SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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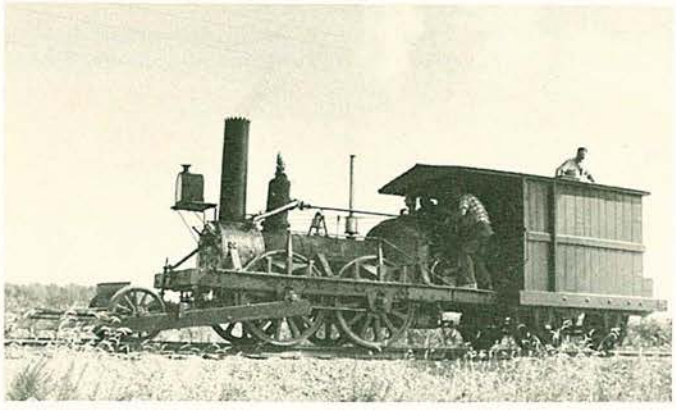
THE BULL & THE FABER: A NEW STEAM AGE AT NMAH

The past fall witnessed events at the National Museum of American History in Washington that may have brought us two steps closer to a revival of serious interest in the use of steam in North America.

In mid-Oct. one of the holiest relics of the age of steam transport was roused from the sleep of decades and, for the first time in fifty-three years, hurtled through the landscape under its own power. The locomotive *John Bull* had been purchased by the Camden & Amboy RR in 1831 from the pioneer manufacturer Robert Stephenson & Co. of Newcastle upon Tyne. (It was Stephenson, you will recall, who built the revolutionary *Rocket*, winner of the Rainhill Trials staged by the Liverpool & Manchester in 1829 to determine the most suitable form of locomotive for commercial service. The *Rocket* is regarded as the first "modern" locomotive on the basis of its arrangement of fundamental elements, a plan that stuck for the entire history of the steam locomotive.)

The *John Bull* saw service for some thirty-five years on the C&A, the principal link in the rail and water route between N.Y. and Philadelphia. Late in its career, the engine was relegated to service on passenger locals, work trains, and other light duties befitting the line's premier engine. By the grace of sentiment on the part of the Stevens family, founders of the C&A, when final retirement came in 1866 the old veteran was spared scrapping. This enlightened and uncommon philosophy later was maintained by the Pennsylvania RR after it had absorbed the C&A. Alert to the *Bull*'s publicity value, the PRR in 1876 withdrew him from storage, performed a bit of misguided "restoration," and steamed him off to arouse nostalgia at the Centennial Exposition in Philadelphia.



Where can be found another sight to produce the sheer excitement of a 149-year-old steam locomotive moving under its own power in a landscape that, through only slightly squinted eyes, appears to have changed not at all in the same span of time? The *John Bull*, seen stepping along near Calverton, Va., stands today somewhat altered from his original form. The cowcatcher-cum-pilot truck and headlight were introduced by the Camden & Amboy to adapt him to the exigencies of N.J. frontier railroading, and the side rods coupling the two driving axles were removed as apparently unnecessary. The spiked smokestack is one of the "antique" touches added during the PRR's restoration prior to exhibition at the Centennial, replacing the spark-arresting stack. At that time the eight-wheel tender that had become the *Bull*'s companion while in service was truncated to its present form.

A decade later the PRR became conscious that they were not necessarily the best caretaker for so significant a treasure, so in 1885 they presented the *John Bull* to the Smithsonian Institution, where he became the National Museum's first specimen relating to the history of technology. He turned out to be also one of its most peripatetic. In 1893 he was sent to the Columbian Exposition, astonishingly making the round trip to Chicago under his own steam! Then again, in 1927, a jaunt to Halethorpe, Md. (near Baltimore), to take fitting part in the pageant celebrating the centennial of the Baltimore & Ohio RR. That was the last time the *Bull* was under steam, although he participated, inert, in the world's fairs at Chicago and N.Y. in 1933 and 1939.

Sept., 1981, will mark the sesquicentennial of the arrival of *John Bull* on American shores. It struck his NMAH custodians that nothing would more suitably celebrate the occasion than once more to bring him to life. Accordingly, preparations were undertaken which consisted of little more than testing the boiler and ensuring the operability of all working parts and lubrication devices. Hartford Steam Boiler Inspection & Insurance Co., in an act of singular generosity, performed gratis an extensive series of boiler tests, including complete X-rays. As there were no ominous shadows (although the *Bull* is an occasional smoker), Hartford declared him fit for steam pressure up to 50 psi. There followed a successful run-in-place under compressed air, with wheels jacked off the rails.

The final and crucial preliminary was an actual trial run, performed last Oct. on a lightly used Southern Ry. branch connecting Calverton and Warrenton, Va. The old fellow was trucked to the spot, set upon the metals, and fired with indigenous cordwood. Then—thrill of a lifetime—curator John H. White, Jr., the scheme's author, cautiously cracked the throttle and, lo!, as though it were only yesterday that he had rolled from the Stephenson shops, *John Bull* moved slowly down the track with no apparent effort and no sound but a thoroughly workmanlike chugging. He cleared his throat of a bit of accumulated water, threw it out the stack, and was off at a stately trot to the cheers of a small group of admirers. Then, back and forth a few times while White and his crew relearned the lost art of driving a locomotive with hook-type valve gear and no brakes to speak of. As confidence grew, so did speed and distance. By day's end there was the next thing to regular service, with several long-distance runs to the hamlet of Casanova (2 mi.) at full cry (15 mph).

The event was a complete success from all standpoints: not only did the *John Bull* operate to near perfection, showing himself fully up to the main event scheduled for next Sept. when he will perform on the day precisely 150 years after that on which he reached American soil, but verifying that he is indeed the oldest operable and operating steam locomotive in the world.

On Dec. 8, a second event celebrating the heroic age of steam occurred at the National Museum. That evening title to one of the half-dozen earliest extant American-built stationary engines was handed over to Roger G. Kennedy, the museum's director, by

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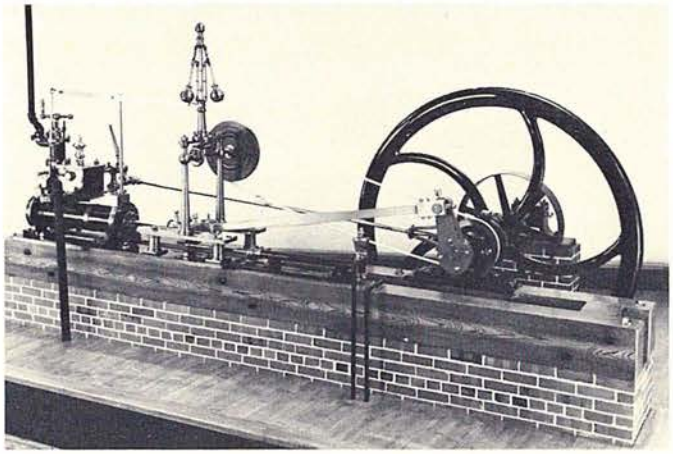
Charles E. Jones, president of the American Society of Mechanical Engineers. The engine was built about 1850 by F. & W. M. Faber of Pittsburgh. The gift symbolized the evolution of mechanical engineering in America from an art to a science to a profession, and commemorated the one-hundredth anniversary of the Society's founding in 1880.



The Faber Engine at the National Museum of American History. Cylinder: 6 x 24 in.; hp: about 7. It was with a nearly identical Faber engine that Col. Edwin Drake drilled his celebrated pioneer oil well at Titusville, Pa., in 1859. No other Faber engines—in fact, no other Pittsburgh-built engines of this early period—survive. *National Museum of American History photograph by Albert Harrell.*

The engine is significant not only as a consequence of its antiquity, but as a prime mover typical of the thousands built during the time of the steam engine's ascendancy to the performance of hundreds of industrial tasks that a half-century earlier had been the nearly exclusive domain of water power. But while typical of the breed of simple, widely distributed engines, this example is at the same time elegantly embellished, principally in the form of elaboration of the turned elements. Particularly distinctive, and an interesting indication of the degree to which the engine builders of the "West" lagged behind their Eastern counterparts, is the heavy-timber engine bed. This forms not only the engine's base, but actually constitutes the structural frame. The timbers form the sole rigid connection between the cylinder and the crankshaft main bearing, carrying all driving stress.

Pittsburgh was the first engine and machinery building center west of the Alleghenies, the industry being launched there in 1812 by none other than Oliver Evans. He was followed by architect-engineer Benjamin Henry Latrobe in 1813, and the rush was on. By 1838 there were no less than 133 engines at work in Pittsburgh, built by forty-four different local firms. The Fabers commenced manufacture in 1834. The last engine built in the Iron City probably was the last built by Mesta, in 1921.

The Museum's engine is on permanent exhibit in the Hall of Power Machinery, within a few connecting-rods' reach of its elder cousin, *John Bull. R.M.V.*

Information leaflets on both the John Bull *and the Faber Engine are available, gratis, from Rm. 5020.*

STOP PRESS

As we go to press with our article "HAER, NAER & the SIA," dramatic changes have occurred in the Nation's Capital that will affect the Historic American Engineering Record and historic preservation in general. On Feb. 19, the morning after President Reagan's address to the Nation outlining his economic recovery program, Secretary of the Interior James Watt abolished the Heritage Conservation & Recreation Service and eliminated the Historic Preservation Fund for FY 82 (Oct. 1, 1981-Sept. 30, 1982), with the exception of $4.7 million for the National Trust for Historic Preservation.

This news does not mean that HAER no longer exists; what it does mean is that HAER, along with its sister program HABS, has been transferred back to the National Park Service, as have most other divisions of HCRS. SIAN decided to proceed with its report on regionalization anyway, because the future status of the HCRS regional offices is not clear; conceivably, they could be transferred to the NPS Regional Offices, although several are located in different cities from the HCRS offices.

Although HAER now is officially returned to the National Park Service (remember, it was NPS that signed the tripartite agreement, along with the Library of Congress and the ASCE, that created HAER in 1969, and administered the program until it was transferred to HCRS in 1978), it will not be until May 31, when a reorganization plan is completed, that we will know exactly how HAER will function. The National Park Service is forming a task force to plan for the re-integration of HCRS programs. At present, NPS officials maintain that regionalization will be assessed on a program-by-program basis. SIAN will keep its readers informed as reorganization proceeds.

Finally, although the President has "zeroed out" the Historic Preservation Fund for FY 82, Congress has the authority to restore all or part of the previously budgeted figure of $32.5 million. SIA members may wish to write their Congressmen, urging them to restore the HP Fund to the budget. Ed.

HAER, NAER & THE SIA: A CLOSE-UP LOOK AT REGIONALIZATION

Last fall SIAN contacted the new Assistant Regional Directors for Cultural Programs of the Heritage Conservation and Recreation Service (HCRS) to ask their plans for the implementation of the HAER component of the now-regionalized National Architectural and Engineering Record. We wrote as follows:

"The recording and documentation of historic industrial and engineering sites and structures is a foremost concern of the Society for Industrial Archeology. With the recent regionalization of the Cultural Programs of the Heritage Conservation & Recreation Service, the SIA fears that the important work conducted since 1969 by the Historic American Engineering Record (HAER) may be diluted or, even worse, brought to a standstill.

"As Editor of the SIA *Newsletter*, I am requesting a statement from each Assistant Regional Director for Cultural Programs on the specific plans he or she has for the implementation of the HAER component of the National Architectural and Engineering Record (NAER) in their region. Responses will be shared with the SIA membership in a future issue of the newsletter.

"As you know, the SIA has been an Important voice in the preservation of North America's industrial and technological heritage. Our organization is anxious to assist NAER in sustaining its crucial recording and documentation activities. If you have any ideas on how the SIA might accomplish this, please feel free to discuss them as part of your response."

SIAN received replies from six of the seven regional offices, which we reprint below. (None was received from the Northeast Region.) While November's election results suggest that the entire regionalization scheme—indeed, federal preservation programs generally—faces an uncertain future, we thought publication of the letters still was worthwhile as a means of acquainting SIA members with their respective federal officials. SIA members should contact these officials with suggestions for recording work, as well as alert them to threats to historic resources in their states. Addresses and telephone numbers for these officials appeared on page 7 of the July 1980 issue of SIAN.

1—Northwest Region (Idaho, Oregon, Washington):

As you probably know, HAER activity in each region is determined primarily by the level of responsibility and funding established by NAER Office in Washington, D.C. Each region receives a Memorandum of Understanding (MOU) from the D.C. Office, reviews that memo, and signs. Our MOU from National Architecture and Engineering Record (NAER) provides $19,000 for NAER activities in Washington, Oregon, and Idaho; $10,800 for Historic American Buildings Survey (HABS) Documentation of Historic Architecture and Technical support to federal projects and $8,200 for HAER. The HAER monies are divided between the documentation of engineering and industrial sites ($4,500) and technical support to federal projects ($3,700). There is no financial support for HABS architectural demonstration projects or HAER community rehab action projects.

Within this fiscal limitation, the Northwest Regional Office is working to establish a solid base for the documentation and preservation of engineering and industrial sites in our three states. Staff within this office have worked in all phases of both HABS and HAER programs and we intend to use that past experience to best advantage. Obviously, any success in this effort will depend heavily on support from agencies outside HCRS, and we are already attempting to forge the links and establish the credibility to make this support possible. We are currently assisting a state-wide HAER inventory, the documentation of a Cascade mining town, a possible inventory and development proposal for the historic Columbia River Scenic Highway, hydroelectric power station reuse, and several other projects. While we are actively seeking to broaden the base of support for preservation and documentation within federal agencies as well as other state and local agencies, we also need local members of the SIA to alert us to potential threats, initiate inventory and recording projects, to function—as they always have—as the front line for concerns mutual to Implementation Assistance and HAER.

This is a large and varied region, an area that has seen little work in IA, given even the heroic efforts of the State Historic Preservation Office staffs. It is also a region in which the sites of interest to IA are remarkably fresh, sites in which people still living once worked, sites which wrought great and permanent changes in the landscape, the quality of life, the pattern of civilization in the West. In many ways, I see the challenge here as one similar in content to what we faced in HAER when I started in 1973; the field is new, the resources are largely unknown, the opportunity to demonstrate the meaning and utility of IA is seemingly endless. I look forward to that challenge, appreciate the opportunity to meet it within the attainable scale of the Northwest, and urge members of the SIA to join with this office in making that effort successful. *T. Allan Comp, Asst. Regional Director, Cultural Programs*

2—Pacific Southwest Region (Arizona, California, Nevada, Hawaii, Trust Territories of the Pacific):

We at the regional level are well aware of the apprehensions with which the SIA and others have looked toward the regionalization of the Heritage Conservation and Recreation Service, and I am pleased to have the opportunity to address some of those fears publicly.

Perhaps it is not inappropriate for me to assure SIA members at the outset that I share their very great interest in the HAER program, now administered by the National Architectural and Engineering Record. I served as chief of HAER for more than seven years, and saw the program grow into something deserving of the commitment which we all share. I would not have accepted [this] position had I believed that doing so would cause the HAER program . . . to suffer a loss in strength or integrity ("be diluted" or be "brought to a standstill"). While still chief of HAER I worked very closely with the architects of our regionalization to protect the professionalism of the HCRS preservation programs.

I am very optimistic about regionalization and the preservation of engineering and industrial structures. It is still very early to be making definite statements about the number or type of projects we will be sponsoring here in the Southwest region, but I can outline the minimum and sketch in the other activities we expect to accomplish during this first year. Clearly, we will not be conducting as many projects in 1981 as we will when we have reached our full operating strength. However, I am confident that being in closer communication with the states we serve will help us develop, first, a greater sensitivity to the particular issues facing this region, and second, a larger following among preservationists and people interested in industrial archeology.

According to the requirements of their work programs, each state will be required to conduct at the very least one NAER project. The regional office will be assisting the State Historic Preservation Offices to select sites for documentation and to design the projects. In some cases, we will be looking to add to ongoing HAER activities, such as in California and Nevada, where statewide inventories have been begun. I cannot, at this early stage, predict the degree to which we will be able to exceed this bare minimum. This will depend upon too many factors which are as yet unclear.

In this particular region, probably more than any of the other six, it is important to take note of the significant presence of federal landownership. Because of their responsibilities under various historic preservation laws, federal agencies themselves through HCRS will be contributing a wealth of valuable records to the HAER collection at the Library of Congress. In the past, it has been difficult to monitor closely those federal actions which impact historic resources, particularly where distances have been great. At the regional level, we are able to maintain closer communications with those agencies and with preservationists concerned about the effects of federal activities on their local resources. We have already assumed responsibility for monitoring Executive Order projects and have been able to renew communications which had lapsed over time and distance. I expect that this type of legally-mandated documentation will add significantly to the archives of engineering and industrial technology at the Library of Congress, along with that produced by special field projects.

At the local level, interest in historic preservation in the West varies greatly from place to place. In this, our first month of operating from the regional office, we have begun to identify and meet with our constituency—to inform them of our new presence here and to learn what their strengths and needs may be. I suspect that in most areas, knowlege of and interest in industrial archeology will be either limited or lacking altogether. This is an area where I will welcome the active consultation of the SIA, both in identifying sites of interest and in developing a broader and stronger SIA following.

I hope that SIA members will communicate directly with my office on a regular basis with their suggestions for strengthening the HAER portions of our program. I personally will be happy to speak with them, or they may direct themselves to Marjorie Baer, who has moved from the Washington office to lead NAER activities in the Southwest Regional Office. We can be reached from 8:00 A.M. until 6:00 P.M. Pacific Time at (415) 556-7741, or by writing to us at 450 Golden Gate Ave., Box 36062, San Francisco, Calif. 94102. *Douglas L. Griffin, Asst. Regional Director, Cultural Programs*

3—Mid-Continent Region (Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming):

I can assure you that the Mid-Continent Region has a strong interest in and commitment to historic industrial and engineering sites and structures. It is my intention to use the regional framework to develop a research design for the industrial sites in the ten-state area. That is, gather the existing knowledge, identify the most significant sites, the areas least studied, and the threatened sites and target the documentation projects to those areas. Because our funds must come from outside sponsors, we may not be able to religiously follow these goals, but I anticipate that even the identification of research priorities will target out projects and thus increase the base of knowledge of industrial and engineering sites.

To this end, I would like to invite SIA members to join the Mid-Continent Region in defining our project priorities and identification techniques. I have contacted some historians with

specialities in the history of technology and they have tentatively consented to lead the discussion, and I am very much looking forward to it. We will let you know as soon as we have a firm date.

As some of you know, we have ongoing bridge inventory projects in Montana and Colorado, and a serious inquiry from Missouri as well. Although it is a little early to have definite field projects lined up for next summer, we have already received several inquiries including one from a large mining company interested in documenting their operation. Each SHPO is required to participate in a NAER project this year, and we are hopeful that we can help them identify some engineering/industrial sites as well as architectural projects.

As in the past, we will rely very heavily on the SIA membership to help us identify projects and students and we hope that you will feel free to call upon us if we can be of assistance to you. *Katherine H. Cole, Asst. Regional Director, Cultural Programs*

4—Lake Central Region (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin):

Our program objectives in this area, as are those of all of the other regional offices, are specifically delineated in Memoranda of Understanding with the Washington office of HCRS. One of our objectives is to develop, manage and complete a HAER project in fiscal year 1981.

Our role in the overall recording and documentation of the nation's industrial and technical heritage is further expanded through our assistance and advice to Federal agencies in complying with their responsibilities under Section 106 of the Historic Preservation Act of 1966 and Section 2(c) of Executive Order 11593.

As a result of this activity we have been directly involved in the recordation of the Dodge Main plant in Hamtramck and Detroit, Michigan, as well as prospectively many other HAER projects in our region. Because of regionalization, a new and positive factor in these recording projects has been and will be the proximity of our cultural staff to the cultural resources of our six-state region.

We are also confident that HAER recording projects will be encouraged nationally by minimum requirement number 14 in the HCRS "Fiscal Year 1981 Historic Preservation Fund Work Program Instructions." This requirement provides for a minimum of one NAER recording and documentation project in each state.

As with any program, our ability to fulfill our plans will depend on the continuance of national policies supporting historic preservation. Regionalization has proven to be an effective and efficient method of delivering services to our States and accomplishing our plans in the recreational and natural resources programs of our agency. There is no reason to believe that the same will not be true for our cultural programs.

If you have further questions or concerns please do not hesitate to contact me or David Brook, Assistant Regional Director for Cultural Programs, at (313) 668-2015. Thank you for your interest in our programs. We sincerely appreciate the SIA's commitment to the preservation of America's industrial and technological heritage. [signed] *David L. Brook for Frank D. Jones, Regional Director*

5—Southeast Region (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, Virgin Islands):

As your membership probably knows, HAER has had a number of projects in the Southeast in its first decade. Several of these projects, such as the "North Carolina Historic Engineering and Industrial Survey," have served as models for similar projects across the country. I am certain that HAER's work in this region is directly responsible for the initiation of the SIA North Carolina Chapter, which serves our entire region. In a relatively short time the HAER program has left quite an impression on the Southeast, an area that has traditionally been associated with agriculture more than industry. Our office intends to build upon this legacy.

This year the NAER program has been greatly enhanced by the State Historic Preservation Offices which, as a requirement of their State Work Programs, are each undertaking ". . . one recording or documentation project prepared to the Specifications of the National Architectural and Engineering Record." The Southeast Regional Office will also conduct its own projects. While we cannot as yet say what each specific project will be, there are some immediate opportunities we are presently pursuing. For example, the Federal Highway Administration's Highway Bridge Replacement and Rehabilitation Program (HBRRP), funded at $1.3 billion this fiscal year, allows its funds to be used for inventorying historic bridges. There is one completed statewide metal truss bridge inventory in our region and it has proven to be a valuable planning tool as well as a valid documentation project. We will use such examples in working with State and Federal agencies in our efforts to initiate similar surveys throughout the Southeast Region.

Along with the benefit of past work and future opportunities in the Southeast, our office is fortunate to have three NAER veterans on its staff. The person leading the NAER program is, in fact, a HAER veteran of eight years. As always, the NAER program needs the grass roots support of those interested in historical documentation to help identify significant sites and, most importantly, to help identify interested parties who could underwrite the costs of documentation projects. We would be delighted to work with the SIA in the coming year to identify those sites and those funding opportunities, and would be pleased to consider any proposals which might be offered by your members. Please be assured that we are committed to maintaining a strong program of documentation for historic engineering sites as well as for historic buildings in our region. Any project or funding proposals your members might have should be directed to James Vaseff, AIA, of my staff. [Signed] *Kirk A. Cordell for Paul B. Hartwig, Asst. Regional Director, Cultural Programs*

6—Northeast Region (Connecticut, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia): No reply was received.

7—South Central Region (Arkansas, Louisiana, New Mexico, Oklahoma, Texas):

First, I would like to bring you up-to-date on recently completed NAER projects in the region. The field work for the following efforts is finished and the final reports are in various stages of completion.

1. Guthrie, Oklahoma: This was a comprehensive planning and rehabilitation proposal project aimed at encouraging the economic revitalization of the city through private and public investment and commitment. The project produced survey and documentation information of the city's downtown area.

2. Laguna Indian Reservation, Laguna, New Mexico: This was an inventory and rehabilitation proposal for the entire Laguna Reservation, with particular concentration on the preservation and sympathetic revitalization of the original pueblo village. This study was generally concerned with the reservation's natural resources, and industrial and manufacturing potential from an employment and cultural resources management viewpoint.

3. McNiel Street Pumping Station, Shreveport, Louisiana: This project was specifically aimed at stimulating public interest in the fate of the pumping station, a rare survivor of late 19th- and early 20th-century steam-powered public works machinery. The project produces a documented survey and adaptive re-use proposal for the facility, which will hopefully serve as an "anchor" at one end of the prospective green belt/park area to be developed by the U.S. Army Corps of Engineers.

4. El Camino de las Misiones, El Paso, Texas: This project, initiated by the City of El Paso, will record the Mission Trail. Measured drawings and comprehensive histories will be completed for a number of structures and sites and a comprehensive survey will be completed along an eight mile route of the Mission Trail. The nomination of the El Camino de las Misiones Historic district will be a final result of the study.

Assuming adequate funding availability for travel and administrative costs, the South Central Regional Office plans to continue its efforts toward establishing and supervising future NAER projects. This work will be performed in conjunction with the State Historic Preservation Offices, and will hopefully further

the identification of new resources and plan for the effective preservation, adaptive re-use, and overall management of all cultural resources in the region. The States are now required to initiate a NAER-type study each year as part of their Historic Preservation program and we are looking forward to working with them toward that end.

Our office will continue to be receptive to requests for project implementation information and suggestions for new project initiation proposals. *Margaret Pepin-Donat, Asst. Regional Director, Cultural Programs*

SHIPS COMING IN FOR N.Y. SEAPORT

A well-used flotilla of early passenger and merchant ships is in process of being assembled and restored at N.Y.C.'s South Street Seaport [NR], itself also in process of assemblage and restoration. Recent wheelings and dealings by the folks at the South Street Seaport Museum have produced encouraging signs of a rededication to the ages of sail and steam.

South Street Seaport Museum photograph.

Through the 1970s, much private and governmental attention was focused on this neglected Manhattan quarter of crumbling counting houses, piers, and fish stalls squeezed between the towering financial district and the East River. Nothing architecturally imposing is left from the flush days when South Street served as the city's principal fish terminal and hub of maritime transportation. The 1863 cast-iron Fulton Ferry Terminal is gone, as is the 1882 High-Victorian Fulton Fish Market. A heavy traffic in fresh fish continues in the area today, but this *despite* the port, not because of it. (Most fish arrive not by sea but by refrigerated truck from distant docks.)

Nevertheless, many of the brick row shops, warehouses, cobbled streets, and seafood bars have endured and found new customers seeking relief from nearby skyscrapers or from the 20th century generally. It is this that has excited museum personnel, city officials, and developers alike, and brought ships back to the seaport.

Since its founding in 1967, the museum has been working to attract support for a complete "revitalization" of the area. The 1980 Seaport Development Plan is the result, an agreement linking the city, state, museum, and a shopping-center developer, the Rouse Co., in a $210-million renaissance to be administered once sufficient funds are raised and approvals received. In response to public outcries that this will result in commercial overkill, museum people have emphasized their commitment to retain the port's coarse, unpolished "sense of place" while introducing specialty shops and restaurants to sustain the area economically (this perhaps a contradiction in terms).

Under the plan, the museum will absorb the present N.Y. State Maritime Museum and include in its collections many of the port's early buildings. A major obligation of the museum is the structural restoration and opening of its ships, acquired over recent years and currently in various stages of disrepair. Under the guidance of curator-historian Norman Brouwer [SIA], operations superintendent David Beggs, and consultant Melvin H. Jackson, the following ships today are either awaiting or well along with their refitting:

Peking (1911)—four-masted, steel-hulled German bark, ex-Hamburg-Valparaiso nitrate trade;

Ambrose (1908)—lightship, serving Atlantic ports until 1964;

Maj. Gen. Wm. H. Hart (1925)-steam ferry, ex-N.Y. harbor service, currently home of the Pioneer Marine School, providing vocational training in marine crafts;

Wavertree (1885)—English square-rigger, restoration underway, HCRS funding approved;

Lettie G. Howard (1893)—Gloucester fishing schooner, last of the clipper-bowed "Fredonia" class;

Mathilda (1899)—steam tug, ex-St. Lawrence Seaway, active to 1975, Canadian-built, steamplant intact, currently in drydock on Hudson R. (Pier 84);

Pioneer (1885)—sloop restored as schooner, tours harbor during summer months;

Aqua (1912)—N.Y. Central RR steam lighter, very poor condition, in dry storage in Brooklyn (engine disassembled, stacked on Pier 15);

Charles Cooper (1866)—wood-hulled packet ship, now a hulk lying at Port Stanley, Falkland Islands, near Antarctica.

Restoration progress reports, general accounts of the port and its future, and well-illustrated articles covering all aspects of maritime history are published quarterly in *SEAPORT,* available for $15/year from the museum, 203 Front St., N.Y.C. 10038. *D.H.S.*

Editor's Note: The South Street project, as it develops, merits the close and constant scrutiny of preservationists. A recent editorial ("Selling the Seaport") in the New York Times *cautioned readers of the precarious balance between history and "stylish marketing." We reprint it here, in part:*

"It is too late now to debate whether creating a marketplace in New York's South Street Seaport is a good idea. The project is in motion, with Board of Estimate approval, the promise of a $20 million Federal urban development grant and the Rouse Company committed as developer. What matters now is the plan for the project . . .

"Drawings and descriptions suggest something much like Rouse's extremely popular Boston and Baltimore waterfront projects, and there is no reason to doubt that their success can be duplicated here. Boston's historic Faneuil Hall buildings and Baltimore's newly constructed Harborplace both offer food and speciality shops, restaurants and pedestrian spaces. A carefully planned and controlled merchandising formula has produced a skillful and precarious balance between history and stylish marketing.

"In the case of the Seaport, however, there is as much reason to fear as to welcome such changes. The Rouse proposal calls for features including glass sheds and canopies to extend the commercial space of the old buildings. There would be widened tree-lined streets, which this area never knew, to accommodate a 400-seat cafe, and pushcarts, luring people in large numbers . . .

"It is time to admit that while this kind of development may be good business, it should not be called good preservation. It is a mistake to represent a sophisticated 20th-century commercial complex as compatible with the area's historic 19th-century market, as the Seaport Museum has done. The present concept is more dependent on the spirit of modern retailing than on any older spirit of time or place.

"In a sense, the Seaport has sold its birthright. Its job now is to see that the transition to Boutique America can leave something of that tough, plain, honest and genuinely evocative remnant of New York's 19th-century working waterfront."

TEXTILE CONFERENCE REPORT

Last Aug., three representatives from the U.S. attended the "Working Conference on the Preservation, the Restoration, and the Presentation of Early Textile Machinery" in Diepenbeek, Belgium. Larry Gross, Gary Kulik, and Ted Penn [all SIA] gave papers. Sponsored by The International Committee for the Conservation of the Industrial Heritage (TICCIH), the meeting enabled professionals from museums and other educational institutions of nine countries to compare approaches, concerns, and collections. The conference was the first time such a broad exchange of information and ideas in the field has taken place. Participants stressed the necessity for international cooperation in the preservation of textile heritage and asked TICCIH to support the activities of the Textile Heritage Project set up during the conference.

"Textile heritage" includes the history of the textile industry and the buildings, machinery, products, as well as verbal, iconographic, and other evidence from which historians can gain a better understanding of the lives of the men and women involved in the textile industry. The Textile Heritage Project will encourage international cooperation in the preservation, analysis, and exhibition of textile heritage. Activities to be undertaken in the coming years include the coordination of information on the availability of repair and replacement parts for historic machinery; the creation of bibliographical information and the distribution of abstracts dealing with the preservation of textile heritage; establishment of an inventory of museums and collections of textile heritage; and the drafting of a checklist of textile machinery made before 1850. It was the sense of the conference that the study of the textile industry should focus not only on machines or other artifacts, but on the human relationships that give meaning to the artifacts.

Conferees visited an open air museum at Bokryk, Belgium, an operating damask hand-weaving operation, a textile museum and factory buildings in Tilburg, The Netherlands, and a Provincial Museum. At the Museum for Industrial Archeology in Ghent, a fascinating early 19th-c. hand-powered cotton mule was operated for the group. Other stops included an operating flax rettery, a historical rettery, and wind- and steam-powered scutching mills.

The three U.S. participants agreed to describe and list all textile machinery made before 1850 in collections here during the coming year. Anyone having knowledge of such pieces, particularly outside major collections, can help by contacting one of the three. *L.F.G.*

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MISC. SITES & STRUCTURES

The Boeing Co.'s first home, the **Red Barn** (1916), has been moved to a permanent site at the company's flight museum in Seattle, Wash. The barn, which will be restored, is scheduled to open next fall. When finished, the museum complex will represent an investment of $18 million.

The Red Barn, the Boeing Co.'s first home, in transit last Nov. *AP LASERPHOTO.*

Last fall the **Anaconda Copper Co.** announced that it was suspending operations at its smelter at Anaconda, Mont., and at its Great Falls refinery. The company has operated the smelter since before the turn of the century. According to James L. Marvin, company president, the "difficult decision" was made after repeated attempts to bring the smelter into compliance with state and federal clean-air standards. Mining and milling operations will continue. What will they do with the ore? Sell it to the Japanese. The ore is being shipped via San Diego. An estimated 1,500 employees at Anaconda and Great Falls will lose their jobs.

The last continuously operating **iron horse** was put out to pasture last Dec. In retiring the last of its freight-hauling steam locomotives, Northwestern Steel & Wire Co. of Sterling, Ill., ends a stubborn company tradition. The company, whose mills sprawl along the banks of the Rock R., began using steam engines in its switching yards in the 1950s. When most companies switched to diesel engines, Northwestern president Paul W. Dillon—a loyal steam fan—refused to follow the crowd. Now, bowing to economic pressure, the company has announced the retirement of No. 73, built in 1929 for the Grand Trunk Ry. The old steamer will join thirteen other steam locomotives in the company's iron horse pasture. One will be saved—it will retire to a museum in the mansion of the late Mr. Dillon—but the fate of the others is uncertain. "We don't want to melt them down," a company spokesman said. "We are trying to find some good homes for them." According to Jim Boyd, editor of *Rail Fan & Railroad Magazine,* only one other company—the Crab Orchard & Egyptian RR of Marion, Ill.—uses steam locomotives continuously for hauling freight.

On the night of Oct. 27, 1980, fire of suspicious origin badly damaged the Boston & Maine's **Sulphite Bridge** (1896) near Franklin, N.H. This bridge was unique in several ways. It was the last known deck-type covered bridge in the country; it also was one of the few remaining covered railroad bridges. In addition, it was the purest existing example of a wood and iron Pratt truss. Another deck-type covered railroad bridge, a Howe truss, used to serve the Milwaukee Road at Palmer Junction, Kings Co., Wash., but it recently was removed.

A dedicated group of local historians in the iron mining district of Mich.'s Upper Peninsula has launched an effort to restore and exhibit a major IA artifact: an enormous 1891 **E.P. Allis vertical tandem-compound steam engine** driving a set of ten "Cornish" pumps extending 1,500 ft. below ground level. The pumps were installed to remove water from the Chapin Mine in Iron Mountain. According to Allis, the installation was the largest mine pump ever built, having a capacity of 3,400 gal. per minute. Plans are underway to restore the engine and enclose it inside a building. Tax-deductible donations may be made to the Menominee Range Historical Foundation, P.O. Box 669, Iron Mountain 49801.

Follow-Up on the News

The **Robins Paper Co. Building** [SIAN Sept. & Nov. 80:2-3] in Baltimore was listed in the National Register in Dec. Local preservationists hope its listing will prod Holiday Inn to incorporate the building into its plans for expansion.

John Robinson, SIAN correspondent in London, writes that the **Pratt & Whitney band saw** on which he reported last issue [p. 3] has been moved to the Dolphin Sailing Barge Museum at Sittingbourne, where it will be used for the restoration and repair of the museum's vessels.

Our last issue [p. 6] carried a small item on **manhole covers** as an "unsung artifact." Now comes word that India this year may corner up to one-third of the manhole-cover market in the U.S. According to a recent report aired on the CBS Evening News, a manhole cover made in India sells for $80, while a U.S.-made cover costs about $120. One foundry worker countered that Indian models do not have the artful designs of American covers. According to one industry spokesman, U.S. foundries are penalized by excessive federal regulations (especially those of the E.P.A.) and higher labor costs.

Plans to demolish Chicago's **North Western Station** and replace it with a new scaled-down station and office tower are at least temporarily on "hold" [SIAN Mar. 80:1]. The Beaux Arts station, located at W. Madison & N. Canal sts., was completed in 1911 and is one of the last great rail terminals remaining in the Loop. On Jan. 6, the Comm. on Chicago Historical and Architectural Landmarks voted 6-0 in favor of public hearings on the issue of landmark status for the station. (The station was turned down for listing in the National Register.) The public hearings are scheduled for Fri., Feb. 13. The Landmarks Commission will review the testimony and make its recommendations to the Chicago City Council, which has final vote on landmark status. The Friends of North Western Station are coordinating efforts to save the station. They are focusing their efforts specifically on airing the issue in the news media in order to marshal broad public support for the station's preservation. Membership in FNWS is $10 per year. Checks and M.O.'s can be sent to "FNWS," P.O. Box 6239, Chicago 60680.

CORNISH PUMPHOUSE RUINS THREATENED

Stephen A. Otto [SIA], of Toronto, submitted the following report on the old Cornish pumphouse at Stellarton, Nova Scotia. He requests the SIA's assistance in evaluating the significance of the site and its pumping equipment (no longer extant) in a North American context. Mr. Otto may be contacted at: Coach House, 161 Crescent Rd., Toronto, M4W 1V1.

The remains of the old Cornish pumphouse are located at Stellarton, Pictou Co., Nova Scotia, on the south side of the Trans-Canada Highway. Situated on the East River, near the head of the tide, Stellarton was originally named Albion Mines. In 1870, the name of the town was changed to "Stellarton" in honor of a high-oil-content coal, called stella coal, once plentiful there. Stellarton was created with the discovery of coal, and most of its history has been dominated and determined by the once-active coal mines in its vicinity.

Sole remnant of the Cornish pumphouse at Stellarton, N.S. "Foord Works, 1867" appears in relief above the keystone. *Pridhams Studio Ltd. photograph.*

The first large-scale exploitation of the Pictou Co. coal fields began in 1827, under the direction of the General Mining Assn. George IV, King of England, had given his brother a 60-year lease of the mines and minerals in Nova Scotia. After accumulating debts in excess of $25 million, the Duke of York gave his mineral lease to a firm of London goldsmiths and jewellers, Messrs. Rundell, Smith & Rundell. In return, the jewellers promised to relieve the Duke's financial embarassment as well as to develop the mines and give him a share of the profits, if any.

With some of their cash reserves, Rundell, Smith & Rundell had financed a company called the General Mining Assn. GMA had mineral tracts in Colombia and Brazil that they intended to exploit, but in 1826 they sent a Cornish mining engineer, George Blackwell, to report on the potential of copper in Nova Scotia.

Blackwell found little, if any, copper but, after witnessing several small coal operations there, he recommended that GMA exploit the region's coal reserves. Accordingly, Richard Smith, GMA's new manager, arrived at Pictou in June of 1827 with a shipload of colliers and their families from the north of England and mining machinery. Smith brought with him a steam engine with a pump, hoisting drum, and chain. The engine and boiler were put together in John Mackay's blacksmith shop in Pictou. This is reputed to be the first stationary steam engine in British North America. (About ten years later, Nova Scotia's first steam-operated industrial railway, one of the earliest in North America, began hauling coal at Stellarton. Three steam locomotives, the "Samson," the "Hercules," and the "John Buddle" were set into operation. The "Samson" still survives; it is said to be about thirty-four years older than any other steam locomotive in Canada and the most powerful engine in North America in its day.)

GMA's operations continued to expand. In 1867, the Foord Pit was sunk to a depth of 960 ft. It is reported that $860,000 was spent on the new machinery for this pit; part of that sum included the purchase and erection of the Cornish pump and pumphouse. The Cornish pump at Stellarton, designed by Walker Iron Wares of Newcastle upon Tyne, is reported to have been the first of its kind in North America and to have helped deep-mining not only in Canada but also in the U.S.

The Cornish pump at Stellarton continued to function until 1893, when the Foord Pit was permanently sealed by its new owners, the Acadia Coal Co. The pump subsequently was removed, and the pumphouse itself today stands in ruins. Along with the "Samson", the Cornish pumphouse is one of the few surviving reminders of the company which pioneered in the development of heavy industry in Canada.

The Dept. of Highways, which has the right of way on the property, plans to widen the highway at Stellarton, which would require the removal or destruction of the pumphouse. The expense of expanding the northern side of the highway, estimated to cost three times that of removing the pumphouse is, in the view of the Dept. of Highways, prohibitive. The Nova Scotia Museum is interested in establishing a museum of transportation and technology in the vicinity of the pumphouse, and hopes to include the pumphouse as one of its exhibits. A lack of funds so far has prevented implementation of this plan.

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IA IN ARCHIVES:
THE NEW JERSEY BOG-IRON INDUSTRY

The Monmouth Co. Historical Assn. in Freehold, N.J., was recently awarded a National Historical Publications and Records Commn. grant to arrange and describe its extensive manuscript collections. These included three records groups which detail the history and development of N.J.'s bog-iron industry.

The "Tinton Falls Iron Works Records, 1668-1761" document the earliest known iron works in N.J. Construction was begun by James Grover of Middletown. Capital soon ran out, however, so a half-interest was sold in 1675 to Col. Lewis Morris. Morris completed the works and began operation of one of N.J.'s first industrial complexes. The collection contains financial records, surveys, legal records, proposals granted by Governor Phillip Carteret, and a map of the property.

The "Allaire Family Papers and Records, 1808-1901" record the development of the Howell Iron Works Co., which was located about 12 mi. southeast of Freehold. James P. Allaire, an associate

Howell Furnace, Monmouth Co., N.J., c. 1825. Watercolor on paper (detail), collections of the Monmouth Co. Historical Assn. *Helga Photo Studio photograph.*

of Robert Fulton, was a brass founder from New York who purchased the works to supply pig iron for his New York foundry. Allaire cast the brass air chamber for Fulton's revolutionary steamboat, the *CLERMONT,* and was with him on its historic voyage. In addition to supplying Allaire with pig, Howell manufactured cast-iron hollow ware. The collection includes family papers and business records of James P. Allaire and his son, Hal. These materials consist of correspondence, legal records, financial records including account and receipt books, miscellaneous manuscripts, printed material, and maps.

The "Dover Forge Papers, 1821-1850" pertain to one of the largest iron works in Ocean Co. The principal product was bar iron, which was hauled to Philadelphia for manufacturing. The collection contains correspondence, financial records, a narrative survey, and a broadside.

These significant bog-iron collections will be of value to historians interested in the development of early N.J. industrial and manufacturing enterprises. The MCHA Library is open Tues. – Sat., 10:00 – 4:00. It is located at 70 Court St., Freehold; (201) 462-1466.

CONTRIBUTORS TO THIS ISSUE

Laurence F. Gross, Merrimack Valley Textile Museum; Patrick M. Malone, Slater Mill Historic Site; David H. Shayt, National Museum of American History; Thorwald Torgerson, Hackettstown, N.J.; Robert M. Vogel, NMAH.

MISC. NOTES

INDUSTRIAL GEOGRAPHY AND INDUSTRIAL ARCHEOLOGY is the title of a special session to be held at a meeting of the American Assn. of Geographers on Tues., Apr. 21, 8:15 – 9:55 A.M. in the Palos Verde Room of the Bonaventure Hotel, Los Angeles. The session is being organized by Anthony Blackbourn [SIA], Univ. of Windsor, Canada, and chaired by Morgan Thomas, Univ. of Wash., Seattle. Among the panelists will be Dr. Blackbourn and Mary Licata, on the McDougall Industrial Corridor; Gerald T. Bloomfield [SIA], on the Detroit auto industry; David Burkenroad [SIA], on "Jamul Cement and Other Technological Failures of the Far West"; Richard Francaviglia [SIA], on "Copper Mining and Landscape Evolution"; and Sharon L. Edaburn [SIA], on "The Archaeological Study of Western Railroads." After the session, there will be an informal discussion of western IA. Details: Dr. A. Blackbourn, Dept. of Geography, Univ. of Windsor, Windsor, Ont., N9B 3P4, Canada.

AMERICAN VERNACULAR: THE CULTURAL LANDSCAPE is the title of the third summer institute offered by the American and New England Studies Program of Boston Univ., July 6-24. Through courses, lectures, and field trips, the institute will focus on the identification, analysis, and protection of the cultural landscape. Courses offered include Commercial Archeology: Architecture, Advertising, and the Automobile; Cultural Resource Survey: Methods and Management; and Vernacular Architecture. Application deadline is May 15. Inquiries: Claire W. Dempsey, 226 Bay State Rd., Boston, Mass. 02215.

THE IRON AND STEEL MUSEUM OF ALABAMA has received into its collections a large number of back issues of periodicals dealing with the iron industry, mining, chemical engineering, and civil engineering, from the period 1890-1935. Inquiries: Vicki Hubbard, Iron and Steel Museum of Alabama, Tannehill Historical State Park, Rt. 1, Box 124, McCalla 35111.

TROY-AREA IA. New members in the Troy, N.Y., vicinity should be aware of the Hudson-Mohawk Industrial Gateway. This group, which has taken charge of all preservation/historical matters having to do with the area's industrial heritage, conducts a sterling array of tours, lectures, and other activities, all set forth in *Gateway Tours & Cruises,* issued periodically. Information: 457 Broadway, Troy 12180; (518) 274-5267.

THE 1981 VERNACULAR ARCHITECTURE FORUM MEETING will be held Apr. 22-25 at Old Sturbridge Village, Sturbridge, Mass. Field trips planned in conjunction with the meeting will cover a wide range of New England resources. Information: VAF, Claire W. Dempsey, 168 Pearl St., Cambridge, Mass. 02139; (617) 492-4376.

HISTORICANS OFFICE, U.S. DEPT. OF ENERGY, announces the 1981-82 Visiting Scholar Program, offering curriculum development and research opportunities in the history of energy systems, policies, and technologies. Visiting scholars will receive support for one year at DOE Hdqtrs. to work on projects of their own design. Deadline is May 1. Information and applications: Jack Holl, Chief Historian, Historian's Office, Rm. 7G-033, U.S. Dept. of Energy, Wash., D.C. 20585; (301) 353-5431.

NEWS OF MEMBERS

It is with great sadness that we report the death, from cancer, of **JEFFREY L. BROWN** on Dec. 7. Jeff was dedicated to his work as historical archeologist and professor of anthropology at the Univ. of Tenn. and was a good friend of the Society. He served as a director on the SIA Board and as an editorial advisor to the SIA *Newsletter* for several years. We will miss him.

CHARLES K. HYDE is recording the Dodge Main automobile complex [SIAN Jan. 80:1 & July 80:4]. The plant is scheduled for demolition this year to make way for a new GM assembly plant. **JOHN BOWDITCH,** SIA president, reports that both the Henry Ford and Detroit Historical museums have rescued a number of artifacts from the old plant.

EMORY L. KEMP was consultant and prime mover on the project to rebuild the historic Meems Bottom Bridge (c. 1893) across the North Fork of the Shenandoah R., south of Mt. Jackson, Va. The Va. Dept. of Highways and Transportation, which directed reconstruction of the bridge, recently won a first-place award in the category of "Environmental Preservation and Enhancement" in the 1980 design competition sponsored by the U.S. Dept. of Transportation's Federal Highway Administration.

THEODORE A. SANDE is the new Executive Director of the Western Reserve Historical Society in Cleveland. Mr. Sande formerly served as a Vice President of the Natl. Trust for Historic Preservation, where he was in charge of the Trust's Office of Historic Properties. Mr. Sande was a founding member of the SIA and served as its first president in 1971-1972.

RESEARCH QUERIES

For an article on the use of aerial photography as an aid to identifying and studying industrial sites, good photographs demonstrating the diversity and variety of this important resource are sought. Three-quarter views (from a balloon, an airplane, or even drawn from the perspective of a hill-top) or vertical views that document an important site or illustrate an important principle in the development of aerial photography are especially wanted. Ellen Rosebrock, Institute for Conservation Archaeology, Peabody Museum, 11 Divinity Ave., Cambridge, Mass. 02138; or Ted Penn, Research Dept., Old Sturbridge Village, Sturbridge, Mass. 01566.

For a masters thesis, information is sought on the construction and stylistic development of tobacco warehouses and factories, 1880-1940, with particular (though not exclusive) emphasis on those located in Va. and the Carolinas. Rebecca Harrison, 210-B Raymond Ave., Charlottesville, Va. 22903.

I am an environmental analyst working for the agency that regulates N. Y. State's electric utilities. As oil prices have risen during the past few years, electric companies here (and elsewhere, I presume) have become interested in renovating or replacing obsolete hydroelectric generating stations. A number of these plants were constructed in the late 19th and early 20th centuries. I suspect that original structures and equipment are intact in many of them and am concerned about the possible impact of proposals to modify or replace these units. As a first step in assessing the problem, I am attempting to gather background information on the early history of hydroelectric power. I would like to hear from anyone who can provide, or direct me to, information on the early history of commercial electric power technology. Material on hydroelectric generation in the Northeast would be particularly useful. Martin E. Cummings, Office of Environmental Planning, State of N.Y. Dept. of Public Service, Gov. Nelson A. Rockefeller Empire State Plaza, Albany 12223.

Between 1910 and 1960, the Quebec government's Dept. of Colonization built hundreds of wooden covered bridges on a revised Town lattice truss plan, which included vertical posts not found in the original variety of the truss. Information on the engineer who designed this adapted truss, and on its first use, is sought by Joseph D. Conwill, P.O. Box 116, Schuylkill Haven, Pa. 17972.

For a theoretical and methodological work on the archeology of historic technology in North America, I would like to correspond with archeologists currently conducting research on the techniques, processes, and behavior associated with the acquisition, growth, manufacture, and repair of material culture during the historic period. Such research would include aspects of survey, sampling, excavation, documentation, ethnography, experimentation, re-creation, and interpretation of such technologies as glassmaking, ceramic manufacture, blacksmithing, weaponry repair, woodworking, mining, husbandry, agriculture, lumbering, fishing, fur trapping, shipbuilding, canal building, and road construction. I am interested in learning of published works on these subjects, so they may be included within a comprehensive bibliography of research already completed. It is proposed that a Symposium on the Archaeology of Historic Technology in North America be held

at the Jan. 1982 Society for Historical Archaeology conference to be held in Philadelphia, with the express goal of publishing an academic/educational work on this subject, with individual case studies written by each symposium participant. If you would be interested in participating in this symposium, or in contributing a case study for publication, please contact Lester A. Ross, Parks Canada, 1600 Liverpool Ct., Ottawa, Ontario K1A 1G2; (613) 993-9717.

This interesting photograph of a suspension bridge recently surfaced, lacking any identification of place or builder. The period of the photo would seem to be c. 1870, the setting rather industrialized judging from the factory buildings faintly visible in the background. Most unusual are the bridge's boiler-plate towers, an unorthodox method of construction in that application. It may be a "one-off" example, locally built. Any information will be gratefully received by Robert M. Vogel, Rm. 5020, NMAH, Smithsonian Institution, Wash., D.C. 20560.

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SIA AFFAIRS

THE NORTON PRIZE

The Norton Company of Worcester, Mass., a leading manufacturer of abrasive materials, has generously endowed a cash prize to be awarded annually to the author of an outstanding article published in *IA*. The award, to be known as the *Norton Prize*, will be presented at the Society's annual meeting according to terms to be established by the editorial committee. An initial gift from the company of $1,750 has already been increased by a gift and pledge of $150, raising the endowment to a total of $1,900. Additional contributions to the fund should be addressed to: The Norton Prize, c/o Rm. 5020, NMAH, Smithsonian Institution, Wash., D.C. 20560.

SIAN(Q). As we begin our 10th Volume, the SIA *Newsletter* becomes a quarterly publication of twelve pages. This is due principally to the rising costs of printing and postage and to the impossible demands of putting out a bimonthly newsletter *on schedule.* (You will recall that we frequently have had to resort to double issues.) Henceforth, SIAN will appear four times a year: Winter, Spring, Summer, and Fall. Deadlines for receipt of copy for the remaining issues this year are: Spring, Apr. 30; Summer, July 15; Fall, Oct. 15. SIAN welcomes your comments on this change.

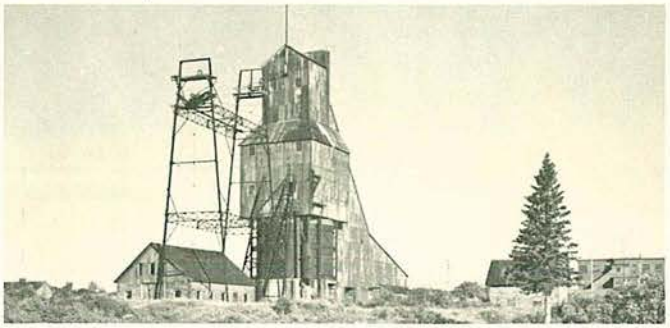
CONSULTANTS DIRECTORY. In Aug. 1978, the Society published a Data Sheet listing preservation consultants, engineers, architects, millwrights, photographers, and similar firms and individuals providing services in the general area of industrial archeology. SIA plans to publish a second updated edition. To be included, kindly send name, address, telephone number, and a brief statement (two of three lines) describing the services offered to Prof. Charles T. G. Looney, SIA, Rm. 5020, NMAH, Smithsonian Institution, Wash., D.C. 20560. We would also like to know of firms and individuals outside the SIA sphere who might appropriately be listed.

WARNING. Members of this organization should be alert to an invasion of their collective privacy in the form of something billed the *Securities Industry Yearbook 1980*. It is published by a shadow organization fronting for we-know-not-what dark forces, styling itself the "Securities Industry Assn." We'll bet! Their ostensible headquarters is not far from our own here in the National Capital. The thing you'll want to watch out for: the yearbook purports to give "information on all SIA members" . . . including department sizes and underwriting activity!

SIA 1981 FALL TOUR ANNOUNCED

Start saving your pennies for air fare and snuggies! For the 1981 Fall Tour we head into the northwoods of the Upper Peninsula of Mich., where we will traverse the "Copper Country" of the Keweenaw Peninsula. This 70-mi.-long finger of land juts out into Lake Superior and is easy to spot on almost any TV weather map.

The Keweenaw, site of the first real mining boom in the U.S. in the mid-1840s, is now home for hard-core IA liberally mixed with scenic beauty. Charles Hyde and Larry Lankton are organizing the tour, which will take place in late Sept. or early Oct. (exact dates to be announced).



The 150-ft. shaft-rockhouse at the Quincy Mine, built in 1908 by the American Bridge Co., will be one stop on the 1981 Fall Tour. *John T. Lowe photograph for HAER*

CHAPTER NEWS

ROEBLING. On Jan. 13, the Roebling Chapter held its annual business meeting at the ITT facilities in Nutley, N.J. Re-elected to another term for 1981 were Thorwald Torgersen, pres.; Deborah Harmon, secy.; and Robert Holton, treas. A report was given on the educational activities held in 1980 and a brief preview suggested for 1981.

Ed Rutsch gave a report on his work at the Savannah, Ga. railroad yards [NHL, HAER]; Terry Karschner showed excellent slides of the Oxford Furnace site; Tom Flagg showed slides of past Roebling activities and of his work on N.Y.C. harbor facilities; and Bob Holton showed slides of IA subjects taken during his recent trip to China. We also viewed the SIA film "Working Places".

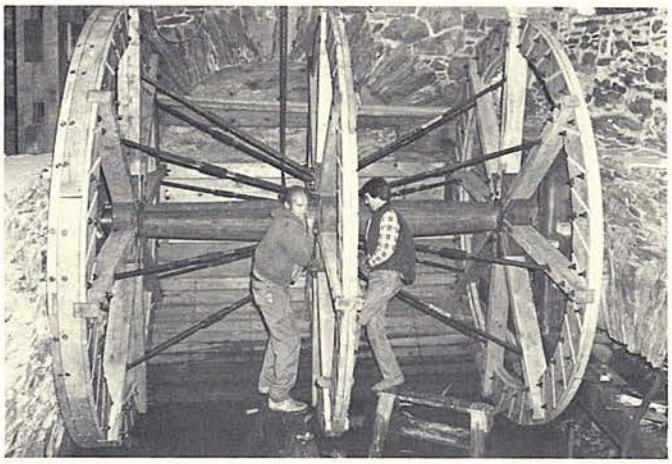
On Nov. 22, forty members of the chapter participated in a tour of the Northern N.J. area. The first site visited was the Oradell Pumping Station of the Hackensack Water Co. Steam turbines are still in use for pumping, but the high points of the tour were the Allis-Chalmers triple-expansion steam pump (out of service) and a beautifully maintained cross-compound engine which drives a centrifugal pump for the raw water supply. While it is in only intermittent use, our guides had the engine operating for our visit.

Next stop was the Marcal Paper Co. in Elmwood Park. Frank Vopasek, chapter member and watch engineer at the plant, had their Worthington cross-compound steam air compressor (c. 1921) operating for us. After a tour of the power plant, company president Robert Marcalus, Jr. (Marcal claims to be the largest family-owned tissue mill in the U.S.) conducted a tour which included the modern Voight high-speed tissue machine in the cutting and packaging plant.

Our tour concluded with a visit to the Paterson Historic District [NHL, HAER] where Jim Lally, a former preservationist at the site, served as our guide.

Seminars and tours are being planned for 1981. It costs $2 a year to be on our mailing list, and we hope SIA members in the metropolitan area will sign up with us. Drop a note to: T. Torgersen, P.O. Box 429, Hackettstown, N.J. 07840. *T.T.*

SNEC. On Nov. 1, the Southern New England Chapter met at the Slater Mill Historic Site, Pawtucket, R.I. The first of the day's events was an examination of the newly-installed water wheel in the basement of the Wilkinson Mill [SIAN Jan. 73:2, July 73:3, July 77:2, Sept. 77:4]. Patrick M. Malone [SIA], museum director, described the long process of excavation, research, design, and construction. Also present were Charles Parrott, principal historical architect on the water power project, and Walter Pulawski, the on-site contractor [both SIA].



Slater Mill Historic Site photograph.

The mid-breast wheel is 12 ft. in diameter and just over 12 ft. wide. When fully wet and carrying water it weighs approximately 16,000 lbs. Major elements of the wheel—the shaft, hubs, and internal segment gear—are made of cast iron. Steel was used for ties, turnbuckles, and bolts. Spokes and felloes are white oak, and floats and soling are cypress. The wheel turns easily in bronze bearings but receives only a thin stream of water supplied by a small recirculating pump. Flow from the Blackstone R. will be provided in the near future.

John Milner Associates worked with the museum staff on the design of the wheel, its pit, and the power transmission system. Paramount Industries provided the parts for the wheel, which were assembled in the pit by Walt Pulawski's carpenters. The wooden breast, flooring, and flashboards were reconstructed by Pulawski after the original structures were recorded and removed.

Much work remains to be done on the project. John Bowditch [SIA] is making a fly ball governor that will allow the power system to respond automatically to changing demands in the Wilkinson Machine Shop on the floor above. Shafts and gears will soon connect the shop machinery to the wheel, and raceways will be rebuilt to link the mill with the river. Additional excavation in 1981 should complete the archeological study begun by Albert Bartovics [SIA] in the early 1970s.

After the tour of the wheel pit, SNEC held its annual business meeting and elected the following officers for the coming year: Betsy Woodman, pres.; Helena Wright, program chrmn.; Herbert Darbee, secy.; and William Goodwin, treas. *P.M.M.*

IA IN THE NATIONAL REGISTER

Compiled by Carol Dubie

National Register listings, Aug. 15-Dec. 1, 1980:

CALIFORNIA. Hughes Flying Boat, Long Beach. The "Spruce Goose," eight-engine seaplane constructed in 1947 of laminated birchwood, once the world's largest aircraft. The conception of industrialist Henry Kaiser, it was constructed by Howard R. Hughes, key figure in Calif.'s early aerospace industry. The "Spruce Goose" flew only once and has been in storage since 1947. **Los Angeles Harbor Light Station,** Cabrillo Beach. 1913 concrete light station located on 1910 concrete breakwater. **Malaguerra Winery,** Morgan Hill vic. 1869 rubble-stone winery and 1904 barn, one of the oldest remaining winery complexes in Santa Clara Co., in use 1869-1898. To be restored as a wine museum. **Point Vicente Light,** Rancho Palos vic. 1926 reinforced-concrete lighthouse with 1914 third-order Fresnel lens. Oil house, fog-signal house, and three keeper's residences, all dating from 1924, are included.

COLORADO. Denver, Boulder, & Western Ry. Historic District, Ward vic. 35.4-mi. right of way of railroad which served small mining communities in Boulder Co., 1880s-1919. Includes roadbed, rock cuts, and switchbacks. **Denver, Northwestern, & Pacific Ry. Historic District,** Nederland vic. 34-mi. right of way with rock cuts, tunnels, trestles, water towers, and ruins of several railroad towns. Associated with David Moffat, one of Colo.'s major industrialists. Route, with 4% grade, operated across the Continental Divide between 1903 and 1928, when the Moffat Tunnel was completed.

DELAWARE. Wilmington & Western RR, Hockessin. Ten-mi. right of way, with trestles, Pratt truss bridge, and three rock cuts constitute remaining features of 20-mi. line constructed in 1872 to serve mills in the Red Clay Creek area. Rolling stock includes both locomotives and passenger cars like those used on the line after 1900.

GEORGIA. Columbus Multiple Resource Area. Included are Golden's Foundry and the W.C. Bradley Co., cotton warehouse complex [1979 SIA Annual Conference tour]. **Ruff's Mill and Concord Covered Bridge,** Smyrna. Representative rural industrial complex, c. 1850: miller's residence, stone mill, and 1872 133-ft. queenpost covered bridge, one of the few remaining in Ga.

HAWAII. U.S. Coast Guard Diamond Head Lighthouse, Honolulu. 1917 square concrete tower and steel lantern house.

ILLINOIS. Metal Highway Bridges of Fulton Co. Thematic Resources. Nine steel through trusses, 1880-1915, unaltered and in rural settings crossing the Spoon R. These pin-connected and riveted Pratt and Parker trusses are a focal point of auto and canoe tours; several are scheduled for replacement.

KENTUCKY. Delong Agricultural Implements Warehouse, Lexington. C. 1880 brick warehouse associated with locally important firm dealing in farm machinery, tools, seeds, and grain, 1881-1906. **Sanchez Storage Warehouse,** Lexington. Five-story brick warehouse, 1913. The Sanchez and Delong warehouses are the remaining remnants of the old warehouse district on the south fork of Elkhorn Creek. [As we go to press, we have learned that the Sanchez Warehouse has been destroyed by fire.]

MASSACHUSETTS. Blue Hills and Neponset River Reservations Multiple Resource Area, Norfolk Co. Includes Lyon's Turning Mill, ruins of mill associated with the Quincy granite industry, and Great Blue Hill Weather Observatory, established in 1885 and an early monument in weather forecasting history.

MINNESOTA. Cuyuna Iron Range Municipally Owned Elevated Metal Water Tanks Thematic Resources, Crow Wing Co. Five elevated tanks dating from 1912-18, a period of rapid development of municipal services in Iron Range communities. [Prepared by Robert M. Frame III, SIA.] **Great Northern Ry. Co. Bridge,** Cass Lake vic. Plate girder swing span over Steamboat R., built c. 1915 for logging industry. [Prepared by Robert M. Frame III.] **Ironton Sintering Plant Site,** Ironton vic. Ruins of 1924 complex for processing of non-selectively mined iron ore, including sintering structure and trestle, machine shops, transformer, and oil tank. **Ogilvie Watertower** (Kanabec Co. Multiple Resource Area), Kanabec Co. 1918 reinforced-concrete water tower with 50,000-gal. tank on 80-ft. cylindrical tower. **New Century Mill,** Minneapolis. Five-story brick mill with engine and boiler house and three circular metal grain-storage tanks, erected 1900; "reportedly the first merchant flour mill in Minneapolis designed to be wholly reliant on steam power." Power equipment and mill machinery largely removed. [Prepared by Robert M. Frame III.] **Redwood Co. Multiple Resource Area. City Blacksmith Shop,** Lamberton. Contains equipment in use since 1919 and still serves its rural agricultural community. **Lamberton Farmer's Elevator,** Lamberton. 1916 grain elevator unusual in region for its brick construction. **Ramsey Park Swayback Bridge,** Redwood Falls. 1938 granite and concrete bridge constructed by W.P.A. **Virginia Brewery,** Virginia. 1905 concrete and brick brewery now used for

storage; associated with the small-scale brewing operations typical in the state prior to Prohibition.

MISSOURI. Brown Shoe Co.'s Homes-Take Factory, St. Louis. Red brick factory, 1904, significant for its role in shoe manufacturing in the U.S. and in the diversified industry of St. Louis.

MONTANA. Big Hole Pumpstation, Divide vic. Water supply system including 1899/1906 pumping station, employee housing, dam and settling basin on Big Hole R. Pumps include: 1907 Nordberg horizontal triple-expansion two-stage plunger pump; 1916 Worthington five-stage horizontal turbine; 1930 Cameron five-stage horizontal turbine, and two Ingersoll Rand four-stage horizontal turbines. Also: 150-ft. riveted steel smokestack and steam boilers (now inactive) dating from 1899. The facility pumped water over the Continental Divide to Butte, Mont. **Fort Benton Bridge,** Fort Benton. Impressive 1888 five-span pin-connected truss bridge, first in the state to span the Missouri R. Built by the Milwaukee Bridge & Iron Works, the structure includes three 175-ft. Baltimore trusses, one 75-ft. Pratt truss, and a central 225-ft. camelback span.

NEW HAMPSHIRE. Meriden Bridge, Meriden. C. 1880 multiple kingpost covered bridge constructed by James Tasker of Cornish, well known bridge builder in the Conn. Valley.

NEW JERSEY. Dock Bridge, Newark. Vertical lift bridge, 1935, designed on the patent of noted bridge engineer J.A.L. Waddell. [Prepared by Janice Artemel, SIA.] **Helme Snuff Mill District,** Helmette. 1880s company town with brick snuff factory of Helme Tobacco Co., one of three major snuff mfrs. in U.S. today. **Salter's Mill,** Imlaystown. 1897 frame gristmill, some equipment remaining, adapted for use as offices.

NORTH CAROLINA. Hadley House and Grist Mill, Pittsboro vic. Property includes remains of concrete mill dam, stone millrace, three-story 1885 wood frame mill building with 16-ft. iron wheel, and grinding stone. Mill operated 1885-1930. **Speight House and Cotton Gin,** Edenton. 1902 brick two-story cotton gin.

OHIO. Dayton Stove & Cornice Works, Dayton. Brick factory complex, c. 1847, formerly housed a stove and architectural element mfr. Associated with industrial development along the Miami & Erie Canal. Now an antiques store. **Lane's Mill Historic Buildings,** Oxford vic. Limestone gristmill, millrace, residence and barns—typical rural milling complex. **Smith Road Bridge,** Bucyrus vic. C. 1890 bowstring truss, oldest in Crawford Co. and possibly a King Tubular Arch. May have been fabricated earlier and relocated to this site.

OREGON. Dallas Tannery, Dallas. 1903 two-story frame tannery with attached one-story brick house, three bark sheds, and oil house. Still makes leather for saddles, halters, and bridles. Equipment includes 1903 steam engine (not in use), 1897 bark grinder, 1863 soaking vats, c. 1915 dehairing machine, and c. 1914 splitter. **Union Co. Alliance Flouring Mill,** La Grande. Frame mill built in 1892 by Farmer's Alliance, which believed that private mills charged too much for their services and organized this collective facility. **Windischar's General Blacksmith Shop,** Mount Angel. One-story frame building used 1922-1979 for local repair work. Contains over twenty items of equipment illustrating conservative updating of traditional technology since 1920.

PENNSYLVANIA. Brady's Bend Iron Co. Furnaces, Brady's Bend. Ruins of 1839 and 1845 hot-blast iron furnaces used in mfr. of nails and iron rails. Company was credited with production of first T-rails west of the Allegenies and became a leading RR iron manufacturer in the 1860s. **Burnt Cabins Gristmill Property,** Burnt Cabins. Three-story frame mid-19th-c. gristmill containing 19th- and 20th-c. milling machinery, still in commercial operation. **Coplay Cement Co. Kilns,** Coplay. Nine 1893 Schoefer vertical kilns used for production of portland cement; stabilized and restored as a museum focusing on the cement industry. [Prepared by Mahlon Hellerich, SIA.] **Covered Bridges of Adams, Cumberland, and Perry cos.** Seventeen covered bridges constructed 1853-1919, most kingpost or queenpost, one Town lattice. **Covered Bridges of Erie Co.** Four remaining bridges, including three kingposts and one Town lattice. **Davis Island Lock and Dam Site,** Avalon. Remains of land wall and guide wall of lock and dam on Ohio R., a major engineering feat at the time of its construction (1878-85) and a stimulus to regional commerce. **Kise Mill Bridge Historic District,** York Haven. District of mill remains: head and tailrace, grist and sawmill foundations, rock dam, 1920 stone arch bridge. **Landis Shoe Co. Building,** Palmyra. **Lehigh Canal: Walnutport to Allentown Section.** With this listing, Pa. completes nomination of all intact segments of the Lehigh Canal, a transportation system critical to industrial development and coal production in the Lehigh Valley. [HAER recording project, Summer 1979.] **Logan Mills Grist Mill,** Logan Mills. Three-story, c. 1840 stone gristmill with later 19th-c. turbines and milling machinery in place. **Merrill Lock #6,** Midland vic. Complex including Richardsonian powerhouse, lockkeeper's house, and crewhouses, 1892-1904, and remains of lock wall, only such grouping remaining on the Ohio R. in Pa.; system played an important role in transportation in the Pittsburgh area.

RHODE ISLAND. Hillsdale Historic and Archeological District, Wyoming vic. 68-acre site of abandoned mill village, including structural remains of 45 mills and associated features, residences, and outbuildings. District has the potential to yield significant information about early and mid-19th-c. rural industrial development. **Sodom Mill Historic and Archeological District,** Exeter vic. Seventeen-acre site of mill ruins and associated water power system as well as surviving 18th-c. farmsteads. Sodom Mill (1814) was the earliest of four textile mills along Sodom Brook.

SOUTH CAROLINA. Calhoun Mill. Three-story brick gristmill, c. 1860, with millrace and dam, miller's house, and six outbuildings, including late 19th-c. cotton gin. **Cigar Factory,** Charleston. Five-story brick mill building, engine and boiler houses, c. 1882; associated with Reconstruction-era textile development in Charleston and with later growth of the tobacco processing industry. **Gervais Street Bridge,** Columbia. Open-spandrel reinforced-concrete arch bridge, 1928; 1415 ft. long, the most decorative of four such bridges in the state. **Newberry Multiple Resource Area, Boundary Street-Newberry Cotton Mills Historic District.** 1884, 1895, 1910 mill complex, constructed as one of the first fully steam-powered textile factories in S. C., presently producing cotton and synthetic yarns. District also includes reservoir, mill warehouse, superintendent's house and 36-acre tract containing 107 worker's houses. **Old Textile Hall,** Greenville. 1917, 1926 brick and reinforced-concrete exposition facility constructed for annual display of Southern textile machinery and products, 1917-1958.

TENNESSEE. Tennessee Brewery, Memphis. Complex of 1890s Romanesque Revival-style brick buildings with interior cast-iron columns and stairs. Brewery operations ceased in 1954.

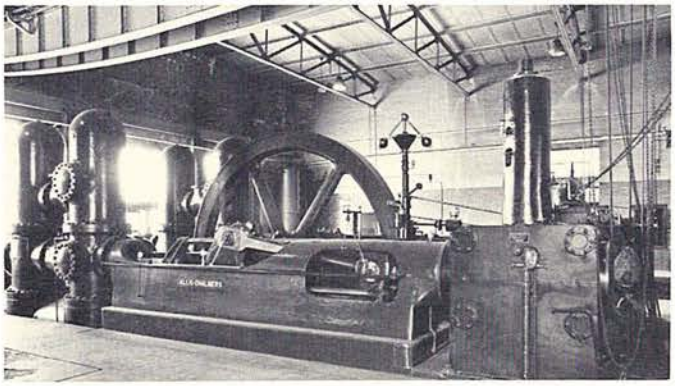
Interior light well, Tennessee Brewery, Memphis. *John Parish photograph.*

UTAH. Denver & Rio Grande Lime Kiln, Cleveland vic. 1880s rubble-stone lime kiln associated with the construction of the D&RG RR in Emery Co. **GAPA Launch Site and Blockhouse,** Knoils vic. Reinforced-concrete blockhouse and launch pad, the original launch site for first supersonic guided missile, Ground-to-Air-Pilotless Aircraft (GAPA), Aug. 6, 1946. **Soldier Creek Kilns,** Stockton vic. Remnants of four charcoal kilns and one lime kiln constructed 1860s-1870s, associated with the smelting process critical to economically profitable mining of low-grade ores.

VIRGIN ISLANDS. Estate La Reine, Christiansted vic.

VIRGINIA. Pamplin Pipe Factory, Pamplin. Archeological remains of clay pipe mfg. site, 1879-1952, with c. 1930 frame one-story factory building, c. 1915 deteriorated brick kiln and chimney. Site claimed to be the largest concern of its type by 1935.

WISCONSIN. Madison Waterworks, Madison. 1917 reinforced-concrete and brick industrial building in Prairie style, housing boiler room with reinforced-concrete coal hopper, and one of two original twin Allis-Chalmers pumping engines. [Prepared by David Donath, SIA.] **Potosi Brewery,** Potosi. Brewing (1852, 1900) and bottling (1902) plant; representative of similar facilities to be found in many small Wis. towns.



Allis-Chalmers pumping engine, Madison (Wis.) Waterworks. *Val Dunis photograph.*

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REVIEWS

David Weitzman, *Traces of the Past: A Field Guide to Industrial Archaeology.* New York: Scribner's, 1980. 229 pp., illus., $17.95.

David Weitzman's book is a personal invitation to tramp around IA sites, an exercise, he stresses, that is both entertaining and educational. The author clearly enjoys field work and the rush of excitement and curiosity that follows the new discovery of something old. His enthusiastic book is intended not for professionals with degree-laden walls, but for everybody else, for "would-be historians," "amateur historians," and "local historians." He wants folks to see their roots in the things that surround them, to communicate with the past by coming into contact with old iron—and to have fun at the same time.

The book is no theoretical tome, and it is by no means all-inclusive. Weitzman deals with but five categories of IA paraphernalia: railroads, timber and iron bridges, roof trusses, iron works, and the petroleum industry. For each category, he provides a cursory history and tells what physical remains one might expect to find and what those remains might mean.

The book functions best as a "field guide," by providing numerous drawings and historic photographs of IA material that can be used for dating and identification purposes. For example, it includes a "Bridge Genealogy" that illustrates numerous truss types and tells when they were employed, and Weitzman does the same sort of thing for steam-locomotive smokestacks and cylinders, and for blast furnaces. Informative side-bars clue readers into such IA esoterica as how to date an abandoned railway by examining its spikes. In this eclectic volume, such nuggets prove the point that the more you see, the more you know—and vice versa.

The SIA *Newsletter* is published four times a year (Winter, Spring, Summer, and Fall) 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 reuse of historic industrial and engineering sites, structures, and equipment. Annual membership: individual, $20; couple, $25; institutions, $25; contributing, $50; sustaining, $100; students, $12. Send check payable to SIA to Treasurer, Room 5020, National Museum of American History, Smithsonian Institution, Washington, D.C. 20560; all business correspondence should be sent to that office. Editorial correspondence should be sent to CAROL POH MILLER, Editor, SIA *Newsletter,* Program for the History of Science and Technology, Mather House, Case Western Reserve University, Cleveland, Ohio 44106.

Weitzman's unfootnoted text derives from secondary sources and includes only a bare-bones bibliography. However, the author does urge neophytes to mix "library archeology" with field work, and he provides useful research aids, such as a note on how to obtain and use Sanborn maps. Those who have practiced IA will find a number of interesting tidbits between the covers, even though the book was written not for the expert, but for the unconverted. *Larry D. Lankton, National Museum of American History*

Michael Hiley, *Victorian Working Women: Portraits from Life.* Boston: David R. Godine, 1980. 142 pp., illus., $17.50.

Arthur Munby's peculiar obsession, working women, led him to observe, record, and collect every possible piece of information about their trades and their lives. Drawing on the large amount of written and pictorial evidence Munby gathered between 1857 and 1910, Michael Hiley has compiled a remarkable account of his investigative activities.

Munby followed and interviewed numerous working-class women; he was fascinated by every detail of their various employments. He traveled to Lancashire in 1859 to record the Wigan pit brow girls, and later to South Wales and Belgium to capture the women miners there. Paper mill workers and "fishergirls," milkmaids and domestic servants all came within his purview, and he would journey far to learn of a new occupation from the mouth of the woman operative herself.

While he purchased some commercial *cartes-de-visites,* these were mostly formal portraits taken in a woman's best clothes. Fortunately, Munby convinced many of his subjects to sit for their photographs in working costume, some at the very workplace itself. A number of photos record the collieries; these are accompanied by Munby's copious notes and descriptions of the work, recorded in the women's own words.

This is a remarkable book, and while its subject, strictly speaking, is not IA, there is sufficient coverage of mining and other industrial work to make it appropriate for notice here. The social and aesthetic history it contains marks Munby as a concerned and sympathetic individual with an extraordinary prescience for a subject very much alive today. *Helena Wright, Merrimack Valley Textile Museum*

Eugene Ferguson, *Oliver Evans: Inventive Genius of the American Industrial Revolution,* Greenville, Del.: Hagley Museum, 1980. 72 pp., $4.95.

For those of us who are not Evelyn Wood speed readers, it is nice occasionally to be able to read an entire work cover-to-cover in one sitting. Such is possible with Eugene Ferguson's biography of Oliver Evans, a small and highly readable paperback that deals incisively with the inventor's triumphs and setbacks. Patent disputes involving Evans's automatic flour mill are examined with particular scrutiny, as are the events surrounding the introduction and marketing of his high-pressure steam engine. Superb graphics and some new insights into the thinking and writings of the man build handsomely upon the 1935 work of Evans's principal biographers, Greville and Dorothy Bathe. *David H. Shayt, National Museum of American History*

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Three SIA members are co-authors of an important new technical publication, *Metals in America's Historic Buildings: Uses and Preservation Treatments.* Margot Gayle, President of the Friends of Cast Iron Architecture; David Look, HCRS staff architect in San Francisco; and John G. Waite, preservation architect in Albany, N.Y., together wrote the 170-page paperback, which has 180 photographs and drawings. Intended for use by architects and managers of historic buildings, the publication stresses the identification and historic uses of architectural metals from A to Z (Aluminum to Zinc) and provides information on the preservation and repair of each metal. It is issued by the Technical Preservation Services Divn. of the Heritage Conservation and Recreation Service, U.S. Dept. of the Interior, and may be ordered from the Friends of Cast Iron Architecture, 235 E. 87th St., Rm. 6C, N.Y.C. 10028. Cost is $5.95 ppd.