The nation’s, perhaps the world’s, last intact gas-holder is headed for the wrecking ball, unless urgent efforts to save it are successful. Long a beloved landmark and iconic building in New Hampshire’s capital city, its future is in jeopardy.

The Concord Gasholder, built in 1888 by the Concord Gas Light Co., stored manufactured gas produced from coal, a process perfected in the early years of the Industrial Revolution to provide lighting and heating for industrial, commercial, and public locations.

The Concord Gasholder is listed in the National Register of Historic Places and is among the last of the fourteen gasholders to remain in the U.S. Of great interest, it is the only one with its inner working intact. It is also the sole survivor in a collection of buildings that were the heart of Concord’s energy and transportation manufacturing in the 19th century.

During the second half of the 19th century, coal gas was an important fuel for municipal and industrial illumination, as well as domestic purposes. In this period, gasholder houses were emblematic of urban progress generally and the coal gas industry in particular, and as one of the larger buildings or structures on a city’s skyline, often came to have iconic status in a community.

This is especially true of the Concord Gasholder. It is the first building that draws your attention as you approach the (continued on page 2)
city on Interstate 93 from the south. For almost a century and a half, it has defined the city skyline. With its round brick walls and peaked cupola it is as distinctive as the gold dome of New Hampshire’s State House.

Few structures have been as symbolic of the creative and architectural genius of industrial archeology as the gas holder. The Troy (N.Y.) Gasholder has been the SIA logo since 1971. In 1982, under the direction of two of the most prominent figures in industrial archeology and SIA history, Eric DeLony and Robert Vogel, the Concord Gasholder was documented for the Historic Architectural and Engineering Record (HAER #NH-7). The 1982 Fall issue of the SIA Newsletter tells the story (see www.sia-web.org/publications/sia-newsletter/).

Until 1952, when it was taken out of service but still owned by the local utility, Concord Gas Co., the Gasholder received the care and maintenance befitting a treasured historic resource. Following the sale of the local company to a sequence of out-of-state corporate energy companies, the Gasholder became a liability for them and suffered from neglect and deterioration.

The final blow, literally, came in 2014, when a tree fell on the north side of the Gasholder roof, opening it up to the weather and fracturing the cornice. This appears to have been the tipping point for Liberty Utilities, its current owner. Anxious to be rid of these liabilities, Liberty informed the City of Concord late last summer of its intent to secure a demolition permit by the end of 2020 and then to proceed to demolish the Gasholder.

No historic structure in the city can be demolished without a demolition permit from the city. But even with a city-wide demolition review ordinance, the city lacks the power to deny or prevent demolition. Most importantly, the delay is only for a total of 49 days, meaning time is always of the essence in finding a viable alternative to demolition.

Liberty Utilities has put its request for a demolition permit on hold, while the city and advocacy groups seek an alternative solution. But this is temporary, and the utility could resume its plan for demolition at any time.

The community, led by the New Hampshire Preservation Alliance (nhpreservation.org), has rallied around saving the Gasholder. In its Seven to Save program, the Alliance has listed the Gasholder twice, the only resource to have ever earned that distinction. In 2018, the Concord Gasholder was listed in the National Register of Historic Places.

The Alliance has created an advocacy website, Save Our Gasholder (saveourgasholder.org) to build citizen support for saving and restoring the Gasholder and making it a centerpiece for the southern gateway to the state’s capital. The website provides illuminating history of the building, the efforts being made to save it, an opportunity to sign a petition in support, and, very importantly, a way to donate money to help with the work that still needs to be done.

In addition, the city’s mayor appointed an ad-hoc Gas-
Annual Conference Now Scheduled for August 2021. With the future course of the pandemic still unclear, in consultation with the Board and the local organizing committee, the SIA has decided to move the “spring” Lehigh Valley Conference to Mon., Aug. 23 through Fri., Aug. 27. The reason for this simple: we are much more likely to be able to have a safe and successful event in late Aug. than in early June. I understand that this disrupts 50 years of practice, may create personal scheduling problems, and brings the conference closer to the planned Fall Tour in Maine. We considered, and rejected for now, postponing the event until 2022, as we felt it important to make our best efforts to have a conference during our 50th anniversary year. It is likely to be a “hybrid” conference, with both in-person and online participation.

The Fall Tour to Bath, Maine remains scheduled for Sept. 22–26, 2021. Local organizer Matt Mueller had a full set of tours and activities already planned for 2020 when we chose to postpone this event. He has started to reconfirm his plans, but is faced, locally, with the same uncertainties as everyone else. This, too, is something we will monitor and update as needed.

We are aware, however, that actually having the event safely depends on many factors beyond our control, among them the state of the pandemic and vaccinations, your willingness to travel, and whether local sites and facilities will be open to us. Stay tuned for future developments.—Saul Tannenbaum, President

Help Us Celebrate 50 Years of the SIA!—Online or in Print

We invite past and present members of the SIA (and especially current members who have been with the organization for a long time!) to share your memories and help us celebrate the SIA throughout its upcoming 50th year.

Visit www.sia-web.org/happy-birthday-sia/ for an online submission form you can use to send us photos and other imagery from past SIA Conferences, Fall Tours, and other activities. We’ll post these images on our website and on social media throughout 2021, the Society’s 50th year.

The SIA Newsletter also welcomes submissions that celebrate the SIA’s past and present—stories from past events, updates on sites visited on tours, photos, etc. If you have something you’d like to share contact Marni Walter at sianeditor@siahq.org.

Thank you for helping us celebrate the 50th Anniversary of the Society for Industrial Archeology!

SIA HQ Updates

Save Our Gasholder asks for the help of SIA members throughout the U.S. and around the world, in saving this unique and irreplaceable piece of America’s industrial history. Spread the word. Money for outreach and advocacy is essential. Sign the petition to show support for the Gasholder’s preservation and reuse. Write a letter to Concord’s mayor and city council. Letters can be mailed to: Mayor and Council, City of Concord, 41 Green Street, Concord, NH 03301 or emailed to the City Clerk at: jbonenfant@concordnh.gov.

Funds needed beyond stabilization of the Gasholder will be significant and will require public historic preservation funding sources, and substantial private funds. SIA members are encouraged to contact the N.H. Preservation Alliance at projects@nhpreservation.org with suggestions and recommendations.

Please help save this irreplaceable, last-of-its-kind icon of America’s industrial heritage.

James McConaha

HAER documentation of the Concord Gasholder by SIA members, featured in SIAN Vol. 11, No. 4, 1982.
Whence Came the Germantown Covered Bridge?

An in-depth exploration of the world of 19th-century bridge builders became a major research interest of mine in the 1970s. Through attendance at SIA meetings (my first annual conference was in 1978) and introduction to HAER via my state historic preservation office employer, I was able to rub elbows with like-minded folks. A casual comment made by Robert Vogel from that period has stuck with me ever since. I don’t fully recall the details, but I had inquired about Wendell Bollman and his railroad bridge truss. “Bridge builders were not a very literary lot, and we simply don’t know,” was his casual but telling response.

David H. Morrison of Dayton, Ohio, built a highly unusual covered bridge in Montgomery County (his home county) at the Village of Germantown in 1865. A combination bridge, it used the typical dimension timbers for the end posts and top chord and included a shingled gable roof. But in lieu of a traditional lower chord, Morrison incorporated an inverted arch chain of linked eye bars from which the roadway was suspended.

Justifiably, the bridge was a revered local landmark, and it was listed on the National Register in 1971 as part of the very first state nominations. But while it remained open to highway traffic, the exposed end posts made the bridge a vulnerable target for errant motorists. A drunk knocked out an end post in 1981, resulting in a collapse. Local officials and citizens organized a rebuilding project using as much of the original as possible, but in the meantime, the state delisted it from the National Register.

When Germantown officials expressed an interest in obtaining a new National Register listing, I was asked to evaluate the historic integrity of the bridge’s physical components. As a rigid suspension truss, the Germantown Covered Bridge is a relatively rare bridge design. Only three bridges of this type exist in the nation, and all are in Ohio. Germantown is the earliest example. The other two, John Bright Bridge No. 1, an iron truss, and John Bright Bridge No. 2, a covered bridge, are in Fairfield County and date to the 1880s. Germantown’s significance is, therefore, defined by its suspension truss, or inverted arch. And unlike most covered bridges, its wooden framing is far less important to an appreciation of the bridge’s significance.

The inverted arch, or “chain,” at Germantown is composed of wrought-iron eye bars alternating through its nine panels between groupings of two or four. Morrison adjusted the thickness of his eye bars, so that the cross section of iron was approximately equal in each panel. There are a total of 52 eye bars in the bridge’s two trusses, all of which appear to be original. Some slight deformation exists in a few of the bars, presumably the result of the collapse and the subsequent challenge of straightening them during the rebuilding.

The eye bar chain consists of eye bars and the requisite pins. Instead of threaded pins with oversize nuts, the Germantown pins consist of an enlarged head on one end and a hole and cotter pin at the opposite end. On the south truss, it appears that at least eight of the ten pins have been replaced, although substantially in kind. However, on the north truss, it appears that at least seven of the ten are original, distinguished by both corrosion and slight size differences from the replacements. The presence of these old pins, along with the eye bars themselves, provide sufficient historic fabric to properly assess and structurally evaluate the workmanship of the original design. Of the 72 components of the two eye bar chains, 61 of them are historic, amounting to 84% originality in the bridge’s most distinguishing feature. This relatively high percentage of original fabric led me to recommend that Germantown proceed with a renewed National Register nomination.

The original 1971 nomination had been fairly superficial,
so it seemed appropriate to ask where Morrison might have gotten the idea for his 1865 design. Other bridge historians have suggested Archibald McGuffie of Rochester, N.Y., who received a patent (#34,311) in Feb. 1862 for an inverted arch iron truss, inspired Morrison’s design. That, I believe, is a misinterpretation. In the first place, McGuffie’s suspension chain featured looped iron links, fabricated by welding together round or square bar stock into oversized loops. It was quite different from Morrison’s eye bar chain. In the second place, as early as 1858, Morrison proposed using a suspension truss for another project in Montgomery County, so he was already thinking in terms of suspension trusses long before McGuffie.

Instead, I believe Morrison’s activities in 1858 are critical to understanding the source of the Germantown design, although it is only if we acknowledge—as Robert Vogel suggested—it is based on supposition.

Morrison received a patent (#20082) for a “metallic shoe” used in wooden bridge trusses in Apr. 1858. At that time, the U.S. Patent Office published an annual summary of each year’s patents with claim summaries and at least one drawing of each invention. Similar patents were arranged in groupings, including one under the heading of “Civil Engineering.”

Among the bridge patents issued that year along with Morrison’s was a complex truss by Stephen H. Long (#21203). You will remember Long as the inventor of a truss in 1830 that introduced mathematical concepts to American bridge builders. His patent used wooden wedges to pre-stress and strengthen a bridge truss, the effectiveness of which was confirmed through a modern HAER engineering study conducted by Dario Gasparini of Case Western Reserve Univ.

By 1858, S. H. Long was living in Louisville, Ky., and was focused on improving Ohio River navigation through dredging and canals. A colonel in the Corps of Topographical Engineers (he would eventually be placed in charge), he was, at 74 years, well beyond his earlier innovative work in bridge design. His 1858 patent is, in fact, little known. Professor Gasparini, who contributed the articles on Long for HAER’s Covered Bridges and the Birth of American Engineering, was not even aware of its existence.

Long’s 1858 bridge patent was meant to be an additional improvement of two patents he received in 1839 that extended his prestressing wedges to a Pratt truss configuration. The details of this earlier “wooden-framed suspension-bridge” patent were described in the aforementioned Covered Bridges volume as “largely incomprehensible.” Nonetheless, Long’s 1858 patent involved adding an “inverted suspension arch” to the original arrangement of verticals and diagonals.

This is important to our story because when the Patent Office printed the civil engineering patents of 1858, it included the descriptions of Long’s and Morrison’s inventions on facing pages. What’s more, the page devoted to drawings printed Long’s truss with its “inverted suspension arch” on the very same page with Morrison’s metallic shoe invention. While Morrison’s proposal that year for a suspension truss on a Montgomery County project was not built, the timing seems to be too much of a coincidence. It suggests Long’s patent could have been Morrison’s original inspiration for an inverted arch. Morrison likely received a copy of the 1858 patent volume and would have certainly seen Long’s drawing. If he were drawn to the full specifications, he would have seen Long’s statement that the inverted arches must be “firmly attached” to the top chord, “at or near both ends” and to all the posts “with which they come in contact.” That clearly describes the Germantown bridge. Perhaps this simple explanation is the most likely source.

The details of the Germantown Covered Bridge likely came from the British Isles, where a robust and longstanding iron industry had made wrought-iron eye bar suspension chains common since the 1810s. America’s leading technical periodical, the Journal of the Franklin Institute, published in Philadelphia, occasionally touched on British chain suspension bridges. But two British engineering publications, The Civil Engineer and Architect’s Journal and The Engineer, both originating in London, were virtually filled with articles and illustrations of the many chain suspension bridges designed and built by English engineers. Each periodical, especially the latter, widely circulated throughout Ohio.

The Clifton Bridge at Bristol, England, effectively marking the culmination of British eye bar chain suspension bridges, was completed in the summer of 1864, virtually on the eve of the Germantown construction. Regular articles in

(continued on page 6)
**Germantown Covered Bridge** (continued from page 5)

*The Engineer* faithfully followed its construction beginning in 1860 and heralded its completion with a full-length and detailed report.

Two other widely circulated books could also have prompted Morrison’s chain suspension bridge designs. Charles Stewart Drewry, a former employee of one of England’s major suspension bridge builders, wrote the first English textbook devoted to the topic, *A Memoir on Suspension Bridges*, in 1832. John Weale, an English publisher of inexpensive educational literature on science and technical topics, published *The Theory, Practice and Architecture of Bridges of Stone, Iron, Timber and Wire* in 1843. A supplement and expansion of Weale’s work came out in 1853. Both volumes included illustrated treatments of British chain suspension designs.

Why would Morrison pick up a British suspension bridge technology that was nearing the end of its influence? Wire suspension bridges had become popular in the Ohio Valley following the completion of the world record-span suspension bridge over the Ohio River at Wheeling in 1849. Luminaries like John Roebling and Charles Ellet, however, were already dominating that field.

It’s likely that Morrison was looking for his own niche in the world of suspension bridges. In fact, he used an all-iron suspension truss design five years later in 1870 to bridge the Great Miami River in downtown Dayton. It was a highly prominent location and was a decorative multi-span bridge in which its builder undoubtedly took considerable pride. At least in western Ohio, the suspension truss helped David H. Morrison make his mark.

David A. Simmons

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**New Book Review Editor Sought**

*IA: The Journal of the Society of Industrial Archeology* is looking for a new book review editor. The journal typically publishes 8–12 reviews per issue, twice annually. The book review editor’s responsibilities include soliciting books for review from publishers and authors, fielding offers to review the books (and seek out reviewers as needed), mailing out books and receiving the reviews, and editing them together in bundles for each issue of *IA*. The book review editor will need to work with authors to make their prose clear but is not responsible for final copyediting or layout. Opportunities also exist for planning future reviews in themed issues.

Applicants should be conversant with the scope of industrial archeology (SIA membership is not required, but relevant) and have some editorial experience, though they need not be professionals. Although the majority of tasks in this position are done electronically, institutional support for incidental costs, particularly mailing books to reviewers, is a plus. The book review editor is responsible for their own hardware and software (all that is needed is email and software to work with DOCX/RTF and PDF files; no typographic layout knowledge is necessary). Attendance at the annual SIA conference is not required, though in the past that has provided the best pool of qualified and interested reviewers. We welcome our new editor to develop a workflow that benefits them and the journal production process.

Please send a letter of interest to the journal editor, Steve Walton (sawalton@mtu.edu) explaining your interest in the topic, experience in editing, and level of institutional support. Appointment of the new book editor will be made on or about June 1.
**GENERAL INTEREST**


- *Engineering Heritage Australia Magazine*, Vol. 3, No. 7 (Jan. 2021) includes a remembrance of Emory L. Kemp; Bill Phippen, NSW Railway & Tramway Honour Boards: WWI Honour Boards Restored to the Grand Concours at Sydney’s Central Station; Miles Pierce, Tram Substation Machinery in Melbourne: Plant & Equipment at Malvern & Brunswick Rd. Substations Now Heritage Protected; Perry Beor, Perth's Secret WWII RAAF Banker; David F. Radcliffe, Malcolm Moore & Albert Longoni: A Tale of Two Innovative Engineers; book reviews; and other news.

- David Foster. *Old Industries Are Creating New Jobs with Clean Energy: It’s a Lesson Minnesota Should Embrace*. MinnPost (Dec. 4, 2020). [www.minnpost.com](http://www.minnpost.com). Looks at examples elsewhere in the country where manufacturers have pivoted to use of new energy sources to stay in business. Particular focus is given to Colorado Fuel & Iron in Pueblo which, founded in 1892, is now fueled by solar, making it the only electric arc furnace in the world to rely primarily on this energy source.

- Samantha Mahoski. *The Way We Work(ed)*. *New York Archives* (Winter 2021). In collaboration with the Smithsonian Institution, the Hart Cluett Museum (formerly Rensselaer County Historical Society) in Troy, N.Y. created an exhibit recognizing the who, what, when, where, and why of the county's workplaces. In the face of Covid-19, the museum used Instagram to share, not just the exhibit, but the behind-the-scenes stories of creating it.

- Mark Alan Rhodes, William R. Price, and Amy Walker, eds. *Geographies of Post-Industrial Place, Memory, and Heritage*. Routledge, 2020. 216 pp. Uses global examples to investigate the overlap of memory and the impacts of industrialization within today’s communities and the senses of place and heritage that developed alongside and in reaction to the growth of mines, mills, and factories. The authors present three of the book’s chapters in Session 7 of IA Online: [www.youtube.com/c/SocIndustArch/videos](http://www.youtube.com/c/SocIndustArch/videos).

**TEXTILES**


- Sam McKenzie. *Ballston Spa’s Abandoned 1814 Factory Awaits Rediscovery*. *New York Almanack* (Nov. 26, 2020). [www.newyorkalmanack.com](http://www.newyorkalmanack.com). Details the founding of the Ballston Spa Co., created to manufacture textiles domestically during the British blockade of the War of 1812. Delays resulted in the project’s abandonment once the Treaty of Ghent was signed and cheap British fabrics were again available. The factory building was subsumed into a later tannery that still stands.

**MINES & MINING**

- Jim Bacon. *Exploring the Booher Branch & Mines, Part 1: The McKelvey Junction(s), and the “Mystery Tram.”* *TT* Vol. 32, No. 3 (Fall 2020), pp. 4–9. An exploration of the Booher Branch area, which had once been part of the “furnace estate” of the original Rockhill Furnace, but was sold off to Joshua Booher and others in the late 1800s. The author and others explored the area on foot to record remains of the Booher mines and other features.

**WATER TRANSPORT**


- John Conway. *Sullivan County D&H Canal History Highlighted with ’Kate Project’.* *New York Almanack* (Dec. 23, 2020). [www.newyorkalmanack.com](http://www.newyorkalmanack.com). The non-profit Delaware & Hudson Canal such as the children who drove and tended mules that towed canal barges. These “hoggies” are to be commemorated with sculpture, seating areas, and interpretive signage along a reconstructed towpath just below Roebling's Delaware Aqueduct.

**RAILROADS**

through the early 1970s. $35 + shipping for members, $49 + shipping for nonmembers from PRRTHS.ORG. Explores the area in three sections: 1) the branch line route from Petersburg through Hollidaysburg and the Muleshoe Curve to Cresson; 2) the Pittsburgh Division main line facilities around Cresson and Gallitzin, then following the road down the east slope to and through Horseshoe Curve to Altoona; 3) that portion of the PRR’s Middle Division, surveying the railroad’s massive shops and yards complex in Altoona.


AGRICULTURE & FOOD PROCESSING

- John Freeman Gill. In Brooklyn, a Ghost of Breweries Past. NYT (Oct. 30, 2020). An office building of the former William Ulmer Brewery is now on the market as residences; the article includes a history of breweries in Brooklyn and a slideshow with historical and recent photos.


BUILDINGS & STRUCTURES

- Bruce Johanson. Band Box Diner, Minneapolis. Minnesota History (Winter 2020–21), p. 177. This local landmark in the Elliott Park neighborhood was designed by the diner operator who commissioned Butler Mfg., a firm known for grain and feed storage bins, to fabricate it from a single sheet of steel. The Band Box chain grew to 15 locations in prefabricated “Butler Boulevard lunch stations”; this is the last remaining.


BRIDGES


- Nicole Saraniero. Prospect Park’s Endale Arch Magnificently Restored. Untapped New York (Nov. 16, 2020). untappedcities.com. Entrance arch to Brooklyn’s grand park has been restored to its past glory.

POWER GENERATION

- Windmillers’ Gazette. Vol. 39, No. 4 (Autumn 2020) includes Michael West and Christopher Gillis, Wind Chargers in Wartime; Christopher Gillis, Small Wind Turbines for Modern Military Applications; A. Clyde Eide, Some Windmill Vignettes; and Norman H. Marks, 1918 Spanish Influenza Strikes Windmill Factory. Avail: $20/yr., published quarterly. Christopher Gillis, Editor, P.O. Box 788, Buckeystown, MD, 21717; www.windmillersga.de.

HAND TOOLS & MACHINE TOOLS


ABBREVIATIONS

NYS = New York Times
TICCIH = The International Committee for the Conservation of the Industrial Heritage, ticcih.org
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.
Vance Packard, 1942–2020

Vance Packard is no longer with us, but his accomplishments as an archeologist, museum developer, preservationist, and “SIA luminary” should never be forgotten. A founding member of the Society for Industrial Archeology, Vance was one of its most active and influential leaders. He served the Society in so many ways that a brief summary does little justice to his dedication and lasting impact. He was president (2002–2004), treasurer, board member, and planner or participant in countless tours, conferences, and committee meetings. He also carried the torch for industrial preservation and interpretation in the Commonwealth of Pennsylvania as a major figure in its Historical and Museum Commission and as a volunteer in many public and private efforts to protect working places or put machinery back in operation.

His love for machines and his remarkable aptitude for solving mechanical problems were obvious even in his youth, when he held summer jobs in a garage, on a ferry, and at a small airport. He took more pride in his skills as a machinist and woodworker than he did in his graduate education in anthropological archeology at the University of North Carolina at Chapel Hill. Some of his early investigations as an historical archeologist demonstrated both his manual dexterity with a trowel and his ability to operate heavy excavating equipment. One of the things that Vance liked about archeology was that he “got to drive really large bulldozers.”

After conducting excavations at a contact-period site in Pennsylvania in 1968, Vance went to work for the Pennsylvania Historical and Museum Commission (PHMC) at the State Museum. He then went back to UNC to continue his graduate studies before returning in 1970 to take a full-time position at the Museum as a Preparator in Natural History. He said that an unusual assignment to disassemble and move a grist mill turned out to be “a pivotal point in my career.” From then on, the Museum staff turned to him to solve mechanical problems. Promoted to Curator in Archeology, he found that the Bicentennial promised ample funding for historical projects: “I spent three years digging soldiers’ huts and officers’ quarters at Valley Forge, gristmills, forges, iron furnaces, and sawmills.” During this period, he also helped to start a new organization, the Society for Industrial Archeology, and participated in its first conference.

PHMC transferred him to its Office of Historical Preservation, where he earned a reputation for dogged defense of historic sites. Although major victories were scarce in those days, he drew satisfaction from the fact that “we inflicted a lot pain.” It is no surprise that the SIA he helped to found includes in its mission the “preservation of historically significant industrial sites, structures, artifacts, and technology.”

In 1979, Vance took over the Commission’s Drake Well Museum in Titusville, Pa. This was an ideal place for him to demonstrate his exceptional talents as a site manager and exhibit designer. When he wanted a correct steam engine for the replica derrick and engine house of 1859 that he was erecting at the Museum, he decided to re-create one. He and John Bowditch, another SIA member and museum professional, built and installed a horizontal engine to take the place of an 1857 model from the Erie City Ironworks. No example of the original engine survived, but Vance’s replica was soon operating perfectly in its place. It would be hard to improve on this example of experimental industrial archeology.

Drake Well Museum also has an incredible jerker system for interconnected oil well pumps driven from a single power source. Vance said that he “spent five years building industrial period exhibits that actually worked. The site was alive with the sounds and smells of the oil industry.” Visitors came away with an appreciation of mechanical ingenuity as well as a realization of the dangers of labor in the oil fields. The exhibit

(continued on page 10)
VANCE PACKARD  (continued from page 9)

on fatal accidents with highly explosive nitroglycerine was particularly memorable.

While he was still running Drake Well, the Commission made Vance the regional director for western Pa. He took on a wide range of projects for the state, including restoration of Commodore Perry’s Flagship Niagara in Erie. During one reorganization of the Commission, he supervised all of Pa.’s industrial and military interpretation. He also moved to Harrisburg in 1989 and worked at the PHMC offices for three years.

Vance’s final position with PHMC was one that he eagerly sought: director of the Anthracite Museum Complex. He operated three anthracite-related museums and a set of historic iron furnaces in northeast Pa. Eckley Miners’ Village, a popular part of that complex, is sure to be one of the tour sites for the SIA’s rescheduled Bethlehem conference.

Vance continued to work with museums, machinery, and historic sites long after he “retired” from state employment in 1997. He was a director of the National Canal Museum in Easton and of the Delaware & Lehigh National Heritage Corridor. He kept busy at sites he had once supervised, like the Pennsylvania Lumber Museum in Ulysses. There, his clever system for recycling sawdust and wood scraps as fuel for heating a boiler showed how waste products had once been turned into valuable steam power. That museum honored him as its volunteer of the year in 1998. He was also praised for his voluntary efforts at the private Coolspring Power Museum, which he helped to establish in Brookville, Pa. Coolspring not only conserves and displays its large collection but also operates numerous engines and hosts semiannual expositions. In recognition of his professional and voluntary achievements over many years, Pennsylvania Museums (a statewide nonprofit organization) gave Vance its President’s Award for special achievement.

On his property at Bear Lake in Thornhurst, Pa., Vance set up both a machine shop and a wood-working shop, complete with a motor-driven, overhead traveling crane for metal-working projects, along with machine tools of various vintages. His wine cellar was similarly well-stocked with libations of carefully selected provenience and age.

Bonnie Smith, Vance’s wife and fellow IA enthusiast, encouraged his appreciation for good wine, Yuengling beer, fine food, saltwater flyfishing, and stimulating travel. (For another view of Vance’s interests and background, see his obituary in the Vineyard Gazette: vineyardgazette.com/obituaries/2020/11/05/vance-packard-78.) Researching the best (or most interesting) restaurants in every conference city became part of the annual ritual in the Packard/Smith household. No SIA conference was complete without a memorable meal in the host community. In addition to the annual meetings that Vance and Bonnie almost always attended, this adventuresome couple made it to many international destinations. They joined other SIA members for organized trips to Scotland, Germany, Sweden, Italy, Spain, and Malta. Together they visited every continent, looking at industrial sites whenever possible but also seeking out natural and cultural wonders when no derricks or smokestacks were visible.

Having the right tools always meant a great deal to Vance. That included not just files and lathes, but also cameras with multiple lenses for every possible need. He was an excellent photographer who left an impressive visual record of the industrial landscape. However, the load of camera accessories that he felt compelled to carry on SIA tours began to take a toll. As the years passed, Vance struggled gamely on, going to a large back pack when a smaller camera bag no longer sufficed. Friends and tour guides watched in amazement as he lugged his equipment off and back on the crowded bus at every photo stop.

Vance was always enthusiastic about seeing the “stuff,”

(continued on page 15)

Vance Packard Bequest to MTU IA Program

On the sad occasion of recognizing the death of our staunch friend and colleague Vance Packard, the IA program at MTU announces a positive development. It will come as no surprise to many of you that Vance left a generous bequest to support Michigan Tech’s Master’s program in Industrial Heritage and Archaeology. Vance was a passionate practitioner of IA, especially on the material side, meaning fieldwork, site interpretation, and material culture/artifact studies. He had a sincere appreciation for the program at MTU and its role in bringing up the next generation of professionals, and he was always willing to put his money where his mouth was! To that end he included the IA program in his will, and a fund has been created in his honor.

This fund also provides an opportunity for others to recognize and support Vance’s ideals while supporting the future of IA education. The Michigan Tech Fund will accept donations made in Vance’s name to further enhance the MTU IA program. Gifts can be made by check to the Michigan Tech Fund, 1400 Townsend Dr., Houghton, MI 49931 or online at mtu.edu/givenow. Please note “IA Fund SS04 - In memory of Vance Packard” on your check or in the Special Instructions field under “Select Gift Designation” online.

The Michigan Tech Fund is a 501(c)(3) institution (Tax ID #38-1554664). Your gift is tax-deductible for the year it’s made, subject to the guidelines of U.S. federal income tax laws.

If you have any questions, please feel free to contact Patrick Martin at pemartin@mtu.edu or (906) 370-2447.

Patrick Martin and Bonnie Smith
While searching for IA on dealers' shelves of old books, the author has noted the curious category of “Books about books.” It’s similar to the quasi-documentary short films about the making of individual motion pictures. Duality is also present in one of the author’s favorite collectible antiques, namely glass paperweights that contain embedded advertising. Some of these advertising paperweights, as they are called, contain images of the advertisers’ consumer products and were probably presented to wholesalers and major retailers. Others depict manufacturing plants, to impress potential customers with the advertiser’s capacity to produce. At the same time, these objects are themselves a product of the glass industry, and often include the name of the manufacturer and the date of the patent. Therein we have a double serving of IA: the vehicle that conveys the manufacturer’s message to the potential customer is itself an industrial product that simultaneously advertises its own manufacturer.

The author’s collection includes a variety of styles but is constrained by the small number of specimens (19, albeit no duplicates), buying habits (in-person purchases at antiques shops and flea markets in Pennsylvania and New Jersey; no internet buys), selectivity (location, product, eye appeal, etc.), and cost (with one exception, a limit of $40 per piece).

The author's paperweights cite two patent dates: Sept. 5, 1882, and Nov. 29, 1892. The former is William Maxwell’s patent for the “manufacture of glass paper-weights” (Letters Patent No. 263,931), which accounts for nine of the specimens. The latter is Albert Graeser’s patent for a “method of securing designs on glass articles” (Letters Patent No. 487,013), which accounts for two of the specimens. Seven of the paperweights bear no patent date, while another is illegible. The reader is directed to the patents for details of the manufacturing processes.

In the author’s collection, the manufacturers identified are Barnes & Abrams Co. of Syracuse, N.Y. (seven specimens, Maxwell’s patent), Barnes Paper Weight Co. of Pittsburgh, Pa. (one specimen, Graeser’s patent), Abrams Paperweight Co. of Pittsburgh, Pa. (one specimen, Graeser’s patent), and Barnes & Abrams Co. of Grapeville, Pa. (two specimens, Maxwell’s patent). One paperweight names J.N. Abrams of...
Mystic, Conn., with no patent date. All but two of the paperweights are rectangular (2.5 in. by 4 in.), while two are globular (3.5 in. in diameter). The manufacturers’ histories are beyond the introductory scope of this brief article.

While perfection should not be expected or demanded of an artist’s rendering, the availability of Sanborn fire insurance maps of Philadelphia allows casual analysis of the depictions of the Shackamaxon Worsted Co. textile mill (J.R. Keim & Co. Inc.). This globular paperweight exists in two varieties; the only difference in the depiction of the mill is the removal of the flag pole to allow space for lettering. The Sanborn map of 1916 shows the portico on the front (West Allegheny Ave. side) of the weaving building as per the paperweight, although the tower above the portico on the paperweights is not shown on the map. The weaving building, and the worsted manufacturing and office building that extends along North Hancock St., are depicted in the paperweights as four-story buildings with basement windows. On the Sanborn map, the worsted manufacturing and office building is identified as a four-story building with a basement, while the weaving building is identified as a five-story building with no basement. The contiguous one-story building in the distance on North Hancock St. on the paperweights (beyond the worsted manufacturing and office building) is identified as the dye house on the Sanborn map. A chimney and an elevated water tank appear far apart on the paperweights, with the tank seemingly mounted on the roof of the worsted manufacturing building and office building; they are separated by 5 ft. on the fire insurance map, which shows a 150-ft. brick chimney and a 50,000-gallon water tank on the ground outside the boiler room.

Because it is a photographic (dot matrix) image, the depiction of R. Granlees & Sons’ Philadelphia manufactory for “dress ginghams and cottonades” should be substantially consistent with the Sanborn map. On the paperweight, the

(continued on page 13)
The sentiment expressed on the t-shirt of Harvey Bomberger in this recent photo says it all about a long-time SIA member who passed away on Nov. 19, 2020, just three weeks shy of his 90th birthday.

Growing up in Pennsylvania surrounded by the Cornwall iron mine and furnace, and the Bethlehem steel plant and Union Canal Tunnel in Lebanon to the southwest; the anthracite mining district to the north; and the mines and silk mills of Berks County to the east, perhaps it was inevitable that Harvey would develop an interest in industrial history, and find his way to become a member of SIA.

Harvey was born in Myerstown, Lebanon County, Pa. He served in the U.S. Marines Corps, working in support service roles at Parris Island, S.C. and Camp Lejeune, N.C. during the Korean War era. He earned degrees from Wyomissing Polytechnic Institute, a B.S. and Master’s in Education from Penn State University, and a Master’s degree from Indiana University. He had teaching certifications in mathematics, physics, earth and space science, geography, industrial arts, drafting, and recreation, and also took classes at Eastern Michigan State University, Michigan Technological University, Bethany College, Arizona State University, University of Wyoming, and Bridgewater State University.

Harvey went on to retire from teaching math and earth science in the Abington School District outside of Philadelphia. So as not to be idle over his summer breaks, Harvey sometimes worked as a park ranger, including at Mammoth Caves National Park in Ky. and Assateague Island National Seashore, Md.

Harvey was a member of SIA since at least 1990, and is remembered by SIA staff as a frequent and enthusiastic participant in SIA events. He had planned to attend the 2020 annual conference in the Lehigh Valley of Pa.

For all his interest in history and technology, Harvey never learned to use a computer. But that didn’t hinder his ability to participate in various programs, lectures, and travels associated with an impressive number of national and Pennsylvania-based societies on an almost daily basis. Until the COVID-19 restrictions of early 2020, Harvey was almost constantly on the go, although in his later years his travels kept him closer to home.

He was the kind of person who seemed to have been everywhere. Twice. And there didn’t seem to be any subject he didn’t know something about. Yet Harvey was unpretentious, content to remain in the background, always in a good mood and happy to chat up anyone.

In addition to SIA, Harvey was also a member of the American Canal Society, Appalachian Trail Museum Society, Canal Society of New York State, Ephrata Cloister, Friends of Cornwall Iron Furnace, Hagley Museum, Lincoln Highway Association, National Building Museum, National Trust for Historic Preservation, Pennsylvania Canal Society, Roebling Historical Society, and Schuylkill River Greenways, among many others.

Consistent with his unassuming character, Harvey’s remains were placed in the Scatter Garden of the Indiantown Gap National Cemetery in Annville, Pa. His quiet presence will be missed by a niece, nephew, several cousins, and friends at many southcentral Pennsylvania historical societies. His lifelong dedication to learning kept him seemingly younger than his biological age, and should be an inspiration to everyone.

Amy Randolph

Artistry in Glass (continued from page 12)

Building is a five-story structure with basement windows and an exterior fire escape, although the constricted fifth floor could be considered a half-floor. The Sanborn map of 1916 identifies the building as the weaving portion of the Murphy Brothers Inc. textile mill at the southwest corner of South 16th and Fitzwater St., a four-and-one-half-story building with a basement. The fire escape on the Fitzwater St. side of the building is shown on the map.

Although Fenton Mullins of Philadelphia manufactured a paperweight based on his patent of Mar. 16, 1886 (Letters Patent No. 338,235), this paperweight was a just block of lead covered with leather. The advantage with respect to glass was the object’s sheer weight, which made Mullins’ paperweight less likely to move once it had been placed. As far as advertising was concerned, the best Mullins could do was to place gold lettering or an image on the cover.

These glass artifacts are non-stop but unobtrusive advertising devices. Physically durable and actually useful, they were intended to keep the advertiser’s name on the potential customer’s desk every day, silently soliciting the viewer’s business, while the paperweight itself planted the idea for the customer to advertise by the same means. They are a buy-one-get-one example of IA that’s enjoyable to collect, display, and research.

Michael Bernstein
David R. Starbuck, one of the country’s most prolific practitioners and writers on historical archeology, died on Dec. 27, 2020 of cancer, having worked to the very end of a life filled with purpose and accomplishment. His final dig at Fort Edward in New York ended in the month before his death at age 71. David graduated from the University of Rochester and earned his master’s and doctorate degrees from Yale. For 28 years, he served as professor of anthropology at Plymouth State University in New Hampshire, having held earlier faculty positions at Rensselaer Polytechnic Institute, Boston University, and Yale.

David was devoted to classroom teaching, but even more so to archeological fieldwork, conducting some 70 field schools during his career. He was a pioneer in industrial archeology in the U.S., entering the field in 1976 when he began to excavate the long-hidden remains of one of the earliest glass factories in New England, the Temple Glassworks (1780–82) in N.H., under the auspices of Boston University.

David followed this work in the late 1970s and 1980s by directing a series of interdisciplinary field studies at Canterbury (N.H.) Shaker Village, combining documentary research, excavations, cartography, and photography. That site, then occupied by some of the last Shakers and now a National Historic Landmark, was making the transition from a religious community to a museum. David’s baseline documentation was essential to the preservation of the village’s physical integrity and the training of its staff and trustees as it passed from the hands of the Shakers. Under the sponsorship of Boston University and the University of New Hampshire, and with financial aid from the N.H. State Historic Preservation Office, Starbuck marshaled the efforts of a score of historians, architectural historians, surveyors, and archeologists to produce reports on more than twenty individual subjects. David continued his Shaker IA work in 1983 when he mapped the waterpower system at Hancock (Mass.) Shaker Village. In his last years, beginning in 2015, David superintended excavations at Enfield (N.H.) Shaker Village. David’s close study of the Shakers’ constructed reservoirs and water-powered mills cemented his specialization in industrial archeology and Shaker studies and led to numerous publications, including his book Neither Plain nor Simple: New Perspectives on the Canterbury Shakers (2004), which provided the first artifact-based portrayal of this celibate American sect.

In partnership with a colleague, the late William L. Taylor of Plymouth State University, David participated in the first recordation of the Concord (N.H.) Gasholder, the most intact gasholder house in the U.S. and the focus of a current preservation effort that David was following closely (see article in this issue). At a meeting held at this site in 1980, he co-founded the Northern New England Chapter of the SIA. David summed up his work in New Hampshire and paid tribute to his predecessors and colleagues in the book The Archeology of New Hampshire: Exploring 10,000 Years in the Granite State (2006).

David served the field of industrial archeology in another important way. From 1983 to 1994, he ably served as editor of IA. Closer to home and ending only at his death, David edited the newsletter of the New England Chapters of SIA and The New Hampshire Archeologist, the journal of the New Hampshire Archeological Society. He also chaired the N.H. State Historic Preservation Review Board.

David’s service to the field of industrial archeology and to the region centered on Plymouth, N.H., was only half of his life. The other half centered on Chestertown, N.Y., the site of a farm that had been in his family since 1794. David traveled back to his beloved farm on most weekends, and sometimes more often, usually making the three-and-a-half hour trip at night and giving rise to the widespread belief that he never slept. David’s productive archeological life in New York focused on explorations of military sites from the French and Indian War. His excavations at Fort William Henry, Battleground State Park in Lake George, Roughers Island in Fort Edward, and Saratoga National Historical Park resulted in many books and articles, notably The Great...
Archaeology of Craft and Industry (faculty.las.illinois.edu/cfennell/IndustrialArcheologyBook.html). This web page provides an extensive bibliography and list of internet resources related to industrial archaeology, based on a forthcoming book of the same title by Christopher Fennell [SIA].


Making Bourbon—Making Landscape: Kentucky’s 19th-Century Transition from Craft to Industrial Distilling (www.youtube.com, search on title). A presentation on distilling complete with economic geography, patent drawings, old bourbon plants and warehouses, and discussion about distillers’ roles in creating Ky.’s turnpikes, hosted by the Filson Historical Society.

Morris Canal Photo Gallery (canalsocietynj.org/photo-gallery/morris-canal/). Takes the viewer along the Morris Canal’s 102-mi. route across northern New Jersey. Beginning in Phillipsburg, each successive photo follows the canal eastward until it reaches its endpoint at Jersey City.

The Romance of Iron and Steel (digital.hagley.org/FILM_2018201_FC09). The earliest print of a film produced by Cinecraft in the Hagley collection. Produced in 1938 and sponsored by the American Rolling Mill Co. (ARMCO), the film explains the science and process of making rolled steel. The film opens with an overview of the ARMCO Research Lab and then follows the manufacturing process through the company’s production facility. Likely shot on location at ARMCO in Middletown, Ohio.

VANCE PACKARD (continued from page 10)
even if that meant climbing through rugged ruins and down into excavations conducted by Michigan Tech at the West Point Foundry site in Cold Spring, N.Y. He made regular visits to consult with faculty and graduate students during that lengthy archeological investigation. The students greatly appreciated his wise counsel and his dry but sparkling humor. Many of them are now important figures in the SIA, half a century after Vance became a founding member.

In 1999, the SIA gave Vance its highest honor, the General Tools Award for Distinguished Service to Industrial Archeology. The award citation notes his “long and distinguished career as a jack-of-all trades and a master of many.” It goes on to praise his many accomplishments and his important role as a mentor to many in the PHMC and outside. For some, that mentoring included a dose of tough love: “He yelled, he complained, and he explained and encouraged.” Despite his obvious qualifications for the award, Vance claimed to be shocked by his selection. At the podium with the famous golden plumb bob in his hands, he remarked that only a week and a half earlier he had purchased a General Tools plumb bob in Home Depot!

Memories of Working with Vance Packard
Vance Packard hired me for my first “professional position” as a field director on an archeological dig in Pennsylvania. Our mission was excavating Revolutionary War sites prior to the Bicentennial. But it did not take long for him to inspire me with an interest in a later history—industrial archeology. Vance, using his famed bulldozer archeology, explored mining sites at Valley Forge and an early grist mill at Washington’s Crossing. I was hooked.

He took me to formative meetings of the SIA at the Williams Club in New York City. The gatherings featured such early luminaries as Robert Vogel, Chester Liebs, Dianne Newell, and more. In one memorable meeting, I remember reviewing the cover for the new journal and listening to plans for a new documentary, “Working Places.” (Now available to view on SIA’s YouTube channel: www.youtube.com/c/SocIndustArch.)

Vance was always in the center of the action in the SIA, attending every conference and serving in every position on the Board. One memorable moment was his treasurer’s report—he said the SIA was in great financial shape. Then waving a fat envelope, announcing cheerily he had a plane ticket to catch to the Cayman Islands.

Despite his obvious qualifications for the award, Vance claimed to be shocked by his selection. At the podium with the famous golden plumb bob in his hands, he remarked that only a week and a half earlier he had purchased a General Tools plumb bob in Home Depot!

Pat Malone (with help from Bonnie Smith and Marni Blake Walter)
CAALENDER

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.

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