

# The Friends' Quarterly



A Newsletter from the Enfield Shaker Museum

## Enfield Shakers and Their Contribution to the Industrial Revolution

Mary Rose Boswell, Executive Director

From about 1820-50 two forms of industrialization emerged in New England, cottage industries practiced in rural homes, and large-scale factories. Domestic employment of rural women in traditional handicrafts increased when some production processes were mechanized. In payment, women were often given credit in store accounts controlled by their fathers or husbands. Large-scale factories depended on water-and steam-powered machines. Women worked away from home and were paid cash.

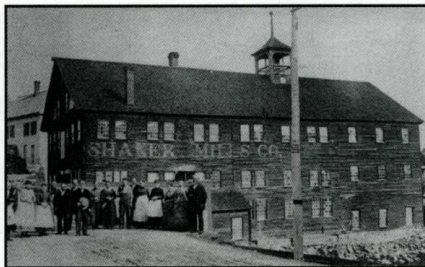
Enfield and Canterbury Shakers' industries fell between the two systems. Both communities had water-powered sawmills, gristmills, and factories. Archeologist David R. Starbuck, in mapping Canterbury's mill system, concluded that Canterbury may have been one of the most industrialized of all the Shaker communities. Production levels, however, were comparatively low.

Until 1825 the New Hampshire Shakers operated similarly to seventeenth century New England farms: clearing the land, establishing agricultural production, feeding members and using the surplus to buy what was needed. Women performed the spinning, cooking, milking, baking and ironing. Historian Laurel Thatcher Ulrich suggests that by 1770 most New England households had shifted all domestic production, including weaving, to women. The Shakers were behind the rest of New England in making this transition—two Canterbury Brothers wove until 1825—but were organized like a large family. They called their founder, Ann Lee, Mother. Each community was divided into Families. Members were referred to as Brothers and Sisters. Deacons and Deaconesses supervised separate areas of production. Trustees oversaw sales. This structure reflects the gendered aspects of work.

Enfield and Canterbury's population levels could not support large-scale production, and the strain of caring for new and young arrivals affected their trades and labor division. Factories typically specialized in one type of product, but the Shakers produced a wide variety. Deacons oversaw the manufacture and rotated from department to department, Family to Family and at times from community to community. As in cottage industries, work was episodic.

In 1841 the Enfield Shakers had a red factory building on the Knox River. It bore the name "Shaker Mills" and was leased to Conant & Davis, a firm that made flannel from wool supplied by the Shakers. About 10 years later, the Shakers built a water-powered machine shop. Elder Henry Blinn recorded that in 1853 the Sisters were knitting shirts and drawers assisted by waterpower.

Historian Richard Candee thinks the Enfield Shakers might have used some of the earliest known circular machines in America, imported from France or Belgium, recorded in 1848-50. These were located in Thompsonville, in Enfield, Connecticut, another Shaker village. He suggests the Enfield, New Hampshire, Shakers developed a process that helped the state become a leader in the manufacture of the new "seamless" hosiery. A circular machine knit a ribbed (knit and purl) tube for the sock body. The Sisters hand-knit



the heel and toe. Their product was known as "Shaker half hose" or "Shaker sock."

The stocking factory system was unlike the Lowell system, which involved hiring girls, and the system at most New England textile mills, involving families. Stocking factories adopted the tradition of rural outwork common in hand-frame knitting. In 1867 John L. Hayes, the wool industry's lobbyist in Washington, DC and an investor in the first powered knitting mill in New Hampshire, credited the Enfield Shakers for starting this process, as did New Hampshire inventor and entrepreneur John Pepper, who may have sold a machine to the Canterbury Shakers.

Herrick Aiken, who invented and manufactured circular knitting machines with his sons Walter and Jonas in Franklin, New Hampshire, may have sold his second machine, an experimental model, to the Enfield Shakers in October, 1854. In December Aiken charged Enfield Shaker Trustee Caleb Dyer for customizing "ribbed stocking frames" several months before selling his seventh machine to the Shaker Mills Company.

Elder Timothy Randlett of Enfield's South Family is said to have invented an unpatented hand-cranked flat knitting machine used at the community before Aiken's machine. In 1905 former Enfield Shaker Henry Cumings stated that Randlett's machines supported the Enfield Shakers' flannel industry until they acquired the second circular knitter manufactured by Walter Aiken.

In 1855 Conant & Davis began manufacturing hosiery. Dyer managed the business, and the Shakers stopped supplying the company goods from their own shop. Conant & Davis reorganized as A. Conant & Co. (1860-73). Its successor Dodge, Davis & Co. (1873-85) made "Indigo Blue, All Wool Shaker Socks" until it lost its lease. Enfield Shakers marketed their own socks (Gents' All-Wool Half-Hose) into the first decade of the twentieth century.

The Enfield Sisters could not keep up with the factory production. Textile companies, however, could hire thousands of women to do the hand-knitting in their homes. In 1870 women from Etna, New Hampshire, to Thetford, Vermont worked for A. Conant. That same year, six Enfield Shakers operated three Aiken powered circular knitting machines for six months, producing only fifty dozen shirts and drawers worth \$1,100 and forty dozen stockings worth \$320. Textile companies used the Shaker name and reputation for high quality to promote their factory products.

Little remains today of this chapter in New Hampshire's industrial history, but Canterbury's steam drying racks and sock boards are on view at Canterbury Shaker Village. The author recently donated a type of circular machine used by the Enfield Shakers to the Enfield Shaker Museum. ■

*Boswell has written and lectured extensively on the Shakers. Two of her publications have earned national awards. This article is based on "Canterbury Shaker Textile Production," in Textiles in New England II: Four Centuries of Material Life (1999). Footnotes and a bibliography are available.*



## Restoration of the Built-in Cabinets of the Great Stone Dwelling

"... the brilliancy of reflected light," – Original Painted Finish on Drawers and Cupboards

by Sara Chase, Paint Analyst

The above quote is the conclusion of a statement by Shaker Hervey Elkins, in his book *Fifteen Years in the Senior Order of Shakers: A Narration of Facts* . . . . He is describing the interior of the Great Stone Dwelling, finished about 15 years earlier. Even earlier, in 1840, just as the building was nearing completion, a visitor to the building wrote another comment on the paint:

Now, the plastering done, every door and window, every drawer and cupboard, every baseboard and pegboard in the dwelling had to be painted.

"The paint is very smooth and glossy," wrote a visitor to the building.

With those eyewitness reports to give firm archival information that the cupboards, drawers and trim in the rooms were painted white, it might seem that the research and analysis needed to recommend exactly what currently available commercial paint would serve to match the original would be a simple matter.

Not so. Whites exist in a nearly infinite range of faintly off-white tints. The Benjamin Moore Paint Company has an entire book of color chips in their "OW" series. Yes, that stands for Off White, and there are 140 different color cards. Broadly speaking the whites range from warm tones, with a little yellow pigment of some sort, such as yellow ochre, added to the basic white pigment, to the cool tones. Those have just a touch of a blue or green pigment. Clearly, then, the first task of the paint analyst was to identify which white pigment was in the basic paint and which tinting pigments existed side by side in the sample. Note, too, that until sometime after 1911, two different white pigments were used to make paint opaque. White lead was the "ancient and honorable" pigment since very early times; zinc oxide began to be used in about 1840. More complication, then, comes when factoring in the exclusive use of titanium oxide in all current commercial paints. Did the Shakers use only white lead or zinc oxide and no other pigments at all in their first finish paint in 1841?

But there was more to discover, equally important to recapturing the original look of those "800 drawers in the house," as Eldress Nancy Moore said in her 1854 journal, noting that "The house is all painted white inside, and furnished with drawers and cupboards." How was that "brilliancy of reflected light," or glossiness, achieved? Once again, a person on the scene at the time recorded the way he thought it was done:

Elder Orville says they finished by dipping the paint brush in boiled oil just as the paint is drying, and brush it over. By this means the oil becomes a varnish which looks elegantly when dry.

Sara Chase, a Preservation Consultant from Lexington, Massachusetts, and Susan Buck, a paint analyst and expert on Shaker paints, combined their talents to show that the Great Stone Dwelling's original paint had white lead in the primer layer and zinc oxide in the second or finish layer. A wide scattering of irregularly hand ground yellow ochre pigment occurred in both layers. The resin on the surface, which gave the high gloss, was made of gum Arabic, a plant resin. We can now make a sample of the original painted finish: a slightly warm and very shiny off white. The Great Stone Dwelling rooms can once again have gleaming brilliant white trim in the rooms. Thanks to the Buck and Chase analysis, two good commercial whites were found.

### Sponsor a Drawer and Support The Great Stone Dwelling Capital Projects!

With impetus from an in-kind donation from Shaker Workshops, Property Manager Tom Boswell, with approval from the Buildings Committee, led by Paul Waehler, and from the Preservation Planning Committee, led by Paul Mirski, was able to arrange for Buck and Chase's paint analysis.

Last year, Dick Dabrowski, President of Shaker Workshops, offered to replace 50 drawers missing from the built-in cabinets in the Sisters' side of the Great Stone Dwelling. Many reasons prompted him to make this offer.

"The built-ins and drawers are part of the power of the Great Stone Dwelling," he said.

"Their precise design and placement are a manifestation of the Shakers' theology. The colors are symbolic. This restoration will improve the visitor's understanding of the Shakers' plan," he added.

Dabrowski hopes that the project will lead to the restoration of at least one dwelling room in the building.

"The timing is crucial because there are not many companies left that can provide this expertise," he said.

Dabrowski will speak on the symbolism of color in the Great Stone Dwelling at the Spring Forum (page 4).

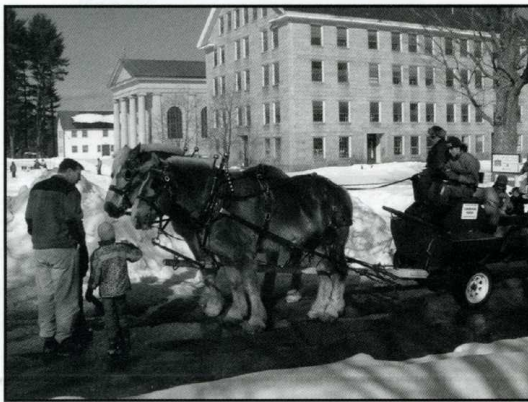
The Development Committee, led by Mary Ann Haagen, designed a fund-raising plan that enhances the gift from Shaker Workshops. Individuals may donate \$250 to sponsor a drawer. With that contribution, they may honor an individual by having that person's name inscribed in the base of the drawer. Proceeds will support the Great Stone Dwelling's upcoming capital projects. (See page 5.)

Sara Chase received an MS in Historic Preservation from Boston University in 1977. Developing a specialty in historic paint investigation early in her career at SPNEA (now Historic New England), she has done paint studies of over 100 buildings from churches and courthouses to small dwellings. She delights in the forensic aspects of paint research.



### Maple Sugar Weekend: March 12-14

Maple sugar was a popular flavoring and commercial product for the Shakers. We celebrate that tradition this weekend. On Friday, from 4-6 p.m., enjoy a welcome reception, complimentary cocktail and customized tour. On Saturday, begin with a continental breakfast, followed by sugar house tours, demonstrations, wagon rides, reception and Sugaring Off Dinner. On Sunday, end the experience with an elegant crepe breakfast. The package includes dinner, two breakfasts, two receptions and all activities, *just \$169/person.*



### Sugaring Off Dinner: Sat., Mar. 13, 6:30 p.m.

Celebrate spring with our annual Sugaring Off Dinner! Our traditional Shaker-inspired meal, catered by Stone Wall Catering, will feature maple-infused winter squash soup, rolls with maple butter, mixed greens with maple balsamic vinegar, baked chicken with cider, apples and maple liqueur, seasonal vegetable, Shaker-inspired corn pudding and maple mousse for dessert. The fee of \$30/member; \$35/non-member includes complimentary wine. Seating is limited, so please make your reservation by Wednesday, March 10.

### Bridal Show: Sat. Mar. 27, 10 a.m. - 4 p.m.

Attend our Bridal Show, and meet a variety of vendors to provide all your wedding needs, from caterers to florists to photographers. The fee is only \$6/person and includes a tour of the Great Stone Dwelling. The first 50 brides to register for the show will be admitted for free. Contact Sara Parris, Events Coordinator at (603) 632-4346 or [events@shakermuseum.org](mailto:events@shakermuseum.org).

### Community Garden Programs Begin Saturday March 20, 1 p.m.

Sign up for plots in our Community Garden and attend lectures on related topics! Refreshments will be served. The first lecture, on starting seeds indoors, will be held on March 20, 1 p.m. An orientation program will follow on April 24, 10 a.m. The classes are free to participants in our Community Garden. Others may attend and are encouraged to make a donation. The Community Garden, sponsored by Hanover-based Hypertherm, meets the company's and the Museum's core values to care for the environment and the local community and to promote programs related to the well being of children and families. The garden will open on Saturday, May 22. Plots are 20' x 20' @ \$20, and 10' x 10' @ \$10. A deposit of an equal amount is required and will be refunded if the plot is properly maintained.

### Children School Vacation Week: April 19 - 23

Participate with your children or grandchildren in daily hands-on Shaker-inspired activities that progress through the week. Activities include storytelling, gardening, singing, crafts and more! Designed for ages 5-11. Pre-registration is encouraged. Daily admission is \$5 per adult and child and \$2.50 per additional child. The fee includes a project to take home each day and a nutritional snack. To secure your place, send in a non-refundable \$5 deposit.





**Service Elderhostel: April 25 - 30**

Learn about the Shaker way through hands-on work, lectures, demonstrations and tours. Rooms and meals included. Call Deb Williams at the Hulbert Outdoor Center at (802) 333-3405.



**Spring Forum on the Shakers: May 7-9**

Immerse yourself in Shaker studies - the weekend will be packed with lectures, tours, displays, performances and workshops. Shaker Workshops will award a \$500 cash prize to the individual demonstrating outstanding new research. Package rates, including rooms and meals, are offered: Weekend overnight package, single occupancy: \$259; double occupancy: \$189 pp; local resident weekend package: \$119; local resident Saturday package \$50-\$60. Friday dinner: \$40-\$50.



*Forum participants (last year) enjoy a break between lectures. Ihyon Woo (second from right) was the recipient of the Museum's first Outstanding Scholarship Award from Shaker Workshops.*

**Mark Your Calendar!**

Shaker Summer Quest, a day camp based on experiential learning involving Shaker-inspired activities, will be offered on July 19-23 and August 2-6. Appropriate for ages 5 to 11. Fees start at \$200 per child, and there are discounts for multiple children. For details, call Events Coordinator Sara Parris, at (603) 632-4346 or email her at [events@shakermuseum.org](mailto:events@shakermuseum.org).

**Kite Workshop: Saturday, May 15, 1 - 3 p.m.**

**(Rain Date: Sunday, May 16, 1 - 3 p.m.)**

Make a kite and watch it soar high above the Shaker fields! Fees are only \$7.50 per adult and \$3 per child aged 10-17. Children under aged 10 have free admission. (Children must be accompanied by an adult; supplies will be provided.)



*Volunteer Sue Jukosky helps Kate make a kite.*

**Benefit Yard Sale.**

**Friday - Saturday, May 21-22, 8 a.m. - 2 p.m.**

This will be a HUGE sale offering books, furniture, household items and more! Held in the Stone Mill. Check out the bargains!



**Start Your Spring Cleaning and Help the Museum's Yard Sale!**

Help make our annual Yard Sale the best ever! Start your spring cleaning and donate your unwanted items to the Museum. We are seeking good or high quality sports equipment, office equipment, furniture, household goods, toys, baby items, books, holiday items, machines, art work, and antiques. We now are now collecting donations. If you need help with delivery, we will pick up your items within a 50 mile radius.



## Progress on the Great Stone Dwelling

April visitors will see a new improvement - both staircases will be entirely restored. Last year the railings from the first to the second floor were addressed, due to a gift from Walter Paine. The results met such enthusiasm that the Building Committee decided the railings up to the fifth floor had to be done. A grant from the Dwinell Foundation made this possible.

Over the last several months, we have focused on energy improvements. Your gifts to the Capital Campaign funded the first phase of the insulation last year. Thanks to Colin and Mardy High and Mariann and Howard Shaffer, who worked on an application to the NH Public Utilities Commission, the Museum was awarded a grant from the Greenhouse Gas Emissions Reduction Fund to complete the second and final phase, as well as the installation of a ventilation and heat recovery system and the purchase of energy efficient lights and appliances. Although it was not part of the grant, we also rejuvenated the heating system and improved its efficiency by 25%. In addition, we insulated the windows in the basement.

This year we will work on the cupola, thanks to a generous gift from the Butler Foundation. Former trustee Barbara Y. Butler, her mother Clara W. Butler, Bonnie Bunning, Cynthia Wentworth and Marjorie Butler took a tour of the building last year. Marjorie insisted that the Butler Foundation should help. In 2008, the Foundation supported much-needed improvements to the wiring and life safety systems.

Other projects are the exterior cornice trim, porch and basement plumbing. Pending funding, more work will be done to the main roof. Arthur Gagnon and I are surveying all the historic sashes in the building. Repairing the interior windows is separate from the Capital Campaign and is awaiting future funding.

All projects are reviewed by our Buildings Committee, with input from historic preservation advisors who serve on the Preservation Planning Committee. Bids are sought from local and near-local contractors.

Tom Boswell, Property Manager

## For More Information

Those wishing to know more about the Enfield Shakers' mechanized knitting (*page 1*), order Richard M. Candee's *The Hand-Cranked Knitting and Sock Machine: A Social History and Catalogue of 19th and 20th Century Home Knitters of American Invention*. Beautifully illustrated with company ads, patent records and images of surviving machines, the publication is available as an e-book on CD-Rom at \$36 in the Museum Store. Spiral bound copies are also available. Candee formed the Preservation Studies Program at Boston University and was its director from 1983 to 2004. He was also a Professor of American and New England Studies at Boston University from 1982 to 2004. He is a member of the Enfield Shaker Museum's Preservation Planning Committee.

The *Friends' Quarterly* is a publication of  
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