SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume 48 Winter 2019 Number 1

IA Along I-75
Dayton, Ohio 2018 Fall Tour Recap

Dayton, Ohio and the I-75 corridor offered a variety of memorable stops on the 2018 SIA Fall Tour. From Sept. 27–30, about 60 SIA members met up at Tour headquarters, the Crowne Plaza Dayton, to experience some of the area's current manufacturing facilities, historic infrastructure, and museums and historic sites. The city is strategically located at the crossroads of two major interstate highways, the east-west I-70 and the north-south I-75. Our itinerary took members up and down I-75, north as far as Jackson Center, and south to the Kentucky border at Covington.

Thursday's early bird tour began at the **Voice of America (VOA) Bethany Relay Station**, which opened in 1944 and operated until 1993. This was a short-wave station broadcasting to the world over 24 high-efficiency antennas (removed in 1998). The control building remains and has been converted to the National Voice of America Broadcasting Museum, including Powell Crosley's Radio Corp. As with many industrial installations, changes were made over time. The original control room and transmitter have been replaced, but at least two later versions were still partially in place along with parts of some of the earlier ones. We also saw the huge concrete vaults behind the amplifier panel that housed the 12,000-volt AC power supplies (from two places), the transformers and other equipment that provided the voltages the amplifier needed to operate, and protection equipment against events like lightning strikes. Most of the equipment had been removed from the vaults, and they now contain an impressive collection of Crosley and other radio equipment and instruments.Paul Crosley was a man of many interests, so in addition to a low-cost radio (the Crosley Pup that sold for $10), large radio transmitters, and

(continued on page 2)

James Bouchard

The pour at Verdin Bell Co.

In This Issue:

Published by the Society for Industrial Archeology
Department of Social Sciences, Michigan Technological University, Houghton, Michigan 49931-1295

DAYTON FALL TOUR (continued from page 1)

everything in between, he was also into household refrigeration. From the icy-ball ammonia system using heat, he went on to develop a more conventional electrical unit. It was the first to include shelves in the door and even a built-in radio. For the war effort, Crosley developed the radio proximity fuse that increased the kill rate of flak from 13% to 50%. He also made an early fax machine that broadcast the news by radio overnight and provided a printed copy for you at breakfast.

Our second stop was not far away, at the **WLW AM transmitter**. Built in 1932 and operating on a special license, this 831-ft. tower put out 500,000 watts, or 10 times the maximum now allowed. Because the 500 kW transmitter blanketed half of North America, including Toronto, Canada, it caused interference with local stations, and so in 1939 Congress limited stations to 50 kW, meaning that WLM was reduced to 50 kW. It still operates today at this level.

These earlier transmitters were only about 30% efficient and the input power was 1.5 MW, so a substantial water-cooling system was provided to keep the tubes from melting down. The water-spray cooling pond was located in the front yard of the station and was used as a heated swimming pool by the station engineer's children. The engineer and his family lived next door to the transmitter so that he (and some others who also lived there) could provide round-the-clock care to the transmitters. The front of the transmitter building houses three 50-kW transmitters: the early tube amplifier that was used to generate the input for the 500-kW transmitter, a more modern home-made 50-kW transmitter, and finally a modern production model 50-kW transmitter. The power distribution and shops for the station were in the basement under this part of the building. The back of the building houses the 500-kW transmitter that sits over a basement full of support equipment, which originally included several motor-generator sets to produce the large amounts of DC power needed by the transmitter. The plate transformers, filters and capacitors, AC input voltage circuit breakers, and the coaxial output lines were also there. While a typical coaxial cable is about 3/8-in. in diameter, the 500-kW output coax was 10-in. in diameter and had stellite insulators for the center conductor. The station engineer's daughter recollects using it as a balance beam.

There were 12, 5-ft.-high RCA 867 water-cooled tubes in the amplifier section and another eight in the modulator. Most of the tube's height was the anode's copper heat sink, which fit in a water jacket. The water was de-ionized to reduce its conductivity to a minimum, and long lengths of Pyrex tubing in a back-and-forth arrangement were used to get enough insulation to avoid arcing. Even though this transmitter has not run in many years, most of the parts are still there in place for all to see. For a video tour of the site go to: *https://www.youtube.com/watch?v=CbHjcwIoTiY.*

After lunch, we proceeded to the **Verdin Co.**, a maker of bronze bells as well as carillons and tower clocks. They also do an extensive reconstruction business because most bells in North America were installed between 1870 and 1910 and now need work. Generally, the entire bell is removed,

Saul Tannenbaum

Control room at the VOA Bethany Relay Station.

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.*

Mailing date for Vol. 48, No. 1 (Winter 2019), March 2019. 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.*

2019 SIA Slate of Candidates

The SIA Nominations Committee is pleased to present the following slate of candidates for the 2019 SIA elections:

Treasurer *(3-year term)*
You will vote for one
Nanci Batchelor

Secretary *(3-year term)*
You will vote for one
James Bouchard

Directors *(3-year term)*
You will vote for two
Colin Batchelor
Bob Newbery
Seth Price

Nominations Committee Member *(3-year term)*
Vote for one
Diana Bouchard
Brian Gill

SIA bylaws state that the Nominations Committee shall notify the membership of the proposed slate at least 70 days in advance of the Annual Business Meeting. Additional nominations may be made in writing over the signatures of no fewer than 12 members in good standing (dues paid for the 2019 calendar year) and delivered to the Nominations Committee chair at the address below no later than April 27, 2019. Candidates must have given their consent to be nominated and must also be members in good standing. Ballots, which will include a biographical sketch and photograph of each candidate, will be mailed in early May. Members must have paid their dues for the 2019 calendar year in order to vote.

The 2019 Nominations Committee is Mike Raber, John Mayer, Ian Hay, and Maryellen Russo, SIA Past President (ex officio). Please direct all nominations and other correspondence to: SIA Nominations Committee, c/o Mike Raber, Chair, 81 Dayton Rd., PO Box 46, South Glastonbury, CT 06073; *msraber@aol.com*. ■

taken apart, and inspected and parts are repaired, replaced, or even upgraded. Reconstruction involves a lot of custom work because the bells were made by different manufacturers at different times and nothing is standard. Often reconstruction includes the installation of an electrically operated striker to make the bell ring instead of turning it, which causes wear and tear and can damage the bell if it goes too far. These strikers are somewhat standard, coming in several sizes and made in quantity.

The guide showed off the special bell with elaborate design work that was cast for their 175th anniversary. We also saw some tower clocks, which are varied and may contain a fair bit of hand work for the dials and decoration, but inside are the latest modern electronics.

The high point of the tour was the pour. The area was well set up with bleachers for about half our group. A large sand-covered area surrounded the flasks waiting to be filled. It was a high-tech operation, with a digital readout on the ladle, a pyrometer to check the temperature, and silver suits to protect the workers. There is still nothing like looking down the barrel of a red-hot furnace as it is turned on its side to pour into the ladle, and seeing the white-hot metal pour out like syrup—and the fireworks that happen as the flask fills.

By the time we got to the **John A. Roebling suspension bridge** crossing the Ohio River between Covington, Ky. and Cincinnati, Ohio, it was sprinkling rain and a bit cold. But the weather could not dampen our interest and most of us piled out of the bus after having crossed the bridge. Started in 1856, but only finished in 1867, it was modified by adding a second set of cables and new deck trusses in the 1890s by one of Roebling's assistants. The second set of cables only support the deck of the main span and are tied to the original cables by turnbuckles that require careful adjustment to share the load. David Simmons explained all this as we walked the bridge in the mist. As we stopped at the center of the span, he pointed out the expansion joint in the deck truss. At the towers, the deck truss is let into the masonry to go through them instead of just resting on them. David also explained how there was much discussion about the purpose of the stay cables and how they should be adjusted.

One group of 10 climbed the stairs to the top of the tower and got a view of the mist from on high. By then the wind and mist were worsening, so there was no second group to the top.

Thursday's opening reception was held at the **Steam Plant**, a former Dayton Power & Light (DPL) steam-generating plant. Built in 1907 and used until the mid-1980s, the Steam Plant has been renovated into an event space that preserves many of the building's original architectural features. Edward Roach, historian with the Dayton Aviation Heritage National Historical Park and author of *The Wright Company: From Invention to Industry*, welcomed everyone to Dayton with an informative orientation lecture.

Two tour groups went different ways on Friday morning and later joined together for a shared afternoon itinerary. Tour A started at the **Taylorsville Dam** near Vandalia, Ohio. Built by the Miami Conservancy District in 1919

(continued on page 4)

Dayton Fall Tour *(continued from page 3)*

in response to the catastrophic Dayton floods of 1913, this earthen dry dam controls the overflow from the Great Miami River. Unfortunately, heavy fog obscured much of the view of the dam.

The next stop was **Hobart**, which makes industrial cooking and dishwashing equipment at its Troy, Ohio facility. On the day we toured Plant 27, the assembly line for their pressure-cooking vessels was shut down, but assembly of their "warewashing" equipment was under way. Hobart manufactures commercial dishwashing equipment that ranges from small under-counter machines you'd see in a Starbucks, to large conveyer belt systems for large-scale institutional use. With a variety of washers under construction, we were able to see how Hobart mixes and matches its more standardized components into custom systems designed for each customer's unique needs.

After traveling a short distance north to Piqua, we arrived at **Hartzell Propellers**. Hartzell was founded in 1917 when Orville Wright suggested to his neighbor, Robert Hartzell, that the walnut used in Hartzell's lumber business be used to make airplane propellers. The propeller assembly line we toured had long since stopped making wooden propellers and was, instead, fashioning complex propeller systems out of aluminum and advanced composites.

Meanwhile, with Ron Petrie as our guide, Tour B crossed the Miami River and headed north, traveling parallel to the Miami-Erie Canal, to visit the **Airstream** manufacturing facility in Jackson Center. This facility was built in 1952 to meet rising demand during the post-war economic boom. In 1980, Airstream was acquired by Thor Industries, America's leading producer of recreational vehicles.

Our tour began as a truckload of axles was being delivered outside. We headed inside, where with the exception of some computerized routing equipment, the trailers are all riveted and assembled by hand. About 600 people are employed here. Unfortunately, no photography was permitted

Christopher Marston

SIA President Christopher Marston, Tour Chair David Simmons, and retired Miami County Engineer Doug Christian in front of the National Historic Landmark plaque at the Eldean Covered Bridge. All three helped make the NHL designation a reality.

inside the facility. We first viewed the furniture and cabinet assembly area, with numerous workbenches and workers drilling and assembling at each one. Next we passed the window assembly area before reaching the main body assembly area. An aluminum fabricating machine stamped out cutouts (for windows, utilities, etc.) in the large sheets of aluminum that will make up the main body of a trailer. These sheets next get riveted onto vertical frame pieces. Further down the production line, a ceiling lift is used to move the body onto a chassis. Three or four workers guide and hand-position the body and connect it to the chassis. Exterior details are attached by hand. After a pressure-spray water check, the trailer bodies move on to interior assembly, including insulation, fiberglass molding of sinks and showers,

(continued on page 12)

Christopher Marston

Robert Verdin III, sixth generation product manager at Verdin Bell, describes a 175th anniversary bell for SIA.

John Reap

WACO Air Museum, YKS (1936) illustrates traditional composite construction.

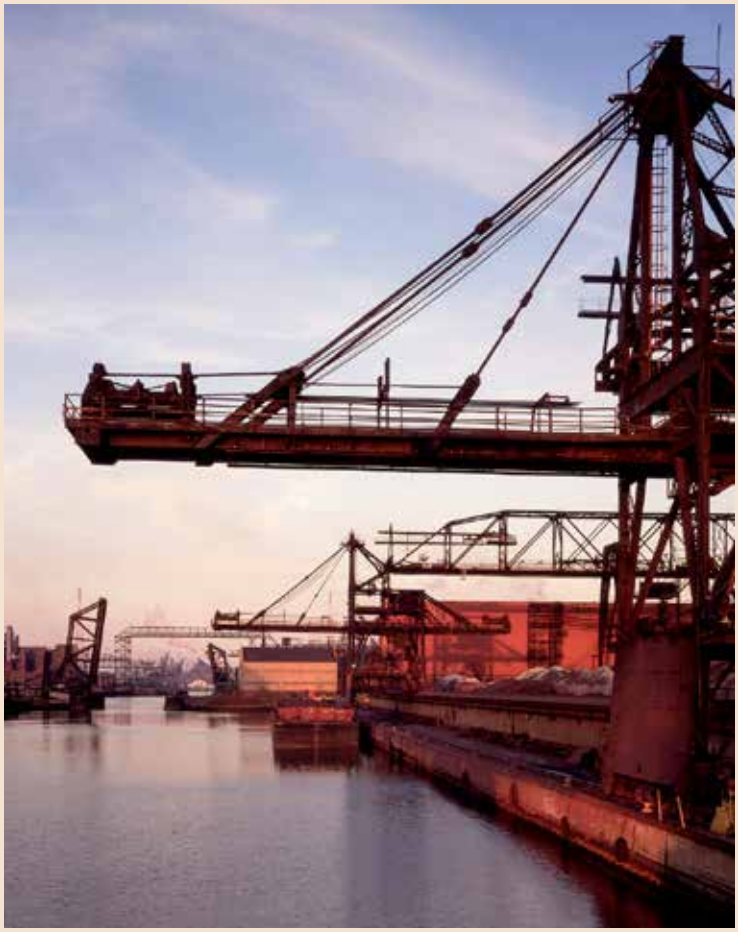
SIA Chicago Annual Conference Update
Chicago, Ill., June 6–9, 2019

Registration should be open for the SIA Chicago conference by the time you are reading this. The excitement is building and we have some great new tours confirmed! You won't want to miss this conference—the first time SIA has been in Chicago since 1991.

Since the Conference preview article in the Fall 2018 *SIAN*, we have confirmed a full pre-conference (Thurs. June 6) process tour of the ArcelorMittal Burns Harbor steel mill in Burns Harbor, Ind. Built by Bethlehem Steel in 1964, this fully-integrated mill stands as the newest mill still in operation in the U.S. You won't want to miss this increasingly rare opportunity to get inside such a facility!

Additionally, we have confirmed a Thursday pre-conference behind the scenes tour of the Illinois Railway Museum in Union, Ill.—the largest railway museum in the U.S., with its own 4.6-mi. railroad line where you can ride vintage transit and railroad equipment through the beautiful northern Illinois countryside.

Friday's all-day process tours will be action packed. We'll tour all types of industry (reflecting Chicago's diversified manufacturing economy)—from Life Fitness, one of the largest manufacturers of exercise equipment, to Vienna Beef, historic manufacturers of the most famous brand of Chicago hot dogs!



Matthew Kaplan

Ore unloaders along the Indiana Harbor Canal, East Chicago, Indiana, 1989.

Our conference hotel is the Hyatt Regency McCormick Place, conveniently located just south of the Loop (as Chicago's central business district is known). Our Thursday opening reception will be held at Plant Chicago, a former meatpacking plant in the historic Stockyards district that has been transformed into an event venue, microbrewery, vertical farming operation, and more. On Saturday, the optional banquet will be held at Lost Marsh in Hammond, Ind., with dramatic views of the surrounding industrial landscape of oil refineries and steel mills.

Post-conference tours on Sun. June 9 include the very rare opportunity to take a boat trip down the Calumet River and Indiana Harbor Canal on the city's southeast side and northwest Indiana. On this trip, you'll travel under historic bascule bridges, the Chicago Skyway, and get great views of the massive BP (Standard Oil) Whiting Oil Refinery. You'll also get up close and personal with active steel mills in East Chicago, as well as historic remnants of the steel industry along the Calumet River. You won't want to miss this trip! See you in Chicago!

—Jacob Kaplan and the SIA Chicago Conference Committee

Rainbow Powerhouse Seeks Adaptive Reuse Plan

The Rainbow Powerhouse in Cascade County, Mont. requires a plan for a new purpose by July 2019 or it faces demolition. Some SIA members will recall visiting this historic powerhouse during the 2015 Fall Tour (Great Falls, Mont.). The Rainbow Falls Dam and the powerhouse were developed and built by Great Falls Water and Townsite Co. in 1908 to provide power to Butte mines, the residents of Mont., and the Milwaukee RR.

Located outside the Great Falls city limits and situated with beautiful vistas on the Missouri River, the brick building is 80 ft. wide and 326 ft. long with 56,000 sq. ft. of existing floor space, and 30-ft.-high ceilings in two large volumes. A feasibility study completed by CTA Architects in 2017 demonstrated a structurally sound and well-maintained building.

NorthWestern Energy Co. (NWE) owns the building and is under order by the Federal Energy Regulatory Commission (FERC) to either dispose of the building or repurpose the site for new uses acceptable to FERC and NWE. Potential suitable uses include a data center and/or greenhouse, while the multiple smaller separate spaces (large transformer bays) could function as individually leased/rented work or storage spaces.

The Rainbow Powerhouse is National Registry eligible which permits use of Federal and State Rehabilitation Tax Credits. Any new business that generates income can receive historic preservation tax credits on qualified rehabilitation expenditures.

For interested parties the feasibility study is available. For more information please call Jane Weber at the Cascade County Commissioners' Office at 406-454-6810. ■

Brad Eatherly

Interior of the Rainbow Powerhouse, showing one of the potential spaces for reuse.

Brad Eatherly

Rainbow Powerhouse along the Missouri River.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 48, No. 1 Winter 2019

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

GENERAL INTEREST

- Marie Benedict. **The Only Woman in the Room: A Novel.** Sourcebooks Landmark, 2019. 272 pp. $25.99. Fictionalized account of Hedy Lamarr's invention of frequency-hopping radio communication technology and her efforts to convince the U.S. Navy to adopt it for a jam-proof radio-guided torpedo system during WWII.
- Andrew Taylor Call. **Chicago: A Civic, Industrial, and Familial History.** CreateSpace Independent Pub., 2018. 828 pp. $44.95. A history of the civic, industrial, and commercial development of Chicago and Cook County, Ill., with information about companies, churches, schools, hospitals, civic organizations, and many families who were builders of Chicago and the region through the mid-20th-c.
- Scott Frickel and James R. Elliott. **Sites Unseen.** Russell Sage, 2018. 176 pp. $29.95. The authors investigate New Orleans, Minneapolis, Philadelphia, and Portland, Ore., using original data for thousands of former manufacturers' locations dating back to the 1950s. More than 90% of such sites have been converted to urban amenities such as parks, homes, and storefronts with almost no environmental review. As new manufacturers open plants on non-industrial lots rather than on lots previously occupied by other manufacturers, associated hazards continue to spread relatively unabated.
- Will Hunt. **Underground: A Human History of the Worlds Beneath Our Feet.** Spiegel & Grau, 2019. 275 pp., illus. $27. A tour of underground spaces from New York's subway tunnels to Australian ochre mines to the Paris catacombs that examines our obsession with such spaces. Rev.: *NYT* (Feb. 3, 2019), p. 16.
- Louis Hyman. **It's Not Technology That's Disrupting Our Jobs.** *NYT* (Aug. 18, 2018), *www.nyt.com*. Upending the traditional narrative that technological innovation drove social change during the Industrial Revolution, argues that decisions by corporations and policymakers drives social change and led to the modern "gig" economy. Based on a new book by the author, *Temp: How American Work, American Business and the American Dream Became Temporary*.
- Harry Kyriakodis [SIA] and Joel Spivak. **Underground Philadelphia: From Caves and Canals to Tunnels and Transit.** The History Pr., 2019. 256 pp. $21.99. Describes the subterranean, infrastructure-related features developed during 300 years of Philadelphia's history: water, sewer, gas, steam, electricity, telephone, and cable utility service, and transit tunnels of all sorts.
- National Park Service, Office of Communications. **Federal Historic Preservation Tax Incentives Program Celebrates its 40th Year.** Avail: *https://www.nps.gov/orgs/1207/htc2017.htm*. (Oct. 15, 2018). A recent report shows that the Federal Historic Preservation Tax Incentives administered by the National Park Service and the Internal Revenue Service, in partnership with State Historic Preservation Offices contributed over $12.2 billion to the economy in 2017. Over its lifetime, the program has preserved or rehabilitated over 43,000 properties while generating over $144 billion in private investment.
- Amelia Nierenberg. **At New Hampshire Family Camp, Iceboxes Preserve, Among Other Things, Tradition.** *Boston Globe* (July 28, 2018). Avail: *www.bostonglobe.com*. Among the antique traditions at the Rockywold-Deephaven Camps in Holderness, N.H., ice is still cut to cool food in iceboxes in the rental cabins. Ice is harvested in January and stored in an on-site icehouse until summer visitors arrive and ice is delivered to them by wheelbarrow each morning.
- **TICCIH Bulletin 81** (3rd Quarter, 2018) includes Kai Weise, *Biratnagar Jute Mills and the Foundation Of Democracy*; Christopher H. Marston [SIA], Justine Christianson, Todd Croteau, Thomas Behrens, and Dana Lockett, *Historic American Engineering Record Update*; Eduardo Romero de Oliveira, *Brazilian Railway Research*; Zachary Liollio [SIA], *Forty-Eight Anchors: the Cape Romain Lighthouses*; Bode Morin [SIA], *U.S. Withdrawal from UNESCO*; Stephen Sanders, *Saving Sandfields Water Pumping Station*; Massimo Preite, *Rediscovered Factories: Industrial Heritage and Architectural Design*; Hasan Bazazzadeh and Mohsen Ghomeshi, *The White Bridge of Ahwaz*; Judith Fait, *Old Rommel Diesel Power Plant*; plus opinion, conference and museum news.
- Adam Winkler. **We the Corporations: How American Businesses Won Their Civil Rights.** Liveright, 2018. 472 pp., illus. $28.95. How corporations, which originally had limited legal rights under charters from monarchies, won the right to act as citizens in court. Rev.: *NYT Book Review* (Mar. 11, 2018), pp. 1, 13.
- T.R. Witcher. **Fifty Years of Preservation: The Historic American Engineering Record.** *Civil Engineering* (Jan. 2019), 40–43. Recounts the history, key projects, and challenges of the Historic American Engineering Record (HAER) over its first 50 years.

TEXTILES

- Ruth Simon. **Weaving Magic Unravels in Woolrich, Pa.** *WSJ* (Dec. 21, 2018), *www.wsj.com*. After nearly 200 years, the

Woolrich woolen mill in Woolrich, Pa. closes and a storied brand ceases to be "Made in the U.S.A."

- Clayton Joe Young, Tim Peeler, and Kelly Carroll. **We See What We Want to See: The Henry River Mill Village, Photography, Poetry, and History.** Redhawk Pub., 2018. 106 pp., photos. $29.95. (Avail: *bookstore.cvcc.edu* or by email to *rcanipe@cvcc.edu*) Built in 1904 and incorporated as the Henry River Mfg. Co., this abandoned North Carolina village has approximately 35 houses rented inexpensively to employees of the textile mill. Homes modeled on traditional farmhouses with gardens and trees helped bridge the transition from agrarian to industrial.

Iron & Steel

- Ken Kobus [SIA]. **A Day Of Reflection: Memories of Steel's Heyday.** *Pittsburgh Quarterly* (online only). *pittsburghquarterly.com/between-the-issues*. A former employee of J&L Steel Pittsburgh Works reflects on his South Side neighborhood and work at the plant during the early days of trying to improve safety concerns and procedures.

Mines & Mining

- Ron Pearson and Ric Case. **Truck Dumps and Strip Mines along the East Broad Top Railroad.** *TT* Vol. 30, No. 3 (Fall 2018), pp. 10–18. Reviews the development of coal strip mining along the East Broad Top during the mid-1900s.

Water Transport

- Delta Queen Steamboat Co. **Historic Delta Queen Steamboat to Resume Overnight Voyages on Inland Waterways.** Press release (Nov. 27, 2018), avail: *http://deltaqueen.com/updates/*. Congress has renewed the Delta Queen's exemption from the 1966 Safety at Sea Act which prevents vessels from overnight passenger service unless made completely of non-combustible materials. After 10 years of retirement, work is under way to restore her to service.
- Bo Petersen. **A Broken Pipe May Have Sunk the Confederate Hunley Submarine, SC Researchers Say**. *Post and Courier (Charlestown, S.C.)* (Jan. 14, 2019), *www.postandcourier.com/news*. Clemson Univ. conservators working to restore the Confederate submarine Hunley found a 1-in. gap where a ballast tank pipe should have been mounted on the side wall of the submarine. This clue could suggest a cause of the vessel's sinking.
- Steven Ujifusa. **Barons of the Sea.** Simon & Schuster, 2018. 427 pp. $29.99. How the clipper ship pushed naval technology to its limits and made fortunes for Americans, including the Forbes brothers, carrying tea and opium from China and, later gold seekers and supplies to California. Rev.: *WSJ* (July 21–22, 2018), p. C12.

Railroads

- Mary Boyce and Lance Collins. **Why Our New Plan for Repairing the L-Train Tunnel Is Best.** *NYT* (Jan. 17, 2019), Opinion. Avail: *www.nytimes.com*. Engineers from Columbia and Cornell Universities describe their solution to repair a subway tunnel under the East River damaged by Hurricane Sandy, preventing the full shutdown planned by the Metropolitan Transit Authority.
- Richard Lanyon [SIA]. **CSDX 39 and the History of the Sludge Express.** *Rail & Wire, official publication of the Illinois Railway Museum* (Summer 2018), pp. 24–43. Describes construction (beginning 1928) of the Sludge Express, owned and operated by the Metropolitan Water Reclamation District of Greater Chicago, and provides details about historical and present-day rolling stock. Also briefly explains the sewage treatment process and the role of the railroad in the disposition of sludge. Readers may contact the author for a PDF copy of the article: *dicklanyon@sbcglobal.net*.

Automobiles & Highways

- Dawn Duensing. **Hawai'i's Scenic Roads: Paving the Way for Tourism in the Islands.** Honolulu: University of Hawai'i Pr., 2015. 332 pp., illus. $42. An investigation of the history, politics, and social processes behind the projects that established the islands' most renowned scenic drives, including the Pali Hwy., byways around Kīlauea Volcano, Haleakalā Hwy., and the Hāna Belt Rd. Engineers confronted a unique combination of circumstances: extreme isolation, mountainous topography, torrential rains, deserts, volcanic eruptions, earthquakes, and on Haleakalā, freezing temperatures.
- Rosemary Kerr. **Roads, Tourism and Cultural History: On the Road in Australia.** Bristol, U.K.: Channel View Pubs., 2018. 304 pp. $159.95. This book explores how Australians have experienced and imagined roads and road travel over time and offers a new way of thinking about roads and road tourism as important strands in a nation's cultural fabric. It also tells the stories of iconic roads, including the Birdsville Track, Stuart Hwy., and Great Ocean Rd., and suggests alternative approaches to heritage and tourism interpretation of these important routes.
- Eric Rutkow. **The Longest Line on the Map: The United States, the Pan-American Highway, and the Quest to Link the Americas.** Scribner, 2019. 438 pp., illus. $30. Chronicle of the political wrangling that eventually resulted in the highway that runs from Alaska to Tierra del Fuego. Rev.: *NYT* (Jan. 27, 2019), p. 15.

Agriculture & Food Processing

- Ingrid Rojas Contreras, photos by Christopher Payne. **Sugar Works: Inside Colombia's Beloved Candy Factory.** *NYT Magazine* (Oct. 28, 2018), "The Candy Issue." Avail: *www.*

CONTRIBUTORS TO THIS ISSUE

Nancy Banks, New York, N.Y.; Diana Bouchard, Montreal, Canada; James Bouchard, Montreal, Canada; Arlene Collins, Houghton, Mich.; Brad Eatherly, Great Falls, Mont.; Mary Habstritt, New York, N.Y.; Patrick Harshbarger, Wilmington, Del.; Neill Herring, Jesup, Ga.; Jacob Kaplan, Chicago, Ill.; Ken Kobus, Bethel Park, Pa.; Harry Kyriakodis, Bristol, Pa.; Richard Lanyon, Evanston, Ill.; Christopher Marston, Washington, D.C.; Ron Petrie, Lakewood, Ohio; Carol Poh, Cleveland, Ohio; Michael Raber, South Glastonbury, Conn.; John Reap, Sun City West, Ariz.; Maryellen Russo, Dripping Springs, Texas; Joe Seely, Chicago, Ill.; Daniel Schneider, Houghton, Mich.; Saul Tannenbaum, Cambridge, Mass., Tyler Turpin, Richmond, Va.; Robert M. Vogel, Washington, D.C.; Steven Walton, Houghton, Mich.; Suzanne Wray, New York, N.Y.

With Thanks.

nytimes.com. A nostalgic tour with photo and documentation of the Colombina factory in La Paila, probably South America's largest hard candy plant.

- Tejal Rao. **Big in Japan.** *NYT Magazine* (Oct. 28, 2018), "The Candy Issue." Avail: *www.nytimes.com*. Describes the process of developing the over 400 flavors, some limited editions, of Kit Kat candy bars specifically for the devoted Japanese market.
- Brent Staples. **A Fate Worse Than Slavery is Unearthed.** *NYT* (Oct. 28, 2018), Sunday Review, p. 8. Commenting on the recent discovery of unmarked graves in Sugar Land, Texas that reveal the horrors of the convict leasing system that was a way to keep African-Americans enslaved in extremely hazardous jobs harvesting and processing sugarcane.

Buildings & Structures

- Lisa Selin Davis. **Factory Guy.** *Preservation* (Summer 2018), pp. 28–35. Highlights conversion of the Stanley Aviation Corp. factory, a concrete-block building of 1954, into the Stanley Marketplace, a successful food hall, shopping hub, and recreational destination in Aurora, Colo.

Water Control & Reclamation

- Richard Lanyon [SIA]. **West by Southwest to Stickney: Draining the Central Area of Chicago and Exorcising Clout.** Lake Claremont Pr., 2018. 422 pp. $21.95. The third and most recent book in a four-part series about the Chicago area canal system and sewerage infrastructure built by the Metropolitan Water Reclamation District (MWRD). Tells the story of draining the South and West Sides of Chicago and of eliminating the cesspool that was Bubbly Creek through such work as the construction of huge intercepting sewers and a new pumping station and enlarging the capacity of the South Branch of the Chicago River. The second title in the series is **Draining Chicago: The Early City and the North Area,** Lake Claremont Pr., 2016. In the largest municipal earth-moving project ever at that point, an engineering marvel, and a public works success, the flow of the Chicago River was turned away from Lake Michigan in 1900 to remove river sewage from the lake. The municipalities of Lake View, Edgewater, Rogers Park, Evanston, and Wilmette worked together with the Sanitary District of Chicago on the massive undertaking. The first of this series was **Building the Canal to Save Chicago,** Lake Claremont Pr., 2012. The fourth book of the series is in preparation and due out in 2020.
- **December 6, 1866: Chicago: First Water Supply Tunnel.** *This Day in Water History*. (Dec. 6, 2018), *thisdayinwaterhistory.wordpress.com/2018/12/06*. Begun on Mar. 17, 1864, work was completed Dec. 6, 1866 on the first water supply tunnel for a U.S. city, the Chicago Lake Tunnel in Chicago Ill.

Misc. Industries

- Harley Cowan. **A Cathedral of Science: Creating a Photography Exhibition for the 75th Anniversary of the Manhattan Project.** *This Place: A Publication of the Washington Trust for Historic Preservation* (Jan. 2019), 15–19. *www.preservewa.org*. The author conducted large-format photographic documentation in Mar. 2017 of the Hanford B Reactor and environs in the recently-established Manhattan Project National Historical Park. An exhibition of silver gelatin prints will be on display at Allied Arts' Gallery at the Park (89 Lee Blvd., Richland, Wa.) from Mar. 5 through 29, 2019.
- Dan Elliott. **Site of Former Nuclear Weapons Plant Reopens as Refuge.** St. Paul Pioneer Pr. (Sept. 16, 2018), p. 8A. Associated Pr. story on the opening of Rocky Flats National Wildlife Refuge where the U.S. government built plutonium triggers for nuclear bombs from 1952 to 1989.
- John Garland. **Little Shrimp on the Prairie.** *The Growler* (Jan. 2019), pp. 10-15. Avail.: *www.growlermag.com*. Saltwater farming of shrimp is a growing industry in Minnesota. Discusses the trial and error of establishing best practices to grow a high-quality product close to its market.
- **Giant "Ice House" Discovered Under the Streets of Marylebone**. *IanVisits* (Dec. 28, 2018), *www.ianvisits.co.uk*. Ice houses were used to store imported ice in the 18th c. and 19th c. before refrigeration. The largest ever found was unearthed during construction of residential buildings in London and has been designated a Schedule Monument by Historic England. The egg-shaped brick structure is to be opened for special architectural and archeological festivals in the future.
- James Hill. **From Tree to Ski at the Fischer Family Factory.** *NYT* (Dec. 28, 2018), *www.nytimes.com*. An Austrian apprentice wagon maker, Josef Fischer, made his first pair of skis in 1925. The factory that he started in his hometown of Ried im Innkreis is still in the town, and remains the only large-scale, family-run ski manufacturer in the world. The plant is able to make 1,700 skis a day.
- John Ismay. **Carving Thousands of Headstones.** *NYT* (Sept. 23, 2018), special section "Those Who Can't Forget." Manufacture of the monument stones for Arlington National Cemetery at Granite Industries of Vermont in Barre.
- Ryan P. Smith. **How the First Man-Made Nuclear Reactor Reshaped Science and Society.** *Smithsonian.com* (Dec. 15, 2017). *www.smithsonianmag.com*. A brief review of the history of Chicago Pile-1 at the Univ. of Chicago, known as the first controlled nuclear chain reaction and a critical first step in the Manhattan Project.
- Joshua David Stein. **Holding On.** *The National* (Oct.-Nov. 2018), pp. 42–49. Avail.: *www.amtrakthenational.com*. The last master glovemaker, or *gantier*, still making gloves in Gloversville, NY has started a museum of glovemaking in a former church.

Abbreviations

B&L = *Buildings & Landscapes*, Journal of the Vernacular Architecture Forum

IA News = Bulletin of the Association for Industrial Archaeology (U.K.), *www.industrial-archaeology.org*.

NRHS = National Ry. Historical Society

NYT = *New York Times*

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*.

WSJ = *Wall Street Journal*

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*. ■

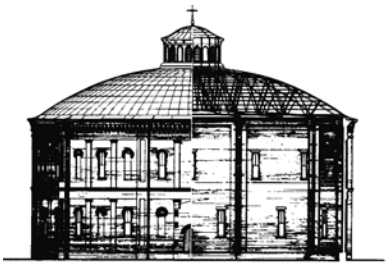
SITES & STRUCTURES

The **B. Mifflin Hood Brick Co. building,** located at 686 Greenwood Ave. NE in Atlanta, Ga., was listed in the National Register of Historic Places on Dec. 6, 2018. Originally constructed in 1909 with a substantial addition in 1921, the B. Mifflin Hood Brick Co. building is a one-story, 11-bay brick building located just west of the National Register-listed Virginia-Highland Historic District and immediately adjacent to the Atlanta BeltLine.

The B. Mifflin Hood Brick Co. building is significant at the local level in the areas of social history and industry for its association with B. Mifflin Hood, a prominent and altruistic businessman and engineer/inventor. When Hood arrived in Atlanta, he was shocked by the working conditions, abuse, and neglect of the convict leasing system, which allowed private companies to acquire prisoners for use as free labor and was widespread in the South at the time. He began fighting for reformation of the system and proudly advertised his own products as "non-convict" brick. Hood also worked to improve the industry of brickmaking and ceramics in the South, bringing technological advances such as shale brick and manufactured quarry floor tile to Atlanta; registering multiple patents during his career; and starting a Ceramic Engineering Department at the Georgia Institute of Technology. The building is also significant as a good example of a showroom and headquarters for an Atlanta-based business that traded goods across the Southeast.—*Historic Preservation Div. of the Ga. Dept. of Natural Resources.*

Ga. Dept. of Natural Resources, Historic Preservation Div.

Main entry of the B. Mifflin Hood Brick Co. building.



The **Nashville, Chattanooga & St. Louis 4-8-4 No. 576** (Fall Tour, 2017) was moved from Centennial Park to live rails on Sun., Jan. 13, 2019. News Channel 5 Nashville reported on the event with video and photo coverage: *www.newschannel5.com/news/*. The locomotive traveled two miles through Nashville on special multi-wheel trailers to the nearby Nashville & Western shortline RR. Nashville Steam Preservation crews will next spend several weeks preparing the locomotive for a four-mile rail journey across town, when it will be moved to the restoration facility at the Tennessee Central Ry. Museum. Following restoration, the locomotive will pull public excursions on the Nashville & Eastern RR. Info: *www.nashvillesteam.org.* ■

IA ON THE WEB

Trains Presents: Little Heisler on the Prairie (Dec. 11, 2018). *trn.trains.com/photos-videos/videos/2018/12/trains-presents-little-heisler-on-the-prairie?utm_source=Yesmail&utm_medium=email&utm_campaign=News0_TRN_181226_000000.* John Reap [SIA] writes, "the 36-ton (small) Heisler Locomotive Works (Erie, Pa.) was built 1912 for the Louise Lumber Co. (Hawkes, Miss.) and came to Silver Creek & Stephenson through a chain of five previous owners. Truck-mounted driving wheels enabled Heislers and other geared locomotives to operate over tight curves and uneven track that would be spread and overturned by conventional frame-mounted drivers. In addition, 100% of the engine's weight was on the driver wheels, for maximum tractive effort. Because of their reduction gearing, the engines could operate efficiently at low ground speeds. For this reason, they could be used on the cheaply-built, unballasted, and poorly-maintained track of logging and mining companies, sand and gravel pits, and construction sites.

A three-mile ride behind SC&S Heisler was on the agenda of the 2013 SIA Rockford, Ill. Fall Tour. The museum also owns a 14-ton Brookville mechanical-drive locomotive powered by an International Harvester UD-18 engine. I'd seen one before, but never heard one run. Pleased that I'd called attention to this rather unique engine, the volunteers were kind enough to fire it up on gasoline and switch it over to diesel after it had warmed up."

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 ■

Announcing the SIA 2019 Fall Tour Reno, Nev., Sept. 19–22

The 2019 SIA Fall Tour will take place Sept. 19–22 in Reno, Nev., a city founded in 1868 as a railroad town along the banks of the Truckee River. Over the years Reno has also been known as a gambling town, a place for easy divorces, a gateway to Lake Tahoe, and of course, the "Biggest Little City in the World."

The tour will highlight the many historic and current industries of the region, including mining, mineral processing, railroads, lumber, power generation, manufacturing, technology, and distribution. The conference hotel will be the recently renovated Whitney Peak Hotel, located in the heart of downtown, next to the famous Reno Arch. We will also visit nearby areas including Virginia City, Donner Pass, Sparks, and Carson City.

The base tour package will include an opening reception at the hotel on Thursday evening followed by all-day process tours on Friday. Saturday will feature a tour of the Virginia City area followed by an evening banquet at the Depot Craft Brewery and Distillery, located in the restored 1910 headquarters of the Nevada-California-Oregon Ry.

An optional Thursday tour will feature the scenic area west of Reno between the historic lumber town of Verdi, Nev. and Donner Pass in Calif. We will follow the route of the first Transcontinental RR through the Truckee River Canyon up to landmark Tunnel #6 of the Central Pacific RR, and the 1926 curved concrete arch Rainbow Bridge, said to be the "second most photographed bridge" in Calif. We will also pass several other historic bridges and four hydropower plants (built 1899–1911), three of which are still in operation. A visit to one of these plants is also being planned.

Potential stops for Friday's process tours include the nearby Tahoe-Reno Industrial Center, the world's largest industrial park, and various other manufacturing establishments in Reno-Sparks and the Carson Valley. It is anticipated that two separate tracks will be offered.

Saturday's tour will focus on the remarkable silver and gold mining history in and around Virginia City, now part of the Comstock Historic Landmark District. From its discovery in 1859, the Comstock Lode produced an astounding amount of silver and gold ore, leading to Nevada entering the Union as the "Silver State" in 1864. It is anticipated that the tour will include stops in Virginia City, the Sutro Tunnel portal site, the Rock Point Mill site in nearby Dayton, and the Donovan Mill in Silver City, a 2017 SIA Industrial Heritage Preservation Grant recipient.

An optional Sunday tour is also being planned with a possible steam train ride on the restored Virginia & Truckee RR from Carson City to Virginia City. Other places of interest include the National Automobile Museum located just a few blocks from the hotel, and the W.M. Keck Earth Science and Mineral Engineering Museum on the campus of the University of Nevada. More details for the 2019 Reno Fall Tour will be posted to the SIA website as they develop.

—Marc Belanger

Lawrence & Houseworth

Lower Dump of the Gould & Curry Mine, Virginia City, 1860s.

Membership Renewal Reminder

Membership renewal notices for 2019 were sent to all members in late December. Please remember to renew your membership and continue your support for the Society for Industrial Archeology! We have much to look forward to in 2019 including the Annual Conference in Chicago, Ill. and Fall Tour in Reno, Nev. Your annual dues support publication of *IA: The Journal of the Society for Industrial Archeology* and the SIA *Newsletter* and support the general operations of the SIA. You can pay your 2019 dues online at *www.sia-web.org/join-or-renew-online/*, or send payment by check along with the form that accompanied the renewal notice. Renewal forms that can be printed and mailed are also available on the SIA website at the address given above.

DAYTON FALL TOUR (continued from page 4)

A blast door in the entry tunnel of T Building, Mound Laboratory.

John Reap

David Simmons explains operation of the pit saw's carriage at Staley Mill Farm.

flooring, electronics, and woodwork/cabinetry. Each trailer slides down the line after each component. At the end of the line, the trailer exits the building to await shipping. This facility builds all models, including overseas models.

After a shopping spree in the Airstream gift shop, the group had lunch on the picturesque village square in Sidney, Ohio, a city of 21,000, 36 miles north of Dayton. Sidney is the seat of Shelby County, and a magnificent 1881 county courthouse dominates the square. Lunch was served in two shifts at **The Spot** diner, which has dished up made-to-order sandwiches and home-baked pies in downtown Sidney since 1907.

While half of the tour group ate lunch at The Spot, the other half alternated with a tour of an exceedingly rare "jewel box" bank building, the **People's Federal Savings and Loan** designed in 1917 by Louis Sullivan, the "Father of Modernism." The bank president was our tour guide. People's Federal has lovingly maintained the Sullivan building for more than 100 years and has made only minor modifications to keep pace with technological and social changes. For example, brass tellers' wickets have given way to the openness of high counters in the banking lobby. The SIA group was shown Sullivan's original sketches, which turned up a few years ago in a drawer in the basement.

After lunch and the bank tour, the bus departed from the published schedule for two surprise stops on the way out of Sidney. First, the group viewed the **"Big Four" Bridge** across the Great Miami River, built in 1923 by the Indianapolis-based Cleveland Cincinnati Chicago & St. Louis ("Big Four") Ry., now part of CSX. A train crossed the bridge on cue!

Next, with Christopher Marston as tour guide, the bus stopped in the nearby village of **Lockington**, where we viewed remnants of a flight of seven large stone canal locks. The locks were part of the Miami & Erie Canal, which once connected the Ohio River at Cincinnati with Lake Erie at Toledo. Visiting Lockington feels like visiting the Pyramids or finding a Mayan temple in the jungle, because it seems hard to believe these imposing stone structures were built by human hands without machinery. Shelby County is at the southernmost point of the continental divide between the Great Lakes and Mississippi River watersheds, so there

James Bouchard

Various Airstream trailers awaiting customization.

James Bouchard

Remains of locks at Lockington.

David Simmons

SIA group photo at the WACO Air Museum.

were many locks required to raise boats over the summit. The Miami & Erie Canal and the bustling town of Lockington were both abandoned in the 1870s, and that abandonment explains why this cascade of seven locks has remained undisturbed to this day.

We next visited **French Oil Mill Machinery Co.** in Piqua. Our guide was Tayte French Lutz, fourth-generation family employee and director of marketing. Alfred Willard French founded the company in 1900, at a time when Piqua was the heart of the linseed market. The company has been in the same building since 1908, first producing vegetable oil mill equipment, and later expanding beyond linseed to a variety of hydraulic presses, equipment for molding rubber and composites, industrial rubber mixers, production of biofuels, and others. We viewed the machine shop and assembly areas (no photos permitted) led by an employee who has worked there for about 45 years. It was evident that he had a deep knowledge of everything we saw and enjoyed sharing his experience with us. While in the machine shop, hole-boring was in progress on a massive hydraulic cylinder. Along with the press machines, the shop was filled with drill bits, wrenches, cranes and hooks, and every other tool imaginable, and our guide clearly knew where to find every one of them. At the end of the tour we passed through an area with assembled machines, where we viewed several massive presses ready for use.

In the late afternoon both tour groups met in Troy at the **Eldean Bridge**, a rare surviving example of the Long truss, constructed in 1860. The Long truss introduced the idea of prestressing to bridge design. Former Miami County Engineer Doug Christian, who led the 2005–2006 restoration of the bridge, was on hand to tell the group about the bridge's history and recent restorations. Steel rods from a previous restoration attempt were removed, and wooden wedges were hammered in at counterbrace connections. Christian pointed out the wedges and explained that they prestressed the bridge once again as Long had intended. As one of the most structurally intact Long truss bridges to survive, Eldean Bridge was designated a National Historic Landmark in 2017, following the efforts of Christian, Christopher Marston, and David Simmons.

The final stop of the day was **WACO Air Museum**. Initially known as Weaver Aircraft Co., the company changed to WACO in 1929 when it moved to Troy, Ohio. WACO became a national leader in the design and manufacture of wood and fabric civil aircraft. During WWII, the plant was entirely dedicated to production of troop- and cargo-carrying gliders. WACO ceased operations in 1947. Historic WACO Field was opened in 1997 along with an historic 1856 barn relocated to the premises in a traditional barn raising. Two additional hangars were added later: the 7,500 sq. ft. hangar houses the WACO Aircraft Museum, research library, conference room, gift shop, and offices, and a new Museum Hangar, completed in 2009, is home to vintage WACO aircraft, displays, and the history of the WACO Aircraft Co.

Saturday began with a visit to the **Mound Cold War Discovery Center** in Miamisburg. Participants were lucky to experience what was probably the last public tour of **T Building** (Technical Building), the only remaining building from the former Mound Laboratory complex. Mound Laboratory was the first Atomic Energy Commission (AEC) site constructed after WWII. During the Cold War, this facility was used for processing polonium and developing polonium-based initiators for the U.S. nuclear arsenal. T Building's construction was kept secret and it did not appear on early site plans. It was built into the side of a hill, then backfilled

(continued on page 15)

Saul Tannenbaum

Several SIA members climb the tower of the Roebling suspension bridge.

CHAPTER NEWS

The **Northern New England** chapter visited Glens Falls Feeder Canal and Old Champlain Canal on Oct. 13, 2018. The visit also included viewing five preserved coal silos with a coal car and lime kilns near Lehigh Cement Co.

The **Northern Ohio** chapter held its annual meeting on the evening of Dec. 7, 2018, at the historic Flat Iron Cafe next to Cleveland's Center Street Swing Bridge. The rare bobtail swing bridge was constructed in 1901, and continues to swing open at regular intervals (as it did during our visit) for freighters carrying ore and limestone to steel mills up the Cuyahoga River. The Flat Iron Cafe is largely unchanged since it was established in 1910 to serve the nautical community. Brad Schwartz presented a talk entitled "The Birth of Downtown Cleveland" from his book of the same name co-authored with Dave Ford. Club officers were elected: Ron Petrie (President), Mary Starbuck (Vice President), Steve Tichenal (Treasurer) and Jim Kenny (Secretary).—*Ron Petrie*

HAER OH-10

Center Street Swing Bridge, ca. 1968.

Roebling (Greater N.Y.-N.J.) held its annual Great Falls Symposium on the IA of the New York-New Jersey Area in Paterson, N.J., Sat., Nov. 10, 2018. Presenters included Sandy Needham, *TICCIH Visit to Sewell Mining Town World Heritage Site, Chile*; David Percival, *Victorian Industrialized Farming—Leighton Hall Estate, Wales, UK*; Nina Rappaport, *Vertical Urban Factory*; Darren Boch, *Paterson Great Falls National Historical Park Updates & Outlook*; John Collins, *How to Do the Ethnography of a Waterfall*; Richard W. Seabury III, *Bakelite: A Varnish or Molding Resin? Richard W. Seabury's Seminal Experiments at the Boonton Rubber Co.*; Alex Prizgintas, *E.H. Harriman's Inclined Railroad*; and Michael Piersa, *Reviving a Giant: Restoring the Corliss Steam Powered Pumping Engine at the National Museum of Industrial History, Pa.*

The **Southern New England** chapter visited Lawrence, Mass. on Nov. 3, 2018. Chapter members enjoyed guided tours of the Lawrence Heritage State Park (LHSP) Visitor Center, the North Canal mill district, the Lawrence History Center (LHC) in the former headquarters of the Essex Co., and the Great Stone Dam.

***Support Your Local Chapter**. For info on a chapter near you or to start one, check out the local chapters section of the SIA website* (www.sia-web.org). ■

IA EXHIBITS

Heavy Metal: Cast Iron Stoves of the Capital Region at the Albany Institute of History & Art showcases these utilitarian objects as both works of art and technological innovations that made the home more comfortable as well as beautiful. During the 19th c., Albany and Troy, N.Y., manufacturers were among the largest producers of cast-iron stoves in the world. Stoves made in these cities were renowned for fine-quality castings and innovations in technology and design. More than 20 cast stoves from the Albany Institute's collection will accompany early patent models, trade catalogues, and other rare materials. The exhibit will run through Aug. 18, 2019. Info: *www.albanyinstitute.org.*

Coinciding with the 150th anniversary of the completion of the first transcontinental railroad, the California Historical Society presents two concurrent exhibitions on view Mar. 21 to Sept. 8, 2019. **Mark Ruwedel: Westward the Course of Empire**, exhibits the photographer's work documenting the physical traces of abandoned or never-completed railroads throughout the American and Canadian West. Ruwedel catalogues eroding cuts, disconnected wooden trestles, decaying tunnels, and lonely water towers that point to the contest between technology and the natural world. **Overland to California: Commemorating the 150th Anniversary of the Transcontinental Railroad** considers the railroad's impact on the industry and culture of California. Featuring photographs, stereocards, historical objects, and ephemera, this exhibition explores how rail access to California contributed not only to population growth and industrial development, but also to the construction of the state's enduring mythology as a tourist destination and land of opportunity. Info: *www.californiahistoricalsociety.org.* ■

Dayton Fall Tour *(continued from page 13)*

John Reap

Missy, a 6th-generation Staley, tells her family's distillery history in front of the original copper stills that are producing whiskey again.

dirt was used to cover it. We entered through one of the two entrances to the vehicular tunnel. Each end of the tunnel had three heavy steel blast doors and two dogleg turns to protect the interior of the tunnel from blast waves. Besides the tunnel doors, the only exterior features of the building were two towers at either end of the building for employee access, and a central air shaft between the two towers.

Our tour guides, long-time employees of the facility, described these construction features as we stood in the tunnel. Its secretive exterior hid a massive structure built of 16-ft.-thick reinforced concrete walls, 15-ft.-thick ceilings, and 8-ft.-thick floor on a 2-ft.-thick slab. The two main stories each cover about 1 acre. It was built to withstand the most powerful conventional weapon in the U.S. arsenal at the time, and was equipped to allow 200 people to continue operations for one month without any outside support. We continued into the tunnel and toured both floors. The first floor was mainly for service: diesel generators, steel tanks for fuel, a power substation, and similar equipment. The second floor was the "hot" area (where radioactive materials were used). This is where polonium production happened. One room was a Faraday cage, with copper walls and underflooring, for shielding radio waves; another had contained a chemical "pool" for the extreme chemical process of removing polonium-210 from the slugs in which they were shipped from Hanford, Wash.

We also had time to explore the Discovery Center, a new exhibit space within the former Mound Laboratory office building. Exhibits cover the history of Mound Laboratory and the variety of work and equipment, including the invention of the radioisotope thermoelectric generator (RTG) for U.S. space programs, and producing stable isotopes for medical applications, and other nuclear-powered devices.

A visit to the **National Museum of the U.S. Air Force** at Wright-Patterson Air Force Base filled our Saturday afternoon. Four massive hangar-like buildings contain 10 galleries displaying more than 360 aircraft and missiles. The galleries include Early Years, several different wars, Presidential aircraft, Missiles, Space, and Research & Development. Visitors can walk through several former Air Force One planes and a Space Shuttle exhibit featuring NASA's first crew compartment trainer.

Saturday night's banquet site, **Staley Mill Farm and Indian Creek Distillery**, is also known as Ohio's best example of a water-powered complex of gristmill, sawmill, and distillery. Members enjoyed an in-depth view of the sawmill and gristmill (ca. 1818), both essentially unaltered from their original Oliver Evans designs. The sawmill last operated at the turn of the 20th c., and still appears today as a snapshot of the last time it was used. Our exploration of the gristmill began at the bottom floor to view the gear pit. We continued up four increasingly narrow flights, viewing all steps in the milling process along the way. The distillery closed in 1905 and fell into disrepair, but the Staley family (who have continuously owned the property) found the original copper stills and family recipes dating to the 1820s. They brought these copper stills back into use to produce whiskey and bourbon employing the old-fashioned, double copper distilling method used by Elias Staley and his sons in the 19th c. A whiskey tasting kicked off the tour's closing banquet.

The SIA thanks our tour hosts, businesses, and historic sites, who generously opened their facilities to our members, and the Dayton Fall Tour planning committee: David A. Simmons (chair), Ron Petrie, Tom Barrett, Doug Miller, Ron Eifert, Christopher Marston, and Courtney Murtaugh (SIA events coordinator).

Diana Bouchard, James Bouchard, Ron Petrie, and Saul Tannenbaum

NOTES & QUERIES

2019 Preserve New York Grant Applications. The New York State Council on the Arts (NYSCA) and the Preservation League of New York State are pleased to offer applications for the Preserve New York grant program, due on Mar. 25, 2019. Launched in 1993, Preserve New York makes grants for historic structure reports, building condition reports, cultural landscape reports, and cultural resource surveys. Applicants must be a unit of local government or a registered 501c3 not-for-profit. State agencies and religious institutions are not eligible to apply. The program provides support up to 80% of the project cost. Applicants must provide 20% of the total project cost as a cash match. Grants typically range between $3,000 and $10,000. Info: *www.preservenys.org* or (518) 462-5658 x10. ■

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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

Non-Profit Organization
U.S. POSTAGE
PAID
Permit No. 11
Houghton, MI 49931

CALENDAR

2019

***23 Mar.*: Annual Meeting of the New England Chapter of the Vernacular Architecture Forum, Old Sturbridge Village, Sturbridge, Mass.** Info: *www.vafweb.org/VAF-NE-Chapter*.

***Mar. 27–30*: National Council on Public History Annual Meeting, Hartford, Ct**. Info: *www.ncph.org*.

***Mar. 30*: 32nd New England Industrial Archeology Conference, Worcester, Mass.** Info: *nec-sia.org*.

***Apr. 24–28*: Society of Architectural Historians Annual International Conference, Providence, R.I.** Info: *www.sah.org*.

***May 17*: Joint Symposium of the Association of Preservation Technology, Western Great Lakes Chapter (APT WGLC) and the Construction History Society of America (CHSA), Chicago, Ill.** Info: *www.constructionhistorysociety.org*.

***May 29–June 1*: Vernacular Architecture Forum Annual Meeting: Landscapes of Succession, Philadelphia.** Info: *www.vernaculararchitectureforum.org/Philadelphia-2019*.

***June 4–6*: Preserving U.S. Military Heritage: World War II to the Cold War, Fredericksburg, Texas.** Info: *www.ncptt.nps.gov/events/*.

***June 5–8*: Wacky Wisconsin Dells 2019, Society for Commercial Archeology (SCA) 42nd Annual Conference, Wisconsin Dells, Wis.** Info: *https://sca-roadside.org*.

***June 5–9*: Mining History Assn. Conference, Marquette, Mich.** Info: *www.mininghistoryassociation.org*.

***June 6–9*: SIA 48th ANNUAL CONFERENCE, CHICAGO, ILL.** Info: *www.sia-web.org*.

***Aug. 9–14*: Assn. for Industrial Archaeology Annual Conference, Somerset, England.** Info: *www.industrial-archaeology.org*.

***Sept. 19–22*: SIA FALL TOUR, RENO, NEV.** Info: *www.sia-web.org*.

***Oct. 18–19*: 2019 Iron & Steel Preservation Conference/ Workshop, Lansing, Mich.** Info: *meslerv@gmail.com*. ■