

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume 49 Fall 2020 Number 4

A CELEBRATION OF THE ROSENDALE VIADUCT

he year 2020 heralds twin anniversaries for the Rosendale Viaduct over Rondout Creek at Rosendale, N.Y. (SIA Fall Tour 2009). Construction of the first railroad viaduct here, completed in 1872, began 150 years ago in 1870. The year 2020 also marks the 125th anniversary of the replacement bridge, started in 1895 and completed in 1896.

The 1872 viaduct was built by the Watson Mfg. Co. of Paterson, N.J. for the Wallkill Valley Ry., first envisioned in the 1860s to stimulate the Wallkill River Valley economy. The line linked the Erie Ry. at Goshen with the New York, West Shore & Buffalo RR at Kingston. The greatest physical obstacle to construction was the Rondout Creek valley in Rosendale. That wrought-iron bridge was 940 ft. long and was among the taller railroad bridges built in the U.S. at

the time, soaring 150 ft. above the Rondout. The viaduct's long spans were Post-type trusses, a design patented in the 1860s by engineer Simeon Post, who leased his design to Watson. Newspaper accounts claimed this first Rosendale viaduct was the "tallest span bridge" in the U.S. when built; however, a slightly taller iron railroad viaduct over Lyon Brook in Oxford, N.Y., had been completed in 1869. Rosendale's 1872 viaduct was soon eclipsed in height by the Erie's 235-ft.-tall Portage Viaduct in western N.Y. in 1875.

By the 1890s, the original structure was no longer strong enough to safely support the forces and weights of new steam locomotives, heavier freight cars, and longer trains. The King Bridge Co. of Cleveland was contracted to build an all-steel replacement viaduct in 1895, using Pratt-type trusses for the long spans over the creek, flanked by deck

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Rosendale Viaduct in 1872.

In This Issue:

- Photo Tour of the Ore Terminal Trail, Big Bend NP
- Besly Co., Chicago
- Letter from SIA's President
- Annual Conference 2021 Update
- MnDOT Historic Bridge Website

ROSENDALE VIADUCT (continued from page 1)



Rosendale Viaduct in 1896.

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; household (joint) \$55; full-time student \$20; institutional \$75; 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; email: sia@siahq. org; website: www.sia-web.org.

Mailing date for Vol. 49, No. 4 (Fall 2020), December 2020. ISSN 0160-1067. If you have not received an issue, apply to SIA-HQ (address above) for a replacement copy.

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

TO CONTACT THE EDITOR: Marni Blake Walter, Editor, SIA Newsletter, 11 Esty Rd., Westmoreland, NH 03467; sianeditor@siahq.org.

girder approach spans, all supported by towers with diagonal braces and horizontal struts. This viaduct was among New York's larger steel railroad viaducts when built but was later eclipsed by structures like the Erie's almost 200-ft.-high, 3,200-ft.-long 1908 Moodna Viaduct at Salisbury Mills.

In 2009, Open Space Institute (OSI) and the Wallkill Valley Land Trust (WVLT) acquired former Wallkill Valley Ry. property including the iconic Rosendale Viaduct to extend the Wallkill Valley Rail Trail. OSI and WVLT restored the viaduct for public use, installing Corten steel railings, replacing damaged railroad ties, and installing decking made of recycled materials. The bridge opened in 2013, creating an important link in the 22-mi.-long Wallkill Valley Rail Trail, also now part of the Empire State Trail linking New York City, Albany, and Buffalo.

Matt Kierstead and Vals Osborne Abridged from an article appearing in the Wallkill Valley Land Trust's Fall 2020 Newsletter.



Rosendale Viaduct today.

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Besly & Co., Chicago Do-It-Yourself IA

y grandfather founded the Charles H. Besly Co. of Chicago in 1875. It was a comprehensive mill supply house selling metal stock, fasteners, hardware, machinist tools—much like McMaster-Carr today. A factory in Beloit, Wisc. was added to manufacture the Besly Disc Grinder as well as taps and dies and other products. In 1902, the company built a new head-quarters and retail sales facility at 118-24 North Clinton St. in Chicago. The three posters reproduced here tell a brief history of the company based on my research and are now on display at that address.

At about age 5, I traveled with my mother and father to Chicago for a board meeting. My mother and I toured the store during the meeting. She used to play in the store on Saturdays when she was a girl and knew that I would have the time of my life. You can imagine my delighted reaction to row upon row of 15-ft.-tall shelves filled with fascinating gadgets and glass topped display cases with shiny tools of mysterious purpose. That visit, and talk of company business over the dinner table, kept me fascinated as did subsequent visits to the factory in Beloit where I marveled at the assembly line and giant grinding machines being readied for delivery. Later I started collecting information about the company, looking at my parent's files and collecting old brochures and ads.

In 1965 the family sold the company to the Bendix Corp. That just intensified my interest knowing that it might disappear in the era of the "conglomerate." I

joined the Society for Industrial Archeology in 2003 and then made a research trip to Beloit. By then, retail operations had ceased, and the firm was a manufacturer exclusively. There I was given access to the company's archive and went through it top to bottom making copies for my collection. I also interviewed current and past Besly employees and was gratified at the enthusiasm for my project. Their continuing loyalty to the firm was evident. They even gave me items from their personal collections. After that I went on a search for some actual Besly machines and bought a few for exhibit in my own company's factory. In the process I got a lot of Besly memorabilia from dealers.

Recently, while in Chicago on other business, I stopped by the old building that held so many pleasant memories. The popular Ogilvie Center is directly across the street and it was good to see the West Loop area bustling with activity. The Besly building had been sold years ago when retail operations ceased and is now the multi-tenant Atrium-West. The owner happened to be there and told me he had been trying to develop a complete history of the building for years and was fascinated with what I could tell him. I asked if he would be interested in highlighting the history pictorially. He showed me several spots that would be ideal for displays.

Working with a graphic artist, I developed an abbreviated history of the building and the company on three large posters (up to 7 ft. tall) plus a plaque with two Besly-trademark machine nameplates. These are now on

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A plaque showing two Besly nameplates, on display along with the history posters in the former Besly building.

ol Bothand



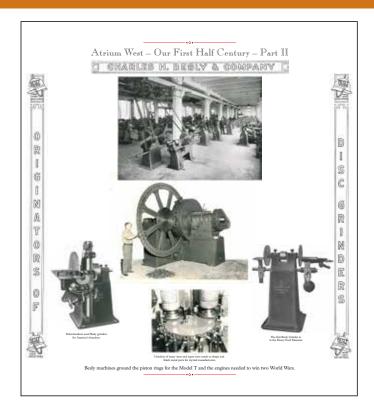
Posters telling the history of Besly & Co., now on display in the former Besly building.

display and have received many favorable comments from tenants and visitors.

Our cities are filled with fascinating "re-purposed" industrial and commercial buildings. It is a testament to their quality that they have productive use today. They often have unusual features, such as the very tall first floor of the Besly building. The addition of a history exhibit can explain the building's design features and be a fine way to get today's youth interested in America's great industrial history.

There are probably hundreds of people with stories like mine. Putting this project together was not a monumental effort. It documents a bit of industrial history that might otherwise be lost forever. I recommend this approach to anyone who wants to contribute to industrial history as an amateur archeologist. An effort like this can help to make more people aware of the industrial history around them and could lead to a larger research project by IA professionals.

Iack M. Bethards



Hudson Mohawk Industrial Gateway Seeks New Executive Director

The Hudson Mohawk Industrial Gateway in Trov. N.Y., is searching for a new executive director. The Gateway was founded in 1972 to preserve and promote the industrial heritage of the region primarily encompassing the New York communities of Troy, Watervliet, Green Island, Cohoes, and Waterford. The Gateway also operates the Burden Iron Works Museum, which features displays and artifacts highlighting the region's industrial past. The Gateway is a 501c3 non-profit institution and is chartered by the New York State Dept. of Education. The Gateway is supported by membership dues, donations, and fundraising activities and events. For further information about the Gateway, see the Gateway website: www. hudsonmohawkgateway.org. A complete job description can be requested by emailing info@hudsonmohawkgateway.org with "Executive Director Search" in the subject line. The new executive director will be expected to begin work in Nov. 2021. No phone inquiries please.

Steve Muller

Atrium West - Our First Half Century - Part III

Charles H. Besly & Company

The Founder at Home



Charles H. Besly (1852-1908) founded the Besly Company in 1875. His wife, Kathleen M.H. Besly, was the daughter of portrait artist G.P.A. Healy. She was a patron of art and music in Chicago for several decades.





CORNER OF BULING DEPARTMENT



Besly Today

In 1952 the supply business was sold to Clinton Street neighbors Barrett-Christie Co. who operated from this location until 1972. Besly continued manufacturing operations and today Besly Cutting Tools, Inc. still supplies its world-famous precision taps and dies worldwide



This clever 19th century advertisement shows the longest-lasting of all Besly product

Student Travel Scholarships. The SIA awards travel scholarships to full-time students and professionals with fewer than three years of full-time experience. The scholarship stipends are intended to help students offset expenses associated with attending SIA events (e.g., airfare, hotel, registration, etc.). To be eligible for a scholarship, the applicant must become a member in good standing. Student memberships are available for as little as \$20/year. Applications should consist of 1) a letter demonstrating a commitment to IA from the student and 2) a letter of reference from a faculty member or an individual active in the SIA. For information or to apply for the 2021 Annual Conference in Bethlehem, Pa., June 2–6, please contact Patrick Harshbarger, pharshbarger@hunterresearch.com; (609)-695-0122, ext. 115. Deadline for applications is Mar. 31, 2021.

Letter from the President

Dear SIA members,

Thank you for your continued interest in and support for the Society for Industrial Archeology. Your membership in the SIA has helped to sustain a half century of interpretation and preservation of industry through conferences, tours, research grants, and publications.

2020, our 50th year, has been unprecedented. A global pandemic forced us to postpone our Annual Conference in Bethlehem, Pa. and our Fall Tour to Maine. Our plans remain to have the Bethlehem conference in Spring 2021 and the Maine tour in Fall 2021, though we are cognizant that, whatever our intentions, our ability to hold those events depends on the status of Covid-19 at the time and your willingness to travel. We expect the Spring 2021 Conference to be a "hybrid" event, encompassing both in-person and online elements. If holding an in-person event remains unsafe, we will transition to a fully online format. To help gauge membership intentions, we'll be circulating a survey in early 2021 to determine willingness to travel and match our plans to the needs of our members.

Despite the postponement of the Conference, we held an Annual Business Meeting via Zoom in June 2020. At the meeting we awarded the 2020 Eric Delony Industrial Heritage Preservation Grant to the Nashville Steam Preservation Society in Nashville, Tenn. The \$2,500 supports Nashville Steam's restoration of the Nashville, Chattanooga, & St. Louis steam locomotive No. 576. The 4-8-4 locomotive was designed in Nashville and was one of the first "J-3" class engines built by American Locomotive Co.'s Schenectady works during WWII. These powerful locomotives hauled passenger trains over steep grades between Nashville and Atlanta until 1952 when the NC&StL became one of the first railroads in the country to fully dieselize.

We also awarded the 2020 Society for Industrial Archeology General Tools Award to Brian Shovers. The General Tools Award is the highest honor that the SIA can bestow, recognizing individuals who have given sustained, distinguished service to the cause of industrial archeology. Shovers has made exceptional contributions to IA, specifically within his home state where he has been a leader since the early 1980s. He is being recognized for his efforts documenting and preserving resources at nationally significant mining heritage sites, and his many spectacular efforts at promoting his state's varied industrial heritage through tours, conferences, workshops, surveys, research and publications, not to mention being a founder and long-time president of Montana's local SIA chapter, the Klepetko Chapter, as well as co-leader of three highly memorable SIA Fall Tours. I congratulate the recipients and thank Committee members for their work.

Our publications, *IA*: The Journal of the Society for Industrial Archeology and the SIA Newsletter continue to keep members up-to-date on news, research, and preservation efforts of industrial heritage from around the world.

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CALL FOR NOMINATIONS 2021

Two Directors, Nominations Committee member, and TICCIH Representative

Attention SIA Members!

This is your opportunity to help maintain the quality, strength, and diversity of leadership that has kept the SIA growing for more than four decades. We have four important positions to fill in the coming year and you can help choose the next leaders of your organization.

SIA's elected officials work for you to carry out the business of the organization. They represent the SIA to others, recruit new members, and plan the future of your society.

In 2021, there will be four (4) openings: two members of the Board of Directors, one of the Nominations Committee, and the TICCIH Representative. We need candidates willing to give their time, knowledge, and experience to the SIA.

This year's Nominations Committee is asking you to identify candidates—friends, colleagues, or perhaps even yourself—who are qualified and willing to serve. (If modesty precludes self-nomination, please find someone to nominate you.) Each candidate must be an SIA member in good standing and must consent to being considered for nomination.

The deadline for nominations is Mon., Jan. 4, 2021. Please send nominations, and any questions, to Ian Hay, Chair, SIA Nominations Committee, 17 Churchill Dr., Shad Bay, NS B3T 2B7, Canada; 617-519-1150 (mobile); ianahay@gmail.com.

Positions Open in 2021:

Directors (3-year term). Two (2) of seven director positions are open this coming year. The Board meets approximately four times per year (both in person [when safe] and online), including during the Annual Conference. Directors govern official business and affairs of the SIA, and often chair committees that oversee operations such as publications, grants, and local chapters.

Nominations Committee Member (3-year term). One (1) of three elected members who assist with recruiting and evaluating nominees, and monitoring annual elections, with the assistance of the immediate past president as an ex-officio member. It is expected that members will attend the Annual Conference to count ballots, and that each member will chair the committee during the final year of their term. The Chair announces the results of the election at the Annual Business Meeting during the Conference.

TICCIH Representative (3-year term). American SIA representative to the International Committee for the Conservation of the Industrial Heritage (TICCIH). Candidate would be tasked with increasing US and SIA involvement with TICCIH. The candidate would have to fund their own travel expenses or be backed by an institu-

tion/company to cover the estimated \$2000.00 a year for the annual meeting.

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

For summaries of the nomination process and responsibilities of SIA officials, view the SIA Bylaws on the "About" screen at www.sia-web.org. If you're unsure about the process or the obligation, please call or write the Nominations Chair at the address above. Current officeholders and their terms are shown below for your reference.

SIA Officers

Saul Tannenbaum, President (2020–2022) Arron Kotlensky, Vice President (2020–2022) Christopher Marston, Past President (2020–2022) James Bouchard, Secretary (2019–2022) Nanci K. Batchelor, Treasurer (2019–2022)

Board of Directors

Rebecca Burrow (2018–2021) David Simmons (2018–2021) Bob Newbery (2019–2022) Seth Price (2019–2022) Jacob Kaplan (2020–2023) Lynn Rakos (2020–2023) Gerry Weinstein (2020–2023)

Nominations Committee

Ian Hay, Chair (2018–2021) Diana Bouchard (2019–2022) Marc Belanger (2020–2023) Christopher Marston, ex officio (2020–2022)

TICCIH Representative

Bode Morin (2018–2021)



Vol. 49, No. 4 Fall 2020

COMPILED BY

Mary Habstritt, New York, N.Y., Patrick Harshbarger, Wilmington, Del., and Marni Blake Walter, SIAN editor, Westmoreland, N.H.

GENERAL INTEREST

- ◆ Engineering Heritage Australia Magazine, Vol. 3, No. 6 (Sept. 2020) includes an account of the winners of the 2019 Colin Crisp Awards, given for works related to engineering heritage; an update on the Powerhouse Museum (Ultimo Tramways Power Station), which was recently saved from demolition; articles by Frank Johnson, Sir Ernest Thomas Fisk (1885–1965): Australia's Pioneer Real Radio Man, renowned for establishing radio communications between Australia and the rest of the world; Stephen Phillip, Anthony George Maldon Michell, F.R.S., inventor of the famous tilting pad thrust bearing; and Margret Doring, Die Wuppertaler Schwebebahn, an almost-unique suspended (monorail) passenger railway in Germany that has been in use for 120 years and is still going.
- ◆ Thomas H. Fehring [SIA]. When Milwaukee Went to War:
 On the Homefront During WWII. Independently published,
 2020. 166 pp., illus. \$12.99. Written in coordination with the
 Milwaukee War Memorial Center's exhibit (On the Homefront:
 WWII, running through the end of the year), which the author
 helped to curate. In 1943 Milwaukee was one of the principal
 industrial centers of the U.S. that produced munitions for the
 war effort. Area companies also produced goods for the troops
 engaged in the war as part of America's "Arsenal of Democracy."
 This book chronicles the many things that were made in
 the Milwaukee area for the war effort, from can openers to
 machinery used to extract U-235 for atomic bomb production,
 and tells the stories of the factory workers who helped build the
 equipment and supplies that were a central part of the war effort.

LUMBER & PAPER

Peter Kendall. A Warning from Wisconsin. Washington Post (July 30, 2020). Verso Corp.'s Wisconsin Rapids Mill will close after more than a century of producing glossy paper, used principally in magazines and printed advertising. The market for glossy paper was already in decline but the coronavirus pandemic has been particularly devastating. Supermarkets and other retailers have removed magazine racks as "touch points" for shoppers, airlines have stopped carrying magazines onboard planes, and barbers, hairdressers, and doctor's offices no longer place magazines in waiting rooms.

WATER TRANSPORT

Rick Spilman. First "Mega" Cruise Ships Go to Scrap Yard. Old Salt Blog, www.oldsaltblog.com (July 31, 2020). Sovereign of the Seas, launched in 1988, was then the largest cruise ship built. It now lies in Turkey next to Monarch of the Seas and the Carnival Fantasy, mega cruise ships that followed shortly after, waiting to be scrapped. These pioneers have been dwarfed by ships built more recently, many now three times as large.

RAILROADS

- ◆ James D. Dilts. The World the Trains Made: A Century of Great Railroad Architecture in the United States and Canada. Univ. Pr. of New England, 2018. 304 pp., illus. \$50. A comprehensive study of the broad range of structures built in North America for the railroads during their heyday, including high-rise office buildings, resort hotels, roundhouses, and shops. Also examines present-day creative reuses of many of the structures. Rev.: *Journal of the Society of Architectural Historians* Vol. 79, No. 3 (2020), pp. 338–340.
- ◆ Karen Staulters. The Ballston Terminal Railroad: A Short History. New York Almanack (Aug. 11, 2020). Avail: www. newyorkalmanack.com. This trolley line ran from Ballston Spa to West Milton and later to Rock City Falls, serving many mills along Kayaderosseras Creek and connecting them to the D&H Railroad. Opened in 1898, it ran until the Depression carrying both freight and passengers.
- Paul Perreault. Early Railroads From The Capital District To Saratoga. New York Almanack (Aug. 23, 2020). Avail: www. newyorkalmanack.com. The Mohawk & Hudson Co. made its debut run on Sept. 24, 1831, one of the first railroads in the country. It was one of several early railroads in the Albany region.

AUTOMOBILES & HIGHWAYS

◆ Luke Sharrett. A Nostalgic (if Isolating) Road Trip Along Route 66. NYT (Sept. 7, 2020). www.nytimes.com. Photo essay featuring sights along historic Route 66, including rail, gas station, and roadside attraction ruins.

AGRICULTURE & FOOD PROCESSING

◆ Old Mill News, Vol. XLVI, No. 4 (Fall 2019) covers a wide range of news of mills around the U.S. Featured are Chase's Mill (Alstead, N.H.; see SIAN, Spring 2020), a former gristmill converted into a woodworking shop with restored turbine, which offers classes to the community; an analysis of Eurekastyle grain cleaners, including very detailed analysis of air-flow patterns used to separate wheat from dust, chaff, straw and other unwanted impurities; the history of Abbott's Mill in Sussex County, Del.; and a thoughtful discussion of the acoustics of

- mills and how each mill creates unique sounds, rumbles and beats, a "music" well-known to its millers.
- ◆ Lee Rainey. Ewing's Mill. TT Vol. 32, No. 1 (Spring 2020), pp. 7–14. History of Ewing's Mill in Mount Union, Pa., which operated from 1889 until its destruction in 1951 to make way for highway improvements. Features detailed drawings of the mill in its final years of steam-powered operation.
- Russ Norris (with drawings by Lee Rainey). The Mill at Shade Gap. TT Vol. 32, No. 2 (Summer 2020), pp. 6–15. History of a three-story, frame, roller grist mill erected 1846 just west of the borough of Shade Gap, Pa. The mill retains almost all of its late-19th and early-20th c. machinery, and was listed on the National Register of Historic Places in 1990. Article includes photos and detailed drawings of the structure.

BRIDGES

- ◆ Thomas Curwen. L.A.'s "Postcard" Span. LA Times (Oct. 2, 2020), pp. A1, A12. Long Beach's Gerald Desmond Bridge, a steel through-arch highway bridge constructed in 1968 to carry Ocean Boulevard (I-770) over the Back Channel to Terminal Island, is being replaced by a sleek, cable-stayed bridge with a 205-ft. vertical clearance. It is estimated that 15% of the nation's waterborne imported cargo is trucked from the Port of Long Beach across this bridge.
- ◆ Jan Lewandoski. John Johnson and the Bridge at St. Johns, Quebec. CBT (Winter 2020), pp. 6–16. Johnson of Burlington, Vt. constructed the Pont Jones between Iberville and St.-Jean-sur-Richelieu, Que. in 1826–27. The author uses archival evidence, including an original bill of materials, to delineate the timber and wrought-iron bridge structure concluding it was a "kingrod truss."
- Rob Mitchell. Is It or Isn't It a Covered Bridge. NSPCB Newsletter (Winter 2019/2020), pp. 9–11. The McHenry's Mill/ Paperdale Covered Bridge was built in the 1890s near the Town of Stillwater over Raven Creek in Columbia County, Pa. When the bridge was slated to be replaced in 1958, the trusses were relocated to private property and repurposed as an open-sided shed. This analysis of the framing suggests significant alterations.
- ◆ James Sindelar. What Is a Long Truss. CBT (Winter 2020), pp. 3–5. Discussion and analysis of Stephen H. Long's patented timber truss of 1830, arguing that the distinctive feature of

CONTRIBUTORS TO THIS ISSUE

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With Thanks.

the patent is a wooden wedge sledged into place between the bottom chord and the diagonals in each panel.

POWER GENERATION

◆ Windmillers' Gazette. Vol. 39, No. 3 (Summer 2020) includes T. Lindsay Baker, Types of Trade Literature Employed in Marketing Windmills; What Profits Earned from Manufacturing Windmills Could Buy; and Rufus W. Smith and His "Oklahoma Boomer" Windmill; and Christopher Gillis, Wood for Windmill Towers. Avail: \$20/yr., published quarterly. Christopher Gillis, Editor, P.O. Box 788, Buckeystown, MD, 21717; www. windmillersgazette.org.

OIL & NATURAL GAS

◆ Ron Pearson and Ric Case. Pumping Oil on the Broad Top. *TT* Vol. 32, No. 1 (Spring 2020), pp. 15–23. An overview of the original ten pumping stations along the 372-mi. pipeline across Pa. (and into N.J.), with a focus on the station constructed along the East Broad Top mainline, the Shirleysburg oil pumping station.

MISC. INDUSTRIES

- ◆ Kate Cronin. Entirely Unexpected Roman Industrial Complex Unearthed at Corby's Priors Hall Estate. Northamptonshire Telegraph (U.K.), (Aug. 10, 2020). www.northantstelegraph.co.uk/news/people/. The borough of Corby is best-known for 20th-c. steelmaking, but two tile kilns, a lime kiln, and five pottery kilns as well as large-scale quarrying facilities were recently discovered. The complex dates to between the late third to middle of the fourth c. A.D. and is set within a Roman Villa estate.
- ◆ Richard Garnett. Wirral Waters Provides Clues to Borough's Industrial Past. Wirral Globe (U.K.), (May 28, 2020). www. wirralglobe.co.uk/news/. The foundation remains of the early 19th-c. Seacombe Smalt Works, along with remains of iron, lead, copper, and alkali works, were discovered and excavated as part of a mixed-residential development project.
- ◆ Steve Olson. The Apocalypse Factory: Plutonium and the Making of the Atomic Age. W. W. Norton & Co., 2020. 352 pp., illus. \$27.95. Recounts how in a matter of months during WWII, the Hanford nuclear facility in the desert of eastern Wash. was built to produce and weaponize plutonium, the deadly new material that would fuel the atomic bomb dropped on Nagasaki and the bombs in the current American nuclear arsenal. Includes chapters on construction and operation of the facilities as well as later Cold War developments. Rev: NYT (July 28, 2020).
- ◆ Suzanne Spellen. Women's Labor History: Detachable Fashions And Laundry Work. New York Almanack (Oct. 19, 2020). Avail: www.newyorkalmanack.com. The development of the detachable shirt collar industry in Troy, N.Y. did not eliminate all the drudgery and danger of laundry work. In fact, some inventions that followed, like a starching machine that spat out collars at high speed challenged ironers to keep up and often resulted in burns. In response, the first all-female labor union was formed to demand better and safer conditions.
- Alan Taylor. A Quarry of Lights in Southern France. The Atlantic (Mar. 26, 2019). www.theatlantic.com/photo/2019/03/. Photo essay of Carrières de Lumières (Quarries of Lights) in Les Baux-de-Provence, France, a former limestone quarry that closed down in the 1930s and has been transformed into an immersive multimedia exhibit space. Features images from recent exhibitions with art by van Gogh, Klimt, da Vinci, and many others.

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2021 SIA GENERAL TOOLS AWARD

Call For Nominations

The SIA General Tools Award Committee is seeking nominations for the 2021 General Tools Award. This year's committee members are Fred Quivik, Chair, David Simmons, and Brian Shovers. Give this committee some work to do, reviewing nominations for distinguished service to industrial archeology. Any SIA member in good standing may make a nomination.

Remember, the General Tools Award is the highest honor the SIA can bestow. It recognizes individuals who have given sustained, distinguished service to the field of industrial archeology. The award is presented at the SIA's annual business meeting.

Here's what we're looking for: (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. Teams, groups, agencies, firms, or any other collective entities are not eligible.

Think of a name, then start a nomination. The committee can help you finish. You can write a statement of 2–3 pages identifying the qualifying accomplishments. Or, write a partial nomination describing one sector of the person's work you know best, with suggestions of others who might know more about the candidate's career. Nominations also may be collaborative efforts submitted by two or three members.

Supplementary material (the candidate's resume, for example) may be added. Nominations must also include the name, address, phone, and email of the nominator.

Information on the award and examples of successful nominations appear on the SIA website for many of the members who have received the award to date: www.sia-web.org/activities/awards/general-tools-award.

Previous recipients are Emory Kemp (1993), Robert Vogel (1994), Edward Rutsch (1995), Patrick Malone (1996), Margot Gayle (1997), Helena Wright (1998), Vance Packard (1999), Eric DeLony (2000), Robert Merriam (2001), Charles Parrott (2002), Alex Barbour (2003), Charles K. Hyde (2004), Lance Metz (2005), [no award given in 2006], Patrick Martin (2007), Chris Andreae (2008), Carol Poh (2009), Robert Gordon (2010), Richard Anderson (2011), Jane Mork Gibson (2012), Bob Frame (2013), Jet Lowe (2014), [no award given in 2015], Duncan Hay (2016), Patrick Harshbarger (2017), Fred Quivik (2018), David Simmons (2019), and Brian Shovers (2020).

The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], then chairman of the board of General Tools & Instruments Co. LLC. High Road Capital Partners acquired General Tools & Instruments in Feb. 2014 and have been pleased for the SIA to continue using the company's name on the award. The award is funded by the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of a citation, a commissioned sculpture ("The Plumb Bob"), and a cash award.

Please email or call Fred Quivik, this year's committee chair, if you are interested in making a nomination for 2021. He'll be happy to talk about it. Nominations are due on Mar. 31, 2021 to Fred at *auivik@usfamily.net*; (651)-224-0934.

LETTER FROM THE PRESIDENT (continued from page 5)

Adversity often drives innovation and, in that spirit, SIA Headquarters has started a series of online talks covering a variety of IA topics, developed and organized by our HQ office manager, Daniel Schneider. We have had 7 sessions so far. Please keep an eye on your mailbox to receive the Zoom link. If you've missed any of the sessions, you can view them on our new YouTube channel: https://www.youtube.com/c/SocIndustArch. If you'd like to present, please get in touch with Daniel at siahq.org.

It is with profound sadness that I share the news that SIA luminary, Vance J. Packard has passed away. Twice President of the SIA, Vance was a recipient of our General Tools Award, as well as numerous honors from Pennsylvania museums and institutions. I know I speak for all of SIA when I say that Vance will be deeply missed and as I extend our condolences to his wife Bonnie Smith.

We appreciate your continued membership and welcome your renewal for 2021. The SIA is in good financial shape to weather the pandemic but will remain so only with your continued support. We also encourage you to bring new members to the SIA, which you may do by gifting them a membership, and to get involved by planning and attending events when we have them again, giving papers, writing articles, and serving as a member of a committee, or as an officer of the society. We are an interesting and energized group who support the study and preservation of all things industrial. Please help spread the word to help keep the SIA a growing and vibrant society.

Yours in IA, Saul Tannenbaum President, Society for Industrial Archeology

Photo Tour

Ore Terminal Trail, Big Bend National Park

In the Sierra del Caballo Muerto on the eastern borders of Big Bend National Park, Brewster County, Texas, are the remains of an aerial tramway constructed for the Del Carmen Co. by A. Leschen & Sons Rope Co. of St. Louis, Mo. In operation from about 1909 to 1919, it carried 7.5 tons of zinc and lead ores per hour across the Rio Grande from a loading terminal near Boquillas, Mexico, to an unloading terminal in Texas. About 3 miles of the tramway extended into the U.S. A 4-mi. trail takes hikers past the remains of several towers on the way to the ore terminal's ruins in an otherwise empty valley of the Sierra del Caballo Muerto. See HAER CA-291,

Keane Wonder Mine and HAER UT-22, Silver King Mining Co. for other examples of Leschen tramways. For more on the ore terminal and tramway in Big Bend, see Joel Greenberg, "The Ore Terminal in Big Bend National Park," Journal of Big Bend Studies, Vol. 18 (2006), pp. 47–72. The following modern photos were taken during my recent (2018) hike along this trail. Historic photos courtesy of the National Park Service (NPS). Special thanks to Fred Quivik, Dana Lockett, and Todd Croteau for help with the captions.

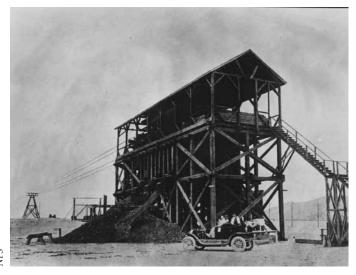
Mark M. Brown



Tower remains where the Ore Terminal Trail splits from another trail.



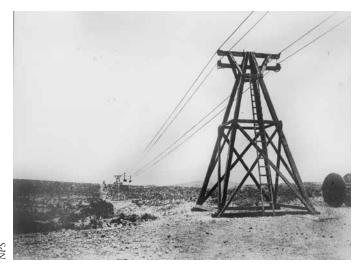
North end of the terminal ruins looking northeast. The low humidly of the Chihuahuan Desert slows decay of wood and metal.



Discharge terminal and receiving yards, 1919.



Buckets of unknown capacity like this carried ore from the mine in northern Mexico near Boquillas del Carmen. The bracket on the side (lower right) kept the bucket from tipping backward. A separate mechanism on the framework (missing), which hung buckets from the tramway, locked them from tipping forward until arrival at the ore terminal.



Tramway, with loaded and empty buckets passing on line.



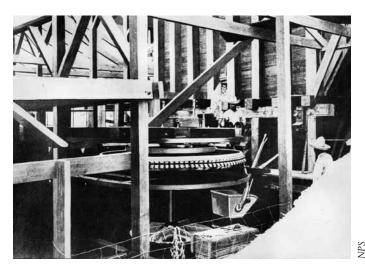
Looking north from the ore terminal. Mule carts carried the ore about 70 mi. north (as the Golden Eagles once flew) to the Southern Pacific at Marathon, Texas.



One half of the terminal's return wheel for the traction cable that moved the ore buckets. When compared to a historic image of the wheel published in Greenberg's article (2006), it appears one rim suffered accidental or deliberate damage.



Presumably the other half of the ore terminal return wheel. Unlike the half wheel in the previous photo, strangely both rims are damaged. Noting the almost sprocket-like character of the rims, Todd Croteau and Dana Lockett, HAER architects involved in the Keane Wonder Mine tramway documentation, pointed out that the tramways need a ratchet system to ensure one-way traction cable travel, though it's not clear that's what explains the irregular rims.



Interior detail of loading terminal, Mexico, 1919.



Bucket frames were suspended from a static cable. Wheels on the towers like this one (see also center left of the first photo) supported a separate traction cable that pulled the bucket frames.

(continued on page 12)

ORE TERMINAL TRAIL (continued from page 11)



Looking southeast along the length of the ore terminal ruins towards Mexico.



Abandoned cable among the creosote bushes with the ore terminal in the valley behind the viewer. The tramway's remoteness made salvage uneconomic when it shut down around 1919. The 3,500-ft. escarpment of Mexico's Sierra Del Carmen is in the background.



Middle of the terminal ruins looking southeast towards Mexico. Rocks in the crib are likely ballast and not ore.



Pulley of uncertain function located in the tower remains seen in the first photo. One possibility is maintaining tension on the static cable.



The last standing tower, near lower center, against the backdrop of the Sierra del Caballo Muerto and Sierra del Carmen.

IA EXHIBITS

The National Museum of Industrial History, Bethlehem, Pa. (a sponsor of the upcoming SIA Annual Conference) recently added an outdoor park and exhibit space. The 17,000-sq.-ft. park displays industrial machinery from Bethlehem Steel and other companies. The park shows the process of transforming raw materials into finished products and highlights innovations in industry. Among the machines on display are an electric arc furnace, a miniature basic oxygen furnace, a 10-ton ladle, and a rare ingot mold. An 11-ft.-tall Bement, Miles & Co. steam hammer dating to 1887 and a Wellman Engineering Co. charging machine, the last of its kind in the country, are both original to the plant and will

(continued on page 13)

Eric DeLony Industrial Heritage Preservation Grant Fund Application Deadline: Mar. 1, 2021

The SIA offers grants from the Eric DeLony Industrial Heritage Preservation Grant Fund from \$1,000 to \$3,000 for the study, documentation, recordation, or preservation of significant historic industrial sites, structures, and objects. Funds may be used for a range of projects including, but not limited to: increasing public awareness of preservation efforts, photography, videography, preparing inventories, and developing measured drawings of extant significant industrial sites, structures, maritime facilities, and industrial artifacts. Grant recipients must agree to prepare a written summary of their project suitable for

publication in either the SIAN or for IA, the Society's scholarly journal.

Grants are open to qualified individuals, independent scholars, nonprofit organizations, and academic institutions. Organizations are preferred over individuals. Substantial participation from state, county, or local history organizations is encouraged, although such groups do not necessarily need to be a sponsoring agency.

For info on how to apply: www.sia-web.org/activities/preservation-grants

IA ON THE WEB

How It's Made: Blueberries (www.youtube.com; search on title), or, how blueberries are harvested, processed, and packaged for mass distribution. Provides a clear explanation of processing with detailed views of sorting and packaging machinery in action.

Lighthouse Retrospective Tours (https://uslhs.org/lighthouse-tour-retrospective) is a collection of lighthouse tour videos from the U.S. Lighthouse Society. Features tours from around the world, including Greece, New Zealand, France, South Africa, and more.

Save Our Bridge (http://www.southyubariverstatepark.org/ RespWebPages/SOB.html) is maintained by the South Yuba River Park Assn., which started as a ten-year campaign to raise money and awareness for the stabilization and preservation of the 1862 Bridgeport Covered Bridge in Nevada County, Calif. The Calif. Dept. of Parks and Recreation received funding from both the Governor and private sources, and awarded a \$7 million contract to the Spectra Co. in 2018. Save our Bridge has documented progress on the rehabilitation, led by subcontracting timber framer Tim Andrews, since June 2019 with photos, videos, and drone videos, all with detailed captions and monthly progress reports. The bridge is expected to be completed in Feb.-Mar. 2021.

This Old House: Factory Made (www.thisoldhouse.com; search on Factory Made), Season 42, Episode 2 features visits to factories that provide building and finishing materials for the projects on the show. Includes Baird Brothers Fine Hardwoods, Cardinal Glass Industries, Kohler, Marvin, Superior Walls, Weaver Precast, and Weyerhaeuser. ■

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: sianeditor@siahq.org. ■

IA EXHIBITS (continued from page 12)

be restored to operational status. A 1941 Whitcomb dieselelectric locomotive has been installed and restored to working condition on a narrow-gauge track in the park area. The two furnaces are situated with the locomotive and charging machine to approximate how a typical steel mill melt shop operated. Raw material mining is showcased with several artifacts including a steam-powered hoisting engine and operable aerial cableway similar to those used in the slate and iron mining industries, as well as a rare Ingersoll-Rand channeling machine used to cut into solid rock. Live interactive demos will include forging using the steam hammer, iron smelting, casting, and slate splitting. Also on exhibit at the National Museum of Industrial History through Mar. 7, 2021 is Machines of Interest: The Selected Works of Stephen Mallon. The exhibit features over two dozen original prints from the artist's collection spanning life on the rails to deconstruction in the recycling yard to tracing the elements of human-made machines. Other works by Mallon include his series "Next Stop Atlantic," featuring decommissioned N.Y.C. Subway cars as they are retired in the depths of the Atlantic Ocean as artificial reefs, and "Brace for Impact," which chronicles the reclamation of the plane that was successfully landed in the waters of the Hudson river by Captain "Sully" Sullenburger. Info: www.nmih.org.

Update from Pa. on the SIA Lehigh Valley 2021 Conference

n behalf of the local planning committee, we are looking forward to the Annual Conference on June 2–6, 2021. The committee has continued its work under the expectation that the pandemic situation will improve, there will be a vaccine, and that we can produce a safe and engaging conference. We are planning on a full conference but also understand that a lot may or may not happen by that time.

There is still a lot of flux as I'm sure you all know. The Anthracite Heritage Museum/Eckley Miners' Village, part of the Pennsylvania Historical and Museum Commission, have been closed to the public since March and will remain closed until at least next spring. Our other two sponsoring museums including the National Museum of Industrial History and National Canal Museum have partially opened to the public and all three have pivoted to offer virtual programming and have thus far been able to continue operations despite the challenges of closures.

Many of the other sites we are planning on visiting have remained open and our tour leaders are maintaining contact with them. While we understand that there will be changes to our list of sites and tour schedules, we will adapt as we get updated information. After the first of the year, we will begin reassessing the current offerings and making necessary changes under the assumption that we will be able to hold a full and safe conference.

However, we will also be considering alternative formats if conditions and public safety mandate it with the intent of

PUBLICATIONS OF INTEREST

(continued from page 8)

ABBREVIATIONS:

CBT = Covered Bridge Topics, published by the National Society for the Preservation of Covered Bridges

CHSA = Construction History Society of America

NYT = New York Times

OMN = of Old Mills (SPOOM)

SCA = Society for Commercial Archeology

TICCIH = The International Committee for the Conservation of

the Industrial Heritage, www.mnactec.com/ticcih TT

= Timber Transfer. Published by Friends of the East Broad Top. Avail. with membership. \$30/yr. www. febt.org.

Publications of Interest are compiled from books, articles, and digital media brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books, articles, CDs, DVDs, etc., 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 Marni Blake Walter, Editor, SIA Newsletter, 11 Esty Rd., Westmoreland, NH 03467; sianeditor@siahq.org.

holding some SIA program in June 2021. I recently participated in the INCUNA conference. INCUNA is the Spanish equivalent of SIA and it developed and ran a hybrid event. Its conference had extensive safety protocols and limited inperson attendance but included a considerable virtual component that allowed participation from around the world. Using a platform called Airmeet, they had over 400 attendees which allowed for virtual gatherings and other engagements. I gave a paper from my home and watched several other presenters. This is an option we will be considering if conditions do not improve or are trending away from improving. From the perspective of a participant, this was a very successful conference given the limitations of virtual gatherings.

So what are you doing in June 2021? It will be the 50th anniversary of the founding of the Society for Industrial Archeology and we look forward to seeing you in the cradle of American industrialization. Come along and tour the active Anthracite coal mines, slate quarries, and cement plants that defined their industries and are still operating after centuries. Come see remarkable heritage projects that transformed former steel plants and mining towns into active educational spaces. Come ride the last mule-driven canal boat in the country and visit preserved quarries, blast furnaces, and bridges. Come see some of Eastern Pennsylvania's heavy industries and high-tech laboratories. We're hoping for a return to normal gatherings by late winter next year so that we can all safely gather and engage our industrial heritage.

Sincerely, the Lehigh 2021 SIA Planning Committee: Bode Morin, Kara Mohsinger, Mike Piersa, Daphne Mayer, Martha Capwell-Fox, Nicholas Zmijewski, Ann Bartholomew, Bob Bilhemier, Mark Connar, Patrick Harshbarger, Ed Hoy, Bill Inderrieden, Iim Kenner, Jerry Lennon, Jet Lowe, Don Young, John McConnell, Brian Schmult, Kevin Mock, Trevor Shellhammer, Kris Thompson, Saul Tannenbaum, Arron Kotlensky, Christopher Marston, Courtney Murtaugh, David Simmons, Pennsylvania Historical and Museum Commission, The Anthracite Heritage Museum, The National Museum of Industrial History, The Delaware and Lehigh National Heritage Corridor, and The Industrial Archives & Library.

Bode Morin, Conference Chair

SITES & STRUCTURES

A Labor Day weekend wildfire engulfed a historic bridge over the Yakima River in Wash. The wooden trestle bridge, believed to be almost 100 years old, was used by the Central Washington RR. Several hundred feet of the structure are reported to be destroyed (www.rtands.com, Sept. 30, 2020). But in good news, the 82-year-old Goodpasture Covered Bridge (Vida, Ore.) did survive the recent Holiday Farm fire after quick action by local firefighters (www.kezi.com, Sept. 25, 2020).—Don Durfee ■

HISTORIC BRIDGE NEWS

MnDOT Expands Its Historic Bridge Website

innesota's numerous historic bridges are well represented on an expanding and increasingly comprehensive website that documents more than 200 bridges. The website was created by the Minnesota Dept. of Transportation (MnDOT) to complement the state's historic bridge program. The program was established by a 2005 Programmatic Agreement with FHWA, the Advisory Council on Historic Preservation, the State Historic Preservation Office (SHPO), and the U.S. Army Corps of Engineers. The historic bridges website was initiated by a 2008 Programmatic Agreement and created by MnDOT's Cultural Resources Unit.

Here's the home page starting point: http://www.dot.state.mn.us/historicbridges/index.html.

Minnesota's historic bridges can be found in two very user-friendly ways: Using a clickable state map to browse by region, or by browsing all historic bridges by county and bridge number or name in a clickable list. MnDOT anticipates adding an interactive GIS-based map sometime in 2021.

Search by region on the map: http://www.dot.state.mn.us/historicbridges/search.html

Browse all bridges: http://www.dot.state.mn.us/historicbridges/browse.html

Either route takes you to a web page for each historic bridge that includes history and significance, key facts, images, document resource links, Google location map, and any rehabilitation activities. Minneapolis bridges are in the Hennepin County list, which includes noteworthy reinforced-concrete arch spans over the Mississippi River from the 1920s. It also includes the 1883 Stone Arch Railway Bridge, a National Historic Engineering Landmark that lives on as a trail bridge connecting with the St. Anthony Falls Flour Milling Historic District.



Named for Frederick William Cappelen, its Norwegian-American engineer who died during construction, the Cappelen Memorial Bridge's 400-ft. main span was the longest concrete arch in the world when it was completed in 1923. Crossing the Mississippi in Minneapolis, the bridge is shown here prior to its recent rehab.

Recent additions to the website include rehabilitation projects, lost bridges, and bridges that are available for sale. Additional links point visitors to more detailed and Minnesota-related discussions of prestressed concrete bridges and fabrication processes, masonry-arch, reinforced-concrete, and iron and steel bridges. A FAQs section includes details on MnDOT's historic bridge preservation program and efforts to bring historic bridges into compliance with the Americans with Disabilities Act (ADA).

The section on rehabilitation provides details and photos on over 20 individual bridge projects. A related section links to funding sources and case studies, along with the Statewide Historic Bridge Management Plan. Individual historic bridge management plans are linked with selected bridges. The website home page provides contact links to a MnDOT engineer, historian, and program coordinator for questions and additional information.

Robert Frame





Minn. Dept. of Transportation

The newly rehabbed 1931 Stillwater Lift Bridge crossing the St. Croix River between Minnesota and Wisconsin, now converted to a pedestrian and bicycle trail bridge. Here restored to its original green paint.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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CALENDAR

Please be advised to confirm all events and dates due to the coronavirus pandemic. All information was current, as best as could be determined, at the time of publication.

2021

Mining History Assn. Annual Conference, Elko, Nev. June 2020 conference rescheduled to 2021. Stay tuned for further info: www.mininghistoryassociation.org.

Society for Preservation of Old Mills (SPOOM) Conference, eastern Mass. Oct. 2020 conference rescheduled to 2021. Stay tuned for further info: www.spoom.org.

April 14–18: Society of Architectural Historians Annual International Conference, Montréal, Qué. Additional post-conference virtual programming to be held in May 2021. Info: www.sah.org/2021.

June 2-6: SIA 49th ANNUAL CONFERENCE, LE-HIGH VALLEY, BETHLEHEM, PA. Info: www.sia-web.org.

TBD: Preserving the Race for Space: Small Steps and Giant Leaps Symposium, Cape Canaveral, Fla. Postponed until future notice. Info: www.ncptt.nps.gov/events/preserving-the-race-for-space/.

TBD: Society for Commercial Archeology Summer Tour: NYC, The Golden Age of Air Travel, New York, N.Y. Postponed to summer 2021. Check back for updates. Info: sca-roadside.org.

Aug. 19–26: Assn. for Industrial Archaeology, Annual Conference, Liverpool, England, U.K. Paper sessions and tours. Info: www.industrial-archaeology.org.

Aug. 29–Sept. 4: TICCIH International Conference: Industrial Heritage Reloaded. New Territories, Changing Culturescapes, Montréal, Qué. Info: patrimoine.uqam.ca/evenements/ticcih2021/.

Fall, TBD: SIA FALL TOUR, CENTRAL AND MID-COAST MAINE. Postponed from 2020. Info: www.sia-web.org.

Nov. 14–17: Australasian Engineering Heritage Conference 2021: The Future of the Past (with pre-conference tours Nov. 11–14), Dunedin, NZ. Postponed from fall 2020. Info: www.engineeringnz.org/programmes/heritage/.

Nov. 16–21: Society for the History of Technology (SHOT) Annual Meeting, New Orleans, La. Postponed from fall 2020. Info: www.historyoftechnology.org.

2022

Apr. 27-May 01: SAH 2022 Annual International Conference, Pittsburgh, Pa. Info: www.sah.org. ■