

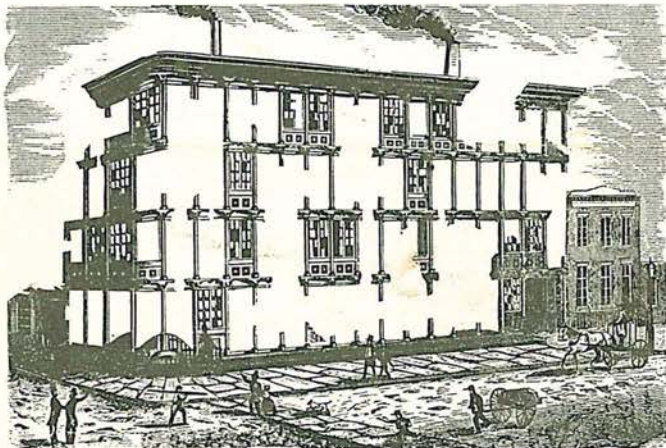
SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume Three Number 4

July 1974

BOGARDUS BUILDING BALDLY BOOSTED



This plate represents one of Bogardus's cast iron buildings, with the greater part of its iron work removed, or supposed to be destroyed by violence; in which demolished condition it will yet remain firm. It is designed to illustrate the strength, stability, and safety, obtained by Mr. Bogardus's method of construction; and also the security against an imperfect foundation: advantages possessed by no other buildings.

It must have appeared to the unknowing as junk, just more of New York's omnipresent demolition debris, this pile of cast iron cast off in a vacant downtown lot, home of winos and derelicts. Panel by panel, in daylight and full view, much of the five-story facade of the historic building was carted away by shantytown thieves and sold as scrap for whatever price

they could get.

There remains about a quarter of the parts of the 126-year-old structure, the prototype of all cast-iron facades, and forerunner of the modern steel-framed office building. Samples of the various components are intact; also examples of the decorative elements which the NYC Landmarks Commission had stored on its own premises.

The building, erected at 97 Murray St., was designed by James Bogardus in 1848, and known originally as the Laing Stores. It is significant for its simple post and lintel construction, the lightest type achieved until then, which made possible the use of slender uprights and a great percentage of window area. The further importance of the Bogardus structure was that it could readily be disassembled, moved, and reassembled at another location; or additional elements cast to expand it if so desired. Its distinction lay in its elegance, and the role it played in structural development.

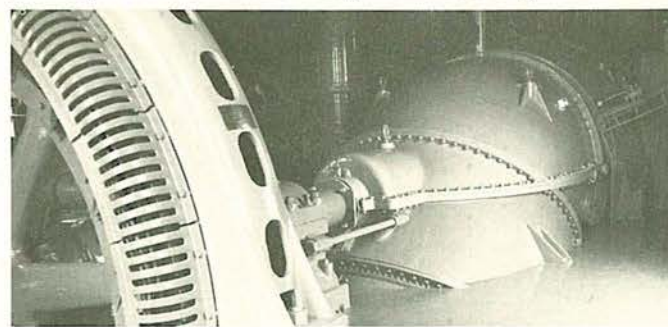
Designated an official NYC Landmark in 1970, the Laing facade was meticulously dismantled a year later to make way for the Washington Market Urban Renewal projects and stored in a fenced, open lot, which was to have been the site of its future reincarnation on the campus of the proposed Manhattan Community College. These plans still stand, and local preservationists are exploring the possibility of having the stolen parts recast, using those that survive as patterns. They assert that Bogardus would have done this. *Margot Gayle, Friends of Cast-Iron Architecture; Frances Frieder, NMHT.*

GRANT/COOKE WORKS BURNS

It was, predictably, "of suspicious origin," the fire that on 28 June destroyed the three-story c1870 shop building in Paterson, NJ, that had been part of the Grant, later Cooke, locomotive works. In a situation full of irony, the building is across the street from the Rogers Locomotive Works erecting shop which is one of the key elements in the Paterson historic industrial district; it had been scheduled for photographic recording this summer by Natl Park Service; and above all, it was the subject of one of Paterson's perpetual historic preservation-demolition fights with the state Dept of Transportation, who *still* are attempting to build an interstate highway extension through the district. Even as the building burned, the Great Falls-SUM salvage excavation project [SIAN 2:5] carried on less than 100 yards away. (Suspicious, not the least as it was the scene in April 1973 of another small fire that apparently aborted. Moral—if you want a job done right, hire a pro.)

Wood Screw Pumps Dedicated

The ASME on 11 June dedicated as a Natl Historic Mechanical Engineering Landmark two low-head, high-volume axial screw pumps of 1915 in the No 1 "Melpomene" Pumping Station, New Orleans. Developed in 1912 by A B Wood



PATERSON SYMPOSIUM

26 & 27 Oct 1974. The IA of Paterson, New Jersey's National Historic Industrial District: research papers & walking tours. The Fall Meeting of the Council for Northeast Historical Archeology, in cooperation with the SIA. Hosted by the Great Falls Development Corp. Paterson Library, Broadway. (201) 278-2800. *Full details with Sept SIAN.*

(1879-1956) of the city's Sewerage & Water Board to elevate storm water from the city's low areas to the level of Lake Ponchartrain, the pumps, installed in quantity from 1915 to 1929, made livable the city "built where no city had any business being built." The pumps in the No 1 Station are 12-ft in diameter, raising 248,000 gpm against a 7-ft head, driven at 75 rpm by 600 hp synchronous motors. Wood pumps have been used throughout the world for low-lift drainage (a 14 pp pamphlet on the pumps and their background is available: ASME, 345 E 47th St, NYC 10017, Attn: Ms Garvan).

Oldest USGS River Gaging Station Honored



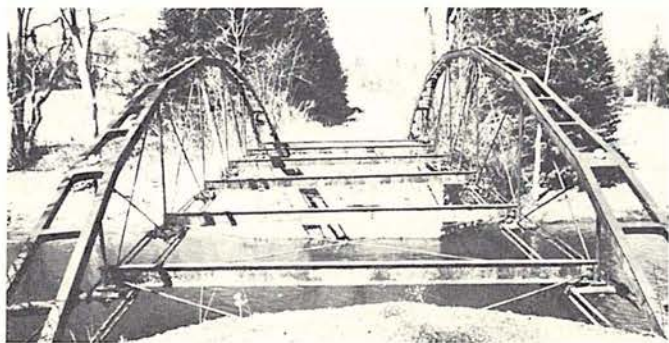
Embudo Gaging Station, looking upstream. Arthur H Frazier photo.

On 10 May, Charles W Yoder, president of the ASCE, presented Joseph S Cragwall, Jr, recently appointed Chief Hydrologist of the US Geological Survey, with a bronze plaque identifying the river gaging station on the Rio Grande at Embudo, NM [on US 64 between Espanola and Taos] as a Natl Historic CE Landmark.

In the Fall of 1888, John Wesley Powell, then director of the USGS, selected that area as a training center for a group of young engineers who were to become the first hydrographers of the US Irrigation Survey, forerunner of the present Water Resources Divn of the USGS and of the Bureau of Reclamation. The engineer whom Powell placed in charge of the camp was Frederick Haynes Newell (1862-1932), later first director of the Bureau of Reclamation. Among those speaking at the ceremony was Wilbur Heckler, retired District Engineer, USGS, a coauthor of Geological Survey Professional Paper 778, *Embudo, New Mexico, Birthplace of Systematic Stream Gaging*, in which the complete story of this historic training center is revealed.

The plaque will be installed on a monument to be erected at a turnout along the highway, in full view of the attractive recording gage shelter and modern cableway (from which USGS hydrographers were then measuring the flow of the Rio Grande). Streamflow records from Embudo date to 1889, the oldest such records to have been published in the Survey's *Water-Supply Papers*. Arthur H Frazier, NMHT.

A Third Whipple Truss



Doris Manley photo.

A rare surviving example of the Whipple bowstring truss bridge—first all-iron highway bridge extensively used in America—has been preserved from scheduled demolition and will be nominated for the Natl Register. The 75-ft cast- and wrought-

iron bridge spanning the Sugar River in Talcottville (Lewis Co), NY is of uncertain date and origin but was built on the basic patent (1841) of Squire Whipple, often called "the father of American bridge building." Hundreds of these bridges were built by Whipple and others, over the Erie Canal and other waterways, between 1840 and 1890—mostly in NY state. Acting on information supplied by the NYS Dept of Transp as to the bridge's historical significance, the town of Leyden, which owns it, has decided to preserve it as a local historical monument. Only two other bridges of the type are known to survive—one in Albany, NY, built 1867 by Simon DeGraff and another in Fonda, NY, built 1869 by Whipple. William P Chamberlin, NYS Dept of Transp.

California State RR Museum

A projected California State RR Museum is now assured of funds for completion. A state bond issue recently was passed providing \$6.8 million for its design and construction, in Sacramento's historic district. A modern museum plus two renovated early Central Pacific Ry riverfront structures will house the magnificent rolling stock collection of the Railway & Locomotive Historical Soc, Pacific Coast Chap. Preliminary plans are finished; detailed plans underway. It is hoped that the museum will open in 1977. This is the second publicly supported US railway museum. The new Pennsylvania State Ry Museum at Strasburg is now installing exhibits. The time when only enthusiast museums represented this important field is now past. John H White, Natl Mus of Hist & Tech.

MARINE NEWS

Alexander Hamilton. Those of you who attended the SIA's 1st Annual Conference in NYC will recall this marvelous vessel, last of the great Hudson River Day Line sidewheelers, tragically, since her 1971 retirement, going tatty at the South St Seaport Museum. A variety of plans for restoration with onboard restaurants and shops seem to have fallen apart. None too soon there has been formed The Committee to Save the Alexander Hamilton, which already has taken steps to arrest the decay and investigate means for full restoration and suitable use, ideally by the State for Bicentennial purposes. CSAH invites interest and support. 16 Fulton St, NYC 10038.

Monitor. It is doubtful that, excepting the Ark, there has been more speculation on the location of the remains of any vessel than of John Ericsson's legendary *Monitor*, intended scourge of the South and generally regarded the first modern war vessel. She went down in tow in a gale off Cape Hatteras, NC in Dec 1862, her precise location and condition a mystery since. Even a flurry of search activity during the Civil War centennial period in the 1960s failed to identify her gravesite. Now an institutional consortium with heavy industry and Navy support, employing the full available array of sophisticated sub-marine inspection instruments, has located what is claimed unequivocally to be *her*, bottom up, in 220 feet. There are some doubters, pending retrieval of artifacts, but in any case there is little question that, because of the depth and her inevitable state of deterioration, raising would be impossible. (Full account: *Industrial Research*, April, pp 33-35).

SS Nobska. Last of the Cape Cod-Mass island (real) steamers (1927), she is being considered for sale or other disposal by the Woods Hole, Marthas Vinyard & Nantucket Steamship Authority due to high operational costs and other pragmatic matters. There is a rising tide of outrage at the prospect, however, because she is totally fit, the Authority is doing nicely at the till, and she is the only member of the island fleet that doesn't look "like an inverted bathtub, shuttling ingloriously across the sounds" (viz: the motor vessels). Responding to the Authority's contention that she is costly and inefficient to operate, a champion of her preservation and retention in service tersely points out that "people do not go to, nor do they live on, the Cape and Islands for the economy and efficiency involved." *Boston Globe*.

THE RPIA INSTITUTE

The first annual Institute on IA was held at Rensselaer Polytechnic Institute, Troy, NY, 24-28 June, with 20 participants exploring all aspects of IA under the guidance of specialists in architecture, history, engineering and dirt archeology. Four days were spent in the field, supplemented by three evenings of slide presentations and, on the fifth day, a survey and discussion of IA literature, recording procedures and activities which participants could initiate back home.

The Institute heard much about the SIA, not only because of its importance in IA but because many of its luminaries were on the faculty. Edward Rutsch led an exploration of the extensive water power ruins in the rugged Poestenkill gorge. Ted Sande dispensed architectural information about the Watervliet Arsenal buildings and the mills and company housing in Cohoes. R A Buchanan, who came from England for the Institute, spoke on canal technology, the nature of IA and government's role in IA, and provided, out of British experience, a fresh perspective on most subjects covered by the Institute.

Paul Rivard wrestled with puzzling aspects of former machinery placement within the Harmony Mills, Cohoes, while Euan Somerscales lectured on the technology of both water power and iron and steel before the Institute visited the remains of the Burden Iron Works and its renowned 60-ft water wheel. Thomas Phelan provided the initial orientation to area history and IA with a talk delivered on a hill overlooking Troy and the Hudson to north and south.

John and Diana Waite led the Institute through Troy itself, emphasizing preservation techniques and problems. In addition, John Mesick gave a slide presentation on adaptive-use proposals for a crumbling industrial-commercial section of Troy which the Institute first studied on foot; and a social historian used the Harmony Mills' mid-19thC company housing to reconstruct the social milieu of Troy and Cohoes in their industrial heyday.

This array of expertise was in keeping with the Institute's objective: to impart to participants as much understanding as time allowed of *all* aspects of IA. Thus, the Harmony Mills were examined from the viewpoints of an engineer, an architectural historian, a social historian, and a specialist in early textile mills. Similarly, to supplement architectural and industrial analyses of the Troy Gasholder House (the SIA logo), Thomas Ryan gave an on-the-spot explanation of the roof framing system. And on the way to the Burden Iron Works site, slides and models of the vanished structures were shown in the "company church" the Burdens built overlooking their domain.

The 20 participants come from such diverse backgrounds that it is difficult to generalize about them. Some of the more unexpected occupations were community college dean, reference librarian, and museum exhibit planner. Few were not professionally involved in some way with IA, and future institutes will continue to be directed toward people who have some IA-related professional background but wish to acquire knowledge and skills in other areas of the subject.

Although this basic intention means that no aspects of IA will be excluded from future institutes, there will be yearly changes of emphasis. In 1975, for instance, water power will receive less attention and transportation—railroads and canals—more. For information: Merritt Abrash, Dir, Inst on IA, RPI, Troy, NY 12181.MA.

Lowell Bicentennial Project

The City of Lowell, declared one of MA's "visible cities" for the Bicentennial and the nation's first planned industrial city, is making positive progress toward establishment of an urban national cultural park [SIAN 1:4:4]. Plans for the park include the use of canals and walkways for recreational purposes and the organization of indoor and outdoor museums, a visitors center, and lock-demonstration units. Also proposed is the creation of a bicycle and walking path network and establishment of a major cultural arts center in one of the former cotton mills [SIAN 3:2].

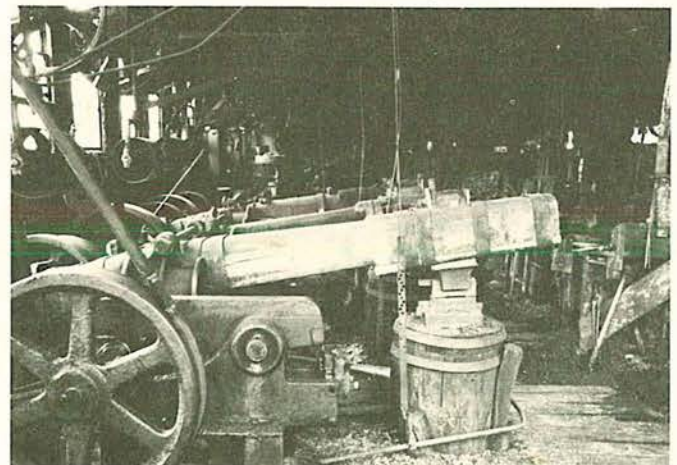
The project has been presented to both State and Federal governments; decisions from both are due shortly. The restoration project will cost about \$30 million, including about \$8 million for land. Spinoff projects, such as adaptive-use restoration of other buildings and streets around the city, would raise the price. Development time could be as long as 10 years. Specialty developers will be commissioned for each project whenever possible. \$3.7 million of Federal and State money was spent through December 1973 on various phases of restoration. [Full account: *Preservation News*, May.]

Kay Byram, NMHT.

ARCHIVAL COLLECTIONS

While IA is principally concerned with evidence from physical remains, it should be noted from time to time that there is a strong interdependence between this form of evidence and that found in surviving records. Four important collections of documents recently have been placed in the custody of public institutions, their accessibility for research thereby enormously improved.

Emerson & Stevens Mfg Co (1870-1964), both the first and last of the many edge-tool factories once working in Oakland, ME, was best known for its fine axes. At its height E&S employed over 35 men at the forges and grindstones. The Maine State Museum, Augusta 04330, has acquired 30 running ft of E&S papers and artifacts covering its entire lifespan: ledgers, orders, letters, photos, advertising, axe heads & sythe blades in work stages, salesmen's samples, &c. In the collection also is a documentary film by Peter S Vogt (SIA) of the works in operation during its terminal days. The Museum is now gathering oral history from the last E&S president.



Emerson & Stevens trip hammers, 1966.

Peter S Vogt photo.

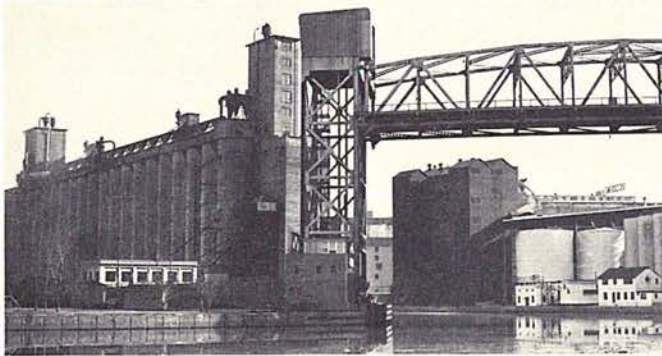
McIntosh, Seymour & Co, Auburn, NY (c1890-c1930), were builders of what are commonly regarded as the finest production steam engines in the US (later large stationary and marine diesels; later a divn of American Locomotive Co). A mammoth collection constituting the firm's entire holdings of engineering drawings, orders, specifications, and other data, is now in the Natl Museum of History & Technology, Washington.

American Iron & Steel Inst, NYC. Its vertical files constituting a large, unique archive of material on the development of iron and steel production, has gone to the Eleutherian Mills-Hagley Foundation Library, Wilmington, DE.

Ward Engineering Works, Charleston, WV (1880-c1935), a major boat, marine-engine and boiler builder, is the source of a major collection of papers, drawings, and photos recently donated to WV Univ. Included are correspondence and invoices, 1917-31; several hundred photos of the plant and vessels constructed; engineering drawings; patents; &c. Ward, one of the largest firms in Charleston at the turn of the century, specialized in shallow-draft river boats.

ADAPTIVE USE

The Grain Elevators of Buffalo, NY. Buffalo's location on the Great Lakes made it a gateway to the Midwest, and, after 1825, its position at the head of the Erie Canal, an outlet to the East. It was a natural transfer point for the shipment of grain to the coast and in 1842 Joseph Dart had the first steam transfer and storage grain elevator in the world constructed at Buffalo Harbor.



Left: Standard elevator—1920, 5.1 million bu; right: Cargil's Electric, 1897, 1 million bu. Dennis J. Connors photo.

It led to the development of a huge grain industry there, and over the years dozens of elevators were constructed, first of wood, then steel, and finally, reinforced concrete. They came to dominate the harbor and continue to bestow a Midwestern flavor on Buffalo's skyline.

The elevators came on hard times when the St Lawrence Seaway opened in 1959, negating the necessity to unload and ship east by rail. Since then, many elevators have been demolished or shut down and there is little hope of revival. The grain elevators are a massive challenge for adaptive use given their specialized construction and poor locations.

Of the 15 remaining elevators, perhaps the most interesting is Cargil's 1897 all-steel *Electric Elevator* (photo), promoted as absolutely fireproof. It was the first of its kind in the East, and the first Buffalo elevator to use the new hydro-electric power from Niagara Falls.

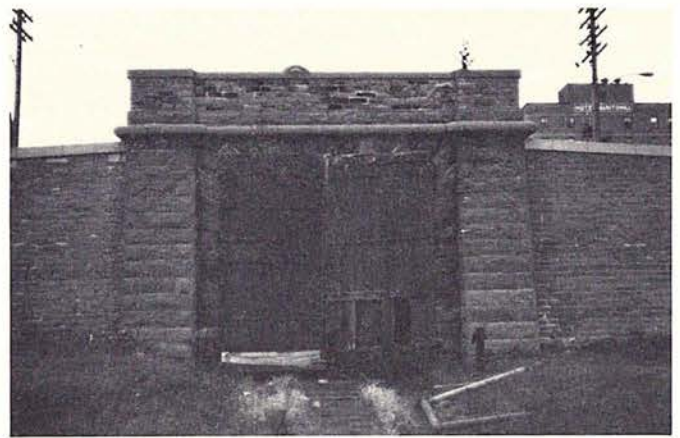
The dominant elevator style in Buffalo, however, is that of the great cylindrical masses of reinforced concrete that so exhilarated Henry Russell Hitchcock with their "majestic purity," prompting him to write: "... the concrete elevators of the 20th century, these peculiarly Buffalo buildings, represent the challenge of American engineers to American architects. This challenge has rarely been answered."

A full-scale survey of the Buffalo grain elevators is presently viewed as a very significant project for HAER in the near future, and efforts are underway to secure the necessary local support. *Dennis J Connors, Landmark Soc of Western NY.*

The Brockville Railway Tunnel. Brockville, Ont, has the distinction of having a railway tunnel, the first built in Canada, passing under the center of the city. The Canadian Engineering Heritage Record [SIAN 1:6:1] investigated the historical and technical aspects of this early engineering structure and discovered the following.

The tunnel's history is bound up with that of the Brockville & Ottawa Ry. Formed to transport supplies and lumber to and from the Ottawa Valley, the B&O planned its line as a feeder to the Grand Trunk, then being built from Montreal to Toronto. Because a steep bluff blocked direct access to the railway terminal on the waterfront, the English contractors, Sykes, DeBergue & Co, chose to tunnel through the obstacle. Excavation began Sept 1854, financial difficulties delaying its completion until Dec 1860.

Money problems continued to plague the B&O, forcing it to merge with the Canada Central Ry in 1878, the Canadian Pacific absorbing the CCR in 1882. As locomotives became bigger with time, the small tunnel could not accommodate them. Therefore, two special locomotives were kept at Smiths Falls specifically for pulling trains through the bore. The last steam



powered train passed through in 1954; diesel switchers continued to use the tunnel for another decade. Since the mid-60s the tunnel has rarely been used and remains closed today.

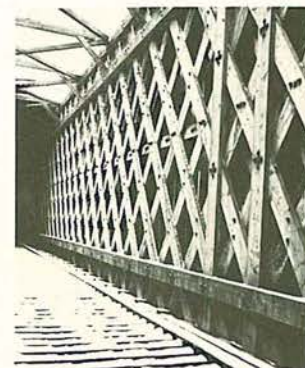
The tunnel in 1721 ft long, running N-S under Victoria Ave. It is arch-shaped, 14'-9" high x 14 ft wide, single track. The tunnel near the ends is bricklined; the center portion shows bare rock. Two shafts running up to the roof of the City Hall allowed locomotive smoke to escape. Both portals are faced with limestone, the southern one being more elaborate since it borders on one of the main streets. A unique feature is that there are wooden doors at each end. These were closed at night to maintain an even temperature and to keep stray animals from wandering in.

After investigation the CEHR concluded that construction probably was a straightforward process employing known tunneling methods and that the engineering of the tunnel could not be called a technological achievement. Structurally the tunnel is quite stable after 120 years; it needs only minor repairs. As the oldest existing railway tunnel in Canada, however, it should be preserved. The CPR is anxious to have some agency take it off their hands. The City of Brockville is interested in acquiring the structure provided it could be turned into a tourist attraction. No one seems to know how to do this. If anyone has any ideas, please write to the Secretary, Canadian Engineering Heritage Record, Dept of Indian & Northern Affairs, Ottawa, Ont, Canada, K1A 0H4. *Judith Roberts, CEHR.*

17thC Mill. The March/April issue of *Architecture Plus*, a recently formed magazine that covers the architectural scene internationally, is given over entirely to the question of "recycling" older buildings. Included are several examples of IA interest, in particular, a 1695 gristmill (partially rebuilt after a fire in 1898) in Imlaystown, NJ, that operated to 1962 and now has been converted into the offices of an architectural and planning firm. Deserving special praise is the way in which the firm, Zion & Breen Assoc, have sensitively built around the existing power and milling machinery so that at some future date the building could be converted back to its original purpose. The main entrance is actually a bridge within the building that spans, and allows one to look down at, the water turbine below. With only a few exceptions, the original machinery has been restored and kept in place. *Ted Sande, Williams College.*

MISC SITES & STRUCTURES

Albany Union Station. Hope springs eternal. Next to Grand Central the most splendid in the NY Central & Hudson River RR's stable of splendid stations was Albany Union (1900). Long abandoned, the deteriorating hulk has been the subject of attempted conversions, sales, and demolition by a variety of state and private organizations. The NY Office of General Services again is chewing on the problem, mumbling about demolition to make sale of the site more attractive. The structure's only apparent friend is restoration architect John Mesick (SIA) who, convinced of its basic soundness and worth to the community, envisages a variety of adaptation schemes.



Chester H Liebs photos.

Vermont and the Register. Vermont is among the handful of states whose review boards for the Natl Register have taken seriously their charge of including on the Register sites and structures that present a comprehensive, balanced record of our physical heritage, by systematically nominating industrial structures. Recently entered on the NR through the efforts of the VT Divn of Historic Sites:

- Central Vermont RR Headquarters, St Albans. 12 major structures incl shops (c1863-70), general office building (c1869), &c.
- Douglas & Jarvis Patent Parabolic (lenticular)-Truss Iron Bridge, Highgate Center, 1887, spans of 215 and 80 ft.
- Covered bridges, 90% of which have been or will be entered on the NR. Recently registered is the 369-ft, 3-span RR bridge at Swanton, formed of continuous Town double-lattice trusses.

D&R Canal State Park. Legislation has been passed by the state of NJ to create a linear park along 60 miles of the canal.

It was bound to happen sooner or later, but we still don't know whether to cheer or weep. The first four-level highway interchange, built 1953 in Los Angeles, has been declared by the ASCE a Historic CE Landmark. But then . . . the Johnstown Flood and the Great Plague were historic landmarks . . .

Demolition for NYC Pier A?



Theo H. M. Prudon photo.

Few examples of the waterfront architecture once lining the Hudson River have survived. Most piers on Manhattan's W side between Battery Park and 14th St have succumbed, now partially replaced by a landfill for the future Battery Park City, a housing and office project. City Pier A, close to Castle Clinton in Battery Park, is the only pier left in the area. The two-story pier was constructed 1885-86 for the Dept of Docks. Since 1960 it has been used by the Marine Fire Co No 1 as a waterfront fire station.

The pier has been altered at various times, most notably by a 50-ft extension in 1900 and in 1928 the installation of a clock in the former lookout, to commemorate the dead of WW-I.

Castle Clinton, the US Custom House—both also in the Battery Park area—and City Pier A together form an important symbol of NYC's growth in the past and its economic dependence upon shipping. The demolition of this sound structure, "to give the public an esplanade along the waterfront that would continue into Battery Park, and a full view of the river," would seem frivolous. Moreover, a new facility for the Fire Dept subsequently would have to be constructed. *Theodore H M Prudon, Columbia Univ.*

THE WORK OF IA

Point Breeze Gas Works



David G Orr photo.

On 13 Dec 1854, the fires were lit in the retorts at the new Philadelphia Gas Works on Passyunk Ave, Point Breeze. This expanded the manufacturing capacity of the original 1834 plant at High (Market) St and the Schuylkill River. This earlier plant was the work of Philadelphia's noted architect and engineer, William Strickland. The new Point Breeze facility had four retort houses, a purifying house, a meter house with offices, and a telescoping gasholder (160 ft diam x 90 ft high; 1,800,000 cu ft), then the world's largest. The works, now known as "Station A", still uses several of these structures.

As a result of the U of PA IA course [SIAN 2:5:4] work was begun this year to research, measure, examine and interpret the old gas making complex. Initial work is centering on the meter house-office building (photo), described in the Chief Engineer's 1855 Report as being 100 ft x 30 ft and Gothic in style. An early engraving of the building differs markedly from the extant structure. While the basic ground floor plan has survived with its lancet-arched windows and entryways, an entire second floor has been added. The present buttresses apparently were incorporated into the building at the time of these major alterations; probably late 19thC. Future work will provide a complete set of measured drawings and interpretive account of the building.

The turbulent history of the PGW at Point Breeze is significant in tracing the rise of municipal gas services in the US. In addition, the career of John C Cresson, the works' chief engineer, 1834-1864, and an early president of the Franklin Institute, has become increasingly more important as our project continues. *David G Orr, Herbert W Levy, Univ of PA.*

Tom Thumb Turntable Sought

Digging has begun on the turntable site of the Baltimore & Ohio RR station in Ellicott City, MD. A stone wall currently being uncovered is believed to be the pit wall of a later turntable than that built in 1831 for the legendary locomotive *Tom Thumb*. Speculation that there may be a smaller, earlier



Maryann F West photo.

platform is based on study of the turntable at the Mt Clare station in Baltimore, and on track notches cut into the joists of the Ellicott City station at a level significantly below the stone pit.

Test pits are being dug in the central portion of the turntable to determine how deeply the area was filled when turntable operations there ceased. So far, a number of handhewn nails and spikes and pieces of the original track have been recovered. An unexpected find in the fill material was a Conoy Indian handaxe approximately 1,000 years old.

Digging will continue until October and begin again in the spring; the winter months will be used for laboratory work. Completion is expected in 1976. The work is under the direction of R Pennington Smith, Instructor of Physical Anthropology & Archeology, Catonsville Community College, and is part of the Station's restoration undertaken by Historic Ellicott City, Inc in cooperation with the City, which has leased the structure from the B&O. Reynolds J Horpel (SIA), president of the Archeological Soc of Maryland, has been assisting in the work at the site. *Maryann F West.*

Recording needed. Neoprimative lime kiln nr Cass, WV, built early 1940s, soon abandoned. Info: Emory Kemp, Dept of CE, WV Univ, Morgantown 26506.



SIA AFFAIRS

With enormous pleasure we announce that the SIAN Table of Organization has been expanded once again, as we are joined by Smithsonian Associates volunteers **Kay Byram** and **Frances Frieder**.

We probably should have mentioned this long since, the SIAN's byline/contribution policy, but haven't probably because it's still a little amorphous even to us. However, we think it works like this. When a contributor sends in an article he/she has *written*, essentially complete and ready to run, it is given a terminal byline, with institutional affiliation if appropriate. When more-or-less raw data, or a published item is sent, in the resulting note or article the sender is not mentioned, but the original publication usually is cited. This does *not* mean that we are not grateful to the sender. You know we are, even though there usually is not an individual acknowledgement. These submissions are the lifeblood of the *Newsletter*. Please keep it up, recalling the timeworn admonition: *If In Doubt, Send It Along*. Reviews are, of course, always signed. Here, as in bylines noted above, we tend not to use individuals' titles, mainly to save space.

MISC NOTES

Assn for Preservation Technology. Annual Conference: Halifax, NS, 24-29 Sept. Information on conference & APT: Meredith Sykes, APT, Box 2682, Station D, Ottawa, Ont.

Historic Transportation Facilities Catalog. The US Dept of Transportation is compiling a HTFC as a Bicentennial project, inviting submission of sites and structures significant in any aspect of the development of transport in the US. Buildings, structures, objects, and districts are to be included. Particularly sought are facilities not otherwise recognized by existing inventories and registers. Office of Consumer Affairs, Secy of Transp, Washington 20590.

Elizabeth J Leppman of Toronto has received a New Jersey Historical Commn grant for research on "The Iron Industry in the NJ Pine Barrens, 1750-1850."

Slater Mill Historic Site has been awarded a grant from the Natl Endowment for the Humanities for the development of an exhibit area that will reinterpret the role of handcraft (hand weaving) technology in the early 19thC.

Ironbridge Gorge Museum has been named by the British Tourist Authority the winner of the "Come to Britain Trophy" for 1973, as the most outstanding new tourist development of that year.

IA Holidays & Weekends (GB). Canals, museums, railways, industrial sites, &c &c. Info: Coombe Cross Hotel, Bovey Tracey, Devon, and Grand Metropolitan House, 7 Stratford Pl, London W1A 4YU.

The Canadian Natl Electric Lines Historical Group has been formed by T G J Gascoigne (SIA) to promote interest in and publish on electric and interurban Rys in Ont and PQ. TGJG, Box 565, Oshawa, Ont L1H 7L9.

The Wings of Aeolus. The Feds too are beginning to look at natural pollution-free energy sources, both new and revisited [see SIAN 3:2:3]. The Natl Science Fndn and NASA are building an experimental 100-kw wind turbine-generator with a 125-ft rotor, atop a 125-ft tower, at Sandusky, OH, looking toward units of 1 to 2 megawatts. It's been done before, of course: recall the ill-fated 1250 kw Central VT Publ Svc Corp unit at Grandpa's Knob that was *on the line* in 1945, until a blade failure caused its destruction. This is, clearly, just the beginning.

Inquiries & Quests

Sugar Refineries. An 8-story bldg standing behind Christ Church, Phila, may well be the 1790s sugar refinery of John Dorsey. If it proves to be, is an earlier one known in W Hemisphere? Charles E Peterson, 332 Spruce St, Phila, PA 19106.

Savonius wing ("S")-rotor windmills. The Finn, S J Savonius, built at least one of these, in E Islip, NY, 1931. Were there others in NA? That survive? Wm Foshag, RD 4, Creek Rd, Carlisle, PA 17013.

Up-&-down sawmills; tub & flutter wheels. In connection with a salvage excavation project, John S Wilson, Dept of Anthro, U Mass, Amherst 01002 would appreciate data on sources of information, particularly on the production aspects of the early lumber industry.

Bags. Graphically attractive flour & meal bags are being sought for an exhibit in its restored Colvin Run Mill, by Fairfax Co, VA. Michael C Rierison, Asst Supt of History, Box 236, Annandale, VA 22003. (703) 941-5000.

Curiosa

Christmas in July: the IA of the Carol (On lesser-known instruments). It was presented as a potential ad but we call it news. In what must be a unique event, Christmas is heralded each year in York, PA by a Christmas Eve concert of carols played on . . . the variable-pitch steam whistle of the NY Wire Co . . . by whistlemaster Marlin L Ryan. And not only that,

you can bring these joyous sounds right into your own living room, on tape, cassette or 33-1/3-rpm record (7"), with narration. Info: P O Box 322, York, PA 17405.

No Fooling, Russ? Environmental Protection Agency chief Russell Train, publically noting recently that it carries 4-million passengers/week and is vastly cleaner and more energy-efficient than the automobile, solemnly proclaimed that the NY Subway system is a "priceless asset and an irreplaceable resource."

PUBLICATIONS OF INTEREST

Sally MacDonald Iliff, **A Life All Its Own—the Mount Royal Station of the Maryland Institute, College of Art**. MICA, 1300 W Mt Royal Ave, Baltimore, MD 21217. 28 pp. \$1.26. Fine, illus essay on the station itself, and its transformation into studios, library, auditorium, &c by MICA, in one of the most successful industrial-structure adaptations in NA.

Edward A Lewis, **The Blackstone Valley Line: the Story of the Blackstone Canal Co & the Providence & Worcester RR**. The Baggage Car, Box 332, Seekonk, MA 02771. 80 pp. \$3.95 paper.*

David H Miars (SIA), **A Century of Bridges—the History of the Champion Bridge Co**. 1972. Avail: the author, 1779 Greene Rd, Martinsville, OH 45156. 48 pp. \$3. What we need more of: a descriptive history of one of the numerous iron/steel bridge firms that gave such a boost to the development of internal communication in late-19thC NA.

Donald B Myer (SIA), **Cabin John Bridge—A Washington Landmark**. ASCE Meeting Reprint No. 1873. Feb, 1973. 7 pp, illus. Copies avail: Editor.

Robert C Post (SIA), **Electro-Magnetism as a Motive Power**. In *RR History*, Spring, pp 5-22. A splendid illus acct of the early electric motor & locomotive.

Robert C Reed, Charles T Harvey & the NY Elevated Ry. In *RR History*, Spring, pp 23-40. Early history of our first rapid transit, by cable.

Paul E Rivard (SIA), **Samuel Slater—A Short Interpretive Essay on Samuel Slater's Role in the Birth of the American Textile Industry**. Slater Mill Historic Site, Pawtucket, RI 02861. 32 pp. \$1.20 pp. Lays to rest the Slater "feat-of-memory" legend.

Kenneth D Roberts (SIA), **Eli Terry & the Connecticut Shelf Clock**. Ken Roberts Publ Co, Box 98, Fitzwilliam NH 03447. 320 pp, illus, index, &c. \$20. Broad coverage of an early mass-produced product. (Review in *Antiques*, Oct 1973 pp 600)

William S Young (SIA), **The Bridge of Stone—a History of the Starrucca Viaduct**. Starrucca Valley Publs, Lanesboro Rd, Starrucca, PA 18462. 32 pp. \$3. Essentially the contents of *Railroading* No. 48 [reviewed SIAN 2:6], revised and with addl illus. The last word on one of America's greatest engineering structures and its builders.

Underwater Archaeology: A Nascent Discipline. Museums & Monuments Series No. 13. Paris: UNESCO, 1972. 306 pp, illus. \$15. Compendium of 26 fairly recent articles.†

†Review in *Technology & Culture*, Jan 1974.

*Review in *Railroad History*, Spring 1974.

Special Reports

J Henry Chambers, **Rectified Photography & Photo Drawings for Historic Preservation**. Office of Archeology & Historic Preservation, Natl Park Service, Wash, DC 20240. 38 pp. One chap of a forthcoming NPS handbook on historic preservation, avail in limited quantity to those seriously interested in or needful of information on this useful recording technique.

Anna Cox Toogood, **Historic Resource Study—Allegheny Portage RR Natl Historic Site**, Penna. Natl Park Service, Denver, CO. May 1973. Avail: NTIS, 5285 Port Royal Rd, Springfield, VA 22151. \$15. xiv + 252 pp. Highly detailed

study of the history, historical resources, and extant remains (from the Natl Register forms) of this remarkable combined RR/canal that traversed the Alleghenys. (See also Winter 1974 *Canal Currents*—a special on the APRR (PA Canal Soc, 102 W Jackson St, York 17403.))

HAER & Gt Falls Development Corp, **Great Falls—SUM Survey—a Report on the 1st Summer's Work**. HAER, Natl Park Service, Wash, DC 20240. 82 pp. Introduction by Eric N DeLony; essays by Russell I Fries (both SIA). Full Historical descriptions of the Rogers Locomotive Works, the Phoenix Mill, and the SUM Power Canals + the HAER drawings and some photos, and early photos, all deriving from the 1st year's work in Paterson, NJ. Interesting and extremely useful.

Reprints

Walter G Berg, **Buildings & Structures of American RRs**. Orig publ, John Wiley & Sons, 1893. The 1st 245 pp full-size facsimile reprinted in 3 parts as *Train Shed Cyclopedic* Nos 7 (\$3.95), 13 (\$4.95), and 19 (\$4.50) by Newton K Gregg/Publ, Box 868, Novato, CA 94947. *TSC* is a series of reprints on RR subjects, mostly motive power & rolling stock. Berg is the best 19th C work on RR structures, fully describing and illus a wide variety of specific stations, sheds, terminals, shop and pier buildings, &c.

Charles Ellery Hall, **The Story of Brick**, 1905. Reprinted, indexed and expanded by Daniel DeNoyelles (1 Pine Dr, Thiells, NY 10984). 65 pp. \$4.06. Excellent account of the technology of the industry in the Hudson Valley, well illus with photos of machinery, yards, kilns, clay pits, co towns, &c. A valued addition to the precious little documentation of an important industry.

By Argosy-Antiquarian, Ltd, 116 E 59th St, NYC 10022:

- Octavius T Howe & F C Matthews, **American Clipper Ships**, 1833-58. 1926. 2 vols boxed. 113 plates. \$37.50.
- J Marvin Hunter, **Trail Drivers of Texas**. 1925. 2 vols boxed. 1070 pp, illus. \$37.50.
- John H Morrison, **History of Steam Navigation**. 1903. 637 pp, 55 dwgs by S W Stanton. \$20.
- Gustavus Myers, **History of Canadian Wealth**. 1914. 347 pp. \$10.
- Alexander Starbuck, **History of the American Whale Fishery**. 1878. 2 vols boxed. 816 pp. \$35.

Serials, Catalogs & Directories

Industrial Archaeology, the Journal of the History of Industry & Technology, has changed publishers & format, although John Butt remains as editor. The quality and informativeness of this fine journal has in the process risen, there now being a section of timely notes and short articles; newslettery, in fact. Annual subscription \$9. Bratton Publ, Ltd, 17 Rutland St, Edinburgh EH1 2AQ, Scotland, who also publ *Transport History* and *Maritime History*.

Journal of Field Archaeology. A new publ, by Boston U & the Assn for Field Archaeology, for reporting the work of field archeologists and others dealing with primary excavation material; methodological and technical problems, &c. JFA, 775 Commonwealth Ave, Boston, MA 02215.

American Gold News (Dedicated to the advancement of the Gold Mining Industry in the US). American Gold Assn, Box 457, Ione, CA 95640. 16 pp/issue, monthly. \$5/year: \$7 foreign. For the small operator; heavily historical.

Reliable Steam Engines—1972-73 Catalog-Handbook. Reliable Industries, Inc. 34403 Joel St, New Baltimore, MI 48047. 22 pp. \$1. Stationary & marine engines & boilers 4 – 125 HP, also plans.

Randolph Kean (comp), **The Railfan's Guide to Museum & Park Displays**. Publ Harold E Cox, 80 Virginia Terr, Forty Fort, PA 18704. 250 pp. \$7. Stunningly comprehensive listing of all RR & electric ry motive power & rolling stock displayed in NA, Central America & the Caribbean, operating & static,

alphabetically by state and province, for use by traveler, with full locating instructions & technical/historical descriptions.

1974 Steam Passenger Service Directory. Empire State Ry Museum, Box 666, Middletown, NY 10940. 144 pp. \$2. Guide to all operating steam and trolley passenger lines in NA, including museums with static displays.

Restored Village Directory, 3d edn. Quadrant Press, Suite 707, 19 W 44th St, NYC 10036. 80 pp. \$1.75. 1 village/page; full descrip, hours, photo.

Recent 2nd hand catalogs. **RRs & Canals:** Paul E Belisle, 74 Spruce St, Watertown, MA 02172. **IA, Econ, & Social History** Dillon's University Bookshop, 1 Malet St, London WC1E 7JB.

Review

Jerome E Petsche, **The Steamboat Bertrand: History, Excavation, and Architecture.** Natl Park Service Publ in Archeology 11. Wash, DC. (Avail: Supt of Documents, GPO, Wash, DC 20402). 177 pp, illus, index. \$2.65.

In the spring of 1865, the sternwheeler *Bertrand*, bound for the Montana territory with a cargo of 75 tons of stores to outfit pioneers working in the northwest, hit a snag in the Missouri and sank.

Its machinery was salvaged but its cargo remained on board for over 100 years. During the time from its sinking to its discovery, the course of the Missouri changed and the *Bertrand* was left hidden in the wet silt of a Nebraska cornfield.

In 1968 the *Bertrand's* remains were discovered by treasure hunters in search of the mercury, whiskey, and gold reported to be in the cargo. While there was little booty left on the ship, a unique archeological collection, invaluable to both cultural and technological historians were unearthed.

Mr Petsche's book is only the beginning chapter in what could be one of the great studies of American material culture; but it is a good one. He has provided basic documentation of the technology of the *Bertrand's* construction and operation, a general description of its cargo, and invaluable information about the process of excavating and conserving the *Bertrand* and its contents. Every archeologist, historian, and curator is in debt to the Park Service and the Bureau of Sport Fisheries & Wildlife for the work they have accomplished. We can only hope that others will take as much initiative in continuing the work of studying and analyzing the *Bertrand* to bring out the "music" in what is one of the great American archeological collections of our time. *Harold K Skramstad, NMHT.*

Commentary

Editor:

Happy to see Dianne Newell's review of *Life in the Iron Mills* [SIAN 3:3]. Along similar lines, you might like to mention such classics as: *Hard Times* — C Dickens; *Germinal* — E Zola; and *The Jungle* — U Sinclair. Along with *Iron Mills*, these present an excellent backdrop to life in 19thC industrial society. Other authors, such as E J Hobsbawm, E P Thompson, and R Hofstadter also have done some amazing things with histories of industrial societies. And most of this is now available in paperback. *Victor R Rolando, Nassau, NY.*

Editor:

This is in response to Thomas W Leavitt's review of the *Historic Engineering Record*, SIAN 3:3. It should be borne in mind that HAER's *New England—an Inventory*, co-reviewed, was prepared by (paid) full time historians, while the *HER* was produced, with no funding, by voluntary non-professional historians.

As set forth in both the Preface and on the last page, the design of the format is ideally suited to the specific purpose of the ASME National Landmark Program. Relative to his remarks about history and patriotism, if it had not been for the patriotically motivated, dedicated efforts of the persons listed on p 28, who of their own volition contributed the information used, there would have been no *HER*.

The interest of the Northern New England ASME section is in sites about 75 or more years old, in ME and NH: to keep them from being forgotten—and do what we can to help save them. We do not include highway systems or flood control projects (the ASCE do that), and we do not include nuclear power plants as information on those is readily available. The suggestion made by the reviewer regarding cooperation with local historians, antiquarian societies, postmasters, etc, has been accomplished, without funds, as far as our limited volunteer manpower permitted. The reviewer's references to certain specific mills have been noted, and there are no doubt hundreds yet to be reported to us.

The reviewer should have noted that the *HER* meets Kenneth Hudson's criteria in that, as shown on p 28, the entire community (including ME's and NH's largest newspapers) participated in furnishing the material used: yet we have hardly scratched the surface of early American engineering history. In response to the reviewer's hope that the committee will continue its work, it will be noted in the *HER* that this is to be a continuing effort. [availability address correction: Richard A Griffin, 875 Washington Rd, Rye, BH 03870. \$2.50.] *Forrest F Lange, ASME*

Editor:

Responding to Thomas Leavitt's review of HAER's *Inventory*, I should like to offer several, more particular criticisms. In my opinion, the *Inventory* falls short of the HAER's usually superlative standards of quality, consistency, and usability for the following reasons:

1. Many locations for sites visited are imprecise.
2. Site names and nomenclature are varied and inconsistent.
3. Some extremely well-known sites which were visited by the HAER inventory team, or have been documented in existing inventories (eg, Colt firearms factory, Hartford) are so coded as to put their existence in question.
4. National Register designations are not up to date.
5. The names of State Historic Resource Inventories, from which much of the information was obtained, are not mentioned in the site listings, neither are major published Federal IA projects such as the *New England Textile Mill Survey*, or, *Historically Famous Lighthouses* [SIAN 3:2].
6. Many individuals and major organizations, including the state historic preservation agencies, which contributed a great deal of time and information to the project, are not credited.
7. The preface fails to mention the usefulness of such an inventory for arousing local interest and advocacy, and instead concentrates on how the *Inventory* would serve HAER's own program objectives.

I am sure that many will find the list impressive, useful . . . a good start. Nevertheless, we have come to expect the very best from HAER. Surely IA in America, long ignored, deserves no less. *Chester H Liebs, Vermont Divn of Historic Sites.*

Editor:

I take almost complete exception to Harry Rinker's comment [SIAN 3:3] concerning our 1973 revision to *Main Line*, i.e.: "Nothing has been done to improve upon the original: it lacks references, bibliography and index, and contains a number of minor errors." This indicates that he has not done his homework in comparing the old and new editions, and is actually making misleading and incorrect statements about the 1973 edn.

First, the 1973 edn is greatly improved over the 1962, as it contains a great many excellent photos and drawings not in the original. Contrary to Rinker's statement, the book is indexed. The minor errors in the early edn, to which Rinker refers, have been virtually eliminated in the new. It is by no means a "facsimile" reproduction of the original as implied.

The attempt of Rinker (who has never personally authored any literary work of consequence) to rate this book as an "amateur work" is laughable. Also, Rinker omitted the address of the American Canal & Transportation Center (909 Rathton Rd, York, PA 17403), so inquiries would have little chance of reaching us. *William H Shank, AC&TC.*