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"We Have Raffeled for the Elephant & Won!": The Wool Industry at South Union, Kentucky

by Donna Parker and Jonathan Jeffrey Wool, next to cotton, is perhaps the most important of all textile fibers. Like most of their contemporaries, the Shakers of South Union, Kentucky, recognized the ease with which wool fibers were spun into yarn and the advantages of sturdy wool clothing. The Society also foresaw potential profits from offering wool processing services to the world's people in south central Kentucky. South Union's woolen industry eclipsed its other textile endeavors and eventually proved a financial hardship for the community. Yet, from its genesis in 1815 to its abrupt demised in 1868, the sect's woolen industry provides a paradigm for the study of the United States' textile industrialization.

The South Union society was the fifteenth community founded by the United Society of Believers in the Second Appearing of Christ, more commonly known as the Shakers. Throughout its long history, it remained the Shakers' westernmost colony. Founded by missionaries in 1807, the South Union believers formally organized in 1811. Committed to communal living, the early converts quickly adopted the doctrines, dogma, and theocratical hierarchy of the sect's eastern communities, although subtle differences existed from site to site. The Logan County sect suffered from constant demand on their resources by Civil War soldiers from both Confederate and Union armies. The community never regained its ante-bellum stature and after waning for years disbanded in 1921.

The Shakers endeavored to be self-sufficient, but they depended on the outside world, which they referred to as the "world's people," as a market for their products. Deftly, the Society also purchased processed goods from the world when it was advantageous. Most researchers concur that the Shakers "principally manufactured items that they needed and could not otherwise acquire" at reasonable prices. "When someone began to manufacture an item of equal quality and less expense than the Shakers manufactured the Shakers would usually stop producing the item." By initiating a woolen industry, the South Union sect supplied its own needs as well as the processing requirements of farmers from the surrounding area.

Wool clothing's esteemed qualities are based on the wool fiber's unique structure. When felted, the fiber's scales become intertwined making a hygroscopic fabric that is well insulated. Clothiers also prize the fiber's resiliency. After being stretched, the fiber's elastic core allows the cloth to return to its original shape.<sup>5</sup>

Wool from early inferior breeds of American sheep produced a poor quality fiber suitable only for coarse goods. To weave fine broadcloth, like that imported from England, American wool manufacturers needed an improved breed of sheep. To retain their strong monopolies on fine wool cloth, European powers, particularly Spain, banned the export of Merino sheep which were prized for their fine wool. Despite these efforts, the first Spanish Merinos arrived in Delaware in 1807 and soon thereafter Merino shipments came from Portugal. By 1814 Merino herds were common in America, particularly in southern Ohio.<sup>6</sup>

South Union records indicate the Society purchased an undetermined number of Merino sheep for \$25 in 1813.<sup>7</sup> By 1850 the Shakers had improved their herd with the Saxon, Cotswold and Southdown breeds to enhance the quality and quantity of wool.<sup>8</sup> The size of the Society's herds is difficult to determine, but journal entries indicate that in 1864, Brethren sheared a total of 700 head from the herds of the Centre, North and East families, the largest number recorded. The Society's journalist thought it noteworthy to mention on 26 April 1864 that several Brethren sheared fifty head each, apparently a large number.<sup>9</sup>

The preferred method of cleaning the fleece was to wash the sheep of its natural oils and dirt before shearing. Having perfected a method of preparing wool for processing, the Shakers issued a broadside in 1814 describing their methods. They recommended that the "sheep be well washed, in some clean pond or river, and put into a clean pasture or other enclosure, for about a week before shearing. This method will make the sheep more healthy, and the wool more lively and agreeable." Confining the animals allowed time for the oils to run back in amongst the hair being a "great preservation to the wool."

After clipping a sheep, the shearer carefully rolled up the fleece, allowing the sorter to easily separate the fine wool from the coarse. In a woolen mill, sorters took years to learn their trade and were highly paid craftsmen. Wool was sorted into two or three grades. Shakers recommended that "domestic manufacturers in woolen cloths," first separate the coarse wool from the fleece. The remaining fleeces, the Shakers instructed, should then be piled:

up into one heap in the middle of a clean floor, ... [weighting] the pile so as to hold the fleeces all fast together. Then begin to pick the wool out of the pile, by degrees, all round, till you have all the wool out from under the weight, and formed into a ring round the room. ... beginning at the outside of the ring, throw it in, little by little, till you have it all in one pile again. Then proceed as before . . . at least four or five times. <sup>12</sup>

Wool must be well mixed, "and faithfully attended to, whether it is carded by hand or sent to the carding machine" to prevent tucking, or pulling during the fulling process and to make the "cloth to look well and wear well." In 1867, five Shaker Sisters sorted the wool "ready for the [carding] machine," but sorting was not clearly a female activity. <sup>13</sup>

Workers then scoured the natural grease, called suint, from the wool. The natural oil which protects the wool constitutes half of a newly shorn fleece's weight. Wool was cleansed by immersion in a tub of stale urine and warm water then rinsed in a stream. Properly washing the wool aided in successful dyeing, spinning and weaving. Both the Brethren and Sisters washed wool at South Union.<sup>14</sup>

After scouring, wool was cleansed of clinging dirt clods, dung, straw and other trash. Women, who typically performed this task, placed the wool on hurdles and beat it with rods, separating the matted wool which allowed easier removal of large pieces of debris. In preparation for carding, the cleansed wool was laid on the floor and sprinkled with oil to make the fibers more pliable. <sup>15</sup> In 1859, South Union Shakers spent \$17.50 for butter and lard to grease wool at the carding machine. <sup>16</sup>

Textile workers carded wool to blend and straighten fibers into a continuous mass making the wool easier to spin. Wool could be carded by hand or by machine. Almost every domestic household in America had several pairs of wool cards. Delegating carding to young children was common, as it was a relatively unskilled task. Records indicate the purchase of wool cards as late as the 1850s. At South Union, Sisters carded some wool by hand, however, the community's carding mill processed most of its raw wool.

British mechanics had introduced the carding machine to America in 1790. Hand cranks operated small carding machines, while larger ones were automated by water-power. Both types utilized several sets of drums covered with wire-studded leather. These circular drums revolved against a stationary drum spreading the wool smoothly over its surface. Wool came off the machine in a uniform

sheet of fibers. An 1824 invention, the condenser, allowed the carding machine to dispense wool in a long continuous strand which was easier to spin. South Union purchased a condenser for their machine in 1849.<sup>17</sup>

The South Union woolen industry followed the pattern of early American woolen mills, beginning modestly with a carding and fulling mill typical in many rural areas. As capital increased and markets expanded, the business evolved into a modern woolen factory. South Union's first carding machine arrived from Harmony, Indiana in 1819. The following year, James T. Sharp, who operated the mill, reported the operation had netted \$522.75 for services rendered to the world's people. In August 1821, the Society purchased a new carding machine for "3 horses valued at \$400.00." Though a profitable business, the mill's maintenance and improvements were costly. In 1822, the Society spent \$140 on a new set of machine cards, which led them to consider raising the fee for their customers. The Shakers placed a notice in the Russellville paper informing customers that:

having been at Considerable expense and trouble, in purchasing cards for our Machienes at double cost in currency - and having only received currency in payment for carding, we had for a while thought to raise on Carding - but now give notice to customers, & to those who have paid over that price, we will refund the same on application. <sup>23</sup>

With escalating mechanization, the Shakers required skilled craftsmen to install and operate their textile machinery. Adam Shriver traveled to South Union from Harmony in 1819 to "set up & put in motion" the first carding machine. Likewise, in 1847, the Shakers employed Thomas Gooch, a local mechanic, at a wage of \$2 per day to set up a newly-purchased machine. The Shakers also hired men to run the carding machines under their oversight. As machinery became more complex, they engaged professional wool carders to operate the mill. In 1863, George Copley, a wool carder from Louisville, was hired to superintend the carding factory. Copley worked at South Union for several years earning \$9 per week, a good wage for the time. An 1866 journal entry seems to indicate resentment about the necessity of hiring skilled laborers: "Four of the Copley connection who came on a visit some 3 weeks since . . . left this morning . . . . They made a lengthy stay considering the wealth of our carder George Copley." This resentment festered as the industry expanded.

Carding was not the sole means of straightening wool fibers. The Shakers also used large wool combs (Figure 1), which were heated, "kept warm in a pot of oil over a flame," and used in pairs to separate the long fibers from the short staple ones. One comb was generally attached to a stationary pole, while the other was used for pulling and subsequently straightening the wool. South Union's 1835 journalist recorded: "Br[other] Saml. S. McClelland [made] . . . use of his great lathe, polishing & grinding teeth on his emory wheels to make for the Sisters some worsted combs."<sup>25</sup>

To facilitate their textile industry and aid their neighbors, the Shakers built a fulling mill in 1814 which opened to the world's people the following year. The mill performed several necessary finishing processes on newly-woven fabric. Fullers used moisture, heat and friction to clean, shrink and felt cloth. Heat and agitation caused the scales of the wool fibers to interlock with each other resulting in a stronger, firmer material than that cut from the loom. Fuller's earth, a clay-like mineral, absorbed the remaining grease in the wool.<sup>26</sup>

Fullers generally employed water power to operate their mills. Cloth was placed in a tub and alternately pounded with beaters causing the fabric to turn over and over. Shakers accepted cloth at the mill site but also employed merchants from as far away as fifty miles to accept cloth for the mill. To their customers, Shakers instructed that when "sending your cloth to the clothiers . . . roll it up tight; put a safe bag or wrapper round it. . . Particularly directions, in writing must attend every piece of cloth, stating the owner's name, the county he lives in, the number of yards in each piece of cloth, and what is wished to be done to it." The Shakers assured their customers that they could "rely on the utmost punctuality, neatness and dispatch in our power," but the community noted in print that it did no business "on the first day of the week [Sunday]."<sup>27</sup>

After fulling, the cloth's uneven fibers had to be napped and sheared to improve the material's softness and appearance. Textile workers raised the nap with a fuller's teasel, the prickly flower head of a plant commonly known as the fuller's thistle. The teasel brush was rolled over the fabric causing fibers to stand up. By 1830, a napping machine, or teasel gig, was employed by most American wool manufacturers. Shaker records indicate South Union purchased such a machine in 1849.<sup>28</sup>

Traditionally, skilled shearsmen wielded forty-pound shears to cut the fabric's raised nap. An automated shearing machine, which required little skill to operate, was patented in 1793 and American mills rapidly adopted it. From the beginning, Shakers employed a shearing machine of this sort at the fulling mill, one obtained in 1814 from Union Village, Ohio, another in 1816 from Pleasant Hill, and yet another on a trip to Watervliet, Ohio in 1849.<sup>29</sup>

Dyeing was also performed at the fulling mill. Wool could be dyed in the fiber, yarn or cloth stage. Like other professional dyesters, the Shakers purchased dyestuffs from area merchants. Records suggest that the Sisters did much of the dying for the community's use. Fabrics were dyed black, blue, bottle green, dove, lead, drab, red and various shades of brown. The most requested color was a light or dark drab. Customers paid according to service, dye color (dyes varied greatly in price) and how closely the cloth was shorn.

As technology advanced, the Shakers improved equipment and machinery. The walking wheel or great wheel produced only one strand of yarn. Introduced in the 1790s, the hand operated spinning jenny (Figure 2) increased spinning production several thousand percent by using multiple spindles. In 1819 South Union acquired a "Spinning Machine - With 6 spindles!", and they paid \$12 for the rights to duplicate it. In 1840, South Union purchased three spinning machines in Lexington, Kentucky, for \$100 each.<sup>30</sup>

The steam or water driven spinning jack, introduced to American mills in the 1820s, had widespread use by 1840. The first jacks had one to two hundred spindles, but those of four hundred were common by the 1870s. Yarn spun on jacks was of highly quality than that spun on the jenny.<sup>31</sup> In 1849, South Union acquired a spinning machine with 120 spindles from Watervliet, Ohio, and placed it on the factory's lowest floor. In 1866, they purchased a spinning jack with 240 spindles. Jack spinners, those who operated the spinning jack, "were highly skilled workers . . . customarily the highest paid and most independent of the woolen factory's operatives." Often barefooted, spinners wore light clothing for comfort, because the wool "spun best in conditions of high temperature and humidity."<sup>32</sup>

The use of the spinning jenny with its increased output of yarn led to the purchase of a fly shuttle loom by South Union in 1820. The fly shuttle loom employed a series of cords and boxes which the

hand weaver operated to send shuttles racing from one side of the loom to the other. The loom could triple the weaver's output. Two months after the purchase, the Shakers experienced difficulties with their "patent loom" leading Harvey Eades to speculate in 1870 that it "may be considered a failure & \$200.00 or more thrown away."<sup>33</sup>

The woolen industry at South Union paralleled the gradual industrialization of American textile production. By the 1860s, the community's woolen industry had progressed to the point where the next logical step was to further automate the process by adding steam power. First introduced in the United States in 1773 and in Kentucky in 1811, steam power presented an improvement over waterpower due in great part to its reliability."<sup>34</sup> Keeping the engine running required a steady fuel supply. Wood, although plentiful on Shaker lands, necessitated a tremendous labor outlay which was in dwindling supply at South Union.

Under Elder Harvey L. Eades' conservative leadership, the woolen industry was not steam powered until the late 1860s. From the beginning Eades opposed expanding the woolen mill. Perhaps he foresaw the Society's gradually declining membership and the dearth of expertise needed to operate and maintain an enlarged and more mechanized factory. Several persuasive Shaker Brethren, however, envisioned a larger factory as a means to bolster the community's coffers.

The proponents of a modern factory were dealt a favorable stroke of fate in May 1865 when an "Appalling storm and freshet – extraordinary" covered the "spinning Jenny and loom in the factory" causing considerable damage. After drying out and investigating the damage, a decision was made to enlarge the factory and in September 1865 the expansion and modernization began. Rather than erect a new structure, the Shakers decided to expand the two-story stone building opposite the community's grist and saw mill on Clear Fork Creek. This building had housed the community's carding mill since at least 1835 and probably earlier. Elder Eades expected the new factory to house "a spinning jack of 250 spindles and four power looms" with "the main business to be making stocking yarn for sale." Construction began with two Brothers stripping the roof off the factory "prepatory to putting on another story of brick" and within a week masons from Bowling Green began adding the third-story walls. Less than two months later, Brethren put a new tin roof on the building. While the men were still roofing the

building, Brother Urban Johns trekked to Louisville, Cincinnati and "other Places in Ohio to look for [an] Engine – carding machines & spinning Jack and looms for our factory.<sup>38</sup>

The following April a "new turbine cast iron water wheel gotten from Cincinnati with new pulleys, shafting, and gearing" was installed. Within ten minutes of operation, the wheel ceased to function when the forebay's timbers "not being strong enough to support such weight of waters" crashed.<sup>39</sup> Concerned but unshaken and with the help of "a hireling," the Shakers rebuilt the forebay with 10" square timbers.

Two months after installation of the turbine, new machinery ordered from Furbush and Gage of Philadelphia began arriving. The first shipment included a set of carding machines and a wide loom. One month later the prized 240-spindle spinning jack, "a fine specimen of workmanship," arrived from the same company. Eades continued his reticent disapproval, writing smugly: "The freight on the present lot amount to the snug little sum of \$75." Upon the equipment's advent, "Several Sisters went to the factory to assist in cleaning the Machinery as it had been wet & was somewhat rusted." A mechanic was employed to help Brother Monroe Powers install the new machinery. He became the first of a lengthy list of the world's craftsmen and laborers the Shakers employed to assist in the factory's operation.

Once the equipment arrived the Shakers discovered that even with an additional floor, the stone factory contained "but little over half the room required." At this point the community's leadership made the critical decision "to raise a frame building at the East end of the present building & to get a steam engine to propel the Machinery when the water is low." This seems to indicate the Shakers planned to use the steam engine only when waterpower was not available. Although the Shakers maintained a substantial spring-fed millpond, it did not provide a consistently reliable power source. Eades' acerbic pen could not resist a jab at the project: "It seems to grow in spite of every drawback, one thing demands another and another. May we not repent it is my prayer." Eades' opposition to the project raises some interesting questions. Was the conservative elder assenting to the work to forego a power struggle with the charismatic Trustee Urban Johns, who apparently oversaw the factory's

expansion? Or, was the abeyance a simple case of a democratic leadership with a loyal but vocal minority?

Despite Eades' opposition, the project lumbered forward. In July 1866, Urban Johns journeyed to Cincinnati to procure a steam engine. He stopped in Louisville enroute and eventually the engines were purchased from that city's Ainsley Cochran and Company. While waiting on the engine's delivery, the Shakers continued construction of the building's addition. A number of hirelings assisted in laying the foundation and framing the factory addition. A Mr. Kennedy from the Ainsley Cochran concern visited the site "for the purpose of showing where the foundation must be laid for the Engine – which he says is nearly finished." Throughout the new wing's construction, machinery began operation in the building's older section. The new fourteen-roller condenser which compressed the bulk of the wool, was put into operation on 1 September 1866. Eades noted that it worked "beautifully – like an automaton." Within two weeks the 240-spindle jack started and two of the power looms were readied. After examining the "first web of Jeans" from one of the looms, Eades quipped: "Does not yet work well."

On 11 October 1866 the two new steam engines reached South Union via the Louisville & Nashville Railroad. One behemoth with 45 horsepower was to run the "factory Machinery and grist mill, when the water is low"; the smaller one with three horsepower was employed to pump water. Shortly after the chimney flue's completion, a fire was started in the boiler, and on 10 November 1866 Eades wrote: "Steam! At last. Steam is introduced at South Union."

Although the steam engines were in place, almost a month lapsed before the shafts and belts moved. In late November the carding machine and jack were operating but the looms remained idle. By this time the Shakers, particularly Eases, worried about locating competent craftsmen and mechanics to operate the factory as well as the concern's mounting costs. Eades lamented:

The four new looms are now set up in their place and we must have a competent weaver – to learn some of our young men to weave – as we do not now expect to employ females there – his wages will doubtless be \$10 a week – then a Dyster & finisher at \$10 pr. week will be \$2500 per year for hands at factory – all this besides 2 cords of wood pr. day for at least 6 or 7 months of the year say 160 days or say

300 cords of wood @ \$2.50 pr. cord is \$750 – say \$800 – all this added to dye stuffs etc. – I presume, I would be on the safe side to say the cost of money to be expended this year besides buying wool to work will not fall much short and may considerably exceed the sum of \$5000. I fear the concern will not much more than clear its teeth.<sup>47</sup>

As Eades predicted, a spinner/carder was soon employed at \$10 per week and a machinist/engineer, which he had not anticipated, was hired for the same wages. Once more the elder mourned: "I trust the factory and mill will clear enough to pay them with the help we expect to give." 48

The lack of competent labor to run woolen factories was a problem throughout the developing Ohio River Valley. "The production of woolens on a large scale," wrote one expert, "required skilled laborers in many departments of the business from the sorting of wool to the finishing of the goods; this kind of labor was not yet to be had." Undoubtedly this explains the small number of woolen factories reported in Kentucky. As late as 1860, the Commonwealth reported only 18 counties with woolen factories. <sup>50</sup>

Competent help was essential for smooth operation of the factory, but finding an overseer from the Shaker ranks proved equally trying. The Shakers placed the factory's superintendence under one brother after another with little positive results. In June 1867, Elder Lorenzo Pearcifield was appointed "Superintendent of the Woolen factory – especially to keep the boys to their loom." Six months later Shaker Logan Johns, who had gone from herdsman to weaver in the previous year, was put in charge of the operation, replacing a less competent Brother. The substitution netted no appreciable gains, as Eades report in August: "The woolen factory seems to drag heavily because our deacon does not understand the business." In part the Elder blamed the Trustees who "hesitate about launching further into this hitherto unexplored Ocean, & now are feeling their way by inches."

Besides the dearth of skilled craftsmen and inadequate Shaker supervision, the factory also suffered from an inadequate inflow of wool and mechanical problems. The Shakers assumed that wool produced inside the community and from nearby counties would sufficiently supply the factory; however, during the factory's first year Urban Johns was sent out to purchase wool from the world.<sup>54</sup> Further feeding Eades' judgement, the factory experienced several mechanical difficulties, including a

burst boiler and several broken mill spindles. Despite its shortcomings, the mill was "still clanking away by steam in the late fall of 1867."<sup>55</sup>

Although the factory did produce cloth-jeans, blanket material and "some casimeres" – Eades began to refer to the operation as an elephant that ate and ate and never produced anything of substantive value. He wrote the Mother Ministry: "We have raffeled for the Elephant & won! The question now is, what shall we do with him? Will he eat his own head off, or will he pay?"<sup>56</sup> The enterprise became a major embarrassment for the Society. When several members from the Mother Ministry visited South Union in 1868, they reported: "Truly, they have got the 'Elephant,' but do not know what to do with him. The factory is a sore burden that they do not know how to dispose of, at present."<sup>57</sup>

Less than three months later, a fire relieved the Shakers of the failing enterprise. On 2 September 1868 at "about rising time, a brilliant light was seen over our dwellings. It was soon announced the Factory was burning." Eades blamed the conflagration on "incendiaries" who torched the factory and the Society's grist mill across the creek. The Shakers saved some cloth, but "all else of both buildings was given over to the jaws of the devouring element." Eades estimated the damage as follows:

Factory Building and equipment	\$35,000
Grist Mill and equipment	18,000
Grain consumed	1,000
Wool and cloth, consumed	6,000
	\$60,000

Others placed the damages as high as \$80,000, but Eades felt "people are apt to exaggerated losses." He figured all could be – replaced "for . . . perhaps \$50 or 55,000 doll[ar]s." <sup>58</sup>

The fire was undoubtedly a "hate crime." The animosity was generated by the Shaker's agricultural and industrial success as well as their benevolent attitude toward blacks. Eades admits that the community had not paid sufficient attention to this neighborhood dynamic: "The Negroes had warned us that our white neighbors intended to burn us out, but we had not become sufficiently alarmed, either to insure our property or to place over it a suitable guard." Punning he observed that "Hence we are Suddenly shorn to the tune of 60 or 70,000 dollars." A few months previous to this fire, another

Shaker structure as well as the homes of several blacks had been burned by "armed men & midnight prowlers." After these offenses the Shakers offered a \$500 reward "for the parties who applied the torch." The Society's Trustees felt that this incident incited the incendiaries "to greater crimes, even the burning of the mills." Eades also suspected the hired mill workers who "knew they were soon to be dismissed." 60

Fearing further retaliation, Eades and the Trustees penned a letter to Governor John W. Stevenson. The epistle explained the situation and pleaded for "some kind of demonstration of State authority" to "save us and our homes from the Spoiler." The Shakers requested that the state offer "a reward for the apprehension of the incendiaries & their backers," who should be placed "where it would not be in their power to so sin against God, themselves & their country." They "got no reply."

Eades also wrote the Mother Ministry at Mt. Lebanon a confession letter. In it he explained that the factory was built after the Mother Ministry issued a directive entitled: "Concerning Factories Among Believers." The Ministry had declared factories "fruitful sources of disorder, not only between families, but between Believers and the world, in some cases the media of great spiritual losses, in other financial losses, in almost all place loss of union between families with few exceptions." Eades compared the warning to that received by Moses from the burning bush and added that had it been heeded "would have saved us... from the poignant regrets & great sufferings... in consequence for this disobedience." Without capital for new construction and realizing the futility of resurrecting the "elephant," the Shakers decided not to reconstruct their woolen factory. The grist mill, however, was rebuilt.

The fire ended a long and sometimes distressed woolen industry at South Union. The Shakers had followed the industrialization pattern familiar to many woolen plants throughout the country, beginning small and adding new equipment as it became available. The sudden surge in technology and capacity, created by the erection of the factory in 1867, outdid the ingenious Society. The Shakers did not have a steady supply of raw wool for such a large facility, and they lacked competent help to operate and supervise the factory properly. The facility never paid for itself, although the carding machines and the fulling mill had posted handsome profits over the years.

The loss of the behemoth woolen factory was a mixed blessing. Despite the tremendous loss in capital, compounded by the fact that the buildings were uninsured, the Shakers no longer had to invest in what appeared to be a doomed enterprise. Still, the Shakers "had never before been without the means to make our own Blankets, Bedspreads, and winter clothing until now." Despite this handicap Sisters who penned the above sorrow hoped that "with the wisdom given us by a kind Providence we may manage to get along somehow without rebuilding the Factory." Even though Eades disapproved of the project from the beginning, he admits he "would not have had it destroyed for this sum [\$80,000]." Despite the lack of a wool processing plant, the Shakers continued to raise sheep for wool in the 1870s and sent it elsewhere for processing. As the South Union Shaker community gradually declined, many of its non-cost efficient industries were abandoned but none was as quickly stripped from their hands as their woolen processing facilities in 1868. Jealous contemporaries had cremated the burdensome elephant.

<sup>&</sup>lt;sup>1</sup> This article represents the last installment of a three-part series examining the textile industries at South Union, Kentucky. For information on the society's flax and silk production see: Donna Parker and Jonathan Jeffrey, "Flax Production at South Union, Ky.," *The Shaker Messenger* 14 (April 1992), p. 7-9, 23; and, Parker and Jeffrey, "Silk, Sericulture and South Union Shakers," *The Shaker Messenger* 15 (May 1993), p. 5-9, 30.

<sup>&</sup>lt;sup>2</sup> For more information of the subtle differences between the eastern and western Shaker communities see John Brenton Wolford's "The South Union, Kentucky, Shakers and Tradition: A Study of Business, Work and Commerce," (Dissertation, Indiana University, 1992).

<sup>&</sup>lt;sup>3</sup> The only full-length history of the South Union community is Julia Neal's *By Their Fruits: The Story of Shakerism in South Union, Kentucky* (Chapel Hill: The University of North Carolina Press, 1947). See also, Miss Neal's *The Kentucky Shakers* (Lexington: The University Press of Kentucky, 1977).

<sup>&</sup>lt;sup>4</sup> John M. Keith, Jr., "The Economic Development of the South Union Shaker Colony, 1807-1861," (Thesis, Western Kentucky State College, 1965), p. 50.

<sup>&</sup>lt;sup>5</sup>Merrimack Valley Textile Museum, *Homespun to Factory Made: Woolen Textiles in America, 1776-1876* (North Anover, MA: Merrimack Valley Textile Museum, 1977), p. 2.

<sup>&</sup>lt;sup>6</sup> Kax Wilson, *A History of Textiles* (Colorado: Westview, 1979), 256; Isaac Lippincot, *A History of Manufactures in the Ohio Valley to the Year 1860* (Philadelphia: Porcupine Press, 1974), p. 93.

<sup>&</sup>lt;sup>7</sup> [South Union Shaker] Record A, 1807-1836, 11 October 1813, Library Special Collections, Western Kentucky University, Bowling Green, Kentucky. Hereafter cited as WKU.

- <sup>8</sup> Report of the Commissioner of Patents for the Year 1850 (Washington, D.C.: Office of the Printers, to the House of Representatives, 1851), p. 277-278.
- <sup>9</sup> [South Union Shaker] Record B, 1836-1864, 26 April 1864, The Julia Neal Library, Shakertown South Union, Kentucky. Hereafter referred to as SU.
  - <sup>10</sup>[South Union Shaker] Fulling Mill Broadside, 12 September 1815, WKU; Merrimack, p. 4.

<sup>13</sup>Ibid; [South Union Shaker] Diary, 1866, 24 May 1866, Shaker Manuscripts, Western Reserve Historical Society Library, Cleveland, Ohio, V:B-227, [microfilm], hereinafter cited as WR.

<sup>14</sup>Merrimack, p. 12; Mary Schenck Woolman and Ellen Beers McGown, *Textiles: A Handbook for the Student and the Consumer* (New York: MacMillan, 1929), p.167; Record A, 13 April 1830; Record B, 28 April 1864; 1866 Diary, 24 April 1866; [South Union Shaker] Record C, 2 June 1867, WKU.

<sup>17</sup> Merrimack, p. 66, 70; Harold B. Burnham and Dorothy K. Burnham, 'Keep Me Warm One Night': Early Handweaving in Eastern Canada (Toronto: University of Toronto Press, 1972), p. 16; 1844-1860 Account Book, May 1849.

<sup>24</sup>Record A, 14 August 1819; 1844-1860 Account Book, 25 July 1847; Record B, 20 May, 1863; Record C, 6 June 1866.

<sup>25</sup>Record A, 28 July 1835. The Kentucky Museum located on the campus of Western Kentucky University owns three of these Samuel McClelland wool combs. They were each donated to the museum by different patrons at different times.

<sup>26</sup> Marion L. Channing, *The Textile Tools of Colonial Homes: From Raw Materials to Finished Garments*, 2<sup>nd</sup> ed., (Marion, Mass.: The Author, 1971), p. 50-51.

<sup>27</sup> Record A, 23 August 1814, 29 December 1814; [South Union Shaker] Account Book, 1815-1816, 18 January 1815, II:B-55, WR; Fulling Mill Broadside.

<sup>28</sup> Dean Straffin, "The Fuller's Teasel," *Early American Industries* 45 (June 1992): p. 38-39; John Nicholson, *The Farmer's Assistant; Being a Digest of All That Relates to Agriculture, and the Conducting of Rural Affairs; Alphabetically Arranged, and Adapted for the United States*, 2<sup>nd</sup> ed., (Philadelphia: Benjamin Warner, 1820), p. 120; 1844-1860 Account Book, May 1849.

<sup>&</sup>lt;sup>11</sup>Ibid. 10, 58.

<sup>&</sup>lt;sup>12</sup>1815 Fulling Mill Broadside

<sup>&</sup>lt;sup>15</sup>Merrimack, p. 14.

<sup>&</sup>lt;sup>16</sup>[South Union Shaker] Society Account Book, 1844-1860, 6 July 1857, II:B-83, WR.

<sup>&</sup>lt;sup>18</sup>Merrimack, p. 68.

<sup>&</sup>lt;sup>19</sup>Record A, 5 June 1819.

<sup>&</sup>lt;sup>20</sup> "The United Society Dr. [for] Carding Machine," 1820, Day Collection, WKU.

<sup>&</sup>lt;sup>21</sup> Record A, 15 August 1821.

<sup>&</sup>lt;sup>22</sup> Record B, 9 August 1847; Record C, 28 June 1866; [South Union Shaker] Account Book, 1821-1833, 15 April 1822. II:B-64. WR.

<sup>&</sup>lt;sup>23</sup>Russellville Weekly Messenger, 7 June 1823.

- <sup>29</sup> Merrimack, p. 44, 96; Record A, 23 August 1814, 6 January 1816; 1844-1860 Account Book, May 1849.
- <sup>30</sup> Merrimack, p. 50; Record A, 30 January 1819; Record B, 25 July 1840.
- <sup>31</sup> Merrimack, p. 74.
- <sup>32</sup> Record B, 19 May 1849, 1 June 1849; Record C, 5 September 1866; Merrimack, p. 74.
- <sup>33</sup>Woolman, p. 75, 200; Record A, 25 January 1820; 21 March 1820.
- <sup>34</sup> Lippincott, p. 68-69.
- <sup>35</sup> Shaker Record C, 20 May 1865.
- <sup>36</sup> Shaker Record A, 17 September 1835.
- <sup>37</sup> Harvey L. Eades to Freegift Wells, 12 October 1865, IV:A-63, WR.
- <sup>38</sup> Shaker Record C, 13 November 1865.
- <sup>39</sup> Ibid., 4 and 11 April 1866.
- <sup>40</sup> Ibid., 28 June 1866.
- <sup>41</sup> Urban E. Johns to Giles B. Avery, 26 August 1867, IV:A-63, WR.
- <sup>42</sup> Shaker Record C, 28 June 1866.
- <sup>43</sup> Ibid., 17 July 1866 and 7 September 1866.
- 44 Ibid., 20 September 1866.
- <sup>45</sup> Ibid., 14 September 1866.
- <sup>46</sup> Ibid.. 10 November 1866.
- <sup>47</sup> Ibid., 1 January 1867.
- <sup>48</sup> Ibid., 10 January 1867.
- <sup>49</sup> Lippincott, p. 167.
- <sup>50</sup> Ibid., p. 166. The average capital for these factories was \$12,000 and the average production in dollars was less than \$22,000.
  - <sup>51</sup> Shaker Record C. 28 June 1867.
  - <sup>52</sup> Ibid., 15 August 1867.
  - <sup>53</sup> Letter from Ministry, South Union, to Ministry, Watervliet, 15 January 1867; IV:A-63, WR.
  - <sup>54</sup> Shaker Record C, 12 July 1867.
  - <sup>55</sup> Ibid., 27 September 1867, 12 November 1867.
  - <sup>56</sup> Letter from Ministry, South Union, to Ministry, Watervliet, 15 January 1867; IV:A-63, WR.
  - <sup>57</sup> Letter from Ministry at Watervliet, NY, now at South Union, to Gospel Friends at Watervliet, 19 June 1868,

## VI:A-63, WR.

- <sup>58</sup> Shaker Record C, 2 September 1868.
- <sup>59</sup> Ibid., 10 September 1868.
- <sup>60</sup> Letter from Ministry, South Union, to Ministry, Mt. Lebanon, 7 September 1868, IV:A-63, WR.
- 61 Ibid
- <sup>62</sup> Letter from Ministry, South Union, to Mother Ministry, Mt. Lebanon, 7 September 1868, IV:A-63, WR.

<sup>&</sup>lt;sup>63</sup> Letter from Nancy E. Moore to Eldress Nancy [Orsment], 18 December 1869, IV:B-20, WR.

<sup>&</sup>lt;sup>64</sup> Shaker Record C, 2 September 1868.

<sup>&</sup>lt;sup>65</sup> Shaker Journal, 1872-1878, 4 June 1874.