

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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SAN JOSÉ SIA 2008 ANNUAL CONFERENCE WRAP-UP

While a great many people were watching the latest Indiana Jones movie, over 110 real archeologists and friends came to San José to attend the 37th Annual Meeting of the SIA, May 29-June 1, with nary a single whip or fedora in sight.

As we searched for something that tied together the rich diversity of Bay Area industry over the years, the one common thread was change, hence the conference theme, "Change Is the Constant." Many of the event venues and tour destinations echoed this theme. Indeed, even the term Silicon Valley is now somewhat a misnomer, as the last major semiconductor fabrication facility (a "fab"), Intel Fab D2, was closed shortly before the conference. This theme of deindustrialization was picked up by Saturday's papers track, *Ciao Industria*, organized by Michigan Tech IA graduate

student Cameron Hartnell, who attended SIA 2008 with help from one of our travel grants. Four different papers about deindustrialization were presented, reflecting trends in and beyond the Silicon Valley.

A driving factor for change in Silicon Valley has been the semiconductor industry's ability to continue to meet Moore's Law. In 1965 Gordon Moore, a Fairchild Semiconductor and Intel co-founder, observed that the number of transistors that could be economically produced on an integrated circuit seemed to be doubling every two years. Through almost incomprehensible amounts of effort, the industry has been able to maintain this exponential curve for over 40 years. The Friday Roots of High Tech tour ended at the **Intel Museum** which traced the company's 40-year history and featured a thread on Moore's Law. Although completely different technology, the other

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Jay McCauley

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The rotary smelter at the New Almaden mercury mines was installed in the 1940s and operated until 1975. The mercury vapor was condensed in the zigzag pipes. The sulfur dioxide gas was vented to the air.

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driving force has been a similar curve for disk storage, which was invented in San José in 1956. The first commercial disk drive held 5 Megabytes, not even enough to store one MP3 song today!

There also have been spectacular failures in Silicon Valley. In the period 2001-05, Joint Venture Silicon Valley Network estimates that well in excess of 200,000 jobs were lost in the "perfect storm" of the dot com collapse and the rapid rise of off-shore manufacturing and software development. This is the most concentrated job loss anywhere since the Great Depression. Yet, we didn't see the physical impacts of this massive disruption that we have seen in past conference and fall tour venues. Sure, there were some "see-through" office buildings, but their investors are just patiently waiting for the "next big thing."

Several of the tours on Thursday, May 29 had elements from the first "hockey stick" growth curve. Some people working out of a garage in San José came up with a new product. It was an instant hit, and within a few years there

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

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were a great many new companies, shipping millions of units all over the country. Except that was the 1870s and the industry was the canning and packing of fruit! Almost 30 SIA members and friends had a taste of Cannery Life by walking through a workers' neighborhood near two major canning and packing plants. The Japanese American Museum of San José helped arrange another tour lead by 81-year-old Jimmy Yamaichi who had a wealth of stories about Japantown and the previous Chinese enclave there, Heinlerville. The area had a number of canning and packing plants, including the aromatic pickle vats that didn't close until the 1980s. The third tour started with a visit to a single-stream recycling plant, smelly, noisy, just a

Of Note: The Model T

Robert Casey [SIA], *The Model T: A Centennial History*. Johns Hopkins Univ. Pr., 2008. 148 pp., (heavily) illus. \$24.95. Although there have been innumerable scholarly and popular books, articles, and studies on Henry Ford's celebrated machine that unarguably put a great percentage of the world on wheels, as well as even more ink on the man himself, Casey's laudable account may well be the last word on both. The Model T, which made its appearance in the fall of 1908, was Ford's solution to his goal of designing and producing on a massive scale a light, durable, simple to drive and maintain, serviceable car affordable by the masses. His success in this is seen in the fact that over 15 million Ts were cranked (!) out in Ford plants around the world. In the 19 years of its production, and despite hundreds of mostly minor modifications, its principal design elements, many unique to the "Ford Car," survived essentially unchanged, most conspicuously its idiosyncratic planetary transmission, ignition system, and pumpless "thermo-syphon" cooling system.

Of modest size, Casey's engaging and important work covers literally every critical aspect of this legendary auto's history: technological, commercial, and social; from the state of "Automobility" in 1908 through the Model T's design process (creation), manufacturing, marketing, owning and driving, and finally, to its "meaning," while throughout recognizing the overweening influence of Henry Ford's hand in the firm's affairs both major and minor.

To SIA readers the most interesting section of the book probably will be that treating the Model T's manufacture. It is heavily based on Ford's extensive photographic archive, with emphasis on the mass-production processes at the celebrated Highland Park plant in the mid-teens. No fewer than 25 high-quality photos of stages in the car's assembly are shown, these alone well worth the price of admission.

Robert M. Vogel

bit dangerous, a perfect SIA tour venue! This tour then went on to the **Adobe corporate headquarters complex** in downtown San José. The buildings are the greenest in the U.S., having earned Leadership in Energy and Environmental Design (LEED) Platinum certification by the U.S. Green Buildings Council. Of particular note for the SIA is that another Adobe building in San Francisco has also earned LEED Platinum, and it was built in 1905! Creative adaptive reuse is VERY green!

Some attendees opted for a self-guided tour of the Valley using the light-rail system, termed *IA on VTA*. Light rail follows some of the old rail rights-of-way, so goes by historic industrial sites as well as their contemporary replacements. One site in particular (property north of the Race Street Station) is a mirror of the industrial history of the Valley. It had been developed originally as a cannery, then redeveloped as high-tech offices and manufacturing with several different occupants over the years, and is being redeveloped again as high-density housing. Thursday ended with an opening reception at **History San José**, including rides on their historic trolleys.

The Friday tours went to industrial sites all over the Bay Area. One tour visited the historic industries of Santa Cruz County: redwood logging, lime processing, and cement. The



Bob Stewart

SIA tour group on the steps of the Cemex cement plant in Santa Cruz County.

tour was complemented by a paper on Saturday discussing the Cowell family who were involved in all of these industries. Another tour first stopped at **Middle Harbor Shoreline Park**, which is in the middle of the bustling Port of Oakland, and features a great deal of material interpreting the history of the port, including the Naval Supply Depot which became the park. The tour then continued on to Richmond and the site of the **Kaiser Shipyards**, including a visit to the **SS Red Oak Victory**, built here during World War II. In a span of just over three years, these yards built an

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JOIN US AT THE THREE RIVERS!

SIA 38TH ANNUAL CONFERENCE—May 29-31, 2009

The SIA will return to Pittsburgh for the first time since 1993. "River Heritage" will be the theme. The industrialization of the Monongahela and Ohio rivers in southwestern Pennsylvania in the 19th century placed the region on the map as a leader of coal and steel production in the world. Today, the various brownfields and industrial complexes, not to mention the extant navigation improvements on the Monongahela, tie industrial heritage to the de-industrialization of the region.

The hotel will be the William Penn Omni in downtown Pittsburgh, within walking distance of eateries, shopping, and transportation hubs. Rates: \$119/night single or double. Saturday paper sessions and business lunch will also be held in the hotel. More information will be added to the web page as it becomes available: www.sia-web.org.



Monongahela wharves, Pittsburgh, Pa., ca. 1902.

Detroit Publishing Co. Collection, Library of Congress

Minutes of the 2008 Annual Business Meeting

President Robert Stewart called the meeting to order at 1:05 p.m. in the Student Union Building of San José State University, San José, Calif.

Opening Remarks. President Stewart thanked the Knight Chapter of the SIA, the Computer History Museum, History San José, and the Dept. of Anthropology-San José State University for their invaluable support in organizing the annual conference. He thanked Leonard Shustek, chairman of the board of trustees of the Computer History Museum, for his generous financial and organizational support.

The president noted that the SIA Board of Directors had its first successful "virtual" meeting in February thanks in part to Jay McCauley and Don Durfee who patiently guided the board in the intricacies of the MTU-based electronic meeting system. The SIA saved about \$4,000 in travel expenses by holding this virtual meeting. The board also adopted a policy at our Ely meeting for supporting requests for concurrence and support in preservation projects.

Treasurer's Report. Treasurer Nanci Batchelor reported that SIA is classified as tax-exempt under the IRS Code 501(c)(3) as an educational organization and we file a Form 990 tax return yearly. The SIA maintains its books and records on a cash basis, and maintains a calendar year for tax and reporting purposes. The following report is for the year that ended Dec. 31, 2007.

We began 2007 with a total fund balance of \$211,230. Cash receipts for the year totaled \$99,922. As usual, the majority of our annual income comes from the various membership dues categories. In 2007 the total dues received were \$84,945. The remaining balance is comprised of interest income (\$4,258), publication sales (\$1,787), and contributions in both general and restricted funds (\$2,907). Total expenses for the year were \$96,410. The production costs of our publications, the newsletter and the journal, combined for a total of \$39,223. The balance of \$71,797 was spent on a combination of labor (\$30,099), postage (\$4,134), insurance and legal fees (\$2,222), prizes, awards and scholarships (\$2,300), preservation grants program (\$7,439), and office overhead, including a new computer and a few miscellaneous items. The SIA closed 2007 with revenues exceeding expenses by \$3,513 and a total fund balance of \$214,742 of which \$29,576 is in restricted funds. To date in 2008 the SIA has had a total of \$45,753 in cash receipts and has expended \$42,073.

Grants Program. Chair of the committee on grants, Dennis Furbush, reported that the committee and the board voted to fund a proposal and grant application by Mark Foster.

Student Scholarships. President Stewart read a report by Patrick Harshbarger, chair of the student scholarship committee. The SIA awarded a travel stipend to Cameron Hartnell, a Ph.D. candidate at Michigan Tech. The president thanked members who have contributed to the scholarship fund.

Terms on the Board. Bill McNiece, Kevin Pegram, Jay

McCauley, and Chris Andreae have completed their terms. The president thanked them for their service and asked that they stand and be recognized.

The president recognized the fine work on an *Analysis of Membership* produced by Jim Bouchard and thanked him for his efforts.

Chapter Reports. The chair of the chapters committee, Jay McCauley, called upon chapter members to stand and be recognized. Members from the following chapters responded: Meigs, Roebeling, NNEC, SNEC, Northern Ohio, Wabash & Ohio, Knight, Kleptko, Chicago Industrial, and Oliver Evans.

Vogel Prize. The chair of the Vogel Prize Committee, Lance Metz, reported via mail that the Vogel Prize had been awarded to Patrick Malone [see article in this issue]. Malone thanked several individuals for their help in researching the paper.

General Tools Award. The General Tools Award Committee Chair, Charles Hyde, presented the award to Chris Andreae [see article in this issue].

Headquarters Report. Patrick Martin, Executive Secretary, briefly commented on operations at headquarters.

Tours & Conferences. Bode Morin, Events Coordinator, reported that the next event, Fall Tour 2008, will be held in Chattanooga, Tenn. Planning is well advanced, hotel reserved, and site tours arranged. Next year's Annual Conference will be held in Pittsburgh. Future plans include tours in Rosedale, N.Y. and Southern Arizona. Plans for study tours in Chile, Mexico, and Japan are in preliminary stages.

President Stewart expressed the organization's gratitude to Jay McCauley for organizing the SIA 2008 Annual Conference and the 2007 Fall Tour to Ely, Nev.

IA Slide Collection. President Stewart expressed the SIA's appreciation to Robert Vogel for contributing his 35mm slide collection of IA images to MTU [see note in this issue].

Nominations Committee. Cydney Millstein, Chair of the Nominations Committee, reported on the election results. The newly elected officers are: Nominating Committee: Erin Timms; Directors: Perry Green, Amanda Gronhøvd, and Tim Mancl; Vice President: Jay McCauley; President: Mary Habstritt.

President's Address. President Stewart passed the newly acquired gavel, a light-weight ball-peen hammer, symbolizing the office of President, to Mary Habstritt, who addressed the assembly, thanking Bob Stewart for his service, and laid out some ideas for how the SIA can better assist local chapters and how members can become more involved.

The meeting was adjourned on a motion made and seconded from the floor at 1:50 p.m.

Respectfully submitted,
Robert C. Stewart
Secretary Pro Tem

astounding 747 ships! A third tour focused on extractive industries in the Bay Area—solar salt production and the mercury mines at **New Almaden**, the oldest industrial site in the area. There were two papers on Saturday discussing aspects of these mercury mines. The final tour visited some of the places where today's high-tech industries can trace their roots. One of the stops was the air dock at **Moffett Field**. A few weeks after the Conference, the massive Hanger One was named one of America's 11 Most Endangered Places by the National Trust.

Saturday was a busy day of papers. As with all other documents, the abstracts to these papers are on-line at the SIA 2008 web site. At the Annual Business Meeting, the new officers were announced and several awards were made [see articles in this issue].

Saturday ended with a banquet at the **Computer History Museum** featuring a well-received talk by semiconductor-industry veteran and CHM Curator David Laws on the history of technology in the area. A particularly poignant moment came as he discussed the disk drive industry and how Building 25 on the former IBM campus in South San José played an important role in this development. The next slide showed the ruins of this historic building after a disastrous fire in January. Those attending the banquet on Saturday or the Friday Roots of High Tech tour were also treated to an exceptional example of IA, **Charles Babbage's Difference Engine No. 2**. The 8,000-part, mechanical, digital computer was painstakingly created from only twenty pages of original drawings and Babbage's notebooks. Its implementation at the Science Museum-London put to rest questions that had been unanswerable for 150 years. Could Babbage have built the machine with the tools and



Jay McCauley

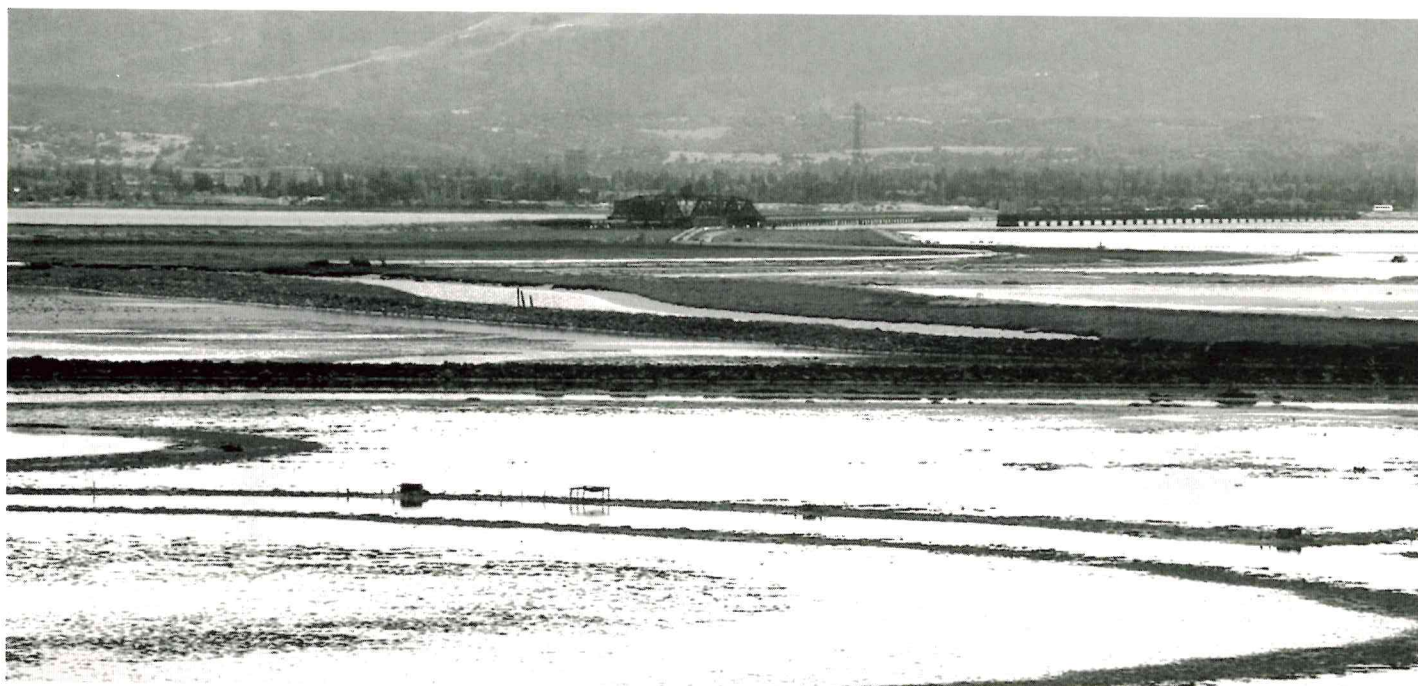
Electromechanical interlocking plant at the Southern Pacific RR tower in Santa Clara, Calif.

techniques available in 1849? Could one person crank it?

Since many attendees needed to travel on Sunday, three more walking tours and a treasure hunt were organized. One of the tours repeated the Japantown/Heinlerville tour. Another explored The Alameda and the industrial heritage along it. Through the generosity of the Buena Vista Neighborhood Association, attendees were able to visit worker homes covering a 60-year span, from the days of the canneries to the beginnings of the explosive growth in the electronics industry.

A secondary purpose to the conference was to demonstrate the use of new technologies and their

(continued on page 10)



Bode Mornin

Salt flats in San Francisco Bay.

Technical Communications and IA

Case Studies from the Iron & Steel Industry

Behind many industries is a web of paper communication. Like archeological artifacts, written and drawn documents can provide evidence about industrial sites and how they functioned. These documents provide us with a rich resource for understanding not only how the technology developed and changed but also about how the people who created them communicated with each other. By looking at the technical communication surrounding a certain industry, you can reconstruct some of its physical and social past.

In my case, I was initially interested in 18th- and 19th-century ironworks in northwestern New Jersey. After seeing many of the archeological remains, I started looking for documentation. I found records in the New York and New Jersey historical societies, county and town historical societies, and town libraries. After I widened my focus to iron and steelmaking in general, I found that there was technical communication in many places, often as the last remaining evidence of an industry. This material can be hard to find; much of it is unprocessed, in boxes. For instance, the Senator John Heinz History Center in Pittsburgh has 56 pallets of records from the Jones & Laughlin Steel Co., unprocessed. The U.S. Steel archives are in a mine outside Pittsburgh, also unprocessed. The Mount Hope Mine in New Jersey recently tore down its

changing house (the site is now occupied by Tilcon, a gravel producer) but the Rockaway Historical Society managed to save boxes of records, which are now safe in a local church.

Sometimes these records are spread far and wide. Principio Furnace, the first successful iron industry in the colonies, was in Maryland. The majority of its records, however, are at the Delaware Historical Society and there are more at the Maryland Historical Society and in the Hall of Records in Annapolis. A large group of the correspondence of Charles Carroll, who was a principal in the ironworks, found its way to the New York Public library. Historians who follow these trails, such as Charles B. Dew in *Bond of Iron: Master and Slave at Buffalo Forge*, find their sources are scattered by time and chance; he began researching near the site of the forge in Virginia, found further documents in North Carolina, South Carolina, Georgia, and Alabama, but eventually found the mother lode at the State Historical Society of Wisconsin.

Many industrial sites, when they close, discard their documentation. There are enough cases, however, where the business owners keep the documents, put them in a box, and they are inherited by the next generation, eventually finding their way to a public collection. Even when records are missing, those of an equivalent industrial site can be used to recreate, at least, the context.

August 1805											
George Taylor & Co. Proprietors											
Martha Furnace Journal (1801-1815) near Batsto, N.J.											
Day	1	2	3	4	5	6	7	8	9	10	11
Monday	1	1	1	1	1	1	1	1	1	1	1
Tuesday	2	1	1	1	1	1	1	1	1	1	1
Wednesday	3	1	1	1	1	1	1	1	1	1	1
Thursday	4	1	1	1	1	1	1	1	1	1	1
Friday	5	1	1	1	1	1	1	1	1	1	1
Saturday	6	1	1	1	1	1	1	1	1	1	1
Sunday	7	1	1	1	1	1	1	1	1	1	1
Monday	8	1	1	1	1	1	1	1	1	1	1
Tuesday	9	1	1	1	1	1	1	1	1	1	1
Wednesday	10	1	1	1	1	1	1	1	1	1	1
Thursday	11	1	1	1	1	1	1	1	1	1	1
Friday	12	1	1	1	1	1	1	1	1	1	1
Saturday	13	1	1	1	1	1	1	1	1	1	1
Sunday	14	1	1	1	1	1	1	1	1	1	1
Monday	15	1	1	1	1	1	1	1	1	1	1
Tuesday	16	1	1	1	1	1	1	1	1	1	1
Wednesday	17	1	1	1	1	1	1	1	1	1	1
Thursday	18	1	1	1	1	1	1	1	1	1	1
Friday	19	1	1	1	1	1	1	1	1	1	1
Saturday	20	1	1	1	1	1	1	1	1	1	1
Sunday	21	1	1	1	1	1	1	1	1	1	1
Monday	22	1	1	1	1	1	1	1	1	1	1
Tuesday	23	1	1	1	1	1	1	1	1	1	1
Wednesday	24	1	1	1	1	1	1	1	1	1	1
Thursday	25	1	1	1	1	1	1	1	1	1	1
Friday	26	1	1	1	1	1	1	1	1	1	1
Saturday	27	1	1	1	1	1	1	1	1	1	1
Sunday	28	1	1	1	1	1	1	1	1	1	1
Monday	29	1	1	1	1	1	1	1	1	1	1
Tuesday	30	1	1	1	1	1	1	1	1	1	1
Wednesday	31	1	1	1	1	1	1	1	1	1	1
Total	31	31	31	31	31	31	31	31	31	31	31

Martha Furnace Journal (1801-1815) near Batsto, N.J.



Christopher Andreae

2008 General Tools Award Recipient

At the May 31 Annual Business Meeting in San José, the 2008 General Tools Award was presented to Christopher (Chris) Andreae. The combined education, career and professional accomplishments of this year's recipient demonstrate an unequivocal commitment to bringing industrial archeology into sharp focus in studies of historic places. Since the 1970s, Chris has been untiring in his willingness to share his knowledge about the industrial past with students, youth, colleagues, enthusiasts, and academics. He has led fights to preserve historic industrial sites and has demonstrated the value of industrial archeology as an integral part of heritage recording and conservation strategies.

Chris has been a member of the SIA since 1974 and has made significant contributions as a Director, Vice-President, President, and organizer of tours and conferences. He has been a key figure in Canadian industrial archeology through his participation in IA organizations, teaching, site studies, and publications, including the remarkable book, *Lines of Country: An Atlas of Railway and Waterway History in Canada*. His scholarly work includes dozens of heritage recording studies that have set a high bar for interdisciplinary approaches and for furthering our

understanding of industrial technologies, science, and economics.

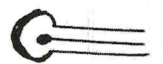
The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman of the board of General Tools Manufacturing, Inc. of New York City, and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of an engraved sculpture ("The Plumb Bob") and a cash prize. The recipient of the award is determined by the members of the General Tools Award committee, which consists of three members appointed by the President of the SIA.

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

There is a fascinating furnace journal in the Hagley Museum & Library, Wilmington Del.: the Martha Furnace Diary. Most furnace journals contain mainly financial information but this one contains notations of daily events. From it we can reconstruct life in an ironmaking village in the early 19th century, better than from any archeological evidence. Daily life depended on the weather; hauling was one of the largest parts of the industry; drunkenness was rampant; employee turnover was large. Some of the entries mixed the mundane and humorous, such as the entry of July 29, 1811: "Joseph Walner quit. Abner Cross with his Team. The general topic of conversation here is respecting a dog that passed by today. It was said that he bit several dogs and was raving mad & some say that he yet retains his Mental Faculties." The Martha journal has been transcribed by Henry Bisbee and his daughter, Rebecca Bisbee Colesar. The transcription, however, is itself rare and hard to find. All that was left of the site, as of the date of its publication (1976), was a grass covered mound in a state park.

Sometimes people keep things because they have an idea they may be important. In the historical papers of the American Iron & Steel Association, deposited at Hagley, there is a tiny furnace journal called *George Nock, His Book, Ramapo Works, Oct. 3rd, 1837*. Although the journal starts out in standard journal format (largely an accounting document), it quickly gives way to recipes to harden and temper cast steel. Someone knew this book was important, kept it, and it worked its way to the present.

(continued on page 8)

Single Shear  is
inferior to double shear
in quality but milder
in temper

Fagot Steel or what
is called Crawley Steel
and is very superior
Steel for making the best
agricultural implements
and for the general uses
of a country smith
they work easier than
cast steel and is
inferior to double shear
Steel in quality

A journal named *George Nock, His Book, Ramapo Works, Oct. 3rd, 1837* which provides recipes for making steel.

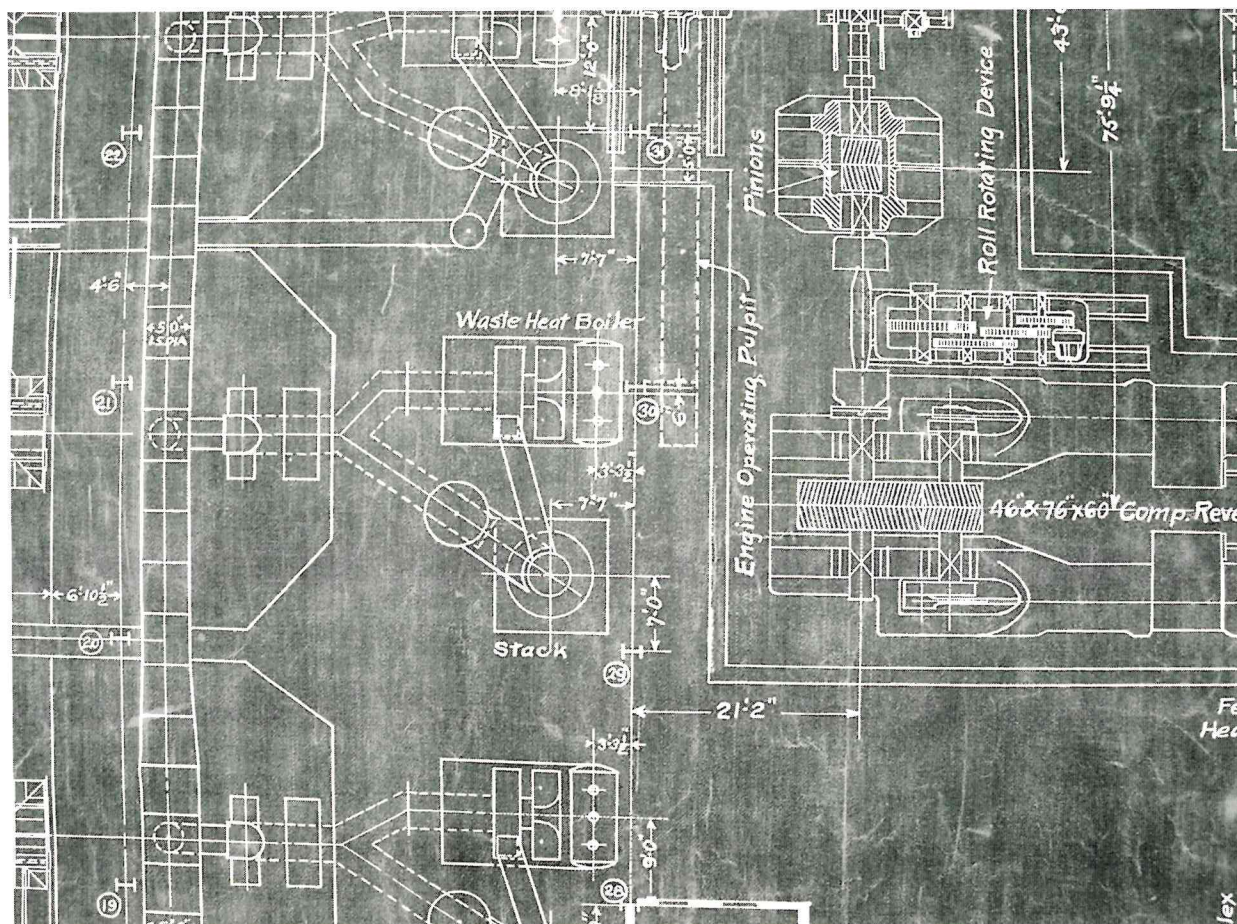
I chose to research a single company across time, to see how the technical communication changed and that study revealed to me how the technology changed as well. Lukens Steel was owned by the same family for 188 years and they gave their records to Hagley. I learned that written and drawn technical communication, in general, did not start until the late 19th century; prior to that date it was mainly account keeping and letter writing. The first documents that were used in the factory itself were records—lists of tonnage, defects, “car books” with information about the contents and movements of railroad cars, and other, mainly quantitative, information. It wasn’t until the turn of the century that workers, foremen, and managers began to communicate amongst themselves in writing and drawing. In 1910, after carbon paper came into wide use, typists took over that role and the workmen themselves did less writing.

At Lukens Steel very little changed in the technical communication between the years 1810 and 1870, and then it began to change rapidly. That reflected the state of their industrial technology—they used the same technology (with the same workers) for the first sixty years of their business. In 1870, when they went from water to steam power (a late advance given that they manufactured boiler plate), the amount of technical communication began to increase.

Suddenly there were boiler reports, indicator cards showing the amount of work produced by the steam engines, and other records kept by the employees themselves. By the end of the 19th century, workers of all sorts were carrying pocket notebooks to keep records of the results of various processes.

The greatest leap forward, in both writing and drawing, was when they installed an open-hearth furnace. It was then that they entered the world of trying to make steel with a specific tensile strength and ductility to withstand the changes in temperature in boilers. This was a world of unseen chemical and physical processes, taking place inside a closed furnace, the molten steel then poured into a mold, and it caused them to start keeping detailed records. They began to experiment and test as well, continually increasing the amount of technical communication and using new tools, such as photography and microphotography.

Both writing and drawing became an essential part of the industrial process after the turn of the 19th century. Knowledge had grown too extensive to be contained in a single mind—groups of people worked together to solve problems and one of their major tools was technical communication. At Lukens Steel, as the equipment became more complex, each machine was drawn and as the interconnecting parts of the plant grew and became more



Detail from a 1918 blueprint of Mill #5, the “Big Mill” at Lukens Steel.

2008 Vogel Prize Winner—Patrick M. Malone

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

Patrick M. Malone's article, *Surplus Water: Hybrid Power Systems and Industrial Expansion in Lowell*, has earned the 2008 Vogel Prize for most outstanding article to have appeared in the last three years of *IA*. He has discerned that the sale and use of surplus water by the Proprietors of Locks & Canals above and beyond the textile mill's normally contracted allotment was the key to business operations of the entire Lowell hydraulic system. In a place where surplus waterpower was cheap, but not always available, a system of interconnected prime movers, eventually working in concert with stationary steam engines, was needed.

As Malone makes clear, not all rivers are suited for industrial development. Early 19th-century industrialists looked for factory sites with both a substantial drop and an annually steady flow. They also

strove to make use of additional or "surplus" water. Perhaps the pioneering leader in this quest was James B. Francis who served for many years as the agent and chief engineer of the Proprietors of Locks & Canals at Lowell.

James B. Francis gained international fame for his successful development of sophisticated devices and techniques for the precise measurement of the water that was used by each of the mills in the interconnected Lowell canal system. He was the first investigator to gauge the importance of surplus water to the mill operations and developed a proportional system for the rates that the proprietors would charge for the additional water flows that the mills would utilize. His work was directly responsible for the rapid replacement of breast wheels by far more efficient hydraulic turbines at the Lowell mills during the 1860s.

As early as 1858, Francis had predicted, "The result of the surplus power at Lowell will be, I think, to run it in connection with steam." As Malone concludes, it is probable that the industrial expansion of Lowell would have stalled in the 1870s without the use of surplus power.

Malone's article is cogent, well-written, and exhibits much original research. He has shined the light of inquiry on a previously neglected aspect of Lowell as one of America's earliest planned water-powered industrial communities.

Lance Metz
Chair, 2008 Vogel Prize Committee

complex, they were drawn as well. As the plants changed, the blueprints were revised, drawn on with different-colored ink and sometimes extensions were glued to the original. Many of these documents were so well-used that they are torn and covered with fingerprints and black ash from the factory.

Lukens was sold to Bethlehem Steel in 1998. After Bethlehem went bankrupt, the plant eventually was acquired by ArcorMittal, the world's largest global steel corporation, but they only operate its modern part—the rest sits, intact, behind wire fence. Even the original house of Rebecca Lukens is there, under new architectural layers, attached to the abandoned employee store. In the past it was possible to tour the plant (see *SIAN* Winter 2005, Fall Tour, Wilmington). I was unable to do so, but by becoming immersed in the documentation I created a workable mental image of the environment as well as the industrial processes. In 1810 it was a water-powered, seventeen-man operation; by 1925 it had three main mill buildings; three open-hearth complexes; a flange shop; myriad railroad sidings; cranes; chemical labs; power-, pump-, and ice houses; and hundreds of other structures: gas producers, acetylene generators, machine and smith shops, offices, and garages. As I wrote, I had a blown-up version of a 1927 blueprint map on the wall

next to me. I was able to imagine the industrial processes from hearth to mold to soaking pit to mill and into the flanging shop or railroad cars for shipping.

The existing documentation surrounding an industry, especially the technical communication, can be a part of industrial archeology in recreating lost industrial processes. In any business after the 19th century, technical documentation was probably an integral part of the process and should be viewed as another form of evidence. Sometimes it is the most detailed evidence that remains.

Carol Siri Johnson

Carol Siri Johnson [SIA] is a professor of technical communications at the N.J. Institute of Technology. For a more detailed look at how she has used technical communications to gain insight into the evolution of the iron and steel industry, see *Prediscursive Technical Communication in the Early American Iron Industry* in *Technical Communications Quarterly*, Vol. 15, 2 (2006), p. 171-89. Also, *The Steel Bible: A Case Study of 20th Century Technical Communication* in *Journal of Technical Writing & Communication*, Vol. 37, 3 (2007), pp. 281-303.

Greater Gifts = Greater Grants

This year the SIA finally depleted the fund reserved for our Industrial Heritage Preservation Grants (IHPG). This program has provided over \$43,000 in small grants to 19 projects since 2004. Grants range from \$1,000 to \$3,000 and fund the study, documentation, recordation, or preservation of significant historic industrial sites, structures, and objects.

Knowing that the fund was nearing zero, in spite of several small donations from members, the SIA Board considered using money from operating funds for 2008 grants while planning fundraising for future awards. The new dues structure, however, which took effect with the 2008 membership year, has not yet increased the General Fund to a point where it was felt there was money to spare.

The Oliver Evans Chapter came to the rescue. The chapter had volunteered to run the 2007 Annual Conference (Philadelphia) and earmarked its share of conference proceeds for the IHPG fund. This amounted to a donation of \$2,466.10.

An additional \$700 contribution from Hudson Moving & Storage in New York, in recognition of preservation assistance from an SIA member, provided funds enough to award one key grant this year, although more than one worthy application was received.

The grant approved by the SIA Board at its May meeting went to Mark Foster of Sommerville, Mass. He has been awarded \$3,000 to conduct HABS/HAER documentation of the Baker-Robinson Oil Works, a 19th-century whale-oil refinery in New Bedford.

In late June, an anonymous donation of \$10,000 was received via the Schwab Fund for Charitable Giving. This

amazing and generous gift is the largest donation SIA has ever received. Part of it has been put to immediate use to fund two additional grants for this year, pursuant to a decision made by the board at its July meeting.

Sarah Sportman's application for \$2,903.74 was funded in full. She will use a combination of archeological surveying and mapping to document how residential space was laid out at Hammondville, an abandoned, late-19th-century, iron-ore mining town in Crown Point, N.Y. The other award provided half of the funds, that is, \$1,281, needed by Eric McFerrin for photographic documentation of historic Red Ore mine sites within the boundaries of the future Red Mountain Park, Birmingham, Ala.

That still leaves us with some distance to go. In 2005, it was decided that the SIA would award grants totaling \$12,000 per year. You can help us meet this goal.

To add your support to preserving our industrial heritage, you can make a donation online, at www.siahq.org, or donate by mail by sending a check or money order to Industrial Heritage Preservation Grants, SIA, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Dr., Houghton, MI 49931-1295.

The IHPG Committee, which reviews grant applications and makes recommendations to the SIA board each June, is chaired by Dennis Furbush, who was ably assisted this year by Nan Hachtel and Nancy Goodwin. If you have questions about the grants program, you can contact Dennis at dsfurbush@earthlink.net.

Mary Habstritt
President, SIA

SAN JOSÉ (continued from page 5)

applicability to our outreach mission. Some, like the use of a dedicated SIA 2008 web site, are pretty well known. Others, like the use of *del.icio.us* (a social bookmarking site), Flickr (image storage, tagging and geolocation), RSS feeds, Yelp (consumer ratings), and Google My Maps are much newer and less familiar. All of the Conference materials were available on the web site (<http://knightsia.org/sia2008>) weeks before the conference, and continue to be accessible. Through a new feature in Google Maps, Street View, you can even do your own virtual tours and see some of the same sites that SIA 2008 attendees did! (Click on www.google.com, select maps, type in Sunol Street, San Jose, then select Street View and click on the human figure. Try "walking" down Sunol Street from The Alameda to Auzerais, and follow along with the Cannery Life tour notes).

Jay McCauley

A Note of Thanks

Each issue of the SIAN relies on the contributions of many members and individuals who write articles, send in news clippings and e-mails, and assist the editor with sundry and often mundane tasks, like graphic design. Over the past five years, a stalwart contributor has been **Bob Chidester** who has volunteered significant effort to help with copy editing. Bob needs a little bit more time for other pursuits; he's started work on his Ph.D. dissertation at the University of Michigan on the topic of the textile mill community of Hamden, Md., and he's a new father! Our sincere thanks to Bob for his contributions to SIAN.



SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 37, No. 3

Summer 2008

COMPILED BY

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

GENERAL INTEREST

- ◆ Margaret Beattie Bogue. **Around the Shores of Lake Superior: A Guide to Historic Sites.** Univ. of Wisconsin Pr., 2007. 2nd ed., 378 pp., photos, map. \$60 hb, \$29.95 pap. Following the lake's shore counterclockwise, highlights hundreds of landmarks in Minn., Ont., Mich., and Wis. Essays on local history, including industry, provide context for points of interest.
- ◆ Rand Dotson. **New South Boomtown: Roanoke, Virginia, 1882–1884.** *Virginia Magazine of History & Biography*, Vol. 16, 2 (2008), pp. 150-90. Focused on the years immediately after the city became the headquarters for two Northern-owned railroads and emerged as one of the fastest growing urban areas in the South, article deals mainly with residents' struggles to solve problems associated with the intense industrialization and urbanization that followed the railroads' arrival. Also explains the crucial role natives played in luring the railroad and other industries to their town, contending that their belief that unfettered development would serve as a panacea for all civic needs led to infrastructure shortfalls, political turmoil, and resentments between older residents and Northern newcomers living in parts of the city developed by the railroads.
- ◆ David Edgerton. **The Shock of the Old: Technology and Global History since 1900.** Oxford Univ. Pr., 2007. 270 pp. \$26. By looking at the technologies that people actually use in their daily lives, suggests that throughout the world innovation is not as prevalent as portrayed in conventional histories of technology. Rev.: *T&C*, Vol. 49, 1 (Jan. 2008), pp. 237-8.
- ◆ David R. Gilbert, ed. **An Annotated Bibliography of Selected Books, Compact Disks and Videotapes on the History and Heritage of Civil Engineering.** American Society of Civil Engineers, July 2007. 76 pp. Avail: <http://content.asce.org/files/pdf/HH-BibliographyFinalDraft7Jul08.pdf>.
- ◆ Theodore Green, ed. **John A. Roebling: A Bicentennial Celebration of His Birth, 1806–2006.** American Society of Civil Engineers, 2006. 248 pp., illus. Reprints avail: www.pubs.asce.org/authors/reprints.html. Proceedings of the symposium held Oct. 27, 2006 in Brooklyn in honor of Roebling's 200th birthday. Papers on not just his bridges but his life, colleagues, and products of his factories.
- ◆ Douglas McVarish [SIA]. **American Industrial Archeology: A Field Guide.** Left Coast Press, 2008. 360 pp., illus. \$99 hb, \$49.95 pap. Billed as a comprehensive guide providing basic information of the most common types of structures, sites, and objects, including bridges, railroads, roads, waterways, several types of production and extraction factories, water and power-generating facilities, and others. Each chapter contains a brief introduction to the technology, illustrations that help identify important elements, and a glossary of common terms.
- ◆ **TICCIH Bulletin**, No. 40 (Spring 2008) features essays celebrating the bulletin's tenth anniversary with perspectives on the organization of TICCIH and industrial heritage from around the world. Includes essay by Pat Martin [SIA] on the North American experience. www.mnactec.com/ticcih.

WATER TRANSPORT

- ◆ Kevin Olsen. **A Great Convenience—A Maritime History of the Passaic River, Hackensack River, and Newark Bay.** American History Imprints (www.americanhistoryimprints.com), 2008. 248 pp., illus. The role of navigation during the development of northern New Jersey from the 17th century to the present, including colonial landings; military action during the American Revolution; 19th-century cargoes (bricks, coal, fertilizer, lumber, etc.); types of watercraft; Port Newark and Elizabethport in the 20th century; and efforts to clean the rivers by the EPA and other environmental agencies.
- ◆ **Ships for Victory: Liberty Ships of the Georgia Coast.** DVD, 30 min. \$20. Avail: www.shipsforvictory.com. Two Georgia shipyards that produced nearly 200 Liberty Ships during WWII. Archival footage, photos, plus interviews with crew members and shipyard workers. Proceeds benefit the Coastal Heritage Society.

RAILROADS

- ◆ James C. Burke. **British Iron on Early American Railroads.** *RH* (Spring-Summer 2008), pp. 60-65. Exploring the role of tariffs on 19th-century rail purchasing.
- ◆ H. Roger Grant. **Railroad Corporate Cultures.** *RH* (Spring-Summer 2008), pp. 8-15. Comparing Erie Lackawanna and B&O management styles of the 1960s.

- ♦ H. Roger Grant. **Rails Through the Wiregrass: History of the Georgia & Florida Railroad.** Northern Illinois Univ. Pr., 2006. 223 pp. \$36. Established in 1906 from Augusta to Madison, in northern Florida, G&F sought to develop agricultural and lumber commodities, but was beset with problems from storms to labor unrest. Rev.: *NHRS Bulletin*, Vol. 72 (Winter 2007), p. 39.
- ♦ Christopher C. N. Greenlaw. **VIA Rail.** Voyageur Pr., 2007. 160 pp. \$36.95. History of VIA, established in 1976 to operate Canada's national passenger rail system. Covers the political forces and the shifting economic conditions influencing what has largely been a story of struggle to maintain viability. Rev.: *NHRS Bulletin*, Vol. 71 (Summer 2006), p. 35.
- ♦ Vincent Guigueno. **Building a High-Speed Society: France and the Aerotrain, 1962-1974.** *T&C*, Vol. 49, 1 (Jan. 2008), pp. 21-40. Jean Bertin and others who were the driving personalities behind the 1960s effort to establish high-speed rail service.
- ♦ John Kelly. **Chicago Stations & Trains Photo Archive.** 2008. Highlights six stations: Dearborn, Grand Central, Central, La Salle St., North Western, and Union.
- ♦ John Leopard. **Duluth, Missabe & Iron Range Railway.** MBI Publishing Co., 2005. 160 pp. \$35.95. Chronological history of the railway, for most of its operations a subsidiary of U.S. Steel, that transported iron ore to docks on Lake Superior. Discussion of iron mining and ore processing, including the shift to taconite pellets in the 1960s. Rev.: *NHRS Bulletin*, Vol. 72 (Winter 2007), pp. 38-9.
- ♦ Tim and Elizabeth Mulina. **East Broad Top Narrow Gauge Tank on Flat Car 116 and Combine 14.** 2007. 50 pp, photos. \$16.99 each. (Avail: Friends of the EBT Co. Store, Box 145, Leetsdale, PA 15056; febtstore@comcast.net). Brief text and photographs in detail of the EBT's steel flat car and passenger car.
- ♦ David F. Myrick. **Western Pacific: The Last Transcontinental Railroad.** Colorado RR Museum (Box 10, Golden, CO 80402), 2006. 232 pp. \$49.95. Exhaustive study of the planning, building, and operation of the WP, which connected Utah to San Francisco. Rev.: *NHRS Bulletin*, Vol. 71 (Summer 2006), pp. 34-5.
- ♦ Cary Franklin Poole. **The Edwards Railway Motor Car Company and Its Visionary Founder, H. P. Edwards, "The Doctor of Sick Railroads."** Hot Box Pr., 2006. 190 pp. \$49.95. Edwards Motor Car of Sanford, N.C., produced its first internal-combustion engine car in 1915 and ended production in 1942. Edwards marketed the car to Southern short lines as a means of cutting expenses. Rev.: *RH* (Spring-Summer 2008), pp. 87-8.
- ♦ **Railfan & Railroad** (May 2008) includes articles on the rescue and restoration of two switcher locomotives that served the American Viscose plants at Marcus Hook, Pa. and Nitro, W.Va., and were later relocated to the plant at Roanoke, Va. It also includes an article on post-WWII diesel-powered tugboats built to handle railroad carfloats.
- ♦ Joseph P. Schwieterman. **Midwest Metamorphosis.** *RH* (Spring-Summer 2008), pp. 42-59. Impact of declining postwar passenger traffic on the Midwest's busiest rail stations.
- ♦ Thomas T. Taber III. **Antebellum American Railroad Compendium 1830-1860.** 2008. Available from the author: 504 S. Main St., Muncy, PA 17756. 756 pp., 600 timetables, 500 drawings, 100 maps. \$65 ppd. Encyclopedia of all 800+ pre-Civil War railroads in the U.S.
- ♦ Tom Smith. **Sleep Cheap!** *NHRS Bulletin*, Vol. 71 (Summer 2006), pp. 4-19. History and analysis of the success of the innovative Budd Slumbercoach, developed in the 1950s to reduce expenses and increase revenue from passenger operations. Roster of cars.
- ♦ H. David Stone, Jr. **Vital Rails: The Charleston & Savannah Railroad and the Civil War in Coastal South Carolina.** Univ. of S.C. Pr., 2008. 369 pp., illus. The C&S, chartered in 1854, faced controversy over location, difficulties with construction through the swamp, problems with procuring material, and constant funding shortfalls, leaving it incomplete until 1860. The Civil War brought new challenges, including importance in connecting Charleston to the rest of the South following the blockade of the port, and then as a strategic asset to be protected against raids at all costs. Rev.: *H-Southern Industry* (July 2008).
- ♦ **Timber Transfer**, Vol. 23, 4 (Spring 2007) features extensive coverage of the history and restoration of the M-3, a 1918 Maxwell automobile that was converted to a railroad motorcar in 1923-24. Available with membership to the Friends of the East Broad Top RR, \$30/yr. www.febt.org.
- ♦ Thomas Waite. **Yellowstone by Train: A History of Rail Travel to America's First National Park.** Pictorial Histories Pub., 2006. 166 pp., illus. \$24.95. Heavily illustrated with historic maps, timetables, postcards, and promotional brochures, as well as historic and contemporary photos. The history of railway tourism follows five rail lines as they developed their "gateways" to the park. Neill Herring [SIA] writes, "... as thorough a source on this subject as could be desired."
- ♦ **Way of the Zephyrs: The Last Decade on the "Q".** *NHRS Bulletin*, Vol. 72 (Winter 2007), pp. 4-37. Passenger operations on the Chicago, Burlington & Quincy in the 1960s.

CONTRIBUTORS TO THIS ISSUE

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With Thanks.

IRON & STEEL

- ♦ Christopher J. Dawson. **Steel Remembered: Photos from the LTV Steel Collection.** Kent State Univ. Pr., 2008. photos,

155 pp. \$39. Selected from the collection donated to the Western Reserve Historical Society (SIAN, Winter 2008) after LTV's bankruptcy in 2000, photographs chosen for artistic quality, their importance in explaining steel processes, and for their human interest.

- ♦ Diana Turnbow and Sara J. Northerner. Chris Dunker, photos. **Dismantling Geneva Steel.** Provo: Brigham Young Univ. Museum of Art, 2008. Photos and essays document the mill in Vineyard, Utah.
- ♦ Joseph H. Woodward II. **Alabama Blast Furnaces.** Alabama Pr., 2007, reprint of 1940 ed. with new introduction by James Bennett [SIA]. 170 pp., illus. \$19.95. Woodward, scion of the Woodward Iron Co. family of Birmingham, penned the reference book describing 80 furnaces erected between 1815 and 1940, as well as several chapters charting the evolution of furnace technology. The chapter on 1880-1940 covers the "golden age" of Birmingham in great detail, tracking fuel improvements, expanded production, and the emergence of the by-products industry. New introduction includes a short biography of Woodward and an analysis of how he originally assembled the book. Rev.: *H-Southern Industry* (June 2008).

BUILDING & STRUCTURES

- ♦ Cydney Millstein [SIA] and Carol Grove. **Houses of Missouri, 1870-1940.** Suburban Domestic Architecture Series, Acanthus Pr., 2008. 288 pp., illus. \$65. With nearly 300 photos, drawings, and floor plans, offers a tour of 45 houses, including those of many industrialists and businessmen. Features the opulent mansion of *Kansas City Star* publisher William Rockhill Nelson and the iconoclastic "machine in the prairie," Samuel Marx-designed Ladue residence of department store magnate Morton May. Brings to life the fortunes, motivations, and aspirations of the wealthy and upstanding house owners who rigorously defined what was "suitable" and respectable living in America's heartland.
- ♦ Helen Tangires. **Public Markets.** W. W. Norton, 2008. 336 pp., photos, drawings, maps. \$75. Richly illustrated compendium of the wide variety of buildings and spaces devoted to the urban marketplace. Open-air markets, street markets, markets in public buildings, market sheds, enclosed market houses, central markets, and wholesale terminal markets.

BRIDGES

- ♦ Hojjat Adeli. **Historic Bridges: Evaluation, Preservation, and Management.** CRC Press, 2007. 304 pp., illus. \$129.95. A treatise for engineers and preservationists, includes a wealth of illustrations and tables.
- ♦ Joseph D. Conwill. **Paddleford Truss Framing.** CBT (Spring 2008), pp. 7-13. Truss pattern and framing system developed by bridge wright Peter Paddleford of Littleton, N.H. in the 1830s.
- ♦ David Guise [SIA]. **Thayer's Whimsical Trusses.** CBT (Spring 2008), pp. 3-6. Patented designs of George W. Thayer, a mid-19th-century Yankee with a creative imagination.
- ♦ Roger G. Knapp, Chester Ong, and Peter Bol. **Chinese Bridges: Living Architecture from China's Past.** Tuttle Pub., 2008. \$35.

- ♦ Anne Merritt. **Historic Photos of the Golden Gate Bridge.** Turner Pub., 2008. \$39.95. Nearly 200 photographs culled from the San Francisco History Center, San Francisco Public Library, and Library of Congress, displayed in large format.
- ♦ Michael E. Mort. **A Bridge Worth Saving: A Community Guide to Historic Bridge Preservation.** Mich. State Univ. Pr., 2008. 160 pp., photos. \$24.95. Billed as a comprehensive handbook to the things community activists and preservationists will want to know to save a historic bridge. Filled with insights from professional historians, engineers, preservationists, and those who have been through "save our bridge" battles and grants-writing efforts, but written by a journalist who has organized the various points of view and cuts through the usual professional and legal verbiage to get to the heart of the matter. Many case studies (mostly from Michigan) and lots of practical advice. A "must-have" book for those who believe preservation starts at the grassroots.

POWER GENERATION

- ♦ Michael S. Raber [SIA]. **Hemlock Glen Archeological District, Hampton, Connecticut.** *SIA New England Chapters Newsletter*, Vol. 30, 1 (2008), pp. 12-18. History and archeology of three closely-spaced, small, country mills, including analysis of the legal relationships among the owners of the various water privileges and the historic hydropower potential.
- ♦ Ginger Strand. **Inventing Niagara.** Simon & Schuster, 2008. 337 pp. \$25. Although the focus is on the people and carnivalesque nature of the tourist attractions, this book also discusses the engineering of the falls and the business of power generation and Gilded Age industry. Rev.: *The Wall Street Journal* (May 8, 2008), p. A18.
- ♦ Steven A. Walton, ed. **Wind and Water in the Middle Ages: Fluid Technologies from Antiquity to the Renaissance.** Tempe: Arizona Center for Medieval & Renaissance Studies, 2006. 300 pp. \$55. Essays explore the textual and physical evidence of mills, the spread of milling technologies, and the owners and operators of mills. Rev.: *T&C*, Vol. 49, 1 (Jan. 2008), pp. 261-3.

WATER CONTROL & RECLAMATION

- ♦ Joe Flanagan. Photos by Jet Lowe [SIA]. **Seeding California.** *Common Ground* (Spring 2008), pp. 22-33. HAER documentation of the Los Angeles and Colorado River aqueducts. Overview history.
- ♦ David Flessner and Herman Wang. **Tennessee Valley Authority Change Region, Providing Access to Power, Economic Growth.** *Chattanooga Times Free Press* (May 18, 2008); www.timesfreepress.com. Lengthy retrospective article celebrates the TVA on its 75th anniversary. On-line version includes video inside the Chickamauga Dam, slideshow of historic photos, and timeline.

MINES & MINING

- ♦ Doug Brugge, Timothy Benally, and Esther Yazzie-Lewis, eds. **The Navajo People and Uranium Mining.** Univ. of N.M. Pr., 2006. 210 pp. \$29.95. The experience of Navajo miners from

1945 until 1988, including the risks of exposure to radiation. Rev.: *T&C*, Vol. 49, 1 (Jan. 2008), pp. 247-9.

- ♦ Ron Clayton. **Historical Find in Ducktown: Flue Near Old Smelting Site Likely Dates to 1800s.** *Knoxville (Tenn.) News* (June 9, 2008). Describes in detail the discovery of 1860s brick flue at the site of a copper refinery in Ducktown, Tenn. Includes timeline of copper industry in the region.
- ♦ John Cramer. **Far East Meets the Big Sky: Chinese Miners' Story Told Through Newly Discovered Artifacts.** *The Missoulian* (June 29, 2008). Lengthy report on archeological dig at the site of the first Chinese mining settlement in Montana, ca. 1875.
- ♦ Thomas Farley. **Gold: From Panning to High-Tech Mining.** *I&T* (Summer 2008), pp. 28-39. Survey of gold-mining technology from panning to the modern ore-processing machinery that can extract less than one ounce from 50 tons of rock.
- ♦ Paul de Kruif. **Seven Iron Men: The Merritts and the Discovery of the Mesabi Range.** Univ. of Minn. Pr., 2007. 241 pp., pap. \$17.95. Re-print of 1929 melodramatic history of how the seven brothers found ore, only to lose their fortune to John D. Rockefeller.
- ♦ Richard Hudelson and Carl Ross. **By the Ore Docks: A Working People's History of Duluth.** Minneapolis: Univ. of Minn. Pr., 2006. 336 pp., photos. \$18.95. Examines how the Communist Party expressed urgencies of working-class people, many of them new immigrants, but puts it in context of Americanization of workers generally, discussing civic clubs of hyphenated Americans, the temperance movement, YMCA. Many photos include factories, freighters, grain elevators.
- ♦ Carolyn L. White. **Interiors: Making Sense of Domestic Space in Depression-Era Rabbithole, Nevada.** *Vernacular Architecture Newsletter* 115 (Spring 2008), pp. 4-8. Exploration of ten standing buildings associated with miners' housing in northwest Nevada in the 1930s reveals the various uses inside the multipurpose, small structures made of an assortment of mostly scavenged materials.
- ♦ Murray Whyte. **Time Stands Still in Oil Industry's Birthplace.** *The Ontario Star* (May 11, 2008); *thestar.com*. Feature article on Oil Springs, including interview with Charlie Fairbank, who was a co-host of the 2001 SIA Fall Tour—Sarnia. Using jerker lines, the Fairbank property yields about 24,000 barrels of oil annually.

CONSUMER GOODS & APPLIANCES

- ♦ Dan Barry. **In War Time, an Old Reliable Is Called to Serve.** *NY Times* (May 5, 2008). History and operations of the Columbus Washboard Co. of Logan, Ohio. The last maker in the country, it has seen business increase since receiving orders from troops overseas.
- ♦ James B. Bell. **From Arcade Street to Main Street: A History of the Seeger Refrigerator Company.** St. Paul: Ramsey County Historical Soc., 2007. 234 pp., photos. \$29.95. Founded in 1902, this family-owned firm flourished through 1955 and lasted until 1980s in St. Paul, Minn. It was renowned for its cabinetmaking and icebox, refrigerator, and freezer manufacturing. After WWII, it merged with Whirlpool and helped that company become an appliance giant.

- ♦ Nicholas Fox Weber. **The Clarks of Cooperstown: Their Singer Sewing Machine Fortune, Their Great and Influential Art Collections, Their Forty-Year Feud.** Knopf, 2007. 420 pp. \$35. Edward Cabot Clark partnered with Isaac Merritt Singer to help the brassy inventor turn his patent into the Model T of sewing machines. Clark and his heirs went on to invest in real estate, including the famed Dakota apartment house in Manhattan, and in art, and to spread their wealth through philanthropy, endowing such institutions as the Baseball Hall of Fame and the Museum of Modern Art. Rev.: *NY Times Book Reviews* (May 20, 2007), p. 12.
- ♦ Curt Wohleber. **The Flashlight.** *I&T* (Spring 2007), pp. 4-5. The development of better dry-cell battery flashlights from the 1890s to the 1970s.

AGRICULTURE & FOOD PROCESSING

- ♦ Ken Belson. **Upstate, Where It Was First Made, Unwavering Devotion to Jell-O.** *NY Times* (May 4, 2008). Museum in Le Roy, N.Y. chronicles the history of Jell-O.
- ♦ Dan Chapman. **Sophie Mae Says 'Bye' to Atlanta: Candy Factory Defunct.** *Atlanta Journal-Constitution* (June 7, 2008). History of 90-yr.-old candy factory, famous for its peanut brittle, closing in part due to decline in sales.
- ♦ Paul Josephson. **The Ocean's Hot Dog: The Development of the Fish Stick.** *T&C*, Vol. 49, 1 (Jan. 2008), pp. 41-61. How factory trawlers and freeze-drying technologies, along with supermarket freezer display cases, led to the development of the fish stick.
- ♦ Ashley Tusan Joyner. **Jones Inventor, Manufacturer Dead.** *Macon (Ga.) Telegraph* (May 24, 2008). Obituary of Jones County, Ga. inventor Jim Eston Altman (age 70), who invented several popular machines for coring and quartering vegetables and fruits, including the olive and water chestnut. In 1984, he invented a dust-free gypsum-board cutter primarily for wall manufacturers in the mobile home industry.

COMMUNICATIONS

- ♦ Tom Huntington. **Who Really Invented the Movies?** *I&T* (Summer 2008), pp. 49-56. An analysis of the several inventors who made contributions to the development of motion pictures, most of whom had to compete with Thomas Edison whose character and business dealings would not allow for rivals to the title of the "father of the movies."
- ♦ Hugh R. Slotten. **Radio's Hidden Voice: Noncommercial Broadcasting, Extension Education, and State Universities during the 1920s.** *T&C*, Vol. 49, 1 (Jan. 2008), pp. 1-20. Radio stations that emerged as part of the educational mission of state universities had distinctly different operations than commercial radio emerging at the same time.

MISC. INDUSTRIES

- ♦ Monica Davey. **For a Pinball Survivor, the Game Isn't Over.** *NY Times* (Apr. 25, 2008). Stern Pinball Inc. in Melrose Park, Ill., continues to manufacture over 27,000 machines annually.
- ♦ Eric Jay Dolin. **Leviathan: The History of Whaling in America.** Looks at the full historical scope of American whaling in detail from its beginning in the 17th century to its

(continued on page 21)

Center for Land-Use Interpretation (www.clui.org). A “land-use” database, organized geographically, lists many historic or active industrial sites. Also info on a land-use museum and projects that exemplify unusual or “exemplary” uses of land from arts installations to prominent industrial sites that are “green” or adaptively re-used.

Delaware Industry (<http://fletcher.lib.udel.edu/collections/dpc/index.htm>). University of Delaware has digitized its postcard collection. Searchable by keyword and subject heading, including IA favorites like iron industry, factories, and street railroads.

Digital Hagley (<http://digital.hagley.org>). Hagley Museum & Library has begun digitizing its important industrial photograph collections. More than 6,000 images are now available, with more added all the time. Already on-line are the Sun Ship and the Dallin Aerial Survey collections.

Earl S. Miers Photograph Collection (<http://tslateva.state.tn.us>). Steamboats and varied work along the Mississippi and Tennessee rivers (ca. 1900-1912). Many depict the St. Louis & Tennessee River Packet Co. Part of the Tennessee Virtual Archive, which includes other collections with some IA-related images.

Louisiana Sugar, 1845-1917 (www.sussex.ac.uk/louisianasugar). Designed as a research tool for examining plantation economy and agrarian society. Utilizing exceptionally detailed annual crop returns and census records, makes available two fully searchable databases.

National Railway Museum Photo Collection (www.scienceandsociety.co.uk). Within London’s Science & Society Library lie the impressive poster and photo collections of the National Railway Museum. The “gallery”

feature, through the link at the top of the page, leads to images focused on the Age of Steam.

R. C. Maxwell Photo Collection (<http://library.duke.edu/digitalcollections/ea/Maxwell.html>). Photos of billboards and signs created by R. C. Maxwell Co., the oldest existing outdoor advertising company in America. There are a number of images of the Atlantic City Boardwalk as well as Asbury Park, New York City, and Philadelphia.

Scots and Aboriginal Peoples in the Canadian Fur Trade (www.abdn.ac.uk/materialhistories). Images and data associated with artifacts acquired by men who left Scotland to work in the North American fur trade over the past 400 years. Many objects have survived in museums and family homes.

Silk Roads Across North America (www.railwaymuseum.ab.ca). Click on “feature articles” for a preview version of Alan Vanterpool’s book on high-speed trains that delivered silk from West Coast ports to mills in the New York area. Also steamships and silk cultivation. Alan thanks those SIA members who assisted him with research.

Transportation Postcards (<http://classicrail.com/cards.html>). Vintage postcards, mostly rail-related (stations, trains, etc.). Organized by state and railroad company.

USGS Quad Maps of Northeastern U.S., ca. 1903-1952 (<http://historical.maptech.com>). With coverage from W.Va. to Maine, this relatively complete set of maps is a valuable IA research tool.

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

IA Image Archive Features Vogel Slide Collection

In response to a large donation of 35 mm slides from Robert M. Vogel [SIA], Michigan Tech’s IA program has established the Industrial Archeology Image Archive (www.anarkinda.com/ia). The website’s purpose is to make the collection available to a wider audience for research or for the simple pleasure of viewing. The images represent over thirty years of travel to sites of significant industrial heritage around the world, some of which no longer exist as depicted. In 2004 Vogel

generously donated his slide collection, and the originals now reside at MTU under the care of the IA program.

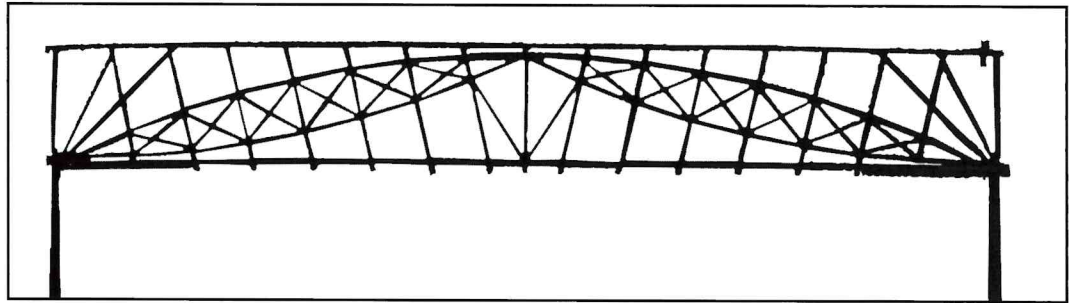
MTU students are in the process of developing and expanding the website. They request your assistance. It involves an extensive research effort, and in such a massive undertaking errors are bound to occur. It is their hope to interest experts and knowledgeable enthusiasts to help with the task of editing and expanding the information provided.

Elusive Truss Bridges

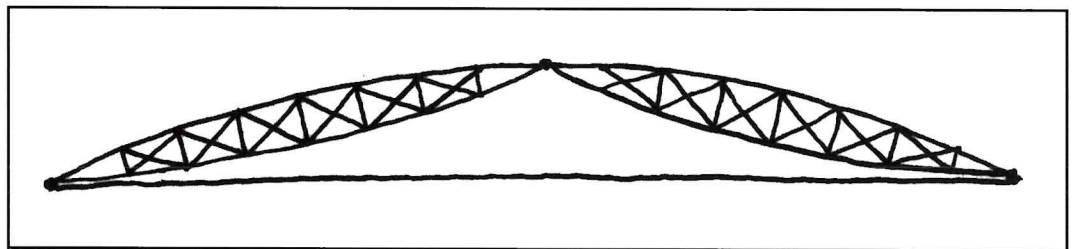
D.H. Morrison's Timber Truss

In 1852, David Humphreville Morrison, who founded the Columbia Bridge Works of Dayton, Ohio, that same year, devised a unique timber-truss configuration that incorporated a multiplicity of different structural forms. It was composed of elements arranged in a manner that makes one ponder whether it would behave as a truss or as a three-hinged arch.

Although Morrison eventually obtained two truss-bridge related patents (patent no. 20,082 of April 1858 and no. 70,245 of October 1867), he never patented his 1852 proposal. Morrison considered his design to be a truss, and if one wished to place it into a truss-type category, it might be labeled an arch-braced truss, but with a long foot note for additional features. The most noticeable innovation is the pair of counter-arches which oppose the full-span arch and form lenticular trusses. The vertical web members, except for the one at mid-span, are tilted with their direction generated by the sub-divisions of the lenticular. The diagonal bracing between the verticals is contained within the lenticular shape between the arch and the counter-arches, rather than more efficiently



Model of Morrison's 1852 timber-truss proposal. This design contains an arch and a pair of counter arches.

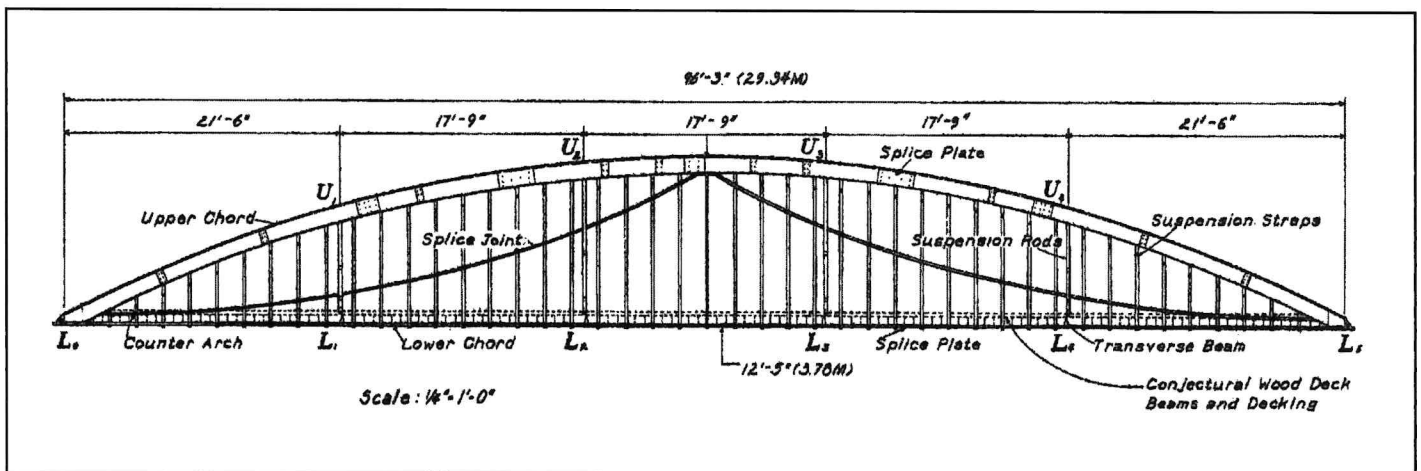


Sketch showing the pair of lenticular-shaped elements that form a three-hinged arch, with the bottom chord of the truss acting as a tie.

extending the full depth of the truss between the top and bottom chords.

A bridge built twelve years later in Lawrence, Mass., actually employed the unusual concept of inserting a pair of counter-arches to oppose a full span arch (see HAER MA-72). Whether its builder, Thomas Moseley, knew of Morrison's Ohio design is speculation. It would not be a large stretch, however, as Moseley and his bridge company

(continued on page 18)



Moseley's 1864 bridge with counter-arches, Lawrence, Mass.

HISTORIC BRIDGE NEWS

The **Gustave Flaubert Bridge**, completed in 2008 in Rouen, France, is a 120m-long vertical lift bridge with the unusual characteristic that the two, three-lane decks hang to either side of the towers (rather than the usual orientation as a single deck between the towers). The decks are supported by travelers and long steel ropes balanced by counterweights. In historical perspective, the bridge revives some of the technical aspects of the so-called *Schwebefähre* (transporter bridges), which were popular in Germany and France in the late 19th century. Of the more than 20 that were built, two remain in Germany. One is at the Nord-Ostsee canal at Rendsburg, and the other in Oste, a tributary of the Elbe at Stade. For more on the Gustave Flaubert Bridge and its predecessors, see: www.abelard.org/france/pont_gustave-flaubert_rouen.php.—Heinz Schwinge

Midwestern weather has not been kind to historic bridges this summer. During June, the **Sutliff Ferry Bridge**, an 1897-98 Parker, metal, through truss in Iowa City collapsed when the Cedar River flooded. The Sutliff Bridge Authority, a non-profit organization which has maintained the bridge since 1984, hopes to salvage the trusses that were swept 100 yds. downstream. Also in June, a tornado struck the **Moscow (Ind.) Covered Bridge** over the Flatrock River, smashing it to splinters. The winds were estimated at more than 130 mph. The two-span, 345'-long, Burr arch-truss bridge was built in 1886 by local bridge wright E. L. Kennedy. Government officials have pledged to seek funds to build a replica.



HAER IA-6, J. Ceramie

The Sutliff Ferry Bridge (Iowa City, Iowa) lost two of its three truss spans in the June flood.

Kansas City Bridge Exhibit. Architectural historian Cydney Millstein [SIA] and artist Susan White of Kansas City collaborated on a temporary exhibit, at the downtown gallery *Re-forming Space*, that ran through mid-July featuring local bridges as engineering history, as well as feats of great beauty. Millstein contributed text with historical photographs and architectural drawings. The bridges displayed were the Broadway Bridge, the 12th Street Trafficway Viaduct, the Paseo Bridge, and the Waddell "A"

Truss Bridge, all designed by the eminent engineer J.A.L. Waddell (1854-1938) and his successor firms including (but not limited to) Waddell & Hedrick; Waddell & Harrington; and Howard, Needles, Tammen & Bergendoff (HNTB). White's artwork included graphite drawings on vellum, pyrographs (burn drawings) on paper, two large-scale wall installations, sculpture, and video.

Amtrak's **Thames River Bridge** was replaced in June. The 1917-19 vertical lift bridge, which spanned the Thames between Groton and New London, Conn., was built by the New York, New Haven & Hartford RR. Amtrak cited the reasons for replacing the bridge as its age and high maintenance costs, especially in light of the wear and tear caused by high-speed passenger trains and more than 2,000 openings per year, many for submarines on their way to and from the naval base and shipyard.—*NY Times* (June 24, 2008).

Pittsburgh celebrated the decorative lighting of the **Hot Metal Bridge** with a ceremony presided over by Governor Edward G. Rendell in June. The steel-truss bridge over the Monongahela River, built in 1900, was used to transport ladle cars from the blast furnaces on the north shore of the Jones & Laughlin Pittsburgh Works to the Bessemer converters and open-hearth furnaces of the South Side Plant. The bridge shares piers with the **Monongahela Connecting RR Bridge** of 1904. The lighting project cost about \$150,000 and brings public attention to the historic bridges, which are next to the Steelworkers' Monument.

The Washington Trust for Historic Preservation has placed Tacoma's **Murray Morgan Bridge**, formerly known as the 11th St. or City Waterway Bridge over the Thea Foss Waterway, on its list of most endangered historic sites. The 1911-13 vertical lift bridge was designed by the well-known

(continued on page 18)



HAER WA-100, Jet Lowe

The Murray Morgan Bridge in the open position.

ELUSIVE TRUSS BRIDGES (continued from page 16)

were located in Kentucky prior to the Civil War. Morrison may have been the originator of the concept of a “counter-arch,” which, while picturesque, has little structural merit.

Most of today’s engineers would have difficulties analyzing Morrison’s truss due to its level of redundancy. When given a choice of paths, it is usually the level of craftsmanship employed in forming the various joints that ultimately determines the true stress in individual members. Thus, depending on the joinery, Morrison’s truss proposal may actually function as a three-hinged arch, with each of the two incorporated lenticular trusses acting as a structural unit tied together at their base. Assuming the overall configuration is used to support a through truss (with its road bed secured to the bottom chord) then the lower extension of the lenticular’s verticals (which are inclined due to the tilting of the lenticular) would hold the bottom chord, which in turn would support the bridge-deck framing. The upward extension of the lenticular’s “verticals” connect to the top chord, which, while not functioning as a normal truss chord, would serve as a platform for overhead lateral bracing. Without the top chord, lateral bracing would have to be confined to the center of the span as there would be insufficient head room to permit bridge traffic. If Morrison’s truss was used to carry a deck truss, the extension of the verticals would act as struts to support the deck above the three-hinged arch.

During the middle of the 19th century, the typical bridge-building process began with a community asking for bids on a structure to cross a stream at a specific point and to support a specified load. The design of the bridge was left to the bidder. By using the least expensive truss design that could carry the required load, the builder would be in the best position to submit a successful bid. The numerous bridges known to have been built by the Columbia Bridge Works, and its successor the Columbia Bridge Co., used tried-and-true configurations. It is highly questionable whether Morrison utilized his own proposed design (as much as he might have wanted to see it built) when faced with the economic reality of competitive bidding.

Whether or not an example of his design was built, Morrison’s proposal is a delightful example of one of the overly complex configurations that were dreamed up at the time, but never accepted due to the excessive amount of material they called for, the complexity of building them, and the inability of builders to calculate the size of the members in them.

David Guise

With thanks to Morrison’s great-great granddaughter, Diana (Morrison) Lynn-Jones and to David Simmons.

HISTORIC BRIDGE NEWS (continued from page 17)

Waddell & Harrington of Kansas City and ranks among the oldest of its type in the U.S. A striking visual feature of the bridge is a slightly-arched, overhead truss between the towers carrying a water main. The bridge was closed to vehicular traffic in late 2007 because of deteriorated steel that raised safety concerns, but it has remained open for pedestrians and bicycles. Community and local political support for preserving the bridge had delayed a project to replace it in 2006, but the closing of the bridge has re-opened discussion of replacing it.—*Tacoma Daily Index* (May 22, 2008).

After decades of planning, Walkway over the Hudson held a “groundbreaking” for restoration of the long-neglected **Poughkeepsie-Highland Railroad Bridge**. The 1888 cantilever deck-truss bridge, a landmark in American civil engineering (*SIAN*, Summer 2006), is well over a mile long with main spans of over 600 ft. It has been closed since the mid-1970s with various attempts to revive it as a walkway. That vision is finally becoming a reality with more than \$30 million in private and public grants. In May the first spikes were lifted from the old track as the first step in a 15-month construction phase, which is scheduled to end August 2009 in time for the bridge to be a centerpiece for the state’s

Henry Hudson Quadricentennial Celebration. Info: www.walkway.org.

The mayors of Covington, Ky. and Cincinnati declared June 8 **John A. Roebling Day** in celebration of the **Covington-Cincinnati Suspension Bridge** over the Ohio River. The bridge, which was built from 1856 to 1867, is a National Historic Landmark and ranks with the Brooklyn Bridge and the Delaware River (Roebling) Aqueduct as the only surviving examples of the famed engineer’s work. The “Roeblingfest” included historic tours led by the CCSB Bridge Committee, which is responsible for the decorative lighting and flags that fly atop the bridge.—*Kentucky Post* (June 5, 2008)

Parks Canada has recognized the **Doukhobor Suspension Bridge** as a site of national historic significance with a Historic Sites & Monument Board commemorative plaque. Built in 1913 by community labor, the bridge connected Doukhobor settlements on both sides of the Kootenay River in Castlegar, B.C. Today, this structure, also known as the Brilliant Suspension Bridge, stands as enduring symbol of the collective toil of these pioneers.—*Parks Canada Press Release* (Apr. 27, 2008) ■

NOTES & QUERIES

What do the **Ford Motor Co.**, **Norman Rockwell**, and the **Troy (NY) Gasholder House** (the SIA logo) have in common? On June 28, the gasholder house was the site for a symposium on the 50th anniversary of Norman Rockwell's painting, *The Street Was Never the Same*, which was commissioned by the Ford Motor Co. to celebrate its 50th anniversary in 1953. The painting, now in the collection of the Detroit Historical Museum, depicts Rockwell's vision of Troy's Little Italy in 1903. The rowhouse in the painting is 296 Fourth St. about one block from the gasholder house. The symposium's organizers faithfully reproduced a tableau of the painting with 31 neighborhood children and adults in period costumes, a horse, a buckboard, several dogs, and a period Ford motor car. Thomas Carroll [SIA] spoke briefly on the history of the gasholder house. The local paper claimed that the gasholder house has been "made famous as the worldwide[!] logo of the SIA."

SIA Member Seeks Rejected Equipment Bids. I am looking for copies of documents (ca. 1880-1925) and copies of court cases about bids submitted to companies or local, state, or federal agencies for equipment that was rejected as not meeting specifications. I am also looking for documents and articles of instances where contracts were cancelled because of vendor problems. I am a procurement specialist for a government agency and want to develop a history presentation. Tyler Turpin, 203 Governor St., Rm. 424, Richmond, VA 23219; tylerturpin@earthlink.com.

The National Park Service's **Historic American Engineering Record** (HAER) has several recording projects underway this summer. Students from the University of New Mexico are recording **El Camino Real de Tierra Adentro** and **Route 66** alignments, an area rich in layers of history including prehistoric petroglyphs and stone formations; El Camino Real traces; 19th-century wagon trails; National Old Trails Highway switchbacks; and early Route 66 rights-of-way. In Maryland, the historic **Morse water filtration plants**, just north of downtown Silver Spring, will be documented as will the **NS Savannah**, the world's first nuclear-powered cargo-passenger ship, launched in 1959, decommissioned in 1972, and now docked in Baltimore. Further north, a HAER team will continue work on the **Schooner Ernestina** in Boothbay Harbor, Maine. Commissioned in 1894 as the *Effie M. Morrissey*, it was a Grand Banks fisher, arctic expeditionary vessel, and WWII survey vessel before a galley fire in 1946. Renamed the *Ernestina*, the ship served in the trans-Atlantic Cape Verdean packet trade before being gifted back to the United States. The documentation will assist in its restoration. Info: www.nps.gov/history/hdp/haer/index.htm.—*Heritage News* (July 2008)

The Minnesota Historical Society has accepted the transfer of the **James J. Hill**, **Louis W. Hill**, and **Maud Van Cortlandt Taylor Hill Papers** from the James J. Hill Reference Library in St. Paul, which decided to de-accession its historical collections about two years ago (SIAN, Summer 2006). The Hill family is well known for its role in American railroading as well as the economic, social, and cultural history of the Upper Midwest and Northwest beginning in the late 19th century. MHS currently is processing the collection and plans to have selections from it available via the Internet in the near future. Info: <http://discussions.mnhs.org/collections/?p=268>.—*History Matters* (May/June 2008)

The Hagley Museum & Library (Wilmington, Del.) has received a gift of books, records and ephemera from the estate of John F. Tucker III of Philadelphia, a former vice president of the **Southeastern Pennsylvania Transportation Authority** (SEPTA). The gift, along with several other donations, gives Hagley a reasonably good historical coverage of the growth and development of rapid transit in the Philadelphia area, including SEPTA's predecessors.—*Hagley Library Archives* (July 15, 2008) ■

IA EXHIBITS

Railroads and the American Industrial Landscape: Ted Rose Paintings & Photographs is continuing through Dec. 30 at its third location, the Railroad Museum of Pennsylvania in Strasburg. Rose was known for his stunning watercolors, but he was also an excellent photographer. Catalogs are still available (www.railphoto-art.org/store/publications.asp) through Milwaukee's Haggerty Museum, where the exhibit opened in 2006. A special issue of *Railroad Heritage* (July 2008) also focuses on Rose's accomplishments (www.railroadheritage.org).

The Putnam County Historical Society and Foundry School Museum in Cold Spring, N.Y., has a temporary exhibit running through December entitled **The West Point Foundry: Unearthing the Past, Forging a Future**. The exhibit focuses on the ongoing research by Michigan Technological University's IA program on the site of this important 19th-century ironworks, which is owned by the Scenic Hudson Land Trust. Featuring documents, artifacts, and images, the exhibit also includes information about Scenic Hudson's plans to develop interpretive trails and exhibits. Info: www.pchs-fsm.org/pchs-spring08Exhib.html. ■

Rick Allen Remembered

Richard Sanders Allen, age 91, passed away peacefully on June 20 after a long illness. Allen was an early member of the SIA, active in its formative years in the 1970s, but he was perhaps best known as a covered bridge historian *par excellence*. Born in Saratoga Springs, N.Y., Rick was the long-time postmaster of Round Lake Village, but his true passion since childhood was the history of upstate New York, and from that grew an expertise in 19th-century bridges and their builders. During World War II, as a clerk in the U.S. Army Air Corps, he spent off hours typing letters to officials in every county of the U.S. inquiring about covered bridges. Building on this seminal effort, Rick authored an influential series of popular regional inventories—*Covered Bridges of the Northeast*, *Covered Bridges of the Middle West*, *Covered Bridges of the Middle Atlantic*, and *Covered Bridges of the South*—which although published nearly 50 years ago remain among the most reliable, well-crafted, and readable narratives on covered-bridge history.

Recognizing that America's covered bridges were being replaced at a rapid pace, Rick was a founder of the National Society for the Preservation of Covered Bridges (NSPCB) and was for many years co-author of its newsletter *Covered Bridge Topics*, which he began in 1943 with Eugene R. Bock. He was one of the first researchers for the original *Mobil Travel Guides* (with covered bridges and other historic sites liberally sprinkled throughout) and he contributed articles to numerous magazines and journals, including *American Heritage* and *True*. In 1963, he received a Guggenheim Fellowship to support his research and writing on covered bridges. It is no stretch to say that Rick Allen made a nationally significant contribution to the public recognition that all covered bridges have come to enjoy, so much so that it's now hard to imagine that one could be purposely destroyed in the name of progress.

Other subjects of Rick's expertise included pre-World War II commercial aviation, early iron furnaces, and iron bridges. He wrote three classic books on these topics: *Revolution in the Sky*, *The Northrup Story, 1929-1939*, and *Old North Country Bridges*, plus dozens of



Rick Allen (1917-2008)

articles. In the 1970s, he was a key contributor to the Historic American Engineering Record's first documentation project, on the industrial history of the Mohawk-Hudson region of upstate New York. Following a stint as Chairman of New York State's Bicentennial Commission, he served as a part-time aviation researcher for the Smithsonian Institution. In 1992, he was given the American Society of Civil Engineer's prestigious History and Heritage Award. After the death of his wife, Doris Bishop Allen, Rick eventually moved to Lewiston, Idaho, to be near his younger son, Robert, but continued to work as a consultant and free-lance writer on numerous historical subjects.

At his core, Rick Allen was a story teller endowed with an insatiable curiosity. He is reported to have once said, "If you find yourself at a fork in the road, where one is paved and the other graveled, take the graveled fork; it will be far more interesting." Rick willingly shared his knowledge gleaned from many trips down graveled roads and served as a mentor to many SIA members over the years. Before his death, he donated his library and papers on timber and iron bridges to the Vermont Covered Bridge Museum in Bennington, Vt., his aviation collection to the Empire State Aeroscience Museum (ESAM) in Glenville, N.Y., and his collection on the history of iron and steel production to the Mohawk-Hudson Industrial Gateway at the Burden Iron Works Museum at Troy, N.Y. To all of us, he has left what is probably his most endearing and often repeated insight. In response to the question of why timber bridges are covered, he explained that "The roof was added for the same reason that grandmother wore petticoats—to protect the underpinning."

Rick Allen is survived by sons Dick and Robert and their families, and by an extended family of many friends and admirers. Donations may be made in support of the Richard S. Allen Collection, Research Library, ESAM, 250 Rudy Chase Dr., Glenville, N.Y. 12302.

With assistance from Dick Allen, Bill Chamberlin, Eric DeLony, and Vic Rolando

MEMBER NEWS

Robert J. Kapsch's book, *The Potomac Canal: George Washington and the Waterway to the West* (W.Va. Univ. Pr., 2007), has been awarded the Book-of-the-Year Award Silver Medal (History) by *Foreword Magazine*. It is a history of the new nation's first effort to link the rich western agricultural lands with the coastal port cities of the east. The Potomac Canal Co. was founded in 1785, and was active until overtaken by the Chesapeake & Ohio Canal in 1828. During its operation, the canal system was used to ship flour from mills in the foothills of Appalachia to tidewater, where the flour was transshipped to the Caribbean as trade for sugar and other goods. Coal was also shipped via the canal system from the upper reaches of the Potomac River to workshops at Harpers Ferry and beyond.

Eric McFerrin has been leading popular tours of the Red Mountain iron-mining district in Birmingham, Ala. (tour site—1999 SIA Fall Tour). More than 100 people turned out in the heat on July 21 to hike over three miles to Mine No. 13, which was started in 1873. A state commission has been established to transform Red Mountain into a 1,100-acre public park. These tours are designed to raise awareness.—*Birmingham News* (July 21, 2008)

R. Damian Nance was named Ohio University's Distinguished Professor for 2008. It is the university's highest faculty honor and carries a lifetime designation that recognizes scholarly accomplishment, professional reputation, and contributions to the university. Nance is a professor of geological sciences with a specialty in the supercontinent cycle and the Earth's long-term tectonic, geochemical, climactic, and biological history.

Paul J. White, a Michigan Tech IA program alumnus and current postdoctoral fellow, recently won the prestigious Joukowsky Award from the graduate school at Brown University for his dissertation, *Chuckwalla and the Belligerent Burro: Timbisha Shoshone, Miners, and the Footprints of Dispossession in the Panamints*. White's work in Death Valley and adjacent areas began during a HAER documentation project of mining sites in the National Park and extended well beyond the bounds of that initial study, combining historical, anthropological, and archeological perspectives on the interactions of native people, the mining frontier, and the dominant national culture. This work has spun off presentations at the last two SIA annual conferences, as well as his recent paper in *IA* (Vol. 32, 1). ■

PUBLICATIONS OF INTEREST (continued from page 14)

demise in the early 20th century after cheap petroleum and changes in women's fashion eliminated markets for its products. Rev.: *NY Times Book Review* (July 29, 2007).

- ◆ Caroline H. Dworin. **Ladders of Memory**. *NY Times* (June 29, 2008). History of the Putnam Rolling Ladder Co. of Manhattan, manufacturer of the rolling wood ladders found in libraries, etc., since 1905.
- ◆ Nancy Goyes Evans. **Windsor-Chair Making in America: From Craft Shop to Consumer**. Univ. Pr. of New England, 2006. 475 pp. \$65. Covers facilities, equipment, materials, construction, and design from the mid-18th century to the present. Rev.: *T&C*, Vol. 48, 3 (July 2007), pp. 653-55.
- ◆ Linda J. Lumsden. **The Golden Tubes**. *NY Archives* (Spring 2008), pp. 8-11. The pneumatic tube system used to move mail through New York City at end of 19th c. and its champion John Millholland.
- ◆ Michael Raber [SIA] and Robert Gordon [SIA]. **Waterbury's Last Operating Brass Mill**. *SIA New England Chapters Newsletter*, Vol. 30, 1 (2008), pp. 20-27. Documentation and history of the Large Diameter Tube Mill of Ansonia Copper & Brass. Plant began as Holmes, Booth & Haydens in 1853. Includes detailed description of operations in 2007.
- ◆ Jodie Wells. **How It All Got Started**. *Horn & Whistle*, No. 113 (Fall 2006), pp. 19-37. History of the Airchime Co. in Langley, B.C., and the inventor of the familiar air horn used on diesel locomotives and vessels. Robert Swanson was the Provincial Inspector of Railways in the 1940s when he developed multi-tone "hexatone" horns. He sought to

replicate the unmistakable sounds of steam whistles so that the new diesel power wouldn't surprise motorists and pedestrians. Much of the mechanical work was by machinists serving the forest industry. Among Swanson's later developments were arrays of horns that played tunes like *Oh, Canada*. One of these remains in daily service atop the BC Hydro building in Vancouver.

ABBREVIATIONS:

- CBT = *Covered Bridge Topics*, published by the National Society for the Preservation of Covered Bridges
- I&T = *American Heritage of Invention & Technology*
- NHRS = National Ry. Historical Society
- RH = *Railroad History*, published by the Ry. & Locomotive Historical Society
- T&C = *Technology & Culture*, published by the Society for the History of Technology (SHOT)
- 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.

CHAPTER NEWS

Northern New England's 2008 spring tour was to Portland, Maine, highlighted by the Cumberland & Oxford Canal (1830-1871) and the Oriental Powder Mill (1824-1905), which made approximately 25 percent of the gunpowder used by Union forces in the Civil War.

Northern Ohio. On June 19, about 25 members and guests toured Cleveland's **Rose Iron Works** and the associated Rose Metal Industries. The tour began in the general offices and forge shop on E. 43rd St., where Melvin M. Rose, son of founder Martin Rose, shared a history of the metalworks and gave a tour of the forge. Melvin has been active in the company for more than 70 years and still oversees the decorative portion of the business along with his daughter Barbara.

Rose Iron Works is one of the oldest decorative metal works in the U.S. Established in 1904, it moved to its current location in 1908. The present building, which dates to 1930, includes the product showroom, museum, archives, and forge. The showroom includes many examples of craftsmanship, including decorative gates, railings, andirons, lamps, and console tables. The museum includes hundreds of wrought-iron prototypes and an extensive medieval lock collection.

Company founder Martin Rose (1870-1955) learned his trade in Vienna and Budapest, opening his own shop in

1898 in Budapest before leaving for the U.S. The company worked with area architects and businesses, and designed decorative metalwork for prominent Cleveland families. In the 1920s, Martin Rose invited the French designer Paul Fehér to come to Cleveland. Fehér designed many of the company's renowned Art Deco objects, including a screen in the collection of the Cleveland Museum of Art. In the 1940s, war needs and restrictions required the company to branch out into industrial applications. Today, Melvin Rose continues to produce works on commission, while Martin's grandson and current company president, Robert Rose, has expanded the firm's industrial applications to include robotic welding, fabricating, and forging for a wide range of customers. Chapter members also toured these facilities, located nearby. See photos of the Rose Iron Works at <http://railsandtrails.com/roseironworks>. —Stephen Titchenal

Samuel Knight (Northern Calif.) is to be congratulated for organizing the very successful 2008 SIA Annual Conference, San José. In August, after a well-deserved break, the chapter reprised the conference's Cannery Life Tour, featuring Del Monte, for those members who hadn't been able to attend in May.

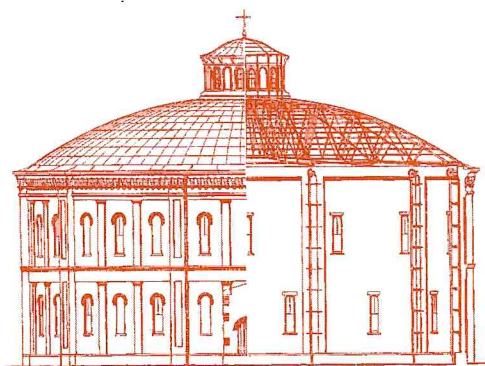
Southern New England held its spring meeting and tour at the Thomas J. Dodd Research Center, Industrial History Archives in Storrs, Conn. Following a peek at the center's Connecticut business and railroad collections, the group traveled to the Gurleyville Grist Mill and the Mansville Hollow Dam.

Support Your Local Chapter. For info on a chapter near you or to start one, contact Tim Mancl, SIA Director, Local Chapter Chair (tjmancl@gmail.com) or check out the local chapters section of the SIA Web site (www.sia-web-org). ■



Stephen Titchenal

The Northern Ohio Chapter toured the Rose Iron Works, specializing in decorative ironwork.



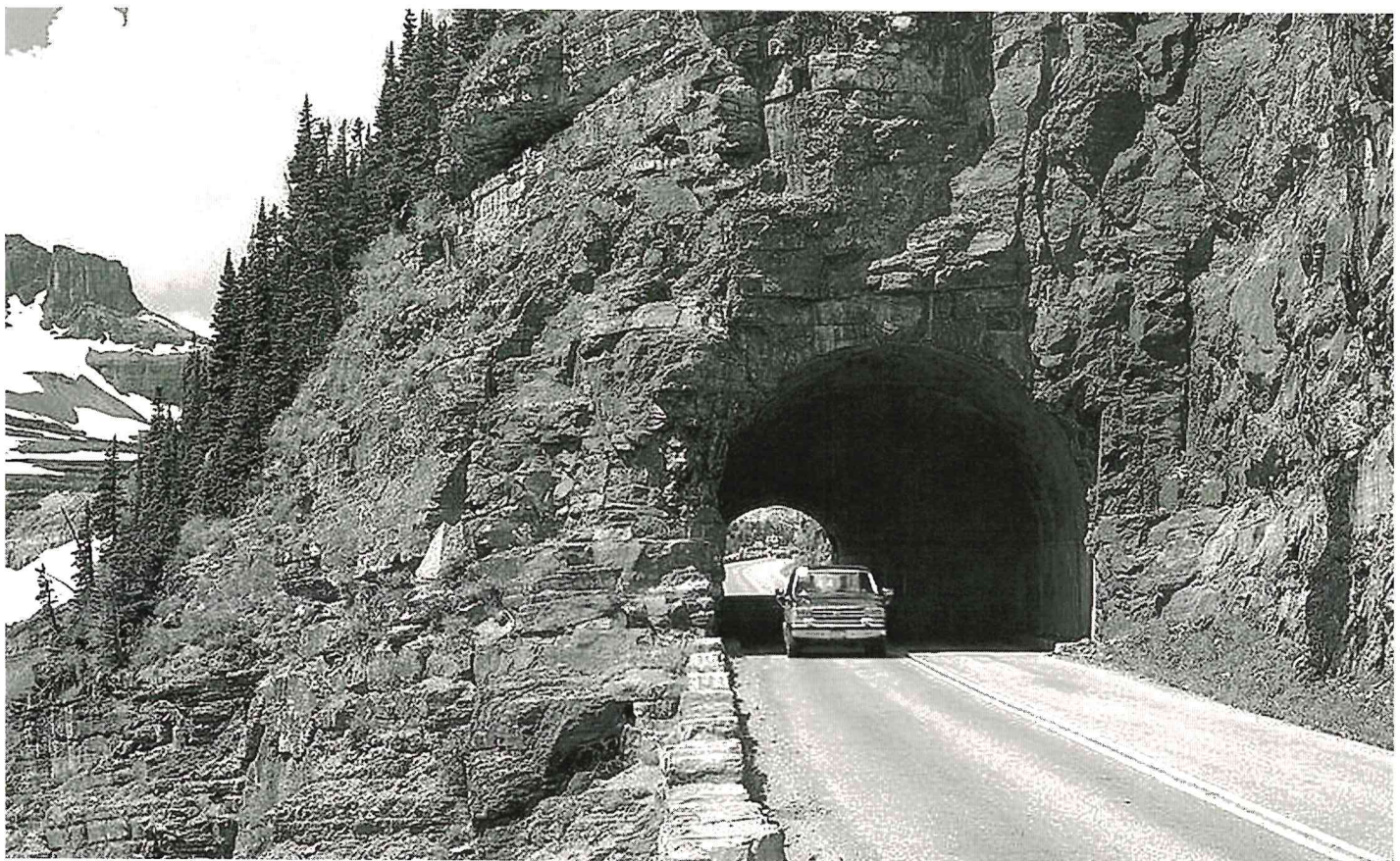
SITES & STRUCTURES

Knight Foundry reports substantial progress toward a long-term agreement with the City of Sutter Creek, Calif., that will result in a stable organizational framework. The city has agreed to take ownership of the foundry, following an extensive environmental investigation that has assured its officials that although some clean-up is required, there are no major unknown environmental liabilities. The total cost of acquisition, environmental clean-up, and related renovation work has been estimated at about \$3 million. The city has formed a partnership with the Knight Foundry Corp., which will be the non-profit group responsible for restoring and operating the site. Knight Foundry, remarkable for its state of completeness, was established in 1873 to supply heavy equipment, including waterwheels and turbines, to the mining and lumber industries (SIAN, Summer 1996). Volunteers are sought to help with the massive job of cleaning and cataloging the patterns. Info: www.knightfoundry.org.—*The Knight Club Noon Whistle* (2008)

Going-to-the-Sun Road 75th Anniversary. In the late fall of 1932, after three decades of construction and more than \$2 million, the first automobile passed over the entire 50 miles of the Going-to-the-Sun Road in Glacier National

Park. The National Park Service formally dedicated the Sun Road on July 15, 1933, with park superintendent Eivind Scoyen calling it “the most beautiful piece of mountain road in the world.” The park and hundreds of revelers—including some who had been there in 1933—celebrated the road’s 75th anniversary on June 27. The Going-to-the-Sun Road was designated a National Historic Landmark in 1997 and is the subject of a National Park Service Teaching with Historic Places online lesson plan, *Going-to-the-Sun Road: A Model of Landscape Engineering*. Info: www.nps.gov/glac/planyourvisit/gtsr75.htm; www.nps.gov/history/nr/twhp/wwwlps/lessons/95sunroad/95sunroad.htm—*Heritage News* (July 2008)

The City of Roswell, Ga., has allocated more than \$300,000 to stabilize and protect the ruins of the **Roswell Mfg. Co.** The cotton spinning and weaving mills opened in 1853. Union troops burned them in 1864 but they were rebuilt and continued in operation until a fire, sparked by lightning, destroyed them in 1926. In addition to remnant walls, an 1854 machine shop survives, as do a water turbine and iron flume.—*Atlanta Journal-Constitution* (May 27, 2008) ■



HAER MT-80, Martin Stupich

*East Side Tunnel, Through Piegan Mountain at Going-to-the-Sun Road, West Glacier, Mont.
Glacier National Park recently celebrated the 75th anniversary of the road's opening.*

CALENDAR

2008

Oct. 3-4: Heritage: Past, Present, and Future, NY State Historical Assn., Cooperstown, NY. History, current state, and future of the heritage preservation field, with emphasis on traditional craft. Info: www.nyfolklore.org/about/janevents.html.

Oct. 11-14: Society for the History of Technology (SHOT) Annual Meeting, Lisbon, Portugal. Info: www.historyoftechnology.org.

Oct. 15-19: SIA FALL TOUR, CHATTANOOGA, TN. Theme: "Industry of the Old and New, New South." Site tours will feature synthetic fabrics, carpets, ceramics, historic bridges, blast furnaces, railroads, plastics, and more. Info: www.sia-web.org.

Oct. 16-18: Pioneer America Society: Assn. for the Preservation of Artifacts & Landscapes Annual Meeting, Baton Rouge, LA. Info: www.pioneeramerica.org.

Oct. 26: 28TH ANNUAL DREW SYMPOSIUM ON IA IN THE N.Y.-N.J. REGION. Sponsored by the Roebling SIA Chapter. Info: RCSIAprez@aol.com.

Nov. 6-7: Automobility: A Conference on the 100th Anniversary of the Model T, Hagley Museum & Library, Wilmington, DE. Info: Carol Lockman, clockman@hagley.org.

2009

Jan. 6-11: Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Toronto, ON. Info: www.sha.org.

Feb. 19-21: 6th Savannah Symposium: World Heritage and National Registers in Perspective, Savannah, GA. Sponsored by the Savannah College of Art & Design. Info: Thomas Gensheimer, tgenshei@scad.edu.

Mar. 7-8: Washington on the Move: The Architecture of Transportation in the Capital Region, Washington, DC. Latrobe Chapter, Society for Architectural Historians. Info: www.latrobechaptersah.org.

May 14-17: North American Society for Oceanic History, Steamship Historical Society, and National Maritime Historical Society Conference, Vallejo, CA. See article in this issue. Info: www.nasoh.org.

May 24-27: Incredible Industry: Preserving the Evidence of Industrial Society, Copenhagen, Denmark. Info: www.kongres09.nkf-dk.dk.

May 29-31: SIA 38th ANNUAL CONFERENCE, PITTSBURGH, PA. See article in this issue. Info: www.sia-web.org.

June 10-13: Vernacular Architecture Forum Annual Meeting, Butte, MT. Theme: Mining Metropolis: An Island in a Stockman's Paradise. See article in this issue. Info: www.vafweb.org.

Oct. 15-19: Society for the History of Technology Annual Conference, Pittsburgh, Pa. Info: www.historyoftechnology.org. ■

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