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Jacqueline Field
Independent Scholar

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Transitions and Expansion: The Haskell Silk Company's Switch from Thread Manufacture to the Production of Yard Goods, 1880-1882

Jacqueline Field. Independent Scholar. 217 Prospect Street, Portland, Maine 04103

The Haskell Silk Company of Westbrook, Maine, operated from 1874-1930. At its peak it was above average in size and counted among major U.S. silk manufacturers. The most northerly situated silk mill, Haskell began as one of New England's numerous post-bellum machine thread makers, but within eight years shifted to weaving broadsilks. During this period many New England thread producers made a similar change and at the same time opted to relocate with new plants in the vicinity of New York and northern New Jersey, where a variety of social and economic factors provided an attractive business climate.¹ The Haskell Company however, expanded its existing premises to accommodate looms and remained in situ on Bridge Street, Westbrook.

Extant company documents are limited, but throw light on the mill start up, and years preceding and following the switch from thread making to weaving. Examination of these documents helps construct insights into silk output and marketing illustrative of both Haskell and general industry practices during this seminal period of silk industry development: late 1870s to early 1880s. On another level this examination aids the effort to extract a picture of the industrial artifact--U.S. silk products--elements rarely included in silk industry studies.

This paper will first briefly contextualize the Haskell Silk Company and discuss the variety of threads Haskell produced and how they were sold and used. Second it will chronicle the earliest Haskell broadsilks, and note the customers and method of distribution. Finally this paper concludes that the successful transition indicates that despite geographic isolation Haskell was networked into the industry at large, was fully apprised of current market trends and benefitted from immigrant silk expertise, as did Mid-Atlantic manufacturers.

At the start some definitions and terms are necessary to clarify the silk discussion. The silk industry consists of two divisions. One is agricultural and involves the production of silk cocoons and reeling or unwinding filament into skeins of raw silk. Silk is imported in this form. The other division is concerned with the further processing of raw silk into manufactured goods.

In the mid-19th century supplies of raw silk were imported from Europe or China. Dating from the 1860s U.S. raw silk imports were duty free while the tariff on imported manufactured silk goods rose to sixty percent. This situation, coupled with other factors, significantly encouraged U.S. silk manufacturing efforts. A major stimulus derived from a parallel development--the sewing machine. In the 1860s-1870s sewing machine use by garment manufacturers and home sewers increased rapidly with a resultant growth in demand for machine thread, or twist as it was called. Designed in the 1850s specifically for sewing machines, this new type of silk thread was originally perfected at the Nonotuck Mills in Florence, Massachusetts.² Thereafter machine twist production remained concentrated in, but not exclusive to, New England--the location of so many textile manufacturing establishments.³

Twist mills proliferated. Of the forty-two twist makers in operation in eight states in the U.S. by 1874--the year Haskell started--twenty eight were in New England.⁴

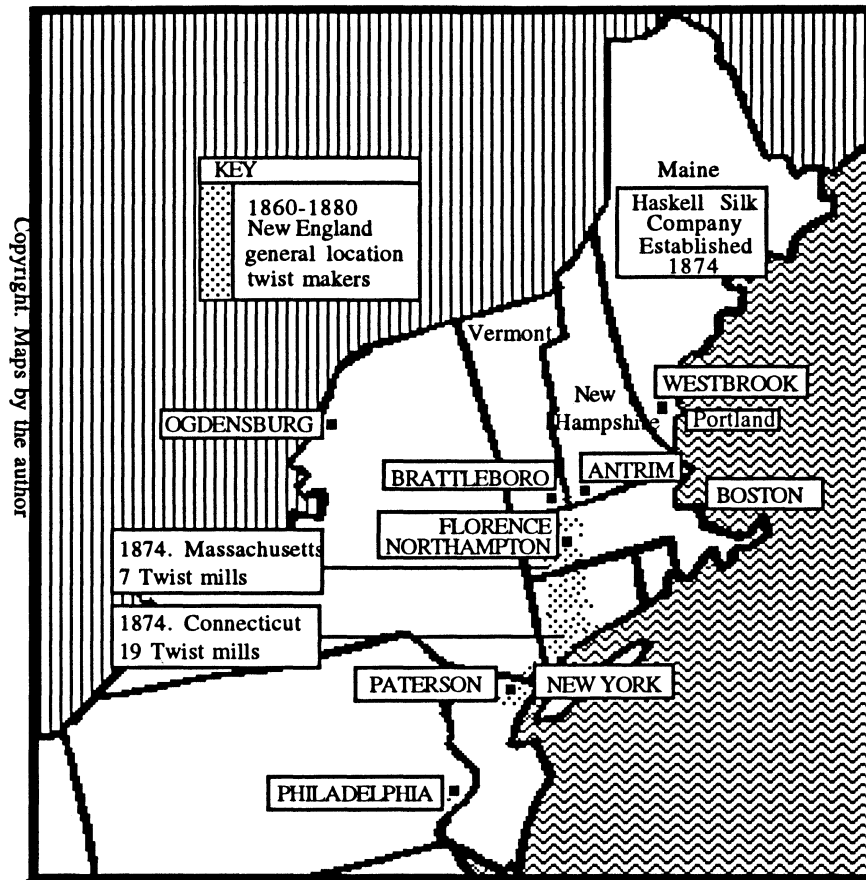


FIGURE 1. Twist mill distribution in New England the 1870s. The greatest concentration was in Connecticut and Massachusetts. The Vermont and New Hampshire twist mills were close to other plants in Massachusetts. The Haskell mill at Westbrook, Maine, was distant from any other twist mill.

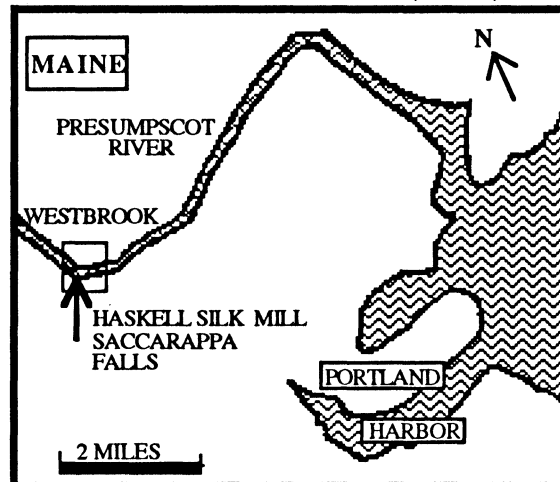


FIGURE 2. The Haskell mill location at Saccarappa falls, 5 miles inland from Portland. Silk and other supplies were transported via the New York-Boston-Portland sea route. The Ogdensburg and the Rochester-New York (later Maine Central) rail lines served Westbrook providing inland transport west and south.

There were nineteen in Connecticut, seven in Massachusetts, one in New Hampshire (Kelsea of Antrim) and one in Vermont (Stearn of Brattleboro).⁵ While Connecticut and Massachusetts each employed over a thousand people in twist making, the New Hampshire and Vermont companies, with eighteen and seven workers respectively, were closer in scale to Haskell at its start.⁶ A glance at a map however, shows they were not close geographically. (Fig. 1) Distant from other twist producers The Haskell Silk Company of Westbrook, Maine, began with six operatives.

While geographically removed from similar silk manufacturers, the Haskell silk mill was nevertheless part of the broad New England textile scene. Within a thirty mile radius there was the major complex at Lewiston (including Bates Mill); Saco/ Biddeford with the Pepperell Manufacturing Company; and at Westbrook there was the Dana Warp Mill and a duck and gingham producer, the Westbrook Manufacturing Company. The latter was owned by the Haskell family who situated the original silk mill opposite their large cotton factory on the lower Saccarappa falls of the Presumpscot River. The silk operation began in a small clapboard building (long since demolished). It was set up with machinery from The Atwood Machine Company--pioneer developers of throwing and twist making equipment. From another pioneering silk company--veteran silk importer, Walker of New York--the first bale of silk was purchased on September 26th, 1874.

Stock and Materials: To John J. Walker

1 Bale # 24 Usual Reel Tsatlee Silk.....\$667.62

109 lbs net @ 61/8.⁷

Tsatlee is Chinese silk. At this time the only choices were expensive high quality European raw silks or the less costly but inferior and more difficult to handle Chinese varieties. An alternative, Japanese silk, began to feed the American industry in the late 1870s.

In its first years of operation The Haskell Silk Company was solely involved in the business of transforming bales of silk into threads. A bale is made up of skeins of reeled silk. After silk workers unpacked the silk, it was passed through almost a dozen separate processes. Degumming, sorting, winding, doubling, twisting are but a few of the procedures--collectively known as throwing--necessary to turn reeled silk into usable threads. Some silk remained white and some was dyed. Records are unclear but indications suggest that in the first years Haskell silk was sent out for dyeing. Whether white or colored, different numbers of threads were combined in various ways to create different thicknesses. In turn different degrees of twist imparted different degrees of strength to make assorted categories and qualities of thread, each with its own performance characteristics designed for specific end uses. From the start Haskell turned out most categories. Early sales records include: both twisted and untwisted embroidery; gimp or Canton, coarse low twist threads intended for fringe makers; "sewings" (threads for hand stitching) less twisted and unsuitable for machine use; loosely twisted tram (filling threads); and more expensive to manufacture complex hard twisted threads--button-hole, sewing machine twist and organzine (for warps).⁸

In the 1870s, before broadsilk production was widespread in America, the threads and twist turned out in such quantities by Haskell and much larger mills were consumed in the manufacture of narrow goods such as fringes, trimmings and ribbons, and, increasingly, in the machine stitching of mass produced garments and shoes. For example, Haskell Tsatlee white silk was used by the Ventilating Waterproof Shoe Company; the Keeler and Baker Underwear Manufacturing Company stitched with Haskell 12 oz. machine twist while The Eastern Elastic Gusset Company employed

Haskell black tram and the Bay State Casket Company of Boston found use for Haskell gimp.⁹

Threads reached consumers packaged in a variety of ways. Tram, organzine and gimp were put up in skeins; embroidery and silks for hand stitching in hanks of different weights, while button-hole and machine twist were wound by the yard on wooden spools. Haskell's earliest supply of spools was recorded on September 19th, a few days prior to the first silk. As manufacturing proceeded records show regular expenditure on bales of silk, spools, spool-end labels, box labels and boxes for spools and skeins.¹⁰

Initially Portland selling agent, J. P. Jordan, marketed Haskell goods. While some items were apparently shipped from Saccarappa to consumers, most of the early mill output was delivered to Jordan in Portland five miles away. (Fig. 2) From the evidence it appears that Jordan bought Haskell silk products and resold them. He also collected payment from individuals who received goods direct from the mill.¹¹ Research has not yet revealed the agent's percentage or whether he played any role (as agents often did) in underwriting or financing Haskell raw silk purchases.

Few invoices survive to show how the mill described goods sent from the mill to Jordan. One example, dated January 13, 1875 gives an idea of the Haskell product and scale of individual transactions during the factory's early months.

Sold to Jordan & Co., 133, Middle Street, Portland:

Tsatlee Mac Twist Pure Dye	000/1	00/1	A/5	=	7 lbs
" " " 16oz Dye	0/1	a/1		=	4 lbs
Canton Twist " " "	a/1	E/1		=	4 lbs
Embroidery 24 - 4oz.Boxes				=	96 oz ¹²

Where the numbers signify thread sizes, the terms "pure dye" and "16oz" indicate qualitative differences. They refer to the amount of dye added to a pound of silk to make up the weight after the gum was boiled off. In colored silks standard "pure dye" was understood to be the best quality with no excess of dye or other mineral additives.

A year after the mill was founded and eight months after manufacturing commenced the agent's typical transactions included several products. From these sales it is evident that even at this early stage in the company history Haskell differentiated product lines through various brand names. They ranged from the basic--"Haskell Silk Company" to "Presumpscot Mills" and, later, "Dirigo." On June 14, 1875 a typical customer, W.K. Griggs, bought:

12 doz	Presumpscot Mills	@	.68	\$17.00
6 doz	Haskell Silk Co.	@	.95	\$ 5.70
1 lb	Canton			\$ 9.50
6 doz	Haskell Silk Co.	@	.95	\$ 5.70 ¹³

The dozens were reels of twist, usually boxed by the dozen. Countless similar purchases, some for greater amounts and others for less, continued over the next two years. Concentrated in Maine, customers were dry goods stores, retailers, home sewers, milliners, tailors, dressmakers, shoe and garment manufacturers. The latter two constituted a market in themselves--over five and a half thousand workers in Maine were employed by a combination of 250 garment and shoe makers, according to the 1870

census. Beyond Maine Haskell also served a scatter of consumers in Boston and nearby states. By 1877 however, the Haskell market extended as far as New York, where Pratt & Freeman of 95 Thomas Street, was one of several businesses recording sales of Canton spool silk and Presumpscot Twist for the Haskell Silk Company.¹⁴

Competition was keen. Haskell threads vied with those from many twist industry giants. Among them, the "Corticelli" brand from the original twist developer, Northampton's (Florence) Nonotuck Silk Company (600 workers in 1875); "Best in the World" from Philadelphia's Brainerd and Armstrong Company (who provided stores with elaborate glass-fronted spool display cabinets); and "Salter & Cutter" from one of the longest established Paterson firms, John D. Cutter. Cutter advertised "Spool Silk, Machine Twist, Hand-Sewing Silk, Button-Hole Twist and Embroidery in Black and Every Shade and Tint of Color." Cutter button hole and "Pure Dye" twist were both offered in eight sizes to suit different machine needle sizes.¹⁵

Amidst the profusion of threads saturating the market, pricing problems beset all manufacturers. Because they were unable to agree to regulate prices, the push for sales led to price cutting and competitive discounting.¹⁶ The effect of all this was to keep profit margins low. Nevertheless, with careful management and economy proprietors of small mills, like Haskell, managed to survive and compete. They incurred lighter expenses than their "mighty rivals" and, as a result, "small as are profits they seem sufficient to turn mill wheels."¹⁷

Haskell mill wheels never faltered and profits were evidently sufficient to encourage expansion. Throughout the last months of 1879 and early 1880 expenditures on quantities of leather belting, drill belting, thread guides, silk winders, swifts, and sundry items such as nails, putty, window glass and clapboard speak of construction and additional machinery.¹⁸ At this time or soon thereafter an extension was erected in front of the original mill building. It appears in a photograph post-dating the mill start up. These improvements were the first of many (now demolished) silk mill expansions at Bridge Street.

Haskell overtook its nearest twist manufacturing neighbors Kelsea (NH) and Stearn (VT). By 1879-80 both were diminished below their 1874 size, whereas the Maine mill at Saccarappa had grown from 6 to 60 workers.¹⁹ The combined thread output from Kelsea and Stearn amounted to approximately 1,500 pounds in 1880, compared with Haskell's more than 4,000 pounds. In that year Connecticut's numerous large and small twist mills produced close to 400,000, almost half the U.S. annual total of 800,000 pounds of thread and twist.²⁰ Most mills turned out a variety. With tram, organzine, fringe silk and a range of sewing threads, Haskell goods illustrate the nuanced diversity silk thread manufacture achieved by this time. Haskell made these sewing threads in a mix of sizes, dye grades and colors:

Sewings (hand stitching)	Tailors Twist	Dirigo Machine Twist
Pure Dye Sewings	Twist	Haskell Silk Co. twist 10oz, 12oz, 16oz
Tsatlee 12 oz twist	Button-hole	Presumpscot Mills twist
Tsatlee (by the pound)	Embroidery	Canton (by the pound)
Pure Dye Tsatlee twist	Floss	Canton (Machine)

A sense of sales volume and some vivid details emerge from New York lithographic printer David Weil's invoices for supplies of Haskell labels.

August 12, 1879			
10,000	Spool Labels. Blue Paper & Gilt	@.45	4.50
24,000	“ “ White “ Black	@.50	7.50
			<u>\$11.70</u>
August 30, 1879			
5,000	Dirigo Hand Sewing		2.75
5,000	“ Tinted Paper		2.50
7,200	Embroidery Silk		3.60
50,000	100yds Machine Twist		15.00
17,000	10yds Button Hole		5.00
43,000	Dirigo Machine Twist		12.90
5,000	Large Dirigo M T Tops		20.00
5,000	Presumpscot Machine Twist		10.00
5,000	Canton Machine Twist		10.00
			<u>\$81.90²¹</u>

The Haskell listing in The 1880 American Silk Goods Directory shows that the company was now represented by Kingman and Freeman, of Mercer Street, New York.²² Via this agent Haskell threads likely reached established narrow goods manufacturers and numbers of the broadsilk weaving concerns starting up during this period. On the one hand increased demand for tram and organzine from these sources provided a market for thread makers like Haskell, while on the other it signified overall silk industry growth and major developments in the manufacture of dress silks.

By this time wide scale domestic broadsilk production was more feasible than ever before. The mechanization of silk looms made manufacture more economic, raw silk was more abundant (in 1879 up 91% since 1877) and, encouragingly, there were long term prospects of growing imports of Japanese raw silk.²³ Perhaps the most significant stimulus was demand. High duty kept imports expensive and as a consequence consumers were hungry for affordable silks. Businesses in every branch of the silk industry expanded--except twist.²⁴ While most twist factories were running on full time with all the orders they could handle, the sharpness of competition deterred new start ups. Only one new twist mill opened in 1879.²⁵ Now other silk ventures attracted capital. The situation encouraged some thread makers to abandon their New England twist enterprises and re-established themselves as weavers in northern New Jersey, where existing narrow goods manufacturers also embarked on broadsilk production in this period.

The early 1880s were pivotal years for silk industry development--and for Haskell. No documents shed light on Haskell shareholder's (all family members) discussion of the Haskell Silk Company's immediate prospects. Nonetheless in 1880-1881, after years as a successful thread manufacturer, the company evidently assessed its position and considered its future direction. If a case was made for a move, in the end the value of a New Jersey site did not outweigh the advantages of the mill's current location--well served by an untroubled workforce, convenient rail transport and proximity to the busy Portland-Boston-New York shipping route. (Figs. 1 and 2) The Haskell Silk Company stayed put and expanded in the town where it was founded.

It is speculative but in the climate of the times Haskell likely considered three alternatives: 1) continue as a twist maker, 2) build on experience and become a throwster supplying tram and organzine to weavers or, 3) make tram and organzine and weave it

into fabric. Over competition made twist the least attractive possibility. Specialization in tram and organzine probably seemed limited and marginally viable because many large thread makers now established their own weaving divisions and were conveniently located to supply other burgeoning weaving factories. In contrast, making tram and organzine to weave broadcloth at Saccarappa presented an option with boundless opportunity for expansion.

The transition, apparently planned in 1881, occurred in 1882. Research has not yet revealed details of loom acquisitions. The only evidence of contact with a loom manufacturer is a later (1886) bill for three dollars for a repair or a part from The Crompton Loom Works of Worcester.²⁶ Nevertheless in early 1882 the sum of \$25,728 was expended on unspecified "machinery" from an unnamed source and by March a series of notes for sums amounting to \$15,000 and more covered stepped up silk purchases.²⁷ (Previously \$2,000 to \$4,500 represented typical Haskell silk buys.) In February and March two thousand dollars worth of company-made Italian organzine and Japanese tram was recorded as an expense: "By weaving--Silk used." Early in April New York agent, Kingman and Freeman began to receive silk broadcloth from Haskell. One consignment, possibly the first, consisted of three fifty yard pieces of grosgrain. This was followed by frequent shipments of grosgrain, moiré, plain and other fabrics in assorted batches of ten to a dozen pieces at a time.²⁸ Closer to hand, agent Jordan continued transactions with customers in Maine where his sales to Portland retailers provide an indication of current prices per yard in 1882:

Eastman Bros. and Bancroft.	22 3/8 Yards Moiré Dress Silk	@ 1.25.....27.97
Millet & Little	26 5/8 Yards Moiré Dress Silk	@ 1.25.....33.28 ²⁹

During the first half of 1882 Haskell sales of twist gradually petered out--presumably as stock in hand diminished.

By mid-1882 Haskell was an integrated broadsilk manufacturer. The November 1882 issue of The American Silk Journal announced the transformation: "The Haskell Silk Company of Saccarappa, Maine is running twenty looms on black grosgrain having discontinued the manufacture of twist a number of months ago. They also manufacture tram and organzine."³⁰

The changeover prompts questions. Since Saccarappa was hundreds of miles from any pool of experienced silk weavers, who set up and operated the looms? Where did the silk weavers come from? Did Haskell train individuals from the nearby cotton mill? One specialist has been discovered. Haskell recruited a German loom-fixer and weaver with over ten years experience with New Jersey silk manufacturers.³¹ The date of his arrival at Saccarappa appears to be 1882, but remains unconfirmed at this time. Silk operatives and the fabrics made at the Haskell mill are however, the subject of another paper. Research is ongoing.

This outline of The Haskell Silk Company's development as a twist and thread maker shows that the remote northern location did not hinder production or growth. Haskell dealt with the same raw silk vendors, silk machinery manufacturers, label printers and spool makers as silk companies in southern New England and the greater New York area where the bulk of the industry congregated. Also similar to those concerns, Haskell produced a diverse range of threads, which are illuminated and better understood due to information found in surviving Haskell documents. In a crowded

market the company carved out a customer base concentrated first in Maine but rapidly extended to New York, northern New Jersey and even beyond. Despite stiff competition Haskell quickly expanded and overtook some other prior established small twist mills. However at the point when twist making became over competitive and conditions favored broadsilk production, Haskell recognized the potential of this branch of the silk industry. In 1882, with its ambitious switch to weaving, The Haskell Silk Company entered a new phase of development.

NOTES

1. Philip Scranton, "Manufacturing Diversity: Production Systems, Markets and American Consumer Society, 1870-1930," *Technology and Culture* 35 (July 1994): 3.
2. L.P. Brockett, *The Silk Industry in America. A History Prepared for the Centennial Exposition* (New York: George F. Nesbitt & Co., 1876), 58.
3. For background on aspects of the development of factory production in New England see Walter Licht, *Industrializing America: The Nineteenth Century* (Baltimore: Johns Hopkins University Press, 1995); Jonathan Prude, *The Coming of Industrial Order: Town and Factory Life in Massachusetts 1810-1860* (Cambridge [Cambridgeshire]; New York: Cambridge University Press, 1983)
4. *Annual Report of the Silk Association of America 1875*, 50.
5. Ibid.
6. Ibid.
7. General accounts, September, 1874, Haskell Silk Company Collection, Historical Collections, Baker Library, Harvard Business School.
8. The term, gimp, is most commonly applied to narrow woven trimmings used in upholstery; Brockett writing in the 1870s explains that coarse loosely twisted silk threads were made into a twist called gimp that was used to weave fringe headings.⁹⁵
9. Sales book, January 1877; Agent's accounts, pp. 489, 191, 523, Haskell Silk Co., HBS
10. General accounts June, 1875, Haskell Silk Co., HBS
11. Invoices, January 1875, Haskell Silk Co., HBS
12. Ibid.
13. Sales book, June 1875, Haskell Silk Co., HBS
14. Invoices, March 1877, Haskell Silk Co., HBS
15. Brockett, xvii.
16. Wm. C. Wyckoff, *The Silk Goods of America: A Brief Account of the Recent Improvements and Advances of Silk Manufacture in the United States* (44, Howard Street, New York: Silk Association of America, 1880), 75.
17. Ibid., 22-23.
18. Invoices, June 1879-September 1880, Haskell Silk Co., HBS
19. Wm. C. Wyckoff, comp., "Report of the Silk Manufacturing Industry of the United States for the Tenth Census of United States" in Wm. C. Wyckoff, *Silk Manufacturing in the United States* (446, Broome Street, New York: Silk Association of America, 1883), 56.
20. Ibid., 58.

21. Invoices, June 1879; August 187, Haskell Silk Co., HBS; The item listed as Dirigo M T tops refers to labels for the boxes used to package reels of Machine Twist. Weil sent these box top labels to Haskell's boxmaker in Lowell.
22. Wyckoff, *Silk Goods*, 101, 118.
23. "Eighth Annual Report of the Silk Association of America," in Wyckoff, *Silk Goods*, 74.
24. Ibid., 75.
25. Ibid.
26. Ledger, 1874-1882, loose insert, Haskell Silk Co., HBS
27. Ledger, February-April 1882, The Haskell Silk Co., HBS
28. Agents accounts, April-June 1882, Haskell Silk Co., HBS
29. Accounts, April 1882, Haskell Silk Co., HBS
30. *The American Silk Journal* (November 1882), 188.
31. *Portland Express and Advertiser* (September 17, 1923). Biographic note, n.p. Walker Memorial Library, Westbrook. Clipping file #17, 191.