

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume 10 Number 2

Spring 1981

SUSQUEHANNA STATION-HOTEL SAVED—MAYBE

Almost given up for gone, the Starrucca House—one of the last and certainly the grandest of the 19th-c. railroad station-hotels—may be struggling back to life. Hidden away in the small northeastern Pa. town of Susquehanna, the awesome 1865 building has come to symbolize the frustrations of trying to save a major industrial landmark located in an economically unpromising environment. (See *SIAN* Jan. 75:1, Nov. 75:4, and Nov. 77:4 for previous episodes of this cliffhanger.)

Its seeming savior is Michael Matis, a local lingerie manufacturer. Matis has made a personal project of the station restoration, aided by townspeople and his own employees. Immediate plans are to put a restaurant in part of the building and eventually to establish a railroad museum in the rest.

But if Matis's plans perhaps seem all too ordinary for station restorations, the structure is not. Its 325-ft. facade, baronial dining hall, and industrial-gothic architecture (attributed to E.J.M. Derrick) make it a gem by any standard. In addition, since the demolition of the Queen City Hotel in Cumberland, Md., in 1972 [*SIAN* Jan. 72:2], it is the most significant survivor of a rare species in railroading. The combination station-hotel design flowered briefly but magnificently in the 1850-75 period, just before rapid improvements in dining and sleeping cars made meal and night stopover facilities superfluous. Their locations—usually in the center of railroad yards—were hardly appealing to the more general hotel clientele, and most were closed down by the turn of the century. The hardier ones struggled on as dingy railroad office buildings, and at least five survived into the 1960s. Now there are two: Starrucca House and an almost unknown B&O building at Newark, Ohio.

Built by the Erie RR during a rare flash of prosperity, Starrucca House was located at a key operating point roughly midway between Jersey City and Buffalo (and, coincidentally, close to the hallowed Starrucca Viaduct). Besides being the site of the Erie's principal repair shops, Susquehanna was the junction of a major coal feeder branch as well as a helper station for the heavy mainline grade over the divide separating the Susquehanna and Delaware River watersheds. The spot thus was picked primarily for operating rather than commercial convenience, a choice that now complicates finding a practical use for the huge structure. But at least it was kept reasonably intact. Thanks largely to the Erie's intense conservatism (and perennial poverty), it never was replaced or even modernized. When its original purpose vaporized, it merely



Starrucca House, Susquehanna, Pa., as it appeared in 1978. *Thomas Trencansky photograph.*

was adapted for more humdrum railroad needs, including partial use as a YMCA for train crews. In the process, its vaulted 50-ft.-high dining hall disappeared under added second and third floors and became a prosaic gymnasium.

But even these functions wilted with traffic and operating changes during the 1960s and '70s—notably the 1961 Erie-Lackawanna merger, closing of the adjacent shops in 1969, and EL's disappearance into Conrail in 1976. By then the station was simply a wayside point on a secondary freight line. Its useful life ended several years ago when Conrail moved out the last railroad office, leaving it a large and ragged orphan. Its subsequent status has been one of alternating hope and gloom—and, most recently, complete despair. Nobody disputed the structure's significance, but nobody knew what to do with it either. It simply was too big and too decomposed for the small, depressed town to restore and support. (Susquehanna, unhappily, was a classic railroad town, and its economic fortunes fell with the railroad activity. Near not much of anything else, its principal present tourist attractions are the viaduct and station—visited mostly by a scattering of unaffluent historians and railfans.) Until Matis took it on, the crumbling building seemed destined for demolition. At one point, in fact, a contract was ready to be let.

So far the walls have been stabilized, cornices covered temporarily, and work started on the restaurant. Matis reportedly has three years under his purchase agreement to start a going business in the building. Yet while his aim is noble, the practical economics remain, unfortunately, questionable. Susquehanna is small, remote, and poor, and much work remains. Yet, says one knowledgeable native, "Mike Matis is the only person in town who could pull off something like this." We hope. *H.H.H.*

THE WORK OF IA: TRACKING DOWN NEBRASKA'S FLOUR MILLS

During the course of Nebr.'s history, over five hundred flour mills were built and put into operation using water, steam, wind, and other sources of power. Mill construction reflected the same settlement patterns as that of the territorial period, 1854-67. The first mills were built along the Missouri R.; then, as settlement spread inland, mills appeared along the water courses of eastern Nebr. By the time of the 1870 U.S. Census, there were sixty flour mills in operation.

The early mills were intended only to serve the needs of the local community, and most were small operations. The expansion of the railroads in the latter part of the 19th c. served as an impetus to the industry and led to the rise of the larger merchant mills. By 1900, some 279 flour mills were in operation in Nebr. The 20th c., however, soon saw the decline of the small flour mill. With the introduction of new power sources and the consolidation of the larger mills, many mills gradually were forced out of business. This, plus the financially troubled years of the 1920s and 1930s, caused scores of mills to close; the abandoned plants rapidly disappeared due to floods, fire, salvage, and plain neglect. Today there are only six operating mills in the state, three of them owned by the same corporation.

In 1970, the Nebr. State Hist. Soc. acquired the Neligh Mills in Neligh [SIAN Nov. 77:5]. The building, with all of its machinery intact, was restored as a branch museum of the Society to commemorate the state's flour milling history. This sparked research interest in the subject and a statewide inventory of flour mill sites that has involved the staff of Neligh Mills for the past two years.



Black Bros. Mill, Wymore (Gage Co.), Nebr.

The Neligh Mills staff located an immense amount of reference material on the industry in the NSHS archives and library and in 1978, work began to consolidate it at the Neligh Mills site. In conjunction with this, an inventory was begun to compile a list of all known flour mill sites in the state, including information on their condition. At the start, it was uncertain how many mills had been built in the state; the general consensus was three hundred.

The sites of the more important mills already were known. The article "Mills, Machines, and Millers," by Robert M. Frame [SIA] (*Minnesota History*, Winter 1978), gave important leads to source material applicable to Nebr. mill sites. As Frame suggested, Sanborn insurance maps were thoroughly searched, and valuable

information for 162 sites was found. Because of the municipal nature of the maps, almost all of these were located in towns and cities. To locate rural sites, dozens of late 19th-c. county atlases were searched. In the 1885 *Atlas of Nebraska*, 122 sites, the majority rural, were recorded. Many of these were labeled simply "Mill" or "Grist Mill". By correlating these sites with information on the manufacturing schedules of the 1880 U.S. Census, proper identifications were made. The number of confirmed sites soon rose well above the projected three hundred figure. Sites of earlier mills were identified by similar correlation with the 1860 and 1870 Censuses and with the privileges for mill sites granted by the Nebr.



Ruins of Richmond's Mill (c. 1880) on the Verdigris R. in Knox Co. Burr stone is seen in foreground. Photographs show the two extremes in site conditions encountered in the course of Neligh Mills' survey of Nebr. flour mills. *Thomas R. Buecker photographs.*

Territorial Legislature and published annually in their reports (1855-1868).

Once the exact location of a site was confirmed, it was recorded on a county plat map and assigned a number, following standard archeological procedure and format. (The archeological site numbers from 500-599 in each county are reserved for flour mills.) Each site had its own file, with the site files arranged by county. An inventory form was completed for each site, and one copy was sent to the Archeology Office at Society headquarters in Lincoln. As additional information—such as newspaper articles or photographs—was found on a particular site, it was noted on a continuation form and added to the file. Thus all known references pertaining to the history of a specific mill can be found in one place.

Whenever possible, mill sites are surveyed on-the-ground and the condition recorded and photographed. The remains of buildings and ruins of dams and mill races with turbines in place have been discovered at a number of sites. In southeast Nebr. a number of mill sites were used as hydroelectric plants in the 1920s and 1930s, erasing all vestiges of their one-time flour milling activity. To date, 521 flour mills are known to have been built and operated in the state. Of that number, 452 sites have been inventoried. Structures were found on only 45 sites; of these, only a few still were in use, while most were abandoned and deteriorating. Since 1978, 135 sites have been surveyed.

Much fieldwork remains, although most standing structures have been inventoried. While we anticipate that few buildings or former sites remain to be found, historical documents, especially newspapers, promise to be inexhaustible sources of information about this once important Nebr. industry. *T.R.B.*

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

In his classic *History of Bridge Engineering* (1911), Henry Grattan Tyrrell noted a little-known aspect of bridge history: "A barbarous custom of the Dark Ages required that a human body be built into one of the piers, and conforming to this ancient practice, an infant was entombed in a pier of the Kerventhal bridge in Saxony in the early part of the nineteenth century. When building the Halle bridge in Germany in 1843, a child was to have been built into it, but a chicken was used instead." *We wonder if the field superintendent got in trouble for changing the contract specs?*

TEXTILE HISTORY CONFERENCE

In Nov. the Merrimack Valley Textile Museum hosted its second Textile History Conference. Twenty-nine speakers and one hundred other historians from across the U.S. and England gathered at Boston Univ.'s Osgood Hill Conference Center for three days of papers, discussions, films, and informal exchanges fueled by this unusual concentration of specialists. Sessions were organized around A.F.C. Wallace's *Rockdale*, factory villages, Southern textile towns, industrial relations in New England textile cities, cotton technology, and cotton industry economics.

In general, the conference reflected the high level of interest in the textile industry among scholars. While labor history could serve as the rubric for much of this attention, participants brought numerous approaches and perspectives. Relationships between technological developments and labor history have begun to receive more attention, while research in business and economic history also has demonstrated increased concern for the impact on (and of) the working class. The new labor history, characterized by the study of industrial capitalism from the bottom up, encourages and benefits from so wide a variety of interests. Studies of immigration, paternalism, and technological change contribute to a better understanding of the lives of those involved in the industry.

The breadth of approaches represented in the conference sessions also encouraged attendance by a diverse audience. Academics from several disciplines (archeology, anthropology, history, economics), museum or "public" historians, private researchers, and a variety of other scholars attended.

The conference was video-taped and papers were requested from the speakers. Attendees praised the quality of the work displayed and enjoyed the opportunity to discuss their shared interest. *L.F.G.*

Follow-up On the News: The Gardner Auction

The Gardner Machine Shop auction has, alas, come to pass. The combined efforts of Harvard's Institute for Conservation Archaeology, the Smithsonian, and other concerned groups and individuals unfortunately failed to raise the funds necessary for purchase of the shop's contents. As previously reported [SIAN Sept./Nov. 80:1-2], this incredibly well-preserved early 20th-c. machine shop was the object of a last-ditch fund-raising campaign.

The auction took place on Mar. 12. About fifty people attended, almost without exception machinists and scrap dealers. Industrial archeologists were hardly in evidence. (The Hagley Museum previously had purchased a good bit of the earliest machinery for their re-creation of the Du Pont Co.'s late 19th-c machine shop.) The auction began with the auctioneer's expression of regret that the money could not be raised for the shop's preservation. The proceedings were characterized by much humor about the age of the equipment and, thus, its general worthlessness. "This stuff belongs in a museum" was heard more than once. Prices for most of the equipment were very low, total proceeds amounting to probably less than \$20,000 and most of that for the more recent machinery. Most of the large machines—lathes and planers—were sold to scrap dealers for \$50 or \$75. Most of the blacksmithing equipment was bought by Kaviar Forge of Harvard, Mass., and thus kept intact. The tools were distributed widely.

Gardner was one of the first emergency rescues attempted by the New England IA community. It was by no means a complete failure: Hagley saved much; information about the shop was recorded; and we all gained a sense of the importance of concerted and timely action. Just wait until next time! *S.L.*

WANTED: ASME LANDMARK NOMINATIONS

The American Society of Mechanical Engineers History & Heritage Committee is seeking nominations of noteworthy national and international mechanical engineering achievements that are uniquely significant to the development of the profession. Suggested criteria include:

1. Works must have been of national or international importance—technical complexity alone is not sufficient.
2. Works must be associated with persons or events that have made a contribution to the history and development of humanity in

general, and the mechanical engineering profession in particular.

3. Works must represent significant facets of mechanical engineering history, but need not have been conceived, designed, or constructed by mechanical engineers.

4. Works generally should be available for public inspection, although safety considerations may restrict access to proscribed sections or areas.

5. Works should be distinguished by being unique, i.e.: one-of-a-kind; first ever; oldest extant; last surviving example of a once widely used type; possess some other rare or uncommon distinction.

6. No definitive date can be set, and works of any age will be considered. The Committee is of the opinion, however, that at least a generation's distance in time generally is necessary to judge objectively the lasting value of a work.

If you are aware of achievements worthy of consideration, informal correspondence with the History & Heritage Committee is invited. Suggestions should be addressed to the Chairman, Prof. J.J. Ermenc, P.E., 77 E. Wheelock St., Hanover, N.H. 03755.

LOBSTA AT THE NOBSKA

If you can't sail in 'em, eat in 'em. Such has been the destiny of a fleet of yesterday's maritime vessels now permanently berthed in ports around the country, their cabins, holds and engine rooms refitted with dining tables, kitchens, bars, and dance floors (*Peter Stuyvesant*, SIAN Sept. 78:5, *Lansdowne*, July 80:4). The steamship *Nobska*, formerly of the Martha's Vineyard ferry trade, is now slated to join the frigate *Constellation* and the submarine *Torsk* along Baltimore's revitalized Inner Harbor as a seafood-and-candlelight eatery.

One of several steamers listed in the National Register, the *Nobska* linked the Mass. islands of Martha's Vineyard and Nantucket with the mainland from her construction in 1925 at the Bath (Maine) Iron Works until her retirement in 1973. The 210-ft. ship carried vehicular and human traffic typical of inter-island ferry service. In 1947, the vessel acquired the ignominious distinction of being the only steam ferry to make a scheduled run for which no passengers, cars, or freight showed up.



S. S. *Nobska* under steam in Nantucket Harbor, 1973. *Bernard Kearse photograph.*

Passing through a number of hands since leaving service, the *Nobska* has been purchased for \$125,000 by former newspaper publisher Adam Spiegel. His plans, vigorously opposed by the Friends of *Nobska* who seek the vessel's repatriation to Mass., call for replacing portholes with picture windows and hanging doors in the sides of lifeboats to provide "intimate" dining compartments. Seating for 600 will be scattered through four levels, with dining and dancing on the hurricane deck and progressively less formal surroundings below.

But it is on the very lowest level that the dining may be of the very highest level, for it is here that the *Nobska's* four-cylinder triple-expansion steam engine will turn over at a stately 3 RPM, forming the kinetic centerpiece for a restaurant and bar nestled among the valves, pipes, and Babcock & Wilcox watertube boilers. Just the place for Latrobe Chapter members to gather for libations and heavy vibrations! *D.H.S.*

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

THE TENTH ANNUAL CONFERENCE: HARTFORD

It was a numerically ambiguous conference, this Tenth. A decade of conferences now celebrated but yet not the 10th Anniversary of the SIA. (The First Annual Conference—that celebrated, zany one in New York with papers ablaze in controversy [are adjustable wrenches industrial archeology or history of technology?], a marathon all-day field trip with no lunch or relief stops planned in, and the historic, first-time-in-print reference to Margot Gayle as Mrs. Cast Iron—occurred when the Society was a bare few months along.) This chronological curiosity permits us the luxury of *two* consecutive years of self-congratulation.

Of the ten, this was, oddly, only the second conference held in New England. As has come to be a tradition, it was a shining display of virtuoso planning in both logistics and balance between industrial archeology the discipline and industrial archeology the infinitely variable and intriguing diversion. All this was something of a small miracle for, unlike the normal way of doing these things, there was no established local organization backing up conference coordinator Matthew Roth; he and a handful of local members put the entire business together pretty much out of their hats.

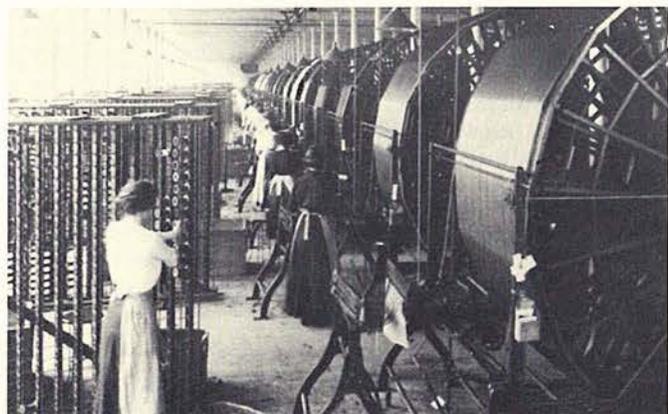
All began with the customary Thurs. evening reception at Hartford's famed **Old State House**, one of the oldest standing state capitol buildings (Charles Bullfinch, 1796). The conference officially was opened by Helena Wright, Program Chair of the Southern New England Chapter, standing in for SNEC President Betsy Woodman. Aetna Life & Casualty consulting architect Jack Dollard followed with a vivid introduction to Insurance City, highlighting the recent boom in adaptive reuse projects based on the town's extensive historical industrial fabric. Ending the evening was a free-form show & tell, a jolly grab bag of IA vignettes covering mills, railroad machine shops, and other past glories.

THE FRIDAY TOUR

Under the bright skies that normally bless these occasions, the Friday "Process Tours" opened at the massive brick complex (1886-1916) of **Cheney Bros. [NHL]** in S. Manchester, by the 1880s



"Hooking" velvet at Cheney Bros. Prior to shipment layers must be separated by small hooks on the packing racks to avoid crushing the pile.



Several of these warping reels—known to the hands as "ferris wheels"—remain at Cheney's, disused. From a stereograph, c. 1910.

the largest silk manufactory in the U.S. A remnant of the firm survives in a portion of the mills producing synthetic velveteen, most of which finds a lively market as casket lining. A bit of the original Cheney machinery survives, most notably some fifty velvet looms built in the firm's own shops c. 1910, still turning out goods in colors, some of which caused the breath to catch.

A tour of the **Pratt & Whitney** machine-tool works left the group with more questions than answers, partly because times appear to be slack in this giant industry so that little work was in the works in the first place, and then, we seemed to have stumbled in precisely at lunch time. It wasn't a particularly spritely scene from any standpoint, but by squinting your eyes slightly you could conjure up a faint sense of that phenomenon beloved of social commentators: a room full of machines making exact replicas of themselves—that is to say, parthenogenetically *reproducing themselves!* It wasn't all that ominous.

Lunch was taken at a delightful spot on the **Farmington Canal** at restored **Lock 12 [NR]**. The canal was in use between 1829 and c. 1850, but never was a great commercial success and was largely superseded by the New Haven & Northampton RR, which crossed the canal just south of the lock site on a rare (in the U.S.) true skew or oblique masonry arch bridge, also restored.

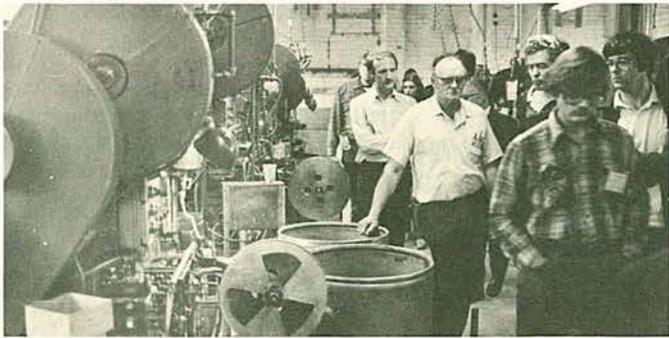


Fri.'s lunch was enjoyed alfresco at Lock 12 Park in Cheshire.

The tour's unquestioned high spot was a visit to the **Ball & Socket Mfg. Co.** in Cheshire. Here were made not balls and sockets but an extensive line of small stamped and deep-drawn metal goods. The firm is one of the few surviving small metal-goods firms that in the late 19th and early 20th c. formed the backbone of Conn.'s industrial might. Their main line—"jingle" bells and brass buttons of every imaginable pattern and style—has changed little since B&S and its predecessor firm turned out buttons for Civil-War uniforms. The heart of operations is a battery of classical transfer or progressive-die presses that produce the finished button, bell, or whatever from flat strip stock in a series of steps. The sight and sound of a large room full of these robotics was a thrill alone worth the price of admission. Each was producing a different trinket: "designer" button; plain geometric-design button; medallion; jingle bell (with the little clapper chopped from reeled wire rod, flipped into the not-quite-closed bell at precisely the right moment, and the four cusps then bent over for the final closure)—all this at frantic speed



The ever-curious Mike Folsom observes the button-blank hopper feed at the Ball & Socket Mfg. Co., Cheshire.



The press room at Ball & Socket, where the progressive die-stamping of button fronts takes place.

but under perfect synchronic control. What followed was interesting but slightly anticlimactic: tumbling to remove burrs; electroplating in the standard long vats of strangely colored substances everywhere oozing globs of errant crystals; then, finally, polishing and lacquering. The manufacture of the mundane is, at times, remarkable, and it was gratifying to observe the immense pride with which a small, successful firm turned itself out and showed itself off for its clearly appreciative audience.

Final stop was the **Berlin Construction Co.**, a steel fabricator that is the somewhat indirect descendant of the late, famed Berlin Iron Bridge Co. of East Berlin, builder for many years of the distinctive Berlin lenticular truss bridge. We were introduced to the plant by Victor C. Darnell [SIA], retired BCCo. chief engineer and authority on the history and development of the BIBC. and its bridges (see *IA*, Vol. 5, 1979). The works staff then put through their paces a number of the large machines typical of such plants—those used for the punching and cutting of steel sections and plates. Wonderful, the contrast between the machinery for handling delicate textile fibers or little bits of brass, and that capable of simultaneously punching a dozen holes through one-inch steel plate.



Victor Darnell here practices theological IA: the laying-on of hands in the analysis of pinned bridge joints.

THE SATURDAY SESSIONS

The program of papers and other presentations was organized with rare skill by Stephen Victor of Slater Mill Historic Site. An extraordinarily interesting and useful session on IA and Labor History got things well off, and it was all uphill from there. This was seen as an important step for both IA and our Society, in establishing a symbiotic working relationship with a closely related field. Addressed, if not fully answered, were the questions: how can our work be applied to the matters pondered by the labor historians; can their insights help us to interpret industry's material remains? Industrial archeologists ought to have taken heart from commentator David Montgomery of Yale, who noted that an understanding of industrial processes forms a necessarily central element in any rational interpretation of the history of working people, and in establishing the collective nature of work.

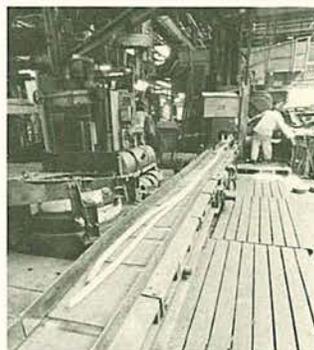
The other sessions were nearly all equally provocative and informative, both those dealing with traditional subjects and those exploring new areas. A group of papers dealing with the use of plats and maps as IA tools was particularly useful, and no doubt went far in dispelling the lingering anxieties of us seem to harbor with respect to the use of maps. For many, there was the annual frustration of attempting to be present at both parts of concurrent sessions, but we seem to have concluded after years of this that have these we must. (Copies of the Abstracts are available from Rm. 5020, gratis.)

Sat. night's events were individually and collectively memorable. Founding member and Past President Edward S. Rutsch recounted in his own highly distinctive style the Society's first decade, concluding with slides of past conferences and tours sent in by the faithful from around the world. These evoked much mirth and cries of ". . . oh, there's old George about to be pulped in that punch press he thought was derelict. . . ."

The dinner also was the occasion for calling to the attention of the conferees the long, vital, and loyal stewardship of the headquarters office by Charles Looney. The membership's fond appreciation was marked by the presentation of a lithograph of Brunel's Wharncliffe Viaduct, west of London, built for the Great Western Ry. The accompanying label noted that both Brunel and Prof. Looney were civil engineers, that the Viaduct was built (1838) of yellow London Stock bricks (a material no doubt familiar to his father, a master brick mason who with his family emigrated to this country from Liverpool just after WW I), and that this Tenth Conference nearly coincided with the Diamond Anniversary of Prof. Looney's birth.

The evening was capped with *dancing*, an uncommon occurrence at these gatherings. Music was furnished by the Hubcaps (who should have been with us in Detroit last year), brought down specially from Providence, R.I., versatile and melodic quite beyond any expectations. They were aided, at times, by the SIA's own Don Jackson.

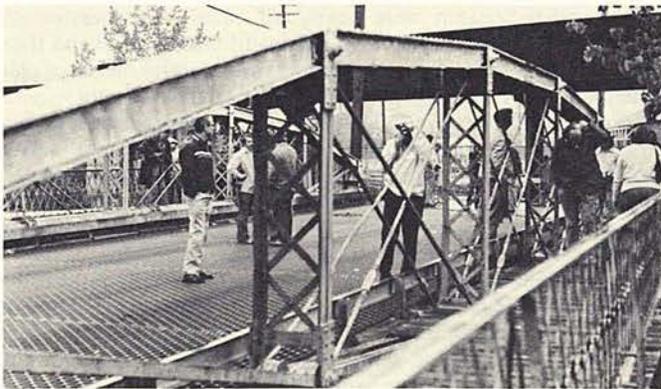
THE SUNDAY TOURS



A pair of round-section rods, still at dull-red heat, emerging from Anaconda's 2,700-ton extrusion press. *Anaconda Industries photograph.*

Weather less fine than on Fri., but a small matter. A number of mills and factories in the Naugatuck Valley southwest of Hartford were featured, further emphasizing Conn.'s unique role in American industrial development. This area was known principally as the seat of the American brass industry, with small rubber products a secondary industry. Most of the bulk brass producers themselves and the derivative firms—locks, clocks, and hardware—have left the area but some remain. In Ansonia the works of the **Anaconda Co.'s extrusion mill** was specially opened for us on this day with a skelton crew on triple time—a singular mark of honor, it must be said. Here copper and a multitude of its alloys are hot-extruded from the billet, mostly in rod form for later drawing into wire and smaller rod, but also in a bewildering variety of shapes. These ranged from simple rectangles for electrical bus bars to exotic architectural sections that would seem to defy formation by any process. The extrusion is performed in a mammoth horizontal press.

There followed a somewhat juicy visit in the rain to the oldest **Berlin lenticular truss bridge** standing in Conn.—spanning the Mad R. on Washington St., Waterbury, built c. 1880. The interesting connections and other details of this rare breed were observed, and the buses then moved on to Waterbury's Mattatuck Museum. There, with lunch, was ingested a special exhibit, "Metal, Minds, and Machines: Waterbury at Work," presenting a nice overview of the array of products once made in the Brass City.



Washington Ave. Bridge, Waterbury. Built c. 1880 by the Corrugated Metal Co. (predecessor of the Berlin Iron Bridge Co.), this lenticular truss is the oldest standing structure by Conn.'s most prolific bridge builder.



Sun. lunch at the Mattatuck Museum in Waterbury.

The remainder of the afternoon was spent taking in a number of additional factories through the bus windows, with a final stop at the renowned **Terry Waterwheel** in Terryville. This unique relic of c. 1845 is about 20 ft. in diameter by 7 ft. wide. It is of composite timber/wrought-iron/cast-iron construction and was built to power one of the hardware shops built on the site of Eli Terry's



Herb Darbee, key conference organizer, fondles the Terry Waterwheel.

clock factory. It stands now as the sole surviving fabric to attest that this once was a flourishing industrial site. The wheel was covered over with a protective canopy in 1956, but despite its importance it is otherwise largely neglected and has been partially burned by vandals.

Thus ended the conference's formal events. Although a number of SIA's conferences and field trips have coincided with the publication of regional or statewide IA inventories which thereby have become the site "guidebook" for the event, it is not too much to say that *Connecticut—An Inventory of Historic Engineering & Industrial Sites*, published jointly by the SIA, the Historic American Engineering Record, and the Conn. Historical Commn. (with substantial editorial assistance by the Merrimack Valley

Textile Museum) has set a new high-water mark. This monumental work was written by Matthew Roth with contributions by Victor Darnell and Bruce Clouette. It is the culmination of two solid years of work by Roth, during which he traversed every square foot of the Nutmeg State; he has accounted for literally every site and structure that could be construed as industrial archeology. Copies will be available, at an as-yet undetermined price, from the Conn. Historical Commn. (59 S. Prospect St., Hartford, 06106) later this summer. *R.M.V.*

The conference was the result, as always, of the efforts of a number of people. It never would have occurred had it not been for the heroic contributions of Bruce Clouette, Herbert Darbee, Victor Darnell, Stew and Jody Henderson, Peter Lefebvre, Ann Smith, Clark Strickland, and Stephen Victor. There were others, to be sure: tour guides, tour hosts at the sites visited, and yet more. The Society's and my own heartfelt thanks to you all. *Matthew Roth.*

THE ANNUAL BUSINESS MEETING, MAY 9, 1981

Pres. John Bowditch explained the problem with mail ballots and the Board's resolution to conduct a new balloting of those members not at the conference. The final results appear below.

He then announced the following future activities: Fall 1981 Tour—Upper Peninsula of Mich., Oct. 9-11; 1982 Annual Conference — Harrisburg, Pa., May 6-9; 1983 Annual Conference — Minneapolis/St. Paul; 1984 Annual Conference — Boston.

Bowditch explained that, over the years, anomalies have crept into the Society's Constitution and Bylaws, creating operating problems that need to be dealt with in a systematic fashion. He announced the Board's resolution to establish a committee to deal with these matters, which will report a coherent set of revisions to the membership for discussion and approval at the next annual meeting. Suggestions for changes are solicited by Larry D. Lankton, Chairman, Constitution Committee, HAER/NPS, 440 G. St., N.W. Wash., D.C. 20243.

TREASURER'S REPORT. Marlene Nicholson reported a 1981 deficit of \$519, resulting mainly from overruns in the cost of the *Newsletter* and the decision to provide the *Newsletter* editor with a per-issue stipend of \$500. She stated that the Norton Prize money had been placed in a 12.6 percent certificate of deposit; that she had reorganized the Society's finances in line with non-profit organization practices; and that she is in the process of computerizing the Society's financial records.

FUND-RAISING. Theodore Penn explained the reasoning behind his proposal for a national SIA fund-raising effort and his designation at the Dec. 1980 Board meeting as Development Officer, a new *ex officio* Board position. Penn argued that the SIA serves many constituencies with its publications; that the cost of publications is increasing; that we have more material to publish than funds to publish it; and that we don't want to raise dues to raise such funds. He sees the establishment of the Norton Prize as one step in the right direction and suggests that a service award be added to it. His proposed goal for both funds is \$25-30,000.

PRESERVATION ADVOCACY. Margot Gayle requested that the SIA support efforts to save two historic buildings: the 7th Regiment Armory on Park Ave., N.Y.C., and E.E. Meyers' City Hall, Richmond, Va. Letters supporting preservation of the Armory *in toto* should go to both Gov. Carey and Mayor Koch. A letter supporting preservation of the Richmond City Hall should go to the Governor of Va. Approved unanimously.

EDUCATION PROJECT GRANT APPLICATION. Michael Folsom reported on the Society's application to the National Endowment for the Humanities for a grant to develop pilot projects in teaching industrial history and industrial archeology at the elementary and secondary school levels. (Fuller report will appear in the next issue of SIAN.)

Meeting adjourned.

Officers

President — Robert M. Vogel, Washington, D.C. Curator of Mechanical & Civil Engineering, National Museum of American History (to 1982).

Vice President — Patrick M. Malone, Barrington, R.I. Director, Slater Mill Historic Site (to 1982).

Secretary — Michael B. Folsom, Boston. Director, Charles River Museum of Industry (to 1983; elected 1980).

Treasurer — Marlene Nicholson, Charlotte, N.C. Sr. Business Systems Consultant, Barclays American Corp. (to 1984).

Past President — John Bowditch, Ann Arbor, Mich. Curator of Power & Shop Machinery, Edison Institute, Henry Ford Museum (to 1982; non-elective).

Newly Elected Directors

Eric N. DeLony, Silver Spring, Md. Acting Chief, Historic American Engineering Record (to 1984).

David R. Starbuck, Durham, N.H. Adjunct Asst. Prof., Anthropology & Archeology, Univ. of N.H. (to 1984).

Standing Directors

Brent D. Glass, Durham, N.C. Director, Neighborhood Housing Services of Durham, Inc. (to 1982).

Larry D. Lankton, Washington, D.C. Historian, Historic American Engineering Record (to 1982).

Charles Emmerich, Dover, N.J. Retired mechanical engineer; engineering consultant; farmer (to 1983).

Paul J. McGinley, Ipswich, Mass. Vice President, Anderson, Notter, Finegold, Inc. (architects and preservation planners) (to 1983).

Matthew W. Roth, Portland, Conn. Consultant in industrial history (to 1983).

Editors

(serving indefinite terms, at the Board's discretion)

IA — Dianne Newell, Vancouver, B.C. Asst. Prof. of History, Univ. of British Columbia.

Newsletter — Carol Poh Miller, Cleveland, O. Historic preservation consultant.

Elected to Nominations Committee

Vance Packard, Titusville, Pa. Historic Site Administrator, Drake Well Park (to 1984).

PUBLICATIONS OF INTEREST

Compiled by Robert M. Frame III, *Minnesota Historical Society*, and Robert M. Vogel, *National Museum of American History*

Hayden L.V. Anderson, **Penobscot Waterways: Canals & Waterway Improvements on the Penobscot River, 1816-1921**. In *Maine Historical Soc. Quarterly*, Summer 1979.

Stephen Barto & Paul O. Weinbaum, **Stone Marks in America & Their Origin, 1790-1860**. *North Atlantic Region Curatorial Paper*, Nov. 1980. National Park Service (NA Region, 15 State St., Boston, Mass. 02109). 4 pp. Gratis. Musings on the marks of stone masons.

D. G. Blaine, *et al.* **Railway Mechanical Engineering: A Century of Progress**. American Soc. of Mechanical Engineers (345 E. 47th St., N.Y.C. 10017), 1979. 445 pp., illus. \$35; \$25 to members. Comprehensive review of developments of all mechanical components of locomotives and cars, U.S. & Canada. Illus. all lifted and so of indifferent quality, but the information is there.

Edward Blair, **Leadville: Colorado's Magic City**. Pruett Publ. Co., 1980. 261 pp. \$28.

John Butt & Ian Donnachie, **Industrial Archaeology in the British Isles**. Paul Elek (London), 1979. 307 pp. £ 9. Favorable review by R.A. Buchanan [SIA] in *IA Review*, Winter 1979-80.

I.C.R. Byatt, **The British Electrical Industry, 1875-1914: The Economic Returns of a New Technology**. Oxford Univ. Press (N.Y.), 1979. 240 pp. \$22. Rev.: *Tech. & Culture*, Oct. 1980.

Louis P. Cain, **The Creation of Chicago's Sanitary District & Construction of the Sanitary & Ship Canal**. In *Chicago History*, Fall 1978.

Thomas C. Cochran, **Frontiers of Change: Early Industrialism in America**. Oxford Univ. Press. (N.Y./Don Mills, Ont.), 1981. 176 pp. \$15. Apparently business & economic history principally.

Gordon Cotton, **A History of the Waterways Experiment Station, 1929-1979**. U.S. Army Corps of Engineers (Vicksburg, Miss.), 1979. 196 pp. \$?

Roger Crombleholme & Terry Kirtland, **Steam '80: A Complete Enthusiasts' Handbook to Railway Preservation Activities and Minor Railways in the British Isles**. Allen & Unwin (9 Winchester Terr., Winchester, Mass. 01890), 1980. 512 entries. \$8.

Thomas Dublin, **Women At Work: The Transformation of Work & Community in Lowell, Mass., 1826-1860**. Columbia Univ. Press (N.Y.), 1979. 312 pp. \$17.50. Favorable rev.: *Tech. & Culture*, Oct. 1980.

James Edmonson, **Of Fruit & Forest: The Basket Industry in Delaware, 1840-1960**. In *Delaware History*, Fall/Winter 1978, pp. 93-123.

Thomas H. Fehring (ed.), **Mechanical Engineering: A Century of Progress**. Milwaukee Section, ASME (History & Heritage Comm., 5101 Santa Monica Blvd., Whitefish Bay, Wis. 53217), 1980. 53 pp., illus. \$10. (Checks to ASME—Milwaukee Section.) Accounts of 51 ME accomplishments in the region over past century: power plants, automated plants, steam pumps, mine hoists, &c. Many important firms and installations.

Kenneth Finkel, **19th-Century Photography in Philadelphia**. Dover Publ. (N.Y.) (in cooperation with The Library Co. of Phila.), 1980. 226 pp. \$9. 250 historic prints from TLCofP collections. Much of IA interest: gas & water works, locomotives, steam power, manufacturing. This sort of thing at its very best; the low price a reflection of mass printing, not low quality.

R.S. Fitzgerald, **Liverpool Road Station, Manchester, An Historical & Architectural Survey**. Manchester Univ. Press (Manchester), 1980. (Avail: Sherratt & Hughes, 17 St. Ann's Sq., Manch. M2 7PD) £12./£6.40. Perhaps the oldest surviving purpose-built RR station, the eastern terminus of the Liverpool & Manchester, on its 150th anniversary.

Mark Fram [SIA], **Ontario Hydro, Ontario Heritage: A Study of Strategies for the Conservation of the Heritage of Ontario Hydro**. Historical Planning & Research Branch, Ontario Ministry of Culture & Recreation (Toronto), 1980. 155 pp., heavily illus. \$10. (Avail: Publs. Svc., Ministry of Govt. Svcs., 5th Floor, 880 Bay St., Toronto, Ont. M7A 1N8.) Extensive examination of the options and possibilities for preservation of the many historic sites and structures owned by OH, one of the world's largest and oldest (1898) utilities. Superb, useful, interesting piece of work.

Leonard Gottlieb, **Factory Made—How Things Are Manufactured**. Houghton Mifflin (Boston), 1978. Compilation of essays classed by LC as "Juvenile Literature," but includes intellectually sophisticated step-by-step process summaries of contemporary brick-, nail-, and fire-hydrant making, baseball, paint brush, and toilet-seat fabrication, & more.

Daniel R. Headrick, **The Tools of Empire: Technology & European Imperialism in the 19th Century**. Oxford Univ. Press, (N.Y.), 1981. 224 pp. \$10./\$6. Gunboats, anti-fever drugs, weapons, land & sea transport, submarine telegraphy & other communication, &c.

Gilbert Herbert, **Pioneers of Prefabrication: The British Contribution in the 19th Century**. Johns Hopkins Univ. Press (Baltimore), 1976. 256 pp., 115 illus. \$17.50. Brunel, Fairbairn, *et al.*, enclosing space at home for the Empire away.

J.G. James, **The Evolution of Iron Bridge Trusses to 1850**. The Newcomen Soc. (Science Museum, London SW7 2DD), 1981. 44 pp., illus. \$?. The long-awaited analysis of this subject, in great detail, world-wide. Much mythology dispelled and obscure material put forth.

Harry Johnson & Frederick S. Lightfoot, **Maritime New York in 19th-Century Photographs**. Dover Publ. (N.Y.), 1980. 160 pp. \$8. Excellent selection and reproduction; vessels and a rich selection of their surroundings—docks, structures, bridges, shipbuilding, &c.

- Elwood Jones & Douglas McCalla, **Toronto Waterworks, 1840-77: Continuity & Change in 19th-Century Toronto Politics.** In *Canadian Historical Review*, Sept. 1979.
- John Kanefsky & John Robey, **Steam Engines in 18th-Century Britain: A Quantitative Assessment.** In *Technology & Culture*, Apr. 1980, pp. 161-186. Interesting approach, much new material.
- John R. Kellett, **Impact of Railways on Victorian Cities.** Univ. of Toronto Press, 1979. 467 pp. \$12.50.
- Haken Lindgren, **Corporate Growth: The Swedish Match Industry in its Global Setting.** Liber Förlag (Stockholm), 1979. 447 pp. Skr 145. (Tr. by Michael Callow.) and . . . Ulla Wikander, **Kreuger's Match Monopolies, 1925-30. Case Studies in Market Control Through Public Monopolies.** Liber Forlag, 1979. 326 pp. Skr 112. (Tr. by Julie Sundquist.) Joint rev.: Lars G. Sandberg in *Bus. History Rev.*, Autumn 1980.
- Craig Mair, **A Star for Seamen, The Stevenson Family of Engineers.** John Murray (London), 1978. 269 pp., 28 illus. £7.50. Account of the famed family of lighthouse engineers, based on first exposure of the family archives. Rev.: Douglas Hague in *IA Review*, Winter 1979-80.
- Jean Martin, **Mule to Marta.** 2 vols. Atlanta Hist. Soc. (P.O. Box 12423, Atlanta, Ga. 30355), n.d. Vol. 1, \$5; Vol. 2, \$6, + post. Illus. history of Atlanta's public transportation systems, including electrification.
- Bruce Mazlish (ed.), **The Railroad & The Space Program: An Exploration in Historical Analogy.** MIT Press (28 Carleton St., Cambridge, Mass. 02142). \$5. Ppd.
- Jeanne McHugh, **Alexander Holley & The Makers of Steel.** Johns Hopkins Univ. Press (Baltimore), 1979. 432 pp. \$27.50. Holley brought the Bessemer process to America and became one of the greatest manufacturing innovators in the field.
- Harry Miller, **Potash From Wood Ashes: Frontier Technology in Canada & The U.S.** In *Technology & Culture*, Apr. 1980, pp. 187-208. Thorough analysis of this vital industry; much on the iron kettles used.
- Conrad H. Milster [SIA], **An Operating Steam Exhibit at the Phillipsburg (N.J.) Pumping Station.** In *Live Steam*, Sept. 1979, pp. 22-27. Many detail photos with descriptions of the 1913 Allis-Chalmers vertical triple-expansion engine.
- Larry Murphy, **Thomas Keefer.** Fitzhenry & Whiteside Ltd. (150 Lesmill Rd., Don Mills, Ont. M3B 2T5), 1977. 64 pp., illus. In "The Canadians" series, for young people but sound biography. Keefer (1821-1915), regarded as the dean of Canadian engineers, designed canals, RRs, the foundations for Victoria Bridge, and waterworks, including Hamilton's.
- Denys Peter Myers, **Gaslighting in America: A Guide for Historic Preservation.** 1978. (Avail.: USGPO, Wash., D.C. 20402, Stock No. 024-016-00094-3) \$5.25. Little on gas technology; emphasis on fixtures.
- Michael O'Dwyer, **The Trent-Severn Waterway: A Brief History.** In *Conservation Canada*, Spring 1980, pp. 3-10 (Parks Canada Information Divn., Ottawa K1A 1G2).
- Bryan D. Palmer, **A Culture in Conflict: Skilled Workers & Industrial Capitalism in Hamilton, Ontario, 1860-1914.** McGill-Queens Univ. Press (Montreal), 1979. 331 pp. \$11. Rev.: Robert D. Cuff in *Bus. History Rev.*, Autumn 1980.
- Nathaniel Mason Paulett & K. Edward Lay, **Historic Roads of Virginia—Early Road Location: Key to Discovering Historic Resources?** Va. Highway & Transp. Research Council (Charlottesville), May 1980. 42 pp. Gratis. Location and some of the building types found along.
- John Bell Rae, **The Development of Railway Land Subsidy Policy in the U.S.** Arno Press (N.Y.), 1979. 337 pp. \$24. and . . . Ross Ralph Cotroneo, **The History of the Northern Pacific Land Grant 1900-1952.** Arno Press (N.Y.), 1979. 468 pp. \$31. Joint rev.: Lloyd J. Mercer in *Bus. History Rev.*, Autumn 1980.
- Paul Rees, **Excavation at Chatsworth St. Cutting, Part of the Original Terminus of the Liverpool & Manchester Ry.** In *Industrial Archaeology Review*, Spring 1980, pp. 160-70. Excavation and research have produced a clear picture of the rope-haulage system devised by George Stephenson, c. 1830.
- David M. Rees-Thomas, **Timber Down the Capilano: A History of the Capilano Timber Co., on Vancouver's N. Shore.** British Columbia Hist. Assn. (Box 121, Victoria, B.C. V8W 2M1), 1979. 62 pp. \$4.
- Carole Rifkind, **A Field Guide to American Architecture.** New American Library, 1980. 332 pp. \$20. IA is slid into Pt. IV: "Utilitarian," with the barns and filling stations, but it's nice stuff, all from HAER/HABS drawings and a few photos.
- Daniel T. Rodgers, **The Work Ethic in Industrial America, 1850-1920.** Univ. of Chicago Press, 1980. 316 pp. \$6.
- Stanley K. Schultz and Clay McShane, **To Engineer the Metropolitan Sewers: Sanitation & City Planning in Late 19th-Century America.** In *Jnl. of American Hist.*, Sept. 1978, pp. 389-411.
- Florence E. Sherfey, **Eastern Washington's Vanished Gristmills & The Men Who Ran Them.** Ye Galleon Press (Fairfield, Wash.), 1978. 345 pp. \$15. Some 80 miles in 15 counties. Strictly descriptive, modestly illus. Rev.: *Pacific Northwest Quart.*, July 1980.
- Carl Siracusa, **A Mechanical People: Perceptions of the Industrial Order in Massachusetts, 1815-1880.** Wesleyan Univ. Press (Middletown, Ct.), 1979. 313 pp. \$20. "Survey & analysis of comments by 40 influential figures about the reshaping of the state's economy & culture from agrarian to industrial . . ." Rev.: Michael Folsom [SIA] in *Tech. & Culture*, July 1980.
- Darwin H. Stapleton [SIA] (ed.), **The Engineering Drawings of Benjamin Henry Latrobe.** (*Latrobe Papers, Series II, Vol. I*) Yale Univ. Press for Maryland Hist. Soc. (New Haven), 1980. 256 pp., illus. \$62.50. Definitive essay on L's graphic work; finely reproduced.
- J. Trounson, **Mining in Cornwall 1850-1960.** (Avail.: TIMS Specialists, Box 50046, Tucson, Ariz. 85703) 2 vols., ea. 80 pp., 130 illus. \$7.50 ea.
- J.T. Van Riemsdijk and Jenneth Brown, **The Pictorial History of Steam Power.** (Avail.: TIMS Specialists, as above) 192 pp., 155 photos & dwgs. \$12. All Europe: stationary, locomotive, farm, marine. Guide to museum collections worldwide.
- Christine Vialls, **Coalbrookdale & The Iron Revolution.** Cambridge Univ. Press (32 E. 57th St., N.Y. 10022), 1980. Approx. 50 pp. \$4. The use of structural iron, power, &c. Nice.
- William D. Walters, Jr., **Abandoned 19th-Century Brick & Tile Works in Central Illinois: An Introduction From Local Sources.** In *Industrial Archaeology Review*, Winter 1979-80 pp. 70-80. Rapid rise and fall of a remarkable number of works in four Ill. counties. Well done.
- George Watkins [SIA], **The Steam Engine in Industry, Vol. 2.** Mooreland Publ. Co., 1980 (Avail.: TIMS Specialists, Box 50046, Tucson, Ariz. 85703) 128 pp., 123 illus. \$17. More of this singular series. (See SIAN Nov. 1979.)
- John H. White, Jr., **Industrial Locomotives: The Forgotten Servant.** In *Technology & Culture*, Apr. 1980, pp. 209-16.
- Mark Wyman, **The Hard Rock Epic: Western Miners & The Industrial Revolution, 1860-1910.** Univ. of Calif. Press (Berkeley & L.A.), 1979. 259 pp. \$16. Rev.: *Tech. & Culture*, Oct. 1980.

CONTRIBUTORS TO THIS ISSUE

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