

ROCKY MOUNTAIN SIA

uring the first weekend in June, over 125 SIA members gathered in Colorado Springs for SIA's 39th Annual Conference. Built around the theme *Industry on the Frontier*, *Mountains on the Horizon*, the four-day event featured twelve tours, the annual business meeting (see minutes in this issue), a photography workshop (see continuing education article in this issue), and excellent paper sessions. In view of the inability to recruit a correspondent to write-up the traditional comprehensive coverage of the annual conference for SIAN, the following photo essay and several individual tour reports are offered in exchange. Thanks to all of the photographers and volunteer "cub" reporters who sent in their contributions!

Pikes Peak or Bust Tour. On Thursday, June 3, the Pikes Peak or Bust tour visited the **Manitou & Pike's Peak Cog Ry**. (M&PP) and Patsy's Candies. M&PP has been

in continuous seasonal operation since 1891 and travels 8.9 miles from Manitou Springs to Pikes Peak climbing in elevation from 6,571 ft. to 14,115 ft. with a maximum grade of 25 percent. The American Society of Mechanical Engineers recognized the M&PP as a historic landmark in 1976 (http://files.asme.org/ASMEORG/Communities/History/ Landmarks/5592.pdf). Newer trains are motorized, dual-car units, Swiss-built and powered by four 350-HP Cummins diesel engines with Voith hydraulic transmissions. They contain 214 seats per paired cars. Cars run at about 10 mph uphill. While traveling uphill, a ratchet brake is always engaged to prevent the cars from descending in the event of power failure. On down trip, the maximum speed is 7.5 mph. The cars use dynamic hydraulic braking, transmission brakes, and axle brakes. Friction brakes are used to bring the cars to a full stop.

The M&PP uses a cog propulsion system designed by

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Maintenance crew makes a repair on the cog rail of the Manitou & Pike's Peak Cog Ry.



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Chimney detail from the Van Briggle Pottery.

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

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

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Roman Abt in the 1880s. The running rails have little wear, and some date to the origin of the railroad. The center cog rails do wear heavily and have a typical life of 15 years. Since the only wear on the cog rails is on the uphill side, they can be reversed end for end, providing several more years of life before requiring replacement. A graphite lubricant is used on the cog wheels themselves.

The railroad employs ten mechanics year-round, who also serve as engineers, along with nine trackmen. The SIA tour included a visit to the shops as well as a trip to the summit and back. The railroad originally used Baldwin steam cog locomotives, one of which is on display at a park in Manitou Springs where the tour stopped for lunch.

Following lunch, the tour visited **Patsy's Candies** (*www. patsyscandies.com*). The business has been in operation since 1903 and makes a range of candies including saltwater taffy and chocolates. We were given a tour of the manufacturing process. Corn syrup is used as the base for many candies. Patsy's utilizes a storage tank for the syrup, which is then distributed by a movable spout that can be rotated to fill any of a series of copper pans used for candy cooking. Some candies, such as saltwater taffy, are individually wrapped in plastic. Chocolate is purchased in the form of large slabs that are melted and held in liquid form. This is then transported to various locations in heating-cable-wrapped pipes.—*Bill McNiece*

Royal Gorge Route Tour. The Royal Gorge Route tour on Friday, June 4, offered spectacular views both at the bottom and top of the canyon. First, tour participants boarded the **Royal Gorge Route RR** at the former Santa Fe depot (c. 1914) in Canon City for an eleven-mile trip to Parkdale. As the train traced the curvy alignment of the former Denver & Rio Grande Western, passengers enjoyed the view of the Arkansas River, swollen by recent snowmelt. The remnants of a wooden water line hanging along the canyon walls



SIA Tour participants pose on the 280-ton payload truck (Euclid-Hitachi EH4500) at the Ashanti open-pit mine.

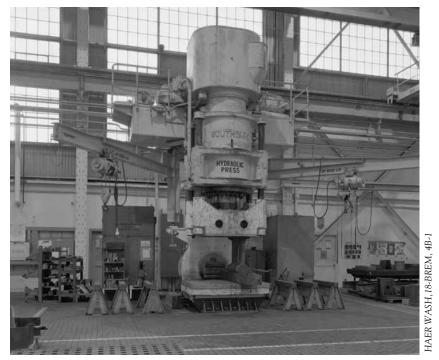
SIA 40th Annual Conference • June 1-5, 2011 • Seattle, Wash.

The Seattle host committee has begun preparations for a memorable conference in the Pacific Northwest, a first for SIA. In perhaps another SIA first, the committee has robustly gone to the internet to promote the event. The conference website is well worth checking out. At present, it features two videos: one about

the Gas Works Park and another about the 1962 World's Fair. Visit the website at *http://sia2011.com* or follow the links from the SIA website, *www.sia-web.org*. Conference updates will be added to the website as plans firm up over the coming months.

The Seattle area, with its long tradition of engineering and manufacturing, is an ideal place for the conference. Attendees will tour bridges, hydroelectric plants, and facilities related to aircraft manufacture, shipbuilding, specialty food and beverage production, and other industrial processes. Currently on the tentative itinerary are the Georgetown Steam Plant, the Tacoma Mills and Waterways, Bremerton Naval Shipyards, the 1962 World's Fair site, Gas Works Park, Lake Union and Ship Canal, Snoqualmie Falls Powerhouse, and the Boeing 787 Assembly Plant. The conference hotel will be the Grand Hyatt Seattle. Sponsorships are available, as well as other opportunities to participate. To reach the host committee, contact Julie Koler, (206) 999-2383, Julie.koler90@gmail.com.

Help Celebrate SIA's 40th Anniversary. Our 2011 Annual Conference in Seattle marks the 40th anniversary of the SIA. The host committee has asked that members share their memories and images from past conferences. Please contact Don Durfee at *sia@mtu.edu*.



1,000-ton hydraulic press in Building No. 460 at Bremerton Naval Shipyards.

could also be seen. Passengers exchanged greetings with the many white-water rafters and kayakers on the river. At Parkdale, the train reversed direction and tour participants alighted at the **Hanging Bridge** (c. 1879), the last remaining original bridge on Rio Grande's Royal Gorge route, and rode up the **Inclined Railway** (c. 1930), the steepest in the world.

After gathering at the top, the tour participants walked over the **Royal Gorge Bridge** (c. 1929), the world's second highest suspension bridge. The bridge, designed by George E. Cole and built of steel fabricated by Colorado Fuel & Iron, stands 1,053 ft. above the Arkansas River. Tour participants were able to walk across the bridge and enjoy a spectacular view of the gorge.

On the way back to Colorado Springs, the bus traversed Main Street through Canon City's traditional commercial district (c. 1870) where a small parade was in progress. The district is on the National Register of Historic Places and is the largest historic commercial district in Colorado.—David Wohlwill **Manufacturing Tour.** On Friday, June 4, the seventeen members of the Manufacturing Tour visited a metal products company, a pottery, a coal-fired electric generating plant, and an industrial history museum.

Springs Fabrication (*www.springsfab.com*) was founded by Tom Neppl in1986. The company produces large engineered metal products. The processes include metal cutting, shaping, and welding, with a focus on low-volume, high-precision work. The company moved to its current location in 1992. It utilizes 100,000 sq. ft. of manufacturing space and employs 135. Much of its production is modular/skidded systems that include tanks, piping, and control systems for plumbing and unit installation. Threedimensional design software is an integral part of man processes. Products include chemical processers, portable power plants, and a range of commercial units. Welding is an important part of much of Spring's work. Since most of its work is short runs, much of the welding is by hand. They

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The hoisting engine at the American Eagle Mine.

do also utilize robotic welding for larger production runs. Some of their welding requires radiographic confirmation of the quality of the welds. Some products undergo pressure testing when appropriate.

Artus Van Briggle, founder of Van Briggle Tile & **Pottery** (*www.vanbriggle.com*), was an Ohio native born to an artistic family in 1869. Following training at Cincinnati Art School, he became particularly interested in the lost art of Ming Dynasty matte glazing. Van Briggle, who contracted tuberculosis, moved to Colorado Springs in 1899 on the advice of his doctor. By 1901, he had developed the matte glazes he had been seeking and began selling the work commercially and exhibiting it in art shows, gaining some measure of fame. Unfortunately, Van Briggle died in 1904, but his wife Anne continued the work and expanded the pottery's operations. A highlight of the tour was a visit to the pottery building built by Anne in 1908 and now part of the campus of Colorado College. The Dutch architect Nicolaas van den Arend designed the building, making extensive use of artistic tiles and architectural terra cotta.



Underground at the Molly Kathleen Gold Mine.

Today, Van Briggle's operations are housed in a facility built in 2009. The pottery uses several mixing devices including a ball mill with babbitt bearings that originally was steam-powered. The pottery utilizes the slip-casting technique with ten ingredients being mixed with water to form the slip. The production mold is filled with slip and allowed to sit for two to six hours. As it sits, the plaster mold absorbs water from the slip and the clay firms up adjacent to the plaster. The remaining slip is then poured from the mold, leaving pottery with a thickness of 3/16 in. to 3/8 in. The cast pottery undergoes a first firing to the bisque stage, then a glaze is applied by dipping and spraying followed by a second firing. Most glazes are the traditional matte finish developed by Artus Van Briggle.

Following lunch, the group traveled to Xcel Energy's coal-fired electricity generating Comanche Station located in Pueblo. The plant is currently expanding to three units. The first two units are of 350-megawatt capacity each and went on line in 1973 and 1975, respectively. The third unit has an 800-megawatt capacity and is in the commissioning



The roundhouse at the Colorado RR Museum.



Aboard the Cripple Creek & Victor Narrow Gauge Railway.

Minutes of the Annual Business Meeting Colorado Springs, Colo. June 5, 2010

President Mary Habstritt opened the Annual Business Meeting in the Antlers Hilton Hotel. She read a letter of welcome from the mayor of Colorado Springs and recognized volunteers for the generous donation of their time and effort making this conference possible. In her remarks, the president noted that the two greatest accomplishments of the board during the past year have been hiring Ron and Corinne Petrie as the new events coordinators, and appointing Fred Quivik as the new journal editor.

Secretary's Report. Secretary Richard Anderson announced that the minutes for the 2009 business meeting had been published in the SIAN (Summer 2009) He asked for any additions, amendments or corrections. There being none, the minutes were accepted unanimously.

Treasurer's Report. Treasurer Nanci Batchelor presented the Treasurer's Report. SIA maintains its books and records on a cash basis, and maintains a calendar year for tax and reporting purposes. SIA is classified as tax-exempt under the IRS Code 501(c) (3) as an educational organization and files a Form 990 tax return yearly. The following report is for the year that ended December 31, 2009.

SIA began 2009 with a total fund balance of \$215,701. Cash receipts for the year totaled \$91,733. The majority of annual income comes from the various membership dues categories. In 2009 the total dues received were \$69,275. The remaining balance is comprised of interest income (\$2,476), contributions in both general and restricted funds of \$5,007, publication sales and excess proceeds from tours and conferences.

Total expenses for the year were \$91,575. The production costs of our publications, the newsletter and the journal, combined for a total of \$28,681. The balance was spent on labor (\$42,462), postage (\$2,742), insurance and legal fees (\$2,286), prizes, awards and scholarships (\$2,050), the

preservation grants program (\$3,000), office overhead, and a few miscellaneous items.

SIA closed 2009 with excess revenues over expenses of \$158 and a total fund balance of \$218,446 of which \$37,206 is in restricted funds.

To date in 2010, the Society has had a total of \$28,702 in cash receipts and has expended \$16,187.

Headquarters Report. SIA Executive Secretary and journal editor Pat Martin reported that things are going well at SIA headquarters thanks to office manager Don Durfee. However, the IA journal is seriously behind schedule. Two issues will be ready for publication soon, and Fred Quivik is already beginning his work to take over as the new editor at the end of the year. Betsy Fahlman, Pat Malone, and Mark Finlay were thanked for their service on the search committee for the new IA editor.

TICCIH Report. President Habstritt announced a meeting to be held after the annual business meeting to talk about TICCIH and how SIA can productively collaborate with TICCIH. Peter Stott is SIA's representative to TICCIH, and he pointed out that one project is upgrading an inventory of the top 100 industrial sites in America for nomination and listing on the TICCIH web site. The TICCIH effort meshes with SIA's effort to compile a list of historic industrial sites in the United States.

SIA Newsletter. Editor Patrick Harshbarger was unable to attend this meeting. He thanks everyone who has contributed over the past year.

Events. President Habritt thanked Jay McCauley, Nanci Batchelor, and Richard Anderson for their efforts on the committee to select the new SIA events coordinators, Ron and Corinne Petrie. Ron Petrie announced that several events are in the pipeline and encouraged members to contact him with potential locations and ideas for conferences (continued on page 7)

SIA President Mary Habstritt (soon to be Past President) assists entertainer T.J. Casey with an impersonation of Willie Nelson at the SIA's Annual Banquet.

Springs.—Bill McNiece



process. Each unit utilizes sub-bituminous coal mined in the Powder River Basin and transported by 120-car unit trains

with 120 tons per car. Coal is pulverized, then burned to produce heat at a temperature of 2500-3000°F. The burning coal is contained within steel pipes 200 to 250 ft. in length and surrounded by water to produce steam at 3000 plus psig. After an introduction to the plant and a walk through the facility, an elevator and flight of steps took

the group to the eleventh story, where we walked outside to get an overview of the plant along with a view of the former Colorado Fuel & Iron plant (now Evraz Rocky Mountain Steel) in the distance. The tour also paid a short visit to the Steelworks Museum of Industry & Culture in

Pueblo (www.steelworks.us) before returning to Colorado

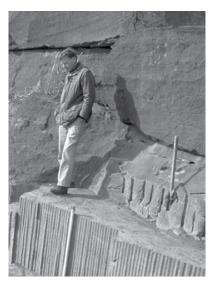
Robert Gordon 2010 General Tools Award Recipient

Robert Gordon's distinguished career as a metallurgist, geologist, archeologist, historian, and teacher spans more than fifty years. For most of that time he has applied his extraordinary skills to the study and promotion of industrial archeology, becoming the gold—or, in his case, perhaps the iron-standard for the application of the scientific method to our field. His incredible record of research in archives, in laboratories, and in the field has resulted in a stack of well-illustrated publications and archeological reports taller than any member of the SIA. Equally impressive are his generosity as a teacher and advisor, his mesmerizing abilities as a speaker or discussion leader, and his passion for making people see and preserve the industrial history around them. These accomplishments make him exceptionally well qualified for the General Tools Award.

Like many senior SIA members, Bob's interest in IA began before there was a name for our obsession. Growing up in northwestern Connecticut, he acquired hands-on skills in machine-shop practices, explored many of the region's waterpowered mills and iron furnaces, and developed a fine eye for site geography while still in high school. He never lost these interests, and as material studies of historic industries began in earnest a generation ago, he soon became a pioneer in the application of the scientific method and environmental analysis to a wide range of archeological field and laboratory projects. His detailed technical drawings, hand-delineated maps, and revealing photographs beautifully illustrated his reports. There are two common threads to Bob's research: an understanding of the historical processes involved in making and shaping industrial materials, and an ability to use physical evidence for investigations ranging in scale from microscopic identification of metallurgical processes to descriptions of how drainage basins were managed for waterpower. He was among the first to analyze waterpower sites using modern hydrological methods. He has conducted numerous imitative experiments with both operating machinery and hand tools. He can read the faint traces of filing on metal parts or the folded strata in the exposed wall of an open pit mine as well as well as literary scholars can read a poem. His ability to relate archeological features to actual work done by people long dead is remarkable. Some of us can recognize a pile of slag, but very few of us can not only figure out how the slag was made but also use the volume of the slag pile to tell us how much metal was produced. From understanding processes, he has been able to interpret artisanal skills in ways which have informed the work of labor historians as well as archeologists.

Bob's research has been at the core of what industrial archeology has accomplished as a field of study over the last twenty-five years. The General Tools Award is not given simply for academic publication, but we would be remiss if

we did not acknowledge the tremendous importance of Bob's many books and articles, countless which have introduced a wide range of readers to our field and informed the efforts of preservationists throughout the country. The Texture of Industry, co-authored with Patrick Malone, is still the gold standard for a new generation of students. He has won SIA's Norton Prize three times (a record), and has



Robert B. Gordon at the Portland, Conn., brownstone quarry.

contributed to the SIA's record of encouraging important scholarship by helping edit two special issues of *IA* and, more recently, serving on the current Vogel Prize Committee. His exemplary writing on industrial archeology has also earned him prizes and citations from the Society for the History of Technology, the American Institute of Architects, and the Association of American Publishers. The Smithsonian Institution honored him with a Regent's Fellowship and encouraged him to work with the collections in the National Museum of American History where he soon had old machines cutting metal once again to assess their production capabilities.

Bob's experience as a surficial geologist, metallurgist, and historian has made him an almost unique historical geographer. His ability to present complex, long-term patterns in readily accessible language has instructed large numbers of students, archeologists, and historians in the origins of the landscapes they see today, which often are deceptively bucolic. His field guides and some of his publications, notably his industrial heritage guidebook for northwestern Connecticut, co-authored with Michael Raber, are designed to get people out to see industrial history on the ground. His particular interest in old roads and turnpikes informs many of his suggested routes.

Bob's influence as a teacher and colleague has been as important as his research. Few who have worked with him have not learned something new, and he will share what he knows with anyone interested enough to ask. He has taught many people who are not industrial archeologists to recognize and preserve industrial sites. His numerous and often remarkable lectures have been a major part of his legacy as an advocate for the study and preservation

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and tours. Outgoing events coordinator Bode Morin was thanked for his service.

2010 Fall Tour. The Fall Tour will be held September 16-19 in Montpelier and Barre, Vt. Matt Kierstead presented tour highlights.

2011 Annual Conference. Corinne Petrie announced that the 2011 SIA Annual Conference will be held in Seattle. She asked Lorilee Hudson from the organizing committee to stand for recognition (see info elsewhere in this issue).

Student Scholarships. The Student Scholarship Fund exists to assist new student SIA members to attend annual meetings. This year's recipients are Greg Anderson, who just finished his BA in Urban Studies at Brown University, and Kaitlyn O'Shea, who is in the Historic Preservation program at the University of Vermont.

Continuing Education. Amanda Gronhovd, chair of the Continuing Education Committee, reported on the photo workshop held Thursday. She thanked Richard Anderson, Jet Lowe, and Jim Owens for their excellent presentations. She asked members to send in ideas for next year's workshop and to volunteer to join the committee.

Finance. Kevin Pegram, Nanci Batchlor, and Justin Spivey currently serve on the Finance Committee. They have created a plan to invest funds for the Vogel Prize to make it self-sustaining over the long term. The board also accepted a plan to start a planned giving program. There will be more information about this soon in *SIAN*.

Historic Preservation Advocacy. Chair Rick Greenwood observed that this committee is relatively new, and members can speak with the committee directly if desired. Other members of the committee are Jay McCauley, Wes Thompson, and Christopher Andreae. The committee advises the board about requests it receives for support to preservation projects. The SIA intends to support sites of national significance or outstanding state or local significance. It contacts state historic preservation officials to verify threats to such sites and writes letters of support. In the past year, the committee has been active in supporting preservation of the Ames Shovel Shops (North Easton, Mass.), the Memorial Bridge (Kittery, Maine), the Domino Sugar Refinery (Brooklyn, N.Y.), and the Lake Champlain Bridge (N.Y.-Vt.). On the horizon is the effort to support preservation of the USS Olympia in Philadelphia.

Grants. Chair Diana Bouchard commented that the committee reviews grant applications and recommends to the board which projects best deserve funding. She is assisted by Carol Litchfield and Nancy Goodwin. SIA received eight applications in 2009-2010, but the preservation grant fund is low. The board anticipates granting one award this year in the amount of \$3,000.

Membership. Chair Justin Spivey announced that Don Durfee, Tim Tumberg, and Lynn Rakos serve with him. The committee's charge is to come up with ways to increase membership. One effort the committee conducts is to

phone non-renewing members to see what led to their nonrenewal. SIA had 36 new members this year, well short of the 109 who signed up last year. The committee has produced a flyer this year to present to people in Colorado Springs who are curious about SIA but hadn't heard of us until the conference came to town.

Awards. Pat Martin presented the citation for the Vogel Prize to Dennis E. Howe on behalf of the prize committee consisting of Larry McNally, Pauline Desjardins (incoming chair), Martha Meyer, Robert Gordon, and Bob Casey (see article in this issue). Chuck Parrott presented the General Tools Award to Robert Gordon on behalf of the committee consisting of Mike Raber and David Poirier (see article in this issue).

Local Chapters. Chair Tim Mancl came forward to report on local chapters. Craig Austin also serves on this committee. He stated that the committee welcomes ideas to help local chapters in their endeavors. Many chapters are very active, conducting numerous field trips, papers, and meetings. He thanked those who have helped. The Southern Chapter has been revived, and he thanked Jim Bennett in Birmingham for his help. President Habstritt recognized the new Edward P. Allis Chapter of Southern Wisconsin by presenting John Kopmeier with a certificate. Mancl then proceeded with the roll call of existing SIA chapters, asking members present to stand for recognition.

Nominations. Chair Christopher Marston stated that this committee is charged with recruiting members to run for society offices. Other committee members were Erin Timms, Rachael Greenlee, and Bob Stewart. He thanked all who ran, all former officers who ran again, and he encouraged others to run. The results of this year's election are Kevin Pegram, Nominations Committee; Mary Ellen Ficker and David Rotenstein, Board of Directors; Justin Spivey, Secretary; Duncan Hay, Vice President; and Jay McCauley, President.

The president thanked those who are leaving the board for their service. Thanks were extended to Bob Stewart, Diana Bouchard, Betsy Fahlman, and Richard Anderson. Richard received a standing ovation in recognition of his 15 years as secretary.

The president passed the gavel to the new president, Jay McCauley, who thanked the audience for the honor. He then praised Tim Goddard for an excellent conference and urged others among the membership to serve on committees. He thanked Mary Habstritt for her service as president, and for stepping in at difficult times in the past to help the SIA. The No. 1 priority is to attract and retain membership, which we are slowly losing. SIA members are the best recruiters, so please make an effort to seek new members.

There being no new business proposed, a motion to adjourn was accepted unanimously.

Respectfully submitted, Richard K. Anderson, Jr. Secretary

Dennis E. Howe 2010 Vogel Prize Recipient

ach year the SIA recognizes outstanding scholarship in the field of industrial archeology with the Robert M. Vogel Prize. Named for SIA founding and distinguished member Robert Vogel, the award honors the author of the best article to appear in the journal IA within the past three years. The prize consists of a cash award and a wooden foundry pattern bearing a plaque engraved with the recipient's name. Articles selected must have a clearly stated thesis and a well-constructed narrative. Analysis of material culture and high-quality illustrations that support the thesis and conclusion are also important measures of scholarship worthy of the prize. Selection is made by the Vogel Prize Committee consisting of five members appointed by the president, who serve five-year terms.

The Robert M. Vogel Prize for 2010 was awarded to Dennis E. Howe for his article An Archaeological Survey of the Whiteport Cement Works, which appeared in Vol. 33, No. 1 (2007), pp. 5-26. From the discovery of natural hydraulic cement in 1825 until the closure of the company in 1902, Whiteport, and its product Rosendale cement, set the recognized standard for natural cement in the U.S. The company supplied about half the hydraulic cement in the country.

Howe takes us through the geology and occurrences of natural cements. The large deposits of dolomite in the Rosendale area, just west of the Hudson River, about halfway between Albany and New York City, were perfect for the production of natural hydraulic cement. The author then describes how the demand for natural cement was driven by canals, military fortifications, and other public works at the beginning of the 19th century. Canvass White, a brilliant young engineer working on the construction of the Erie Canal, patented a method of producing natural cement in 1822, but left the development of this product to his younger brother, Hugh White. The Rosendale site, which first supplied cement for the construction of the Delaware & Hudson Canal, was bought by Hugh White in 1838. He then resold it to the Newark & Rosendale Lime & Cement Co. in 1848. The company made new investments which raised production from 450 to over 1,000 barrels of cement a day. The cement mill was changed from water to steam power in the late 1860s. With the development of horizontal rotary kilns in the 1890s, the production of Portland cement

became viable. It was the adoption of Portland cement as the construction industry standard around 1900, however, that was the death blow to natural hydraulic cement industry. The company closed in 1902 and soon the site was abandoned. The Whiteport property was never redeveloped, which makes it a rich archeological site.

Howe takes us on a surface-archeology survey of the extant remains of the site. He is able to identify 15 different structures or structural complexes including a battery of four limestone kilns, various cooperages (including one that was water-powered), which produced thousands of cement barrels a year, a large steam-powered cement mill, and two large storehouses, as well as a number of ancillary buildings. Also recognizable is a large millpond which once provided power to the cement mill, a long stone embankment, and a dam. The roadbed of a horse-powered railway, which moved the cement barrels from the mill to the storehouses and then down to Eddyport for shipment on barges, is also visible.

Howe provides a description of the remains of each structure plus probable dates and uses. This is verified against insurance maps and other sources of information. He then relates these structures to what is known about the manufacture of natural cement using as sources textbooks and state publications dating from the beginning of the 20th century.

This article successfully integrates the history of natural cement, the biographies of Canvass and Hugh White, the histories of Rosendale and other nearby communities, the Whiteport Cement Works, and insurance plans with an archeological survey of surviving remains.

Dennis Howe's article is an important contribution to our understanding of how natural hydraulic cement was made and its role in the construction of public works in the 19th century. The research on the Whiteport site itself leads to a better understanding of how natural cement was actually made, how manufacturing components worked together, and the evolution of the site. All these lines of research lead to a much better understanding of the importance of Rosendale cement and the Whiteport site.

> Larry McNally Vogel Prize Committee Chair



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COMPILED BY

Summer 2010

Mary Habstritt, New York, NY., Justin Spivey, Oakland, Calif., and Patrick Harshbarger, SIAN editor, Wilmington, Del.

GENERAL INTEREST

- Christopher DellaMea. Exploring Appalachia's Coal Fields— West Virginia, Pennsylvania, Kentucky, Ohio, Virginia, Maryland. 2010. \$24.95. And, Exploring the Rust Belt— Pennsylvania, Ohio, West Virginia, Indiana. 2010. \$29.95. High-quality contemporary color photographs of railroads, mines, factories, workers' housing, and company towns. Selfpublished by the author in a bookstore-quality format. Previews and information on ordering available at www.blurb.com/ books/1279428 and 1233144.
- Lance Metz, ed. [SIA]. Canal History and Technology Proceedings, Volume 29. Canal History & Technology Press, 2010. 200 pp. \$25. Avail: National Canal Museum, (610) 559-6613. Proceedings of the annual symposium held at Lafayette College each March. Includes Emory L. Kemp and Janet K. Kemp [SIA], A Thoroughfare Through the Howling Wilderness: The Weston & Gauley Bridge Turnpike; Robert J. Kapsch [SIA], Building the South Carolina Canal and River Navigation System (1817-1828); Mike Piersa, A History of the Stephens-Jackson Slate Company, Pen Argyl, Pennsylvania; Part I: Lifting the Big Blocks; Damon Tyvaryanus and David B. Long, Recent Investigations at the Hillstown Glasshouse Site; Martha Capwell Fox, From Sugar to Cement: The Long and Varied Entrepreneurial Career of Jose De Nevarro; Thomas X. Grasso, The 1921 Motorship Day Peckinpaugh: Her Rise, Decline, and Resurrection; and Robert P. Wolensky, The Pennsylvania Coal Company and the Anthracite Leasing System: Development and Resistance.
- Timothy Riggs. At the Heart of Progress: Coal, Iron, and Steam Since 1750: Industrial Imagery from the John P. Eckblad Collection. Ackland Art Museum, University of N.C, 2009. 50 pp. \$15. Written to accompany an exhibition of prints from the Eckblad collection of industrial imagery, explores the way that artists have looked at the world created by heavy industry over more than two centuries. Offers a detailed discussion of 29 key prints and traces the growth and transformation of heavy industry in Britain, France, and America.
- Ezra Shales. Made in Newark: Cultivating Industrial Arts and Civic Identity in the Progressive Era. Rutgers Univ. Pr., 2010. 322 pp., illus. \$49.95. Experimental exhibitions in the Newark (N.J.) Public Library at the turn of the century defined the "industrial arts" as a project in which cultural literacy and patriotism were melded with the goal of engaging the city's swelling population of immigrant factory workers.
- Tamara Stewart. Excavating Hazardous Sites. American Archaeology (Spring 2010), pp. 38-43. Review of trends over the past 20 years in conducting archeology in areas with hazardous industrial wastes.

Mike Toner. Working to Reveal the Working Class. American Archaeology (Spring 2010), pp. 26-31. Features archeological projects that highlight the living and working conditions of industrial workers in the 19th century including John Russell Cutlery Co., Turners Falls, Mass.; Harper's Ferry, W.Va.; Ludlow, Colo. (striking miners' tent colony); and Five Points neighborhood, New York, N.Y.

RAILROADS

- Jeff Brouws. **On Railroad Photography**. *NHRS Bulletin*, Vol. 75 (Winter 2010), pp. 3-35. Insightful essay, copiously illustrated, looks at more than 80 years of railroad photography and what it has to say in broad terms about railroad history, aesthetic content and the changing American landscape.
- Michael T. Burkhart. Critters: Survival Stories of the 25-Tonner. NRHS Bulletin (Fall 2009), pp. 4-11. Photo essay about surviving and still-working industrial locomotives at various factories in the Upper Midwest and Northeast.
- P. Thomas Carroll. **Building a Better Spike**. *I&T* (Summer 2009), pp. 14-17. Two 19th-century industrialists fought the longest patent case in U.S. history over a lucrative machine that mass-produced railroad spikes.
- Thomas Greco and Karl Spence. Dining on the B&O: Recipes and Sidelights from a Bygone Age. Johns Hopkins Univ. Pr., 2009. 208 pp. \$34.95.
- ◆ Joel E. Hoffman. Louisa's Revenge. NRHS Bulletin (Fall 2009), pp. 30-41. Story of the Richmond, Fredericksburg & Potomac RR's attempt in the early 1840s to dominate rail transportation in central Virginia. Ironically, a key target of the RF&P was the Louisa Railroad, the original ancestor of the modern-day CSX Corporation, which swallowed up the RF&P in 1991.
- ◆ Jaques Kelly. Giving Snow-Covered Streetcar Tracks the Brushoff. Baltimore Sun (Dec. 26, 2009). Describes operation of the Baltimore Streetcar Museum's 1923 Philadelphia Rapid Transit snow sweeper.
- Philip Kennicott. A Restored 1910 Train Station Preserves the Vanishing Architecture of Segregation. Washington Post (Feb. 28, 2010), p. E3. Article about the station built by William duPont on the grounds of James Madison's Montpelier estate. Raises the issue of preserving racially segregated spaces, which have been disappearing since the civil rights movement. Includes photo of ribbon cutting and the floor plan.
- Matt Moffett. Argentines Engage in Labor of Love on a Railroad to Nowhere. Wall Street Journal (June 7, 2010), p. 1. Volunteers work to preserve an abandoned rail line with no promise that it will ever be used.

- Mark Ovendon. Paris Underground: The Maps, Stations, and Design of the Metro. Penguin, 2009. 176 pp. \$25. While providing a general history of Paris' various lines, the evolution of the Metro map from its early-20th-c. origins is examined. Long informational captions and obsessive technical detail for diehard subway and map devotees.
- Lawrence A. Gueller. A Wisconsin Icon Turns 100. Mid-Continent Railway Gazette, Vol. 42, No 1 (June 2009), pp. 8-16. Detailed history of the Goodman Shay #9 locomotive preserved at the Mid-Continent Railroad Museum. #9 originally worked for the lumber industry in the woods of Wisconsin.
- Frank A. Stanley. Railroad Shop Practice, Methods and Tools. McGraw-Hill, 1921; Lindsay Publications, reprint ed., 2009. 331 pp., illus. \$19.95. From 1917 to 1919, Stanley toured North American railroad shops collecting photos and information on then-current practices. Many of his findings were published in American Machinist Magazine. In 1921, he compiled the articles in a book. Includes Southern Pacific, NY Central, Pennsylvania, Santa Fe, Northern Pacific, Canadian Pacific, and others. Chapters are topical from machining pistons to driving wheels and axles.
- T. J. Stiles. The First Tycoon: The Epic Life of Cornelius Vanderbilt. Knopf, 2009. 736 pp. \$37.50; \$19.95 pap. A "whacking" new biography of the man who invented the modern corporation by consolidating New York railroads and who inspired the term "robber baron." Rev.: NY Times (April 29, 2010), p. C1.
- TICCIH Bulletin features a wrap-up of industrial heritage news from around the world. No. 47 (Spring 2010) includes: Benjamin Fragner, The Exhibition, New Uses in Old Industrial Buildings (an exhibition of industrial re-use in the National Technical Library, Prague); Peter Wirth, Small Is Successful? How Small Mining Towns Tackle the Problems Left by Mining; and Bode Morin [SIA], U.S. Heritage Conflicts with Environmental Mediation. Info: www.mnactec.com/ticcih.
- Ilene R. Tyler and Ann K. Dilcher. Sustainable Heritage Conservation: Pere Marquette Railroad Depot in Michigan. *APT Bulletin*, Vol. 41, No. 1 (2010), pp. 21-26. Detailed description of the planning and preservation of the depot built in 1904 for the Flint & Pere Marquette RR in Bay City, Mich.
- Eric Wills. End of the Line? A Historic Princeton, N.J., Rail Line Faces an Uncertain Future. Preservation Online (May 24, 2010). New Jersey Transit proposes to replace the 2.7-mile spur between Princeton Junction and Princeton with an express bus system. The proposal is controversial. The line, known as the "Dinkey," has been operating since 1865.

AGRICULTURE & FOOD PROCESSING

- Ruth Formanek. Fish Factories: Ruins of an American Industry. Pogonia Books (170 West End Avenue, 27N, New York, NY 10023), 2010. 96 pp. \$19.50 paper. Over 50 color photographs of fish factory ruins along the Atlantic Coast, with a historical essay on menhaden fisheries by H. Bruce Franklin. Chapters focus on New York, New Jersey, and Virginia menhaden-processing factories.
- Jordan Goodman. The Devil and Mr. Casement: One Man's Battle for Human Rights in South America's Heart of Darkness. Farrar, Straus and Giroux, 2010. 336 pp. \$30. Reconstructs the investigation by Roger Casement into the mistreatment and torture of Amazonian Indians by the rubber baron Julio Cesar Arana, who oversaw an empire of 10,000 square miles in the Putomayo rain forest for the Londonincorporated Peruvian Amazon Co. Casement calculated that between 1906 and 1911, the native population of the region

dropped from 50,000 to 8,000 as a result. Rev.: NY Times Book Review (Feb. 14, 2010), p. 11.

Katharine Q. Seelye. In Maine, Last Sardine Cannery in the U.S. Is Clattering Out. NY Times (Apr. 3, 2010). The oncethriving industry has died out in Maine and elsewhere in the U.S., a victim of global competition, corporate consolidations, and a general lack of appetite, at least in the U.S., despite the nutritional value of sardines. Photographs of the plant, owned by Bumble Bee.

LUMBER & PAPER PRODUCTS

- Phillip J. Harris. Adirondack, Lumber Capital of the World. PublishAmerica, 2008. 200 pp., illus. \$29.95 paper. A comprehensive history of the lumber industry in the southeastern Adirondacks, includes pioneer lumbermen, lumber camps, jobbers, log drives, log marks, saw mills, and the Delaware & Hudson RR.
- David A. Simmons [SIA]. A Most Excellent Machine: Bennett's Stump Puller. *Timeline*, Vol. 27, No. 1 (Jan.-Mar. 2010), pp. 32-33. History and description of a mechanical tripod stump puller (hand operated and horse powered) patented and sold by Harwell L. Bennett of Westerville, Ohio in the 1880s and 1890s.

IRON & STEEL

James R. Bennett and Karen R. Utz [both SIA]. Iron & Steel, A Guide to Birmingham Area Industrial Heritage Sites. Univ. of Ala. Press, 2010. 144 pp., illus. \$19.95 pap. Heavily illustrated guidebook provides an illuminating look at the people and events that shaped Birmingham into one of America's leading steel centers. Maps provide directions to preserved sites open to the public and lesser-known, yet still accessible, sites, including all of the notable iron and steel sites in Jefferson, Shelby, Tuscaloosa, and Bibb counties. Many of these sites were featured as part of the 1999 SIA Fall Tour. Includes Tannehilll Ironworks, Shelby Ironworks, Billy Gould Coke Ovens, Brieffield Ironworks, Oxmoor Furnace, Irondale Furnace, Helena Rolling Mill, Red Mountain Mines, Lewisburg Coke Ovens, Sloss Furnaces, Blocton Coke Ovens, and Vulcan Park.

BUILDING & STRUCTURES

- Kimberly Konrad Alvarez. The Lustron House: The Endangered Species of the Post-World War II Prefabricated Housing Industry. Adirondack Architectural Heritage Newsletter, Vol. 18, No. 2 (Winter 2009), pp. 1-4; www.aarch.org/ newsletter/Vol.18-2win09.pdf. Project to document Lustron houses in the Adirondacks. Article is mainly historical background on the Lustron Corp.
- Ryan Blackburn. Clark Central Student Uncovers Remains of Factory at Sandy Creek Nature Center. Athens (Ga.) Banner Herald (May 10, 2010), pp. 1-4. Describes student project to clear the site of a brick factory, dating to the early 20th century, which probably used a continuous-kiln system.
- Robert Gatje. Great Public Squares: An Architect's Selection. W.W. Norton, 2010. 224pp. \$65. From the storied piazzas of Rome, Venice, and Florence to Santa Fe, Portland, Boston, and New York, stunning computer-generated plans and color photographs convey the experience of the world's famous public squares. Includes a brief history of each square.
- Reese Palley. **Concrete, A Seven-Thousand Year History**. Norton, 2010. 224 pp., illus. \$37.50. Historical account of the versatile building material beginning with ancient Egypt to the present day.

 David Runk. Companies Consider Factory-Roof Gardens. Washington Post (July 27, 2010). Trenton Forging, southwest of Detroit, Mich., is using heat from a forge to turn out car parts and to warm a year-round greenhouse on the company's roof.

BRIDGES

- Joseph D. Conwill. Bath-Haverhill Covered Bridge at Woodsville, New Hampshire: The Oldest Existing Town Lattice Truss. Covered Bridge Topics (Spring 2010), pp. 6-10. Update to the Historic American Engineering Report prepared in 2002 with new information gathered after the report was submitted to the Library of Congress.
- Washington Roebling; edited by Donald Sayenga. Washington Roebling's Father: A Memoir of John A. Roebling. American Society of Civil Engineers, 2009. 284 pp. \$45. Part biography, part memoir. Washington, who completed John's triumphal Brooklyn Bridge, describes his father's life, character, career, and achievements with candor and intimate details. Donald Sayenga, an authority on the history of wire rope, has transcribed the original manuscript, making it available for the first time, and added annotations for hundreds of people, places, events, and technologies.
- Kevin Starr. Golden Gate: The Life and Times of America's Greatest Bridge. Bloomsbury Pr., 2010. 215 pp., illus. \$23. A paean to the Golden Gate by a California historian. Rev.: NY Times Book Review (Aug. 8, 2010), p. 7.

COMMUNICATIONS TECHNOLOGY

- Steve Lohr. H. Edward Roberts, PC Pioneer, Dies at 68. NY Times (Apr. 2, 2010). Roberts wrote software for the MIT Altair, the first inexpensive general-purpose microcomputer. Roberts gave Bill Gates (founder of Microsoft) his start in the software business.
- Alexander Rose. Radar Saves the Day. I&T (Summer 2009), pp. 38-47. The development of radar technology as a defense against attack from aircraft in the years leading up to WWII.
- David S. Rotenstein [SIA]. The Undisclosed Location Disclosed: Continuity of Government Sites as Recent Past Resources. http://historian4hire.wordpress.com/2010/07/15/coldwarsites/ (July 15, 2010). Describes efforts to identify, document and preserve cylindrical, reinforced-concrete towers secretly built in Md., W.Va., Pa., and Va. to house microwave communications technology during the Cold War. The towers would have provided communication between the White House and underground bunkers in case of nuclear attack.

TEXTILES

Rob Pavey. Cotton's Reign Fades. Augusta Chronicle (Aug. 5, 2010). Closing of S.M. Whitney Co., est. 1868 by a descendant of Eli Whitney. The firm was a cotton factor, a middleman that loaned money to farmers to produce cotton, transport their crop, and sell it to mills.

WATER TRANSPORT

William J. Broad. A Quest to Make the Morgan Seaworthy. NY Times (Aug. 16, 2010). Lengthy feature article describes efforts to document and restore the Charles W. Morgan at Mystic (Conn.) Seaport. The Morgan was built in 1841 and is the world's last surviving wooden whaling vessel. She hasn't moved under her own sails since before 1941. Documentation includes a number of high-tech digital techniques. After the \$10 million restoration is complete next year, the Morgan will call on former whaling port cities in New England. Julia Lawlor. No More Barges but Plenty of Beauty. NY Times (July 29, 2010). Describes a 70-mile bike tour of central New Jersey's Delaware & Raritan Canal. Info on renting bikes.

Power Generation

- ◆ Jane Brox. Brilliant: The Evolution of Artificial Light. Houghton Mifflin Harcourt, 2010. 360 pp. \$25. Social history of lighting technology from lamps fueled by animal fat to coal gas and electric utilities. Emphasis is on how light has changed western culture and shaped human psychology. Rev.: NY Times Book Review (Aug. 1, 2010), p. 14.
- Wind Power: The Danish Way. Poul la Cour Foundation, 2009. 88 pp., illus. 35 Eur. Avail: The Museum Shop, Poul la Cour Foundation, *plc@poullacour.dk*. Heavily illustrated volume tells the story of Danish wind power development from traditional four-bladed European-style windmills to early 20th century experiments in generating electricity that are at the foundation of the impressive Danish-made wind turbines producing electricity throughout the world today. Rev.: *Windmillers' Gazette* (Summer 2010), p. 13.
- Windmillers' Gazette is a quarterly journal for the preservation of America's wind power history and heritage. Vol. 29, No. 1 (Winter 2010): Wooden Vaneless Windmills Made by the Dempster Mill Manufacturing Company (Beatrice, Neb. maker, est. in 1878). Vol. 29, No. 2 (Spring 2010): A Close Look at the Monitor Self-Oiling Windmill (Baker Manufacturing Co. windmill produced from the 1870s to 1960s). Vol. 29, No. 3 (Summer 2010): T. Lindsay Baker, A Close Look at the Perkins Solid Wheel Windmill (Christopher Perkins, inventor of a self-governing windmill to pump water in 1869). Avail: Box 507, Rio Vista, TX 76093. \$20/yr.; www.windmillersgazette.com.

AERONAUTICS & AEROSPACE

Mark Wolverton. From the Mind of R.T. Jones. *I&T* (Summer 2009), pp. 30-37. Biography of self-taught engineer who proposed

CONTRIBUTORS TO THIS ISSUE

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With Thanks.

a radical aircraft design with an asymmetrical, oblique wing, which could be adjusted in flight to reduce drag.

Tools

- P.T. Rathbone. The History of the Old Time Farm Implement Companies and the Wrenches They Issued. Astragal Press, 1999 and 2006. 2 vols., 520 pp. and 320 pp. Set price \$150. Hardbound volumes encompass the history of over 500 companies and include old advertising pictures. Softbound supplements list over 3,000 wrenches from over 750 companies. Includes buggy, silo, cream separator, windmill, and gas engine companies.
- Jane Rees and Mark Rees. The Rule Book, Measuring for the Trades. Astragal Press, 2010. 476 pp., illus. \$89.95. Measuring tools used by tradesmen and professionals in everyday work, explaining how the devices were used by placing them in a trade and social context.
- Tools and Their Uses. Bureau of Naval Personnel, 1973. Reprint ed. 2010. 192 pp., illus. \$12.95. Avail.: Astragal Press, *www.astragalpress.com*. This manual, originally prepared for the use of naval personnel, was designed to present the basic hand and power tools that the ordinary person is likely to use. Through a wealth of more than 300 diagrams, clear explanations, safety tips, and operating instructions, teaches the basics of choosing and using tools properly. Teaches names, general uses, and correct operation of tools, fasteners, and measuring devices, as well as tools for grinding, metal cutting, soldering, and more.

MINES & MINING

• Ana Campoy. **Smelter's Shut, So Now What?** *Wall Street Journal* (June 30, 2010). Last year the American Smelting & Refining Company copper smelter near El Paso, Tx., closed. The community is now grappling with what to do with the site, including the 800-ft.-tall smokestack. Environmental cleanup is a complication.

ABBREVIATIONS:

- I&T = American Heritage's Invention & Technology
- NRHS = National Railway Historical Society
- TICCIH = The International Committee for the Conservation of the Industrial Heritage, www.mnactec.com/ticcih
- *Timeline* = Quarterly journal of the Ohio Historical Society, 1982 Velma Ave., Columbus, OH 43211. \$40/yr., \$14.50/issue.

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**.

GENERAL TOOLS (continued from page 6)

of industrial sites. No one attending one of his talks is likely to forget his clarity of presentation, his animated performance, and his independence from textual prompts: the man can say more without notes, and usually say it better, than most of us can with them. In addition to 8 to 10 talks given at national and regional SIA meetings, Bob has been a regular speaker at Ironmaster conferences, at numerous conferences on historical landscapes and industrial transformations of Connecticut towns and cities, at meetings of historical societies in New York, Connecticut, and Pennsylvania, and at many other professional organizations including Colonial Williamsburg, Sturbridge Village, the Smithsonian, the New Haven Preservation Trust, and the American Philosophical Society. When a public school teacher asked him to speak at a high school in Danville, Pa., a former iron-making center, he came hundreds of miles with a tray of well-chosen slides in hand (and asked no fee for his services).

Bob Gordon and his lab at Yale have been a magnet for many dozens of students, ranging from undergraduates to retired engineers, almost all of whom have become dedicated to industrial archeology, including several who explored early industries in Africa and South America. The services that he has provided to contract archeologists, museum professionals, and cultural resource managers have expanded their practical capabilities and broadened their intellectual horizons. Typical of his generosity, he is currently converting his large collection of micrograph slides to digital format, for the use of future researchers. His enthusiasm, acumen, and modesty have made him not just a teacher, but an IA missionary.

The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman of the board of General Tools & Instruments Co. LLC 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. They serve three-year overlapping terms.

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, 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.

SIA's Continuing Ed Program

elcome to the first Continuing Education Committee SIAN column! We've initiated this column to help members learn about the committee's activities and expand the breadth of "continuing education."

The Board of Directors formed the committee to offer members opportunities to learn about various aspects of IA. In the past these opportunities included short courses on subjects such as identifying and recording historic bridges, GIS for IA, and digitally recording historic structures. The committee strives to make these opportunities relevant to the SIA mission, interesting to the members, and cost effective.

At the 2010 Annual Conference in Colorado Springs, the committee organized a half-day photography workshop taught by James C. Owens (Senior Fellow at Torrey Pines Research and the Past President and Fellow for the Society for Imaging Science and Technology), Jet Lowe (long-time HAER staff photographer), and Richard K. Anderson, Jr. (Cultural Resource Documentation Services).

Jim Owens began the presentation with a history of photography and how technologies have changed. He then discussed digital imaging, image capture (the camera), image editing (both in-camera and post-camera), archiving, and laser mapping. During his talk he offered practical, understandable descriptions of how cameras and digital technologies work and made suggestions as to how best to format and store photographs.

Jet Lowe offered participants seven photography "Commandments" (or helpful hints). These included "Know Thy Camera as Thyself", "Slower is Faster," and "Follow the Light." Jet discussed how our job as industrial archeologists and preservationists often entails convincing people that the built environment is important. His portion of the workshop addressed this conundrum by teaching participants how to frame and present photographs that allow images of structures to be more persuasive and convincing.

Richard K. Anderson, Jr. focused on how properly taken and processed photographs can yield dimensional information. He observed that "in addition to photography and written data, measured drawings are a primary means for documenting engineering and industrial heritage." He discussed the types of dimensional information contained in photographs, rectifying photos to obtain accurate dimensional information, as well as perspective and distortion. Richard also offered simple, cost-effective techniques that photographers can use to reduce or correct distortions and glean dimensional data for use in accurate technical drawings.

Following the presentations and a question and discussion period, the presenters and participants dispersed for lunch, re-assembling for a walking field trip to use some of their newly acquired skills and information. The field trip took participants to the Van Briggle Pottery, approximately one mile from the conference hotel.

Thanks to the presenters and participants, the photography workshop was a great success! The Continuing Education Committee is currently exploring ideas and opportunities for the upcoming year, including offering continuing education credits for workshops, offering longer, full-day or multi-day courses, and compiling a list of school programs focusing on industrial archeology, heri-

(continued on page 16)



Instructors and participants in the SIA's photography workshop in Colorado Springs, June 2010.

CONFERENCES & WORKSHOPS

Call for Papers. On the Surface: The Heritage of Mines and Mining, Apr. 14-16, 2011, Innsbruck, Austria. The focus of this conference is the heritage of mining and the extractive industries and the physical sites and social legacies left on the Earth's surface. Some former mines, mining landscapes, and communities have gained heritage status and have become popular tourist attractions while others lie abandoned as pertinent and problematic markers of a changed world. This international, multidisciplinary conference seeks to critically examine the powerful and on-going fascination with mining and how mining heritage now plays an important role in

wider agendas of economic and cultural development. The Centre for Tourism and Cultural Change, Leeds Metropolitan University (U.K.), in partnership with the Dept. of History and European Ethnology, University of Innsbruck, welcome abstracts from a variety of disciplines and fields including: architecture, art history, history, sociology, anthropology, ethnology, cultural studies, geography, tourism studies, museum studies, archeology, linguistics and economics. Please submit a 300-word abstract including title and full contact details as an electronic file to *ctcc@leedsmet.ac.uk*. Deadline: Nov. 19, 2010. Info: *www.tourism-culture.com/conferences_and_events.html.*

IA Note—Asbestos Shingles

review of marketing materials and references associated with the Asbestos Shingle Slate & Sheathing Co. (ASS&S) of Ambler, Pa., reveals that the company advertised its products much like any other company might have promoted its wares. For example, the company paid to be listed in R.L. Polk's *Philadelphia City Directory* for 1927, but enjoyed a free listing in Reuben H. Donnelley's *Industrial Directory of the Eastern District* for 1930. The company also issued its own marketing literature and, most interestingly, distributed samples of its cementasbestos building products. The author recently obtained two identical specimens of the latter at an antique market in Pennsylvania.

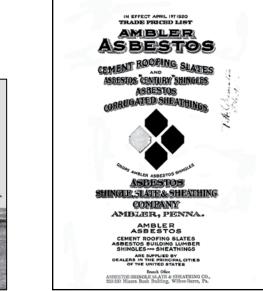
Manufactured under Ludwig Hatschek's reissued United States patent of 1907, cement-asbestos products consist of asbestos fiber mixed with hydraulic cement and rolled or pressed under great pressure into a monolithic material. These products were manufactured into the 1970s as corrugated and flat sheets (including perforated flat sheets), and as hollow ware such as pipe and conduit. The most familiar of the cementitious asbestos products is the Transite® of Johns-Manville. Not needing to be painted or otherwise treated, these products were practically maintenance free. They were resistant to weathering and insensitive to temperature change, would not propagate fire or conduct electricity, and were inhospitable to insects and mold. Not being absolutely inert, however, cement-asbestos water pipe was also responsible for asbestos contamination of public water supplies.

One of the cement-asbestos products developed during the first decade of the 20th century was roofing shingles, and ASS&S made a specialty of it. These shingles were promoted as superior to natural slate, which could become fissile and exfoliate after exposure to the elements. And because cement-asbestos shingles weighed less than slate, the frame of a new building could be of lighter construction and thereby save money. Being tougher than slate yet slightly flexible, cement-asbestos shingles were also less likely than slate to crack between the nail hole and the edge of the shingle.

During his employment as an environmental assessor, the author has had occasion to submit samples of cementitious asbestos products for laboratory analysis by polarized light



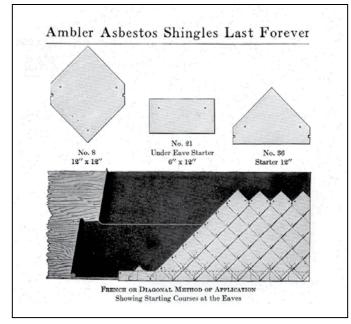
Salesman's sample of asbestos shingle. Note the foreign language inscriptions, suggestive of export sales. Actual measurements 4.2 by 4.2 inches; since this size is not listed in the catalog, and considering the absence of nail holes, it is evident that this was produced as a marketing sample.



Front cover of 40-page asbestos product catalog of April 1920 (5.5 by 8.5 inches).



Industrial building roofed with shingles manufactured by the ASS&S. From a brochure entitled Illustrations on the Use of Ambler Asbestos Building Lumber (ASS&S, 1922).



Details for cement-asbestos shingles.

microscopy, and found that they commonly contain approximately 40 percent chrysotile asbestos. Cementitious asbestoscontaining materials are classified as a miscellaneous material under the federal Asbestos Hazard Emergency Response Act, and are far less a concern than friable asbestos-containing materials. The workers who manufactured these products were far more likely to become ill than the customers who used them. An article in the *British Journal of Industrial Medicine* (1960) states that asbestosis had been known since circa 1900, and that the first case of carcinoma of the lung associated with asbestos was described in 1934. The author recommended medical monitoring "as a warning of impending disease," but proposed no preventive measures.

ASS&S is not listed in the Philadelphia Suburban Telephone Directory of January 1938, nor does it appear in Bell Directory Publishers' Pennsylvania State Manufacturers & Industrial Classified Telephone Directory and Buyers Guide



Railroad structure roofed with ASS&S shingles (ASS&S 1922).

of 1939. However, Keasbey & Mattison Co. of Ambler, whose motto was "Everything in Asbestos," appears in both of these directories and is listed as a supplier of asbestos shingles in Conover-Mast's *Plant-Production Directory* for the spring of 1943. The inside of the back cover of ASS&S's booklet of April 1920 is a full-page advertisement for Keasbey & Mattison, which suggests that it was affiliated with, and possibly absorbed by, Keasbey & Mattison.

Michael Bernstein

MEMBER NEWS

Mark Finlay won the Agricultural History Society's Theodore Saloutus Memorial Prize for the best book on agricultural history published in 2009 for his book *Growing American Rubber: Strategic Plants and the Politics of National Security* (Rutgers, 2009). The book explores America's quest during tense decades of the 20th century to identify a viable source of domestic rubber. Straddling international revolutions and world wars, this well-researched history chronicles efforts of leaders in business, science, and government to sever American dependence on foreign suppliers. It plots out intersecting networks of actors including Thomas Edison, Henry Ford, prominent botanists, interned Japanese Americans, Haitian peasants, and ordinary citizens—all of whom contributed to this search for economic

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self-sufficiency. Finlay teaches at Armstrong Atlantic State University.

Matt Kierstead's large-format, documentary photo of an active textile mill, titled *City Interior*, was competitively selected for the annual poster of the Pawtucket (R.I.) Arts Festival. The image is looking down a canyon-like alley between two brick mills with a smokestack in the background. The selection is fitting not only because it recognizes Pawtucket's industrial past but because it recognizes the large-format medium for its artistic as well as documentary qualities. It is the first photo selected for the annual poster; prior posters have featured paintings. Matt is a historian and photographer living and working in Pawtucket.

HISTORIC BRIDGE NEWS

Historic Bridge Festival. Portland, Ore., has built a 16-daylong festival of entertainment and arts around the heritage of the bridges spanning the Willamette River. A group of local preservationists and artists founded the PDX Bridge Festival as a nonprofit organization dedicated to showcasing the city's ten Willamette bridges. From July 23 through Aug. 8, the 2010 festival celebrated the 100th anniversary of the Hawthorne Bridge, the nation's oldest surviving vertical-lift bridge. Perfomances, art installations, and film showings were organized around the historic bridge theme with daily bicycle and walking tours of the bridges. Info: *www.pdxbridgefestival.org*.



Bridge Available. This nationally significant National Register-eligible bridge carries Mead Ave. over French Creek in Meadville, Pa. It is an unusual structure consisting of two different types of trusses, essentially a bridge within a bridge: a 1912 Baltimore truss (outside) welded to an 1871 double-intersection Whipple truss (inside). The bridge was documented by HAER in 1998. Due to deterioration and safety concerns it has been closed to vehicular and pedestrian traffic since 2007. Crawford County will transfer ownership to any responsible party who can relocate, restore, and reuse the structure. Historic preservation covenants will be attached to the deed to ensure long-term preservation and maintenance. Interested parties should contact Tom Minnich, PennDOT District 1-0 Environmental Manager, (814) 678-7008 or David Anthony, PennDOT Architectural Historian, (412) 429-4861, by Dec. 31, 2010. Info: www.dot.state.pa.us/ Internet/Bureaus/pdCulturalResources.nsf.

CONTINUING ED PROGRAM (continued from page 13)

tage, or preservation.

If you have ideas for future workshops or would be interested in teaching continuing education courses, have suggestions for this newsletter column, or have other questions or comments regarding the committee's activities, please contact Amanda Gronhovd at Gronhovd@10000LakesArchaeology.com.

Finally, please consider becoming a member of the

Addendum. The wording in the article on a Dimple Truss in the last issue of SIAN (Vol. 39, No. 2) may have been confusing. While the vertical members in a uniformly loaded parallel chord Pratt truss are in compression, all the web members, diagonals as well as verticals, in a uniformly loaded, bowstring, Pratt-like configuration are in tension. Therefore, when a dimpled bowstring truss' top chord configuration is subjected to a moving load the vertical at midspan will undergo a stress reversal changing from a tensile to a compressive stress.—*David Guise*



Bridge Available. The Wenatchee River Bridge is at the head of Tumwater Canyon on U.S. Route 2 near Wenatchee, Wash. The railroad bridge was built in 1900 by the Great Northern. It was widened and improved for highway use in 1936 by the M.P. Butler Co. The main span is a 175-ft., pin-connected, Pratt, through truss. The approach span is a 79-ft. through girder. This bridge retains excellent integrity of its 1936 appearance and is a good example of a Pratt truss. As part of a replacement project, the National Register-eligible bridge is available for relocation as an alternative to demolition. Info: Bob Romine, PE, Box 98, Wenatchee, WA 98807; (509) 667-2881; rominer@wsdot.wa.gov.

Continuing Education Committee! No matter if you have a little time or a lot of time to devote, we welcome it all and will find a place where you can be an active and contributing member of the SIA—a place that fits with your schedule, interests, and expertise!

Amanda Gronhovd

IA ON THE WEB

Atlas of Historical County Boundaries (*www.newberry. org/publications/*). The Newberry Library has published an on-line reference work providing information about the creation and boundary changes of every county in the U.S., from the earliest county creation in the 17th century to 2000.

Blister Steel (*www.youtube.com/user/RicFurrer*#p/u/4/3gSU4 kx_fqc). Two 4-minute video clips illustrate the production of blister steel, a process by which a small amount of wrought iron is packed in a hearth with charcoal to promote diffusion of the carbon into the iron to produce steel.

Cable Car Ride 104 Years Ago (*http://www.youtube.com/ watch_popup?v=NINOxRxze9k*). This remarkable 7-minutelong silent film was taken by a camera mounted to the front of a cable car traveling along Market St. in April 1906, days before the Great California Earthquake (and fire) leveled San Francisco. The number of automobiles, bicycles, carts, and pedestrians zigzagging in front of the car and the total lack of traffic control, except for the occasional traffic cop, makes for a fascinating spectacle.

From Steel to Lettuce (*www.treehugger.com/files/2009/04/ steel-factory-grows-lettuce.php*). Video tour of a Japanese steel-cable factory that was converted to growing hydroponic lettuce when demand for its steel products fell.

LA Beyond Cars (*http://railla.org*) promotes rail transport as an alternative to automobiles. A recent exhibit features architectural renderings of futuristic stations and highspeed rail.

"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.

SITES & STRUCTURES

The Tennessee Valley Authority's Chickamauga Lock (tour site-2008 SIA Fall Tour Chattanooga) project has been placed on hold due to a lack of funding. The original lock, built in 1940, is located adjacent to the Chickamauga Dam across the Tennessee River east of Chattanooga. The half-finished replacement lock was expected to be completed by now, but delays in funding and schedule due to the depletion of the Inland Waterways Users Trust Fund have placed the project on hold indefinitely. The 70-yearold lock is too short and narrow for modern barge traffic creating a bottleneck for the approximately two million tons of cargo that passes each year. Furthermore, it is suffering from "concrete growth" caused by a chemical reaction in the original concrete, causing the lock to crack and its walls to gradually spread apart. The lock must be shut down periodically for repairs.-Chattanooga Times (July 27, 2010)

The **Kingston (Ont.)** Dry Dock, adjacent to the Marine Museum of the Great Lakes, is undergoing a much needed restoration with a grant of \$1.6 million from the federal government. The cut-limestone dock was built in 1890 and designated a National Historic Site in 1974. Work involves removing a weathered concrete extension built in 1927 down to the original limestone. Photos available at: *www. kingstonthisweek.com/ArticleDisplay.aspx?e=2525679*.

Knoxville (Tenn.) IA News. Knox Heritage, a city preservation organization, has named two IA sites to its annual "Fragile 15" list. The Standard Knitting Mill at 1400 Washington Ave. was constructed about 1945 and

sits along I-40 near downtown. Founded in 1900, Standard Knitting grew to employ more than 4,000. Several older buildings in the complex were torn down in the 1990s; this structure was home to Delta Apparel until 2007. Delta Apparel gave the mill to a Goldsboro, N.C., foundation, and it's now for sale. The McClung Warehouses, 501-525 W. Jackson Ave., were once home to C.M. McClung & Co. The wholesale warehouses were built in 1911 and 1927. A 2007 fire destroyed about half the complex. Also of news in Knoxville, the 120-year-old Locomotive No. 154 made its first run in 57 years after two years of restoration. The locomotive had been on display and exposed to the weather at Chilhowee Park since 1953. The 2-8-0 Consolidation was built in 1890 by the Schenectady (N.Y.) Locomotive Works for the East Tennessee, Virginia & Georgia RR, which became part of the Southern Ry. in 1894. It is now running excursions on the Gulf & Ohio Ry.—Knoxville News (May 14 & July 1, 2010)

Surviving Richmond (Va.) Industrial Power Plants. Many factories and industrial sites in Richmond had their own power plants. Quite a number of these remain and some have been converted to other uses. The building that now houses the Boathouse at Rocketts Landing Restaurant was originally used as a power plant for a streetcar line before being converted to other industrial uses and finally into the eatery. The Lucky Strike Building at the east end of Tobacco Row on Cary Street was transformed into office space in early 2009. Other adaptively reused power plants

CHAPTER NEWS

Oliver Evans (Greater Philadelphia) held its annual meeting and picnic on June 21 at the Fairmount Water Works Interpretive Center (tour site—2007 SIA Annual Conference). In addition to the usual repast of ribs and fried chicken, the chapter enjoyed a demonstration of 19thcentury surveying techniques by the Wrigley's Engineers Independent Co. C, a group of Civil War reenactors.



Madame Alexander Doll Co., a recent Roebling Chapter tour site.

Roebling (Greater N.Y.-N.J.) toured the Madame Alexander Doll Co. in New York City's upper west side on August 6. Madame Beatrice Alexander Behrman founded the company in 1923. Over the decades it has created beautiful handcrafted play dolls for generations of children. Chapter members examined the company's impressive doll collection as well as the work of a talented staff of designers and costumers.

Samuel Knight (Northern Calif.) gathered on August 5 for a presentation from Richard Anderson, Jr. [SIA] on the application of digital images to CAD in IA. Richard's presentation focused on how CAD modeling, historic photographs, and basic site dimensions taken in the field were used to arrive at fairly accurate digital recreations of the Irondale Furnace complex in Birmingham, Ala.

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 website (www. sia-web.org).

Do You Know Someone Interested In IA?

The SIA announces the **2011** *Membership Referral Contest*. We are asking you to encourage your friends and colleagues to join the SIA. By helping our membership to grow, you could also qualify to win one of these fabulous prizes:

Grand Prize—One prize of two basic SIA conference registrations (our next conference is in Seattle), or 10 years of SIA dues, awarded to first-place recruiter or by random drawing if there is a tie for first place.

First Prize—\$100 credit applicable toward conference registration or two years of SIA dues, awarded any first-place recruiter(s) not selected in Grand Prize drawing.

Second Prize—IA-related book prize worth \$50 or 1 year of SIA dues, awarded to the second-place recruiter(s).

Third Prize—SIA logo gear (Mug, Hat, Coaster or Mouse Pad), awarded to anyone else recruiting one or more new members (while supplies last, from most to least new members and then in the order of when the new members' dues were paid).

Rules:

1. Encourage friends and colleagues to join the SIA, or purchase 2011 gift memberships for them.

- 2. New member dues or gift memberships must be paid by March 31, 2011.
- 3. Reinstatements of previously lapsed SIA memberships or renewals do not qualify.
- 4. Referring members must be named on new member's application.
- 5. Referring members must be an SIA member in good standing (2011 dues paid).
- 6. Only new Individual, Joint, Sustaining or Contributing membership levels qualify.
- 7. Voting members of the SIA Board of Directors and headquarters staff are not eligible for prizes.

Grand prize includes 2 basic member registrations for an upcoming SIA annual conference (it does not include transportation, hotel, meals, pre- or postconference tours, banquet fees or any other expenses).

The SIA Membership Committee will determine prize awards. The SIA Board will resolve any questions of contest rule interpretation and all Board decisions are final.

Please call (906) 487-1889 or *sia@mtu.edu* if you have any questions.

NOTES & QUERIES

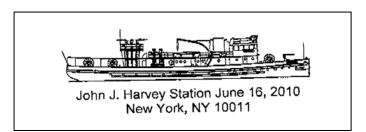
The National Endowment for the Arts (NEA) recently announced \$3 million in grants to cities in support of creative "placemaking" projects that contribute to the livability of communities and transform sites into lively, sustainable places with the arts at their core. From an industrial heritage perspective, it was significant that the NEA chose to announce the awards in Bethlehem, Pa. in the shadow of the blast furnaces of the former Bethlehem Steel plant (tour site—2002 Fall Tour, Lehigh Valley). Twenty-five cities are receiving grants to address integrating arts programming to revitalize older industrial districts, downtowns, and waterfronts.—ArtDaily.org

Warner Co. Photograph Collection. This newly processed collection of more than 3,000 photos at the Hagley Museum & Library (tour site—2005 SIA Fall Tour, Wilmington, Del.) is open to researchers with an interest in one of the Delaware Valley's largest cement and concrete suppliers. Warner Company began life in 1794 as a shipping firm operated by two brothers, John and William Warner. Running between Wilmington and Philadelphia, the Warner line became well known for transporting cement, lime, plaster, and building sand. Hagley's pictorial collection contains excellent coverage of Warner operations from 1923 through the 1960s. Photographs document sand and gravel dredges, limestone mines, concrete plants, waterfront distribution yards, and an extensive fleet of tugs, barges, and cement trucks. Advertisements publicize and promote the use of lime.—Hagley Library & Archives (July 23, 2010)

Historic Lightship Available for Donation. The U.S. Lighthouse Society is seeking a steward for the former Coast Guard lightship LV 605 (*Relief*), a National Historic Landmark. The 130-ft.-long, 600-ton vessel has been completely restored to its 1951 appearance when she was launched and commissioned. Nearly all the systems on the vessel are operational including three power generators, main engine, air compressors, fog horns, navigation lights, radar, etc. The galley is fully equipped with historically correct dishes and equipment. All compartments have been freshly painted, bright work shines, and fancy work has been replaced. Even the original operating and maintenance manuals are on board. *Relief* is presently moored at Jack London Square in the Port of Oakland, Calif. Although

operational, she may need some hull work before venturing into open waters, but she has been underway in San Francisco Bay. The U.S. Lighthouse Society is willing to transfer ownership at no cost to a suitable non-profit steward and may be able to defray moving expenses. For further information and to discuss the matter, please contact Wayne Wheeler at (828) 225-5572 or Jeff Gales at (415) 362-7255.

The **Passenger Train Historical Society** is planning a reenactment of Abraham Lincoln's inaugural train trip from Springfield, Ill. to Washington to commemorate the 150th anniversary of the event in February 2011. Sponsors are needed to support activities along the route with stops currently planned in Indianapolis; Columbus, Alliance, Ravena, Hudson, and Cleveland, Ohio; and Pittsburgh. Other cities are encouraged to commemorate this historical event. Info: *www.pthsonline.org.*



IA in Philately. On June 16, the U.S. Postal Service offered a special pictorial postmark to honor the John J. Harvey fireboat and crew. The fireboat became well known for her heroic efforts in response to the September 11 attacks. The historic fireboat has hosted several SIA Roebling Chapter events. Also, in February, the USPS honored the Mackinac Bridge in Michigan with a Priority Mail stamp featuring an artist's rendering of the bridge with seagulls flying around the two towers. The "Mighty Mac" opened in 1957 and remains the longest (total length) suspension bridge in the Western Hemisphere. Canada Post recently issued a series of stamps depicting historic grist mills. Featured are Watson's Mill (1860) in Manotick, Ont.; Keremeos Grist Mill (1877) in Keremeos, B.C.; Old Stone Mill National Historic Site (1810) in Delta, Ont.; Riordon Grist Mill (1890) in Caraquet, N.B.; and Cornell Mill (1830) in Stanbridge East, Que.

SITES & STRUCTURES (continued from page 17)

include those of the Model Tobacco Complex on Jefferson Davis Highway in South Richmond and the Richmond Locomotives Works in Shockoe Bottom (closed in 1926). When the St. Joseph's Villa Orphanage at Parham and Brook Roads opened in 1931, it had its own power plant, and Virginia Union University's power plant still stands, its smoke stack visible from I-95. The former City of Richmond New Pump House along the Kanawha Canal had a power plant installed in it in 1905. It provided electricity for pump house operations and the associated Byrd Park Reservoir. Use of this plant ceased when the New Pump House went out of service in 1924.—*Tyler Turpin*

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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CALENDAR

2010

Nov. 9-12: VI Latin-American Colloquium on Preservation and Protection of Industrial Heritage, Belo Horizonte, Minas Gerais, Brazil. Info: www.patrimonioindustrial.org.br.

Nov. 10: Crisis and Consequence Conference, Hagley Museum & Library, Wilmington, Del. The historical impact of financial crises on American society, business, and technology. Info: *clockman@hagley.org*.

Nov. 19-20: Heritage Recording and Information Management in the Digital Age (SMARTdoc), University of Pennsylvania, Philadelphia, Pa. Applications of new digital media to historic documentation projects. Info: www. smartdocheritage.org.

2011

Mar. 31-Apr. 2: Business History Conference, St. Louis, Mo. Info: Carol Lockman, (302) 658-2400, ext. 243; clockman@hagley.org.

Apr. 14-16: On the Surface: The Heritage of Mines and Mining, Innsbruck, Austria. See call for papers in this issue. Info: www.tourism-culture.com/conferences_and_events.html.

May 31-June 4: Vernacular Architecture Forum Annual Conference, Falmouth, Jamaica. Info: www.vafweb.org.

June 1-5: SIA ANNUAL CONFERENCE, SEATTLE, WASH. See article in this issue. Info: www.sia-web.org.

June 20-26: National Railway Historical Society Annual Convention, Tacoma, Wash. Info: www.cascaderails2011. com.