsburg, VA.** Info: [www.sha.org](http://www.sha.org).

**Mar. 17: Canal History & Technology Symposium, Lafayette College, Easton, PA.** See article in this issue. Info: [www.canals.org](http://www.canals.org); (610) 559-6616; [chtp@rcn.com](mailto:chtp@rcn.com).

**Mar. 28-31: Vernacular Architecture Forum Annual Meeting, Savannah, GA.** Info: [www.vernaculararchitectureforum.org](http://www.vernaculararchitectureforum.org).

**Apr. 27-29: Industrial Heritage for the Future, TICCIH Intermediate Conference, Warsaw, Poland.** Pre- and post-conference tours of canals, textile mills, and other industrial sites. Info: [www.mnactec.com/ticcih](http://www.mnactec.com/ticcih).

**June 1-2: Business History Conference Annual Meeting, Case Western Reserve Univ., Cleveland, OH.** Theme: Entrepreneurial Communities. Info: Carol Lockman, Box 3630, Wilmington, DE 19807; (302) 658-2400; [clockman@hagley.org](mailto:clockman@hagley.org).

**June 7-10: SIA ANNUAL CONFERENCE, PHILADELPHIA, PA.** Paper proposals requested. See article in this issue. Info: [www.sia-web.org](http://www.sia-web.org).

**Sept. 11-14: BigStuff2007, Dortmund, Germany.** See article in this issue. Info: [www.iiconservation.org/news/calendar.pho?idnr=92](http://www.iiconservation.org/news/calendar.pho?idnr=92) or [BigStuff07@bergbaumuseum.de](mailto:BigStuff07@bergbaumuseum.de).

**Sept. 27-29: SIA FALL TOUR, ELY, NV.** Info: [www.sia-web.org](http://www.sia-web.org).

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

## 2007 Fall Tour to Ely, NV

The SIA Board has accepted a proposal by the Nevada Northern Ry. to host the 2007 Fall Tour in Ely, NV, Sept. 27-30.

Last year the U.S. Dept. of the Interior designated the Nevada Northern as a National Historical Landmark. The press release stated: "Nevada Northern . . . is the best-preserved, least altered, and most complete main yard complex remaining from the steam railroad era. The Nevada Northern Railway was established in 1905 to support the area's booming copper mining industry. The era of dieselization of the railroad industry during the second half of the 20th century led to alterations and demolitions of railroad yards and shops nationwide. The East Ely yard escaped modernization because of its geographical remoteness and the decline of the mining industry it once served."

The Nevada Northern operates two steam locomotives (each nearly 100 yrs. old) and two 50+ yr.-old diesels. Our tour will include the yard complex, an extended visit to the Robison copper mine (the reason the railroad was established in 1905), as well as other local sites including the 1870s mining towns of Hamilton and Treasure Mountain. The plan is to hold the Saturday-night banquet aboard the dining car of the Ghost Train on a twilight excursion. The tour hotel is the historic Hotel Nevada, which when it was built in 1929 was the tallest building in Nevada. It has been renovated and has all the usual modern facilities.

Ely is best reached by flying into Las Vegas. Plans are underway for some activities in Las Vegas, and for optional transportation to/from Ely (about 250 mi.). Ely is in the high desert of the Great Basin at about 6,900 ft., so temperatures are moderate in Sept.

The Nevada Northern was the subject of a feature article in the Oct. 2006 issue of *Trains*. There is also much more information on their web site: [www.nevadanorthernrailway.net/index.htm](http://www.nevadanorthernrailway.net/index.htm)

Watch the SIAN and the SIA Website ([www.sia-web.org](http://www.sia-web.org)) for updates. Registration materials will be sent to members in mid 2007.

Jay McCauley

Department of Social Sciences  
Michigan Technological University  
1400 Townsend Drive  
Houghton MI 49931-1295

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