

SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

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HIGHWAY THREATENS LANDMARK MILL VILLAGE

The New Hampshire Department of Public Works & Highways (NHDPW&H) and the Federal Highway Administration are preparing the Draft Environmental Impact Statement for the B3 Corridor of the proposed relocation of Rte. 101 (Bypass of Dublin Village). The B3 Corridor would cross a ridge forming the southern edge of the bowl of hills that surrounds Harrisville (NHL, HABS), perhaps the finest surviving example of a 19th-c. brick mill village. While the state's schedule is uncertain, it is likely that a hearing on the project will take place around July 1st.

A road in the B3 Corridor would have an adverse auditory and visual impact on the landmark village. It would disrupt, as well, an area containing many of the original late 18th-c. farmsteads that formed the economic and social matrix for the start of the small woolen mills and sustained them until the 19th c. NHDPW&H asserts that the proposed road would be built below the present surface of the ridge, that it would not be visible in its entirety from the village, and that the visual impact would therefore be mitigated.

The firm of Bolt, Beranek & Newman of Cambridge, Mass., was hired by the Town of Harrisville to assess the auditory impact of the proposed corridor. They concluded that the proposed roadway will significantly increase noise levels throughout most of Harrisville, creating a major change in the acoustic environment. Noise-level increases, they predicted, would be "moderate to severe."

Early in 1981 the SIA Northern New England Chapter established a subcommittee, chaired by Peer Kraft-Lund, to investigate possible adverse effects of the B3 Corridor on industrial-archeological resources. One of the subcommittee's concerns was the impact of blasting during construction on the brick buildings of the landmark district. This, as well as a general concern for the preservation of the 19th-c. mill village, has been communicated to John Clements, NHDPW&H commissioner, by NNEC President John Jordan.

Local residents and a consulting architectural historian have been studying the historic resources of both Dublin and Harrisville during the past several years. The investigation of the original agricultural settlement is proving to be an important contribution to the history of both towns. These agricultural sites and the many houses in Dublin that contributed to the literary, artistic, and architectural distinction of that town have been submitted to the Keeper of the National Register for a Determination of Eligibility.



Harrisville Historic District, looking southeast. The proposed highway would cross Beech Hill Ridge, at the upper right. "The architecture of Harrisville portrays the life of a particular town," William H. Pierson Jr. wrote in *American Buildings and Their Architects* (Vol. 2), "yet it is also a composite of early industrial America which has no surviving counterpart in this country." John J. Colony Jr. photograph.

Dublin continues to press aggressively for a solution to the traffic problem in its village center. With similar determination, Harrisville continues to resist the construction of a highway across the Beech Hill Ridge. *M.M.*

ZERO HOUR FOR PRESERVATION PROGRAMS

The U.S. national historic preservation program is in trouble. James Watt, Secretary of the Interior, has proposed a ZERO appropriation in FY 1983 for the state historic preservation programs and for the National Trust for Historic Preservation. (Both programs received \$25.4 million for FY 1982.) The National Trust is fighting back with its "Raise the Roof for Preservation" campaign. It is urging all friends of preservation to voice their support by writing their Representatives (U.S. House of Representatives, Washington, D.C. 20515) and Senators (U.S. Senate, Washington, 20510). The crucial vote on the proposed budget likely will take place in June.

SIAN PRODUCTION MOVES TO CLEVELAND

Beginning with this issue, the *SIA Newsletter* will be printed in Cleveland by The Carpenter Reserve Printing Co. This change will allow the Editor closer control over production and, at the same time, save money. The *Newsletter* will continue to be mailed from Washington, D.C.

SASKATCHEWAN DISCOVERY: DARDIER'S DAVIS-CALYX SHOT DRILLS

Editor's Note: The Western Development Museum in Saskatoon, Sask., and the Saskatchewan Mining Development Corp. recently cooperated on the acquisition and research of some important Sask. mining artifacts. Two steam-powered Davis-Calyx shot drills were recovered from an island in the east end of Lake Athabasca and transported to Saskatoon, where David Neufeld [SIA] has conducted extensive historical research. Here, Neufeld reports on one of the first IA projects undertaken in the province.

In Jan. 1915, three prospectors sledged out of the wilderness of northern Sask. after spending five months working along the shores of Lake Athabasca. They carried out a few hundreds pounds of ore samples, quietly confident of their discovery. Subsequent work on their claims was some of the earliest mining exploration to take place in northern Sask.

Harold V. Dardier, leader of the group, had been sent to Canada to investigate the possibilities of nickel mining there. Suppliers had been unable to keep up with the burgeoning demand of a rapidly rearming world, and many large steel and armament manufacturers sent exploration teams into the field. Vickers, Ltd., a large British firm, backed Dardier's work. After seeing his samples and hearing his report in the spring of 1915, the company decided to pursue further work in the area. Dardier returned to Edmonton, Alta., later that summer and began organizing a major expedition to further develop his nickel claims east of Fond du Lac.

In Sept., Dardier prepared to leave for the north. His expedition party consisted of 25 engineers, assayers, and mineralogists, about 75 métis laborers, and at least two white women. They boarded 18 scows for the hazardous Athabasca River trip to the northern site. The expedition also carried some 70 tons of supplies, including mining equipment and sufficient food and clothing to support the work crew for a year.

The major mining items were a pair of Davis-Calyx steam-powered shot drills, to be used for obtaining core samples of the ore. This drill, manufactured by the Ingersoll Rand Drill Co. of N.Y., is a rotating, hollow-core type with a cutting surface made by distributing steel



shot along the bottom edge of the rotating drill shaft. This type of drill was largely supplanted for mineral prospecting by the more efficient portable diamond drill during World War I.

Arriving on the site in the late fall of 1915, Dardier's crew erected a comfortable camp and, by early 1916, drilling was under way. The crew worked around the clock throughout the summer, but by Aug., with supplies exhausted, no major discovery had been made. The crew abandoned the site. Dardier and a small party returned to the area later in the year with a diamond drill to do some further work, but left again in 1917 without having found any significant ore body. The camp, with substantial supplies including the two boilers and shot drills, was abandoned permanently.

Over the next 65 years the camp was scavenged by locals and other prospecting parties for tools, supplies, lumber, and souvenirs. By the



Museum staff members unload one of the Davis-Calyx shot drills at the Saskatoon Western Development Museum. T. Jabush—Imagery Illustrations photograph.

1980s much of the camp had disappeared, and only the heavy equipment and a few traces of log buildings still remained.

In the summer of 1981, the Saskatchewan Mining Development Corp. (SMDC) had a prospecting party in the eastern end of Lake Athabasca. The old Dardier camp was well known in the area, and the crew visited the site and inspected the remains. Len Wawryk, SMDC public relations officer, felt that the site represented an important aspect of Sask.'s mining history and took steps to preserve it.

Cooperation between the SMDC and the Western Development Museum (WDM) led to the mounting of an expedition to survey the site and remove the drills to Saskatoon. Tim Jones, an archeologist, spent a week on the site with Wawryk, carefully recording site data and preparing the drills and related equipment for shipment. Jones focused his attention on the mining equipment and recovered the two shot drills, a variety of drill stems, bits, and other items, as well as the two large vertical boilers. In all, some 185 pieces were collected, labelled, and prepared for shipment. Preliminary identification of parts was done on site but more thorough work will be undertaken in Saskatoon. Ingersoll-Rand has kindly supplied the museum with a valuable set of drawings to assist in this task. Notes on other remains on the island were made as well.

A barge and cat from Uranium City were chartered, and in a small bay the crew struggled through shallow, muddy water to move the drills off the island on the first step of the trip out. After a stormy passage west across the lake to Uranium City, the drills were placed in a warehouse to await the opening of the winter road.

Last Nov. consultant David Neufeld, under the direction of Warren Clubb, WDM Research Coordinator, began researching the story of Dardier and his expedition. This research has uncovered much new information about the expedition and has led to specific recommendations for public display of the drill equipment. WDM is studying options for further displays on the contributions of mining to Sask.'s history.

The success of this project illustrates the possibilities for cooperation between cultural institutions and industry. This example ought to stimulate other ventures of this type. D.N.

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 re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual, \$20; couple, \$25; institutions, \$25; contributing, \$50; sustaining, \$100, student, \$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 & Technology, Mather House, Case Western Reserve University, Cleveland, Ohio 44106.

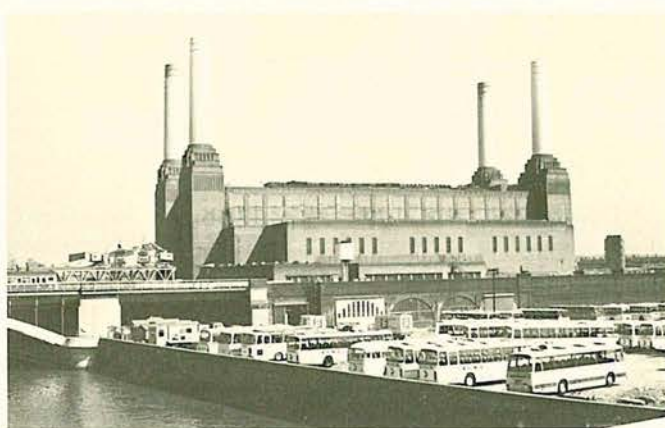
NEWS FROM ABROAD: DARING RE-USE PLAN FOR LONDON'S BATTERSEA POWER STATION

SAVE Britain's Heritage, a conservation group, has turned its attention to the preservation and adaptive re-use of London's Battersea Power Station. The station was built in two parts between the 1930s and 1950s, although its original design — owing much to architect Sir Giles Gilbert Scott's successful blend of classical principles and modern functionalism — has been realized as a harmonious whole. Every Londoner knows the four great chimneys and the huge brick boiler house at whose corners they stand. To east and west are turbine halls, while the river front is enlivened by cranes and enclosed coal conveyors.

Economics led the Central Electricity Generation Board to close one half of the station, and total closure is likely in the near future. So what then? To demolish would be expensive and would remove a London landmark (listed in 1980). To preserve the silent shell as an industrial monument would be costly, too, and arguably pointless. To re-use the 25 million cu. ft. of space is a bold and worthwhile option, but needs imagination and realism in equal measures.

The SAVE proposal is both imaginative and logical. The vast central boiler house could become an arena for indoor athletics, conferences — even pop concerts. Below this is space for a skating rink, and below that again is room to park 1,350 cars. Of the two adjacent turbine halls, one could be an indoor sports center while the other is proposed for use as a space for the display of large items of historic industrial machinery. This last is both appropriate to the building's original use and practical; there is the height to accommodate these intact, while the existing gantry cranes are powerful enough to lift and install them. Outside, a riverside swimming pool would augment the leisure facilities, and the coal conveyors could be adapted as walkways and extended across the road into Battersea Park. These, like the cranes and the chimneys, are rightly recognized as symbols of Battersea's original function, and their retention is an integral part of the scheme. Ancillary proposals include new housing between the station and the park, and a riverside walk and square.

The notion of leisure as the central role of Battersea's planned new existence is amply justified. There is a need for such facilities in London at large and in Wandsworth Borough particularly; there is historical precedent in the vicinity — Battersea Fun Fair and the earlier Ranelagh Gardens; and the building's huge spaces and long,



London's Battersea Power Station. Morley von Sternberg photograph, courtesy SAVE Britain's Heritage.

clear spans are ideally suited to sporting use. And, leisure is a growing industry which could bring employment as well as life to this riverside area.

SAVE stresses that the proposal is only one of a number of possibilities for the building, but it seems as good as anything likely to emerge. The next step is to find private capital, for the report realistically accepts that public funding is unlikely at present, although Wandsworth Council may be expected to encourage a re-use scheme of this nature. Equally important, perhaps, is the need for public opinion to endorse a realistic plan such as SAVE is offering. One recalls how local opinion contributed to the abandonment of plans to devastate the Covent Garden area with massive redevelopment and road "improvements."

SAVE is to be congratulated on its foresight in preparing a scheme while there is still time to debate the building's future and while it is still being maintained at least in large part. Now we must hope for an enlightened developer to appear! M.B.

Editor's Note: A large, lavishly illustrated 36-page booklet, "The Colossus of Battersea," is available from SAVE Britain's Heritage, 3 Park Square West, London NW1 4LJ, for £2.50 ppd.

ARSENIC AND OLD WASTE

The following article, written by I. Peterson, originally appeared in Science News, Vol. 120, Nov. 28, 1981. It is reprinted here in part.

Nineteenth-century industries were not subjected to the kind of environmental, health, and safety regulations enforced today. They freely spewed their wastes into running water, which was presumed to clean itself quickly, or into dumps on available vacant land. In addition, some of the materials often used in consumer products and in construction are now known to be hazardous. These wastes and materials may survive in items that are still used or collected, in old buildings, in refuse piles, and in sediments. Now, a growing number of scientists are warning that these century-old pollutants are potential sources of present-day environmental problems or threats to public health.

"In some areas, particularly the sites of intensive 19th-c. manufacturing and mining, they may well represent a serious—and largely unrecognized—problem," concludes a report compiled for the Environmental Protection Agency by Vary T. Coates, Thecla Fabian, and Margaret McDonald of Dames & Moore, a firm of consulting engineers in Washington, D.C. The recurring discovery of old waste dumps of hazardous materials, during excavations, is one example. The arsenic, lead, and mercury compounds used in many Victorian products also may pose a threat to the health of restorers and users of these items.

Arsenic residues may survive in old factories, equipment, and on-site waste dumps. Especially at risk, the authors say, may be workers excavating or reclaiming old mine or industrial sites, workers renovating or demolishing industrial buildings, those remo-

deling or refurbishing old residences or antique furnishings, and hobbyists who collect, repair and frequently handle 19th-c. artifacts. Because the symptoms of arsenic poisoning can be subtle and cumulative, they can easily go unrecognized or not be associated with the source of poisoning.*

The researchers examined prominent industries and processes to find potential modern hazards involving possibly widespread risk to health or the environment, portability and transport of the materials over time, historical unawareness, and lack of current understanding of the threat. They identified several topics of particular concern: the substances arsenic, lead, mercury, and cyanides; the electroplating, iron and steel, tanning, and coal industries; and waste-containing canals and sediments behind dams.

Arsenic and its compounds received greater attention in the study because they exemplified toxic substances widely used in a variety of industries. One common use was as the source of pigments, primarily for the color green. Arsenic pigments appeared often in stuffed animals, toys, house paints, wallpaper, lampshades, pastry ornaments, carpeting, and articles of clothing such as bearskin robes in which they were used both as a dye and to discourage bugs.

The researchers say problems remaining from 19th-c. activities are neither as severe nor as widespread as the byproducts of 20th-c. technology, but they are not insignificant. Further assessments in selected areas are needed to better define the situation.

*Symptoms can include a burning sensation in the throat, abdominal cramps, nausea and vomiting, and thirst.

OPINION IA: A MATTER OF LIFE AND DEATH

by David H. Shayt

The following commentary by David Shayt, museum technician at the National Museum of American History in Washington, D.C., marks the debut of a new SIAN department. We hope to carry opinion pieces on a regular basis and invite those members with opinions on IA-related issues to write us. We view the Newsletter as an open forum where issues can be aired and new ideas put forth concerning both the field of industrial archeology and the SIA's goals and direction. Ed.

It's about time somebody stood up and got righteous about the dearth of industrial museums. The last issue of SIAN [p. 11] carried a reprint of "We Need Our Monuments Too," an editorial by Ben Nagler that originally appeared in the trade publication *Tooling & Production*. As it should have, this rare bit of advocacy issued from the very heart of modern manufacturing, the U.S. machine-tool industry.

Here we are, the Society for Industrial Archeology, contentedly obsessed with all matters smacking of the machinery, structures, and worklife of industry past, while milling around us at the cutting edge of its own history is industry present, with mutual interests in the work of SIA that we scarcely have considered tapping. Have we not ignored for too long the potential support base for our Society that lies in the largest industrial community ever to exist? With total sales last year of \$1.8 trillion, the Fortune 500 can do without us, but should we do without them?

Nagler hardly needed to remind us that American technological museums of any depth can be counted on the fingers of one hand. Whatever the social values this condition reflects, industry itself cannot be faulted. Businesses stay in business by producing goods and services and usually avoid getting into their own or others' history.

But if Nagler's editorial is any clue, the industrial past is no longer destined automatically for the industrial trash bin, as in days gone by. Corporations are upgrading their archives to high-tech "historical resource centers." Competitions are held to discover the owners of a machine-builder's earliest products still in service. And there are numerous corporate histories in progress or newly published, often under the auspices of the company itself. For reasons of their own, industrial firms are seeking their roots in unprecedented numbers today, and in so doing they move into our territory. We ought not to remain strangers.

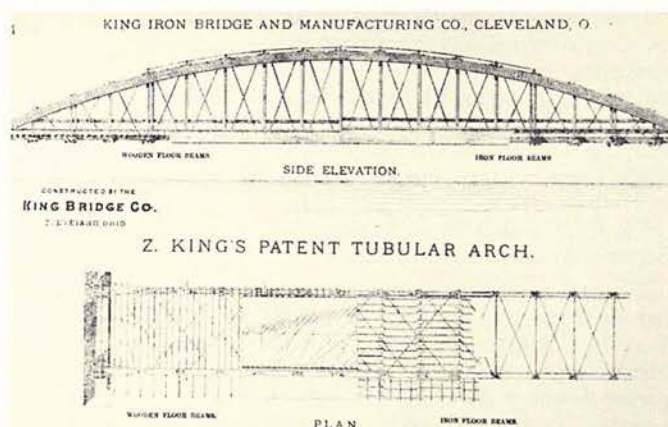
Nearly two hundred readers of *Tooling & Production* responded to Nagler's editorial with requests for more information about the SIA. Their inquiry cards identified them as shop foremen, production engineers, materials analysts, vice presidents, foundry superintendents, tool-and-die makers, men and women from across the country with an interest involving themselves in an organization that looks at the history of their own trades. They may not be overly enthralled by journal articles advancing industrial archeology as a scholarly discipline. Neither are they likely to be armchair antiquarians interested simply in collecting memories of "the good old days when things were built to last." They probably will be most absorbed with the history of their own work experiences, through the sites and processes we study. They can appreciate in ways that we cannot the value of preserving, recording, and interpreting the surviving evidence of obsolescing technologies. Many come from generations of factory workers and craftsmen, with a rich personal folklore about the machinery and shops left behind.

Ways must be found to attract the members of modern industry—the occupants and creators of tomorrow's industrial archeology. Their inclusion in our ranks would broaden SIA's diversity of interests and enrich the membership with solid technical skills in a host of industrial callings. The challenge is to make known our existence to industry. Display ads might be placed in selected trade magazines, house organs, and organized-labor journals. Perhaps letters could go out to manufacturing firms fifty years of age or older inviting corpo-

rate membership. We'll either make the effort or else be the poorer for not having laid out the welcome mat for members of living industry.

KING BOWSTRING TRUSS SALVAGED

Last June, the Miami Purchase Assn. for Historic Preservation (MPA) in Cincinnati learned that a bowstring truss bridge in Warren Co., Ohio, was scheduled for replacement. The bridge, spanning Todd's Fork Creek at Baldwin Crossing, was built by the King Bridge Co. of Cleveland in 1871. Since only two such bridges were known to survive in southwestern Ohio, MPA took on the cause of its preservation, hoping that the bridge could be preserved in place. When that proved impossible, they assisted the county engineer in carefully dismantling the bridge so that it might one day be rebuilt at a new site. MPA retained Fenton Rigging Co. of Cincinnati, which donated a crane and operator for 14 hours. The Warren Co. Engineer's Office itself donated an estimated \$9,000 in labor and materials as part of the salvage effort. The 20-ton, 144-ft. span was taken apart in sections last fall and now rests along the banks of the creek. MPA must raise funds before it can relocate and assemble the bridge in Sharon Woods Village, a 19th-c. village that it owns and operates. Contributions and ideas about fund-raising strategies for this project are sought. Contact Steve Gordon, Historian, MPA, 812 Dayton St., Cincinnati 45214; (513) 721-4506.



King patent bowstring arch bridge (1871), spanning Todd's Ford Creek in Warren Co., Ohio, prior to being dismantled last year. David Miars photograph.

THE TOP 10 NEW PRODUCTS of all time, according to 350 research and development executives polled by *New Product Development* newsletter are, in order: the wheel, bow and arrow, telegraph, electric light, plow, steam engine, vaccine, telephone, paper, and flush toilet.

The *SIA Newsletter* is published with the support of the Program for the History of Science & Technology, Case Western Reserve University, Cleveland, Ohio.

ONTARIO IA SOCIETY FOUNDED

The Ontario Society for Industrial Archaeology was founded on Feb. 27 at a meeting held at the Ontario Science Centre in Toronto. The aims of the Society are "to promote an awareness of all facets of IA, including the recording of physical remnants, the study of industrial processes, and the examination of social aspects of industrialization." The Society recruited 40 paid members following the founders meeting in Feb. The new organization is expected to grow rapidly to represent IA interests in the province.

At the first meeting, Norman Ball [SIA] introduced the steering committee—Chris Andrae, George Hume, Marilyn Miller [all SIA], Phyllis Rose, Bill Henderson, and himself—which then stood for election as the Society's first executive officers. Andrae will serve as president and Miller as editor of the *OSIA Bulletin*, which has been modeled after the *SIA Newsletter*. According to the new editor, "We do not intend to compete with [SIAN's] wide-ranging news of IA in North America and Europe but hope to provide an information network for all the interested individuals and organizations in the province." The Society's activities initially will center in the Toronto area, where most members reside. In addition to the newsletter, OSIA will sponsor research and recording projects, trips and tours, and "promotion of IA to the uninitiated."

At the founders meeting, 55 participants viewed "The Cooperage," a film about barrel-making in Vancouver. After the business meeting, which included review of a draft constitution and bylaws, the group was taken on a tour of Domtar's Fine Paper plant in the Don Valley. En route, there was a walking tour of the Don Valley bridges between the Science Centre and the Domtar plant.

OSIA will be affiliated with the Ontario Historical Society. Annual membership is \$10. Send check payable to OSIA to Phyllis Rose, Secretary-Treasurer, Institute for the History & Philosophy of Science & Technology, 280 Huron St., Univ. of Toronto, Ont. M5S 1A1.

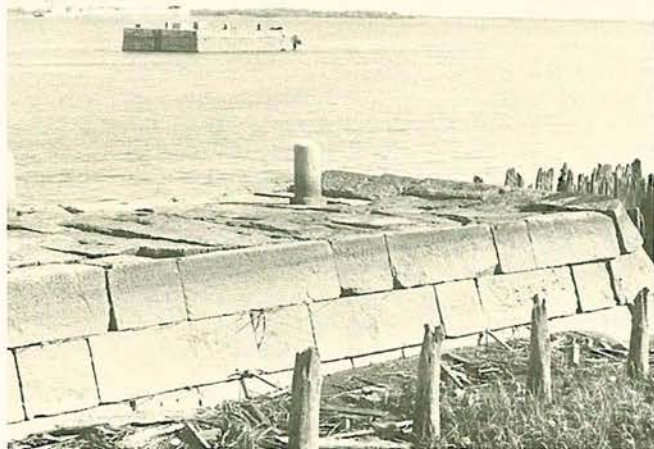
IA IN THE NATIONAL REGISTER

Compiled by Carol Dubie

National Register listings, Dec. 15, 1981-Mar. 1, 1982:

CALIFORNIA. **Groezeinger Wine Cellar**, Yountville. Built 1868-1872, the largest complex of brick industrial buildings in Napa Co. is significant for its association with the development of large-scale wine production in the Napa Valley. **Larkmead Winery**, St. Helena vic. 1906-07 stone complex. **Taylor, Duckwork & Co. Foundry Building**, St. Helena vic. 1884 stone building housed the manufacture of wine presses essential to regional industry.

DELAWARE. **New Castle Ice Piers**, New Castle. Group of seven stone piers with an outer shell of finished granite blocks and a core of rubble; one of the earliest and most important harbor improvements in Del. The piers were constructed 1803-1882 to protect wood-hulled ships from ice floes.



New Castle (Del.) ice piers. The pier in the foreground was erected in 1803, that at the rear in 1879. *Richard T. Jett photograph.*

ILLINOIS. **Coles Co. Highway Bridges over the Embarras River**, Charleston and vic.: **Airtight Bridge** (1914), Pratt through truss with pony-truss approach span, built by the Decatur Bridge Co.; **Blake-man Bridge** (1907), three-span, reinforced-concrete arch bridge built by the Mercantile Bridge Co. of Paris, Ill.; **Harrison Street Bridge** (1898), camelback truss; **Stone Quarry Bridge** (1883), double-intersection Pratt truss built by the King Iron Bridge Co.

INDIANA. **Longwood Covered Bridge**, Connersville. Burr Arch, 97 ft. long, built in 1884 by Emmett and Charles Kennedy.

KENTUCKY. **Henry Vogt Machine Co. Shop**, Louisville. First building (1902) of a major innovator in the U.S. ice machinery industry.

MAINE. **East Vassalboro Grist and Saw Mill**, East Vassalboro.

MASSACHUSETTS. **Fall River Waterworks**, Fall River. Complex on 22 acres consists of a pumping station, intake house, 121-ft. standpipe tower housing 78-ft. standpipe for high service, all dating to 1872-1875; 1908 gate house; ca. 1914 auxiliary intake house; and ruins of 1876 ice house. The Victorian Gothic-style complex is an excellent example of facilities constructed during the late 19th-c. era of public works expansion.

MISSOURI. **Alley Spring Roller Mill**, Eminence vic. Wood-frame mill, 1893, representative of industrial and commercial centers in the Ozarks. Extant 1890s machinery includes roller mills, separators, scourer, and silk-screen sifters.

NEW YORK. **Coney Island Fire Station/Pump Station**, Brooklyn.

OREGON. **Howard's Gristmill**, Mulino. Wood-frame mill, built in 1851 and enlarged in the 1890s, produced flour and feed grain until 1958. Weigh scale, separators, and other historic equipment remain. **Paris Woolen Mill**, Stayton. Complex of early 20th-c. frame buildings including main mill building (1905), finish room, spinning annex, workshop, boiler room, dye house, and tile picker house. A wide variety of historic machinery survives, including pickers, dusters, cards, and spoolers (ca. 1905-1930), as well as overhead shafting from former water power system.

SOUTH DAKOTA. **Charles Murtha House and Brick Yard**, Elk Point.



Standpipe tower, Fall River (Mass.) Waterworks. *William R. Hargraves Jr. photograph.*

THREE ORPHANS ADOPTED

The three historic railway items described last issue [p. 10] have been sold at the Danbury Fair auction. The result of the sale is a happy one, however, because each of the pieces has gone to a good home. The sale also answers in finite terms a question often asked but never before answered in recent decades: What is a historic engineering relic worth, in hard cash? The usual clichés about it being "one-of-a-kind" or "priceless" are of no value to an appraiser. What is it worth? Whatever it will sell for. Clearly the market value of antique rail pieces is well below that of vintage automobiles or paintings.

Here are the results of the auction: *Daniel Nason*, steam locomotive, \$42,500, to the National Museum of Transport, St. Louis; Boston & Providence R.R. passenger car, \$14,000, to the National Museum of Transport; and Van Depoele electric locomotive, \$9,000, to the Branford Electric Railway Assn., East Haven, Conn. The last-named item, incidentally, is very poorly documented. Readers having specific information on this pioneer electric locomotive are urged to contact the writer of these notes or Branford. *J.H.W.*

CONTRIBUTORS TO THIS ISSUE: Michael Bussel, London; Mary Meath, Dublin, N.H.; David Neufeld, Saskatoon, Sask.; and John H. White Jr., National Museum of American History.

MISC. NOTES

DISTILLED BEVERAGES CONFERENCE. The National Geneva Museum, Hasselt, Belgium, and the Industrial Heritage Project, St.-Truiden, Belgium, are cosponsoring a conference dealing with the history and heritage of the strong-liquors and distilled-beverages industry, to be held in Belgium Sept. 15-18, 1982. All those conducting research in the field or who are active in related museums or on-site conservation of structures are invited. This working conference will deal with manufacturing technology and the social and economic effects of the industry. Active participation at sessions is expected, and attendance will be limited to 50 participants. Conference language will be English. The conference is offered under the auspices of the International Committee for the Conservation of the Industrial Heritage (ICCIH). Costs are estimated at \$175. Information: Helena Wright [U.S. ICCIH representative], Merrimack Valley Textile Museum, 800 Massachusetts Ave., North Andover, Mass. 01845; or Adriaan Linters, Project Industriel Erfgoed, Begijnhof 59, B-3800, St.-Truiden, Belgium.

CONCORD GASHOLDER RECORDING PROJECT. Postponed last summer, the project is moving ahead once again. It is being coordinated by the Institute for New Hampshire Studies at Plymouth State College. Eric DeLonny and Robert M. Vogel [both SIA] will head recording teams at the site. Dates of the on-site work are July 24 and 25. Volunteers are welcome and will be essential to the success of the project. Information: William L. Taylor, Institute for New Hampshire Studies, Plymouth State College, Plymouth, N.H. 03264; (603) 536-1550, ext. 347. Unlike other, similar structures, the Concord Gasholder (1888) is entirely intact, making its recording of major significance in North American IA [SIAN Sept./Nov. 80:9].

TERRA-COTTA SEMINARS. Friends of Terra Cotta, Inc., founded in 1981 [SIAN Summer 81:4], is sponsoring three one-day seminars on the history, production, properties, uses, and deterioration of architectural terra cotta and the methods of inspection, testing, repair, and replacement. Cosponsors are the American Institute of Architects Historic Resources Committee, the National Trust for Historic Preservation, and the National Park Service. The first seminar was held in San Francisco on April 28. The remaining two will be held on Sept. 28 at the Archicenter, Monadnock Bldg., 330 S. Dearborn, Chicago, Ill.; and on Sept. 30 at the Mechanic's Institute, 20 W. 44th St., N.Y.C. Registration fee for each is \$75 for FOTC members, \$80 for non-members (includes a one-year FOTC membership), and \$50 for students (includes membership). Information: FOTC, Inc., c/o California Historical Society, 2090 Jackson St., San Francisco, Calif. 94109; or David W. Look, (415) 556-7741.

DESIGN ACTION, a new architectural newsletter serving Washington, D.C., Md., and Va., will begin publication in Sept. The inaugural issue is supported by a grant from the National Endowment for the Arts. *Design Action* will feature articles on architecture, urban planning, historic preservation, engineering, landscape architecture, and interior and graphic design. The resource section of the first issue will include a regional calendar of events for Sept. and Oct., a map of Art Deco architecture in Baltimore, and bibliographies related to many of the subjects covered in the feature articles. *Design Action* is published by the independent, nonprofit Architectural Arts of Washington, D.C., Inc. To receive the inaugural issue, send a tax-deductible contribution (\$2 minimum) payable to: Architectural Arts of Washington, D.C., Pension Building, Rm. 122, 440 G St., NW, Washington, D.C. 20001. Further information: Richard Etlin, Executive Editor, (202) 338-1902.

JOHN BULL POSTER. Exquisite color panoramic photograph of the locomotive (steam up, safety blowing off) and its period passenger car on the occasion of its 150th-anniversary run, Sept. 1981. Poster, 24 x 36 in., shows the wood-laden tender and crew. \$5 ppd. from Cirama, Box 187, Glastonbury, Conn. 06033; (203) 633-1339.

"GRAND CENTRAL TERMINAL: CITY WITHIN THE CITY," a major exhibition exploring the history and development of Grand Central Terminal and its influence on the physical, economic, and social life of N.Y.C., will open at the New-York Historical Society, 170 Central Park West, on May 27. Organized by the Municipal Art

Society and sponsored by Philip Morris and the National Endowment for the Humanities, the exhibition will be on display through Oct. 3. It will include photographs, drawings, sculpture, vintage film clips, a multilevel model of the terminal, and objects associated with the station. A national tour is planned.

EICHNER MEMORIAL. As "one thinks . . . of the furniture maker, Chippendale, the sun dial maker, Schissler, the instrument maker, Frauenhofer," so too "Eichner was . . . blessed with the ability to make things of such obviously superior quality as to overcome the advantages of the machine." The life and work of L.C. Eichner, master 20th-c. craftsman and instrument maker, are vividly portrayed in a 60-page, illustrated memorial booklet written by Robert P. Multhauf [SIA]. Single copies are available gratis from EICHNER MEMORIAL, Rm. 5020, National Museum of American History, Smithsonian Institution, Washington, D.C. 20560.

NORTH AMERICAN ARCHAEOLOGIST. This quarterly journal covering archeological activities in the U.S., Canada, and Northern Mexico, is available to SIA members at a special subscription rate of \$15, a savings of \$13 over the regular individual rate. Edited by Roger W. Moeller, *NAA* surveys all aspects of prehistoric and historic archeology, including industrial sites, resource management, and contract archeology. Subscriptions must be prepaid in U.S. dollars drawn on a U.S. bank. Please mention your affiliation with your order to: Baywood Publishing Co., Inc., 120 Marine St., Box D, Farmingdale, N.Y. 11735.

HAROLD R. NESTLER, INC., a rare book dealer, offers "unusual, rare & scarce items on historical technology." For the 1982 catalogue, write HRN, 13 Pennington Ave., Waldwick, N.J. 07463.

THE 1983 CONFERENCE ON UNDERWATER ARCHEOLOGY will be held Jan. 6-9 in Denver, Colo., at the Marriott Hotel City Center. CUA has issued a call for papers. Abstracts must be submitted by Aug. 1. Information on CUA program requirements: Calvin R. Cummings, National Park Service, Denver Service Center, P.O. Box 25287, Denver 80225; (303) 234-6112. Program details will appear in the Oct. 1982 *Society for Historical Archeology Newsletter*.

THE EARLY AMERICAN INDUSTRIES ASSN., through its Grants-in-Aid Program, has announced the recipients of annual grants for 1982-1983 and their projects. Awards of \$1,000 were made to Thomas J. Farnham, New Haven, Conn.; James L. Garvin [SIA], Concord, N.H.; Peter Lloyd, Ipswich, Mass.; Daniel F. Preston, Mt. Rainier, Md.; and David L. Weitzman [SIA], Covelo, Calif. Farnham will study the early foundry industry and its development, beginning about 1790, in New Haven, Conn. He will examine the various stages of New Haven's foundries, from a primitive industry producing cooking utensils and household articles to sophisticated production of large and specialized castings; in the last stage of their development, these foundries began to invent and produce a whole range of mechanical devices such as the Hotchkiss air-spring hammer. Garvin's project will be a comprehensive survey of tool-making and toolmakers in N.H. Lloyd will investigate craft practices of housewrights prior to 1900. Preston's study will describe how the U.S. Patent Office provided important information on technological innovations to mechanics and craftsmen and how the office aided them by protecting their intellectual property before 1836. Weitzman will undertake an intensive study of the Samuel Knight Foundry in Sutter Creek, Calif. He will document its history through photographs and oral history and show that the foundry is a bridge between two centuries where the relationship between master craftsman and apprentice endures.

"AN INTRODUCTION TO HISTORIC BRIDGES," by Stanley Gordon and Donald C. Jackson [SIA], consists of 78 35mm color slides and a 25-min. cassette tape. The slide show may be borrowed gratis from the Federal Highway Administration, HNG-33, 400 7th St., SW, Rm. 3113, Washington, D.C. 20590.

STEAM & GAS ENGINE SHOW—"most complete east of the Mississippi"—will be hosted by the Rough & Tumble Engineers Historical Assn. Aug. 18-21 on U.S. Rte. 30 at Kinzers, Pa., 13 mi. east of Lancaster. Admission is \$3. Information: R&T, Box 9, Kinzers, Pa. 17535; (717) 442-4249.

AVAILABLE. Muyle, a firm based in Charleroi, Belgium, repairs electrical machinery and rolls copper shapes. Its facility at Anhee-Sur-Meuse dates from the 16th c., its copper operations there from the 18th c. The firm is offering for sale a number of machines from this plant and would be pleased to provide further information to prospective buyers. Available are: water-powered rolling mill (only one in Europe); 750-h.p. steam engine, which drives three rolling mills; 250-h.p. vertical steam engine, which drives two rolling mills; steam engine direct-connected to 20-kw. generator; steam engine direct-connected to 150-kw. generator; diesel locomotive; naptha locomotive. All are in perfect working condition, and all are pre-20th c. Information: R. Brandt, Muyle, 104, Rue de Couillet, B-6001, Charleroi, Belgium.

NEWS OF MEMBERS

ROBERT M. FRAME III has assumed the position of Asst. Curator of the James J. Hill Papers at the James J. Hill Reference Library in St. Paul, Minn.

DAVID STARBUCK has accepted a position as Asst. Prof. of Anthropology at Rensselaer Polytechnic Institute, beginning Sept. 1. Starbuck will be employed by Rensselaer's Program in Public Archaeology, where he will teach and conduct research in industrial and historical archeology.

RESEARCH QUERIES

Information is sought on the location and availability of 19th- and early 20th-c. mining tools and equipment, especially those used in Mo.'s "Headbelt" or "Tri-State" mining regions, or in the Midwest. Emphasis of search is on lead and barite mining; however, information on other mining is also appreciated. Gary Walrath, Asst. Regional Supervisor for History, Mo. Divn. of Parks & Historic Preservation, Rte. 4, Box 177, Festus, Mo. 63028.

For a publication on David Wilkinson's early screw-cutting lathes, references or illustrations pertaining to 19th-c. use of the terms "fluting engine" and "gauge lathe" would be appreciated. Tom Leary, Slater Mill Historic Site, P.O. Box 727, Roosevelt Ave., Pawtucket, R.I. 02860; (401) 725-8638.

SIA AFFAIRS

NEH GRANT. The Society has received a major grant from the National Endowment for the Humanities to develop curricula for elementary and secondary schools on the history of industrial work in America. Under the \$145,000 grant the SIA will work with the Charles River Museum of Industry in Waltham, Mass., and with David Weitzman [SIA], a nationally known curriculum writer, to conduct a series of workshops for teachers on methods of teaching about traditional skills and manufacturing techniques. Education projects will focus on the techniques of recording the work process. With professional guidance, students and teachers will seek out manufacturing sites and industrial shops with camera, tape recorder, and video equipment to document what they find there. The two-year project will be directed by Michael Brewster Folsom, Executive Director of the Charles River Museum and Secretary of the SIA.

THE NORTON PRIZE. This year's Norton Prize winner is Laurence F. Gross [SIA]. The Norton Manufacturing Co. of Worcester, Mass., an abrasives manufacturer, last year endowed a cash prize of \$150 to be awarded annually to the author(s) of an outstanding scholarly article published in the SIA journal, *IA*, during the past three years. Gross's article, "The Importance of Research Outside the Library: Watkins Mill, A Case Study," appeared in Vol. 7 (1981). The award was presented at the Society's annual conference in Harrisburg, Pa. Gross is Curator at the Merrimack Valley Textile Museum in North Andover, Mass.

ROYALTY CHECK. The Society is pleased to announce receipt of a fourth royalty check for \$101.48 from sales of *Historical Archaeology: A Guide To Substantive and Theoretical Contributions*, edited by Robert L. Schuyler [SIA]. The book is available from Baywood Publishing Co., Inc., Farmingdale, N.Y. 11735, for \$16.50 ppd.

CHAPTER NEWS

COMPOSITE CHAPTER REPORT FOR 1981 ACTIVITIES. At the beginning of 1982, we have eight chapters listed. On Jan. 8, and again in Feb., I solicited annual reports from each of these. As of Mar. 24, I have received responses from the five listed here:

Montgomery C. Meigs Original—

President: David H. Shayt, 165 D St., SE, Washington, D.C. 20003.

- 8-26-81 Films on bridges, steam hammers, a 19th-c. British ship, and Calif. road building in the 1920s;
- 10-28-81 Report from Eric DeLony on the 4th International Conference on the Conservation of the Industrial Heritage;
- 11-10-81 Noontime tour of Cathedral Stone Shops;
- 11-22-81 Eastern Shore excursion to W. Willock's "Historic Machinery" estate at Centerville, Md.;
- 3-3-82 Documentary film on the Brooklyn Bridge.

Roebling (N.Y.-N.J. Metropolitan)—

President: Nanci Batchelor, 203 W. Burlington St., Bordentown, N.J. 08505.

- Spring Preliminary dig on Plane 9 East of Morris Canal in conjunction with Ed Rutsch's report for NJDOT;
- Sept. First Annual N.Y.-N.J.-area IA Symposium held at Drew University, Madison, N.J.;
- Sept. Two-day field trip in South Jersey, covering IA of the Pine Barrens;
- Nov. Field trip to power plant of Hercules Powder Co. at Kenil, N.J., and exploration of Long Pond Iron Works site with Ed Rutsch;
- Jan. Annual meeting at ITT complex. Feature presentation on Thomas Edison's 19th-c. Magnetic Ore Separation plant at Ogdensburg, N.J.

Chicago—

President: David Bolaños, 1134 N. Wolcott, Chicago, Ill. 60622. Field trips and reconnaissance of Illinois & Michigan Canal and associated industrial development. Assisting in lobbying for National Park designation;

- 2-81 Tour of Stateline Generating Plant, Hammond, Ind.;
- 10-81 Tour of abandoned coke ovens, Lockport, Ill.

Northern New England—

President: John Jordan, Jaffrey Rd., Peterborough, N.H. 03458.

- Spring Meeting at Harrisville, N.H., site of Colony family woolen mills. Chapter is concerned about potential threat to this historic village by planned highway development (see article this issue);
- Fall Meeting at Royal River Brick Works, North Yarmouth, Maine, where water-struck bricks are still produced with 18th-c. methods;
- Spring '82 Meeting at Ben Thresher's Mill in Vermont.

Southern New England —

President: Helena Wright, MVTM, 800 Massachusetts Ave., North Andover, Mass. 01845.

- 3-27-81 Site examination and testing at Lawton Mills, Exeter, R.I.: a "dirt-dig" archeological service performed by members of SNEC;
- 4-11-81 Spring meeting. Tour of Holyoke Water Power Co. dam and hydro station, presentation on historic Holyoke, and business meeting, followed by tour of Parsons Paper Mill;
- 10-24-81 Recording project at Byfield (Mass.) Snuff Mill, including measured drawings, photos, site drawing, and inventory of old records;
- 11-7-82 Fall meeting at Charles River Museum of Industry, followed by a photo report on the Copper Country tour by Pat Malone.

No reports were received from **Great Lakes**, **Latrobe**, or **North Carolina** chapters. Chapters are reminded that the SIA bylaws provides that chapters that fail to submit annual reports will be considered disbanded. *Thorwald Torgersen, Chapter Co-ordinator*

An account of the SIA Annual Conference, held in Harrisburg, Pa., May 6-9, will appear in the next issue of the *Newsletter*.

REVIEWS

Material Culture of the Wooden Age, edited by Brooke Hindle. Sleepy Hollow Press (Tarrytown, N.Y. 10591), 1981. 394 pp., illus. \$22.50.

This collection, the second on the Wooden Age edited by Hindle, shows the continuing importance and vitality of wood as a primary resource in American building, transportation, and manufacturing well into the 19th and even 20th centuries. The authors of these stimulating essays are all sensitive to the qualities of wood as structural material, chemical resource, and fuel. Some of them have also treated the meaning of wood, thus moving from material culture to more abstract cultural analysis. Furthermore, all of the articles deal in different and interesting ways with the subject of industrialization.

The essays are divided into three groups. The first, "Home and Farm," contains two papers. Wayne D. Rasmussen's "Wood on the Farm" discusses the use of wood in rural life. Del Upton's "Traditional Timber Framing" considers the significance of a variety of construction types up to balloon framing, which he discusses as "industrialized building."

In the section on "Transportation," Joseph A. Goldenberg's "With Saw and Axe and Augur" analyzes the changing organization and processes of the shipbuilding industry up until the decline of wooden shipbuilding at the end of the 19th century. In "Wooden Roads," Don H. Berkebile discusses reasons for the different uses of wood as a road-building material. Lee H. Nelson's "Colossus of Philadelphia" provides a careful study of that "soaring achievement," the 340-ft., single-arch wooden bridge across the Schuylkill River in Philadelphia. In "Railroads: Wood to Burn," John H. White Jr. treats the use of wood as a material for rails, cars, fuel, and ties, in all cases describing the slow shift to other materials on the "iron road."

The section on "Production" has four studies. Robert P. Muthauf's "Potash" describes America's reliance on potash from her

forests and the consequent delay in developing a chemical industry. "Naval Stores, 1781-1881," by G. Terry Sharrer, describes not only the process but also the implications for labor, marketing, and land use of southern U.S. production of tar, turpentine, rosin, and ship timber. Richard H. Schallenberg's "Charcoal Iron: The Coal Mines of the Forest" describes the development of charcoal ironmaking and shows how ironmakers were able to adopt coal-based smelting methods and new techniques of charcoal production to remain competitive until the advent of open-hearth steel at the very end of the 19th century. Gary Kulik, in "Factory System of Wood," describes the extensive wooden technology in America's earliest factories and offers a provocative analysis of the cultural meaning of the use of wood by the earliest entrepreneurs and the use of stone, brick, and iron by manufacturers of the next generation.

In summary, almost every article in Hindle's collection is important to industrial archeologists. They open our eyes to the significance to the industrial world of that most typical of pre-industrial materials. *Stephen Victor, American History Workshop, New Haven, Conn.*

"150^e Anniversaire, 1831-1981," *Annales des Ponts et Chaussées*, new series, 19, 3rd trimester (1981). 60 F (France); 75 F (elsewhere). Order directly from: École Nationale des Ponts et Chaussées, 254 Rue de Vaugirard, 75740 Paris.

The 150th-anniversary issue of an important civil engineering journal contains thirteen historical articles, most of which consider developments in French engineering during the first half of the 19th century. Particularly notable for IAists are articles on early iron bridges, "The Golden Age of Suspension Bridges in France, 1823-1850," and the birth of French railroads. There are numerous excellent illustrations and brief English summaries. *Darwin H. Stapleton, Case Western Reserve University, Cleveland*

NEWS IN BRIEF

Thanks to "Devine intervention," the 61-year-old **Pasco-Kennewick Bridge** [HAER,NR] in Washington State has been given a reprieve. Virginia Devine, a local resident, posted \$75,000 of her own money to secure a bond that extended the injunction prohibiting demolition of the cantilever truss bridge, which spans the Columbia River between the towns of Pasco and Kennewick near Spokane. Devine is a member of the American Assn. of Retired Persons (AARP), whose national *News Bulletin* (Feb. 1982) carried an article about her efforts; the local chapter of AARP has been conducting a campaign to save the bridge ever since a new bridge was built next to it in 1978. Supporters of the bridge must now present their case in the 9th District U.S. Circuit Court of Appeals in San Francisco. They say it is "just good sense" to keep the old bridge because it is safe, it would cost more to demolish than to maintain it, and it can be used as part of a hiking and biking trail between the two cities. Supporting the preservationists' position, the National Trust's Regional Office filed an amicus curiae brief in Dec. Others involved with historic bridge preservation may obtain a copy of the brief by writing the National Trust for Historic Preservation, Western Regional Office, 681 Market St., Suite 859, San Francisco, Calif. 94105.

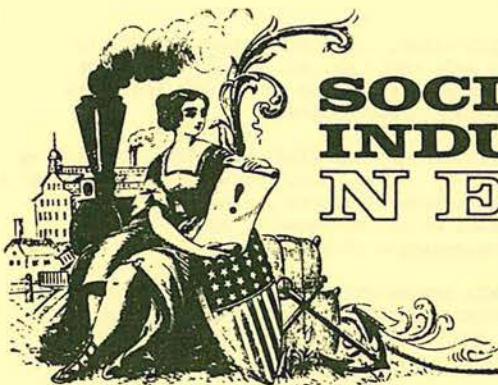
Campbell's Bridge in Greenville Co., one of only two covered bridges still standing in S.C., was closed after it was ruled unsafe last fall. Although riddled with shotgun blasts and covered with graffiti, county officials say it is unlikely the 72-year-old bridge will be forsaken by the county because of strong public interest in its preservation. According to Jim Walker, Director of Public Relations for the S.C. Dept. of Highways & Public Transportation, the only other covered bridge in the state is the **Lower Gassaway Bridge** between Liberty and Six Mile in Pickens Co.; that bridge is in deteriorated condition and is not on a public road.

Perhaps no other mode of transportation has inspired the imagination more than the **Orient Express**, the train that became the favorite of royalty, artists, spies, and mystery writers during the golden

age of railroading. On May 23, the new super-luxury Venice-Simplon Orient Express began operating on a regular schedule. It will make two runs a week in each direction between London and Paris and three between Paris and Venice. Developers say that the four-year, \$20-million project is the most ambitious restoration in railroad history. Authenticity has been the watchword, plastics the unthinkable. Passengers will hear a sound not ordinarily associated with modern trains: the creaking of wood. The site selected for the restoration of the Pullman cars was Steamtown, a working railroad museum next to the Carnforth station in Lancashire, England.

The **Wannalancit Mills** complex [NHL] in Lowell, Mass., will be recycled for use as a research and development facility and for high-tech assembly. The complex, which consists of four brick buildings varying in height from two to five stories, has been renamed the Wannalancit Office & Technology Center. The development project is a joint venture of the Dobroth Co. of Concord, Mass., and the Fryer Co. of Lowell, both real estate investment firms, and Parklee Corp., a subsidiary of the Woburn Five Cent Savings Bank. The Wannalancit Mills' National Register designation means that the investors are eligible for substantial tax credits. Architect for the project is Peter Rinzenbach of Perry, Dean, Stahl & Rogers of Boston. The Suffolk Mfg. Co. began operation on the site in 1831. The Wannalancit Mills were included in a tour of Lowell's canals and mills when the SIA Annual Conference was held there in 1976.

In Feb., a score of workmen succeeded in moving a 115-ft.-long section of granite wall 60 ft., inch by painful inch. The wall, weighing 805 tons, was designed by architect Alexander Parris and built in 1825-1826. It borders Boston's old **Charlestown Navy Yard** [NHL, HAER]. The wall was moved to accommodate changes in local streets as part of a state highway project. A portion of the Navy Yard, deactivated in 1974, was turned over to the National Park Service as a unit of the Boston National Historical Park. Other portions of the old shipyard are being converted for residential and commercial use.



SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

PUBLICATIONS OF INTEREST

A SUPPLEMENT TO VOL. 11 NO. 2

SPRING 1982

Compiled by Robert M. Frame III, James J. Hill Papers, Hill Library, St. Paul, & Robert M. Vogel, National Museum of American History

BOOKS & ARTICLES

Nigel Atkin, Terminal Warehouse: CANADA'S LARGEST RENOVATION JOB. In *Housing Ontario*, July-Oct. 1981, pp. 21-23. Flat-slab concrete, art-deco, 8-story warehouse by Charles H. Moore, on York Quay, Toronto, is being rehabed for "mixed use."

Christopher T. Baer, CANALS & RRs OF THE MID-ATLANTIC STATES, 1800-1860. Regional History Economic Research Center, Eleutherian Mills-Hagley Foundation (Wilmington, Del.), 1981. 80 pp., maps, tables, \$15 (paper).

Norman R. Ball (SJA), COMMENTS ON THE BURRARD INLET SAWMILL INVENTORY: 1869. In *Material Hist. Bull.*, 1977, pp. 73-80. Discusses designs for 2 wood planing machines.

Lois Barton (Ed.), DISSTON--MILL TOWN. In *Lane County (Ore.) Historian*, Summer 1980, pp. 24-43. Memoirs & interviews concerning a logging & sawmill town.

Peter Baskerville, AMERICANS IN BRITAIN'S BACKYARD: THE RAILWAY ERA IN UPPER CANADA, 1850-1880. In *Business Hist. Rev.*, Autumn 1981, pp. 314-336.

Kerry William Bate, IRON CITY, MORMON MINING TOWN. In *Utah Hist. Quart.*, Winter 1982, pp. 47-58.

Henry H. Baxter (SIA), BUFFALO'S GRAIN ELEVATORS. Vol. 26, *Adventures in Western N.Y. History*. Buffalo & Erie Co. Historical Soc. (25 Nottingham Ct., Buffalo 14216), 1980. 24 pp., illus. \$2.00 ppd. Good account of one of the most interesting but least-known IA structures in one of its great seats.

William Beahen, DEVELOPMENT OF THE SEVERN RIVER & BIG CHUTE LOCK STATION. In *History & Archaeology*, No. 40. Avail.: Canadian Gov't Publ. Centre, Supply & Services Canada, (Hull, Quebec, Canada K1A 0S9). \$6.30.

C. Francis Belcher, LOGGING RRS OF THE WHITE MOUNTAINS. Appalachian Mt. Club (Boston), 1980. 242 pp., illus., maps, biblio., \$9 (paper). Rev.: *Jnl. of Forest History*, October 1981.

Mathilde Scalbert Bellaigue, INDUSTRIAL ARCHAEOLOGY IN INDUSTRIAL ANTHROPOLOGY: THE ECOMUSEUM OF THE COMMUNITY OF LE CREUSOT-MONTCEAU-LES-MINES, FRANCE. In *Industrial Archaeology Review*, Autumn 1981, pp. 228-36. Review of the first decade of this unique experiment in museumizing an entire former industrial community. (Followed (pp. 237-40) by Barrie Trinder's IMPRESSIONS OF LE CREUSOT.)

Ken Bernsohn, CUTTING UP THE NORTH: HISTORY OF THE FOREST INDUSTRY IN THE NORTHERN INTERIOR 1909-1978. Hancock Hse. (Vancouver, B.C.), 1981. 220 pp., \$18.

G.M. Binnie, EARLY VICTORIAN WATER ENGINEERS. Thomas Telford Ltd. (c/o Instn. of Civil Engineers and British Nuclear Energy Society, 1-7 Great George St., London SW1P, 3AA, ISBN

0-901948.), 1981. 310 pp., 75 illus. £12. Ppd. The more prominent of the English water-supply engineers.

Mary Blewett (Ed.), SURVIVING HARD TIMES: THE WORKING PEOPLE OF LOWELL. Lowell Museum (c/o LHS, Box 1826, Lowell, Mass. 01853), 1982. 180 pp. \$6.95. The lives of several Lowellians and working conditions in the textile mills, in the form of essays by Univ. of Lowell students. Well regarded.

Robert F. Bluthardt, LOST BOSTON R.R. STATIONS. In *MTH Notes* (Modern Transport Technical & Historical Society, David G. Casdorff, P.O. Box 1458, Monrovia, CA 91016), June 5, 1981, pp. 1-3. Brief history of Boston depots.

William C. Bolger, SMITHVILLE: THE RESULT OF ENTERPRISE. Burlington County Cultural & Heritage Commn. (Mt. Holly, N.J. 08060), 1980. 255 pp. Thorough, engaging account of the manufacturing village founded ca. 1865 by Hezekiah B. Smith, maker of woodworking machinery. Full of interest technologically, archeologically, and socially.

L.G. Booth, et al, THOMAS TREDGOLD (1788-1829): SOME ASPECTS OF HIS WORK. In *The Newcomen Society Transactions*, Vol. 51 (1970-80), pp. 57-94. In 5 parts: His Life; Carpentry; Cast Iron; Warming & Ventilation; Tredgold's Publications. The first Survey of the life and works of one of the 19th c.'s most influential technical writers and investigators.

Clayton D. Brown, ELECTRICITY FOR RURAL AMERICA: THE FIGHT FOR THE REA. Greenwood Press (Westport CT), 1980. 178 pp. \$22.50. Rev.: *Business Hist. Rev.*, Winter 1981.

Terry Brown, THE NEW CATTLE BARONS: CARGILL & LAND O'LAKES ARE BULLISH ON BEEF. In *Corporate Report - Minnesota* (Minneapolis), April 1982, pp. 52-58. Changes in meat-packing industry since 1960; mostly business but some technology--outlines the modern "disassembly line" slaughterhouse.

Larry Brundage, OAKLAND, MAINE AXES & OTHER EDGE TOOLS. In *Chronicle of the Early American Industries Assoc.*, Sept. 1981, pp. 51-54. 19th-c. edge-tool mfg.

John Burnett, A SOCIAL HISTORY OF HOUSING 1815-1970. Methuen & Co. Ltd. (Northway, Andover, Hants SP10 5BE England), 1980. £6.

Anthony Burton & Clive Coote, THE PAST AT WORK. Andre Deutsch (105 Great Russell St., London WC1), 1980. £9. To accompany BBC series.

Neil K. Buxton & D.H. Alcroft, BRITISH INDUSTRY BETWEEN THE WARS: INSTABILITY & INDUSTRIAL DEVELOPMENT, 1919-1939. Scholar Press (London), 1980. 308 pp. £18.50. Rev.: *Technology & Culture*, April 1981.

Edward C. Cass, FLOOD CONTROL AND THE CORPS OF ENGINEERS IN THE MISSOURI VALLEY, 1902-1973. In *Nebraska Hist.*, Spring, 1982, pp. 108-122.

Joyce V.B. Cauffield & Carolyn E. Banfield (Eds.), THE RIVER BOOK: CINCINNATI & THE OHIO. The Program for Cincinnati,

1981. 227 pp. Elegant series of essays on all aspects of the Mighty Ohio with special emphasis on its Queen City: the steam boats, the bridges, and the industry are well treated. Beautifully produced, nicely illus. (cf Kidney on Pittsburgh's rivers, below)

Sam Churchill, KERRY LINE STILL STIRS MEMORIES. In *Loggers' World*, July 1981, pp. 61-66. Kerry Timber Co. & its Columbia & Nehalem River RR in NW Oregon, 1913-38.

V.T. Coates, et al, 19th CENTURY TECHNOLOGY, 20th CENTURY PROBLEMS. American Soc. of Mechanical Engineers (345 E. 47th st., NYC 10017), 1981. 11 pp. \$4. (paper 81-WA/TS-4) Assessment of potential dangers to the environment from the leavings of three 19th c. industries (coal, arsenic, iron & steel), and dams, the silt behind which often contain noxious residua.

Morris Cohen (Ed.), MATERIALS SCIENCE & ENGINEERING: ITS EVOLUTION, PRACTICE, & PROSPECTS. Elsevier Sequoia SA (Lausanne, Switz.), 1979. 102 pp. Part I (Melvin Kranzberg & Cyril Stanley Smith) treats the history of materials from both technological and social standpoint. Rev.: *Technology & Culture*, Jan. 1981.

Martin Conway, HARPERS FERRY--TIME REMEMBERED. Carabelle Bks. (Box 2711, Reston VA. 22090), 1982. 160 pp., 185 illus. \$15/10.

Truman B. Cook, FISH BOATS & ENGINES, COASTAL FREIGHTERS. In *Oregon Hist. Quart.*, Spring 1982, pp. 53-65. Author's account of marine engines, &c., used on Columbia River c1911-14.

Thomas R. Cox, SINGLE DECKS & FLAT BOTTOMS: BUILDING THE WEST COAST'S LUMBER FLEET, 1850-1929. In *Journey of the West*, July 1981, pp. 65-74.

Frank A. Crampton, DEEP ENOUGH: A WORKING STIFF IN THE WESTERN MINING CAMPS. Univ. of Oklahoma Press (Norman), 1981. 304 pp., illus., index. \$17. Crampton's autobiography, post-1904.

T.E. Crowley, THE BEAM ENGINE: A MASSIVE CHAPTER IN THE HISTORY OF STEAM. Senecio Publ. Co. (7 Little Clarendon St., Oxford OX1 2HP, England), 1982. 142 pp., 148 illus., £9.75. General history from Newcomen on, including the Cornish engine, engines in other countries, list of 157 engines and their locations, and map of engines open to the public. (G.B. only). Good description of each engine.

Daniel De Noyelles, WITHIN THESE GATES. The author (1 Pine Drive, Thiells, N.Y. 10984), 1982. 275 pp., 90 photos, \$10.; \$11 after 1 July, both PpD. The brick industry of the Hudson Valley, with supplement on Brick Brands, manufacturers, and locations in N.Y. and other states.

Duane De Paepe, SALTPETRE PRODUCTION FROM INDIANA CAVE SEDIMENTS-- AN IMPORTANT EARLY REGIONAL INDUSTRY. In *Indiana Military History Jnl.*, Oct. 1980.

Bernard A. Drew (SIA), BERKSHIRE OFF THE TRAIL. Attic Revivals Press (53 Gilmore Ave., Gt. Barington, Mass. 01230). (1982?). 96 pp., 186 photos, maps, \$8.50 PpD. Incl. illus. chapter on Charles H. Ball (of Windsor, Mass.) & his patented metal truss bridges in Berkshire Co., Mass.

Ken Drushka, AGAINST WIND & WEATHER: THE HISTORY OF TOWBOATING IN BRITISH COLUMBIA. Douglas & McIntyre (Vancouver, B.C.), 1981. 320 pp., illus., \$25.

Richard B. Duboff. ELECTRIC POWER IN AMERICAN MANUFACTURING, 1889-1958. Arno Press (NY), 1979. 249 pp., \$20. Based on author's 1964 Univ. of Penn. thesis. Rev.: *Business Hist.* Rev., Winter 1981.

Edward Dutra, HISTORY OF SIDEDRAFT CLAMSHELL DREDGING IN CALIFORNIA. Dutra Dredging Co. (345 St. Gertrudes Ave., Rio Vista, Cal. 94571), 1976. 16 pp. Gratis. Interesting technology-- creation of levees from dredged spoil, the dredge boom slewing not by a turntable but by the clamshell cables, which run to the sides of the hull and do the swinging as well. Many good illus. of dredges back to 1876 when it all started.

G.S. Emmerson, SS GREAT EASTERN. David & Charles, 1980. 182 pp., illus. £8.95. Another account of the great ship, apparently with good attention to her technology. Rev.: *IA Review*, Autumn, 1981.

W.R. Evenson, BENSON RAFTS: GIANT WOOD PILES AFLOAT. In *Merchant Magazine*, July 1981, pp. 40, 42, 66-67. Benson Timber Co., Clatskanie, Ore., towed oceangoing log rafts from Columbia R. to San Diego 1906-41.

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William L. Downard, DICTIONARY OF THE HISTORY OF THE AMERICAN BREWING & DISTILLING INDUSTRIES. Greenwood Press (Westport, Ct.), 1980. 268 pp., \$35. Rev.: *Business Hist. Rev.*, Winter 1981.

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Stephen G. Heaver, Jr. (SIA), WORTHINGTON HORIZONTAL CROSS-COMPOUND PUMPING ENGINE. Brochure for its designation as a Pennsylvania Historic Mechanical Engineering Landmark, York, 7 May 1982. 6 pp., gratis: ASME, PR Dept., 345 E. 47th St., NYC 10017. (An illus. brochure on the family of pumping machinery at York's Brillhart Pumping Station, including the above machine (1925), is avail. from The York Water Co., 130 E. Market St., York, Pa. 17405.)

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on the woodworking hand tool and its uses. Favorable rev.: *Technology & Culture*, Jan. 1981.

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J.M. Richards, THE NATIONAL TRUST BOOK OF ENGLISH ARCHITECTURE. W.W.Norton & Co. (55 Fifth Ave., N.Y., N.Y. 10003), 1981. 288 pp., \$25. Incls. industrial architecture.

GRAND CENTRAL TERMINAL --CITY WITHIN THE CITY. Brochure for the current exhibit (to Sept.) at N.Y. Historical Society (Central Park West & 79th St.). 12 pp., illus., gratis. NYHS, 170 C.P.W., NYC 10024. (A stunning catalog for the show exists but we haven't seen it; will comment next issue. It is said to go for \$25.)

THE KINGSTON HARBOURFRONT PROJECT--URBAN ARCHAEOLOGY. Special report by Frontenac Historic Foundation and Ontario Heritage Foundation. 16 pp., gratis from Ontario Ministry of Citizenship & Culture, 7th Fl., 77 Bloor St., West, Toronto, Ont. M7A 2R9. Includes data on industrial and "railway" periods.

OLIVER: PLOWMAKERS FOR THE WORLD. (Exhibit catalog.) Discovery Hall Museum (120 S. St. Joseph St., South Bend, Ind. 46601), 1982. 24 pp. \$2.50 PPD. Illus. with photos and copies of advertising. Oliver Chilled Plow Works, from beginnings after Civil War to present (now White Farm Equip.)

GUIDES & INVENTORIES

Geoffrey Body, AN ILLUSTRATED HISTORY OF PRESERVED RAILWAYS. Moreland Publ. Co. (PO Box 2, Ashbourne, Derbyshire, DE6 1DZ, Engl.), 1981 £ 6.95. Short histories of all 30 preserved rys. in GB, and locates 250 places where artifacts are preserved. Chapter on operating a preserved ry.

Alan R. Clarke (SIA), STONE BRIDGES: A REMINDER OF OUR PAST. In *Northern Virginia*, Mar./Apr. 1982, pp. 12-14. "Tourist's guide" to some of the more interesting bridges in the Washington-Baltimore area.

G.L. Studley, CONNECTICUT, THE INDUSTRIAL INCUBATOR. History & Heritage Committee, Hartford Section, ASME (c/o D.W. Kitchen, 344 Beelzebub Rd., S. Windsor, Conn. 06074), 1982. 180 pp., illus. \$21.50 (\$18. ASME membs.) PPD. (Checks to ASME, Hartford Section.) A wonderful, thorough survey of the remarkable variety of industries in the state from its beginnings, with reference to sites.

REPRINTS

Daniel D. Badger, BADGER'S ILLUSTRATED CATALOG OF CAST-IRON ARCHITECTURE (1865). (With new introduction by Margot Gayle (SIA)). Dover Publs., Inc. (N.Y.), 1981. (Avail.: Friends of Cast-Iron Arch., 235 E. 87th St. (6C), NYC 10028) xvii (new introd.) + 35 pp. + 102 litho plates. \$9.95 PPD. Stunning facsimile of an important document in the area. Gayle's introd. identifies Badger's significant standing structures (fabled iron warehouse at Watervliet Arsenal; several in NYC) as well as the massive all-iron Grand Central Depot (mark I). Up to the usual Dover quality of reproduction. The value of the year.

G. Krook, THEORETISCH EN PRACTISCH MOLENBOEK (Theoretical & Practical Mill Book), (1850). Originally published by Doorman (The Hague); reprint: Lykele Jansma Uitgever (Antwoordnummer 104, 1285 ZV Buitenpost, the Netherlands), (1982?). 233 pp., with "atlas" of 21 40x 50 cm. lithos

in separate portfolio. Fl. 179. Basically the construction details of 5 mill types & portfolio of complementary engineering drawings.

SERIALS

Bertrand Lemoine (Ed.), ANNALES DES PONTS & CHAUSSEES, SPECIAL 150th ANNIVERSARY ISSUE. (Vol. 19, No. 3, 1981). ADP&C, 254, Rue de Vaugirard, 75740 Paris, Cedex 15, France. Splendid series of special historical articles on the origins, theory, and practice of civil engineering in France. Incls. 2 pp. of English summaries (avail. from R. 5020).

DER ANSCHNITT: ZEITSCHRIFT FÜR KNUST & KULTUR IMBERGBAU. (The Journal for Art & Culture in Mining). Bimonthly by the Deutsches Bergbau-Museum Bochum, Am Bergbaumuseum 28, D-4630 Bochum 1, West Germany. Single issues DM 12; annual subscription DM 72. Handsome, well-illus. offering treating the declared areas in the broadest sense—really the history of mining in all aspects. Articles, reviews, and general commentary. Continental orientation; in German.

TECHNOLOGIA (formerly TECHNOLOGIA BRUXELLENSIS). Quarterly review of IA and the history of science & technology. Published by the Assn. of Industrial Engineers, Brussels. (AIIBr, Ave. de l'Amarante 26, 1020 Brussels, Belgium). 270 BFr/year.

WINDMILLERS' GAZETTE. Quarterly, 12 pp per issue, \$8. per year. U.S. & Canada; \$12 elsewhere. T. Lindsay Baker, Publ., Box 7 W.T. Station, Canyon, Texas 79016. (2 issues have appeared, starting with Winter 1982.) A delightful, informative, chock-full offering on every aspect of the American farm/ranch windmill mainly, but other types as well, published by the nation's most authoritative windmill. History, nuts-&-bolts, availability of parts; all the rest of the early and current lore but pretty much excepting the modern wind generator.

BIBLIOGRAPHIC NOTES

Julia Elton, BRIDGES, DOCKS, & HARBOURS, With Related Works. Catalog of antiquarian books offered by B. Weinreb (93 Great Russell St., London WCLB 3QL), Feb. 1982. Catalog 45. 212 pp., 541 entries. \$30/20. Brilliant assemblage of many of the major works in these fields, mostly English language. Includes also lighthouses, CE in general, and biographies. Indexed & illus. Each entry extensively annotated making this itself an extremely valuable reference far above & beyond a dealer's offering.

Jack Goodwin (SIA), CURRENT BIBLIOGRAPHY IN THE HISTORY OF TECHNOLOGY. In *Technology & Culture*, April 1981, pp. 374-484. This annual tour de force; covering all fields and periods.

Ruth H. Kamen, BRITISH & IRISH ARCHITECTURAL HISTORY: A BIBLIOGRAPHY & GUIDE TO SOURCES OF INFORMATION. Architectural Pr. Ltd. (9 Queen Anne's Gate, London SW1H 9BY England), 256 pp. £30. Inc. sections on building construction--materials 7 methods, and building types--industrial, commercial, transport, lighthouses.

BOOKS & ARTICLES ON IA FOR THE YOUNG. Secretary Michael Folsom quite properly raises the question of publications for the prepubescent among us. There already exists a surprisingly extensive bibliography of works on IA and the branches of engineering, many of them explicatory. Folsom has made a start at setting this down, principally in conjunction with the Society's Education Project which he directs. Copies are available gratis from Rm. 5010. And... he would very much like to have additions from those of you aware of other titles.

NOTES ON THE BIBLIOGRAPHY OF TECHNOLOGY, by Lance R. Day (Librarian of the Science Museum, London). In the April 1982 number of *The Newcomen Bulletin* (Membership in The Newcomen Society, c/o The Science Museum, London SW7 2DD, is highly recommended). A two-page review of the principal sources in English of bibliographical information in the field. Very useful it is. Copies gratis from Rm. 5020.

DOCTORAL DISSERTATIONS. We mention from time to time the rich resource represented by this colossal body of research and thought. Many of IA concern are on microform, available

also as xerographic copies. A catalog of subjects in U.S. HISTORY is available from University Microfilms International, Box 1764, Ann Arbor, Mich. 48106. Some categories: Automobile Indus.; Economics; Commerce-Business; Engineering; Urban Planning; Women's Studies.

SPECIAL SALE. Columbia Univ. Press (136 S. Broadway, Irvington, N.Y. 10533) has out a good catalog with some items of IA interest, at very low prices. Of note: Siracusa's A MECHANICAL PEOPLE (SIAN Spring 1981); Horwitz' ANTHROPOLOGY TOWARD CULTURE: CULTURE & WORK IN A 19th-C. MAINE TOWN (SIAN Jan. 1980), at \$7.25 & \$8.75, down from \$22.50 & \$17.50. Can be ordered only via the catalog form, and until 31 July 1982.

John Butt & Ian Donachie, IA IN THE BRITISH ISLES (Paul Elek, London, 1979, 307 pp.) is on sale at Barnes & Noble, 18th St. & 5th Ave., NYC, \$4. (ca 24% of original price)

CONFERENCE PROCEEDINGS

Alan L. Olmstead (Ed.), SYMPOSIUM ON THE HISTORY OF AGRICULTURAL TRADE & MARKETING. Special issue of *Agricultural History*, Jan. 1982: papers from 1981 symposium. Includes session on food processing:

Patrick W. O'Bannon, TECHNOLOGICAL CHANGE IN THE PACIFIC COAST CANNED SALMON INDUSTRY, 1900-1925: A CASE STUDY;

G. Terry Sharrer, THE MERCHANT-MILLERS: BALTIMORE'S FLOUR MILLING INDUSTRY, 1783-1860;

Margaret Walsh, FROM PORK MERCHANT TO MEAT PACKER: THE MIDWESTERN MEAT INDUSTRY IN THE MID-19th CENTURY.

Alastair Penfold (Ed.), THOMAS TELFORD: ENGINEER. Proceedings of a seminar at Coalport China Works Museum, Ironbridge, England, April 1979. Thomas Telford, Ltd. (London), 1980. x + 181 pp., illus. £9.00. Covers eight areas of his work: Association with Shrewsbury; the Shrewsbury and Newport canals; the Holyhead Road; the London Bridge scheme; the Menai Suspension Bridge; steam carriage experiments; the Caledonian Canal; the Scottish Highlands bridges. Reviewed by R.A. Buchanan (SIA): *Technology & Culture*, Oct. 1981.

A.W. Skempton, LANDMARKS IN EARLY SOIL MECHANICS. Proceedings of 7th European Conference on Soil Mechanics & Foundation Engineering, Brighton, England, 1979. Vol. 5, pp. 1-26. (Availability unknown) A review of 30 treatises in French and English, 18th - early 20th c., with critical analysis of the development of this arcane field by one of the leading historians of civil engineering.