

Spaulding's Kennebunk Connection

The explanation used in my book "*Spaulding Fibre – 310 Wheeler Street – Tonawanda, New York 14150*" about how the J. Spaulding & Sons Company became aware of and entered the vulcanized fibre business was not complete. That explanation pointed to Wilmington, Delaware where vulcanized fibre began in 1875 based on the Englishman Thomas Taylor's 1871 US Patent and the proliferation of imitators that arose in the region. Wilmington, Delaware is 400 miles distant from Rochester, New Hampshire where J Spaulding and Sons Company was headquartered. There is closer and more likely place from where the Spaulding brothers got the idea to get into the vulcanized fibre business. That place is Kennebunk, Maine and the model for the Spauldings was the Leatheroid Manufacturing Company and its associated businesses and successors the Mousam Manufacturing Company, the National Fibreboard Company and the Rogers Fibre Company. Kennebunk is 30 miles from Rochester. It seems most likely that the Spauldings developed their interest in vulcanized fibre by borrowing ideas from this nearby neighbor.

The Leatheroid Manufacturing Company first existence can be traced to Wheeling, West Virginia.¹ The 1879 Session Laws of West Virginia showed the following individuals to hold shares²:

Thompson Hanna, of Wheeling, W. Va.	125
Chas. E. Dwight, of Wheeling, W. Va.	25
Thomas Hanna, of Wheeling, W. Va.	25
Daniel Clemmans, of Wheeling, W. Va.	25
Daniel W. Hanna, of Wheeling, W. Va.	1

The West Virginia law incorporated the company with \$20,200 in initial capitalization, each share having a \$100 value. The company was authorized to increase its capitalization to \$100,000 through the sale of additional shares with the value of \$100 each. Leatheroid operated in Wheeling for a year and then moved on to Pittsburg Pennsylvania for a year and next to Philadelphia Pennsylvania. Finally Leatheroid was purchased by the Mousam Manufacturing Company and its equipment and manufacturing operations removed to Kennebunk Maine.^{3 4}

The Mousam Manufacturing Company was organized in 1875 to manufacture leatherboard at Kennebunk Maine. This was two years after Jonas and Waldo Spaulding began their leatherboard manufacturing operations in Townsend Harbor, Massachusetts. Among those organizing Mousam Manufacturing Company were Emery Andrews, S.B. Rogers, Stephen Moore, and Homer Rogers. The companies name was the same as a cotton mill that had operated in Kennebunk from 1838 to 1850 and ceased operations after being destroyed in a fire.^{5 6} Mousam Manufacturing Company used most of its leatherboard in the production of shoe counters. Shoe counters are used to stiffen the heel area of boots and shoes. The Spauldings would also become very large in the shoe counter business.

In 1881 when Mousam Manufacturing Company purchased Leatheroid and moved its manufacturing equipment into nearby mill buildings adjacent to its own leatherboard mill in Kennebunk, Maine, it organized it as a separate company, the Leatheroid

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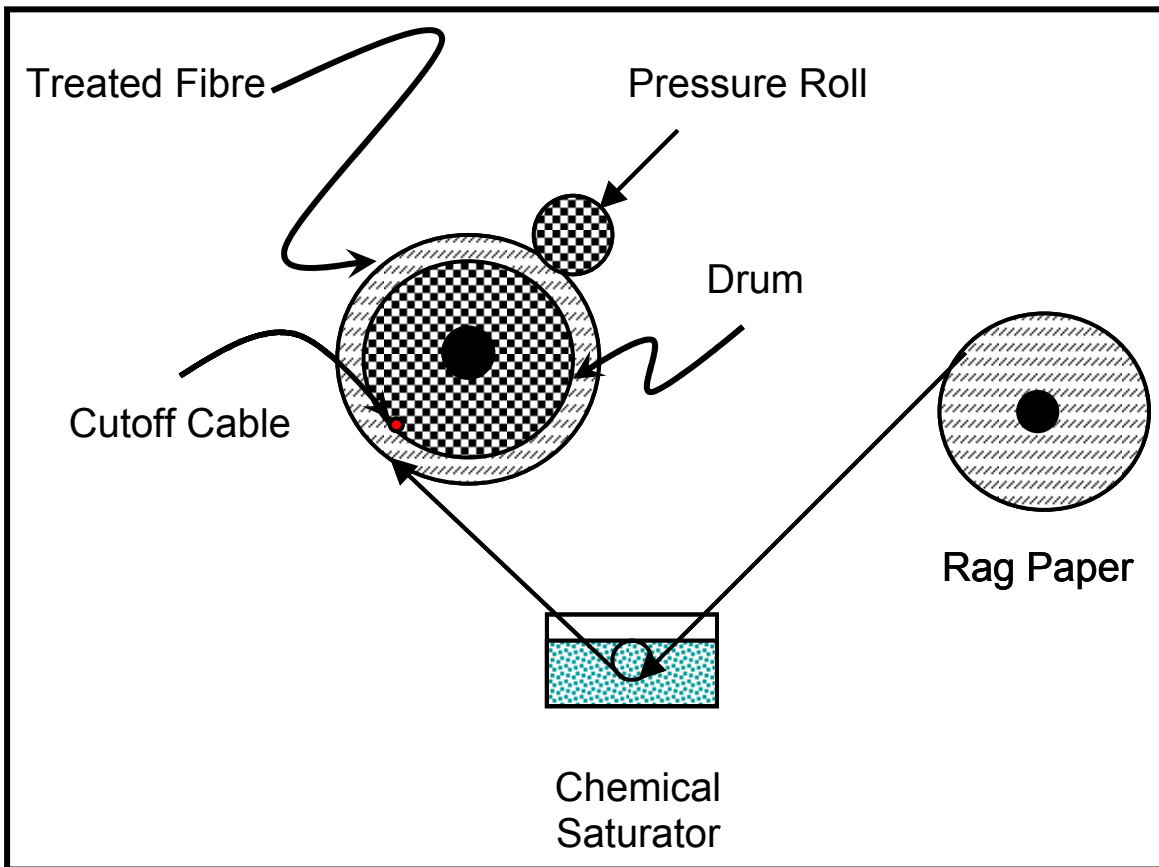
Manufacturing Company. Emery Andrews, S.B. Rogers, Stephen Moore, and Homer Rogers were board members and controlling stock holders in the Leatheroid Manufacturing Company as they were in Mousam Manufacturing Company. In 1891 the Mousam Manufacturing Company and the Leatheroid Manufacturing Company along with Harwood Manufacturing Company of Leominster, Massachusetts, the Towne Manufacturing Company of Boston Massachusetts and Clegg and Fisher Mill at Lawrence, Massachusetts were merged into a new company known as the Consolidated Fibre Board and Leatheroid Company.⁷ This consolidation was known as the National Fibre Board Company with Emery Andrews as president and the board of directors consisting of Charles H. Allen, Homer Rogers, J. A. Harwood, Stephen Moore, and W. C. Gogswell. In 1918 the National Fibre Board Company changed it's named to Rogers Fibre Company. The officers of Rogers Fibre Company in 1920 were Elliott Rogers, Pres., Kennebunk, Me.; Louis Rogers, V-P; E. W. Freeman, Clerk, Portland, Me.; L. B. Rogers, Treas. & Gen. Mgr.; E. O. Hallberg, Asst. Treas. Boston, Mass.⁸ In 1930 the Leatheroid business of Rogers Fibre Company and its equipment were sold to the Delaware Hard Fibre Company. All usable equipment was removed from the Leatheroid operations in the Island and Dirigo buildings at Kennebunk thus bringing an end to Leatheroid.⁹

The Spauldings entered the leatherboard business in 1873, two years earlier than Mousam Manufacturing Company, with the founding of a leatherboard mill at Townsend Harbor, Massachusetts by brothers Jonas and Waldo Spaulding. They did business as the Spaulding Brothers Company. In 1890 in a bid to bring his sons into the leatherboard business Jonas founded a second leatherboard mill at Milton New Hampshire at the site of the old Tuttle shingle mill.¹⁰ In 1892 Jonas Spaulding and his three sons Leon, Huntley, and Rolland incorporated their business at Milton as J. Spaulding & Sons Company. Production of leatherboard at Spaulding's Milton Mill began in 1893. A second mill for the J Spaulding & Sons Company was planned and built at North Rochester, New Hampshire at the site of the old Cottles mill. It commenced operations in 1900.¹¹ Jonas Spaulding died November 10, 1900 in Andover, Massachusetts and is buried at Hillside Cemetery in Townsend, Massachusetts.¹² After Jonas died Leon, Huntley, and Rolland operated the company successfully with Leon being the President of the co-partnership. In 1900 they entered the shoe counter manufacturing business utilizing a patent assigned to them in 1898 by Daniel L Chandler of Ayer, Massachusetts.¹³ Two years earlier in 1898 Mousam Counter Company was formed in Kennebunk Maine to manufacture shoe counters from leatherboard, leatheroid, and fibreboard provided by the National Fibre Board Company.¹⁴ In 1902 J. Spaulding & Sons Company acquired the Kennebunk Manufacturing Company of Kennebunk Maine.¹⁵ Kennebunk Manufacturing Company made leatheroid extension cases, suit and dress cases, sample cases, telescope cases and lunch boxes in factory spaces across the river from the Leatheroid Company.¹⁶ This acquisition is the one that likely started the Spauldings into the vulcanized fibre business.

The Kennebunk Manufacturing Company was incorporated in Maine on July 23, 1893 with John R. Littlefield of Boston, Mass., President and J. B. Lara of Kennebunk, Me., Treasurer. The purpose of the Company was the "manufacturing and dealing in cases,

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boxes, valises, grips, and trunks.”¹⁷ The name, “Kennebunk Manufacturing Company” was the same name as that of an ill fated company that had tried to build a cotton mill at Kennebunk in 1825 and failed by 1828.^{18 19} The new Kennebunk Manufacturing Company merged with another Kennebunk manufacturer of similar travel items known as the Travelet Company after 1895.²⁰ The merged companies were purchased by J. Spaulding & Sons Company in 1902 and its operations were moved to Milton, NH where they occupied the old N.B. Thayer & Co, shoe factory until 1936.^{21 22} While in Milton the Kennebunk Manufacturing Company, manufactured megaphones, radio speaker horns and violin cases in addition to its original line of lunch boxes and suit and sample cases. In 1936 the operations of the Kennebunk Manufacturing Company were integrated with



those of Spaulding & Perkins Company and the Spaulding Fibre Materials Handling Division was created at North Rochester New Hampshire.

By 1906 operations of Kennebunk Manufacturing Company were gone from Kennebunk.²³ Also in 1906 the J. Spaulding & Sons Company purchased a cut-down machine and installed at North Rochester New Hampshire.^{24 25} A cut-down machine is used to create a thick fibre board sheet from multiple plies of paper drawn from a parent paper roll. The attached schematic shows the major elements of the cut down process. A

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roll of rag paper from the paper mill was placed on a back stand to feed the process. The paper sheet is run through a chemical saturator. The chemical applied in the saturator is different for vulcanized fibre and leatheroid. The chemically saturated sheet was rapped around a drum and pressure applied. A cutoff cable was placed across the drum when the wind up of saturated paper was initiated. The operator would then start the wind up of the chemically saturated paper on the drum. The building multi-ply fibre sheet was compacted by a press roll to insure good contact between the plies. Once the desired fibre sheet thickness (30 % more than the finished thickness) was reached the cut down machine was stopped and the finished built up multiple ply sheet was “cut down” from the drum. This was accomplished by using a come along cable type puller to pull the cutoff cable from under the built up fibre sheet cutting built up plies free from the drum. The partially finished fibre sheet was dropped onto a platform dolly with a thump and looking like a gigantic piece of elephant hide (grey was the most prevalent color). The sheet would then be racked with a number of other similarly produced pieces and the rack and sheets would be lifted by an overhead track crane and immersed in vat of solution. The chemicals and vat treatments for leatheroid and vulcanized fibre were different although the highly bonded cellulose product produced by each were very similar and served the same end uses.

Now it is certain that Leatheroid and Spaulding both used cut down machines. Spaulding's use is documented in two references^{10 25} and my personal observation at their Wheeler Street factory. Leatheroid's use is referenced in three places^{3 4 26} and a photograph of a cut down machine at Leatheroid's Kennebunk operation is shown in “*Trunks, textiles & Transits Manufacturing on the Mousam River*”.²⁷ However, the chemical process used to achieve the bonding that hardened the cellulose paper developed along different lines for leatheroid and for vulcanized fibre. The key patents for vulcanized fibre were:

Table 1				
Patents Key to the Development of Vulcanized Fibre				
Date	Patent Number	Title	Inventor(s)	Assignor(s)
January 15, 1867	61,267	Improvement in the Treatment of Paper and Paper Pulp	Augustus Theodore Schmidt	
March 16, 1871	114,880	Improvement in the Treatment of Paper and Paper Pulp	Thomas Taylor of Grove End Road, England	Edmund S. Hanna & Waldimer A Schmidt of Pittsburg, PA
April 4, 1871	113,454	Improvement in Treating Paper and Vegetable Fibrous Substances	Augustus T. Schmidt of Pittsburg PA	

The three patents involved in the founding of the Vulcanized Fibre Company of Delaware in 1873²⁸ are listed in Table 1. The patents were owned or assigned to papermakers (August T Schmidt, Edmund S. Hanna, and Waldimer A. Schmidt) who plied their trade in and around Pittsburg, PA and Steubenville, OH. This group of men assigned their patents to the Vulcanized Fibre Company of Delaware which was organized, funded, and controlled by Augustus Hartje (1818 – 1889). Hartje was German immigrant who had been successful, in oil, banking, and various other manufacturing activities and was known one of the wealthiest Germans in Allegheny County, his fortune being estimated at over half a million of dollars. He suffered financial reverses in the panic of 1873 but recovered to become identified with paper manufacturing. He had

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offices in Pittsburg, PA and an extensive paper mill at Steubenville OH. The 1867 Schmidt patent no. 61,267 concerned the transformation of paper into parchmented paper using mineral acid principally sulfuric acid (oil of vitriol). The 1871 Taylor patent no. 114,880 (assigned Hanna and Schmidt) is the key patent for making vulcanized fibre. Zinc chloride was agent used in that patent to transformed paper into highly bonded strengthened material known as vulcanized fibre. The Schmidt patent no. 113,454 also from 1871 also relied on zinc chloride as the agent used to obtain the vulcanizing effect. There was some litigation that pertained to the ownership and royalties due from these patents contested in Federal court in the case of Hartje et al vs. Vulcanized Fibre Co.²⁹

The key patents for the development of leatheroid were:

Table 2 Patents Key to the Development of Leatheroid				
Date	Patent Number	Title	Inventor(s)	Assignor(s)
January 15, 1867	61,267	Improvement in the Treatment of Paper and Paper Pulp	Augustus Theodore Schmidt of Pittsburg PA	
October 20, 1877	198,382	Improvement in Manufacture of Parchment-Paper	Thompson Hanna and Thompson S. Hanna of Pittsburg PA	
February 24, 1885	312,945	Manufacture of Parchment-Paper or Leatheroid	Emery Andrews of Kennebunk, Maine	Leatheroid Manufacturing Company of Kennebunk, Maine

These patents centered on using mineral acids (sulfuric and hydrochloric) to produce the high level of bonding for parchmented paper and leatheroid as compared to using zinc chloride to produce vulcanized fibre. The basic process for producing parchmented paper is to pass the paper through an acid bath, press it, wash the paper, neutralize the remaining acids in the paper with a caustic bath of ammonium hydroxide, sodium hydroxide, or other suitable caustic solution, wash the paper again, and then dry the paper in the normal way. This process is used to this day to produce parchmented paper. However the use of this process to produce the highly bonded fibre board known as leatheroid had problems to be surmounted. Using the cutdown machine to build up multiple layers of paper to various board weights entailed the problem of how to keep the acid from destroying the cellulose chains. The key to the using the parchmentizing process for paper in the production of paperboard seems to center around using other chemical agents in the parchmentizing acid solution to retard or delay the destruction of the cellulose chains until such time as the acid is washed out or neutralized. Examples of such agents are given patent number 198,382 as zinc and dextrin (dextrine). Other organic matters that may substitute for dextrin mentioned in 198382 were crude petroleum, blood, albumen, and paper and pulp. Another technique used to retard or delay the action of the parchmentizing acid solution was to keep the reaction cold. The technique and equipment designed to accomplish it are described patent number 312,945. Indeed the importance of keeping the reaction cold was so important that Leatheroid manufacturing was suspend every summer until 1889 when the company dug a well that provided a source of cold water year round as an alternative to using Mousam River water³⁰.

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In 1906 when the J. Spaulding & Sons Company bought a cutdown machine and began experimenting with the manufacture of hard fibre products at the North Rochester, NH plant it is quite likely those experiments included both vulcanizing and parchmentizing processes. The vulcanizing process had been practiced in the Wilmington, DE region for 30 years by that time. The parchmentizing process to make hard fibre, Leatheroid, had been practiced in Kennebunk, ME for 25 year by then. With the knowledge gleaned from their neighbors in Kennebunk, ME, and their experiments the J. Spaulding & Sons Company would enter the hard fibre business in a big way in 1912 at their Tonawanda, NY plant using the zinc chloride process for producing vulcanized fibre. Clearly J. Spaulding & Sons Company benefitted from it competitors in Kennebunk, ME and in Wilmington, DE and prospered for 70 years in Tonawanda, NY. Imitation after all is a sincere form of flattery.

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Year	Event
1859	British Patent for Vulcanized Fibre awarded Thomas Taylor
1867	US Patent #61267 "Improvement in the Manufacture of Paper and Treatment of Paper Pulp" Augustus Theodore Schmidt Allegheny County, PA (Parchmentized Paper)
1868	Leon C. Spaulding born on March 23 rd in Townsend Harbor, MA
1869	Huntley N. Spaulding born on October 30 th in Townsend Harbor, MA
1871	US Patent #114880 "Improvement in the Manufacture of Paper and Treatment of Paper Pulp" Thomas Taylor, of Grove End Road, England Assignor to Edmund S Hanna and Waldimer A. Schmidt, of Pittsburg, PA (Vulcanized Fibre)
1871	US Patent #113454 "Improvement in the Manufacture of Paper and Treatment of Paper Pulp" Augustus T. Schmidt of Pittsburg, PA (Parchmentized Paper)
1873	Spaulding Brothers Company (Jonas & Waldo) begins manufacturing Leatherboard in Townsend Harbor, MA
1873	Rolland H. Spaulding born on March 15 th in Townsend Harbor, MA
1875	The Leatherboard Mill at Kennebunk, ME was incorporated by Emery Andrews, S. B Rogers, Homer Rogers, Stephen Moore and others using the same name as the 1834 to 1850 cotton mill in Kennebunk: Mousam Manufacturing Company
1877	US Patent #198382 "Improvement in the Manufacture of Parchment-Paper" Thompson Hanna and Thompson S. Hanna of Pittsburg, PA (Parchmentized Paper)
1879	Leatheroid Manufacturing Company Incorporated in West Virginia
1881	Mousam Manufacturing Company purchased the Leatheroid Manufacturing Company of Philadelphia Pennsylvania
1882	Leatheroid Company begins manufacturing in Kennebunk, ME using sulfuric acid process (Parchmentized Paper)
1885	US Patent # 312945 "Improvement in the Manufacture of Parchment-Paper or Leatheroid" Emery Andrews of Kennebunk, Maine Assignor to The Leatheroid Manufacturing Company (Leatheroid)
1891	The Leatheroid Manufacturing Company was consolidated into the National Fibre Board Company
1893	J Spaulding & Sons Company begins manufacturing Leatherboard in Milton, NH
1893	Kennebunk Manufacturing Company Incorporates in Maine
1893	Thompson Hanna dies of accidental poisoning in Kennebunk Maine
1896	Leatheroid builds rag paper mill
1898	Mousam Counter Company formed
1898	Leatheroid makes "Dirigo" Fibre using hydrochloric acid.
1900	Jonas Spaulding dies at Andover, MA
1900	J Spaulding & Sons Company begins manufacturing Leatherboard at North Rochester, NH
1902	J Spaulding & Sons Company acquires Spaulding Brothers Company of Townsend Harbor, MA

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1902	J Spaulding & Sons Company acquires Kennebunk Manufacturing Company
1904	J Spaulding & Sons Company moves Kennebunk Manufacturing Company operations to Milton. NH
1906	J Spaulding & Sons Company acquires cut down machine and begins experimenting with the manufacture of vulcanized fibre at the North Rochester, NH plant.
1911	J Spaulding & Sons Company announces the intention to build a mill in Tonawanda, NY
1912	J Spaulding & Sons Company Tonawanda, NY, mill begins operations
1913	J Spaulding & Sons Company builds second Leatherboard mill in Milton, NH
1918	Leatheroid Manufacturing Company was combined with National Fibre Company and the Mousam Counter Company to form Rogers Fibre Company
1930	The Leatheroid business of the Rogers Fibre Company acquired by the Delaware Hard Fibre Company ³¹ (National Vulcanized Fibre Company?)

¹ *History of the Pan-handle: being historical collections of the counties of Ohio, Brooke, Marshall and Hancock, West Virginia*; J. H. Newton, G. G. Nichols, and A. G. Sprankle;. Published by J. A. Caldwell, Wheeling, W. VA.; 1879; pp 288-289.

² *Acts of the Legislature of West Virginia at its Fourteenth Session Commencing January 8th 1879*; Published by W.J. Johnston Public Printer; Wheeling, West Virginia; 1879; p248.

³ *American Mail and Export Journal*; July 1886; p17.

⁴ *The contributor: Representing the Young Men's and Young Ladies Mutual Improvement Associations of the Later-day Saints*; Vol. VII: No. 8; May 1886; pp 310-311.

⁵ *The Village of Kennebunk, Maine*; George A. Gilpatric; The Star Print Inc, Kennebunk Maine; 1935; p53

⁶ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p22.

⁷ *The Christian Union*; Vol.44: no15 October 10, 1891; p703.

⁸ *Moody's Manual of Railroads and Corporation Securities*; 22nd Annual No.: Vol.2 (K to Z); Poor's Publishing Company; 33 Broadway, NY, NY; 1921; pp 1315-1316.

⁹ *The Village of Kennebunk, Maine*; George A. Gilpatric; The Star Print Inc, Kennebunk Maine; 1935; p58

¹⁰ *Foster's Daily Democrat*; "Post Civil War Growth Sets Stage For Spaulding Fibre's Huge Success"; Spaulding Fibre 100th Anniversary Supplement; 1873-1973; Article provided to J. M. Snyder by Rochester Historical Society; Martha Fowler Letter January 31, 2007.

¹¹ "Great New Industry –Rochester History" Ruth Howland; Article provided to J. M. Snyder by Rochester Historical Society; Martha Fowler Letter January 31, 2007.

¹² Find A Grave Memorial# 43897371

¹³ U.S. Patent No. 606,375.

¹⁴ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p48.

¹⁵ *Foster's Daily Democrat*; "Post Civil War Growth Sets Stage For Spaulding Fibre's Huge Success"; Spaulding Fibre 100th Anniversary Supplement; 1873-1973; Article provided to J. M. Snyder by Rochester Historical Society; Martha Fowler Letter January 31, 2007.

¹⁶ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p39

¹⁷ *Lewiston Evening News*; July 26. 1893; "News from All Around," p7.

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- ¹⁸ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p10
- ¹⁹ *The Village of Kennebunk, Maine*; George A. Gilpatric; The Star Print Inc, Kennebunk Maine; 1935; pp 46-47
- ²⁰ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p39
- ²¹ *Foster's Daily Democrat*; "Post Civil War Growth Sets Stage For Spaulding Fibre's Huge Success"; Spaulding Fibre 100th Anniversary Supplement; 1873-1973; Article provided to J. M. Snyder by Rochester Historical Society; Martha Fowler Letter January 31, 2007.
- ²² MILTON and the New Hampshire Farm Museum (NH) (Images of America (Paperback)); Sarah Ricker; Arcadia Publishing (July 17, 1999); p81
- ²³ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p39.
- ²⁴ *Foster's Daily Democrat*; "Post Civil War Growth Sets Stage For Spaulding Fibre's Huge Success"; Spaulding Fibre 100th Anniversary Supplement; 1873-1973; Article provided to J. M. Snyder by Rochester Historical Society; Martha Fowler Letter January 31, 2007.
- ²⁵ *Tonawanda News*; "Company Founded by Jonas Spaulding in 1873 Now One of Largest Industries in Its Field – More Expansion Is Due in '60s" October 14, 1961; 50th Anniversary Spaulding Supplement; p 1.
- ²⁶ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p30.
- ²⁷ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p23.
- ²⁸ *Industries of Delaware –Historical and Descriptive Review- Cities, Townes, and Business Interests – Institutions, Manufacturing and Commercial Advantages*; Richard Edwards, Editor and Publisher; Wilmington, DE; p 109.
- ²⁹ *The Federal Reporter Cases Argued and Determined By the Circuit and District Courts of the United States*; Vol. 44; Dec 1890 – Mar. 1891; St. Paul; West Publishing Company; 1891; pp 648 - 653.
- ³⁰ *Trunks, textiles & Transits Manufacturing on the Mousam River*; Rosalind Magnuson; The Brick Store Museum, 117 Main Street, Kennebunk, Maine 04043; September 2005; p31.
- ³¹ *The Village of Kennebunk, Maine*; George A. Gilpatric; The Star Print Inc, Kennebunk Maine; 1935; p58.