



CHARLES RIVER  
MUSEUM OF INDUSTRY

# SHOPTALK

SUMMER 1987

Vol. 2, No. 2

## VOLUNTEERS' RECEPTION

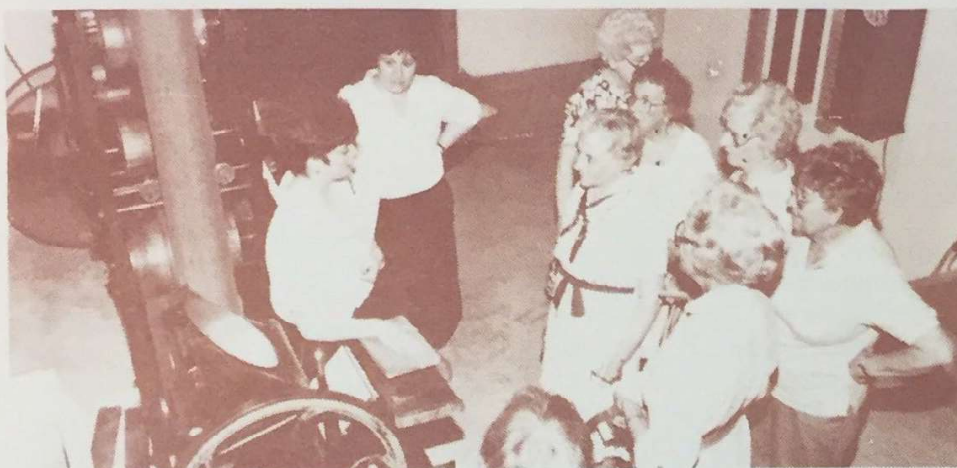


Photo: Roland Perry/Raytheon

On May 29th, the Museum sponsored a reception to encourage volunteer participation in programs and to update residents of the adjoining Francis Cabot Lowell Mill housing with recent developments. About 35 people attended the occasion, which included a description of volunteer openings, and a tour of exhibit space. See **HELP WANTED**. Jane Donohue, Coordinator of Development, explains Museum programs to prospective volunteers

## WELCOME! & FAREWELL

**Eleanor Shaugnessy** joins the Museum staff as Office Manager. Ellie is a long-time resident of Waltham who brings experience in bookkeeping, accounting, and banking. She will be responsible for payroll, financial accounts, membership records, mailing lists, among other important management tasks. She is a welcome, enthusiastic and industrious addition to the staff.

This past spring **Robert Andrade** and **Gregory Scheurer**, work-study students from Sylvania Technical School, completed their course of study and left our employment to start new careers in electronics. At the same time, Gerard Altimari, new to the Sylvania program, joined us. He assists Dan Holbrook with curatorial and plant projects and is doing a great job.

GFM

## WISH LIST

### CURATORIAL

blacksmith's bench  
hair trunk  
metal shelving  
work shoes, early 19th century-present  
automobile tool kit, early 20th century  
duster, goggles, and hat of type worn  
by early automobile enthusiasts  
map cases  
Model T Ford, 1920s sedan body, for  
cosmetic restoration  
Metz "Plan Car"

### OFFICE

paper cutter  
vacuum cleaner [Electrolux or  
comparable]

## CONSTRUCTION, OPENING RESCHEDULED

The necessary processes for completing plans and choosing a contractor for publicly-funded construction including approvals from ten separate agencies have forced the Museum to reschedule its opening.

Early in the summer the Museum signed a contract with the **City of Waltham** to proceed with the improvements needed to open to the public. **Keyes Associates** of Waltham was chosen by the City, under contract with the **State Department of Environmental Management**, to draw up the final construction plans for exterior improvements and a balcony for the Boiler House exhibit hall. The firm did all work without fee, as a "pro bono" contribution to the Museum.

Further complications in the public bidding process delayed selection of a contractor until the very end of August. The low bid, submitted by the **Rahmi Construction Company** of Lowell, came in at about \$5000 over the \$75,000 State appropriation for the project, but at their September meeting the Trustees voted to raise these additional funds and to proceed. Construction should begin by the end of September and be completed by mid November. Exhibit installation will follow immediately.

The Trustees determined that it will be much more effective to wait until the Spring for a formal Grand Opening, but special events and school programs are planned through the late fall and winter.



## CURATOR'S REPORT

Several exciting developments have arisen since our last Newsletter. We have received many additional gifts for the Museum collection.

**Stanley Paine** of Boston Gear helped coordinate a gift of 53 gears representing most of the larger sizes and varieties commonly used in industry over the past 200 years. These gears, which were displayed at our June 11 Corporate Members' Reception, will be incorporated into a mural as part of our exhibit, *THE MACHINE*.

**Marion Bright** of Waltham donated a cotton "lumper," date and manufacturer unknown. Although lumps are designed to break apart lumps of cotton from bales for processing into thread, Mrs. Bright's brother, George Eden, had used the machine to create upholstery padding.

**Edward Seldin**, a Museum Corporator, and **David Greenwood**, Proprietor of the *Old Bostonian Company*, donated a Moore and Kline, Inc., Model 5300 gasoline pump for the *AUTOMOBILE PLANT* exhibit. In addition, Dr. Seldin gave the Museum a Marchant calculating machine to add to the *OFFICE* exhibit.

In response to the Museum's "Wish List" published in the last Newsletter, we received five alarm clocks from *Pasquale "Pat" Caruso* of Auburndale and two antique lunchboxes from *Henry Deeks* of Cambridge. These objects will become part of our *GOING TO WORK* exhibit. We are still looking for objects related to commuting and timely attendance at work. Objects do not have to be antiques but must relate to commuting by foot, bike, trolley, train, bus, or car.

**Roy F. Carlson** gave the Museum a "Little Giant" self-propelled lawn sprinkler patented by a Portland, Maine, company in 1892. Dr. Carlson's gift becomes the first water-powered vehicle in our collection. A part of the force of the jet of water turning the sprinkler head is applied through a train of gears and shafts to turn wheels which drive the sprinkler across the lawn.

**Gregory Conti**, a student intern from Emerson College, donated a thumb-actuated caliper. The patent for this caliper is credited to *W. Reilly* of Waltham.

**George B. Smith** of South Boston provided the Museum with three large pulleys on a shaft. These will be incorporated into *THE MACHINE* exhibit as a dramatic example of one of the most elementary machine parts.

**Mike Folsom** donated an ornate Singer sewing machine rescued from the trash in his back alley. Mike also donated two early 19th-century weaver's "reeds" found in the attic of his Vermont farm house, and a Mike Seeger record of southern labor songs, *Tippie, Loom, and Rail*.

We have negotiated the purchase from *Old Sturbridge Village* of a replica of an 1830s "drawing frame" for our *TEXTILE MILL* exhibit. This machine was built under the direction of *Theodore Z. Penn* as a pilot project for the development of an entire mill village planned at *Sturbridge* in the 1970s. Prohibitive costs led to the abandonment of this plan. We hope we can make good use of Penn's work.

We have also obtained some objects on loan during the last quarter:

**Coburn Benson** has loaned us an unusual early (1890s) Brown and Sharpe single-spindle screw machine for the production equipment component of the *MACHINE SHOP* exhibit.

**The Museum of American Textile History (MATH)** has agreed to lend us a Draper Loom model X-3 for the *TEXTILE MILL* exhibit. This four-harness loom, manufactured by the Charles River in Hopedale, dates from the early 20th century. The X-3 features automatic bobbin replacement, which was the Draper Company's great contribution to the advance of textile technology in the 1890s. MATH will also be lending us bobbins, hooks, and other textile worker's tools for the exhibit.

We want to thank everyone who has donated or lent objects to us. We appreciate their enthusiasm and support.

GFM

## IN-KIND SERVICES

His card reads, "Robert Calquhoun Guiry, Consultant, Anifriction Precision Devices." The address is Newton, Mass. Cal's resume begins, "Extensive back-ground in the application of ball bearing technology to a wide range of industrial, military, and aerospace systems, such as synchros for satellite-borne encoders." Reading on, you'll learn that Cal put in thirty years as a sales engineer with the *Falmer Bearing Co.*, a leading manufacturer of ball bearings.

But Cal knows how to make things flat, too. He started out in industry running a metal planer for the *Rivett Co.*, maker of lathe, in Brighton, down river from the Museum, and he has spent most Thursday mornings this past year at the Museum refurbishing a small (20") planer for our *MACHINE SHOP* exhibit. The planer was manufactured around 1882 by the *Ed E. Bartlett Co.* of Dorchester, Mass., for sale by the *A.J. Wilkinson Co.* of Boston.

The metal planer is the basic machine which can cut high precision flat surfaces over broad areas. (The Museum's 20" model is dwarfed by others with beds that reach 20' and more.) The ability to machine such surfaces was crucial to the development of modern industry. The Museum's Wilkinson planer was donated by *Werner Mueller* of Easton, Mass.

Cal Guiry's resume notes that he also piloted a C-46 in the Far East during the War. The resume does not explain, however, that Calquhoun is the pure Scots spelling of Calhoun, and should be pronounced without an L, as well as without a qu (ah-hah-hah). MBF

## HELP WANTED Volunteers

The following volunteer positions are currently available: Curatorial Assistants, Security, Newsletter Production Crew, Office Assistants, Hospitality Committee. Apply now for Fall openings. Call 893-5410 and ask for Gail Mohanty.



Museum President, Fred Bailey, addresses the Corporate Members' Reception.

## CORPORATE MEMBERS' RECEPTION

Thermo Electron Transcript Newspapers  
Brenton E. Tyler Insurance  
Waltham Federal Savings  
Waltham Savings Bank

JMD

The Museum is grateful to *Honeywell Bull, Inc.*, and to *Phil Connor*, Director of Public Affairs for *Honeywell Bull*, formerly *Honeywell Information Systems*, for making the Museum's June reception for Corporate Members a success. The event commemorated the first anniversary of many of our Corporate Members and allowed prospective members to meet the Museum's Trustees and staff.

Special thanks to *Brasco Florist* of Waltham for donating a flower arrangement and to *Gordon's Liquors* of Waltham for providing liquid refreshments for the reception.

The Museum's current Corporate Members include:

A&D Realty Aerospace Fabricator  
Arklay S. Richards Co.  
Arisan Industries, Inc.  
Rudolph Beaver, Inc. Boston Edison  
The Chateau Restaurant Econocorp  
Gardnercrest, Inc. Hyde's, Incorporated  
Harvey Industries Honeywell Bull, Inc.  
Hollycorp Longview Fibre  
Marcou Jewelers The Neelon Corporation  
The Polaroid Corporation  
The Raytheon Company Ruland Industries  
Skinner & Sherman Laboratories  
The Shipley Company  
Tebdyne Engineering Services

## SNEC/SIA EVENTS

The Southern New England Chapter (SNEC) of the national Society for Industrial Archeology (SIA) is actively recruiting membership and providing a much-increased level of programs for its membership. The Museum is taking the opportunity to acquaint its public with this important regional organization. We urge you to write requesting a copy of the SNEC membership brochure.

SNEC events scheduled for the near future include:

A tour of the Crane Museum, Dalton, MA, 10 a.m., 19 September (the Crane Company makes the paper for US banknotes).  
A tour of the New England Wireless and Steam Museum, East Greenwich, RI, 10 a.m. 3 October.

For additional information about SNEC and its tours, call Peter Stott, 332-5548.

## DIRECTORS PARTICIPATE IN SCHOLARLY CONFERENCES

**Gail Mohanty** and **Mike Folsom** participated in a panel at the annual conference of the *Society for Historians of the Early American Republic (SHEAR)* in Philadelphia in July. The panel, which Mike chaired and served as commentator on, was devoted to a discussion of "Workers, Inventors, and Technological Change in Antebellum America." Gail read a paper titled "Putting Up with Putting Out: Diffusion of Powerloom Technology and Out-Work Weaving in Rhode Island, 1821-1829." She was joined on the panel by two other scholars. **Steven Lubar**, who preceded Gail as Curator of the Museum and who is now a Curator at the Smithsonian, read "Invention Becomes Enterprise: Business and Technological Change in America, 1790-1860." **David Zonderman**, Assistant Professor of History at the University of Wisconsin, who has never worked for the Charles River Museum of Industry, read "Means and Ends: Antebellum New England Factory Operatives and the Work Ethic."

The previous weekend, Gail presented a paper at the *Dublin Seminar* held in Deerfield, Mass. The paper was entitled "Adding Flesh to the Dry Bones of Industrial Research: Rhode Island Handloom Weavers Revealed in Probate Records, 1800-1821."



EXHIBITS I:  
Each issue SHOP/TALK  
features one of the Museum's  
current exhibits

## THE MACHINE

The MACHINE is the first exhibit visitors see as they enter the Museum. The purpose of this exhibit is to introduce visitors--not to the historical themes and ideas of the Museum, but to themselves. Who are you, in relation to the technology of the Industrial Revolution? What ideas, feelings, experiences, attitudes do you bring with you? Awe? Indifference? Fear? Excitement? Hope (for prosperity and convenience)? Concern [for the environment or unemployment]? And how will your preconceptions shape your response to the Museum's exhibits and programs?

The first things the visitor sees inside the Museum's doors emphasize the central place of industrial machinery in our exhibits and programs. Massive, complex, seemingly dangerous, or oddly trivial equipment elicits dramatically the visitor's machine consciousness:

Endless wheels and gears.

A foot-powered printing press, named "The Pearl," to publish the current Museum program.

A paper bag machine capable of mass-producing hundreds of thousands a day.

A tack machine set up to stamp out the rivets that secure the seams of blue jeans.

A foot-powered player piano at which visitors can manufacture pre-programmed music.

And a "time clock"--the machine designed to regulate the industrial day--at which visitors "punch in" to enter the world of industrial work.

Four large graphics suggest alternate ways we conceive the relations between people and industrial machinery. Charlie Chaplin grimaces as he is fed "through the mill" on mammoth gears. A "heroic worker" applies muscle to wrench in a photograph by Lewis Hine. Two "ordinary guys" punch in at the start of yet another hum-drum day. A woman aims a rivet gun to build a bomber to win the war and bring the boys home.

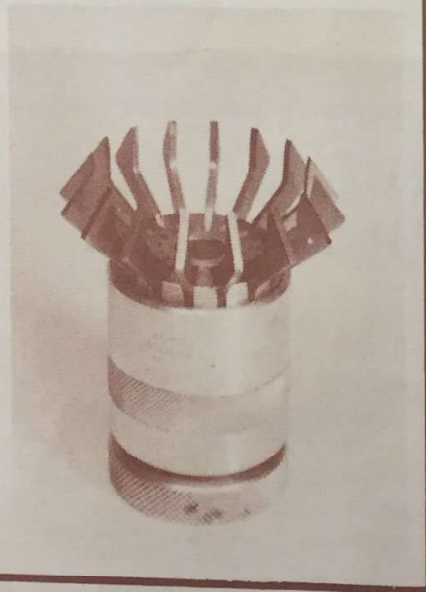
Each visitor will be asked to take the opportunity to add their thoughts to our understanding of the Industrial Revolution by writing a brief statement about these machines and images and what they mean. MBF



## GIZMO!

*Do you have a thing-a-mabob, a whatsit, or a widget that's been around the place for years, and nobody knows what it is? Send us a photo, and we'll do our best to identify it.*

*Try this one for starters:*



## SUMMER INTERNS

This summer students from colleges and universities in the region are working on projects at the Museum.

**Deborah Holman**, a Wellesley history major, is organizing handbooks and background materials for interpreters to use in preparing to lead school tours and demonstrate equipment. Her work will also make the Museum's library and archives readily accessible for teachers and students to use for research projects of their own.

**David Wimberley** is a participant in the Undergraduate Research Opportunities Program ("UROP") at MIT, where the Museum arranged for him to work under Prof. Merritt Roe Smith, historian of technology in the Institute's Science, Technology, and Society Program. Wimberley will be trying to document the equipment used to mass produce rifles at the Springfield Armory in the 1840s and watches at the Waltham Watch Factory in the 1850s, to learn exactly how this new technology was transferred from military to civilian uses.

**Priscilla Lam**, also an MIT "UROP" student, is working under Arthur Smith, Professor of Electrical Engineering, to study the origins of the American semi-conductor industry, with emphasis on the start of commercial manufacture by the Raytheon Company. Among other things, she will conduct oral history interviews with Norman Krim, former Raytheon Vice President, who was in charge of transistor production.

**Gregory Conti**, an American Studies major at Emerson College, is researching the impact of the founding of the Boston Manufacturing Company in Waltham on the religious life of the community. Materials from Conti's research will be adapted for the Museum's education programs on the dramatic impact of the Industrial Revolution on American life. MBF



# ON THE TRAIL OF AUTO PIONEER, SYLVESTER ROPER

When Mrs. Constance Hanson of Bedford rang the Museum's doorbell, she hoped that she would find inside what she had sought for years. She is the great-grand-daughter of **Sylvester H. Roper** (1824-1896), a New England automotive pioneer who has been called one of the first to solve the problem of practical, lightweight personal transportation. His steam wagon of 1861 and his 1863 steam-powered "velocipede" (bicycle) ran successfully for years, and he built eight more steam vehicles in the following twenty-seven years.



SYLVESTER H. ROPER AND HIS PATAL INVENTION.  
FROM THE Boston Globe, JUNE 2, 1896.

Roper's death of a heart attack, in fact, took place upon his last such vehicle, a steam-powered bicycle. Roper, at age seventy-one, was demonstrating it at the Charles River Bicycle Park in Cambridge when his heart failed at an estimated sixty miles an hour. Witnesses testified the bike merely wobbled and slowed down, finally falling into the soft sand of the racetrack's infield. Roper's last act apparently had been to turn the steam valve closed, so he would coast to a halt.

The fate of the bicycle immediately following the accident is unknown, but it eventually turned up in Coney Island at the American Museum of Public Recreation. That organization then sold it to the Bellm Cars and Music of Yesterday Museum in Sarasota, Florida.

It was Mrs. Hanson's mother who started to compile information on her grandfather. She corresponded with the then curators of the Henry Ford Museum in Dearborn, Michigan, which has the early steam car, and of the Smithsonian, which has the 1863 velocipede. Mrs. Hanson has maintained the search for information about Roper's life and deeds, and has an important collection of clippings, photographs, articles, and letters. She has traveled to see the Ford, Smithsonian, and Bellm vehicles. When she heard that the Bellm Museum had sold the 1896 bike to a collector in the Boston area, she went looking again. A correspondent at the Museum of Transportation told her the bike was on loan to the Charles River Museum of Industry, hence her visit. However, she was disappointed again. We had had it on loan, but the lender took it back pending our construction.

**Coburn Benson** of Concord acquired the Roper steam bicycle in 1983 from the Bellm Museum. A lifelong collector and steam enthusiast, he has a strong interest in the life and works of Roper. When he heard about Mrs. Hanson's visit, he set out to repay it. He and a friend, driving a Stanley Steamer, showed up on her doorstep in Bedford as unannounced as she had at ours. Their swap of her biographical information and his technical knowledge proved fruitful, and will enable the Museum to afford the public a more complete picture of Sylvester Roper's contributions to early automotive history. DH

## DON RANDALL

A friend of the Museum, Donald Randall, of Halifax, MA, passed away April 30. Don was an avid, life-long collector of antique automobiles, bicycles, and horse-drawn vehicles. He loaned the Museum the Orient septuple and three-seater bicycles. Don was a gentleman, and we are proud to have had the benefit of the generous sharing of his knowledge and collection. DH

## HELP WANTED Interpreters

The following advertisement has been posted at colleges and universities in the Greater Boston Area:

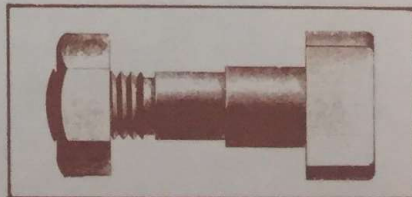
**IF YOU WANT TO DO  
SOMETHING ABOUT  
HISTORY-- AND GET PAID FOR  
IT--HERE IS AN OPPORTUNITY.**

THE CHARLES RIVER MUSEUM OF INDUSTRY IS TRAINING A CORPS OF INTERPRETERS TO CONDUCT TOURS OF MUSEUM EXHIBITS AND HISTORIC SITES, AND TO LEAD MUSEUM EDUCATION PROGRAMS. NO TECHNICAL KNOWLEDGE AND NO TEACHING EXPERIENCE WILL BE REQUIRED OF APPLICANTS, BUT WE WILL EXPECT (1) A WILLINGNESS TO LEARN ABOUT THE PRINCIPLES OF THE INDUSTRIAL REVOLUTION, (2) A SYMPATHETIC INTEREST IN THE PEOPLES OF AN INDUSTRIAL COMMUNITY, AND (3) AN ABILITY TO RELATE INFORMATION TO THE PUBLIC WITH CLARITY AND VERVE.

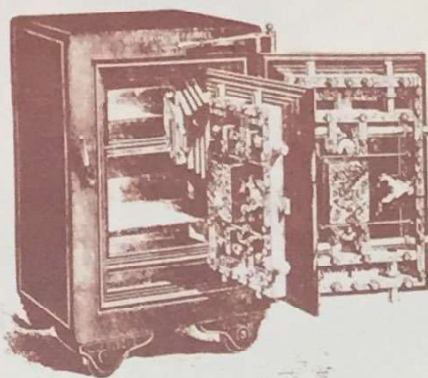
INTERPRETERS MUST BE ABLE TO DEVOTE PERIODS OF 2-4 HOURS AT A TIME ON AN IRREGULAR SCHEDULE, FOR WHICH THEY WILL BE PAID \$5 TO \$8 PER HOUR, DEPENDING ON EXPERIENCE AND SKILL.

STUDENTS CAN ALSO COMBINE WORK AS INTERPRETERS (1) WITH INDEPENDENT STUDY PROJECTS FOR ACADEMIC CREDIT AND (2) WITH INTERNSHIPS IN MUSEUM-BASED RESEARCH AND EDUCATION.

CALL: Mike Folsom or Gail Mohanty  
893-5410







Your donation is vital to the Museum's success. Each gift, no matter the size, has an impact. If each of SHOPTALK's 2500 readers were to give a \$25 donation, we would be \$62,500 closer to opening our doors, and sharing our "hidden treasure" with greater Boston. YOUR SUPPORT IS VITAL. (All who donate before the Museum's Opening will be acknowledge as Founders.)

[ ] YES, I will support the Museum's opening campaign drive with a donation of . . .

\_\_\_ \$25 \_\_\_ \$50 \_\_\_ \$100 \_\_\_ \$150 \_\_\_ \$200 \_\_\_ \$250 \_\_\_ \$500

The Charles River Museum of Industry 154 Moody St. Waltham MA 02154

## PRO BONO PUBLICO

### *Museum's Secrets to be Revealed*

As Opening Day looms larger, the long-kept "secret" of the Museum's existence will be revealed to the Greater Boston public. Marketing a new museum requires strategy, enthusiasm, and expertise. We have been fortunate in finding two firms generous enough to give hours of their creative time in an effort to establish our "new" image.

**Phillips Design Group** of Boston has donated research and production time to create the Museum's

logo, and the Museum's Trustees have voted to adopt the logo formally. The design was created by **Alison Moritzsugu**, under the direction of Philips' Creative Director, **David Sargent**. The image combines a historic typeface with a contemporary graphic suggesting traditional mechanical forms to symbolize the historical depth and ongoing reality of the Industrial Revolution.

**Bogardus Lowell Pile, Inc.**, has recently become involved in the design and implementation of the Museum's public relations and advertising efforts. **Howard Lowell**, President of the firm, has developed a detailed plan of tactics to begin a cohesive marketing campaign. Trustee Dan Fenn and I have met with him to discuss potential

audiences and methods of approaching the Museum's market segments. A "positioning line," or slogan, is being composed to accompany our new logo, and a revamped brochure for membership is in the works.

Other firms that have recently made in-kind donations are:

Art Through Photography	Rudolph Beaver Co.
Artisan Industries	Brasco Florist
Boston Gear	Charrette Reprographics
Hydes Incorporated	Honeywell Bull, Inc.
Keyes Associates	Parker Hannifin
Raytheon	Riverside
Transportation Co.	Ruland Industries
Teledyne Engineering Services	
Simplex	TRW Fastener Division
	JMD

## The Charles River Museum of Industry

154 Moody St., Waltham, MA 02154  
(617) 893-5410

RETURN REQUESTED

NON-PROFIT ORG.  
U.S. Postage  
PAID  
Permit No. 57401  
BOSTON, MA

Ms. Elizabeth Castner  
685 Trapelo Road  
Waltham, MA 02154