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NNEC President's Report

Greeting, this is my first report as the new president of the Northern New England Chapter of the Society of Industrial Archeology. One of my goal as president will be to increase membership in our chapter. As outgoing president Dennis Howe touched on in his final presidents note, we have a dilemma. The interest in industrial archeology is expanding while the membership in our chapter and others is declining. I feel this is due to people not knowing our organization, and wonder if members might have any suggestions on how to change that. I would like to remind all that they are welcome to bring interested friends and relatives to our spring and fall tours.

As new members develop interest in certain fields, they may choose to do research, lead tours,

Wanted: SIA Events Coordinator

The SIA has an opening for the part-time position of Events Coordinator. The successful candidate will report to the Executive Secretary and will have a strong role in the planning and execution of annual conferences, fall tours, and study tours. Current SIA membership is required, as well as experience with SIA events. Relevant event planning experience is also important. Please submit your application no later than June 1, 2007 to Nanci Batchelor, Chair, Events Coordinator Search Committee, c/o Withum, Smith & Brown, 5 Vaughn Dr., Princeton, NJ 08540; (609) 520-1188; nkbatch@msn.com.

or present a paper on the subject. When I joined in 1991, my only interest as a forester was water powered sawmills. Since then I've discovered the broad scope of industrial archeology and now even have an interest in bridges, something I first considered rather dull. In 1995 I invited my brother to join the fall tour in Portsmouth, he became a member, and has done research on the "Great Works" on the Salmon Falls river. This may be the site of the first water powered sawmill in North America and he may present a paper on this topic in the future. This illustrates how guests may join us initially for a tour, but develop a deeper interest in industrial archeology as the years pass.

With this in mind, our spring tour will be an event most will enjoy. A visit to the *Flying Yankee* streamliner train on Saturday, June 2nd in Lincoln, N.H. Adjacent is the Hobo railroad where an 80

minute train ride along the Pemigewasset river can be enjoyed. The *Flying Yankee* was built in 1934 as a three car articulated diesel train, one of only three built. It ran from 1935 to 1957 on the Portland - Boston route in 51 minutes, a faster time than today's Downeaster. Restoration is two-thirds complete and a open house will take place with a 45 minute guided tour showing the work done to date. Once the *Flying Yankee* is running, it will become one of the landmark events in railroad preservation history. In addition to the optional railroad excursion, other sites will be added on the itinerary. Remember the date, Saturday, June 2nd. A flier will follow once the entire schedule is determined. Southern chapter members are always welcome to join us.

Dave Coughlin

American Textile History Museum Names North Carolinian L. McKay Whatley Adjunct Curator of Machinery

In a move to make the industrial machinery collection of the American Textile History Museum in Lowell, Massachusetts, known to a wider audience, the Museum has named Southern textile historian Lowell McKay (Mac) Whatley to the new position of Adjunct Curator of Machinery.

According to ATHM's President/CEO, James (Jim) Coleman, Whatley joins the Museum in connection with the decision to relocate much of its industrial-period machinery collection to storage space in Franklinville, North Carolina, and the Museum's long term goal to establish a satellite museum in North Carolina where there is a strong history in textile production.

"The Museum is very pleased to welcome Mac to our collections department," said Coleman. "Working with him in North Carolina opens a new chapter in the Museum's history. Mac is passion

ately interested in textile history, and we are confident in his ability to promote the preservation, study, and use of the Museum's machinery collection. We see this as an important step toward becoming more of a national museum, with greater public access to our vast collections."



Lowell McKay (Mac) Whatley

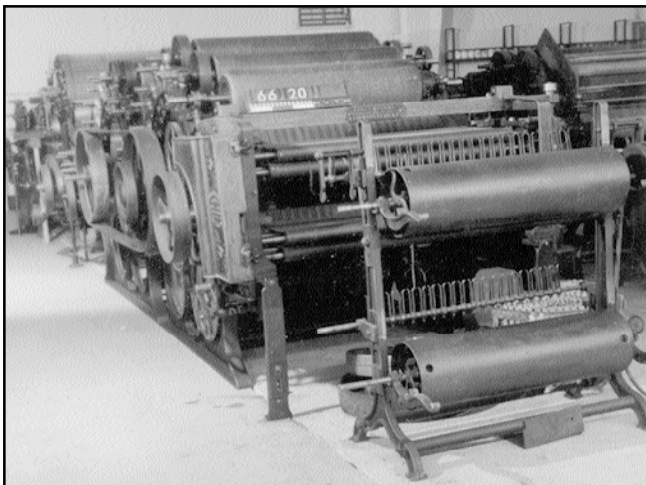
The American Textile History Museum tells America's story through the art, science and history of textiles. The Museum sold part of its Dutton Street property last summer for development into mixed use space in order to bolster its endowment and ensure its future in Lowell. Museum is completing the movement of objects and will be organizing the collection over the coming months.

Richard M. Candee, an Advisor and Chairman of the ATHM Collections Committee, said "This move greatly increases the survival and interpreta-

tion of the museum's world-class collection of large industrial machinery. We welcome Mac Whately as a skilled and knowledgeable colleague and look forward to a much expanded use and interpretation of these collections."

Coleman added, "Mac has many great ideas for potential partnerships in North Carolina and around the South, and is already working on ways to make our machinery collection known to a much wider audience."

Lowell McKay (Mac) Whately has been involved in textile history, especially in the South, all his adult life. As a student at Harvard in the 1970s, he majored in fine arts, specializing in architectural history. After working as an archaeologist with the Virginia Research Center for Archaeology in Williamsburg, he became an architectural survey specialist for the Historic Preservation Section of the North Carolina Department of Cultural Resources. In 1985, his survey, *The Architectural History of Randolph County, NC*, was published. Continuing his education, Mac earned a masters in library science from the University of North Carolina-Chapel Hill and a JD from North Carolina-Central University in Durham. Today, he is a lawyer in Asheboro, North Carolina focusing primarily on commercial real estate law. He is very active in civic organizations in the area, and continues to pursue his interest in textile history.



In ATHM's collection to be moved to the storage space in Franklinville, North Carolina: Davis & Furber carding machine set, about 1870.

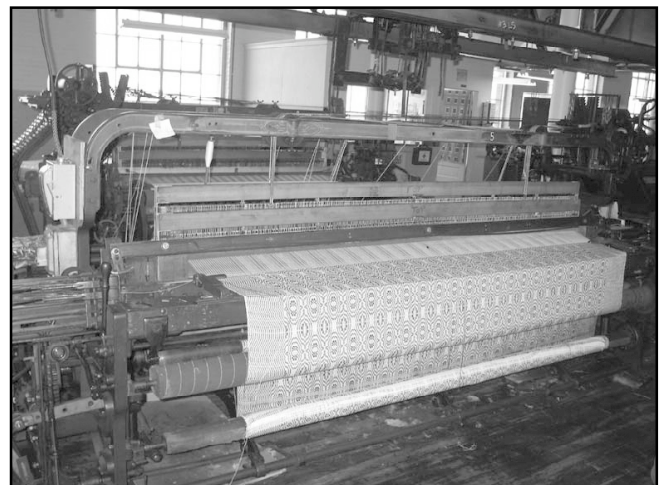
The Franklinville site where the collection will now be housed is rich in Southern textile history. It was established as a textile mill in 1836, the first in the Deep River area, and part of the building that still stands dates back to 1846.

A Campaign for the American Textile History Museum is in progress to support endowment, daily operations including collections,

special exhibitions, school programs, and renovations to the *Textiles in America* core exhibition. For information go to www.athm.org

American Textile History Museum and UMass Lowell Form Partnership to Promote Science, Technology, and Culture

The American Textile History Museum (ATHM) and the University of Massachusetts Lowell (UML) have entered into a Cooperative Agreement to promote the understanding of the textile industry through collaborative research, educational programming, and exhibition development. Through a variety of initiatives, the partners will



In ATHM's collection to be moved to the storage space in Franklinville, North Carolina: Crompton & Knowles loom is a W-3, made in Worcester in about 1890.

promote public education and awareness of science, technology, and culture, using the textile industry as the context for learning and research.

According to ATHM President and CEO James Coleman, the collaboration is an opportunity for the Museum staff to work closely with the faculty at UML to develop exciting programs and exhibitions of interest to their institutions and to the public.

UML Provost John Wooding commented that, "Both institutions have tremendous resources and important ties to the textile history of the city of Lowell. This knowledge and expertise can be combined to create dynamic exhibitions and programs on subjects of great value and interest to the public."

Mr. Wooding has appointed a liaison from each UML college and school involved to work with the ATHM staff in the development of projects and the supervision of students and others involved in the research, programming and exhibition development described in the Cooperative Agreement. "We are confident that the scope of this program will add an exciting new dimension to the knowledge of issues relating to America's textile industry and beyond, reaching into new areas of science, technology, culture and history," said Wooding.

According to Mr. Coleman, "The Museum is currently working on a major renovation of its core exhibition *Textiles in America*, and is looking forward to working with UML faculty to develop displays featuring the importance of nanotechnology in the manufacture of cutting-edge textiles. We look forward to developing and cosponsoring programs and exhibitions on advances in fiber nanomanufacturing aimed at bridging the gap between the public's understanding of scientific discovery and product. We also plan joint sponsorship of oral/video history projects and a film festival related to the textile industry, the inclusion of attendance at ATHM exhibitions and programs in the UML curriculum as appropriate, and the promotion of research and study of ATHM collections," he said.

The agreement will include reciprocal access

to library collections, and will provide internship opportunities for UML students. ATHM and UML liaisons will meet periodically to discuss topics for student assignments such as working with the UML faculty and students to develop a program for identifying appropriate subjects for oral histories. Other projects envisioned as a result of the agreement, are the cosponsoring of symposia with the Tsongas Industrial History Center to present scholarly research related to the American textile industry, and the development of school age programs designed to assist UML in the fulfillment of technical grant requirements for the Greater Lowell community and beyond. The ATHM Education department will also work with the UML College of Management to provide programs for business students.

Coleman said "We are delighted to partner with UML in this exciting venture. Not only is it in keeping with our mission to tell America's story through the art, science and history of textiles, it also promises to benefit UML faculty and students who are interested in the textile industry with the opportunity for related scholarly research in the fields of labor, gender studies, history, economics, business and other issues. It will also provide internship opportunities for students interested in careers in areas such as textile design, history, curatorial and museum education. In addition, we look forward to developing an on-line bibliography of oral/video histories and films concerning the textile industry, and to working with UML in training our staff to record these oral histories," he said.

The agreement, which went into effect on April 5, runs through December 31, 2008.

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Leete's Cattle Pass (Amtrak Structure No. 86.79), Guilford, Connecticut

Leete's Cattle Pass (Amtrak structure no. 86.79) is a railroad-associated feature located in the town of Guilford in south-central Connecticut, approximately one-quarter mile from the shore of Long Island Sound and 2 miles southwest of Guilford Center. The cattle pass crosses under Amtrak's Northeast Corridor immediately west of catenary pole 86.52 where the track runs parallel to Connecticut State Highway 146 (i.e., Leete's Island Road), between the intersections with Moose Hill and Sam Hill roads.

The pass is significant as an early and rare surviving example of a small grade separation of the type that was designed to accommodate the needs of property owners and municipalities along railroad lines constructed in the early to mid-nineteenth century. The cattle pass also is significant as a railroad engineering feature that incorporates two types of masonry arched construction. The cattle pass's northern half is among the oldest arched masonry structures along the original New Haven & New London Railroad line, which was completed in 1850-1852. The southern, box-culvert portion of the pass dates to the double-tracking of the line by the New York, New Haven & Hartford Railway Company in 1890.

The National Railroad Passenger Corporation (Amtrak) is proposing to clean debris and install ballast retaining structures at the Leete's Cattle Pass to provide safe access to the structure for the Leete Family and Amtrak personnel. The project is being conducted at the request of the Leetes in exchange for permitting Amtrak access to their land to replace the non-historic culvert no. 86.60 on the rail line. In accordance with Section 106 of the National Historic Preservation Act (36 CFR 800), Amtrak consulted with the Connecticut State Historic Preservation Officer (SHPO) regarding the effects of the project on the cattle pass, which has been determined eligible for listing in the National Register of Historic Places. The documentation of the pass was part of the agreed upon mitigation for the project impacts.

Description

The cattle pass is a small stone tunnel situated on a north-south axis under a portion of double-tracked railway. There are several feet of ballast overburden between the top of the cattle pass and the railway tracks. The south end of the structure opens into a small undulating wooded area of former pasture lying between the railway and Highway 146. The north end of the structure opens onto a lower area of pasture that has reverted to swampland. The steeply sloping banks of the roadbed, combined with ongoing railway maintenance activity, have caused several feet of ballast, cinders, and other debris to be deposited at both mouths of the pass.

The pass was built in two sections. The shorter, arched northern section appears to have been built in about 1851 for the original single-track line and the longer box culvert southern section, with its more massive stonework and simplified construction, appears to date from the double-tracking of the rail line in 1890 during the tenure of the New York, New Haven & Hartford Railway Company. The overall structure is 58 ft in length and 30 ft in width at its widest point, the south wingwalls. The width of the tunnel interior tapers from 4 ft at the southern end of the structure to 3 ft, 3 inches near the transition to the northern half (Figure 1). Both portions of the structure are built of local, ledge-quarried granite and schistose granite with a pinkish cast that is split-faced and without dressing. The northern portion features a stone arch roof, while the southern section features a slab roof, creating a 1 ft, 10 inch offset in ceiling heights where the two intersect (Figure 2 & 3). The stone roof sills for the southern portion of the structure rest on a base that is contiguous with the arch springline for the northern portion of the structure. One-inch wide drill marks are visible in the stones throughout the structure and rubble backfill is visible behind tunnel wall faces in various locations.

There are visible differences in construction techniques and materials between the two halves

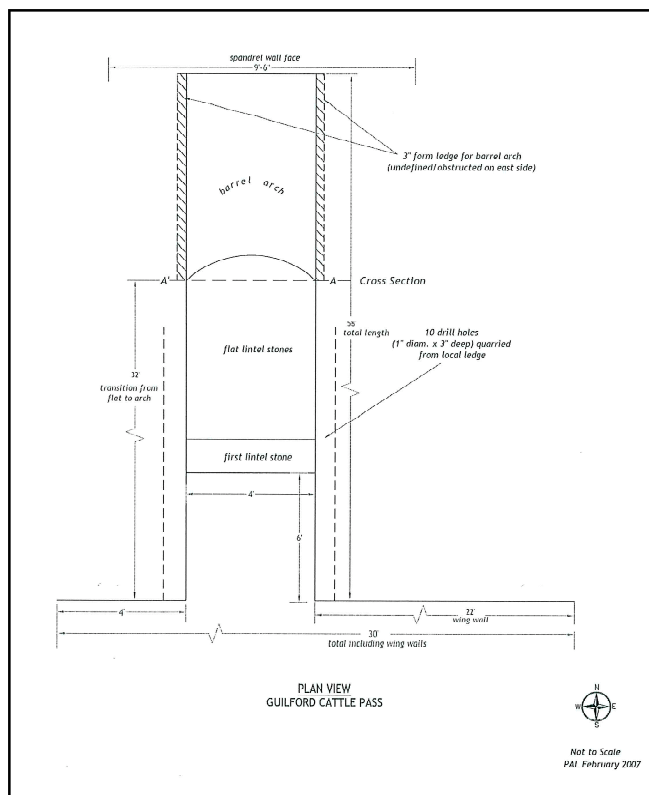


Figure 1. Plan of Leete's Cattle Pass, Guilford CT.

of the structure. The older arch section to the north measures 23 ft in length and 6 ft, 10 inches in tunnel height, with an average arch radius of 1 ft, 9 inches. The overall width of the structure at the northern portal is 9 ft, 6 inches in width, including the spandrel wall face (Figure 4). The tunnel walls are built of random-laid ashlar courses with some mortar infill visible. Larger stones are used from the base of the wall to the springline and then stone size decreases to smaller flat stones and chink stones in the arch structure. A possible form ledge for the arch's construction is visible at the springline of the west wall and averages 3 inches in depth. The northern arch face is composed of 10 tapered voussoirs that measure 1 ft, 7 inches in length, with a maximum width of 1 ft at the wide end and 8 inches at the narrow end. Two non-historic railroad tie wingwalls extend perpendicularly from the arch face and are lined with fencing constructed of rusted barbed wire hung on cedar log and rolled metal posts.

The newer southern portion of the structure takes the form of a stone box culvert 32 ft in length and four ft in interior width (Figure 5). The walls

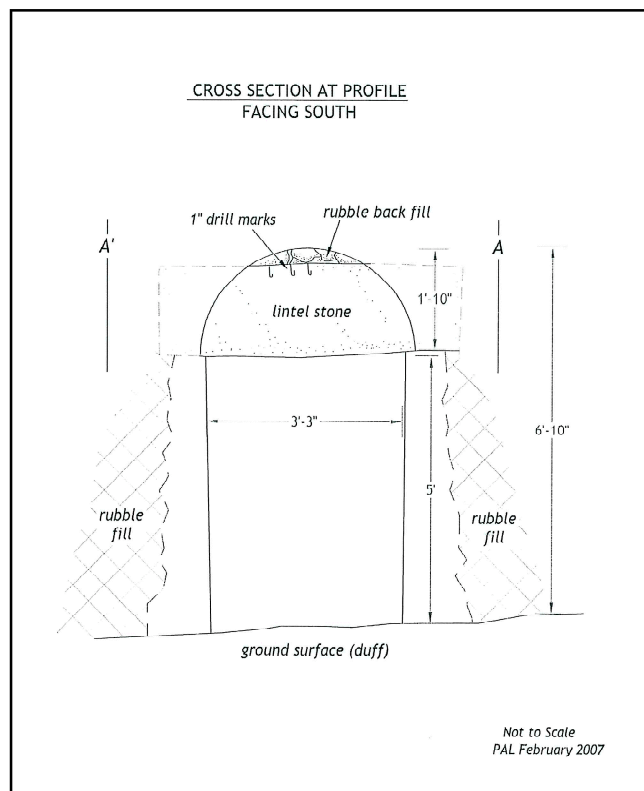


Figure 2. Cross Section of Leete's Cattle Pass at Midpoint.

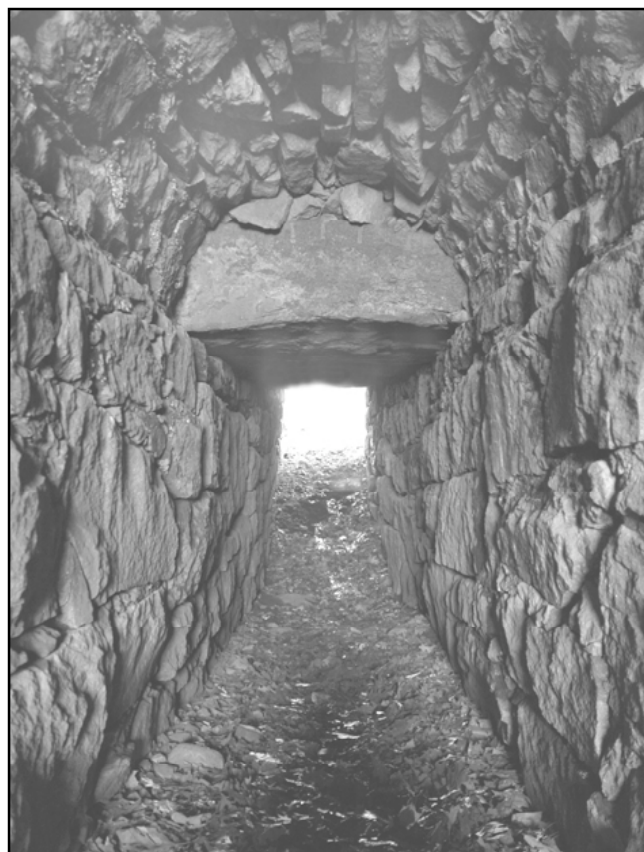


Figure 3: View looking south showing cattle pass interior, transition from northern arch section to southern box culvert section.



Figure 4. View looking south showing north arch face.



Figure 5. View looking north showing detail of south entry.

are composed of rough granite blocks that are generally larger and more rectilinear than those in the arch section. The block faces are hammered and the blocks are laid with more pronounced and organized horizontal coursing in roughly five exposed courses. There is one anomalous massive stone on the east wall, one yard south of the transition, that measures 4 ft, 4 inches long and 2 ft, 4 inches high. The roof is composed of massive rectangular stone lintels averaging 2 ft, 2 inches in width with some naturally glaciated surfaces exposed. The stone lintel at the south opening measures 6 ft, 6 inches in length; 1 ft, 6 inches in height; and 1 ft, 6 inches in width. The sidewalls of the pass's south opening extend 6 ft beyond the last roof lintel. Two wingwalls of unequal length run perpendicular to the sidewalls and parallel to the railway on the structure's south elevation. The west wall is largely buried in ballast and cinders and measures approximately 6 ft in length. The east wall measures 22 ft in length. Both walls are composed of dry-laid, glaciated granite fieldstone. A temporary, non-historic wood retaining wall has been erected on top of the stone lintel at the south tunnel entry.

History of Leete's Cattle Pass

Leete's Cattle Pass was one of a variety of accommodations built by the New Haven & New London between 1850 and 1852 to appease local townships and private landholders where the new right-of-way infringed upon established land usage or water rights. The New Haven & New London was one of four historic rail lines that ultimately formed the New York, New Haven & Hartford Railroad, which received its charter in 1848. Yale University engineering professor Alexander C. Twining surveyed the route and the line was completed and placed in operation in 1852. It was during this phase of construction that the northern arched portion of the cattle pass was built. In conjunction with the New York & New Haven (built 1847–1849) to the south and the Boston & Providence (built 1832–1835), the New Haven & New London created a direct rail link between New York and Boston, except for a short 13-mile stretch between New London and Stonington (Karr

1995:95).

The last link in the route between New York and Boston, the section between New London and Stonington, was completed in 1858. Initially chartered in 1853 as the New London & Stonington Railroad, this short 13-mile stretch made it possible, with the exception of ferry rides across the Connecticut and Thames rivers at Old Saybrook and New London, to travel by rail from New York to Boston. Problems in financing the road, however, forced the New London & Stonington into bankruptcy within four years. In 1857 the line was absorbed by the New Haven & New London and that company was reorganized under the name New Haven, New London & Stonington (New Haven, New London & Stonington). In 1864, the New Haven, New London & Stonington, unable to meet its interest payments, went into receivership. The eastern portion of the line between Groton and Stonington was sold to the Stonington Railroad and subsequently became known as the "Groton Extension." The western section was reorganized as the Shore Line Railway. With its debt restructured, the Shore Line began to prosper. In 1870 it financed a rail drawbridge over the Connecticut River. That same year, the line was leased to the New York & New Haven, which began coordinating operations with the Hartford & New Haven Railroad to create a viable unified route to Boston. Two years later those two lines merged to form the New York, New Haven & Hartford Railroad, commonly known as the New Haven. In 1890, the New Haven double-tracked the Boston to New York mainline to accommodate increased traffic, requiring that Leete's Cattle Pass be enlarged to the south. Historical maps showing the route of the rail line through Guilford indicate that there have been no significant track realignments in the area where the pass is located (PAL 2001:18, 22).

The cattle pass is a unique surviving example of a stone railway feature that shows masonry construction techniques as they evolved from ca. 1851 to 1890. Leete's Cattle Pass was probably built for W.F. or A. Leete, whose names are shown in the vicinity of the rail line on 1852 maps of Guilford, and through whose property the railway sought to build its right-of-way. The Leetes, in the form of William Leete (1613–1683), Governor of

Connecticut Colony (1679–1683), were a prominent founding family of Guilford and retain a significant portion of their original landholdings in the vicinity of the pass. Stone for the pass may have been ledge-quarried from one of the numerous granite outcroppings visible in the vicinity of the pass on Leete landholdings or from the Whitfield Quarry (1837) the earliest documented quarry in the town. This quarry was located just to the north of the current railway alignment, approximately 2 miles east of the pass (Helander 1981:58; Leete and Leete 1985:6–7, 23; Steiner 1897:255).

In 1890 the cattle pass was lengthened to the south with the extant box culvert section. Stone for this portion of the pass is supposed to have come from the Beattie Granite Quarry (1870) which operated two sites in Guilford and supplied stone for New Haven Railroad projects in Harford and New London, as well as in New York. This quarry is also supposed to have supplied stone for other structures in Guilford associated with the double-tracking project (Joel Helander interview with J. Daly and M. Kierstead, January 1, 2007). Other possible stone sources include the John Hannah quarry on Leete's Island, approximately one-half mile southeast of the cattle pass, and the Hughes Bros. and Bangs Quarry, located approximately 1.5 miles southeast of the pass. Hannah's quarry supplied stone for the Thames River Drawbridge (1889) on the New Haven line in Connecticut (Steiner 1897:218–220, 255–256; Turner and Jacobus 1989:14).

The land on both sides of the track in the vicinity of the cattle pass is currently owned by Lawrence R. Leete, who used the feature until about 1970 for bringing beef cattle to pasture (Lawrence R. Leete interview with J. Daly and M. Kierstead, January 1, 2007).

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1968 *Guilford, Conn.* Photo-revised 1984.

Matthew Kierstead and John Daly
PAL, Pawtucket, RI 02860

The New Hampshire Historical Society Museum Acquires Unique Industrial Icon

Editor's Note: The Concord, NH, gasholder was recorded for the Historic American Engineering Record in 1981 as the first project of the then newly-formed Northern New England Chapter of the Society for Industrial Archeology. For more information about the gasholder's history and use from 1888 until 1952 see "The Concord (New Hampshire) Gasholder: Last Intact Survivor from the Gas-Making Era" by William L. Taylor in IA, Vol. 10, No. 1. 1984.

New Hampshire Historical Society Collections Committee Member Bill Upton recently alerted the Society to the sale of an important iconic object related to the late 19th-century urban and industrial development of New Hampshire. On Sunday, February 25, at Northeast Auctions in

Portsmouth, NH, the Society acquired a sterling silver Concord Gas Light Company presentation inkwell made by the world-renowned silver manufacturer William B. Durgin of Concord. This unique piece of presentation silver, made as a miniature version of the Concord Gas Light Company's gasholder house, was given to John M. Hill, treasurer and manager of the company in 1889.

The circular brick gasholder house building, measuring 86 feet in diameter and standing 80 feet high, was constructed in 1888. It was capable of holding 125,000 cubic feet of gas. The gasholder house was used until 1952 when the company hooked up to a larger network supplying natural gas. No longer needing to store gas, the company



The 1888 Concord, NH, gasholder and participants in the 1993 Society for Industrial Archeology Fall Study Tour that was organized and hosted by the Northern New England Chapter.

put the gasholder house out of service. The structure today is the only enclosed gasholder house in the United State to have survived intact.

The recipient of the inkwell, John M. Hill (1821-1900), was the son of New Hampshire Governor Isaac Hill and Susanna Ayer of Concord, NH. The owner of the New Hampshire Patriot, in 1855 Hill became treasurer and manager of the Concord Gas Light Company, serving until January 1889. Interested in civic and state improvements, Hill also served as a member of the Concord Water Commission and Fire Department. He was the Democratic candidate for governor in 1884.

Because of its uniqueness, good condition, and association with New Hampshire silver manufacturing, this inkwell enhances the Society's New Hampshire history and silver collections. Ron Bourgeault, Dr. David G. Stahl, Eleanor H. Stark, William W. Upton, Dr. & Mrs. Robert O. Wilson, and Gary F. Yeaton generously pledged funds to help the Society acquire the inkwell.



*Presentation Inkwell
William B. Durgin
1889
Silver and glass
2007.10*

Donna-Belle Garvin

Membership Application Form

The Society for Industrial Archeology promotes the identification, interpretation, preservation, and modern utilization of historic industrial and engineering sites, structures and equipment.

Northern New England Chapter

Maine, New Hampshire, Vermont,
Northeastern New York

☐ Regular \$10.00

☐ Student \$5.00

☐ Lifetime \$100.00

Make check payable to NNEC-SIA
and mail to:

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305 Heritage Way
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Chapter members are encouraged to join
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Chapter dues do not include membership to national SIA.