SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

Volume 28 Summer 1999 Number 2

EL CERRO RICO

Mark Hufstetler of Bozeman, MT, shares his recent trip to Bolivia's famous silver mines where mining technology has changed little in more than 100 years.

With apologies to the Butte cognoscenti among our readership, many industrial archeologists would argue that the true "richest hill on earth" lies in South America. High in the Bolivian Altiplano, the desolate, symmetrical cone of El Cerro Rico shelters a honeycomb of fabulously rich silver mines now in their fifth century of continuous production. The mines of Cerro Rico were the legendary products of the Spanish quest for wealth in its New World colonial empire. Beginning in the mid-16th century, Spanish-led mining ventures extracted billions of dollars worth of silver from the mountain, as well as substantial quantities of lead, tin, and other minerals. Potosí, the city at Cerro Rico's base, became an internationally recognized symbol of mineral riches, and for a brief time was known as one of the largest cities in the world.

Although the glory days of Cerro Rico are long over, Potosí remains a mining town, and some 8,000 men and boys continue to work the mountain's catacombs in search of riches. They are the successors to several million Quechua Indians and African slaves who worked and died extracting and hauling ore for the Spanish over the centuries. Today's miners work under horrifying conditions, little-changed for hundreds of years; most are killed by accidents or silicosis within a decade of entering the mines. Their lives today mark a frightening, yet fascinating reminder of the harshness of much of the world's industrial heritage.

Relatively few travelers venture into this isolated corner of the Andes, but for those who do, there is the chance for the experience of a lifetime: a day spent underground in one of Cerro Rico's mines. In September 1998, I made the trek to Potosí to see the famous mines. The city, at an elevation of 13,400 feet, is surrounded by a rugged, treeless landscape reminiscent of mountainous Nevada, and the sprawling neighborhoods of aged, poorly built shacks clearly reflect an industrial city that has seen better times. The center of town, in contrast, retains much of its architectural glory, with some 2,000 surviving colonial buildings standing in graceful contrast to their severe natural and man-made environment. Relaxing in the dignified town square, it was easy to appreciate the words on the city's original seal:

I am rich Potosí,
The treasure of the world
And the envy of kings.

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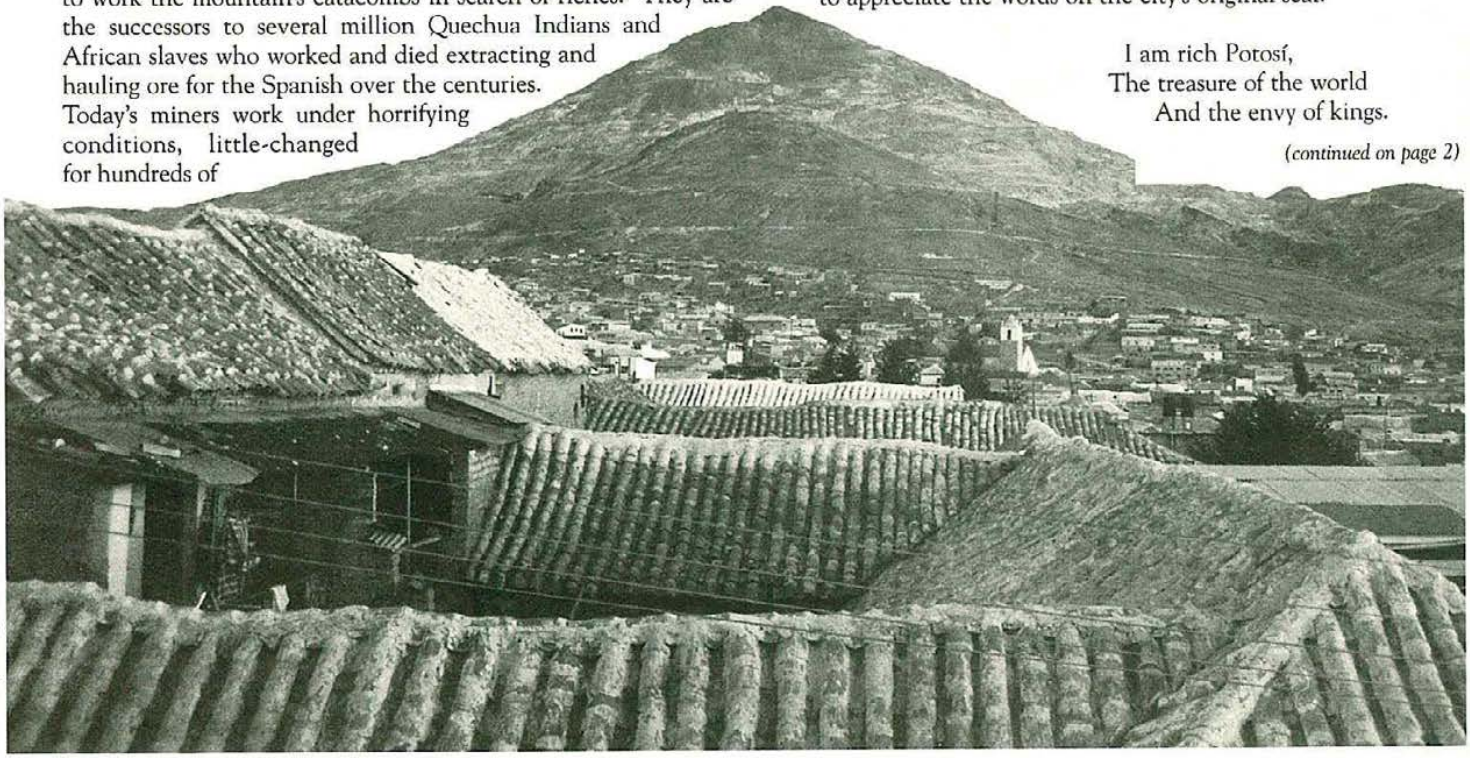

Mark Hufstetler photo

Cerro Rico looms over the rooftops of Potosí.

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El Cerro Rico

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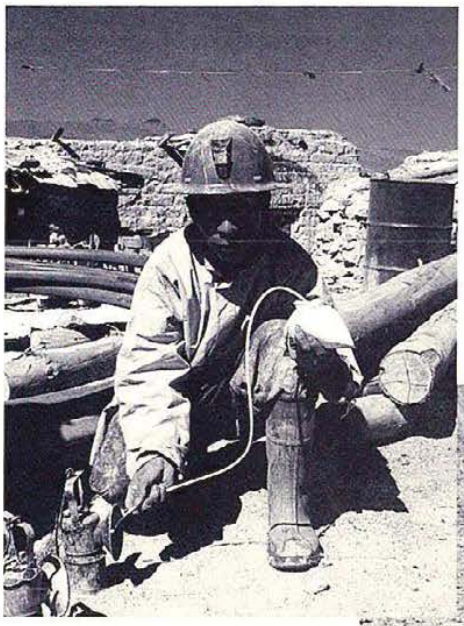

Juan, a former miner and Mark Hufstetler's guide to Cerro Rico, uses one of the carbide lamps to light a length of fuse, which is leading to a plastic bag containing a balled-up stick of dynamite and a bunch of ammonium nitrate. Then boom!

Mark hufstetler photos

Mark Hufstetler holds a stick of dynamite and a bag of coca leaves, customary gifts for Cerro Rico's miners.

The morning after I arrived, a young Australian traveler and I arranged a visit to Cerro Rico in the company of Juan, a former miner who had taken up the guide business after a disabling underground injury. Boarding a *colectivo* (a shared taxi), we first headed off to equip ourselves. Juan provided us with loaned slickers, boots, and helmets, as well as a *lampara de carburo* (carbide lamp), which would provide the only light underground. Then to the streetside stalls of the market district, where it was customary for visitors to purchase presents for the miners. The roster of recommended gifts included bottles of fruit-flavored drink, as well as sticks of dynamite (!), bags of ammonium nitrate, and a supply of coca leaves. (The miners constantly chew coca while underground—it works as a stimulant and produces a detached, contemplative mood. And yes, it's the same stuff cocaine is made from.) After the successful completion of my first-ever "coke" purchase, the three of us boarded another *colectivo* and headed for Cerro Rico.

On first glance, the slopes of Cerro Rico appeared to form only a fabulous archeological site, with an endless honeycomb of footpaths, stone-lined adits, and weathered wood-and-stone structures. Closer examination revealed a hive of present-day activity; according to Juan, some 120 active mine entrances remain on the mountain (out of a total of 450). While the Potosí mines were once government-controlled, operations today include 17 privately owned mines and 22 "cooperatives," where miners work for a share of the proceeds. At the private mines, workers earn less money but enjoy a somewhat-higher level of on-the-job mechanization and safety. Many men prefer the relative independence and income potential of the cooperatives, despite the near total lack of safety standards and modern technology.

We trudged up the hill to the La Candelaria Mine, a typical cooperative operation. A cluster of small stone buildings flanked the Candelaria adit, a low, arched portal lined with dry-laid cut stone. Curving tracks led from the adit to a low, waste-rock fill, where the ore cars were dumped. A group of boys stood ready to shovel the ore into roughly built wooden chutes, which channeled rock into the beds of old farm trucks waiting below. Juan headed off to ready the carbide lamps, and we peered into the portal. All was silent for a minute or two, and then a fully loaded ore car suddenly came screaming out of the mine, pushed at top speed by a pair of diminutive miners. Two other cars soon followed. Rounding the curve on two wheels, each car was quickly dumped in front of the chutes, and the waiting boys went to work. Then immediately, back into the mine for another load.

Juan soon returned with the lamps, and we savored our last sunshine and fresh air before cautiously entering the adit. The tunnel was only about five feet high, and the rails, ties, and mud made for treacherous footing; my back almost immediately began to complain. We'd made it a couple of hundred feet underground when Juan, who was in the lead, suddenly issued an urgent command in Spanish, followed by its English equivalent: "Run!" A moment later we heard the rumbling of a loaded ore car careening towards us, and we frantically began to stumble towards the pinprick of light behind us. We pressed ourselves into a tiny alcove moments before the ore car speeded by, and I immediately realized how I was destined to die: decapitated by the wheels of a Bolivian mine car.

On into the mine. The adit grew smaller, and its curves and undulations soon blocked the last of the sunlight. Juan led us into a long-abandoned stope, and we scrambled over boulders into a small alcove holding a large, monstrous statue. This, we were told, was *el Tio* ("the Uncle"), the god of the miner's underworld. While nearly all Bolivians are Catholics, the miners have evolved a superstition that God's domain ends at the surface, and that their underground world belongs to spirits of the devil. Offerings to *el Tio* are designed to protect the men whose work forces them into the devil's realm. Our tio was a large, man-like figure with horns of a devil. He was wearing miner's boots and was (how shall I put it?) exceptionally well-endowed. Piles of coca leaves

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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 annually. SIA promotes the identification, interpretation, preservation, and re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual $35; couple $40; full-time student $20; institutional $40; contributing $60; sustaining $125; corporate $250. 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.ss.mtu.edu/IA/SIA.html*.

Mailing date for Vol. 28,2 (Summer 1999), September 1999. 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: Patrick Harshbarger, Editor, *SIA Newsletter*, 305 Rodman Road, Wilmington, DE 19809; 302/764-7464; *e-mail: phsianews@aol.com*.

EL CERRO RICO (continued from page 2)

left as offerings surrounded his seat. Juan lit a cigarette and placed it between Tio's plaster lips, then reached for a small bottle of potent moonshine resting in the crook of the statue's arm. In turn, we each took a sip of the hooch, and poured a bit on the ground as an offering for Tio.

We continued working our way in and down, quickly becoming more adept at avoiding the deadly ore cars. Making our way to the end of a narrow drift, we watched miners load some of the cars. We were at the top of a narrow winze, where a wooden tripod held a rope and pulley staffed by a group of young men. Every minute or two, a signal from below would alert them to pull up a large leather *bota* filled with ore, which they dumped a few feet away in front of the cars. The Australian (a muscular young bloke) and I took a turn dumping the bags, but one bag just about killed us; we couldn't imagine repeating the cycle a few hundred times a day. The miners informed us that they were very proud of their new pulley system; until a couple of years ago the miners had carried *botas* up from the lower levels on their backs.

Crawling down a black maze of steep and narrow passageways, we entered the second and third levels of the mine. The temperature soon surpassed 100 degrees, and the dust and smoke became almost unbearable. Juan told us that, in addition to silica dust, we were inhaling arsenic fumes, asbestos dust, and a host of other trapped gasses; all seemed to easily penetrate the handkerchiefs we had wrapped around our faces. The mine grew muddier and muddier, and the muffled sounds of underground explosions became more frequent. At the fourth level we encountered a group of miners seeking shelter from an imminent dynamite charge, and we waited with them for the explosion. Quietly sitting there, we could see tiny flecks of ore everywhere, glittering in the light from our lamp flames. When the dynamite went off, the dust was too thick for us to continue, and we scrambled up the precipitous, slippery incline to level three. Working our way back, we found ourselves trapped behind a derailed mine car; luckily, the following cars managed to stop inches before they would have squashed us.

La Candelaria Mine adit.

We continued after the derailment was cleared, stopping to visit with a small circle of miners taking their midday break. No food was brought into the mine; "lunch" consisted only of cigarettes, more coca leaves, and another bottle of moonshine (passed around the circle, with the same ritualistic spillage we had practiced for Tio). The men chatted slowly in a mixture of Spanish and Quechua, and Juan translated for us. I realized that, at the ripe old age of 40, I was at least a decade older than any of the men I had seen today; they start work young, and if they don't leave the mines will rapidly kill them. The miners work six-day weeks, and can earn between 1,000 and 1,500 bolivianos a month. (A boliviano is worth about 20 cents.) The cooperative mines have no electricity, and all the ore is moved by hand; the only hint of modern technology is a couple of air-powered drills that were recently brought into the mine. Despite all this, most of the men seemed to think they had good jobs. Their earnings made them middle-class by Bolivian standards, and they were perpetuating Potosí's legendary mining tradition. Most came from families where nearly all of the men worked in the mines.

Working our way back to the main adit, we climbed a narrow, almost vertical incline, with our path inches below a primitive wooden chute carrying cascades of ore shoveled from above. And at last, after five hours underground, we finally headed out. My clothes were ruined, and my back and legs ached for days; fresh air and sunshine had never felt so good. Yet, I was immensely grateful for having had the experience, which changed forever how I look at mines and IA. We turned in our lamps and, as a final gesture, Juan set off a bag of dynamite and ammonium nitrate for us. No one else on the mountain even seemed to notice the explosion—compared to the goings-on underground, it was nothing at all.

M.H.

A group of boys stand ready to shovel the ore into roughly built wooden chutes, which channel ore into the beds of elderly farm trucks at a cooperative mine.

LETTER TO THE EDITOR

On *Whither IA*

To the Editor:

I have read the literature and reports on the *Whither IA* seminar at Lowell in 1998. It has been pointed out to me that the meeting might have been more accurately described by the title "Whither Professional Archeology," as nothing about the future of "Avocational Industrial Archeology" was said. As avocational industrial archeologists make up a large portion of our membership, the loss of their interest, participation, and revenue would be a catastrophe.

From my own experience it has been avocational industrial archeologists who have aided every facet of my research. They know the sites and areas over time, they know many of the obscure sources of information, they gain us access to the best informants and coach us in how to make successful inquiries to them for information.

I suggest it would be good for us to listen to these members and share a positive agenda that centers on the future of their participation in the Society's goals. Perhaps a symposium on the subject might be in order. Please share your own views on this subject in the newsletter.

Edward S. Rutsch
Newton, NJ

Fred Quivik responds:

Thank you for asking me to respond to Ed Rutsch's letter concerning the thrust of the Society's November 1998 symposium, *Whither IA*. I share Ed's (and others') commitment to maintaining a broad membership in the SIA.

As a longtime member of the SIA, a board member, and a past president, I'm proud of the Society's record of embracing the interests and concerns of professionals and non-professionals alike. One of the reasons we maintain the number of professional members we do is because there is no other organization that gives professionals so much access to the tremendous store of knowledge and experience our avocational members hold. One of the reasons we maintain the much larger number of avocational members we do is because we make such a focused effort to attend to the interests of those who share a passion for industrial artifacts but who gain no professional standing from that passion. I know of no other organization that, on one hand, strives to be "scholarly," with its journal and its annual paper sessions, and, on the other hand, makes such a determined effort to satisfy the wishes and desires of its members who are "enthusiasts." SIA sponsors extensive tours twice a year, organizes occasional study tours abroad, and encourages local chapters, all of which are activities that appeal to both avocationalists and professionals who share our passion for the material world. Those activities are the lifeblood of the SIA.

Following the success of *Whither IA*, I sensed the value of continuing to explore future directions for the field and the Society. One of the issues that arose at the symposium was the need to interest students and young people in our field. I organized a paper session for the annual meeting in Savannah in which three students who attended the Lowell symposium could share their responses to that event and describe how it might shape their careers, both as students and after they leave school. Their papers stimulated a rousing discussion. I was so enthused by the response of both the students and the audience that I've decided to organize another such session for next year's meeting. The topic I thought would be valuable to address could be called "The Role and Needs of Avocationalists in Industrial Archeology." I'm glad to read that Ed thinks that would be a good idea as well. I'll be soliciting avocational (amateur, non-professional, whatever the preferred term) participants in such a session. I'd welcome ideas from members on how the session could be structured, and I'm sure Ed has some good suggestions.

The program committee of *Whither IA* had invited Ed to be our opening speaker, but he was unable to join us. Had Ed been able to be at Lowell for the symposium, I'm confident he would have agreed with me that all were welcome. Addressing past and future directions for the field of industrial archeology, the program was aimed at practitioners, with no distinction between those who practice industrial archeology for pay and those who volunteer. Indeed, several who attended the symposium count themselves among the Society's devoted avocational members. The discussions that followed each of the sessions showed the commitment of the symposium's participants, whether professional or amateur, to industrial archeology. Judging from the tenor of the discussions and energy that grew out of them, what the participants shared was not the extent of their professional involvement in the field but their commitment to the study and preservation of the material culture of our industrial society. I hope we will continue to attract such folks, regardless of their "professional" status.

The Editor responds:

It would be a tragedy if the SIA became mired in a debate of professional vs. avocational goals, but I nonetheless echo Ed Rutsch's encouragement to members to share their own views on this subject in the *SIAN* by writing a letter to the editor. I also encourage members to participate with Fred Quivik in the organization of a session on the role of avocationalists in IA at next year's annual conference in Duluth.

I attended the *Whither IA* symposium in Lowell, and I agree that it had a welcoming atmosphere for both professional and amateur members. The program had an academic tone, but this was appropriate given the nature of the symposium's goal to reflect on the discipline of industrial archeology. It was not the goal of the symposium to set an agenda of professionalization for the Society, and actually, I thought it was remarkable how little was said about the SIA, its future, or the composition of its membership. Before and after Lowell, I have heard a few SIA members (professional and non-professional) say that they did not attend because the program looked too academic, too abstract, or was just not about real preservation issues. It is a shame that some of the more skeptical members did not attend because they would have had an opportunity to express their points of view. They would have seen that it was a forum for the respectful and enthusiastic exchange of ideas in a language that we all could understand.

Given Ed's letter and the things that have been said to me, however, I cannot doubt that *Whither IA* struck a nerve with some members over the issue of inclusiveness and the status of their goals within the Society. My own opinion is that the distinction between the goals of professional and avocational members is murky, especially in terms of what we all receive from the SIA's regular conferences, tours, and publications. True, some SIA members earn a living while working in IA-related fields, but their backgrounds vary widely. They include historians, architects, engineers, archeologists, geographers, museum specialists, historic preservationists, archivists, media specialists, and so on. Many

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HOT METAL! SIA's Fall Tour, Birmingham, AL

November 2–7

The organizers of this year's fall tour have put together an exciting package of process tours and historic industrial sites that will feature at least one stop with hot metal every day. The schedule begins with a pre-tour, hands-on foundry workshop offered by Sloss Furnaces National Historic Landmark. Participants will learn pattern making on Tuesday, Nov. 2, then create molds on Wednesday. The crew will then fire up the cupola during the opening night reception and pour the molds made that day.

Over the next four days of activities, SIAers will visit American Cast Iron Pipe Co. (ACIPCO) to watch centrifugal cast-iron pipe production; U.S. Steel's blast furnace, seamless pipe mill, and rolling mill; the ca. 1905 Empire Coke Works; and, a catalan forge demonstrated by Jack Bergstresser. Other process tours include the new Mercedes SUV assembly plant and the Boral Brickworks. There will be plenty of opportunity to visit historic sites related to the development of Birmingham's iron and steel industry, including Tannehill and Brierfield blast furnaces, the West Blocton beehive coke ovens, Shelby Iron Works Park, and abandoned mine sites along Red Mountain.

Registration packets were mailed this summer. The tour has a 90-member limit due to restrictions at several of the sites, so send your registration in early. Info: Bode Morin (205) 324-1911; e-mail: *110751.2101@compuserve.com*. ■

American Cast Iron Pipe Co. After desulfurizing, the iron is conveyed in either a 1300-ton or 1000-ton holding ladle to the centrifugal casters. ACIPCO photo.

Rickwood Field, the oldest professional baseball park in the country, will be the setting for the Saturday evening banquet, and, if field conditions allow, a softball game or two. Rickwood, named after Woodward Iron heir Rick Woodward, played host to the segregated Birmingham Barons and the Birmingham Black Barons. This field also hosted championship games of the city's industrial leagues.

MOTOWN REVIEW V: DETROIT'S IA IN 1999

SIA's Detroit Connection (Charles K. Hyde) Updates the Continuing Demolition of Detroit's Industrial Past

I wish I could tell an uplifting story of the adaptive reuse of Detroit's factories and other remains of its industrial past, but alas, I cannot. At best, several sites continue to deteriorate with no rescue in sight. Detroit's **Michigan Central RR Station** (Warren & Wetmore, 1913) now suffers from extensive water damage. Efforts to restore the steamboat **Columbia** (1902), one of two large passenger excursion boats serving the Bob-Lo Island amusement park in the Detroit River, continue. The non-profit Steamer Columbia Foundation is trying to raise the funds needed for restoration (roughly $2 million) and plans to operate this vintage ship again.

Detroit's version of "economic redevelopment" usually results with the loss of historic sites. The new Tiger Stadium (Comerica Park) will open next spring, and there is as yet no news regarding the fate of historic **Tiger Stadium** (1912, 1923, 1936), which is owned by the City of Detroit. Equally disturbing was the city's decision to locate Detroit's new gambling casinos on the Near East Riverfront, a historic industrial district. Buildings and other structures associated with the **Detroit Dry Dock Co.** will be demolished, including a ca. 1880 dry dock and several large buildings of the **Dry Dock Engine Works,** which built maritime engines. A young Henry Ford had his first regular industrial job at the engine works as an apprentice machinist in 1880-1882.

The last of the Chrysler Corporation's vintage auto plants, the former **Maxwell Motor Co.** complex (1908-1970s) in Highland Park will be entirely gone by the end of 1999 and the site redeveloped for light manufacturing. This collection of about thirty major buildings had evolved into Chrysler's engineering and design center, as well as its world headquarters, starting in the late 1920s. Similarly, the **Ford Motor Co. Administration Building** (1928, 1947) in Dearborn was demolished in 1997, following documentation by this author. Designed by Albert Kahn, it served as Ford's headquarters from 1928 to 1956.

Perhaps, the most distressing loss is the **Packard Motor Car Co.** factory complex, which was featured on the cover of the tour packet for the 1980 SIA Annual Conference. In 1903, a group of Detroit capitalists bought the company from its founder, James Packard, who had established the business in Warren, Ohio, in 1899. The new owners then moved production to Detroit. Albert Kahn got his first serious experience with factory architecture working for Packard, and he designed all the buildings (about 40) that made up this complex of 3.5 million sq. ft. Building Number Ten (1905) was his first reinforced concrete factory building.

All Packard cars and trucks were assembled here from 1903 to 1956, when Studebaker bought Packard and briefly moved production to South Bend, Indiana. Since its closure, the plant has served as a very large warehouse for hundreds of tenants. The City of Detroit took ownership of the complex in 1997 because of nonpayment of taxes and is now tearing it down with hopes of redeveloping the 35-acre site as an industrial park. Demolition is costing Detroit nothing. Michigan's Department of Environmental Quality awarded the city a grant of $3.9 million for demolition and environmental cleanup. The site is in Detroit's Empowerment Zone, so tenants of a new industrial park will enjoy substantial tax benefits. Because no federal funds were involved, the City of Detroit has made no effort to document the plant. The fact that this is the last major auto plant of that era and Albert Kahn's most important early work has had no impact on these decisions. The Detroit preservation community, such as it is, has been remarkably silent on this issue.

Despite all this "gloom and doom," some Detroiters remain com-

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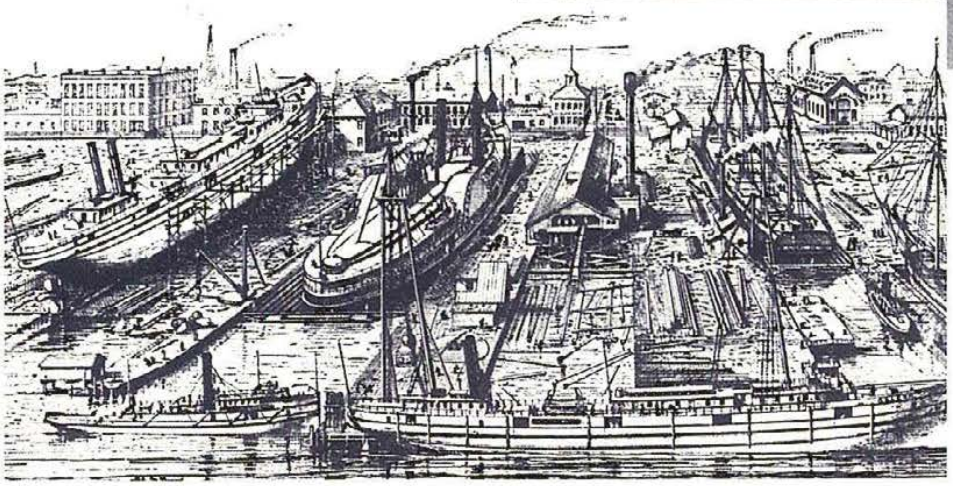
The Ford Motor Company Administration Building, built in 1928, demolished in 1997. Albert Kahn Assoc., photo



Dry docks, Detroit Dry Dock Co., Foot of Orleans Street, 1890. Burton Historical Collection, Detroit Public Library

Motown Review

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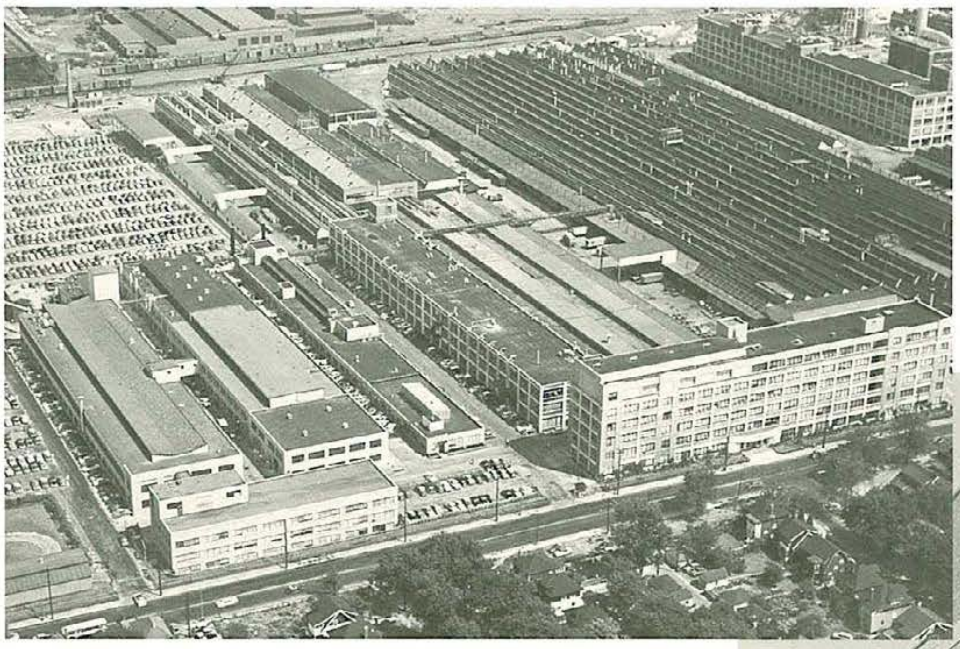
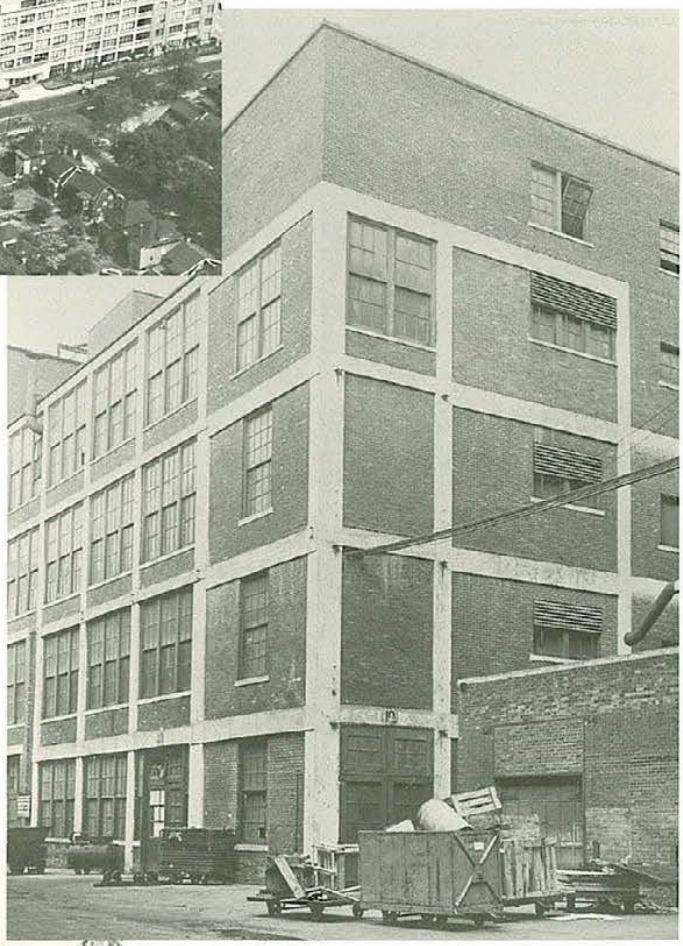


The Chrysler engineering and design center in Dearborn, formerly the Maxwell Motor Company complex, will be entirely razed by the end of the year. Courtesy Chrysler Corporation

mitted to historic preservation. On August 24 of last year, Detroit's **Big Stove** was officially presented back to the people of the city. The Detroit-Michigan Stove Co. built this 25 ft.-tall wooden stove to display at the Columbian Exposition in Chicago in 1893. Detroit at that time was the largest American manufacturer of parlor and kitchen stoves. After the closing of the exposition, the stove came back to Detroit and stood at several sites until 1974, when it was dismantled and stored in a warehouse. The Michigan State Fair celebrated its 150th anniversary in 1998, and Director John Hertal raised over $100,000 in cash and donated services to rebuild and reassemble the badly deteriorated stove. It now stands in a secure location at the State Fairgrounds in Detroit as a monument to Detroit's pre-automotive industrial past.

C.K.H.



Charles K. Hyde, photo

Albert Kahn's Building Number Ten (1905) at Packard.

The giant stove built for the Chicago Columbian Exposition, 1893. It is now restored and displayed at the State Fairgrounds in Detroit. Burton Historical Collection, Detroit Public Library

Western Oregon's China Ditch

After the California gold rush of 1849, miners moved north and found good prospects in placer deposits along the southern Oregon rivers. Typically, ore was removed by using water from hand-dug ditches to wash away gravel deposits, the runoff then directed into sluices with riffles on the bottom to collect the gold. If a person or company had more land and money, a faster way of getting the gold was to use a hydraulic nozzle, or "giant," a process known as "hydraulicking."

Hydraulic gold mining is like removing pimples with 60-grit sandpaper, effective but hard on the landscape and liable to leave scars. Essentially, imagine a garden hose with a 10' nozzle fed by a 12" pipe under great pressure. The jet of water blasts away the earth down to bedrock, creating huge gullies and choking the streams with tailings. These giants were thirsty and the water to feed them is the subject of this article.

To mine the many tributaries of the South Umpqua River, the Myrtle Creek Consolidated Hydraulic Gold Mining Co. was formed and stock offered to the public in November 1889. The ambitious goal involved 2,000 acres of land and called for a 27-mile ditch to connect Little River with Myrtle Creek and so supply the water to work the giants. While the Irish were called upon to dig most of the early canals in the east, the Chinese supplied the heavy labor in the west. That winter a force of 80 men completed the first 7 miles. At the peak of digging activity, in the summer of 1891, there were 200 Chinese laborers at work on the ditch, advancing their camps as they went.

In 1979, the Bureau of Land Management and Umpqua National Forest started the process to document and protect sections of China Ditch within their jurisdiction. Many sections of the ditch are visible today because of a large forest fire in 1987, and 11 miles of the ditch were listed on the National Register of Historic Places in 1991. As a result, with the aid of interpretive signs and a truck, visitors today can travel the 10.5 mile loop on logging roads and see some remaining sections of the ditch. A foot trail also follows a short section.

Attached to the headgate was a riveted pipe, which led down to the giant. The view here is looking at the pipe heading up a 50-degree slope.

Hydraulic monitor used to wash away the gold-bearing soil into sluices. Commonly called a "giant" in the industry, this one is preserved at the Douglas County Museum in Roseburg, OR. **Tom Hull photos**

From the ditch, water was collected into a wooden headgate.

In the application for the National Register, the authors admit that China Ditch was second in length for Oregon water diversion projects for mining. The Eldorado Ditch in eastern Oregon employed up to 1,000 Chinese in 1870 and ended up with a ditch more than 100 miles long which operated until 1925. Although the Eldorado was larger, it was dug in the flat desert land of Baker County. China Ditch was dug to Myrtle Creek, a town that greets travelers with a sign, "Welcome to the 100 valleys of the Umpqua." A topographical map of this area looks like a child's scribbling. China Ditch winds like a snake along the sides of ridges, through tunnels, and over flumes on rocky hillsides. Maintaining a 1% grade in this county was an impressive engineering task.

As an economic venture China Ditch was less successful. In April 1893 the ditch was 3 miles short of tapping the Little River, but there were four giants working off the water from the smaller creeks. Disaster struck in June when a writ of attachment was filed against the company for back wages. Things came apart fast. The Panic of 1893 set in and six Portland banks closed in a single day. The stockholders accused the company of "salting" the mine to sell stock. Just as the giants were able to wash away entire hills in the pre-EPA days, so the stockholders' money vanished in pre-SEC days. Other liens followed and the court finally ordered the sale of company property in June of 1894. The 7-page hand-written copy of the sale items included: 1 giant #2, 4 axes ... table dishes for about 20 men more or less ... one gray horse, 8 years old.

Of the Chinese who did the work not much is known. I sat in the ditch in the deep forest miles from town, the air heavy with silence imagining the opening of a Clint Eastwood spaghetti western, the chink of picks and shovels the only soundtrack. Did they go off to the tong wars, or on to work on other projects? The answer is gone, just like the investors' money and the old gray horse.

T. H.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

PUBLICATIONS OF INTEREST

A Supplement to Vol. 28, No. 2

Summer 1999

COMPILED BY

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

GENERAL INTEREST

- Esther Bubley. **Duluth's Impressive Ore Operations.** *VR* (May/June 1999), pp. 54-62. Photographic essay of Duluth's railroads and ore docks in 1947. A great warmup to SIA's 2000 annual conference!

- Hubert Comte. **Tools: Making Things Around the World.** Abrams, 1998. 365 pp., illus. $75. Diverse collection of evocative photos, paintings and drawings of craftsmen at work, from slaters to wheelwrights. Originally published in French as *Outils du Monde*. Rev: *Preservation* (Mar./Apr. 1999), p. 91.

- Betty J. Duggan. **From Furs to Factories: Exploring the Industrial Revolution in the Tennessee Overhill.** Tenn. Overhill Heritage Assoc. (727 Tennessee Ave., Etowah, TN 37331), 1998. 64 pp., illus. An interpretive guide to the different industries and their historical remains that developed in southeast Tennessee. Produced by a state heritage area.

- Paul B. Israel, Keith A. Nier, and Louis Carlat, eds. **The Papers of Thomas Edison: The Wizard of Menlo Park, 1878, Vol. 4.** Johns Hopkins Univ. Pr., 1999. 966 pp., illus., $60. Newest volume in series covers one year in the life of the great inventor. In 1878, Edison developed the phonograph, made a breakthrough in telephone transmitters, and announced the advent of domestic electric lighting.

- Lance B. Metz, ed. **Canal History and Technology Proceedings, Vol. XVIII.** Canal History and Technology Pr. (30 Centre Sq., Easton, PA 18042), 1999. 213 pp. $22.75 ppd. Includes Vince Hydro, *The Lehigh Coal and Navigation Company's Mauch Chunk Gravity Railroad, Part II: The Backtrack;* Larry Lowenthal, *The Second Critical Period of the New York State Canal System;* Lee R. Maddex, *A Work of Art: A History of the Conococheague Creek Aqueduct;* Lillian R. Rodberg, *Brick Barns, A Brass Band, and a Bicycle Railway: New Jersey's (Other) Smithville;* Charles D. Wrege, Regina Greenwood, John Joos, *Early Industrial Management Experiments at Bethlehem Steel Company, 1899-1900: New Discoveries about Frederick Taylor;* Don Postle, *An Early American Civil Engineer: Isaac Roberdeau.*

- Massimio Negri. **The Preservation of the Sites and Monuments of Industrial Archaeology, and Programmes for Their Conversion into Museum.** *TICCIH Bulletin* (Spring 1999), pp. 3-4. Sweden's Bergslagen Ekomuseum and Italy's Crespi d'Adda presented as case studies of large-scale industrial sites and efforts to interpret them to the public as industrial heritage moves into the mainstream of the European preservation movement. Bergslagen Ekomuseum comprises nearly 60 sites and an enormous area of forest where iron was extracted at the end of the 12th century. Crespi d'Adda, a cotton mill and company town, was built between 1878 and 1900. It is considered one of Italy's finest IA sites.

- Geoffrey Timmins. **Made in Lancashire: A History of Regional Industrialization.** Manchester Univ. Pr., 1998. 365 pp., illus. £50. Contextual analysis from Tudor times to the present.

- Michael A. Tomlan. **Preservation of What, For Whom? A Critical Look at Historical Significance.** National Council for Preservation Education (Box 291, Ithaca, NY 14851), 1999. 234 pp. $29. Proceedings of conference held at Goucher College in March 1997. A wide range of approaches to the concept of historical significance as it has been applied and might be applied in the future. IA topics are included within a broad-based discussion of the use and misuse of public policy.

MISC. INDUSTRIES

- Frederick Allen. **Old Hat.** *I&T* (Winter 1999), p. 6. Early 20th c. equipment used to craft straw and wool hats of the highest quality at Michael Harris, San Francisco.

- Tim Allen. **Copperas, the First Major Chemical Industry in England.** *IAN* (Winter 1998), pp. 2-3. Excavation of 16th c. copperas works near Whitstable, Kent. Copperas was a metal sulphite, produced by a noxious and dangerous process of boiling liquid containing sulphuric acid. It was used principally as a dye fixative for woolens, but also used for the embryonic pharmaceutical industry and for other purposes including tanning, the manufacture of ink, and as a sheep dip.

- Bill Bamberger and Cathy N. Davidson. **Closing: The Life and Death of an American Factory.** Norton, 1998. (Avail: Bas Bleu Bookseller-by-Post, Box 93326, Atlanta GA 30377-0326; 1-800-433-1155; item # 1622.) 223 pp., photos. $27.50. Chronicle of the last four months of the White Furniture Co. of Mebane, North Carolina, a family-owned plant founded in 1881, bought by a conglomerate in 1985 and closed in 1993. Profiles of five longtime White employees.

- Keith Krause. **Arms and the State: Patterns of Military Production and Trade.** Cambridge Univ. Pr. (New York), 1995. 317 pp. $22.95. The complex interrelationships among international economics and technological developments in the armaments industry.

- Barbara Mayer. **Preserving Papers and Paint: The Corporate Archives of Benjamin Moore & Co.** *Public History News* (Spring 1999), pp. 1-2. Established in 1883, the archives preserve the history of the company and the paint industry. Website: *www.benjaminmoore.com*.

- Andre Millard. **America on Record: A History of Recorded Sound.** Cambridge Univ. Pr., 1995. 413 pp., illus., bibliog., index. Describes jazz, blues, swing, rock, rap, and movies against the business and technological background of sound recording, incl. such developments as cylinders, 78 rpm discs, 45 rpm microgroove singles, and compact discs.

- Arwen Mowun. **Steam Laundries: Gender, Technology, and Work in the United States and Great Britain, 1880-1940.** Johns Hopkins Univ. Pr., 1999. 352 pp., illus. $38.40. Factors influencing the rise and decline of commercial steam laundries.

- Matthew W. Norman. **Colonel Burton's Spiller & Burr Revolver: An Untimely Venture in Confederate Small Arms Manufacturing.** Mercer Univ. Pr. (Macon, GA), 1996. 137 pp., illus. $22.95. Case study of problems Confederacy faced lacking skilled labor, access to raw materials, and capital.

- Pierre Claude Reynard. **Unreliable Mills: Maintenance Practices in Early Modern Papermaking.** *T&C* (Spring 1999), pp. 237-62. Maintenance in 18th-c. French paper mills reveal a pervasive "operate-to-failure" style.

- Cece Saunders and Emily Jones. **Jenkins Manufacturing Co. Plant in Bridgeport (CT).** Documentation of valve maker, 1860-1987; **"Ives Toys Make Happy Boys": Bridgeport's Ives Manufacturing Co. Recorded to HAER Standards.** Toy train maker from 1870 to 1930. *SIA New England Chapters Newsletter* 18,2 (1998), pp. 6-9.

- Martin Schönfeld. **Was There a Western Inventor of Porcelain?** *T&C* 39,4 (Oct. 1998), pp. 716-27. New light on 17th-c. European acquisition of porcelain technology.

- Catherine Zusy. **Recent Exploratory Excavation of U.S. Pottery Co. Site, Bennington, VT.** *SIA New England Chapters Newsletter* 18,2 (1998), pp. 5-6. Company operated 1847-1858. Analysis of pottery fragments.

Agriculture & Food Processing

- Karel D. Bicha. **C. C. Washburn and the Upper Mississippi Valley.** Garland Pub. (New York), 1995. 210 pp. $52. Biography of Cadwallader Colden Washburn, the power behind the giant, profitable Washburn Crosby Milling Co. (later General Mills) and a key player in the development of the entire Upper Mississippi region, covers his business and political activities in exhaustive detail. Rev: *Minnesota History* 55 (Fall 1996), pp. 133-4.

- Cecilia Danysk. **Hired Hands: Labour and the Development of Prairie Agriculture, 1880-1930.** McClelland and Stewart (Toronto), 1995. 231 pp. $18.95. Transformation of the farm worker that accompanied the development of mechanized farming in western Canada. Originally viewed as equals, accumulating cash and experience, they became hired hands faced with the prospect (after all the good farmland was gone) of being wage laborers for life, in conflict with their employers and the government which stifled their attempts to unionize.

- Otis L. Graham, et. al. **Aged in Oak: The Story of the Santa Barbara County Wine Industry.** Univ. of Calif., Santa Barbara, Public Historical Studies Program, 1998. 92 pp., maps, photos, $16.95. Rev: *PH* (Spring 1999), p. 154.

- Terry L. Shoptaugh. **Roots of Success: History of the Red River Valley Sugarbeet Growers.** North Dakota Institute for Regional Studies (Fargo, ND), 1997. 271 pp. $25. Rev.: *Minnesota History* 56 (Summer 1998) pp. 98-9.

Textiles

- Peter Benes, ed. **Textiles in Early New England: Design, Production, and Consumption.** Dublin Seminar for Early New England Folklife Series. Boston Univ. Pr., 1999. 240 pp., illus., charts, photos. Based on the 1997 annual conference.

- Roger N. Holden. **Stott and Sons: Architects of the Lancashire Cotton Mill.** Carnegie Pub., 1998. 272 pp., illus. Early 19th c. architects of Oldham involved in the promotion of cotton spinning companies and, as a general architectural practice, designed other buildings including houses, schools, and a watch factory.

- Nelson Lawry. **Tragic 1907 Dover Mill Fire Is Recalled.** *SIA New England Chapters Newsletter* v. 19,1 (1999), pp. 9-11. Reprint from *Dover (NH) Times* (Jan. 28, 1999). Cocheco Manufacturing Co. mill burns.

- Thomas E. Leary. **The Boott Cotton Mills Museum and the American Textile History Museum.** *T&C* (Spring 1999), pp. 363-68. Exhibit review.

- Peter Stanier. **Stroud's Fulling Days.** *IAN* (Summer 1999), p. 5. Ham Mill, Thrupp, Stroud (UK). Early 19th century rolling mill machines and fulling stocks.

- Mark Watson. **Nemesis for the Scottish Textile Industry?** *IAN* (Summer 1999), p. 4. Last jute spinning mill in UK closes. Includes other sites visited by the SIA study tour.

Power Generation

- Frederick Allen. **Hidden Treasures.** *I&T* (Summer 1999), pp. 6-7. Buffalo's Francis G. Ward Pumping Station, 1914.

- T. Lindsay Baker, ed. **Windmillers' Gazette.** Quarterly. Avail: Box 507, Rio Vista, TX 76093. Vol. 18,1 (Winter 1999) includes *An Overview of Horizontal Windmills and Trying to "Sell" a Windmill Patent in the 1840s* (the 1846 patent of Allen Judd and J. B. Bridgman of Cabotville, MA). Vol. 18,2 (Spring 1999) includes *Prefabricated Windmill Towers from Fairbanks, Morse and Company*.

- Robert Carr. **Gasholders and the Arts.** *IAN* (Winter 1998), p. 6. Adaptive re-use of gasholders in Europe.

- Cullen Murphy. **Engines of the Gilded Age.** *Preservation* (May/June 1999), pp. 70-74. Stalemate over preservation of Chestnut Hill pumping station outside of Boston.

Water Control & Reclamation

- Martin Reuss. **The Art of Scientific Precision: River Research in the U.S. Army Corps of Engineers to 1945.** *T&C* (Spring 1999), pp. 292-323. 1927 Mississippi R. flood and the research program it provoked.

- Richard White. **The Organic Machine: The Remaking of the Columbia River.** Hill & Wang, 1995. 130 pp. $17.95. Includes four chapters on history of attempt to control river from early 19th c. to 1990s. Rev: *T&C* (Spring 1999), p. 419.

RAILROADS

- Mark Aldrich. **The Peril of the Broken Rail: The Carriers, the Steel Companies, and Rail Technology, 1900-1945.** *T&C* (Spring 1999), pp. 263-91. Railroad management blames steelmakers for poor quality steel; steelmakers blame railroads for running trains too heavy and too fast. Collaborative testing efforts finally settle the dispute.

- Ted Benson. **Done Honest & True: Richard Steinheimer's Half Century of Rail Photography.** Pentrex (1-800-950-9333), 1999. 96 pp., 130 photos. Collection of b&w photos from over 50-yr. career of well-known railroad photographer. Concentrates on western US.

- John P. Hankey. **Railroads on Parade.** *VR* (May/June 1999), pp. 32-40. 170 yrs. of railroad parades and pageants celebrating the progress and history of American railroading.

- Benjamin F. G. Kline, Jr. **The Logging Railroad Era in Pennsylvania.** Avail: Friends of the RR Museum of PA, Attn: Peg Poore, Box 125, Strasburg, PA 17579. Four numbers in the long out-of-print series have been reissued: *Pitch Pine and Prop Timber* (No.1); *Wild Cattin on the Mountain* (No. 2); *Dams, Dinkies and Sawdust* (No. 12), and *Stemwinders in the Laurel Highlands* (No. 13).

- Blair Kooistra, Jim Belmont, and Dave Gayer. **Crossroads of the West: A Photographic Look at Fifty Years of Railroading in Utah.** Pentrex (1-800-950-9333), 1999. 160 pp., illus., maps, biblio. $49.95. Lavishly illustrated plus history of rail operations in the state. Rev: *VR* (July/Aug. 1999), p. 103.

- Michael Krieger. **Where Rails Meet the Sea: America's Connections Between Ships & Trains.** Metrobooks, 1998. 176 pp., illus. $22.98. Organized geographically (East, Great Lakes, South, West) includes detailed descriptions of waterfront operations, including piers, warehouses, and ferries. Rev: *VR* (July/Aug. 1999), p. 103.

- Marci Lynn McGuinness. **Along the Baltimore & Ohio RR from Cumberland to Uniontown.** Arcadia Pr. (1-800-313-BOOK), 1998. 128 pp., photos. $16.99. Features remarkable collection of photographs by W. H. Jackson in 1891, showing bridges, depots, and other lineside structures west out of Cumberland, MD. Rev: *VR* (July/Aug. 1999), p. 105.

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With thanks

- Margaret Miller. **When the Automobile Saved A Railroad.** *VR* (July/Aug. 1999), pp. 62-71. "Galloping Gooses," automobiles placed on railroad trucks, kept the Rio Grande Southern RR (CO) in operation during the 1930s to 1950s.

- James P. Zeigler. **A Railroad and a Town: Monon Portrait.** *VR* (July/Aug. 1999), pp. 30-42. History of the Monon RR (Chicago-Louisville) and the railroad town of the same name in Indiana.

WATER TRANSPORTATION

- Jay C. Ehle. **Cleveland's Harbor: The Cleveland-Cuyahoga County Port Authority.** Kent State Univ. Pr., 1996. 200 pp., photos, maps, $24. Memoir by former director and chairman of the port authority, 1974-93. Includes several chapters on the early history of the port. Rev: *PH* (Spring 1999), p. 151.

- Richard Francaviglia. **From Sail to Steam: Four Centuries of Texas Maritime History, 1500-1900.** Austin: Univ. of Texas Pr., 1998. 324 pp., maps, illus. $34.95. Documentary, cartographic, pictorial, and archeological sources are used to explore the rich maritime history of Texas's lengthy gulf coastline and navigable rivers. Rev: *PH* (Spring 1999), p. 148.

- Brian Lamb. **Construction of Locks c. 1800 and in Particular Marple Lock 6.** *Journal of the Railway and Canal Historical Society* (July 1999), pp. 55-61. Avail: 77 Main St., Cross Hills via Keighley, West Yorkshire BD20 UJS, UK. Explanation of lock construction with use of original and current plans.

- John Lamb. **Lockport, Illinois, The Old Canal Town.** Arcadia Pr. (2 Cumberland St., Charleston, SC 29401), c. 1999. Includes large number of photos of the operation of the Illinois & Michigan Canal, the construction of the ship and sanitary canal, and the Illinois Waterway. Plus industries and bridges associated with these waterways.

- David McGee. **From Craftsmanship to Draftsmanship: Naval Architecture and the Three Traditions of Early Modern Design.** *T&C* (Apr. 1999), pp. 209-236. Pre-1800 British naval architecture in the context of dispelling the notion that all pre-modern design is craft work.

AUTOMOBILES & HIGHWAYS

- Stephen Fox. **"I Like to Build Things."** *I&T* (Summer 1999), pp. 20-30. The story of Walter Chrysler.

- Maxwell G. Lay. **Ways of the World: A History of the World's Roads and of the Vehicles That Used Them.** Rutgers Univ. Pr., 1999. 401 pp., illus., $50. A sweeping overview from prehistoric times to the present.

- **Society for Commercial Archeology Journal** (Fall 1998) features three articles on the history and development of US-numbered highways: Gary R. Mason and Sara Amy Leach, *The Redwood Highway: Ancient Trees and Tourist Bate* (US 101 from San Francisco to Grants Pass, OR) ; Jon Axline, *Highway Through History; Montana's Scenic U.S. Highway 91*; and, Martha Carver, *The Dixie Highway and Automobile Tourism in the South* (many highways, but mostly US 41). The SCA *Journal* is published twice a year and sent to members. Info: SCA, Box 234, Geneseo, NY 14454-0235.

Mines & Mining

- Karen Daniels. **Tennessee's Historic Copper Basin Area: An Overview.** Polk County Pub. (Benton, TN), n.d. 20 pp., illus., map. A brief history of copper mining in southeast Tennessee taken from the National Register of Historic Places Multiple Property Documentation form.
- Shane Gould. **The Somerset Coalfield.** Somerset IA Society Survey No. 11, 1999. 68 pp., illus. £6.95. Avail: D. W. Warren, 52 Stoke Rd., Taunton, Somerset TA1 3EJ, UK. Brief history and gazetteer of industrial sites around Radstock to the southwest of Bath. Pumping and winding houses, powder houses, workers' housing, transportation, coke ovens. Rev: *IAN* (Summer 1999), p. 7.
- Larry C. Hoffman. **The Rock Drill and Civilization.** *I&T* (Summer 1999), pp. 56-63. Rock drill technology through prehistory to the present.
- Charles K. Hyde. **Copper from America.** Univ. of Ariz. Pr., 1998. 267 pp. $40. Discovery and development of major copper producing areas from colonial times to the present day.
- Donald L. Miller & Richard E. Sharpless. **The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields.** Canal History & Technology Pr. (30 Centre Sq., Easton, PA 18042-7743; (610) 559-6613), 1998. Reprint ed. 360 pp., illus, $32.70 ppd. Overview history of the rise and decline of Pennsylvania's anthracite coal fields.

Iron & Steel

- Ed Kirby. **Echoes of Iron.** Sharon Historical Society (18 Main St., Sharon, CT 06069), 1999. 150 pp., illus. Connecticut's iron industry.
- Victor Rolando. **Beckley Furnace Stabilized by State of Connecticut.** *SIA New England Chapters Newsletter* v. 19,1 (1999), pp. 3,6. Established in 1847 by John Beckley at East Canaan, and operated through late 1910s. Stabilization of furnace stack.

Bridges

- Robert Forsythe and Charles Blackett-Ord. **Lambley Viaduct: The History, Decline and Restoration of a Great Monument.** North Pennines Heritage Trust (UK), 1998. 32 pp., illus. £2.50. History and restoration details of 1852 viaduct spanning the South Tyne valley carrying the 13-mile-long railway from Haltwhistle to Alston.
- **Preserving Historic Bridges in Connecticut.** Efforts to save Berlin Iron Bridge Co. (CT) truss bridges in Connecticut. **Crystal Lake Falls Brick Kingdom Historic Park.** The relocation of truss bridges to a historic park at the former Wassell, Nickel and Gross Piano Action factory (1922) in Barton, VT. *SIA New England Chapters Newsletter* v. 19,1 (1999), pp. 4-5, 7.

Buildings & Structures

- Antoni Vilanova. **The AEG Turbinhalle in Berlin-Moabit.** *TICCIH Bulletin* (Winter 1998), pp. 3-4. Turbine factory (1909) by influential architect Peter Behrens.

Air Transport

- Donald M. Pattillo. **Pushing the Envelope: The American Aircraft Industry.** Business history of major manufacturers of aircraft for military and commercial uses. A wealth of detail on business executives and companies. Rev: *PH* (Spring 1999), p. 158.

ABBREVIATIONS:

IAN	=	Industrial Archaeology News
I&T	=	American Heritage of Invention & Technology
PH	=	Public Historian
T&C	=	Technology & Culture
VR	=	Vintage Rails

Publications of Interest *is compiled from books and articles brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books and articles, especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. Publications of Interest c/o the* **SIA Newsletter,** 305 Rodman Road, Wilmington, DE 19809.

We endeavor to make citations as complete as possible, but they are from a variety of sources, and are sometimes incomplete. If a date, publisher, price, or other statistic is missing, it simply means that it was unavailable, and, unfortunately, we do not have the time to track down these missing bits. The SIA, unless otherwise noted, is not a source for any of the cited works. Readers are encouraged to use their library, bookstore, or school for assistance with locating books or articles.

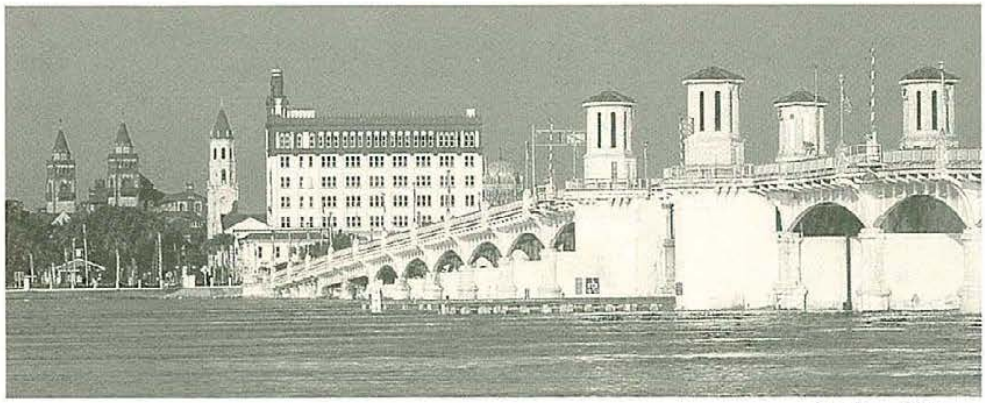
Dan Mayer, 1943-1999

SIA member Dan Mayer died on May 6. Dan was a museum consultant and an avid railroad fan, who rarely missed a chance to attend SIA conferences and tours accompanied by his wife Martha. He will be missed by his many SIA friends.

Dan specialized in exhibition design and developed exhibits for such museums as Eckley Miners' Village, the New York State Historical Association, the Scranton Iron Furnace, the Vermont Folklife Center, and the Historical Association of Cedarburg, WI. He also worked for the Historic American Engineering Record in Seattle and installed the Urban Cultural Park Visitor's Center in Albany.

For many years Dan was a professor in the Cooperstown Graduate Program in Museum Studies from which he graduated in 1973. It is a two-year program leading to a master's degree in museum studies, and it is located on the campus of the New York State Historical Association and the Farmers' Museum in Cooperstown, NY. Founded in 1964, it is one of the most well-respected graduate programs of its kind, with over 600 graduates. The graduate students were very special to Dan. His friends and colleagues have established the *Daniel D. Mayer Scholarship Fund* in his honor. The award will be given to a student who shares Dan's enthusiasm for exhibitions, and perhaps even railroads! Tax-deductible contributions are being accepted: Dan Mayer Scholarship Fund, Cooperstown Graduate Program, Box 800, Cooperstown, NY 13326.

Bridge of Lions Draws SIA Support



Walter Coker photo.

Bridge of Lions.

At the Annual Business Meeting, June 5 in Savannah, the SIA membership voted to endorse a resolution in support of preserving the Bridge of Lions (NR, 1925-27) in St. Augustine, Florida. The bridge over the intercostal waterway is threatened with demolition, and it has been listed on the National Trust's "11 Most Endangered" historic sites. It is the subject of a more than a two-decade-old battle between city residents, local government, the Florida Department of Transportation (FDOT), and the U.S. Coast Guard. The final decision whether to replace or rehabilitate the bridge is expected soon from FDOT. The SIA was approached for its support by members of the Save Our Bridge Committee during a period of public comment while the FDOT considers alternatives. The SIA's resolution of support was forwarded by the committee to FDOT.

The Bridge of Lions was built during Florida's 1920s land development boom to replace a previous wooden trestle. The bridge, which takes its name from two statues placed at the western portal, is a 23-span, 1,538 ft.-long arched steel deck girder bridge with a double-leaf bascule span. The two-story bascule operators' houses are in the Mediterranean-Revival style. The handsome bridge is a major symbol of civic pride, but it has been cited for a narrow roadway and a shipway of inadequate width.

The U. S. Coast Guard has been one of the most vocal advocates for a replacement bridge, insisting that it demands a greater horizontal clearance to accommodate barge traffic and that it will not issue a permit for any construction project that does not meet its requirements. The Jacksonville *Times-Union* and Save Our Bridge Committee engineers have claimed that the Coast Guard has been using inaccurate and skewed numbers to inflate the actual amount of barge traffic, which has been decreasing and not increasing over the past several years. City residents have been divided over the bridge, and a group called "Citizens for a Safe New Bridge" has been organized in opposition to preservation.

A public hearing on June 28 drew more than 350 people to the county auditorium in St. Augustine. Because of the dogged work of the Save Our Bridge Committee, public opinion ran high in favor of restoring the bridge to its original appearance. Speaking in favor of rehabilitation were the Florida Secretary of State, St. Augustine's mayor, and representatives from the National Trust and the National Advisory Council on Historic Preservation. Theresa Segal of the Save Our Bridge Committee writes, "Things are looking better and better since the public hearing." FDOT's decision is expected sometime later this year.

Call for Papers

SIA Annual Conference 2000 • Duluth, MN • June 1-4

The SIA invites proposals for papers to be read at the Annual Conference in Duluth, Minnesota on Saturday, June 3. Presentations on all topics related to industrial archeology are welcome. This year, the program committee especially encourages presentations on bulk-commodities shipping and transcontinental transportation, and industrial archeology exploring the social history of the mining industry. Once again, landscape studies will be of particular interest.

Presentation Formats: Proposals may include individual papers (20 min.), organized panel discussions (90 min., typically three papers, formal commentator optional), reports on works in progress (10 min.), or symposia of related papers.

Proposal Formats: Each paper proposal must include: 1) title; 2) an abstract of not more than 250 wds.; 3) a one page resume for the presenter(s), including postal address, telephone/fax, and e-mail; 4) a list of audio-visual requirements. A panel or symposium organizer should submit all of the paper proposals as a group, accompanied by a title and a brief description of the theme or purpose. All proposers must submit four (4) copies of their proposals.

Deadline: Jan. 15, 2000. Send paper copies of proposals to: Fredric L. Quivik, SIA Program Committee, 2830 Pearl Harbor Road, Alameda, CA 94501. Inquiries are welcome at the above address or by phone (510) 769-7855; e-mail: *fquivik@lmi.net*.

The Suburbanization of Paterson, NJ's National Historic Landmark District

David Soo, a Paterson resident, reports on a threat to preserve the city's industrial landscape.

Courtesy Paterson Museum

There are times when an average citizen must develop expertise in order to stop something wrong from happening. Ten years ago, when I moved to Paterson, I never expected to find myself doing just that. Now I am part of a preservation battle against the city and a developer over a proposed prefabricated, suburban tract housing project on a 7-acre, city-owned property, formerly the Allied Textile Printing (ATP) site, adjacent to the Great Falls and along the Passaic River.

The ATP site is a key property in the Great Falls National Historic Landmark District. The historic district is known especially for the use of the tremendous waterpower derived from the 77'-high falls and fed to the mills through a three-tiered engineered raceway system enabled by the natural contours of the terrain. The ATP site was one of the first locations developed by the Society for Establishing Useful Manufactures (S.U.M.) with Alexander Hamilton and the great architect-designer Pierre Charles L'Enfant beginning in about 1791. The ATP site was home to a number of mills, including Samuel Colt's original gun mill. The planned industrialization of this unique place is a seminal expression and realization of the Hamiltonian vision of an industrialized America. This is truly a founding father's site.

Demolition by neglect has been a tragic theme in Paterson, and particularly in the historic district, which is listed as a priority 1 threatened landmark area by the Secretary of the Interior. The ATP site is home to decaying mills and ruins, and because of this condition, it is being partially rehabilitated by $1.67 million of federal Urban History Initiative funds, administered by the Philadelphia office of the National Park Service (NPS). The proposed work will include demolition and site clearing, archeology, and rehabilitation of historic properties. This work and the proposed housing development are receiving a Sec. 106 review with full consultation by the Advisory Council on Historic Preservation.

The project's proponents have yet to answer properly some very basic questions about the impact and possible adverse effects on archeological resources or to even consider whether a housing development with acres of parking is appropriate for an industrial NHL. During demolition, generic archeological monitoring is the only type of work that currently is scheduled in the budget. Without funds for mitigation or conservation, it can almost be guaranteed that crisis management archeology will cause delays and encourage the loss of misidentified and undiscovered resources.

To better understand the history of the ATP site, the NPS completed a study called the *Maxman Report* in 1996. This report, which was a preliminary guide for preservation and archeology, has been used inappropriately as a benchmark for development. It fails to identify two 150 ft.-long stone-arch tailrace culverts which have visible brownstone openings at the river. The most glaring error is the misidentification of an intact mill building as being constructed in 1915, when it clearly is a ca. 1840-50 mill. This mill will be demolished according to the developers' proposed plan.

Another serious concern is that the developer wants to install approximately 50,000 yds. of fill, up to depths of 13 ft., on the east half of the ATP site. The forces from compaction and the weight of the fill could damage archeological resources, including the two tailrace culverts. It would permanently preclude the reopening of the head- and tailraces for interpretation and education, and it

(continued on page 17)

Barbara Small photo

The former Allied Textile Printers property is a key property in the Great Falls NHL District. The buildings are deteriorated, but the site, which holds Samuel Colt's first gun mill, is rich with archeology that traces the development of America's earliest planned industrial city. The site is now threatened by a tract housing development.

Cleveland's Huletts Soon Will Be History

On July 8, the Cleveland Landmarks Commission voted to rescind a six-month stay of demolition imposed a month earlier and approved a resolution giving the port authority a green light to remove that city's four great Hulett iron-ore unloaders [NR, HAER, ASME], the last on Lake Erie. Two machines will be scrapped almost immediately (following documentation of the dock to HAER standards). One will be disassembled and mothballed on the site for up to five years, with no provision for its reassembly. A fourth will stand until Jan. 15 to give proponents of a plan to relocate two Huletts to a proposed park on the Cuyahoga River an opportunity to raise the money needed to disassemble and mothball it.

The seven-year-long campaign to preserve the Huletts reached a critical stage two years ago, when Conrail sold the historic C&P Ore Dock to the Cleveland-Cuyahoga County Port Authority. The port authority contracted with Oglebay Norton Co., an old-line Cleveland iron-ore firm, to operate it as a multi-product bulk cargo dock. A new port master plan unveiled in 1998 was ominously silent on the fate of the Huletts. Then, last December, the port authority applied to the landmarks commission for permission to remove the four Huletts and all associated buildings and equipment. The commission turned down the port's request and instead imposed a six-month stay of demolition.

The grass-roots Committee to Save Cleveland's Huletts stepped up its efforts, conducting letter-writing and petition campaigns, and winning local and national media coverage. With the assistance of a consultant who formerly served as supervisor of operations at the C&P Dock, the committee incontestably demonstrated that it was possible both to expand the capacity of the dock and preserve the Huletts. In early May, the National Trust for Historic Preservation notified the Committee to Save Cleveland's Huletts that it had approved the committee's nomination of the Hulett unloaders to the Trust's prestigious annual list of "America's 11 Most Endangered Historic Places." The committee looked to the trust to marshal critical technical and moral support in behalf of preservation.

Meanwhile, two member organizations that had been at the forefront of the committee's efforts, the Cleveland Waterfront Coalition and Ohio Canal Corridor, hatched a compromise plan. Convinced that preservation of all four Huletts in situ could not be achieved, they proposed to disassemble and store two Huletts for future resurrection on the banks of the Cuyahoga River in the Flats entertainment district. There, they would be part of a theme park marking the northern terminus of the Ohio & Erie Canal National Heritage corridor. The two Huletts would be displayed—one up and one down—in association with the outline of a "ghost" ore freighter and a reconstructed canal lock.

Notwithstanding the prohibitive expense—one study estimates that it will cost $1.8 million to disassemble, store, and reassemble a single Hulett, not including site and transportation costs—this plan for "Disneyland-on-the-Cuyahoga" won critical support from several key organizations, including the influential George Gund Foundation and the Cuyahoga Valley National Recreation Area, a local unit of the National Park Service. Worse, even before publicly announcing its "Most Endangered" list on June 14, the National Trust endorsed the compromise plan in a letter to the Cleveland Landmarks Commission, calling it a "win-win solution." (It seemed not to matter that the Huletts would be removed from their historic lakeside setting, compromising their integrity and sacrificing their eligibility for National Historic Landmark status.) Although the landmarks commission in June voted to impose a second six-month delay of demolition, it reversed itself a month later, bowing to political pressure and granting the port its wish to clear the site.

Perhaps the worst part of losing the Huletts is the knowledge that it is an unnecessary loss. The battle to preserve these monumental icons of Cleveland's industrial heritage was never a choice between preservation and jobs, as the port authority and the *Cleveland Plain Dealer* so neatly (albeit insupportably) reduced the issue. The truth is Cleveland will lose the Huletts because the port authority and the dock operator, Oglebay Norton Co., found them inconvenient, and because Mayor Michael R. White, who controls the majority of appointments to the port board and might easily have intervened to save them, elected not to. The Hulett unloaders, whose saga has so frequently occupied these pages, within months will be consigned to scrap or storage. What, if anything, is ever resurrected will ring hollow compared with the majesty that was.

With the demise of the four Hulett unloaders at Cleveland, only two remain. The 1940s-vintage machines are still being used to unload coal at the LTV coke works in South Chicago, IL.

C.P.M.

Suburbanization of NHL

(continued from page 16)

would flatten the industrial landscape and destroy the visual understanding of the use and development of the power canal's third tier. This is a unique area where mills were built in relationship to natural terrain, which made possible the use of water-power. The very reason for Paterson's existence!

Now that it is becoming apparent that historic preservation issues might interfere with the proposed housing project, many residents feel that the city administration and the developer created this dilemma by signing an agreement to construct the townhouses before the completion of the historic reports or archeological investigations. City officials are attempting to put into place an agreement with the NPS that gives them power to control which historic resources will be demolished or retained. To date, the city has shown a lack of responsibility and allowed the developer to perform test excavations without the supervision of an archeologist. In one instance, the developer dug pits with a tracked backhoe through sensitive archeological areas. These test pits were up to 20 ft.-deep and 20 ft.-long!

We are confronted with issues of national importance. If the City of Paterson and the developer are able to subvert the importance of archeology on a publicly owned site in a threatened NHL district with federal funding created especially for historic preservation and archeology, then a precedent will be set that will lower national standards.

The Sec. 106 review is still taking place and provides for full public involvement. Through this process, we have an opportunity to have a meaningful influence on the future of this site and the national perception of urban industrial history. Please write the NPS to make your opinion known. We need help because the archeology can't always be where all the people who care about its preservation live.

Info: Paterson Friends of the Great Falls, Inc., 13 Van Houten St., Paterson, NJ 07505; (973) 684-6550; fax 225-0011; Website: *PatersonGreatFalls.com*. Consultation packages may be received by writing: Paterson/UHI, NPS, Cultural Resources, U.S. Custom House, 3rd Flr., Second and Chestnut sts., Philadelphia, PA 19106.

NOTES & QUERIES

Victor Darnell Collection at MIT. Earlier this year, we received the sad news of the death of Victor Darnell (*SIAN* 28,1). The Burndy Library, Dibner Institute for the History of Science and Technology at MIT has announced that it has received the donation of his books, photographs, broadsides, catalogues, advertising magazines, and journals documenting the practice of 19th-century American structural and civil engineering with special emphasis on bridge engineering. In its Spring 1999 newsletter, the library writes "the collection is one of remarkable richness and depth; it is no exaggeration—indeed, it is an understatement—to say that it takes the Library's collections in the history of engineering to an entirely new level. Our appreciation to Mr. Darnell is unbounded." The collection includes Victor's files and notes for *A Directory of American Bridge-Building Companies, 1840-1900*, published by the SIA in 1984. Since he continued to gather information long after the book was published, the files are an essential supplement. It is expected that the collection will be opened to researchers sometime next year after it has been catalogued.

J. P. Flanders Water Pump Query. I am researching and hope to restore a large double-acting piston water pump in Vergennes, VT. The pump was designed and manufactured in Vergennes ca. 1871-73 by J. P. Flanders, who obtained a patent in 1873. The pump is approximately 20' long by 15' high by 15' wide. It was in operation until the 1930s and powered by a water turbine on the Otter Creek falls, to provide domestic water supply. According to records, similar pumps were installed at other sites including South Bend, IN; Muskegon, MI; Meadville, PA; Burlington, IA; Troy, Peeksville, and Ogdensburg, NY. I would appreciate any info on these installations. If any members are in the Vergennes area, I would be glad to show them the pump. Info: Ivor Hughes, 212 Rotax Rd., North Ferrisburg, VT 05473; e-mail: *ihughs@aisvt.bfg.com*.

The ***Pennsylvania Historical and Museum Commission (PHMC)*** invites applications for its 2000-2001 Scholars in Residence Program and its recently inaugurated Collaborative Residency Program. The Scholars in Residence Program provides support for full-time research and study in the manuscript and artifact collections at any PHMC facility, including the state archives, state museum, and 26 historic sites and museums around the state. The Collaborative Residency Program will fund original research that relates to the interpretive mission of PHMC sites and museums and advances a specific programmatic goal of the host site or museum. Proposals for Collaborative Residency are to be filed jointly by the scholar and host institution. Both programs are open to all who are conducting research on Pennsylvania history. Residencies are available for 4 to 12 weeks for the year beginning May 1, 2000, at the rate of $1,200 per month. Application deadline: Jan. 17, 2000. Info and application materials: Div. of History, PHMC, Box 1026, Harrisburg, PA 17109; (717) 787-3034; e-mail: *lshopes@phmc.state.pa.us*.

The ***Flemish Association for Industrial Archeology*** reports that it has expanded its website with more information in English and translations from the Dutch continually added. The website includes a list of threatened sites: *www.conservare.be/wia*.

The Society is pleased to announce receipt of the 21st royalty check for $17.81 from sales of *Historical Archaeology: A Guide to Substantive Theoretical Contributions*, edited by Robert L. Schuyler ($31.95 + $4 postage, Baywood Publishing Co., Inc., Amityville, NY 11701).

Correction. *SIAN* (27,4), p. 11, incorrectly identified the photo of the Duluth grain elevators as Garfield C& D. The pictured site actually is only Garfield D (1907), including the additional silos (annex) that were built in 1930. Garfield C is behind D and out of sight in the photo. ■

LETTER TO THE EDITOR *(continued from page 4)*

belong to professional societies that are designed to represent and advance their career interests and aspirations in a far more effective manner than the SIA, but in my experience these organizations aren't nearly as personally rewarding, educational, or fun! I do not detect any desire to make the SIA more like these other societies with marathon paper sessions, professional membership qualifications, or anything of the sort. Still, I think that it behooves us to examine the role of avocationalists in industrial archeology, and whether the SIA could be better meeting their needs. We need to provide a formal opportunity for members of this group to step up and be heard, and we need especially to tip our collective SIA hardhats to all of the significant contributions that they have made and will continue to make far into the future. That is why I endorse a session on avocationalists at next year's annual conference in Duluth. ■

New International Industrial Heritage Journal

Patrimoine de l'industrie—ressources, pratiques, cultures/ Industrial Patrimony—Resources, Practices, Cultures aims to go beyond the national boundaries which usually divide industrial heritage and archeology publications. The journal, edited by Louis Bergeron and published in the English and French languages, is a collaboration between The International Committee for the Conservation of the Industrial Heritage (TICCIH) and the Ecomusée de la Communauté Urbaine Le creusot-Montceau les Mines in France. Its objective is to offer an outlet for the research and work of all members of TICCIH, which has grown in recent years to include a diverse geographic mix of members and areas of interest. The TICCIH board includes an SIA-appointed member; the position is currently held by Dennis Zembala. The journal will offer a means of communication with international groups, in view of establishing partnerships and more efficient ways of safeguarding sites and artifacts. It is hoped that the journal can contribute to broader appreciation and support for the preservation of the world's industrial heritage. The first issue will appear this year and includes several thought-provoking articles on the theory and practice of industrial history, as well as articles that highlight work and research at industrial history museums and sites in Europe, Latin America, and Asia. A copy of the subscription form and rates may be obtained from the *SIA Newsletter* editor, or by writing the Ecomusée de la Communauté Urbaine Le creusot-Montceau les Mines, Industrial Patrimony Journal, Chateau de la Verrerie, B.P. 53, F 71202 Le Creusot Cedex, France.

SITES & STRUCTURES

The documentation phase for restoring the 1858 ***Aldrich Towing-Path Change Bridge*** (see *SIAN* Summer 1998) is now complete. The bridge is the oldest documented iron truss bridge in New York State, and one of two bridges known to survive from the first enlargement of the Erie Canal. It draws attention to one of the lesser known designs of Squire Whipple, widely regarded as 19th-century America's foremost truss bridge engineer. The Historic American Engineering Record (HAER) has produced a set of drawings and photographs that will now assist in the rehabilitation phase. Field work was completed under the guidance of HAER Chief Eric DeLony and field supervisor Lecture Bradley Wales with the assistance of architectural students from the State University of New York at Buffalo. Bridge engineering historian Bill Chamberlin researched and prepared the written history.

A request for proposal was sent out this past spring to several engineering firms to select a project manager for the bridge's rehabilitation and reconstruction. Francis Griggs [SIA] and Clough Harbour Assoc. were awarded the contract. Griggs has been involved with the restoration of historic bridges in New York and Massachusetts for more than 17 years. Scheduled for completion next summer, the restored bridge will serve as a cross-over bridge in Aqueduct Park for the NY State Heritage Trail system, following more than 360 miles of the old and new canal. Info: Jay Harding, 1735 Maple Ave., Palmyra, NY 14522: e-mail: jhmhfour@redsuspenders.com.

In February, the Central Ohio Coal Co. began dismantling ***Big Muskie,*** the 27-million pound dragline stripping shovel that was a stop on the 1996 SIA Fall Tour of Columbus. The *Cleveland Plain Dealer* (Jan. 30, 1999) reported that the machine had become too expensive to maintain, even as a display. The world's largest shovel was built in 1967-69 to work the Muskingum strip coal mine. The 487-ft. long monster had a bucket capacity of 220 cubic yards, and over its lifetime moved more than 4.8 million cubic yds. of dirt, or twice the amount needed to build the Panama Canal. Idle since 1991, the shovel was parked near the end of its last excavation when SIA members visited it by special arrangement. The coal company is considering a proposal from a local nature preserve to save Big Muskie's bucket.

George Stephenson's ***Rocket,*** the pioneering steam locomotive that won the 1829 Rainhill trials, has been undergoing the first internal survey since being sold to a colliery railway in 1836. According to London's *The Guardian* (Mar. 19, 1999, p. 26), curators are using fibre optics and a delicate flexible probe to peer inside the smoke box, cylinders, and boiler without danger of causing damage to the historic railroading icon. The investigation has shown repair seams, structural changes, and damage from several accidents, including a major collision. The goal is to sort out which parts are original and which are replaced, until this time a matter of speculation. The curators hope that they will shed some new light on a critical period of advance in locomotive technology. With the *Rocket*, Stephenson is credited with introducing the multi-tube boiler with superior steam-raising ability and fuel economy. The investigation, billed as a "miniature archeological excavation," is open to public viewing until January at the National Railway Museum in York (UK). ■

CHAPTER NEWS

Oliver Evans (Philadelphia) had a slide show and tour of the Strawberry Mansion Bridge (1894-96) early this spring. The 1,237'-long metal arch bridge over the Schuylkill River has undergone restoration under the direction of the Philadelphia Streets Dept. and A. G. Lichtenstein & Assoc., consulting engineers. An April event was a tour of the United Parcel Service facility at the Philadelphia airport. The tour was scheduled for the early evening hours for a behind-the-scenes look at the shipper in full operation. In May, the chapter visited the Chesapeake & Delaware Canal Museum in Chesapeake City, MD.

Roebling (Greater NYC/NJ) toured Pennsylvania Station and Grand Central Terminal in March. Lorraine Diehl took the group on a discovery quest to find remnants and clues to the lost majesty of Penn Station, including vestiges of carriageways and architectural remnants. Architect Frank Prial led an insider's tour of Grand Central to discuss aspects of the station's recently completed restoration. In May, Diana Stuart led a walking tour of manhole covers in Lower Manhattan. She is working on a photographic history of manhole covers and has discovered many fascinating examples attesting to the founders' skill and artistry. The chapter reports that it is the SIA's largest local chapter, with 434 paid members as of Jan. 1999.

Southern New England toured the "Big Dig," Boston's Central Artery and Tunnel project in July. The project has been under construction since late 1991, and it is now over half complete. It spans 7.5 miles of highway, 161 lane miles in all, about half in tunnels. The larger of two Charles River bridges, a 10-lane cable-stay bridge, will be the widest ever built and the first to use an asymmetrical design.

Southern held a service day in March at Brighthope Furnace on the Little Cahaba River (AL). Chapter members cleaned up trash and debris. Brighthope was an active Confederate industrial site that processed iron at a forge and may have made iron in a blast furnace during the Civil War before being destroyed by the Union Army in 1865. Today, remains of the mill dam and some walls are evident, as well as an abundance of forge slag. As yet, however, there has been little physical evidence of a blast furnace, even though early literature referred to one. In April, the chapter heard papers from Kevin Towes on Oxmoor Furnace Cemetery and Garnet Garvin on charcoal furnaces in Alabama. ■

1999 SIA Election Results

The results of the SIA officers election were announced at the Annual Business Meeting, June 5, in Savannah. Elected to the Board of Directors for terms of three years were Lance E. Metz, Richard O'Connor, and Louise Trottier. Elected to the Nominations Committee for a term of three years was Patrick Harshbarger.

A full review of the 1999 Annual Conference will appear in the Fall issue of *SIAN*.

CALENDAR

1999

September 25: 6th Michigan Railroad History Conference, Henry Ford Museum, Dearborn, MI. Paper sessions in conjunction with the museum's Railroad Days Festival. Info: Robert W. Cosgrove, 1424 Iroquis Ave., Detroit, MI 48214-2716; (313) 499-3466; website: *www.concentric.net/~bmcnrhs/mirrhc.html*.

Sept. 28-Oct. 3: Assoc. of Railway Museums Convention, Vancouver, BC. Hosted by West Coast Railway Assoc. & Heritage Park. Website: *www.wcra.org*.

Sept. 29-Oct. 2: American Assoc. for State & Local History and Mid-Atlantic Assoc. of Museums Conference, Baltimore, MD. "Caring for Treasures at the Millennium." Info: AASLH, 530 Church St., Ste. 600, Nashville, TN 37219-2325; Website: *www.aaslh.org*.

October 3-7: Society for the History of Technology (SHOT) Annual Meeting, Detroit, MI. Info: SHOT, Dept. of History, Auburn Univ., Auburn, AL 36849. Website: *hfm.umd.umich.edu/tc/SHOT*.

October 7-9: Pioneer America Society, 31st Annual Conference, Washington, PA. "The Trans-Appalachian West." Saturday field trip will focus on the National Road in western PA. Info: Alexander T. Bobersky, Community Development Dept., 646 Tod Ave. NW, Warren, OH 44485; (330) 841-2595; fax, 841-2643.

October 8-10: Society for the Preservation of Old Mills (SPOOM) Annual Conference, Hickory, NC. Hosted by the Catawba County Hist. Assoc. Friday seminars and BBQ at Murray's Mill. Saturday tour of mills in the foothills of the Blue Ridge Mts. Sunday post-tour to Hart's Square. Info: Sydney Halma, CCHA, Box 1055, Newton, NC 28658; e-mail: *ccha@w3link.com*.

October 18-23: World Congress of Conservation and Monumental Heritage, XII General Assembly, ICOMOS, Mexico. General paper sessions at various locales in Mexico. Issues related to conservation, heritage tourism, archeology, etc. Conservation of Industrial Architecture is a scheduled session. Info: Carlos Flores Marini, Coordinator-Mexico 99, Mazatlan 190 Col. Condesa, CP 06140, Mexico, DF; Tel/Fax 525-277-3166; e-mail: *icomos-mex99@compuserve.com.mx*.

October 20-23: International Conference on Historic Bridges, Wheeling, WV. Info: Emory L. Kemp, Inst. for the History of Tech. & IA, 1535 Mileground, Morgantown, WV 26505; (304) 293-7169; fax 293-2449; e-mail: *Lsypolt@wvu.edu*.

November 3-7: SIA Fall Tour, Birmingham, AL. (See article elsewhere in this issue) Info: Bode Morin, Sloss Furnaces NHL, Box 11781, Birmingham, AL 35202-1781; (205) 324-1911; fax 324-6758; e-mail: *110751.210@compuserve.com*.

2000

March 16-19: American Society for Environmental History Annual Meeting, Tacoma, WA. Into the Next Millennium: The Past and Promise of Environmental History. Info: Mart Stewart, Dept. of History, Western Washington Univ., Bellingham, WA 98225-9056; (360) 650-3455; e-mail: *smar4@cc.wwu.edu*.

April 6-9: Preserving the Historic Road in America, Morristown, NJ. Sponsored by the National Trust for Historic Preservation. Info: Dan Marriott (202) 588-6279; e-mail: *dan_marriott@nthp.org*.

June 1-4: SIA Annual Conference, Duluth, MN. Co-sponsored by the St. Louis County Historical Society. Info: SIA-HQ, Michigan Tech Univ., 1400 Townsend Dr., Houghton, MI 44931-1295; website: *www.ss.mtu.edu/ia/sia.html*

July 14-18: First International Conference, National Association of Mining History Organizations, Cornwall, England. Sponsored by Carn Brea Mining Society and Camborne School of Mines. Info: Maureen Holmes, Rivergarth, Bar Meadows, Malpas, Truro TR1 1SS, UK; e-mail: *namho@csm.ac.uk*.

Aug. 30-Sept. 7: TICCIH 2000: The Millennium Congress, London, England. Three days of working sessions in London, followed by choice of 4 days of regional touring in either Cornwall, Wales or Scotland. Info: Rosy Hayward, The Science Museum, London SW7 2DD, UK; e-mail: *ticcih2000@nmsi.ca.uk*.

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SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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