

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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TAMING CHICAGO'S WHITE EL-PHANT



THE LOOP, CHICAGO. Left: Wabash looking north from Harrison. Right: the crossing complex at Lake and Wells with Tower No. 18. Jack E. Boucher photographs for HAER, 1971.



As downtown after downtown experiences turbulent but energizing renaissance after renaissance, urban mass-transit systems are receiving therapy of the opposite order. New systems for old is the call issuing from city planning offices. Replace those outmoded trolleys with subways. Get rid of the decrepit downtown terminals. Bring on the superbuses and boutique "transit plazas." After all, what good's a renaissance if you can't get to it in the latest, fastest, and most comfortable style? Or so the logic goes.

At least two legs of Chicago's 1897 elevated "Loop" are slated for demolition, stations and all. The city considers such excision essential if their born-again downtown is to become the mecca they envision. A bittersweet decision, they concede, acknowledging the city's 82-year fellowship with the five-by-seven block riveted steel structure. But official perceptions of the Loop's inherent obsolescence render evanescent any such clinging nostalgia at City Hall.

"It's time we wake up and look at the Loop objectively," they intone. "Look at its filth, its archaic design and engineering. Listen to the banshee screeches of the cars careening overhead. Feel the bone-rattling vibrations on the ground below. See the way it straddles and obliterates four good downtown avenues—Wabash, Lake, Wells, Van Buren! Observe, if you dare, the drunkards and lurking criminal element inhabiting the sunless iron jungle beneath the tracks. All this is worth saving!"

"No," is the argument of the Chicago Transit Auth. It's also the argument of the Urban Mass Transit Admin., the Chicago Planning Comm., the Chicago Urban Transp. District, and Sears, Ward's, and Field's department stores, all of whom have backed CTA's proposal to replace the Loop legs with a subway under the downtown. Indirect support for the proposal has been provided by the Chicago Landmarks Preservation Council and the Illinois Historic Sites Advisory Council, who have refused to recognize the Loop's historical significance.

But, least we despair, there stands an equally formidable assemblage on the other side of the third rail. The Keeper of the Natl. Register of Historic Places, the (U.S.) Advisory Council on Historic Preservation, the Natl. Trust, the American Inst. of Architects, the Intl. Comm. for the Conservation of the Industrial Heritage, and a sizable army of intrepid "juice line" irregulars collectively have challenged the city's objective view with an objective view of their own: the Loop works! It has proven itself eminently effective in channeling a deluge of passengers daily into and out of the city center. Expeditious service, they insist, is the Loop's chief attribute and will prove to be its ultimate salvation. The structure stands most solidly on its own merits, say the defenders. That it's ugly and dirty, that it shelters undesirables, that it lowers adjacent property values, are not functions of the structure itself, but indictments of the City's maintenance and rehabilitation programs. Clean it up, emphasize the Loop's vigorous structural integrity, upgrade its engineering with welded rails and sound-absorbant elements, and wonders might unfold. "Sure would be cheaper than a subway," they say.

Though local efforts to place the Loop on the Natl. Register have failed, the Keeper has declared it eligible. This alone requires that exhaustive proof be provided to show that no reasonable alternative to demolition exists. Currently, CTA has before it a number of diverse proposals. Among them: total rehabilitation; token commemoration (using markers enbeded in the street to indicate the demolished Loop's former path); and reuse of the structure as an elevated walkway. Whatever route is taken, utilization of federal funds is a certainty, thus requiring that a complete HAER-level recording be made of the structure prior to any alternations.

Chicago City Architect Jerome Butler has declared the el a "dinosaur out of another era of transportation that doesn't fit into the future of Chicago." Such sentiment surely calls for the establishment of a whole new field of professional inquiry—industrial paleontology. *D.H.S.*

THE IA OF CONTROLLED FEAR: TO SAVE A PARACHUTE JUMP

On 13 July 1977, the N.Y. City Landmarks Commn. voted to designate the Parachute Jump, near the Riegelmann Boardwalk in Coney Island, Brooklyn, a N.Y.C. Landmark. The largest and earliest structure of its type to survive, it has lain unused, in a state of disrepair, cast aside like an old, forgotten toy, since the 1964 closing of Steeplechase Park, the once world-renowned amusement center.

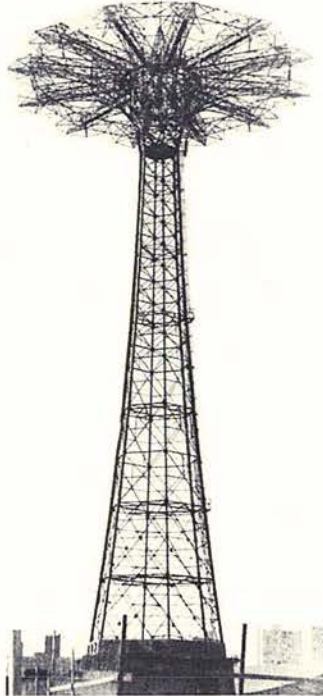
Steeplechase was opened in 1897 by George C. Tilyou, the enterprising promoter responsible for much of Coney Island's former fame, fortune, and fun. Despite a series of catastrophic fires the area flourished and was transformed from a resort area for the wealthy to a haven of amusements for the masses. Due to Tilyou's efforts, the Parachute Jump, star attraction at the N.Y. World's Fair of 1939-40, was reerected at Coney Island in 1941. When N.Y.C. purchased the 12-acre Steeplechase site in 1964 the buildings and rides were demolished but the 250-foot, all-steel Parachute Jump was left, towering over the Boardwalk.

In its report, the Landmarks Commn. observed that "A complex set of conditions governed the construction of the Parachute Jump . . . [the product] was not only a well-engineered structure but also an extraordinarily beautiful one. . ."

The tower, quietly rusting away, is a victim not only of the elements but of the harsh reality of N.Y.C.'s financial distress. Official support appears totally unlikely despite the enthusiastic advocacy of the Landmarks Commn. The Friends of Coney Island, a group of Brooklyn citizens who are concerned that a part of their cultural heritage is disintegrating, are developing a preservation and restoration plan, and proposing a museum and restaurant at the tower's base. Their first step will be to conduct an engineering study to determine the Jump's structural soundness and to estimate the costs of restoration and maintenance. *G.S.*

FoCI: c/o Sachs Management, 148 Amherst St., Brooklyn, N.Y. 11235. (212) 891-8337.

For more on the IA of jump towers, see account of the 8th Annual SIA Conference, below.



Jeff Karsdon photograph.

IA ON THE SILVER SCREEN

For a moderately strong and authentic taste of life in a typical (?) Southern cotton mill and mill town (Alabama, apparently), catch *NORMA RAE* starring Sally Field. The time is now and the heroine, a feisty young mill hand who despite her inner rumblings of discontent at the "system" can see barely beyond the next moment, discovers her real mission in life when she gets caught up in the intense efforts of a young, handsome, "outside" union "agitator" to organize the mill. They succeed, despite the initial fear and apathy of the byssinotic hands and the bitter, dirty-trick resistance of the company men, then go their separate ways, he back to NY. Much good footage of weaving (heavy camerawork on the looms, from all angles) (they seem to be running dishragging), spinning, roving, warping, and picking, not in production sequence.

HIGH GEAR IN LOWELL

SIA members who attended the 1976 Annual Conference in Lowell and others less fortunate may wish to keep abreast of the multifarious activities of various agencies—federal, state, and local—now occurring there. The Lowell Natl. Historical Park, established as a unit of the Natl. Park system in June 1978, has instigated a heavy schedule of tours to accommodate the anticipated crush of summer visitors. A 3-hour Mill & Canal Tour by Boat, Bus, & Foot, guided by rangers, departs 9 times daily, Weds.-Sun., to 2 Sept. Other tours—of the Wannalancit/Suffolk Mill Area and the Architecture of Downtown Lowell are given hourly, 9-4. A short self-guided tour is also available.

All Park activities are described in an outpouring of literature available from LNHP, 171 Merrimack St., Lowell, MA 01851—to wit:

Planning Newsletter. Vol. I, Spring & Summer 1979 issued; **Milling Around** (bi-weekly), for Park visitors.

Park publications are identified by a logo based on Winslow Homer's "Bobbin Girl", first published as a woodcut in Wm. Cullen Bryant's *Song of the Sower* (1871), from the collections of the Merrimack Valley Textile Museum, N. Andover, Mass.

The following agencies also are involved in the Lowell Preservation District: 1) The Commonwealth of Mass. Dept. of Environmental Mgmt., which plans a State Heritage Park to utilize the city's canals and rivers for cultural and recreational purposes, with research and design for a waterpower exhibit by the Lowell History & Design Co. (Lee Cott, Laurence F. Gross, & Patrick M. Malone [all SIA]); 2) The City of Lowell Divn. of Planning & Develop., which plans programs in facade improvement, transportation, and neighborhood preservation; 3) The Northern Middlesex Area Commn., which will follow the impact of the Park on the region's economy, transportation, and housing.

Numerous other organizations have been involved over the years in the movement to create the Park. Their actions culminated in the formation of the Lowell Historic Canal District Commn. whose *REPORT* to the 95th Congress led to the establishment of the Natl. Park. The same legislation that created the Park also put together the Lowell Historic Preservation Commn., a 15-member federal-state-local body evolved from previous efforts. The LHPC will have responsibilities to the City and property owners for maintaining standards within the Preservation District.

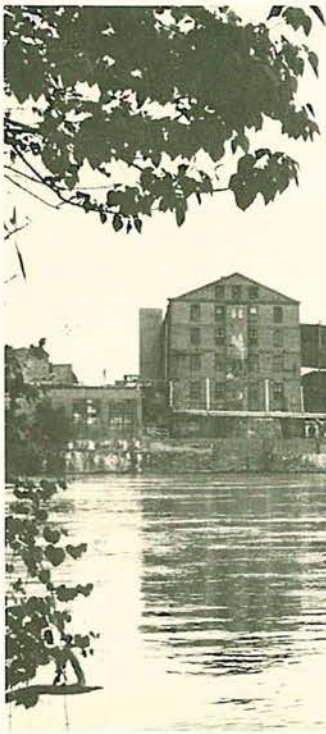
Unlike the people of Lowell, who, according to the LHPC, "understand the Park in their hearts without necessarily knowing the precise planning boundaries of the Natl. Park Service area, the State Park, the Preservation District, &c," interested parties outside are urged to write the LNHP to be placed on their mailing list for publications explaining these roles. You can't tell the players without the program. *H.W.*



MELANCHOLY OCCURANCE

While they may not be as common today as they once were, we do still, on occasion, experience a M.O. of the sort that was such common industrial fare in the last century. A recent AP story might have been taken from any of the technical or "operating engineers" journals of that distant time. We quote it to remind ourselves that like fire, steam *still* a wonderful servant but a terrible master makes.

"MONTROSE, Pa. The body of a sawmill worker was blown through the roof when a plate on a steam boiler blew off. The victim, killed instantly, landed 150 feet away in a creek. Clayton Collins, 58, of Montrose, was firing the boiler at the A.C. Crosley & Sons Sawmill in Forest Lake Township when the explosion occurred."



Columbus

Eagle & Phenix Mills and the Chattahoochee above the dam. The powerhouses are at the far right.

The EIGHTH ANNUAL CONFERENCE—COLUMBUS, GEORGIA 26th - 29th April 1978

"NO DOUBT ABOUT IT", they all said, "it's been the best ever and no way in the world to do better" . . . those who attended the Society's most southerly conference to date. The implied fascination of a part of the world essentially new to most members was clear just from the enrollment. Some 120 people attended a meeting that lay at least 700 miles away for most, and considerably further for a fair number. It was, in the event, well worth it. The weather was ideal for the entire weekend, the sites visited were never less than interesting and at best astonishing, the papers were up to the normal high standard, the company was congenial, and overspreading all was an effusion of that singular cultural expression known to the world outside as Southern Hospitality.

Believe those of us who experienced it on this occasion—those of you who haven't experienced it at all—you don't know what the phrase means. Even for those of you who think you know what it's all about, it now has a *new* meaning. There seemed clear evidence for all this in the constant whispering among the Northern visitors of plans for emigration.

The conference moved immediately into forward motion with a reception on Thursday evening at Rankin Square, a major restoration encompassing an entire city block of 19th and early 20thC commercial structures. The privately financed project has progressed sufficiently far that its ultimate success is apparent.

THE FRIDAY TOUR

The all-day tour emphasised the operating industries peculiar to the South's post-1865 industrialism; mainly cotton textiles and machinery. Of special concern was the group of industrial sites that were fully recorded by the Historic American Engineering Record during its 1977 Columbus Survey. That project strongly influenced the declaration of the combined sites as the Columbus Historic Riverfront Industrial District, and the district's subsequent designation as a National Historic District (1978) [SIAN Nov. 78:1]. A secondary focus of the tour was the close relationship of the city's industries — particularly the earlier ones — to the Chattahoochee River, which forms its western boundary.

Perhaps the most characteristically Southern industry today is the manufacture of cotton cloth. A "typical" mill was seen at Swift

Mfg. Co., whose sole product is the classical blue denim, sold to the various jeans makers. Typical, in that the mill itself is an architectural mixture, the oldest block having been built at the firm's founding in 1883 and the latest in the 1970s. This was, incidentally, the city's first large steam mill. The production machinery too, in the traditional fashion, ranges from classical ring-spinning frames to those based on the recent "open-end" process. Weaving is done on a combination of orthodox, and modern shuttleless looms of the air-blast type that run at a speed surpassing the eye's ability or the mind's capacity to take in.

A certain contrast was provided by the **Eagle & Phenix Mills**, perched directly on the river's edge, a cotton complex with antebellum roots but the major elements of whose fabric (no pun intended) were erected between the 1870s and 80s. Here we visited not the mill proper but the far more significant power plant. This consists of two separate hydroelectric stations with the latest equipment installed in 1921. The plant developed gradually between 1844 when the first dam was built, through an interesting series of alterations and additions. The first prime movers were water wheels, succeeded by turbines, their power transmitted to the mills by a variety of systems including rope drive, open shafting spanning the tail race, and finally electricity. The site's evolution is an enormously interesting one, all thoroughly documented by the HAER Survey and set forth in a series of striking, highly descriptive drawings that were displayed for the occasion.

The adjacent Muscogee Mills were seen principally in the negative, conspicuous being a yawning gap where the No. 1 Mill of



Columbus Iron Works, river front, restoration in progress.

1868 had just stood. This, the most architecturally distinctive of the city's mills, was demolished no more than a month before the Conference by the mill's present owners, the Fieldcrest Co.

Columbus was known as widely for machinery manufacture as for textiles, its reputation based principally on the products of the **Columbus Iron Works**. CIW has thrived from the middle of the 19thC. manufacturing, at various times, a great range of agricultural implements, stoves, power transmission machinery, steam engines, and from the 1880s to the 1920s, absorption ice machines (see the Conference announcement). The firm left the site for a suburban one in 1963, and in 1975 the city purchased the majority of the old plant for adaption to a convention



Columbus Iron Works interior, partially restored.

and trade center. We viewed this impressive brick complex—most of which was constructed between 1902 and 1907—with rehabilitation some 50% complete. A certain amount of machinery has been left in place, including the foundry cupola furnace and much line shafting. The heavy timber framing, the vast volumes of the erecting shop, and the general sense of architectural power will produce a facility of stunning impact.

At the steamboat landing adjacent to CIW the U.S. Army Corps of Engineers had kindly moored for the tour's benefit the steam, sternwheel snagboat **Montgomery**, built in 1926 and still in the full



Snagboat *Montgomery*, bucket down, at the landing below Columbus Iron Works.

flush of a productive career. Her principal duty is to remove snags from the channels of the Apalachicola, Chattahoochee, and Flint rivers. (Snags are the submerged logs and trees so feared by riverboatmen both before and since they were so vividly described by Mark Twain.) All is original, including engines (14" x 72", 20 rpm) and boiler (Scotch marine, 210 psi.), everything built in Charleston, S.C.



Assembling a cotton gin at Lummus Industries

Despite CIW's departure, machinery manufacture still is alive and well in Columbus. At **Lummus Industries** we saw at close range the manufacture of another distinctively Southern product: the cotton gin, as well as its close associate, the cotton press, and other allied products. Of particular interest was the diversification of manufacturing machinery and methods. Efficiency is achieved by retention of a certain amount of early equipment for low-production or occasional operations, with entirely modern machinery for high-production, high-repetition work. Very sensible arrangement, that.

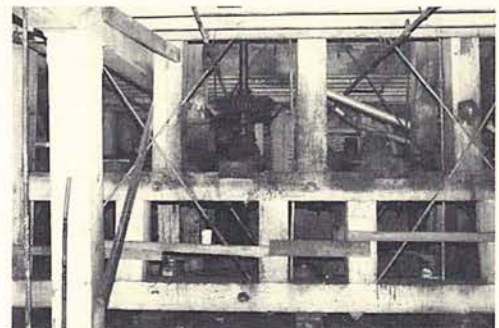
All was not IA, of course. There was the occasional diversion of a pass-by and look-at some notable feature of local culture. (The SIA has long recognized that all IA, and no play, makes a long day, so to say.) The clear favorite among these high-speed respites unquestionably was the internationally celebrated Columbus Stockade,¹ the inspiration in 1927 for Thomas Paul Darby's eternal folk classic, *Columbus Stockade Blues* . . .

Way down in Columbus, Georgia,
(I) Want to be back in Tennessee.
Way down in Columbus Stockade,
My friends all turned their backs on me . . .

For many the day's high spot was the visit to the **City Mills**, a large flour and feed mill that began operation on the site in 1828. Present buildings date from 1869 with many additions to 1914.



City Mills, downstream side. At the left are the remains of the Columbus RR Co. hydroelectric station (1894-96), largely dismantled in 1950; in the center the mill's wheelhouse containing three 62-inch Leffel vertical turbines; and at the right the flour mill of 1891.

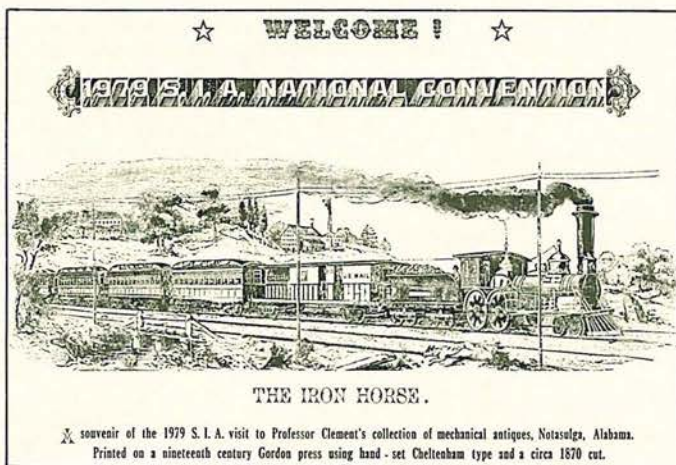


A section of the hurst frame (1908) at City Mills.

Only feed is milled today. Of great interest was the hydraulic power equipment of which much survives, although inoperative. A "hurst frame" of 1908 — a massive timber structure supporting the run of seven buhr stones and their respective bevel gearing — was the most arresting feature in the mill. It served to isolate the vibration of the gearing, and also to maintain the precise relationship between stones, and driving and driven gears—all this by its structural independence from the principal framing of the mill.

After a trip through **Goldens' Foundry & Machine Co.** (1890-1910), the tour ended with a supplement for the hard-core only: a detour across the river to once-notorious Phenix City, Alabama to gain a striking panorama of Columbus' river-front mills and other industrial structures, bathed in a perfect western light.

¹ Stockade: n. Vernacular, esp. South. U.S. A jail or lockup.



THE EVENTS OF SATURDAY EVENING

Here was something new and extraordinary. No sit down at a banquet; no get on a boat and go up the river or down the bay; no steam train ride. No. Pile into busses. Stop first at the **Bickerstaff Clay Products No. 3 Brick Yard** south of Phenix City, Ala., which

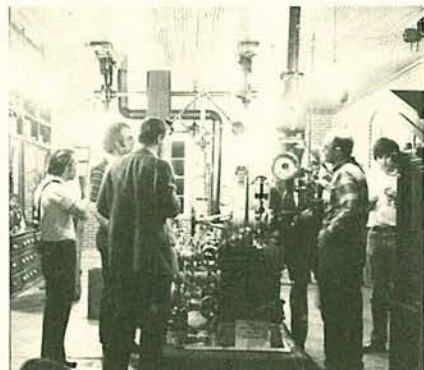


Beehive brick kilns (1919), Bickerstaff Brick Co.

is in full, high-production operation, while preserving a dozen obsolete beehive brick kilns of 1919 plus a variety of other antiquarian machinery, all very impressive.

Then back on the motorcoaches, and on due west to Notasulga, to the remarkable **machinestead** of SIA member **Walter B. Clement**, to examine and experience the two remarkable things he has done. First, he has built, from scratch, as handsome, well crafted, and livable a confection of a carpenter-Gothic cottage as has been built in the U.S.A. since 1865. And there he lives in, we should judge, above-average contentment. Then, if that weren't enough, he has built himself a neat little brick engine house off to one side, where there lives his Watts-Campbell Corliss engine of 1903, his print shop based on a Chandler & Price job press, and a variety of other mechanical antiquities. Nearly all were in operation—steam devices *under live steam*—to the complete ecstasy of the crowd.

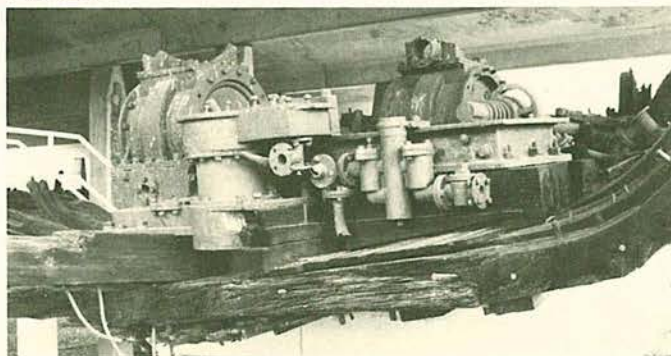
And yet more. In another small building was the machine shop, the Mietz & Weiss oil engine, and *additional* period machinery, producing in total an atmosphere of an earlier time that was nothing less than spellbinding. A picnic supper was taken on the lawn amidst a constant circulation of the assembled faithful among the various buildings and objects of adoration.



Every man his own stationary engineer. Walter Clement (hand on throttle valve) starts his Watts Campbell Corliss engine for the massed appreciative.

THE SUNDAY TOUR

With the fine weather continuing, the group moved off for a brisk tour of the districts restored and under restoration by the Historic Columbus Foundation, our hosts for the weekend, who in every sense of the word have created the historical renaissance presently sweeping the city. Then on to the **Confederate Naval Museum**, a unique institution whose principal holdings are the remains of a pair of Confederate vessels: the ironclad *Muscogee* and the gunboat *Chattahoochee*. The former was built in Columbus but burned before it saw combat; the latter, a converted schooner engined at Columbus, was scuttled toward the War's end. During the Civil War Centennial both vessels were raised from their resting places on the bottom of the Chattahoochee and brought to the Museum. Of very special interest were the screw engines of the *Chattahoochee*, among the earliest surviving American marine engines.



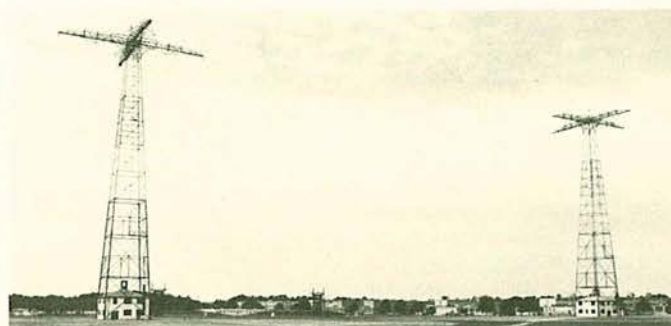
Direct-acting, short-stroke screw engines of the *Chattahoochee*.

The tour's final stop was Fort Benning, established during WW-I, famed as the headquarters of the U.S. Army Infantry. Two sites of interest were visited. First was the **Infantry Museum** which houses, along with an interesting variety of infantry objects, a small steam locomotive built for WW-I service but never shipped, used until recent times for hauling recruits to the distant rifle ranges, and—strangest object of all—a portable, mule-drawn sterilizer. This was nothing but a big autoclave on wheels with a vertical boiler on the back, used to sterilize blankets and other items in army field hospitals.



The IA of disinfection: sterilization on the fly.

Easily the most unusual structures seen on the entire weekend were the **parachute jumps**, which may, in fact, appear less surprising if you've read everything else in this issue. Until recently there seems to have been a firm belief at Ft. Benning that one of these 250-ft. "jump" towers which were installed in the early years



The IA of surprise attack. The Jump Towers, Ft. Benning.

of WW-II to train paratroops (there are three—a fourth was destroyed in a 1954 tornado) was indeed the celebrated structure that previously had thrilled thousands at the 1939-40 N.Y. World's Fair. We have seen that it isn't. The more modest Army versions were, however, directly inspired by the original at Flushing Meadows and were built by the same firm: The Safe (sic) Parachute Jump Co.

Those of you who attended this extraordinary event will need no reminding that the pervasive spirit of conviviality and the precise yet easy-going organization of the entire weekend were the consequence of well over a year of planning, estimating, cajoling and sometimes arm-twisting site owners, marshalling, dickering, and nearly perpetual anxiety—all this on the part of Conference Coordinator David M. Sherman and his allies in Columbus. There is considerable irony in the fact that when Mr. Sherman undertook to organize a 1979 conference in Georgia he was firmly entrenched in Atlanta as the state's Historic Preservation Officer. Subsequently he reestablished himself in Washington, but missed not a step in the planning process, wheeling—if not dealing—across a distance of some 750 miles. Formidable.

The critical key, he is the first to say, was his above-mentioned colleagues. Janice Biggers, Executive Director of Historic Columbus Foundation, the Conference's host, in every sense carried the entire affair on her able back, turning not only her own staff but much of the city inside-out to make the event the stunning success it was. This was apparent not only in the underlying organization, but in the constant high energy brought to bear by Mrs Biggers and her associates on every element of the meeting, ensuring the perfection of each. (It was Mrs Biggers, incidentally, who in 1977 led HCF's efforts to raise the \$14,000 local share of the funding for the HAER Survey.)

John S. Lupold of Columbus College was not only author of the superb Tour Guide, one of the most complete and well-organized of these to date, but also conducted the planning and scheduling for the Friday and Sunday field trips, a task seemingly simple—until you've tried it yourself. Prof Lupold in the course of this coordinated the site guides—many of them volunteers, reassured uneasy managers and owners, and drilled the other tour guides to the point that all went like a Swiss movement.

It was, in total, a heroic effort on the part of these principals and the many others who struggled with them. The lucky ones who were at Columbus know that it was worth it.

THE ANNUAL BUSINESS MEETING—

28 April 1979

The Annual Meeting was held in the Springer Opera House (Built in 1871, handsomely restored in 1964-65, site of performances by such luminaries as Lillie Langtry [1889]), a full report of which is printed separately and accompanies this issue.

ELECTION. Edward S. Rutsch, Chairman of the Nominations Committee, announced the results of the election of officers and board members for 1979-80, which were as follows:

Officers

President—Theodore Z. Penn, Sturbridge, Mass. Researcher in Technology, Old Sturbridge Village. (to 1980)

Vice President—John Bowditch, Ann Arbor, Mich. Curator of Power & Shop Machinery, Henry Ford Museum. (to 1980)

Secretary (and Hon. Counsel)—Brenda Barrett, Ickesburg, Pa. Administrator, Protective Services, Pa. Historical & Museum Commission. (to 1981: elected 1978)

Treasurer—Marlene Nicoll, Greenwich, Conn. Data Dictionary Administrator, American Can Co. (to 31 Dec. 1981: elected 1978)

Past President—George M. Notter, Washington. Principal, Anderson Notter Finegold Assoc. (architects), (to 1980: non-elective)

Standing Directors

Mary Jane Rutsch, Newton, N.J. Principal, Cultural Resource Management, Inc. (to 1980)

David M. Sherman, Washington. Special Asst. to the Asst. Secy. for Fish & Wildlife & Parks, Dept. of the Interior. (to 1980)

Jeffrey L. Brown, Chattanooga, Tenn. Assoc. Prof. of Anthropology & Director, Inst. of Archaeology, Univ. of Tennessee at Chattanooga. (to 1981)

Newly Elected Directors

Brent D. Glass, Chapel Hill, N.C. Deputy State Historic Preservation Officer, N.C. (to 1982)

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

Elected to the Nominations Committee

Merrill Ann Wilson, Denver. Historical architect, Natl. Park Service, Denver Service Center. (to 1982)

Editors

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

IA—Dianne Newell, London, Ontario. PhD Candidate in History, University of Western Ontario. (See *SIA Affairs*, below.)

Newsletter—Robert M. Vogel, Washington. Curator of Mech. & Civil Engineering, Natl. Museum of History & Technology.

Local Chapter Presidents

(Elected by chapter membership)

Montgomery C. Meigs Original Chapter (Greater Washington)—**Robert B. Hoke**, Columbia, Md.

Southern New England Chapter (Conn., Mass., R.I.)—**Patrick M. Malone**, Lincoln, R.I.

Roebuck Chapter (Greater N.Y.C.)—**Terry Karschner**, Bordentown, N.J.

Great Lakes Chapter (Detroit/Windsor area & beyond)—**John Bowditch**, Ann Arbor, Mich.

Northern California Chapter—**Raymond L. Wilson**, San Francisco.

Latrobe Chapter (Greater Baltimore)—**Mark R. Edwards**, Annapolis, Md.

MISC CONFERENCE NOTES

The run of John S. Lupold's *Industrial Archeology of Columbus, Georgia*, the tour guide, unfortunately was sufficient only for distribution at the event. There is hope of a second printing of this outstanding document, which will be announced here if it occurs. We recommend, in the interim, his equally fine *Columbus Georgia 1828-1978*, a thorough history of "The Lowell of the South" which deals with and illustrates most of the tour sites. Available from *Historic Columbus Foundation, Inc.*, 716 Broadway 31906. Pp. 140. \$4.00 ppd.

See also Prof Lupold's "Revitalizing Foundries, Hotels, & Grist Mills in Columbus," in *The Georgia Historical Quarterly*, Spring 1979, pp. 138-42. (Univ. of Ga., Athens 30601.)

SIA AFFAIRS

IA. Michael W. Robbins, Editor of the Society's journal for the past two years, has resigned from the post (the 1979 issue—Vol. 4—will be the last from his able hand. It is due in early Sept.). The Board has appointed Dianne Newell, 1977-78 President and presently Chairman of the Publications Comm., to the post.

LATROBE CHAPTER. The Society's 6th local chapter has been formed and sanctified. Its sphere of influence is the Greater Baltimore area. (This may well lead to vicious confrontations with the Meigs Chapter, as the two groups vie to establish where Greater Washington ends and Greater Baltimore begins, and vice-versa. We visualize *Car Wars*, in which hit teams from the rival chapters rush at each other headon in automobiles along the Baltimore-Washington Pkwy.) The new chapter name memorializes Benj. H. Latrobe, Jr., celebrated chief engineer of the Baltimore & Ohio RR, many of whose works stand, including the route alignment of the B&O from Harpers Ferry to Wheeling. Chapter President: Mark R. Edwards, 36 Maryland Ave., Annapolis, MD 21401. (301) 263-3741.

THE BRIDGE SYMPOSIUM

On 9 & 10 May over 80 industrial archeologists, preservationists, engineers, and transportation officials from throughout the eastern U.S. met in Washington to discuss the future of historic highway bridges' and their place in America's transportation system. Sponsored by the Historic American Engineering Record, the symposium included 19 speakers representing, among other groups, the state historic preservation offices, the Fedl. Highway Admin. (FHWA), the Dept. of the Interior, and the Advisory Council on Historic Preservation. The event's purpose was to bring together the often opposing transportation and preservation factions to provide each with a greater understanding of the other's views.

In the wake of the recently enacted Surface Transportation Assistance Act of 1978 which provides \$4.2-billion in federal funds for highway bridge replacement and rehabilitation [SIAN Jan/Mar 78:9], HAER believed it crucial that problems related to historic bridges be discussed openly and frankly among all interested groups.

The Symposium was divided into 4 half-day sessions: 1) Inventorying Historic Bridges; 2) Significance & Criteria; 3) Safety & Rehabilitation; and 4) Feasibility of Preservation. Following a showing of the HAER/FHWA-sponsored slide film, *An Introduction to Historic Bridges*, the first session focussed on the importance of inventory work in the highway planning process. The methodologies used in the Virginia and Frederick Co., Maryland truss-bridge inventories were reviewed and attention given to the HAER inventories now underway in Calif. and Montana, supported by the states' transportation depts.

The first afternoon session dwelt on issues of significance and criteria. The most important topic discussed was the numerical rating system used by the Va. Hwy. Transp. & Research Council in evaluating the historical significance of truss bridges and its relationship to Natl. Register criteria. It was clear that numerical rating systems should be considered an aid, not an end, in evaluating a bridge's eligibility for the Register.

The second morning included presentations by A.G. Lichtenstein [SIA], a private consulting bridge engineer and an FHWA engineer on the problems of older bridges with respect to safety and rehabilitation. Examples of rehabilitated spans were shown and the audience was given a clear idea of FHWA interest in upgrading and maintaining the country's highway system.

The final session looked at the feasibility of preservation in practical terms. Potential legal problems were discussed, along with presentations on the potential relationship between bridge preservation and bike-way development. A particularly important talk described how Frederick Co., Md. is incorporating bridge preservation formally into its highway system. D.C.J.

The Symposium was organized by HAER's Donald C. Jackson [SIA]. "Proceedings" have been prepared and copies may be obtained from HAER, HCRS / Rm 327 Pension Bldg. / 440 G St. NW / Wash., DC 20243.

RESPONSES

ALL-BRIDGE ISSUE: JAN.-MARCH 1979

A miscellany of comments from Field Curry, Pittsburgh: The Cleveland pylons are certainly the nicest I know of but they are not unique in the U.S. Some of Conde McCullough's Oregon Hwy. Dept. bridges have some very fine decoration, particularly impressive because he was working in concrete rather than stone. (Good photos in David Plowden's *Bridges, the Spans of N. America*, 1974) . . . The Pt. Richmond trusses would make marvelous roof trusses for someone's long-span building . . . Letchworth State Park [Portage Viaduct, IA in Art] is well worth a substantial detour. The DL&W also crossed the gorge on a spectacular bridge which is still standing so far as I know . . . When Otto Kuhler immigrated to this country [1923] he settled first in Pittsburgh. One painting—of the Wabash Bridge—is as monumental as the bridge was. It fills the entire wall of the landing between the 1st and 2nd floors of the Chamber of Commerce Bldg. A self-taught primitive painter, John Kane, did a number of

paintings of the local scene and bridges are prominent in many, naturally. One or two are hung permanently in the Museum of Art, Carnegie Inst . . . There was a prominent Philadelphia family named Wister [Christian Thought &c]. Philadelphians even today have a terrible inferiority complex and can't resist knocking their neighbor cities. They've never quite gotten over the rise of N.Y.

Sir: Regarding Kentucky's covered bridges (p. 10) you [they] were using some out-of-date figures for CBs remaining in Pa., Ind., and Ohio. At this time Ohio has 153 historic timber CBs; Pa. about 230; and Ind. 101 plus a covered canal aqueduct. Ohio leads in CBs listed in the Natl. Register with 60. *Miriam F. Wood, Ohio Covered Bridge Committee.*

Sir: I must quarrel about your statement concerning Howe trusses and their determinacy [The Howe Truss Lives]. If they were statically determinate it was only because the engineers of that day did not have the capacity for solving many simultaneous equations and so made the necessary simplifying assumptions to make them determinate and therefore solvable.

Strictly speaking, the Howe truss is highly indeterminate. It can be rendered determinate only if:

1. The diagonals are assumed not to carry any tensile forces; hence, only one diagonal is working in each panel.

2. The diagonals act independently and are not connected to each other at their point of crossing.

3. The top and bottom chords are pinned at the panel points.

Fortunately, all these conditions tend to make the structure more flexible. Therefore, it is always conservative to assume determinacy and design accordingly. I guess that's why so many covered bridges are still standing! *Duane S. Ellifritt, Metal Building Mfrs. Assn., Cleveland.*

Mr Ellifritt is, of course, correct, as he is speaking strictly. The timber Howe truss was generally—if not invariably—employed where timber was either free or so cheap as to be effectively so. The assumptions noted surely were made, resulting in heavier chords. These and the redundant (apparently tensile) diagonals, as pointed out, simply made the truss stiffer—which couldn't hurt—at the expense of a bit more wood and labor. Not engineering design at its theoretical best, perhaps, but they sure worked.

Two readers—Mr Ellifritt and James E. Brittain of Georgia Inst. of Tech.—suggested that the **mystery truss** might be a Bailey bridge of WW-II fame [conceived in 1941 for quick replacement of downed spans, formed of prefabricated modular panels and standardized hardware], or [Ellifritt] its successor, the "Accrow Panel." Many Baileys are found around the landscape as "temporary" bridges, and there is a decided resemblance, emphasised by the small cut published, but this is not a tactical bridge of any stripe. We'd still like to know what it is.

Unlike the truss—which really is a mystery—there were many comments about the curious masonry of the **Conestoga Creek Bridge**—about half wrong and half right, for you see, we really *did* know what was happening here (i.e., there). The wrong suggesters, who shan't be named out of consideration for their families, thought the blocks were for 1) supporting part of the timber centering used in constructing the arches (2 replies), or 2) keying a new stone facing to the side of the bridge.

Those who knew are represented by Robert S. McGonigal of Glenside, Pa. who says: "the photo shows it being wide enough for only two tracks (which it now carries) and while the stonework on the near (S) side is quite rough, that on the north is finished [Perhaps we should have revealed that.] My first supposition was that it was originally a four-track bridge which was reduced in width when the Penna. RR removed two of the four mainline tracks on the Parkesburg-Lancaster section of its mainline c1960. A look at a 1945 map, however, revealed a short stretch of double track just E. of Lancaster (the bridge!) and an 1892 photo in E.P. Alexander's *On the Main Line* shows the structure with only two tracks and the same rough stonework. It is doubtful that in a period of expansion such as the late 19thC the PRR would be slimming down its most important mainline and even more unlikely that it would partially

dismantle a recently constructed bridge in the process.

Perhaps one side was left unfinished with an eye toward widening in the near future. This expansion apparently never came, possibly because of the construction or acquisition of a line via Columbia which enables through freights to bypass Lancaster. Incidentally, the bridge is not Conrail's, but part of Amtrak's Phila.-Harrisburgh line, although Conrail does have trackage rights for its freights."

Daniel D. Reiff, State Univ. College, Fredonia, N.Y. says the same, adding that the metal ties and bars may have been placed simply to prevent the rough infilling and grout in the spandrels from working out. Randolph W. Chalfant, Maryland Historical Soc., notes (as does Mr Reiff) that the unfinished side was downstream to minimize wash on the "temporary" face, adding that this sort of keying really would not have been necessary to the structural stability of the structure had the 2nd half been built.

Since there really is no such place as Lancaster, P-A, no one gets the prize.

A sombre footnote to this matter was brought to our attention by several people. On the evening of 14 June Amtrak's *National Limited* derailed right on the Conestoga Bridge, the result of a broken locomotive axle. One of the derailed cars then was sideswiped by a passing freight. By the grace of whoever looks after these things, everything stayed upright and on the bridge, although several cars did come fearfully close to going into the drink some 80 feet below.

We've been picked up by the *Beacon* (N.Y.) *Evening News* who liked the coverage of the City's Phoenix iron truss in the "Jan.-March edition of the National Society of Structural Archiology News Letter." (All sic.)

MISC. NOTES

ARCHIVAL MATTERS

(For the following we are indebted to the Committee for the Preservation of Architectural Records Newsletter, 15 Gramercy Park South, NYC 10003.)

CALIF. PUBLIC UTILITIES COMMN. (pre-1946: Calif. RR Commn.) has deposited its records in the Calif. State Archives. Those for 1861-69 have been inventoried. Incls. drawings, photos, & maps on state's steam & electric RRs, public utilities, and auto. industries. CSA, 1020 '0' St., Rm. 130, Sacramento 95814.

CENTRAL OF GEORGIA RR. A collection of some 45,000 engineering drawings and maps has been deposited in the Ga. Historical Soc., apparently reaching back to the road's earliest period, c1850. Anthony R. Dees, Director, GHS, 501 Whitaker St., Savannah 31401.

AVAILABLE

CAST-IRON T SHIRTS. Pertaining to, not made of, of course. Friends of Cast Iron Architecture have clanged out of the closet with their message via one of the day's most persuasive media. Featured is the "flamboyant Mansard roof of the 1869 Gilsey Hotel, Manhattan, still standing, encircled by the words 'Friends of Cast Iron Architecture'." Black on a beige shirt. Get several; make your neighbors jealous; turn your colleagues green; spread the ferrous gospel. S M & L & children's L. \$5.50 PPd. FoCIA, 44 W. 9th St., NYC 10011.

CIDER MILL FOR SALE, Nassau, N.Y. (c15 miles SE of Albany). Appears built early 20thC, annual run 130,000 gals.; 2 bins holding 40 tons of apples each; 1.25 acres. Ca\$45,000. A pleasant business in a nice part of the world. Bernard Fauth, Fauth Products, Nassau, NY 12123. (518) 766-2717.

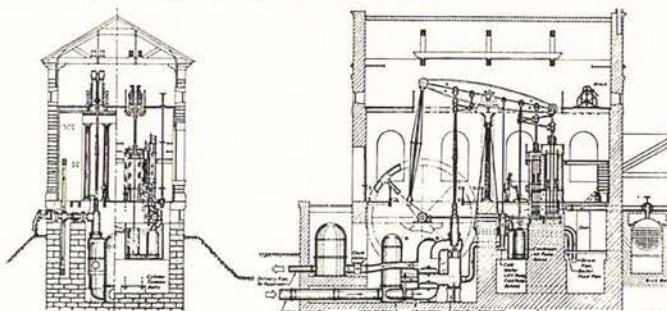
AMMANN CENTENNIAL. Further to the note on the 100th Anniversary of Othmar H. Ammann's birth last issue, we would note two additional items: 1) Switzerland has issued an attractive Sfr 20 commemorative stamp with a portrait superimposed on a stylized suspension bridge, in gray, magenta, and ochre. First-day covers with a block of four are available from the Technorama Schweiz, Technorama Str., 8404 Winterthur, Switzerland, at \$2.

2) The Technorama (Switzerland's under-construction technical museum and archive) also has published Urs Widmer's *Othmar H.*

Ammann 1879-1965, 60 Jahre Bruckenbau. (60 years of bridge building). 104 pp, heavily illus. \$4.50 PPd.

DELAWARE & RARITAN CANAL HISTORICAL MAP, 1976. The canal and adjacent RRs as of 1866; summary of the canal's history; cross sections; and a detailed map of the Trenton area (1897). 20" x 30". \$3. Map & Publ. Sales Office, Bureau of Geology & Topography, Box 1390, Trenton, NJ 08625. Checks to Treasurer, State of N.J.

GARTSHORE BEAM PUMPING ENGINES, HAMILTON, ONT. William Sawyer [SIA] has done it again. Noted here recently was his remarkable interpretive drawing of the Leavitt machinery at the Calumet & Hecla copper mine. Mr. S. now has produced a large sheet graphically describing in full the pair of engines designed for the City of Hamilton by Thos. C. Keefer, CE and built by John Gartshore's Dundas (Ont.) Foundry in 1857-59. They survive, out of service, lovingly preserved by the city (see SIAN March 76 for photos). The Sawyer drawing includes small regional and site plans, elevations and plan of the engines and boilers in their respective houses @ 3/16-in. scale, details of the pumps and valve gear, and copious notes on references, history, and specifications. 31 x 48 ins. Ozalid: \$5.; blueprint (more permanent), \$6., PPd. Wm. D. Sawyer, 1010 Bush St., San Francisco, CA 94109. A singularly thorough document on the only surviving beam pumping engines in N. America.



Details of the Sawyer drawing of the Hamilton pumping station.

TRUSS BRIDGE. King Iron Bridge Co., 1887. Double-intersection Pratt type, multi-span, total L. 473 ft., take one or more. Nr. Belleville, Kan. Non-profit orgs. only, taker pays transportation. Glenn Anschutz, Kan. Dept. of Transp., State Office Bldg., Topeka 66612. (913) 296-3531. By 31 Aug.

POSITIONS AVAILABLE

RESEARCH COORDINATOR Large contemporary science & tech. museum seeks scientist, engineer, or historian to conduct independent research, and to write in concise, interesting, and understandable manner. Resume to Victor J. Danilov, Pres., Museum of Science & Industry, 57th St. & Lake Shore Dr., Chicago, IL 60637.

RESEARCH INQUIRIES

DL&W, ERIE, and ERIE-LACKAWANNA FREIGHT EQUIP. Seeking photographs, drawings, or other documentation to compile list of all freight equip. of above roads. To include car type, no. series, statistical data for each series, paint scheme(s), truck type, and documentation source. Schuyler Larabee, 10 Dana St.-4 South, Cambridge, MA 02138. (617) 876-3471.

ALDEN PARTRIDGE, of US Military Academy (1785-1854). For a complete biography, MS materials on the man and his students sought. Prof Gary T. Lord, Dept. of History, Norwich Univ., Northfield, VT 05663.

CONTRIBUTORS TO THIS ISSUE

Donald C. Jackson, Historic American Engineering Record; Gerald Sachs, Friends of Coney Island; David H. Shayt, Natl. Museum of History & Technology; Helena Wright, Merrimack Valley Textile Museum. With thanks.