

AN ABSTRACT OF THE THESIS OF

Caryl Gertenrich for the degree of Master of Science
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Title: THE THOMAS KAY WOOLEN MILL IN SALEM, OREGON,
1900-1959

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Abstract approved: _____
Ruth E. Gates

The Thomas Kay Woolen Mill once manufactured cloth with a reputation renowned throughout the United States. This study is an attempt to report the history of the mill. Data are categorized by: the Kay family; production including plant, machinery, raw materials used, goods manufactured; management including the effects of national developments; and labor. Data were gathered from official documents, correspondence, mill records, newspapers and printed materials, and from interviews with four Kay family members and fifty-three mill employees. The interviews with mill employees provided a wealth of information concerning factory life. The antiquated buildings and machinery manufactured the coarse Willamette wool into cloth for outerwear and blankets. During wartimes the mill experienced its greatest production. Post-war developments such as synthetics, foreign imports, and movement of the textile industry to the South led to the eventual demise of this specialized, family-operated mill, which has become a museum.

The Thomas Kay Woolen Mill in Salem, Oregon, 1900-1959

by

Caryl Gertenrich

A THESIS

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degree of

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THE THOMAS KAY WOOLEN MILL IN SALEM, OREGON, 1900-1959

CHAPTER I

INTRODUCTION

Origin and Statement of the Problem

The Thomas Kay Woolen Mill stands as a monument to a textile manufacturing industry which existed during the industrial development of Oregon. The mill once manufactured cloth with a reputation renowned throughout the United States. It provided a market for the local wool clip, hired laborers from the community and contributed to the general economic well-being of the state of Oregon. During national emergencies, the mill filled orders for products considered essential to the national war effort. The Kay family, as individual citizens, contributed significantly to the political life of the state of Oregon.

Today, the natural water supply which powered the plant flows through the mill untapped. The clatter of machinery is no longer heard. The Thomas Kay Woolen Mill has discontinued the manufacture of cloth. Instead, its name appears on the National Registry of Historic Buildings and it is being restored as a textile museum under the aegis of the Mission Mill Corporation.

What is the story of this ghost from the past? What might we learn of the lives of those people, labor and management, who contributed to its operation for over 70 years? What conditions brought to an end this particular textile manufacturing institution in a Western wool-producing state? It was the opinion of the investigator that the story of the mill was foremost a tale of people and how their lives intertwined with the goods they manufactured (see Figure 1).

Purpose of the Study

The purpose of the study was twofold:

1. To investigate the operation of an Oregon textile industry from its early years during the industrial development of the state to its demise during the post-war technological revolution.
2. To describe the textile manufacturing Kay family and to record their political contributions to the Oregon community.

Limitations of the Study

This investigation is a case study of an individual woolen mill. Generalizations about other mills should not be drawn from the findings of this single case. Numerous replications of studies of woolen mills throughout the United States would be necessary for such conclusions to be drawn.

The study begins in the year 1900, rather than 1889 when the corporation was formed, because primary data sources were not



Figure 1. Employee Group Picture circa 1932 Thomas Kay Woolen Mill, Salem, Oregon.

accessible to the investigator for the prior period. The study ended with the year 1959 when continuous production was terminated, even though the mill did continue wet finishing until complete closure in 1962.

The study was limited by the meager and incomplete written evidence. The investigation could have been enhanced if additional records and data had been made available.

CHAPTER II

REVIEW OF RELATED LITERATURE

Published studies concerning the history of the woolen industry in the Willamette Valley and Thomas Lister Kay are meager. This factor limited the investigation.

Major sources of information about the Oregon woolen industry and about Thomas Lister Kay are by Alfred Lomax (1941, 1974), who was commissioned by a Kay descendant to record the history of woolen mills in Oregon.

Woolen Industry in the Willamette Valley

In 1825, John McLoughlin, chief factor for the Hudson Bay Company envisioned the Willamette Valley as a livestock region. Sheep, as marginal land feeders, were imported by him and their number multiplied. In 1834, Jason Lee, missionary to the Indians, came across the continent from Missouri and settled in the Salem area. In 1843, Lee was instrumental in setting off the first great migration of almost 1000 white settlers to the Willamette Valley. Joseph Watt, a member of one of the early migration groups, brought the first high grade breed of sheep into the Willamette Valley in 1848; he later established the Willamette Woolen Mill at Salem in 1856; this was the first woolen mill on the West coast, and it burned in

1876.¹ Salem's site on the Willamette River, the abundant water power, and the central location in Oregon and the Salem community's donation of \$9,000 contributed to the town's selection for the woolen mill. Salem had an Indian mission flour and saw mill, 1841, the Willamette Flouring Mill, 1864, and the Pioneer (Linseed) Oil Co., 1867 (site of the later Kay Mill), which indicated that milling was of industrial importance to the capital city (Lomax, 1941).

Thomas Kay's Technical and Managerial Experience

Thomas Lister Kay was born on June 24, 1838 at Eccleshill, County of York, England (see Figure 2). Kay learned to weave at the woolen mills near his home in Yorkshire, the center of Northern England's textile industry.² An ambitious man, he migrated to the United States in 1857, returned to England, and then left once again for the United States in 1858, where he worked at east coast mills. In 1859 after his family arrived from Yorkshire, he accepted the job of loom boss at a Trenton, New Jersey mill operating 300 looms. He was the youngest boss there. Kay worked in the eastern mill until it burned in 1862. In 1863, he was asked to come to Oregon as a loom

¹ The year 1876 is a corrected date given in Lomax (1974). In Lomax (1941) the year 1875 was listed as the date when the mill burned.

² See Appendix I and II. The investigator was able to gather information concerning a Yorkshire mill at which it was claimed that Kay had worked.

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ENTRY OF BIRTH
Deaths Registration Act 1953

B. Cert.
S.R.

Registration District										
1953 Birth in the Sub-district of Idle in the County of York										
Columns:—	1	2	3	4	5	6	7	8	9	10*
No.	When and where born	Name, if any	Sex	Name, and surname of father	Name, surname and maiden surname of mother	Occupation of father	Signature, description, and residence of informant	When registered	Signature of registrar	Name entered after registration
345	Twenty fourth of June 1953 Idle Eccleshill	Thomas Lister	Boy	Isaiah Kaye	Elizabeth Kaye formerly Lister	Clothier	The x mark of Elizabeth Kaye Mother Greengates Eccleshill	Twelfth of July 1953	Samuel Lutton Registrar.	

*See note overleaf.

Certified to be a true copy of an entry in a register in my custody.

Lawrence M. Lister Superintendent Registrar

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4th September 1953 Date

Figure 2. Thomas Lister Kay Certified Copy of Birth.

boss by a fellow worker, J. Worsley, who had become superintendent of the new Brownsville Woolen Mill, the second woolen mill in the new state of Oregon. Fire closed that mill and Kay had further opportunities to work at various woolen mills that were being established throughout the state. In 1873, Thomas Kay became one of the corporate owner-operators of the rebuilt Brownsville Mill. This proved to be a financially successful operation, but by August, 1888, it was dissolved (Lomax, 1941).

Kay was looking for a location to build a mill of his own. After only two weeks of intensive solicitation, Salem was able to raise the \$20,000 bonus required by Kay to match his own \$55,000 investment. This city secured for itself a woolen mill once again. In 1889 articles of incorporation were formed, and the Thomas Kay Woolen Mill was established. The mill opened in March, 1890.

Kay operated the mill so successfully that he was able to rebuild a new brick structure in six months time after the initial wooden building was consumed by fire in November, 1895. Architect Walter D. Pugh patterned the new mill after Kay's mill at Waterloo which Kay had acquired two years earlier. The festive opening of the new mill on May 15, 1896 was an occasion to express Kay's appreciation for the financial assistance twice received from the Salem community.

A depressed situation for the wool industry existed until the fall of 1896 when the election of the Republican, protective tariff

presidential candidate, McKinley, seemed likely. Business confidence returned and in November, 1896, the Thomas Kay Woolen Mill manufactured the first worsted cloth west of the Mississippi River. The year 1897 was a full production year for the mill, especially since the Klondike gold rush demands were being met. This situation continued through 1898 when worsted manufacture was temporarily curtailed in favor of the lucrative miners' market. Business continued in full force through 1900. Kay's death on April 27, 1900 due to an unsuccessful operation was the end of a very active, personal supervision by a highly skilled owner-operator (Lomax, 1971).

CHAPTER III

PROCEDURE

Primary research tasks were the identification of major categories of the data needed, the location of productive data sources, the collection of data, and the development of a device for data analysis.

Identification of Major Categories

The Kay family was selected as one category, with special attention to their role in Oregon politics. Three general categories common to an industry were also included: production, management, and labor.

The Kays became significant political figures in the Oregon community; thus, it was appropriate to note their involvement in the influential realm of government.

The mill buildings, the machinery, the raw materials used, and the goods manufactured were topics of consideration which would provide important data concerning production.

Management positions held by family and non-family members were investigated, as well as the financial status and the organizational systems used at the mill. National developments were included so that their effect on management could be considered.

Many aspects concerning labor were investigated. They included age, number, sex, family background, kinship bonds, technical training, hours and days per week, wages, benefits, working conditions, accidents, union activities, and social activities of employees.

Location of Data Sources

Kay Family Members

The names of third generation Kay descendants were provided by the historian of the Mission Mill Museum, Mr. David Duniway. This included Marjorie Kay Huntington, daughter of second generation Thomas B. Kay; Eleanor Fellows Kay, wife of Thomas B. Kay's only son, Ercel; Carlisle Roberts, nephew of Thomas B. Kay; and Thomas Kay, III, a fourth generation Kay, who was manager and the last family owner of the mill. All four of the family members were willing to be interviewed for the study.

Official Documents

Thomas Lister Kay's birth certificate and marriage certificates had been secured by the investigator in September, 1974 on a trip to Yorkshire, England.

Correspondence

Letters to a Yorkshire textile mill in an attempt to verify Kay's employment there are included in Appendix I and II.

Mill Records

The woolen mill records were made available to the investigator by the Mission Mill Museum. Although they were the greatest source of information concerning management and production, they were often lacking in specific information, which limited the research. The annual reports to the stock holders were assembled chronologically. The Minutes Book of the Thomas Kay Woolen Mill, 1889-1940 were perused as well as the Appraisement of Thomas Kay Woolen Mill Company, 1934. All available correspondence, records books, and invoices of the mill were scanned. A problem was lack of order of mill records.

Mill Employees

The first step in locating mill workers was to contact Thomas Kay III at the existing Thomas Kay Woolen Store which was located on the mill site. The investigator was provided with a list of 75 names and addresses of people who had worked at the mill, and were thought to be alive. Those people from the Willamette Valley area who could

be located were phoned and the project was explained. A request for an interview was made to each. Subjects were asked to check their personal records and belongings for references, photos, letters, diaries, and other memorabilia pertaining to the mill. They were encouraged to share these with the investigator at the interview session.

Newspapers and Printed Materials

The Thomas Kay Woolen Mill as reported by the Oregonian, the Oregon Statesman, and the Capital Journal is indexed at the State of Oregon Library in the Oregonia Collection in Salem, Oregon. A pictorial account of the mill was located in a local paper, Your Town, 1946-7. Some of these photos have been reproduced and are included in this study. All information from these newspapers concerning the Kay family, production, management, and labor of the woolen mill was investigated.

Collection of Data

Mill Records and Other Printed Materials

A system of filing the collected data was the first step necessary. Everything was indexed under categories of Kay family, production, management, and labor. Information of importance was tabbed with

colored signal dots for quick visibility and identification by category without damage to the documents.

Interviews

Of the 75 employee names provided, 53 interviews resulted, including one president-sales manager, one superintendent, seven department "bosses," 43 mill hands, and the wife of a deceased employee. Only one refusal was given. Interviews were held in the home of the interviewed person or at the museum office. Each interviewee was assured that the information would be kept confidential. Although a standard questionnaire was used (see Appendix III), the tone of the interview was kept conversational, so that the interview could be informal. This seemed to enable the persons to relax and to better recollect their experiences from the distant past. The interviews were recorded on tape and transcribed later. Tapes and corresponding transcriptions were coded and are in the possession of the investigator.

The Kay descendants were interviewed in a similar style as the employees. They were questioned in depth according to their family relationship and involvement with the mill.

Development of Chart for Data Analysis

A device was developed which would allow the investigator to record systematically the data collected for analysis. Simplicity of form allowed convenient analysis of a great quantity and variety of data which were tabulated in chart form. Each of the general categories investigated, the Kay family, production, management, and labor, became a separate topic to be charted. The sub-topics pertaining to each were listed. The years which the study included were grouped by the first six decades of this century. These became columns under which the data could be recorded.

CHAPTER IV

FINDINGS

Kay Family

Thomas Lister Kay, founder of the mill, married Ann Slingsby on April 3, 1857 at the 12th century parish church of Calverley, County of York, England. He signed his name with an X on his marriage certificate (see Figure 3); he could not write throughout his life, but did learn to write his name while a resident of the United States. As far as the public was concerned, this inability to write was a deep secret (Roberts, 1977). He was characterized as a gregarious, robust, earthy man. While he was alive, Thomas Lister Kay vigorously managed the mill, and involved his family actively in its operation.

There were 10 children in the Kay family (see Figure 4). Five children had died over the years: Elizabeth, at the age of 2, buried in New Jersey; Harry, died a young man, but had supervised spinning and dyeing at the mill in 1890; Mary (Polly), age unknown; Minnie died at the age of 13 at Brownsville; Freddie, died about 7 years old; and Minnie Belle, age unknown. Their bodies were interned in the Thomas Kay lot in the Pioneer Cemetery in Salem.

The five children who survived into adulthood were Fannie, Thomas B., Elizabeth, Lenore, and Bertha, who was about 27 years

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The fee for this certificate is 25p when issued at the time of marriage or 40p subsequently.

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ENTRY OF MARRIAGE
Marriage Act 1949

D 537644

M. Cert.
Church

Insert in this margin any notes which appear in the original entry.

Registration District <u>Wharfedale</u>							
1854 Marriage solemnized at <u>Calverley</u> the <u>Parish Church</u> in the <u>County of York</u> in the Parish							
Columns:—	1	2	3	4	5	6	7
No.	When married	Name and surname	Age	Condition	Rank or profession	Residence at the time of marriage	Father's name and surname
54	April 3 (1854)	Thomas Kay	20	Bachelor	Weaver	Windhill	Isaiah Kay
		Ann Slingsby	20	Spinster			Henry Slingsby
Married in the <u>Parish Church</u> according to the rites and ceremonies of the <u>Established Church</u> or after <u>banes</u> by me,							
This marriage was solemnized between us,		<u>Thomas X Kay</u> <u>Ann Slingsby</u>	in the presence of us,		<u>John Kish</u> <u>John Craven</u>	<u>Alfred Brown M A Vicar</u>	

I, Gordon George Lane, Vicar of Calverley
a true copy of the Entry No. 54, in the Register Book of Marriages in the said Church.

WITNESS MY HAND this

6th

day of

September

1974

G. G. Lane

State "Rector", "Vicar", or "Curate".

Vicar of Calverley

CAUTION:— Any person who (1) falsifies any of the particulars on this certificate, or (2) uses a falsified certificate as true, knowing it to be false, is liable to prosecution.

Figure 3. Kay-Slingsby Certified Copy of Marriage.

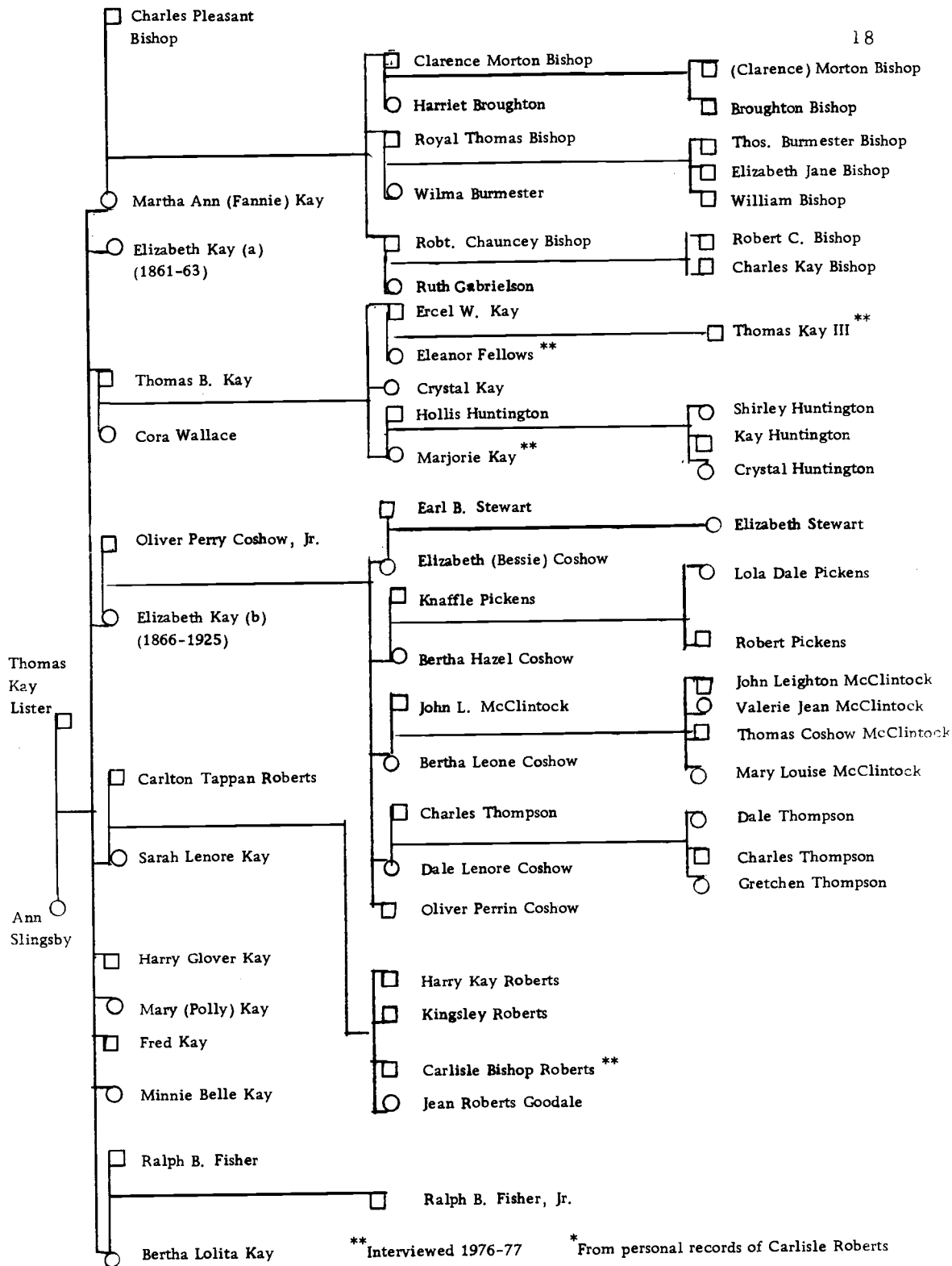


Figure 4. Thomas Lister Kay Genealogy *

younger than the first-born child, Fannie.

Role of the Kay Family in Oregon Politics

All of the Thomas Lister Kay children possessed an active interest in politics. Many played significant roles in the political dealings of the state of Oregon (see Chart 1).

Thomas B. Kay, the older and only surviving son of Thomas Lister Kay, was deeply involved in politics. He served the state as an elected representative from the district of Marion County in 1903, and again in 1905. He was elected state senator in 1907 and in 1909. He was elected to the powerful office of state treasurer in 1910 and in 1914. In 1920 he again was elected to the office of state representative, and in 1922 was re-elected to the same post. He served in this capacity until his election to the office of state treasurer for the third time, in 1924. He was re-elected to that office for the fourth time, in 1928, and held that position until his death on April 29, 1931. He was the only person to be elected to the position of state treasurer four times. His death was due to a heart attack which occurred while he was attending an executive meeting with the governor of the state (Roberts, 1977)³.

³ Dates have been documented in Oregon Blue Book and/or by reports found in microfilm copies of newspapers: The Oregon Statesman, the Capital Journal, and the Oregonian.

Chart 1. Second and Third Generation Kay Family and Spouses in Oregon Politics by Decade from 1900 to 1970 from Interview with Carlisle Roberts (1977). Dates Documented by Oregon Blue Book and Newspapers: Oregon Statesman, Capital Journal and Oregonian.

Kay Family and Spouses

Second Generation	Third Generation	1900	1910	1920	1930	1940-60	1970
1. Kay, Thomas B. State Representative State Senator State Treasurer Wallace, Cora		Elected 1904, 1905 1907, 1909	Elected 1910, 1914	Elected 1920, 1922 1924, 1928	Died in Office 1931 (Ap 29)		
2. Bishop, Fannie Kay State Delegate to Republican National Convention Bishop, Charles P. City Mayor State Senator State Delegate to Republican National Convention		1899-1904	Elected 1915, 1917 1916	1924		Died 1944 (Dec 31) Died 1941 (Nov 18)	
3. Coshow, Eliz. Kay Coshow, O. P. , Jr. State Supreme Court Justice				Appointed 1923 Elected 1924-1930 Chief Justice for 2 years			
4. Roberts, Lenore Kay Roberts, Carlton	Roberts, Carlisle Oregon Tax Court Justice						Appointed June, 1970 Elected Nov. 1970 Nov, 1976
5. Fisher, Bertha Kay Fisher, Ralph Attorney, Organized Multnomah Co Bar Assoc.							

In the influential executive post of state treasurer, he was instrumental in bringing the linen industry to Salem. He promoted flax experimentation at the state penitentiary to determine its feasibility for production in the Willamette Valley. The management of the Miles Linen Company and the Salem Linen Mill was taken over by Thomas B. Kay in 1928 (Tobin, 1960).

Thomas B. Kay has been described by some family members as a very strong-willed dominant fellow, much interested in what was happening in Oregon. Kay seemed to be willing to encourage hopeful Oregon entrepreneurs by financial backing. His estate included a small amount of stock in a number of promotional enterprises begun in the state.

Fannie Kay, Thomas Lister Kay's first-born child, was highly admired throughout the state in the Republican Party and was one of the state chairmen to the Republican Party for Women. As national committeeman from Oregon to the Republican National Convention in 1924, she notified Coolidge that he had been nominated as the presidential candidate. She was a staunch Republican and held the belief that woolen mills needed tariffs so that American mills might compete with the lower wages paid to laborers of other countries. Her husband, Charles P. Bishop, was mayor of Salem from 1899 through 1904. He served the state as a senator in 1915 and was re-elected in 1917. He represented Oregon at the Republican National Convention

in 1916. Clarence Bishop, son of Fannie and Charles P. Bishop, established the Pendleton Woolen Mill in 1909 which operates today with an international reputation for excellence. Such a textile heritage was said to have been a goal of founder Thomas Lister Kay for his descendants.

Elizabeth Kay, second daughter, married Oliver Perry Coshow, Jr., a Douglas County lawyer who was very interested in politics. He was a respected member of the family and was a close friend of T.B. Kay. In 1923 he was appointed Supreme Court Justice in Oregon and in 1924 was elected to the same office for six more years. He served as Chief Justice of the Supreme Court for two of those six years. He was a popular Democrat.

Lenore Kay, third daughter, was twenty years younger than her sister, Fannie, yet they were very close. Lenore's husband, Carlton Roberts, worked in the Bishop's men's clothing store, the Salem Woolen Mills Store, in Salem before he was married. He managed the Salem Woolen Mills Store in Portland from approximately 1904 to 1906 when it was established by the Bishops. Lenore and her husband had a son, Carlisle, who continued in the political arena like his Kay ancestors. Carlisle became an attorney and was eventually appointed to the Oregon Tax court in June, 1970. He then was elected to the same office the following November and was re-elected in 1976.

Bertha Kay, fourth daughter, married a young attorney, Ralph

Fisher. Ralph was notable for political reform. He organized the Multnomah County Bar Association in a manner which would allow the profession to police itself. At only 28, Ralph Fisher was shot by one of the attorneys whom he had prosecuted. He left behind a young widow and a year-old son, Ralph Fisher, Jr. Young Fisher eventually went to New York to work for the Oregon Worsted Company, a Bishop undertaking. Ralph Fisher, Jr. also had an only son, whose young life was ended when the submarine, the USS Thresher, sank off the New England coast on April 10, 1963 (Roberts, 1977).

Production

Physical Plant

A comparison of the buildings in existence in 1896, 1934, and 1948 shows relatively little change (see Chart 2). A plat plan had been made by the Sanborn-Perris Map Company after the brick mill replaced the burned wooden mill in 1896, a second was made by the General Appraisal Company in 1934, and the third by the W. C. Dyer Insurance Agency in 1948 (see Figure 5). Except for the excavation of the basement to the full length of the main building, approximately 1920⁴, and for the addition of the two floors built above the finishing

⁴Lomax (1974) states that the mill built in 1896 had a full cement basement. The physical evidence, i.e., difference between rubble masonry foundation and rubble with brick foundation showed that a full basement was added at a later date. The mill wright, Wayne

Chart 2. Buildings and Changes in the Thomas Kay Woolen Mill by Decade from 1890 to 1950.

Building	1890 Sanborn-Ferris Insurance Maps 1895-1915	1900 Source of Information*	1910	1920 Physical Evidence Mentzer (1976)	1930 General Appraisal Co. 1934 Appraised Value	1940 W. C. Dyer Insurance Co. 1948	1950 Mentzer (1976)	1960
Mill, Main Building 2 1/2 Story Bruck 60' w x 146' l Rubble Masonry Foundation Gable Roof, Composition Shingles Basement	Present			About 1920 Extended Full Length	\$ 36,074. 56	Present		
Finishing Room 1 Story, Brick + Frame 36 1/2'w x 60'l Concrete Foundation Flat Roof, Sheet Metal	Present				3,297. 18 About 1937 Extended up 2 Floors for Carding Machine**	Present		
Dye House, Scouring and Drying Rooms 1 Story, Frame, Brick, Iron Clad and Concrete 9 Sections, Various Sizes	Present				5,825. 32	Present		
Picker House 1 Story Brick 35'w x 52'l Concrete Foundation Gable Roof, Sheet Metal	Present				4,940. 26	Present		

Chart 2. Continued.

Building	1890 Sanborn-Perris Insurance Maps 1895-1915	1900	1910	1920	1930 General Appraisal Co. 1934 Appraised Value	1940 W. C. Dyer Insurance Agency 1948	1950	1960
Water Turbine House 1 Story Frame, 16'w x 34'l Built on Walls of Picker and Dye House Gable Roof, Composition Shingles	Present Same Site as Power Source of Pioneer Oil Co.				\$ 1,484.31	Present		
Boiler House 1 Story, Concrete and Frame Concrete Foundation Gable Roof, Galv. Iron	Present But Machine Shop Was Used as Boiler Room Pre 1924				1,898.78	Present		
Fuel Vaults "A"-1 Story, Ironclad 30'w x 48'l Concrete Piers, Gable Roof "B"-1 Story, Ironclad 27'w x 72'l Concrete Piers, Shed Roof	Not Built			Built After 1924	1,201.10	Present	1950's Demolished	
Machine Shop 1 Story Frame, 22'w x 30'l Built on Mud Sills Gable Roof, Shingles	Present				597.81	Present		
Storage Warehouse 1 Story Frame, 28'w x 95'l Concrete +Brick Piers Gable Roof, Shingles	Pre-1889 Present				922.68	Present		1960's Demolished

Chart 2. Continued.

Building	1890 Sanborn-Perris Insurance Maps 1895-1915	1900	1910	1920	1930 General Appraisal Co. 1934 Appraised Value	1940 W. C. Dyer Insurance Agency 1948	1950	1960
Wool Warehouse	Present				\$ 5,506.37	Present		
East Section: 2 1/2 Story, 40'w x 80'l, Frame, Gable Roof	1889							
Center Section: 1 Story, 53'w x 80'l	Not Built			Built after 1924	Pre 1934 Added			
West Section: 1 1/2 Story, 36'w x 80'l, Gable Roof	1889							
Oil House	Pre 1889				134.43	Present		
1 Story Frame 11 1/2'w x 37'l	Present							
Club House	Only Storage Area Present				585.75	Present (Recreation Building)		Burned After 1964
Office + Store	Present				1,602.02	Present	1950's	
Section 1: 2 Story Frame 20'w x 45'l							Replaced by New Office-Store	
Section 2: 2 Story Frame 32'w x 45'l								
Section 3: 1 Story Frame 24'w x 22 1/2'l								

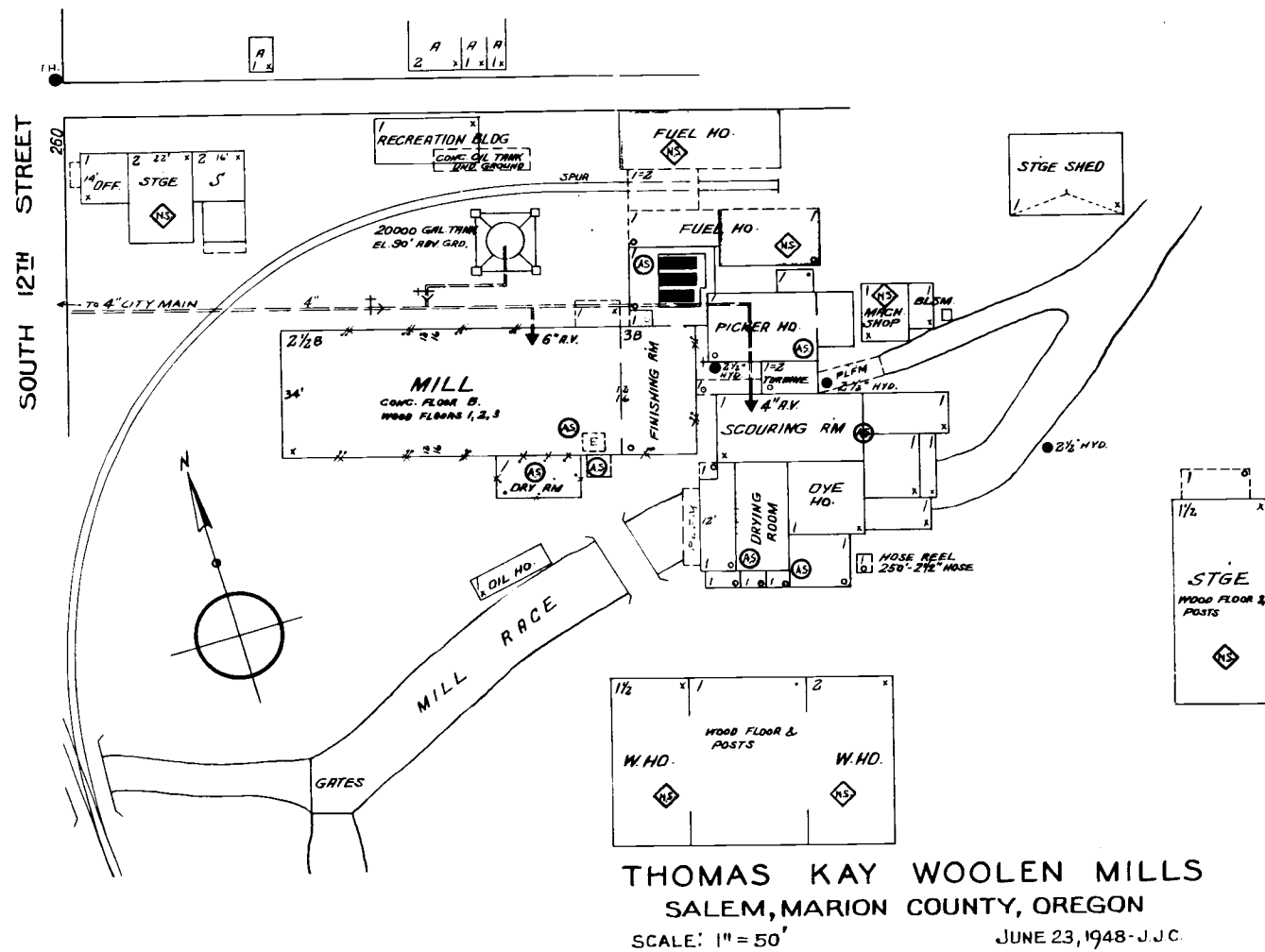
Chart 2. Continued.

Building	1890 Sanborn-Perris Insurance Maps 1895-1915	1900	1910	1920	1930 General Appraisal Co. 1934 Appraised Value	1940 W. C. Dyer Insurance Agency 1948	1950	1960
Yard	Date Unknown				\$ 219.32			
Toilets						Shown as		
Storage Shed					1937	Removed	1950's	
(Horseshoe)							Demolished	
Total					331,895.60			
Other						1942 *** Dryer Addition Torn Down in 1970's		
Land					7,500.00			

* Employee Interviews Were Used for Clarification When Necessary

** Allport (1977) and Mentzer (1976)

*** Mentzer (1976)



W. C. DYER & SONS INSURANCE AGENCY
 INSURANCE
 SALEM, OREGON

Figure 5. Thomas Kay Woolen Mill Plat Plan, 1948. W. C. Dyer Insurance Company

room approximately 1937, as well as some minor additions, the physical plant remained basically the same as constructed in 1896.

The changes that did occur began around 1920 with the excavation of the basement to enlarge the wet finishing room. Sometime before 1934, the wool warehouses were joined by a one-story center section, and two fuel vaults were added off the north side of the mill near the boiler house. The fuel vaults were demolished in the 1950's as was the shed for playing horseshoes which had been built by the mill workers for their recreation in 1937. The pre- 1934 club house (recreation building) had a fire after 1964 and was destroyed. The unheated toilets indicated in the yard on the 1934 plat plan were removed through the efforts of the labor union. Restroom facilities were relocated inside about 1937 when the original one-story finishing room was extended up two floors to accommodate the fourth carding machine before it was purchased. Around 1942 a dry room was built on the south side of the main building off the wet finishing room to accommodate the newly acquired Miller cloth dryer. The dry room was torn down in the 1970's. Originally, drying had been done in the

Mentzer (1976) was able to date the full basement excavation at about 1920 when his father worked on the endeavor.

Lomax (1974) claimed that in 1898 a two-story brick addition was built on the east end of the main structure. Physical evidence, i.e., metal framed windows, indicate modern construction features. Millwright, Wayne Mentzer, and card room boss, Carl Allport (1977), said that the two-story addition was built before 1937 to accommodate the carding machine that was purchased in 1937.

loft (attic) on tenter bars with steam heat. The storage warehouse which had been the tannery from the original Pioneer Oil Company was demolished in the 1960's. The dyehouse had minor additions made to it about 1913 and 1936. The picker house had two concrete additions made to it at dates unknown. The fuel houses were built after 1924. The railroad spur track was added after 1908.

The architectural design of the mill was similar to mills constructed in Yorkshire where Thomas Lister Kay worked during the 1940's (see Figure 6). It provided a gravity type of production flow which proved to be an inefficient method as the industry became more competitive and refined, and as labor costs increased. The carding and spinning were done on the second floor, then the spools of yarn were carried down to the first floor where loom dressing and weaving took place. The woven cloth would be dropped below to the basement-level finishing rooms. An obvious disadvantage of this type of production flow was the difficulty of getting the scoured and picked wool from the separate one-story picker house up to the cards. This required much hand labor. At the Kay mill the wool was wrapped in two large sheets made of split wool sacks, weighing about 150 pounds each, loaded onto a cart, pushed over to the elevator, loaded, and then moved up to the second floor. The process was repeated in reverse as the wool was brought over to the cards. During the early 1940's, this labor-intensive step was eliminated by a system which



Figure 6. Saltaire Mills, Shipley, Yorkshire, England taken by author in 1974.

blew the wool from the picker house up to the carding room.

The limitation of space is another factor to consider in the discussion of the plant. The 60 foot by 182 1/2 foot building (including the expanded finishing room) provided cramped space for the bulky textile machinery considered necessary for increased production. Expansion of the main mill building with its rubble masonry basement and 2 1/2 stories of brick would have required a large outlay of capital.

Machinery

The manufacture of cloth at the Thomas Kay Woolen Mill involved processing by ten departments before it was ready for shipping at the store-office building (see Chart 3). The conversion of raw wool stock to finished cloth required sorting, scouring, dyeing (stock or piece), picking, carding, spinning, dressing, weaving, wet finishing, and dry finishing as illustrated in Figures 7-49 beginning on page 43.⁵ The machinery involved was turn-of-the-century vintage, and was frequently "home-made" by mill-wrights, George Mentzer and his son, Wayne. The machinery was worn down through constant use and was slow for the pace of modern production. The old textile machinery seldom wore out, but the increasing cost of maintenance was a problem, as was the time lost while the machines were out of commission.

⁵Figure 17 (Chamberlain, 1977); Figures 7, 8, 9, 13, 16, 29 and 33 (Ade, 1977). All other figures from Your Town, 1946-47.

Chart 3. Machinery Used in the Steps of the Manufacturing Process at the Thomas Kay Woolen Mill by Decades from 1890 to 1950. Data Based on General Appraisal Co. , 1934, Bill of Sale Thomas Kay Woolen Mill to U. S. National Bank of Portland, 1941, and Machinery List, 1949. *

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
1. Sorting (Wool Warehse)	Scale, Fairbanks 2000# Capacity					Pre 1934		
	Scale, Howe 2500# Capacity					Pre 1934		
2. Scouring (Scouring Room)	Wool Scourer				1921 Sargent 3 Tub			
	Cone Duster				1926 Davis & Furber 42" Diameter			
	Extractor				Pre 1934 Schaum & Uhlinger 1 48" Basket			
	Carbonizing Machine for Wet Stock, Little Used					1930 Home-Made 1-2 Roll		
	Wool Dryer	1895 Home-Made		1910 Sargent Wood Frame Stock		Pre 1934 Sargent 1 Iron Frame	1949 8' Single Apron	
	Cloth Carbonizing Dryer	1900 Home-Made Removed after 1934					1948 Hunter 5 Section	

Chart 3. Continued.

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
3. Dyeing	Piece-Dye Machine					1931 Home- Made 6 String		
						1933 Home- Made 2 6 String		
						Pre 1934 1 Sample		
	Wool Dyer (Stock)			1919 Klauder- Waldon 1-500# 1919 Klauder- Waldon 1-1000#				
	Carbonizing Tanks					1930 Home- Made 2 190# each		
	Dye Tank					1930 Home- Made 3-200# 300#		
						Redwood Pre 1934 Home- Made 1 Cotton Removed by 1940		
	Sample Card		1900 1-Old First Breaker					

Chart 3. Continued.

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
4. Picking (Picker House)	Mixing Picker			1919 Davis & Furber			1949 Davis & Furber	
	Pounder					Pre 1934 Davis & Furber		
	Burr Picker					1934 Sargents 42"		
	Waste Duster					Davis & Furber Made into Tag Duster in 1940 Out to Pullery in 1947		
	Rag Picker					Pre 1934 Clark 1939 C. S. Dodge Big Ben		
5. Carding (Second Floor Mill)	Cards	1892 Davis & Furber 2-4 Cylinder Set 48" x 60"				1937 Davis & Furber 1-3 Cylinder 48 x 60	1941 Whitin 1-3 Cylinder 60 x 60	
		1897 Davis & Furber 1-3 Cylinder Set 48" x 48"						
			1900 Old First Beaker 1 Sample					

Chart 3. Continued.

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
6. Spinning (2nd Floor Mill)	Card Cylinder Grinder		1907 B. S. Roy 1-48"					
	Mules	1897 4-288 sp. out in 1937						
	Frames						1941 Whitin 12-120 sp. 1946 Whitin 2-120 sp.	
	Bobbin Winder		1900 Lazenby 1-20 sp. Two-sided				1945 Whitin-Schweiter 1945 1-automatic	
	Rewinder						1943 Leesonina 1-20 Bobbin	
	Spooler	For Cleveland Warp Dresser					1941 Whitin 1-High Speed	
	Pattern Looms (See Looms)					Pre 1934 Knowles 1-46" 25 Har, 4 Box		
7. Dressing (1st floor Mill)	Warp Dresser	Cleveland 100" (6 Spool Racks)						

Chart 3. Continued.

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
8. Weaving (1st Floor Mill)	Looms	1898 Crompton- Knowles 4-90" Cashmere 25 Har. 4 Box 1893 Knowles 3-72" Cashmere 20 Har. 3 Box 1898 Knowles 4-90" Cashmere	1904 Knowles 7-90 " Heavy Worsted 30 Har. 4 Box Knowles 6-90" Cashmere 25 Har. 4 Box 1900 Crompton- Knowles 8-108" Cashmere Broad 25 Har. 3 Box					
	Percher					Pre 1934 1-98" Roll 36 yd. Dial		
9. Wet Finishing	Extractor			1918 Tolhurst Centrifugal (Sold Later)		1930 Tolhurst Centrifugal	1947 48" Whirlwind	
	Dryer Cloth	Attic Tenter Bars & Stream				1935 Tenter Bars	1942 Miller 20th c.	
	Washer, Cloth		1904 Hunter (3-4 String) (1-2 String)					

Chart 3. Continued.

Manufacturing Process	Machinery	1890	1900	1910	1920	1930	1940	1950
	Fulling Machine		1900 5(4 String)					
	Sewing Machines		1900 Tilling Hast With Table 1900 Singer 1 Zigzag					
10. Dry	Napper			1914 Jones Single-Acting 88"				
Finishing (Finishing Room)	Shear		1908 Parks & Woolson 2(66" Single)		1908 Curtis & Marble 1920 1(66") David Gessners	Pre 1934 1(66" Rotary Steam)		
	Cloth Winder & Doubling		1900 Windle 1(32")				1946 Springfield Folding Machine	
11. Power	Water Wheel #1	James Leffel 48" Water Turbine						
(Water Turbine House)	#2		1914 James Leffel 45" Samson					
(Wet Finishing House)	Generator Motors						1941 1 60 H. P. 1948 3 for Blower & Burr Picker	

Chart 3. Continued.

Manufacturing Process		Machinery		1890	1900	1910	1920	1930	1940	1950
Hot Water &	Boiler	#1	Only 2 in					Pre National Boiler		
		#2	1896					1934 66" x 16'		
Steam (Boiler House)		#3						Pre 1934 Casey Hedges 60" x 14'		
							Pre 1934 Unknown 72" x 18'			
							1935 Kirkland			
							1944 Dillon			
Elevator							Hydro-Electric 1946 Freight Elevation			

* Employee interviews were used for clarification when necessary.

In 1931 after the death of T.B. Kay, manager Ercel Kay requested authority from the board of directors of the corporation to purchase a cloth dryer and a double-acting napper. He was given permission to make a second-hand acquisition of both machines at "the best price attainable." The minutes in 1932 did not include any announcement of such a purchase. During the following depression years there was no further mention of that machinery.

In June, 1935 an efficiency report was made by an "experienced mill man" (Minutes Book), William F. Scott, hired by Kay to "see if our present condition can be improved." One of Scott's conclusions was "the equipment...generally is old and is poorly arranged." Specifics concerning the machinery were enumerated. Some of them were:

Equipment for [carbonizing]...is very crude...The picker room [should have]...an automatic oiler and a self-feeder on the mixing picker...The card room is in very poor shape ...The number of cards and mules are badly out of balance with looms...Another set of cards should be added...the mule...standing [should be]...started and two more mules added...The matter of automatic looms should be considered and about 20 of them installed...The drying proposition should be immediately attended to. One dryer... would release four out of the five men now doing this work...The double action napper needs grinding badly... A piece dye kettle should be added to the dye house equipment. Hot water arrangement for washer is very wasteful.

By the early 1940's management did engage in a modernization plan in an attempt to meet growing competition. Domestic machinery

production was slowed during World War II, however, so that the acquisition of new machinery was not completed until the end of that decade.

The number one modernization priority had been in the card room. In 1941 a new 3-cylinder Whitin carder was purchased. This brought to five the number of cards in use at the mill. The fourth, a used Davis and Furber with a ring doffer, had been added in 1937. In 1941 twelve motor-driven Whitin spinning frames were added, as was a Whitin high-speed spooler (warp compressor). To accommodate the extra power needs of this equipment, the wet finishing room no longer operated off the water-powered main shaft. The wet finishing room equipment was powered by a 60 horsepower generator which was installed in that area. In 1942 the Miller cloth dryer was placed in a small addition built to house it off the south side of the mill. This resolved the problem of inadequate drying which had plagued the mill so long. Also in 1942 the steam boiler became inoperable, and the mill had to buy expensive steam from the Oregon State Board of Control until their order for a new boiler was approved by the War Production Board. The Dillion Boiler was eventually installed two years later in 1944. In this same time period motors were installed in the picker house for the blowers and burr picker. The automatic Whitin-Schweiter bobbin winder acquired in 1945 was the last machine delivered during the war period. In 1946 two more Whitin spinning

frames were purchased, as well as a Springfield folding machine and a hydro-electric freight elevator. In 1948 a Whirlwind extractor was placed in the wet finishing room, and a 5-section Hunter cloth carbonizing dryer was added to the dye house area. The delivery of twelve long awaited motor-driven automatic Crompton-Knowles looms was especially welcomed. The 8-foot single apron wool dryer installed in 1949 brought to an end the modernization plan which had its inception in the mid-thirties.

The machinery for the Thomas Kay Woolen Mill operated exclusively from the power generated by the water turbines as the head waters of the millrace ran over the 12-foot drop and through the turbine cogs to produce 17.0 horsepower. In 1914 the installation of the Samson 45 water turbine enabled the entire mill to function off its power, except the picker house, which ran off the remaining smaller turbine. This savings in the costs of power was a tremendous asset. It was only after 1941 when additional machinery was added that supplementary power was needed to operate the mill.

The steam from the boiler was used for heating the mill and for dyeing purposes, but not as a power source. A generator produced direct current electriciting for lighting purposes.



Figure 7. Wool as it arrives at the wool warehouse. 1959



Figure 8. Wool sorting. 1959



Figure 9. Fasteners removed from rags for shoddy. 1959

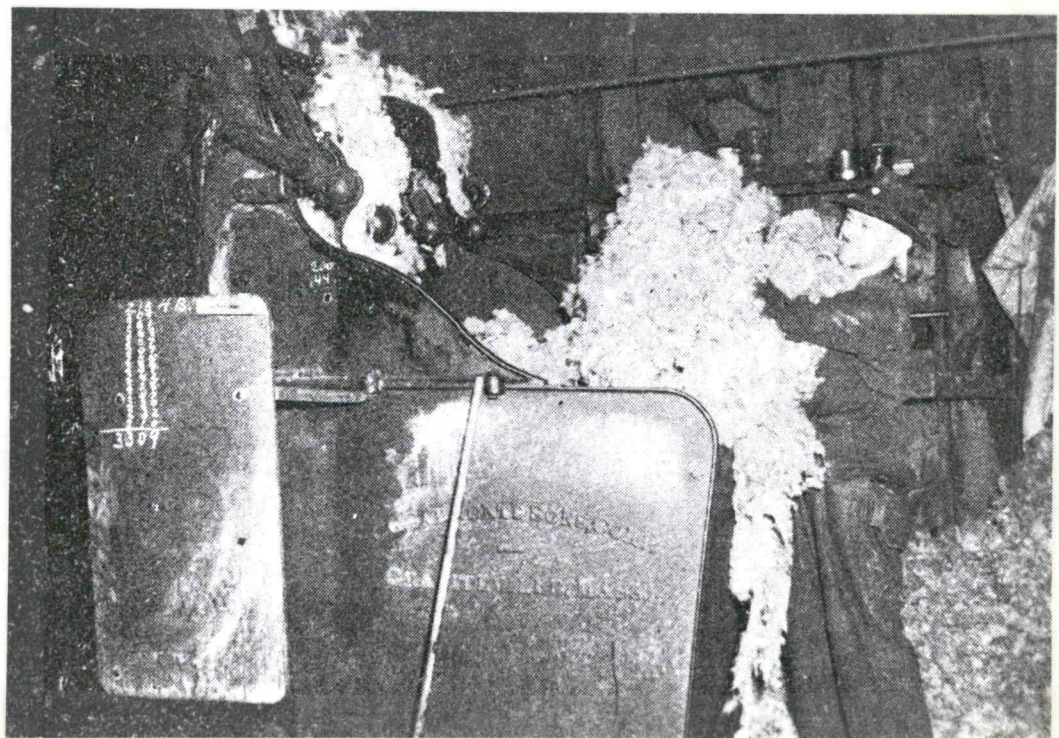


Figure 10. Sorted wool loaded into the wool washer. 1947

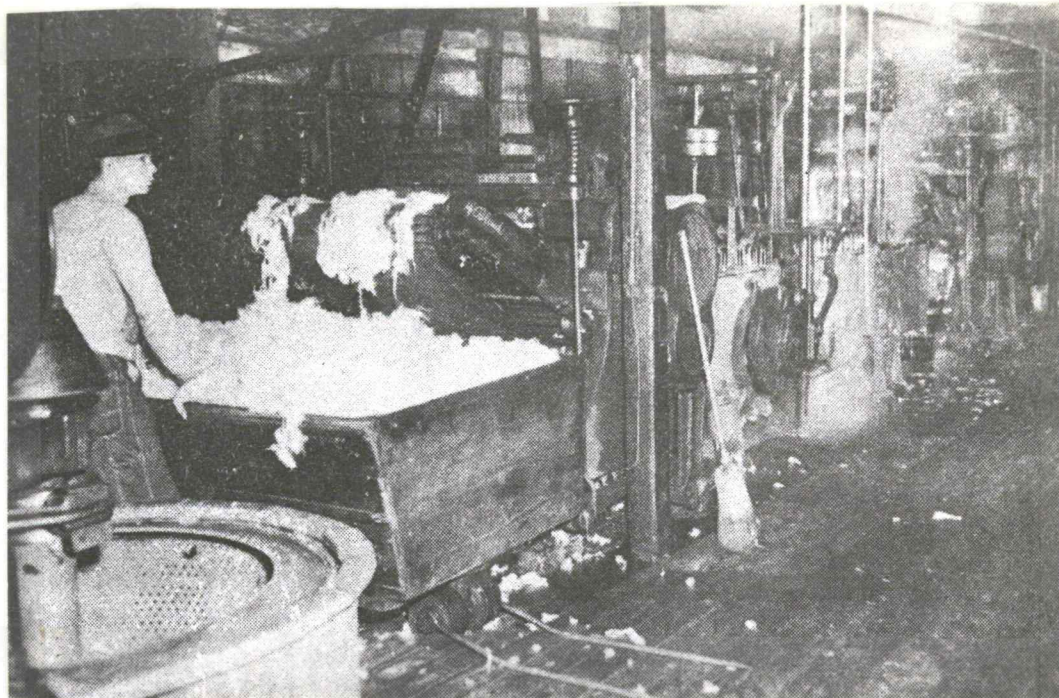


Figure 11. Scoured wool removed from washer. 1947



Figure 12. Scoured wool dried in stock dryer. 1947



Figure 13. Clean, dry wool returned to wool warehouse. 1959

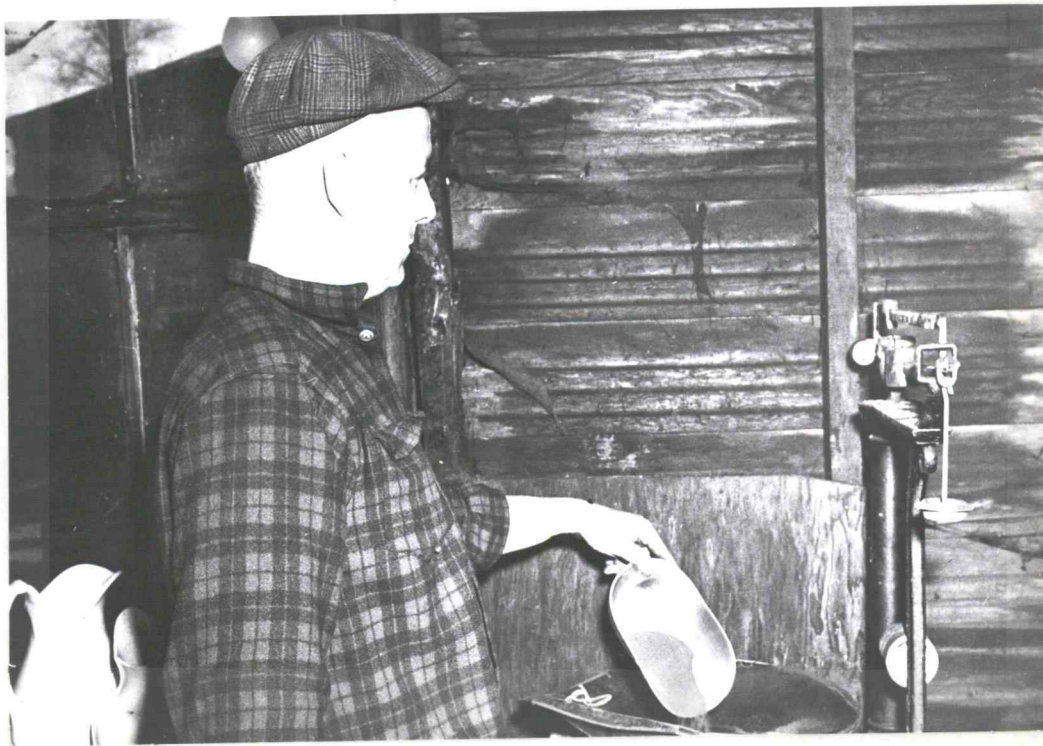


Figure 14. Dyer weighing chemicals. 1947



Figure 15. Wool in dye vats being stirred with poles. 1947



Figure 16. Dyed wool removed from vats by hand. 1959

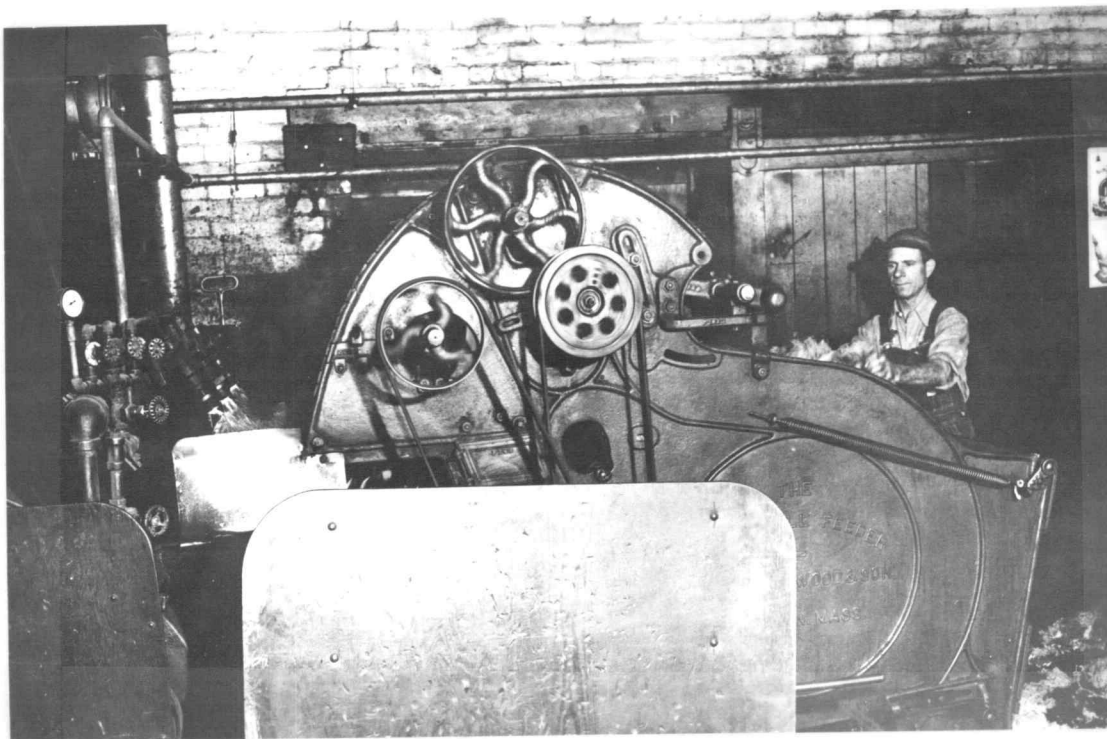


Figure 17. Hopper feeding wool into mixing picker. 1955

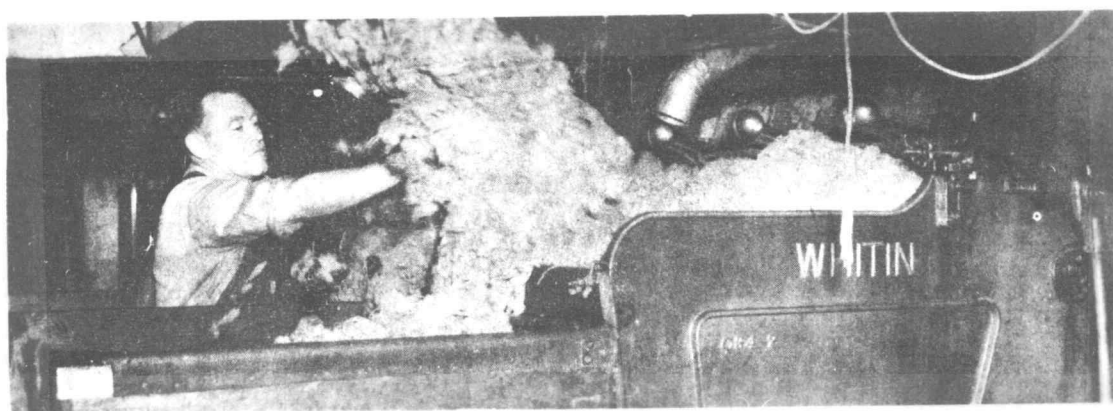


Figure 18. Wool fed into carder. 1947

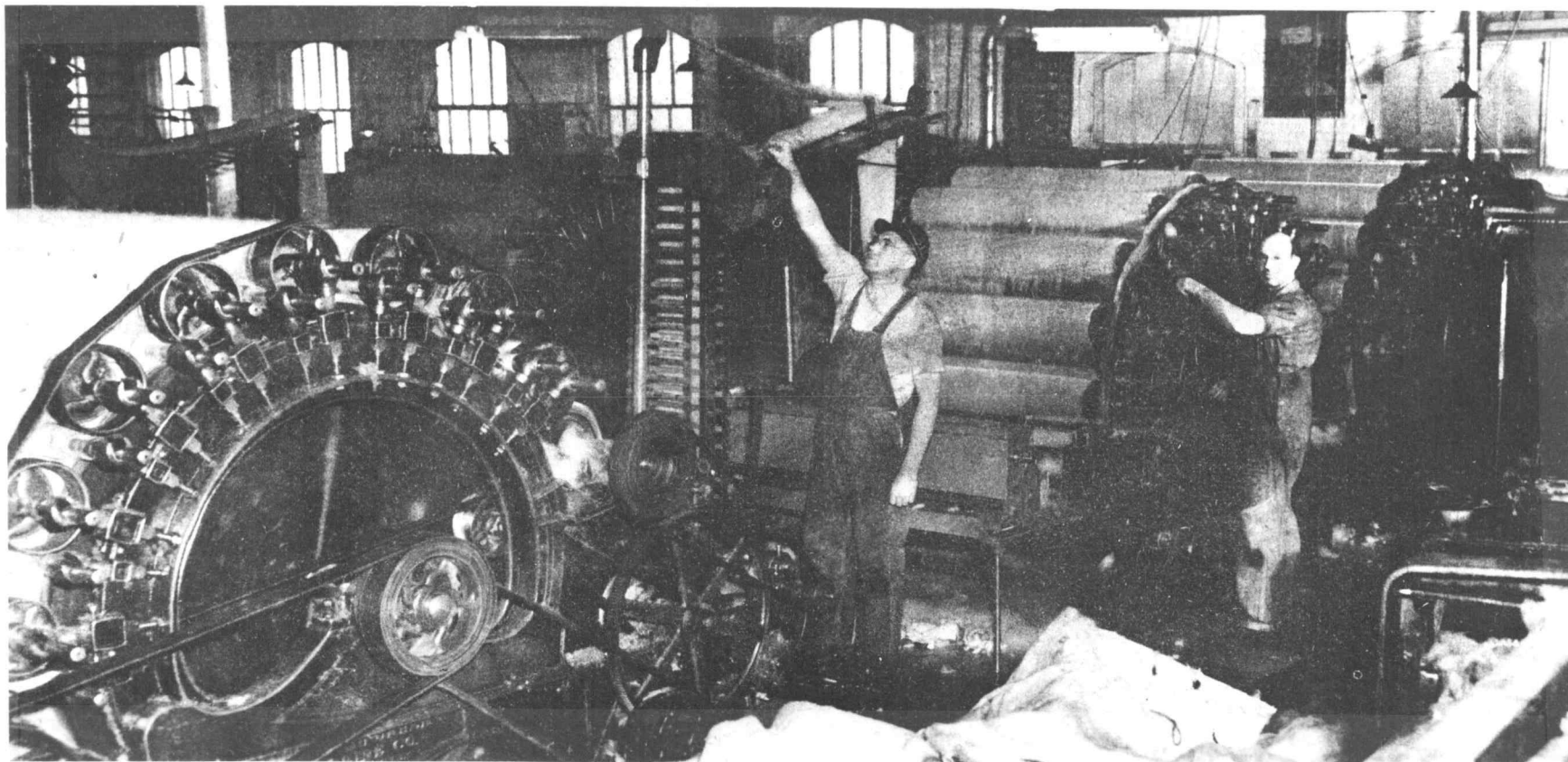


Figure 19. Three-Cylinder Carder. 1947



Figure 20. The combing wires on the carding machine being cleared of fibers by using hand cards. 1947

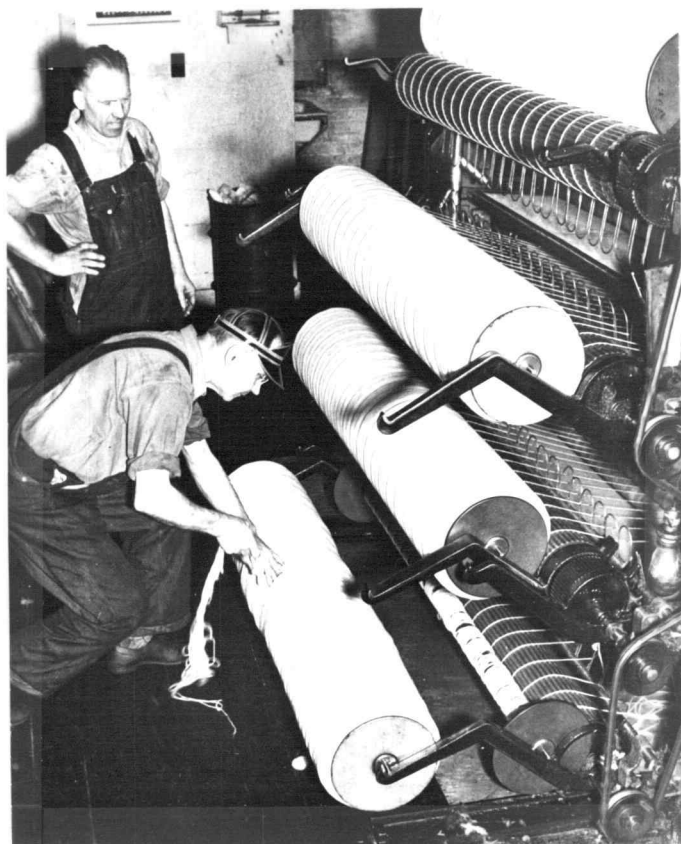


Figure 21. Spools of roving removed from cards. 1947

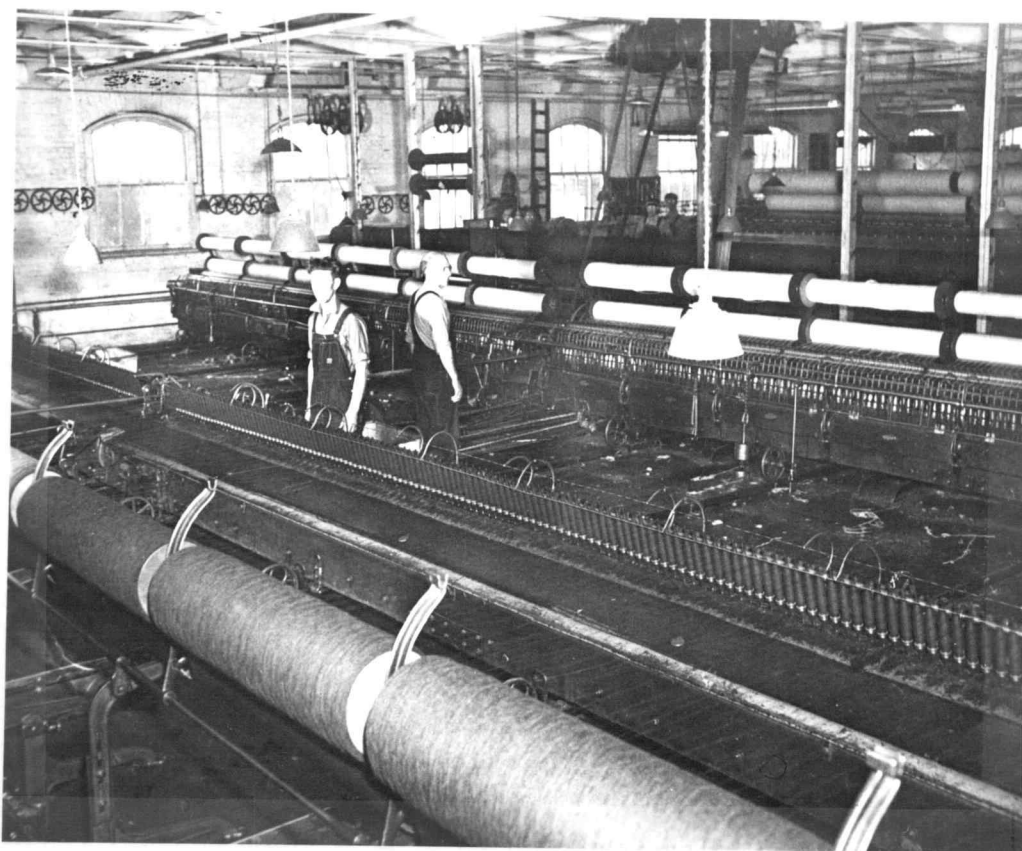


Figure 22. Spinning mules. 1947

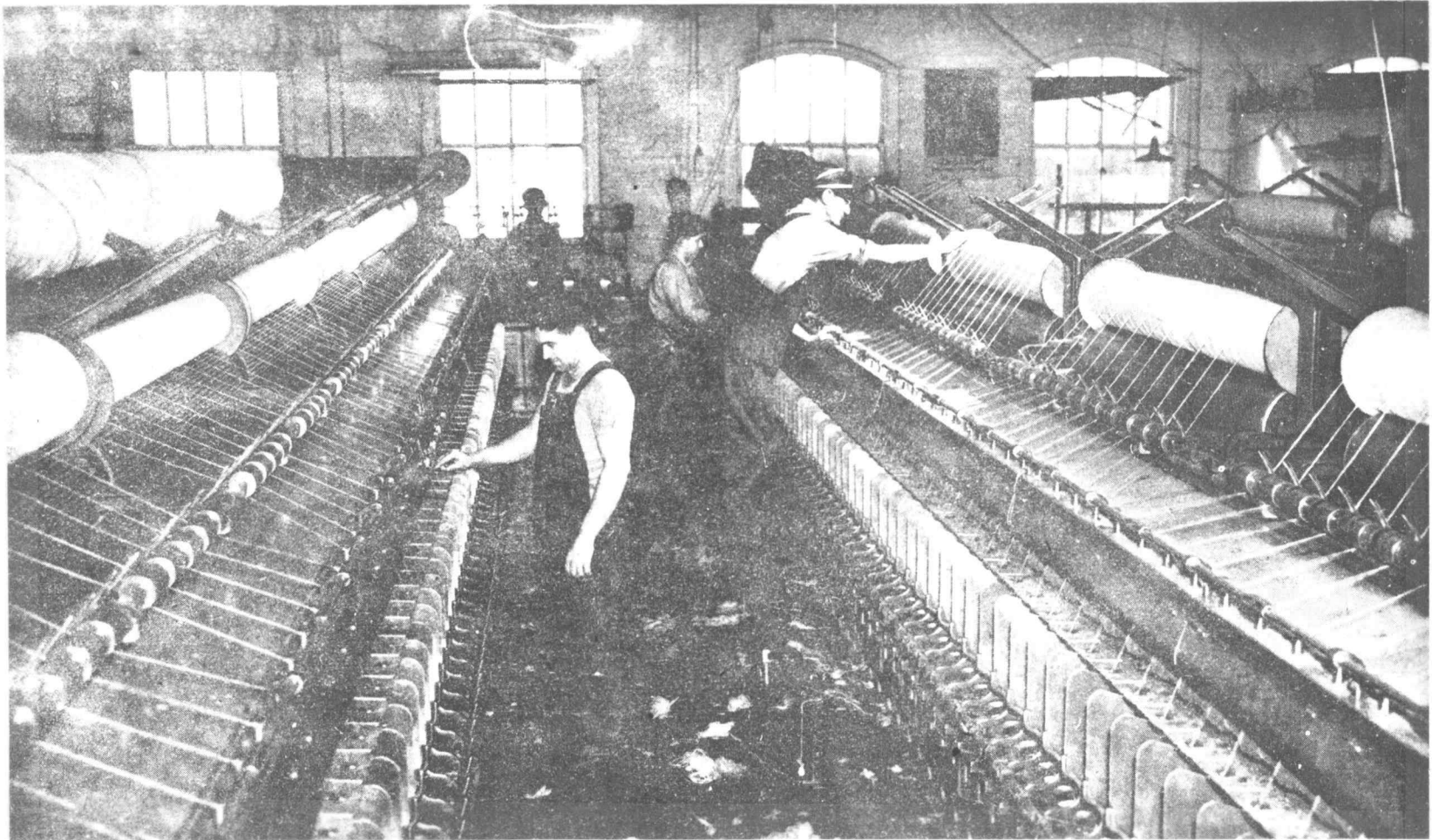


Figure 23. Whitin spinning frames. 1947

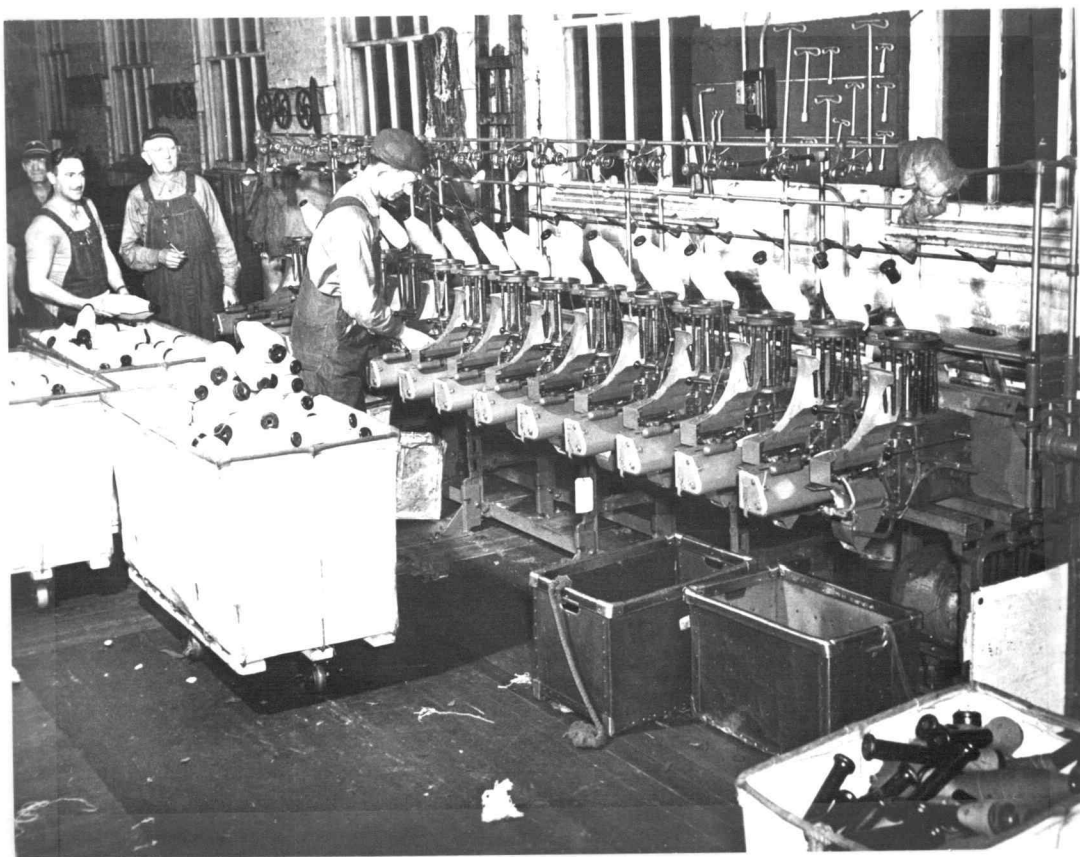


Figure 24. Bobbin winder which rewinds yarn onto shuttle bobbins.
1947



Figure 25. High speed spooler which prepares spools for warp. 1947

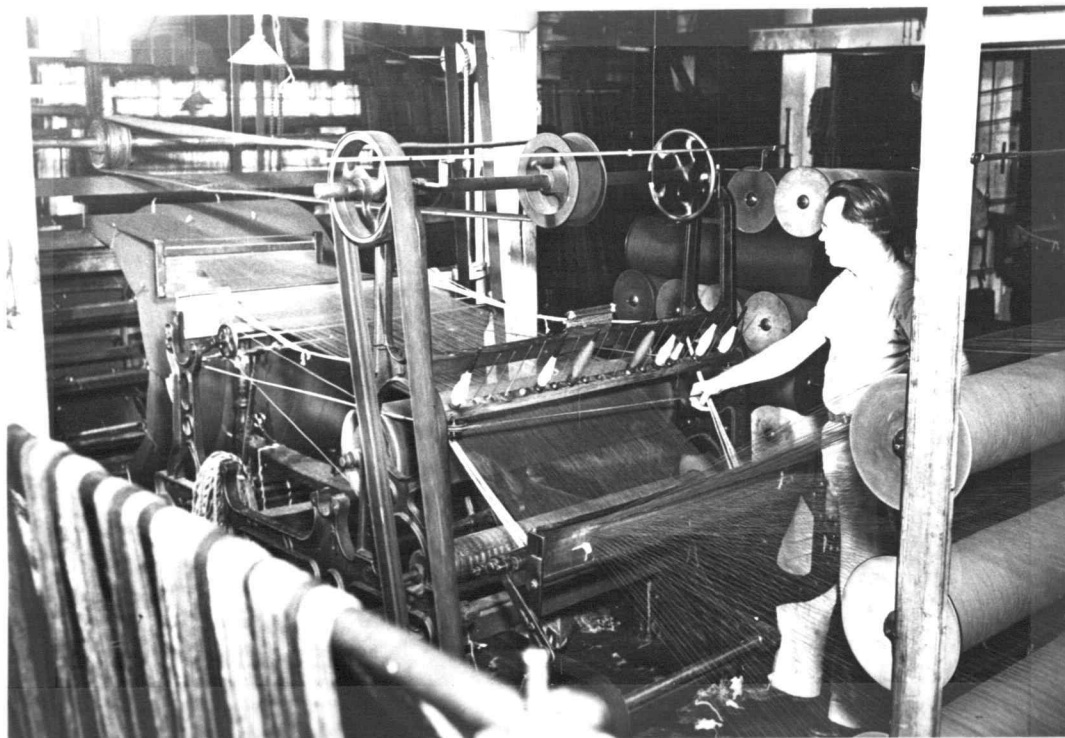


Figure 26. Warp dresser which winds yarns from many spools into large roll of warp on the dressing frame. 1947

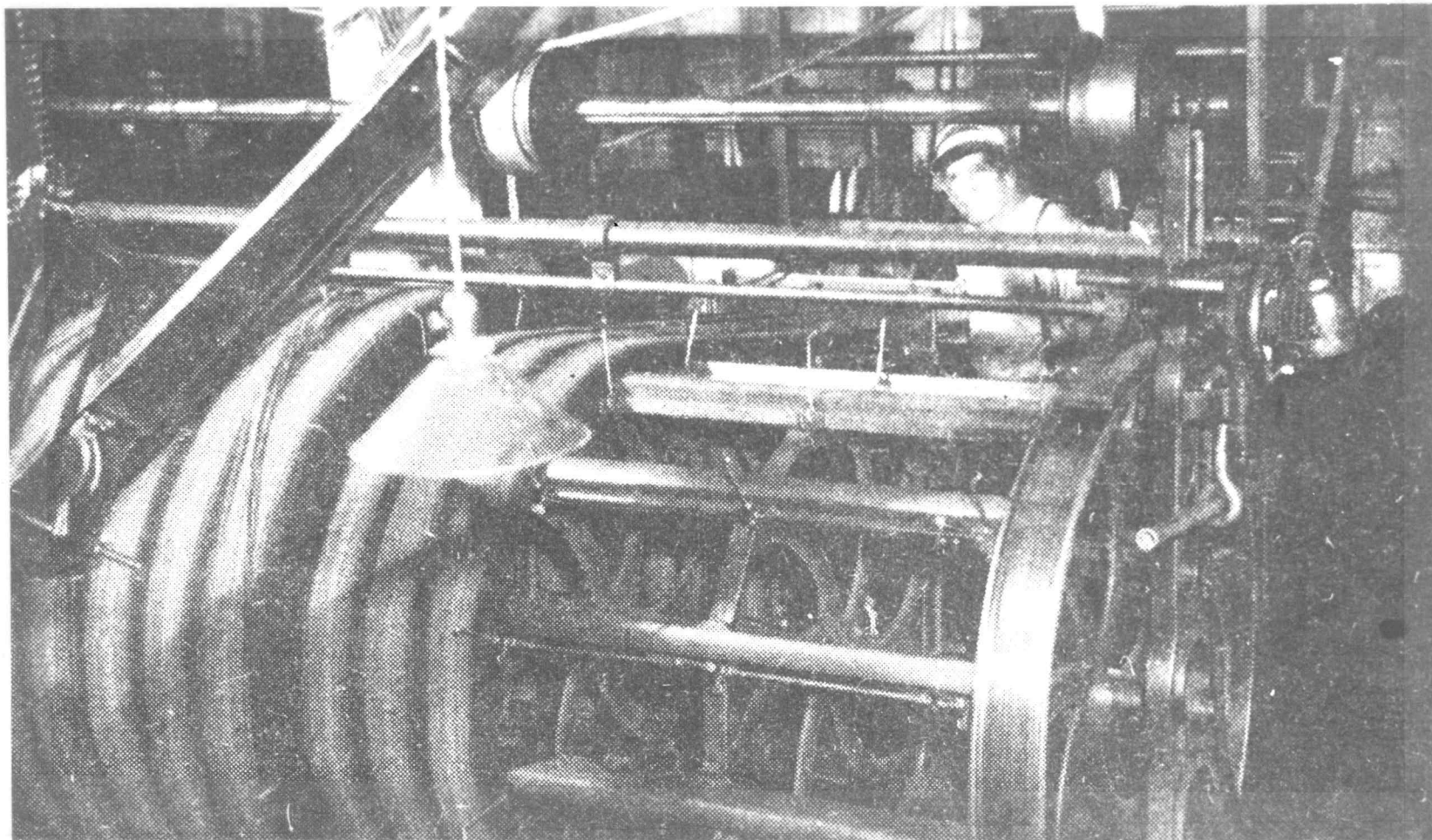


Figure 27. Warp dressing frame which holds all of warps. 1947

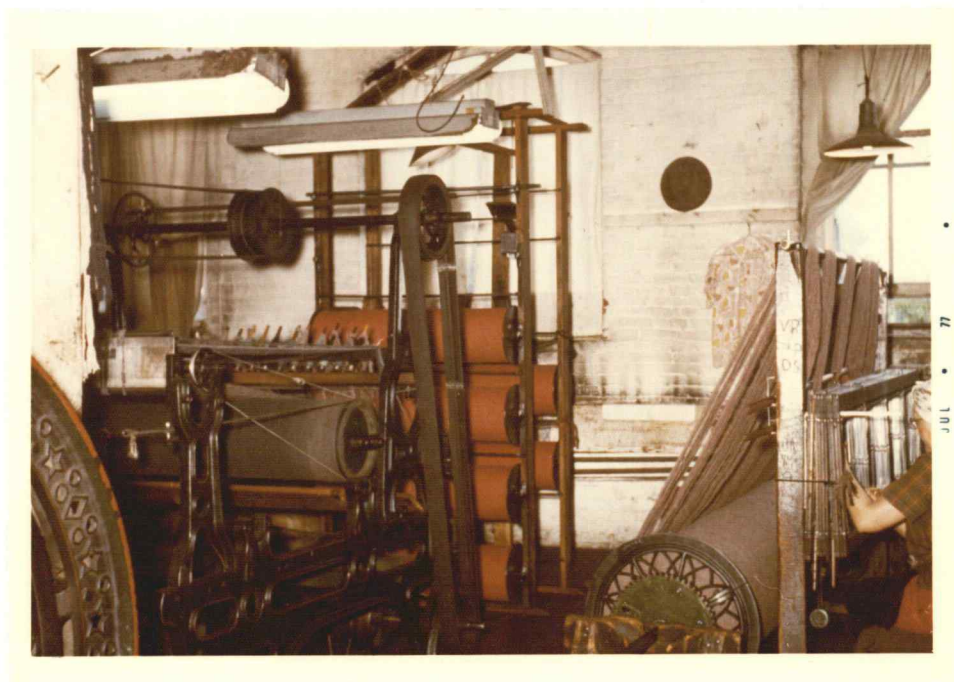


Figure 28. Warp ends drawn from warp beam through heddles.
1958



Figure 29. Turn-of-the-century manual looms. 1947

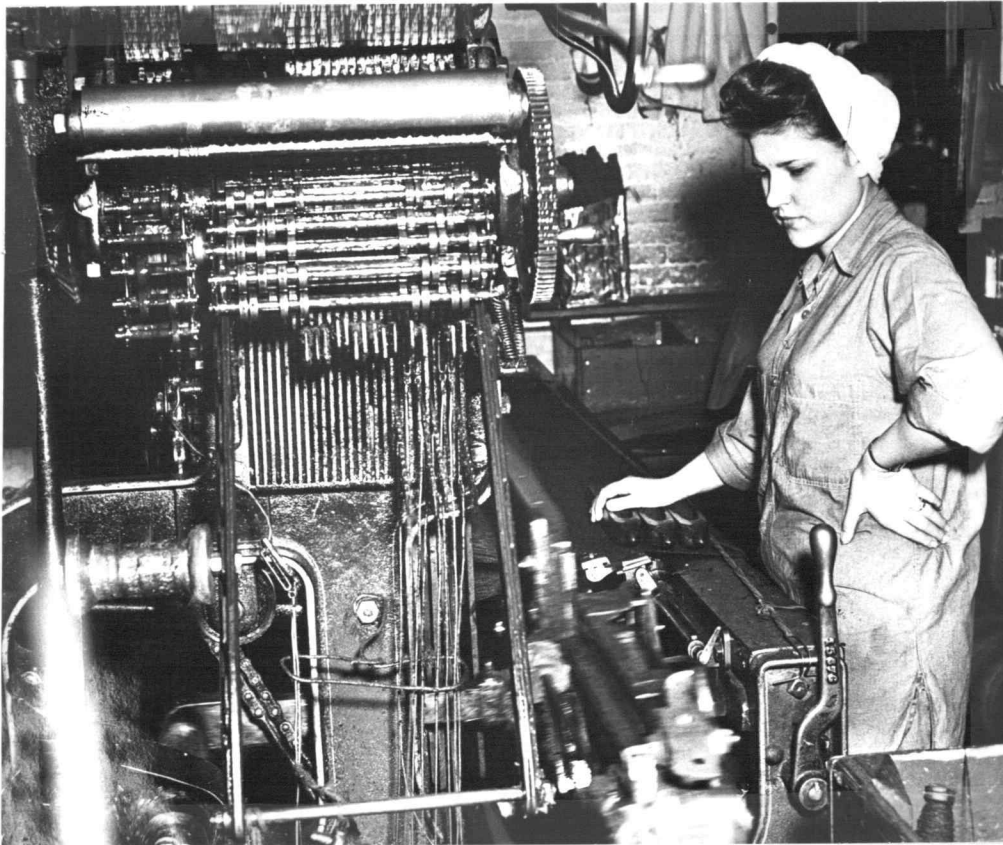


Figure 30. Woman watching weaving progression on older loom.
1947

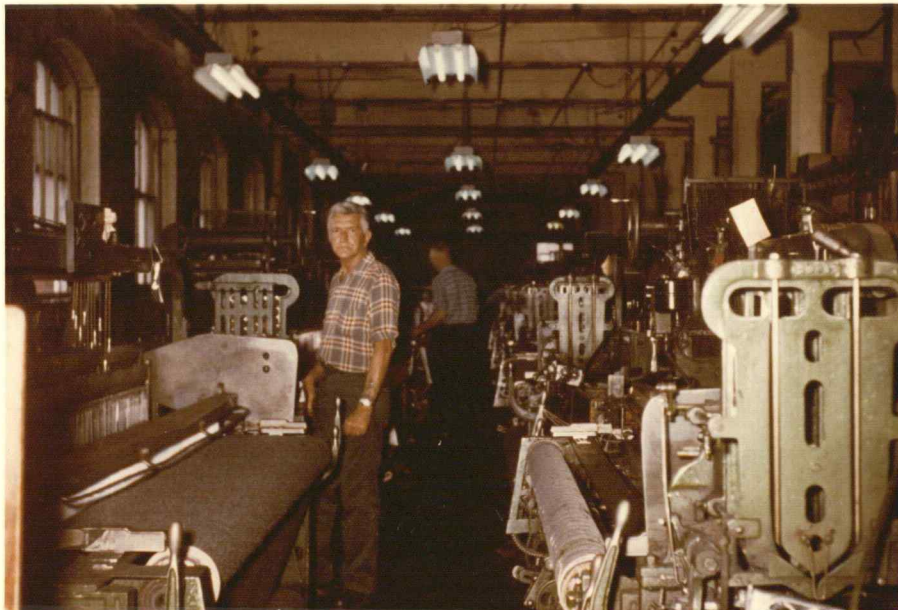


Figure 31. Post-war automatic looms. 1959



Figure 32. Perching...visual inspection and yardage measurement.
1947



Figure 33. Burling...snipping off of loose threads after weaving.
1947



Figure 34. Re-weaving. 1947.

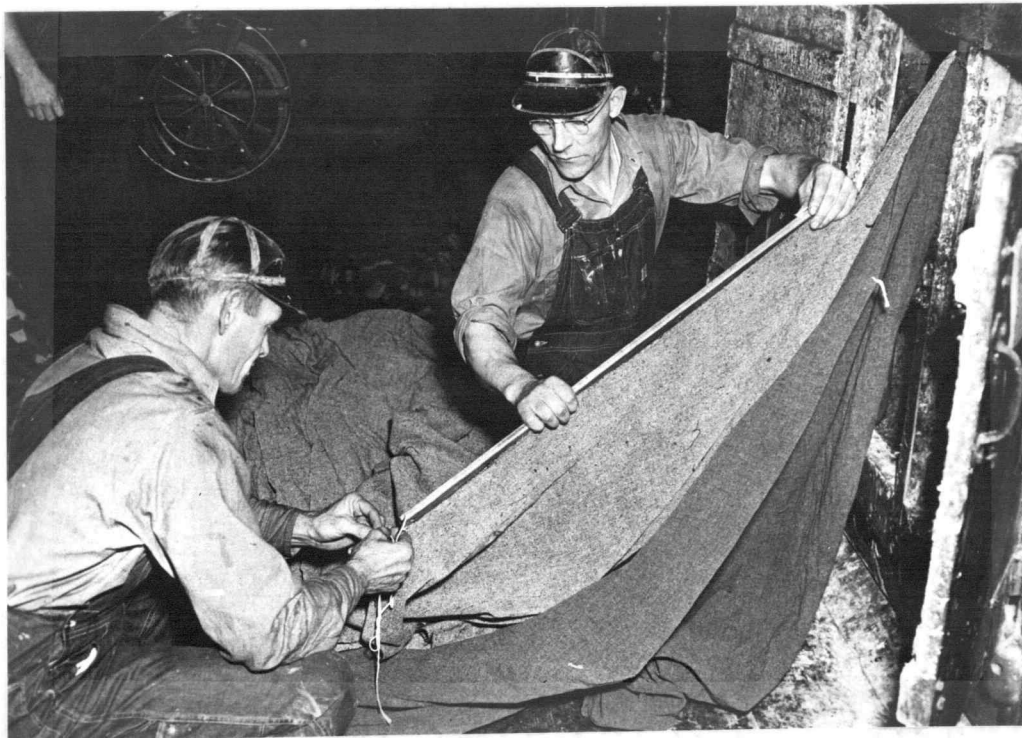


Figure 35. Woven fabric marked by yards before going into fuller. 1947



Figure 36. Cloth ends sewn together to form continuous fifty-yard length strip before entering fuller. 1947



Figure 37. Gallons of "soft soap" added to fulling machine. 1947



Figure 38. Cloth removed from fuller after shrinking and felting. 1947

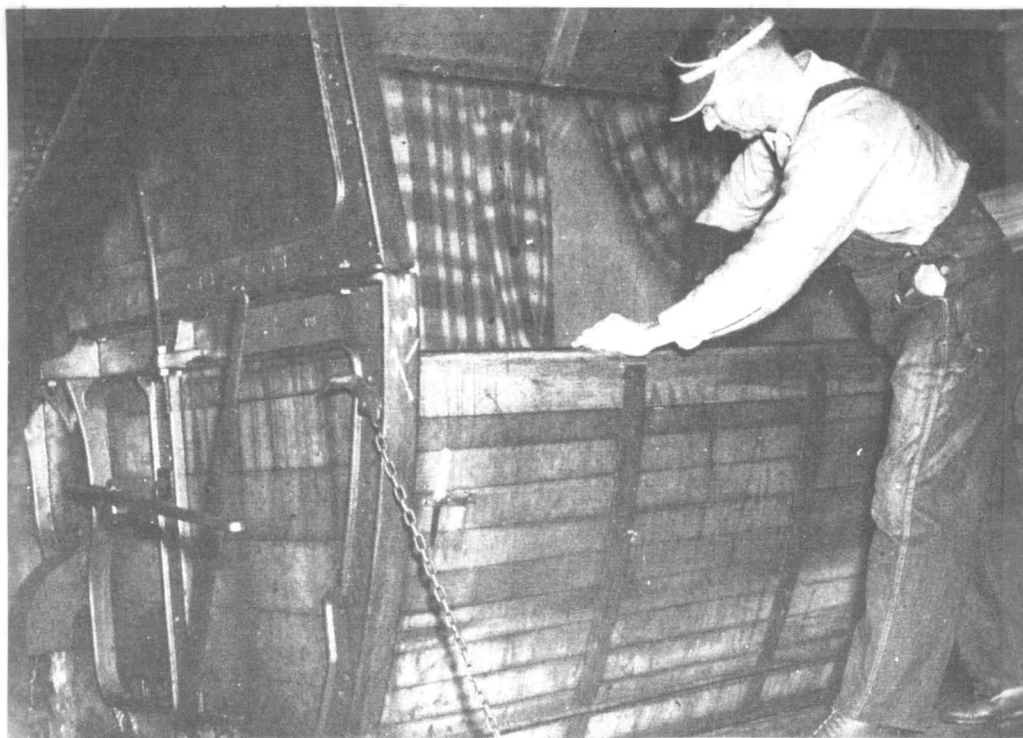


Figure 39. Cloth placed in washing machine after leaving fuller. 1947

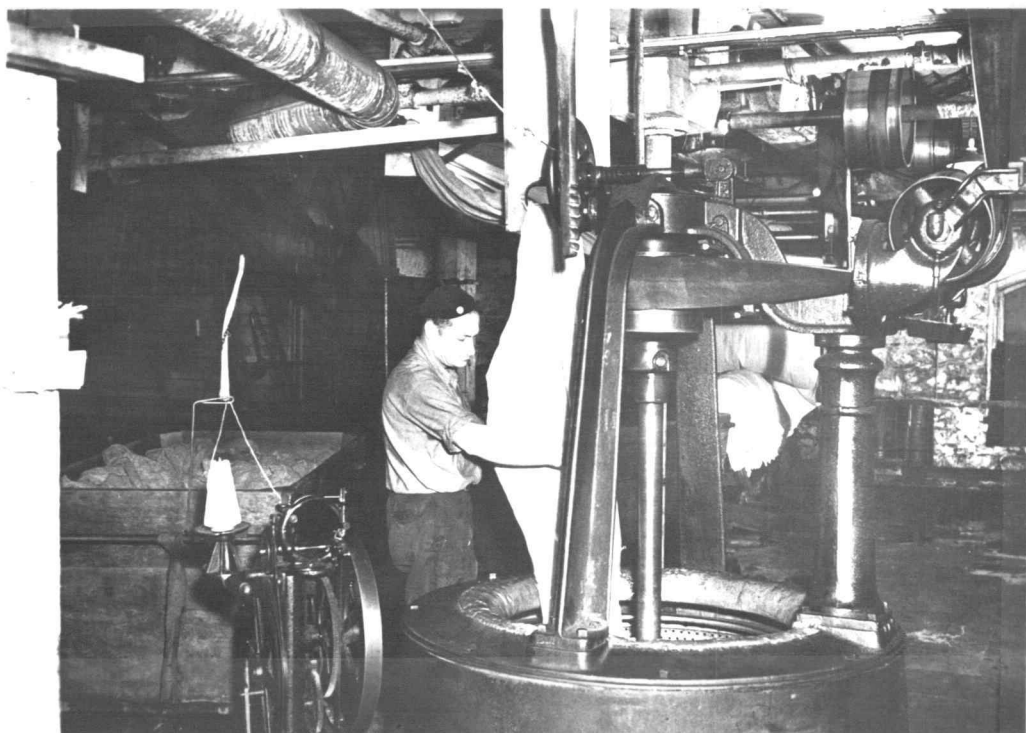


Figure 40. Washed fabric removed from extractor. 1947

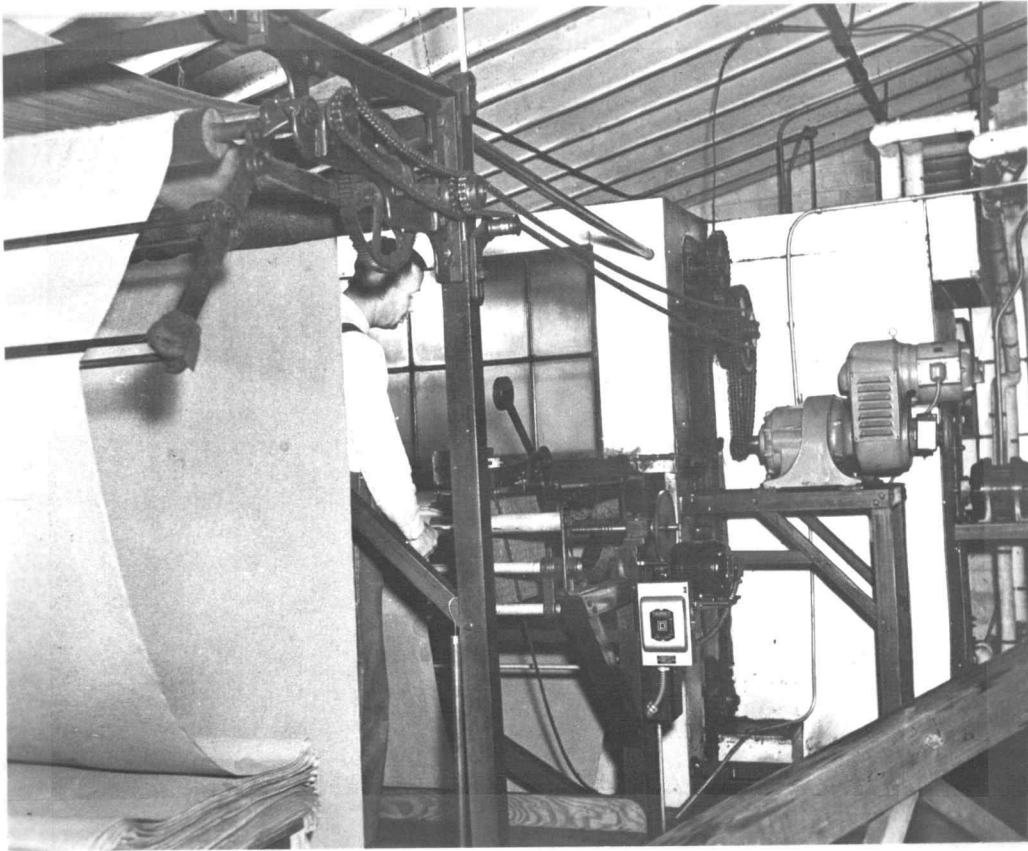


Figure 41. Cloth dryer which permits drying of 2, 000 yards of fabric every eight hours. 1947

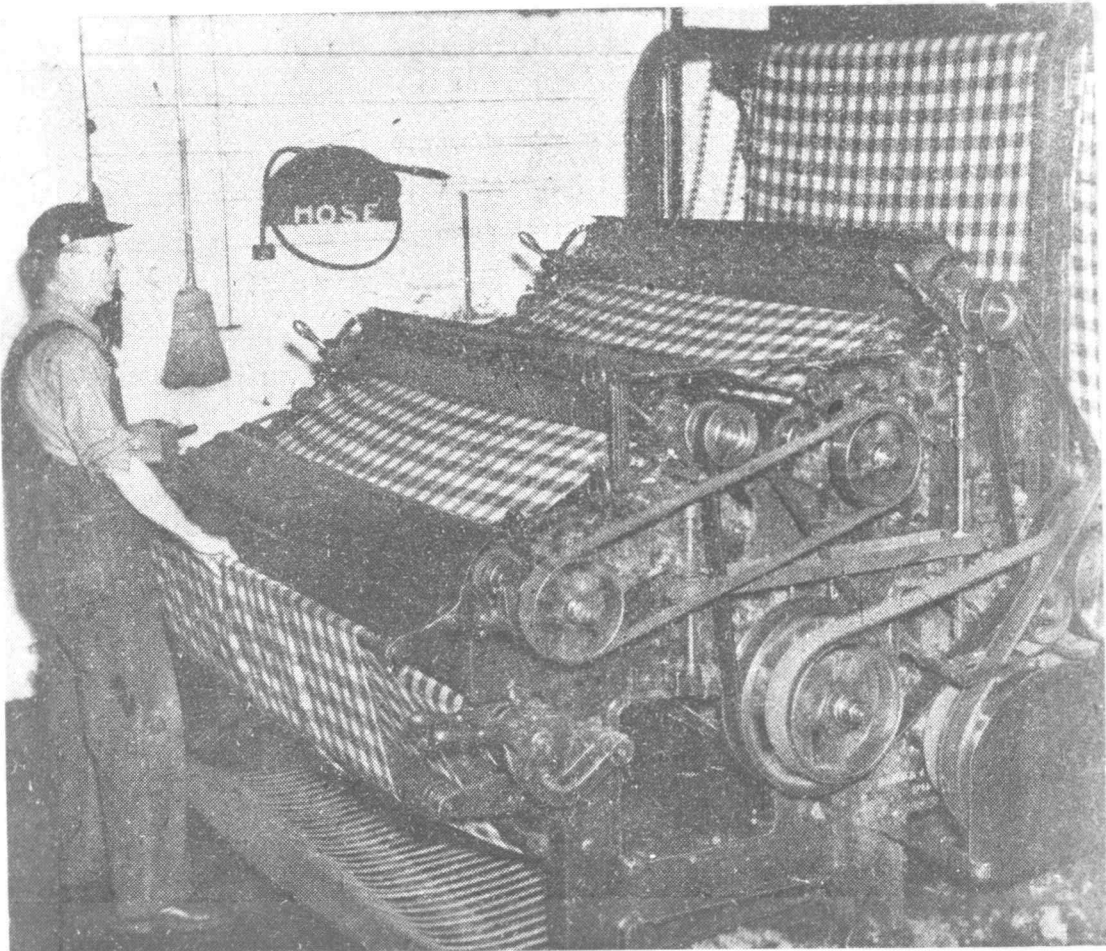


Figure 42. Shearer which cuts off excess nap from dried fabric.
1947

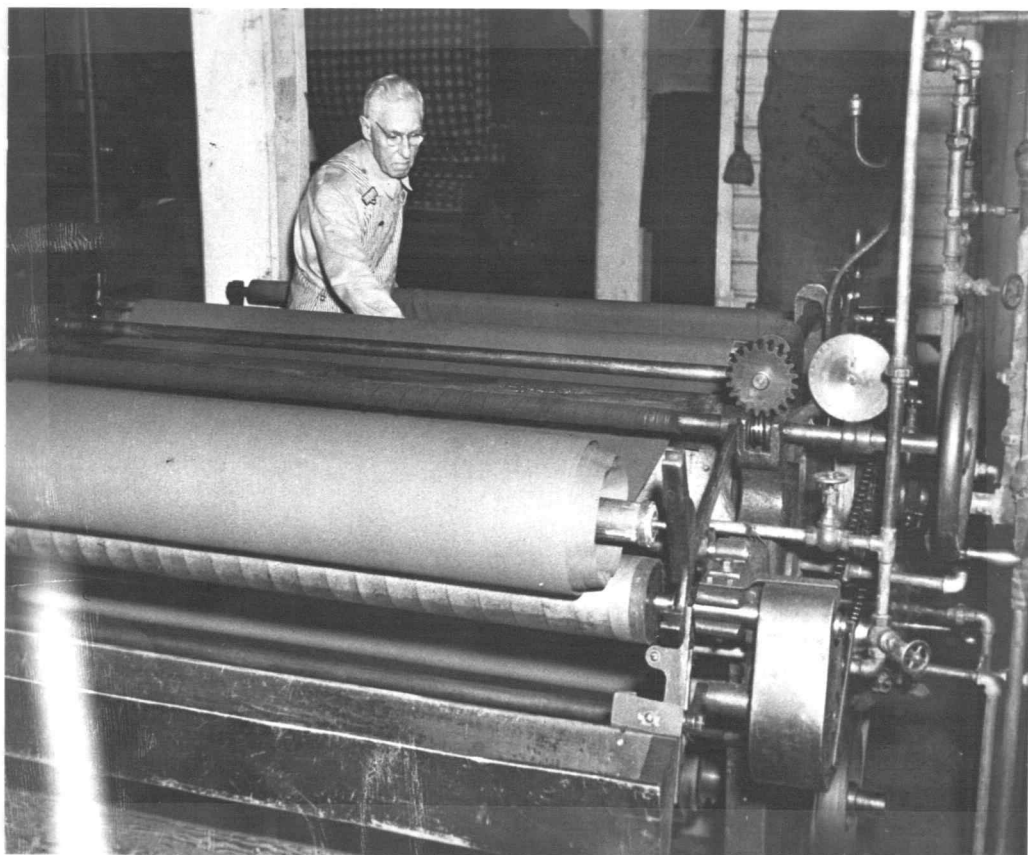


Figure 43. Pressing machine which hooks and stretches fabric to keep it square while pressing. 1947



Figure 44. Flaws in cloth tied on edge with string at final inspection. 1947

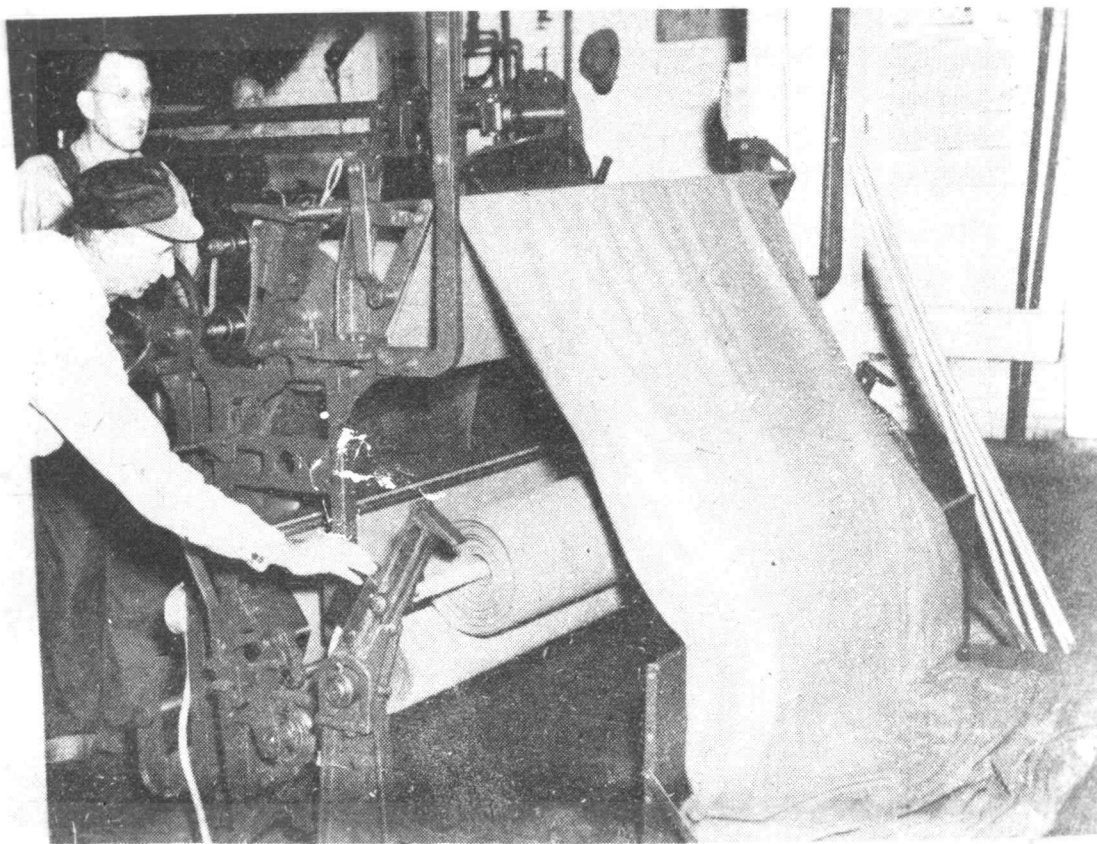


Figure 45. Cloth winder which places fabric on bolts. 1947



Figure 46. Shipping department which wraps bolts of cloth. 1947

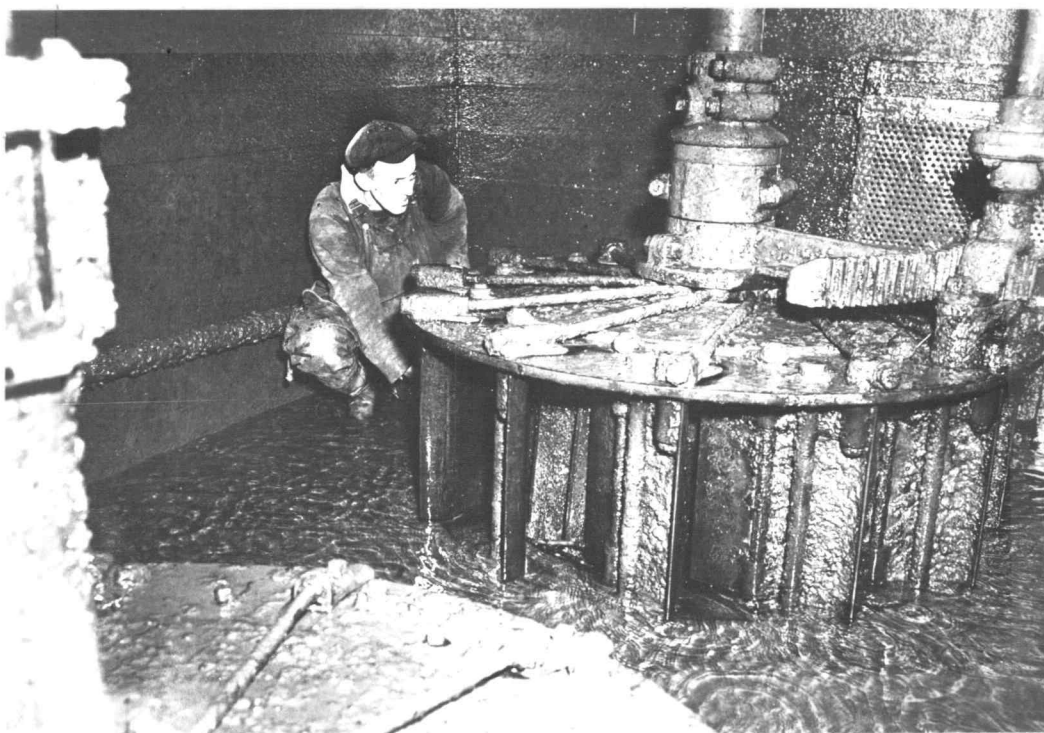


Figure 47. Plant engineer examining Samson water turbine when water from millrace is turned-off. 1947



Figure 48. Shaft coming from water wheel underneath cog gear which connects with shaft leading to mill. 1947



Figure 49. Plant engineer adjusting governor which keeps constant power on pulley shafts. 1947

Raw Materials

In 1856 sheep husbandry in the Willamette Valley was stimulated by the construction of the first woolen mill in Oregon at Salem. The Willamette Woolen Mill was built to process local wool. By 1870 the mill had been such a stimulus to wool growth that wool had become an export staple for Oregon. Prices were determined by Eastern (Boston) buyers, however, and thus brought uncertainties to the local farmer-sheep raiser.

In the 1870's population pressures in the lush Willamette Valley drove Oregon herds into less desirable ranges of southeastern Oregon. It was more profitable for a farmer to raise crops in the rich valley soil and keep only a small herd of sheep than to use his land exclusively for sheep grazing. By the 1880's a growing market for mutton had developed as the railroad united Oregon with the east (Shroyer, 1966).

Low blood sheep, such as the black-faced Suffolk are better meat than wool producers and were raised by Willamette Valley farmers. This coarser, shorter-haired variety of sheep survived better in the rainy Willamette Valley, but its black hairs mixed with the fleece precluded the manufacture of pastel-colored goods, according to Tom Kay III.

The Thomas Kay Woolen Mill was founded to use this local wool and to produce goods for the local and Pacific coast markets. The

wool used at the Kay mill came from the following three sources:

1) Wool sales in Eastern Oregon; 2) Middlemen who maintained offices in Portland, the Willamette Valley, and Eastern Oregon, and 3)

Directly from farmers, especially in Western Oregon (Lomax, 1953).

Tom Kay III reported that the mill always took all the wool they could get from the local farmers. The mill kept what it could use and sold off the rest for a profit.

The Oregon Blue Book, 1911 (p. 25) discussed the importance of the sheep industry. It stated that raising sheep was one of the most profitable industries in the western country, and it reported that in the year 1909 wool brought top prices with profits ranging from 25-75%.

The Willamette Valley holds the best prospect for the raising of small herds. Almost every farm could support a herd of from 50-500 sheep with profit. Wool clip of the United States is approximately 300 million pounds, 220 million of which is grown in the West with Oregon producing 20 million.

In 1917 The Oregon Statesman stated that of the 16 million pounds of Oregon crop of wool, 1 1/2 million pounds were produced in the Willamette Valley.

The Woolhouse Book, 1936-1945 indicated that some wool was imported from New Zealand in 1936 along with Klamath (Southern Oregon) lambswool, Prineville (Central Oregon) wool, (Willamette) Valley lambs, Seattle squaws and Oregon Worsted (Company) tags.

An entry in 1945 showed Australian mixed, so there was foreign stock used as well as domestic wool.

Unfortunately, annual wool consumption at the Thomas Kay Woolen Mill was not recorded by weight but by dollars (see Chart 4). The dollar value made it possible to determine the financial value of the capital assets of the mill, which was a necessity by 1913 when the 16th amendment of the Constitution of the United States passed the enactment of income taxes. The dollar designation does not provide as good an indicator for growth of the mill, however, because it was based on the changing economic status of the dollar and on the price of wool rather than on constant weight. An increase in dollar value does not precisely reflect an increase in wool consumption.

The only record of wool consumed, by poundage, at the Thomas Kay Woolen Mill is that listed in the incompleated copy of the 1927 and 1929 Department of Commerce Census of Manufacturers, which indicated 153,655 and 174,752 pounds respectively. The rest of the figures on the tabular Chart 4 indicate figures recorded by inconsistent methods as the bookkeeping procedure changed over the years. No attempt to analyze them has been made at this point because of doubt concerning their reliability and validity.

The chart does indicate that shoddy is one of the materials used in the manufacture of woolen cloth at the Kay mill. Cook (1964) describes shoddy as wool recovered from fabrics which have not been

Chart 4. Fibers Used in the Manufacture of Cloth at the Thomas Kay Woolen Mill by Decade from 1900-1950, Value (\$) Based on Annual Statements and/or Minutes Book, Poundage (#) Based on Census of Manufacturer.

Fibers	1900	1910	1920	1930	1940	1950
			Source of Information			
		Assets	Assets	Purchases	Purchases & Freight	Cost to Manufacturer
Wool	No Evidence	'10 No Evidence	'20 \$ 57,139	'30 \$ 77,293	'40 \$309,013	'50 No Evidence
		'11 No Evidence	'21 \$ 99,085	'31 \$ 63,024	'41 \$382,370	'51 \$502,139
		'12 \$ 45,601	'22 \$121,673	'32 \$ 54,851	'42 Not Available	'52 \$214,301
		'13 \$ 43,259	'23 \$187,766	'33 Not Able to Determine	'43 \$579,052	'53 \$187,568
		'14 \$ 44,306	'24 \$111,296	'34 Not Able to Determine	'44 \$ Consumption \$455,164	'54 Wool & Shoddy \$308,008
		'15 No Evidence	'25 \$117,951	'35 Purchased & Frt. \$ 84,063	'45 \$392,316	'55 Wool & Shoddy \$283,483
		'16 No Evidence	'26 \$ 83,368	'36 \$146,163	'46 \$443,669	'56 Wool & Shoddy \$340,242
		'17 \$110,708	'27 Census of Manuf. 153,655#	'37 \$152,374	'47 \$178,727	'57 No Evidence
		'18 \$ 40,494	'28 No Evidence	'38 Not Available	'48 No Evidence	'58 No Evidence
		'19 \$ 96,826	'29 Cen. of Man. 174,752#	'39 \$ 89,478	'49 \$310,455	'59 No Evidence
Shoddy	No Evidence	'10 No Evidence	'20 \$ 7,876	'30 \$ 36,937	'40 \$ 44,829	'50 No Evidence
		'11 No Evidence	'21 \$ 6,143	'31 \$ 17,729	'41 \$ 55,010	'51 \$ 19,467
		'12 \$ 6,599	'22 \$ 15,339	'32 \$ 10,841	'42 Not Available	'52 \$ 2,425
		'13 \$ 6,636	'23 \$ 10,707	'33 Not Able to Determine	'43 \$ 37,507	'53 \$ 2,665
		'14 \$ 11,728	'24 \$ 9,133	'34 Not Able to Determine	'44 Consumption \$ 46,482	'54 See wool above
		'15 No Evidence	'25 \$ 26,515	'35 \$ 72,949	'45 \$ 26,084	'55 See wool above
		'16 No Evidence	'26 \$ 23,641	'36 Not Listed	'46 \$ 18,518	'56 See wool above

Chart 4. Continued.

Fibers	1900	1910		1920		1930		1940		1950	
		Assets		Source of Information Assets		Purchases		Purchases & Freight		Cost to Manufacturer	
Shoddy (cont.)		'17	\$ 33,235	'27	Cen.of Man 289,825#	'37	\$ 80,148	'47	\$ 5,779	'57	No Evidence
		'18	\$ 10,004	'28	No Evidence	'28	Not Available	'48	No Evidence	'58	No Evidence
		'19	\$ 9,990	'29	Cen. of Man. 367,160#	'29	\$ 69,108	'49	\$ 1,503	'59	No Evidence
Cotton	No Evidence	'10	No Evidence	'20	\$ 5,176	'30	\$ 3,304	'40	No Evidence	'50	No Evidence
		'11	No Evidence	'21	\$ 4,098	'31	\$ 3,080	'41	No Evidence	'51	None
		'12	\$ 1,290	'22	\$ 2,625	'32	\$ 2,050	'42	No Evidence	'52	\$ 90
		'13	\$ 1,299	'23	\$ 3,798	'33	Not Listed	'43	\$ 612	'53	None
		'14	\$ 6,649	'24	\$ 3,000	'34	Not Listed	'44	Consumption \$ 69	'54	No Evidence
		'15	No Evidence	'25	\$ 1,314	'35	Not Listed	'45	\$ 104	'55	No Evidence
		'16	No Evidence	'26	\$ 187	'36	Not Listed	'46	\$ 61	'56	No Evidence
		'17	\$ 9,260	'27	Cen. of Man 10,037#	'37	Not Listed	'47	None Listed	'57	No Evidence
		'18	\$ 4,879	'28	No Evidence	'38	Not Listed	'48	No Evidence	'58	No Evidence
		'19	\$ 3,962	'29	Cen. of Man 13,278#	'39	Not Listed	'49	None Listed	'59	No Evidence
Man-Made										Use Experimented Not Continued	

excessively felted during manufacture; the wool fibers can be teased apart with a minimum of damage to them.

Shoddy is listed on the 1927 and 1929 Census of Manufacturers report of the Thomas Kay Woolen Mill. Shoddy consumption for 1927 was 289,825 pounds and for 1929, 367,160 pounds which is roughly double that of wool consumption. This is not to say that this was an uncommon practice in the woolen industry. Von Bergen (1948) states that the woolen industry had to resort to greater use of wool substitutes to meet the keen competition of the woolen market. Rainnie (1965) states that in lower-medium quality woolen manufacturing, technical ingenuity based on blending shoddy and wool is important for cost-reduction.

Cotton was another raw material used at the mill, although its use dropped significantly after the death of T.B. Kay in the 1930's, and it was never used much again. It was said that T.B. Kay maintained a good business for cotton-warp blankets used by the Chinese in San Francisco. Cotton was little used during the forties because government contracts called for cloth that was all wool. By the end of the war, there was no evidence of its use except for ninety dollars worth of cotton in 1952.

Man-made fibers were used experimentally in the fifties but were not used in production because of the inability of nylon to absorb the acid dyes used on wool.

Another material used significantly at the mill was dyestuffs. Before the second world war, the mill imported most of its dyes from Europe. During the war this was impossible, so American dyes were tried. At first the domestic dyes were less satisfactory, but improved with time as American manufacturers met the demand for high quality dyes.

Manufactured Goods

The quality of woolen cloth is dependent in part upon the raw materials used in its manufacture. The Kay woolen mill used coarse Valley wool mixed with shoddy, and thus, specialized in outerwear and blankets (see Chart 5). Transportation costs for other wools would have been too expensive for this small mill to use extensively. Outerwear fabrics of a serviceable quality could be made from a blend of wool and shoddy, and could be "made in the fulling mill" according to Thomas Kay III. Blankets require the least technical skill, which suited the on-the-job training which most of the local mill workers acquired. The use of wool from local blackfaced sheep which contained black hairs precluded the manufacture of pastel colors, so that bright, intensely colored cloth dominated the mill's production.

At the turn of the century, the Thomas Kay Woolen Mill manufactured overcoating, blankets, and flannels. Lomax (1974, p. 55) stated, "Worsted manufacture was temporarily curtailed in favor of

Chart 5. Manufactured Goods by Yardage at the Thomas Kay Woolen Mill by Decade from 1900 to 1950.

Manufactured Goods	1900	1910	1920 Census of Manufacturer	1930 Minutes Book and Annual Reports to Stockholders	1940	1950
Total Yardage	No Evidence	No Evidence		'30 No Evidence	'40 322,769 yds.	'50 No Evidence
				'31 No Evidence	'41 435,361 yds.	'51 Not Listed
			'27 333,075 yds.	'32 No Evidence	'42 481,482 yds.	'52 Not Listed
			'29 Not Listed	'33 228,887 yds.	'43 488,508 yds.	'53 Not Listed
				'34 356,307 yds.	'44 526,084 yds.	'54 287,245 yds.
				'35 386,620 yds.	'45 491,219 yds.	'55 299,250 yds.
				'36 337,717 yds.	'46 596,374 yds.	'56 349,608 yds.
				'37 302,658 yds.	'47 255,685 yds.	'57 No Evidence
				'38 339,441 yds.	'48 No Evidence	'58 No Evidence
				'39 390,814 yds.	'49 367,458 yds.	'59 No Evidence
Piece Goods				'30 No Evidence	'40 248,262 yds.	'50 No Longer Listed
				'31 No Evidence	'41 248,262 yds.	'51
			'27 317,767 yds.	'32 No Evidence	'42 Not Available	'52
			'29 Not Listed	'33 187,559 yds.	'43 257,657 yds.	'53
				'34 323,502 yds.	'44 522,710 yds.	'54
				'35 371,166 yds.	'45 489,710 yds.	'55
				'36 Not Listed	'46 593,814 yds.	'56
				'37 Not Listed	'47 Not Listed	'57
				'38 Not Listed	'48 No Evidence	'58
				'39 Not Listed	'49 Not Listed	'59

Chart 5. Continued.

Manufactured Goods	1900	1910	1920		1930		1940		1950	
			Census of Manufacturer		Minutes Book and Annual Reports to Stockholders					
Blankets					'30	No Evidence	'40	73,178 yds.	'50	No Longer
			'27	15,308 yds.	'31	No Evidence	'41	187,099 yds.	'51	Listed
			'29	Not Listed	'32	No Evidence	'42	Not Available	'52	
					'33	41,328 yds.	'43	230,851 yds.	'53	
					'34	32,805 yds.	'44	3,374 yds.	'54	
					'35	15,454 yds.	'45	1,509 yds.	'55	
					'36	Not Listed	'46	2,560 yds.	'56	
					'37	Not Listed	'47	Not Listed	'57	
					'38	Not Listed	'48	No Evidence	'58	
					'39	Not Listed	'49	Not Listed	'59	

the more profitable miners' cloth." One of the weavers employed at the time of World War I remembered worsted cloth produced up to that time, but not after that period. The Samples Book, 1912-1919 included samples of serge, a worsted cloth. The samples in this book are very beautiful and soft to the touch. They include 12 ounce dress goods, both plain and twill weaves in heather tones; polo cloakings, Melton-like fabric, in vivid colors of red, blue, and green; 24 to 40 ounce Mackinaws in checks, plaids, and solids; Donegal tweeds; Irish frieze; knickerbockers; 12 and 13 ounce cassimere suiting of herringbone twills and small plaids; and 12 ounce Cheviot suiting in twills and small checks.

The 1927 U. S. Department of Commerce Census of Manufacturers report indicated 317,767 yards of woolen cloth were woven, including overcoating, sutings, and flannels; another 15,308 yards of blankets brought the total yardage manufactured to 333,075. The production of cloth at the mill had not been systematically recorded before 1933, when a new accountant, J. L. Edwards, initiated a bookkeeping procedure to do so. Of the 228,887 yards woven that year, 187,559 yards were piece goods which included overcoating, 148,330 yards, the largest single item; cloaking, 51,088 yards; cassimer suiting, 4,777 yards; twist suiting, 4,274 yards; flannel pants cloth, 11,206 yards; cotton warp pants, 2,177; cotton warp cadet, 2,561; cowboy cloth, 3,178 yards, and lastly, tweeds and flannels, only 1,242 yards. The

blanket yardage woven for 1933 was 41,328. For unknown reasons the listing of individual types of cloth was discontinued after 1935 when only cloth and blanket categories were recorded.

In 1941 when World War II began and new machinery was in operation at the mill, production figures rose above 400,000 yards. At this time the War Production Board curtailed civilian production and required manufacturers to increase production for government orders; thus, the Kay mill produced overcoating and blankets for the army in great quantities. For civilian production, however, manager Kay reported in the 1943 stockholders' meeting that they were "working on a program which we have always wanted to try out...to make a better class of goods than the strongly competitive cheap lines on which we were running before the war."

In 1944 total production of over 500,000 yards was reached. Production peaked at 596,374 in 1946 which became "the most successful in the history of the mill," as stated by E. W. Kay in the Annual Report of the President for the Year 1946. Restrictions on civilian production had been eliminated by the end of the war, and heavy buying resulted. The Oregonian (1949) wrote that the Kay Mill manufactured

a variety of soft woollens...to serve a national market. A Texas cutter of athletic warm-up clothes uses this fabric. Bright red cloth for hunting jackets...in Wisconsin. Shirting, mackinaw materials, ladies suiting and coating fabrics, as well as woolen for men's

clothes go to garment factories up and down the Pacific slope.

In 1947 there was a drop in production to 255,685 yards, a figure less than half that of 1946. The president's report on mill operations for 1947 states

This lack of business was caused mainly by the fact that our customers found themselves overstocked in a market where their product was not selling and, consequently, would not buy additional merchandise until they had disposed of their inventories.

Written records become sporadic again after 1947. None is available for 1948; 1949 shows production of 367,458 yards and a new company auditor, L. T. Cain, and new methods of record keeping appear. The next listing of yardage is in 1954 with only 287,245 yards manufactured. The last yardage reported was in 1959 with 299,250 yards. The mill had been experiencing losses regularly by this time. The woolen market in the United States was being inundated with man-made fibers and flooded with cloth from foreign countries as tariffs on manufactured fabrics were lifted.

Management

Positions

Upon the death of his father in 1900, Thomas B. Kay was selected by majority vote of the family controlled stockholders as president of the board of directors and manager of the plant (see chart 6).

Chart 6. Management Positions Held by Family and Non-Family Members at the Thomas Kay Woolen Mill by Decade from 1900 to 1950.

Position		1900		1910		1920		1930		1940		1950	
		Sources of Information											
		Minutes Book and Interviews											
		Family	Non-Fam.	Family	Non-Fam.	Family	Non-Family	Family	Non-Fam.	Family	Non-Family	Family	Non-Fam.
President	Start 1900	T. B. Kay	---	T. B. Kay	---	T. B. Kay	---	'31 Death T. B. Kay	'31 A. N. Bush	'45 E. W. Kay	'44 A. N. Bush	E. W. Kay	---
Manager	1900	T. B. Kay	---	T. B. Kay	---	T. B. Kay	---	'31 E. W. Kay	---	E. W. Kay	---	'53 T. Kay III	---
Assistant Manager	None			Feb. 1918-19 E. W. Kay	Position Ended - Became Salesman								
Superintendent	No Evidence			---	Clarke Raleigh McGregor	---	'23 Change Min. Bk. '26 C. Paige	---	Feb. '37 - C. Paige '37 W. Berry	---	About '43 A. Jones	---	About '53 J. Reid

Fannie Kay Bishop had wanted her son, who had the technical training and interest, to have the opportunity to manage the mill, but T.B. Kay opposed her intentions, and a family rift developed (Roberts, 1977). In April, 1908, T.B. Kay offered to sell the factory to the Bishops, but the sale never materialized. In 1909, the Bishops bought the Pandleton Woolen Mills, instead, launching a separate, independent unit (Lomax, 1974).

The interviewed mill workers only recollections of T.B. Kay were that he came to the mill each morning dressed in a suit and presented a striking appearance. It is not known how much he delegated the operation of the mill to his superintendents, but it must be remembered that he was very actively engaged in high level state business right up to his death. Interestingly, no system of costs had been devised while he was manager. He presented the annual statement to the stockholders in a verbal manner only.

Ercel W. Kay was T.B. Kay's only son, and it was always expected that the mill's operation would pass to Ercel as it had done from Thomas Lister Kay to Thomas B. Kay. Ercel had worked at the mill as a youngster; the timebook from the wool warehouse shows the entry of Ercel Kay during the summer of 1906. The Minutes Book entry of June 7, 1917 showed that Ercel W. Kay was elected to fill a position on the board of directors which Squire Farrar had held before his death. In February, 1918 the position of assistant manager

was created and was filled by Ercel Kay. In that same year Ercel Kay married Eleanor Fellows, and in 1923 they had an only child, Thomas Kay III. In August, 1919 the position of assistant manager was eliminated, and Ercel was to assist in the selling end of the business.

The mill was not what Ercel wished to do for his life's work, according to his wife. The demands of manufacturing did not suit his more private disposition. His physician recommended more out-of-door, serene activity. Since he was very much a sportsman and loved golf, he formed the Salem Golf Course in 1929, and this became his prime interest. Much of the physical work necessary to the development of the land used for the golf-links was handled by Kay himself. When the depression hit, both the mill and the golf course were economically threatened.

On May 9, 1931, a week after T.B. Kay's death, a special meeting of the board of directors was called for the purpose of electing a new president. Ercel Kay made a motion that A.N. Bush of U.S. National Bank of Portland (Ladd & Bush Branch in Salem) be elected president. The motion carried. When his own name was mentioned for manager, Ercel stated that he would be able to give only half of his time to the operation of the mill. Nevertheless, he was elected at a salary of \$112.50 per month.

Ercel Kay's managerial duties are first reported in the Minutes

Book on August, 1931 when he related to the board of directors his opinions concerning a trip to Minneapolis.

It is good for someone from the mill to call on the wholesale trade often. It puts the company in closer touch with their requirements and creates a more friendly feeling.

In October he asked for authority to buy a cloth dryer and a double acting napper, two pieces of equipment which were badly needed. In December he called the directors' attention to the poor condition of the building occupied for offices, and was asked to secure an estimate for a new office building. In 1932 when the financial report showed a loss of almost \$20,000, plans for a new office were postponed. At the annual stockholders' meeting on January, 1934, Kay announced a profit of over \$10,000 for the year 1933, even with an almost 50% advance in labor costs due to the National Recovery Administration's reduction in the work week to 40 hours. Mill workers reported in interviews that they changed from two 10-hour shifts to three 8-hour shifts. They continued on an hourly rate, except for spinners and weavers who were paid by piecework. At a board of directors' meeting the following March, 1934, Kay asked to borrow \$25,000 from the bank (Ladd & Bush) to cover the cost of stock for increased orders. He reported in April that banking regulations required security on loans of this size, and he was instructed to execute a contract with Haslett Warehouse Company of San Francisco for the purpose of issuing bonded

warehouse receipts. This service, of course, added to the increasing costs of mill operations.

In January 1935, Kay reported the year of 1934 as one of economic setback with strikes, reduction in merchandise prices, and increases in raw materials contributing to a loss of almost \$20,000. At the May meeting of the board of directors Kay reported that the company was going further behind, and that if the mill was going to compete, it would be necessary to improve machinery. He requested the services of an experienced mill man, Wm. F. Scott, to check the mill's efficiency. At this same board of directors' meeting, Kay reported that the mill had entered into an agreement with L. F. Dommerich Co. to factor the accounts sold through S. Merrill Company of Minneapolis. This provided the company with cash for working capital, but since the accounts were sold at a discount, it also reduced the mill's profits from its better accounts.

In August 1935, after the efficiency report was presented, Kay suggested two courses of action to the board of directors, either liquidate assets to pay debts or add improved machinery. The matter was taken to the stockholders for consideration. There a resolution was passed to liquidate or sell the business and plant of the Thomas Kay Woolen Mill. This resolution was taken back to the board of directors in September, and there it was voted to sell the plant and business. After this the Minutes Book does not indicate any actual

buyer for the mill, and the resolution is not mentioned again.

At the annual stockholders' meeting in January, 1936, a profit of almost \$28,000 was announced, but because of the policy of not booking orders more than three months in advance, the mill had not been running full time, and Kay warned the stockholders not to anticipate a good year. A board of directors' meeting the following November was called to determine if a dividend should be declared out of the profits for 1936, and the dividend did materialize. It had been a consistent policy of the company directors in the past to declare such dividends when a profit resulted in any given year to avoid paying higher undivided profits taxes. The resulting problem was that there was no available cash for capital improvements which Kay felt were so desperately needed. Dividends, however, were declared for the year of 1936, as mentioned, and the problem of depleting working capital was left unresolved.

At the annual stockholders' meeting in February, 1938, an announcement was made by Kay that a new superintendent, Wilbur Berry, had been hired and that there was less friction and more cooperation among the mill workers. A used carding machine purchased in 1937 was helping to handle orders better, also.

At the 1939 stockholders' meeting Kay asked for needed machinery. By the following year February, 1940, Kay said that it would be absolutely necessary to proceed with modernization plans if they

were going to compete with mills which had modern machinery. In January 1941, Kay had the accountant, James L. Edwards, present an analysis of comparative operations between 1933-1938 in an effort to secure financing for his proposed modernization plan. A loan was secured from U. S. National Bank of Portland which eventually totalled over \$75,000, but there are no available records to confirm its exact date and amount. A bill of sale of the Thomas Kay Woolen Mill to the United States National Bank of Portland dated July 16, 1941 is thought to have served as security for the loan.

By 1943 Ercel Kay reported to the stockholders the policy of trying to increase sales on the Pacific coast, as well as that of producing a better grade of cloth. In 1945 the report on mill operations was signed E. W. Kay, President, as A. N. Bush no longer occupied this position. In this report Kay stated that the policy of increasing sales on the Pacific coast was very satisfactory, and the Kay Mill was continuing to sell the better grade of cloth. In February, 1947 the Pacific coast market had worked out so well that the Kay Mill withdrew from all Eastern markets with the exception of a few of their oldest and most desirable customers in the Midwest, retained as an insurance against a shortage of business. A reversal of this policy was reported for the year 1947, which indicated an effort to get back in the good graces of the Midwest cutters. Management did not feel it could compete in the East because of the freight rates. There are no

more annual reports to the stockholder after 1947. The remaining records are merely financial statements with no descriptions.

Thomas Kay III, Ercel's son, became plant manager in 1953 after his military service in the Korean War. He, too, had worked at the mill during the summer months as a youngster, even though his mother related that he was just as likely to be asleep on the wool bales as on the job. Many of the workers indicated a real fondness for him because he made himself available and was often seen in the mill itself. Tom liked manufacturing woolens; he found it exciting and rewarding. He had a warm feeling toward the mill. The family roots were firmly interwoven with the mill and Tom sensed that commitment. Since there are no minutes books available for the 1950's, there is no written evidence of his experience in the position of manager.

The management position of plant superintendent changed hands in 1923 according to the Minutes Book, but no name was given. In 1926 Chester Paige was hired by T. B. Kay through a technical employment agency in the East. Paige left in 1937 and was replaced by Wilbur Berry, who was described by the mill workers as a knowledgeable textile man. Berry remained until about 1943 when Arthur Jones became superintendent. He was described by Ercel Kay in the Minutes Book as being an expert on suitings. John Reid, the son of the boss dyer, assumed the position of superintendent in about

1953, and kept it until the close of the mill. He said that his textile experience was gained through correspondence school coupled with on-the-job training he had acquired as worker at the Thomas Kay Woolen Mill.

Financial Status

At the time of the earliest records in 1912, the Thomas Kay Woolen Mill showed a substantial profit (see Chart 7). The peak in that decade was 1918, a year of government contracts with a profit of over \$86,000. In the early 1920's the profits fluctuated between \$32,000 and \$65,000, but fell in 1924 to less than \$4,000. Profits did not rise above \$29,000 in the following years of that decade, and 1930 showed a \$35,000 loss. A "very nice gain" of undetermined amount was reported in the Minutes Book in 1931, but in 1932, a loss of almost \$20,000 was listed. Through the rest of the thirties, the financial status of the mill vascillated between profits and losses. The 1940 profit of under \$5,000 increased tenfold in 1941 to almost \$54,000 as war production began to rise substantially, until profits peaked at almost \$182,000 in 1946. The year 1947 brought a drop to \$20,000 and 1949 showed less than \$8,000 profit. The first half of the 1950's showed a loss every year. The years 1955 in which profits of over \$29,000 were reported, and 1956 in which profits dropped to \$20,000, were the last years that dollar figures were available.

Chart 7. Financial Status of Thomas Kay Woolen Mill by Decade from 1900 to 1950, Data Based on Annual Statements and Reports and Minutes Book.

Financial Status	1900	1910	1920	1930	1940	1950
		\$	\$	\$	\$	\$
Profit/Loss (P) (L)	No Evidence	'10 No Evidence	'20 P 48,664.70	'30 L 35,304.68	'40 P 4,904.36	'50 No Evidence
		'11 No Evidence	'21 P 32,500.46	'31 "Very nice gain"	'41 P 53,554.76	'51 L 44,701.12
		'12 P 35,158.54	'22 P 65,913.62	'32 L 19,485.27	'42 P 74,328.00	'52 L 110,035.78
		'13 P 40,142.08	'23 P 34,474.09	'33 P 10,244.14	'43 P 73,760.73	'53 L 52,421.84
		'14 P 25,974.25	'24 P 4,675.58	'34 L 19,646.55	'44 P 113,783.36	'54 L 12,812.66
		'15 No Evidence	'25 P 20,683.78	'35 P 27,689.00	'45 P 107,099.93	'55 P 28,655.70
		'16 No Evidence	'26 P 27,617.34	'36 P 34,799.95	'46 P 181,658.16	'56 P 20,613.88
		'17 P 18,008.14	'27 P 28,842.24	'37 L 5,450.00	'47 P 20,317.18	'57 No Evidence
		'18 P 86,356.86	'28 Error in Reporting	'38 No Evidence	'48 No Evidence	'58 No Evidence
		'19 P 31,455.57	'29 P 4,726.00	'39 P 10,913.65	'49 P 7,457.13	'59 No Evidence

Organizational Systems

No records of any bookkeeping system used at the turn of the century were available (see Chart 8). In 1912 an annual statement of the Thomas Kay Woolen Mill appeared, but it was very meager and merely contained a listing of figures for assets and liabilities. This method of reporting continued basically until 1933, when the new auditor, James L. Edwards, initiated a more detailed method of recording the financial situation of the mill. This included a balance sheet of assets, liabilities, and capital, a profit and loss statement, comparative inventories and cost to manufacture, and cost of goods sold. It should be noted that this detailed method of record keeping was initiated after T. B. Kay's death, when A. N. Bush became the president of the board of directors.

Included in the records listed above was the reporting of the net cost of finished goods manufactured by the yard. The cost in 1933 was \$1.132 per yard, in 1934, \$1.039 per yard, and in 1935, \$1.17 per yard. The Scott efficiency report of 1935 stated that investigation of the mill disclosed that

There was no system of costs showing the efficiency of operations. The office has no records of layouts or costs of any of the fabrics made. The superintendent has all of this data in a very crude, unsystematic way and puts prices on the goods with no check from any of the officers.

Chart 8. Organizational Systems in Use by Management at the Thomas Kay Woolen Mill by Decades from 1900 to 1950.

Organizational System	1900	1910	1920	1930	1940	1950
	Sources of Information					
	Annual Statements and Reports and Minutes Book					
Bookkeeping System	No Evidence	'12	'20-'29	'30-'32 '33 New Auditor (Edwards)	'49 New Auditor (Cain)	'55 New Auditor (Larson)
Systems of Costs	None	None	None	Initiated		
Net Cost of Finished				'33 \$1, 132	'40 \$1, 20	'50 No Evidence
Goods Manufactured				'34 1, 039	'41 1, 62	'51 No Evidence
Per Yard				'35 1, 17	'42 No Evidence	'52 Not Listed
				'36 Not Listed	'43 2, 217	'53 Not Listed
				'37 Not Listed	'44 1, 716	'54 \$2, 48
				'38 No Evidence	'45 1, 747	'55 2, 51
				'39 Not Listed	'46 1, 60	'56 Not Listed
					'47 1, 89	'57 No Evidence
					'48 No Evidence	'58 No Evidence
					'49 1, 883	'59 No Evidence

The four years following the efficiency report do not list the net cost of finished goods manufactured per yard. In 1940 this method was resumed, and cost per yard was \$1.20; in 1941, \$1.60. The highest cost per yard occurred in 1943 at \$2.217. It decreased to \$1.60 in 1946, the year of highest profits at the mill. The cost per yard increased to \$1.89 in 1947 as labor costs rose. In 1954 when information on cost per yard was again available, it had risen to \$2.48, and in 1955 to \$2.51. This is the last year when the data on cost per yard could be found.

National Developments

Profits for the war year 1918 were more than double any previously recorded year. World War II increased military consumption and affected civilian consumption during prewar 1941 to postwar 1946 (see Chart 9). During all those years, profits were the highest they had ever been with a peak of almost \$182,000 in 1946.

The Thomas Kay Woolen Mill was affected by World War II in other ways besides profits. Production was regulated by the War Production Board, the draft status of the workers was affected, and the purchase of improved machinery was slowed as was that of a badly needed boiler. Dyes were difficult to secure, since they had been previously imported from Europe. Wages had been frozen at a

Chart 9. National Developments that Affected the Management of the Thomas Kay Woolen Mill by Decade from 1900 to 1950.

National Development	1900	1910	1920	1930	1940	1950
War		'17 W. W. I U. S. Gov't Contracts			'41 W. W. II War Production Board Controls Production Value of Goods Produced <u>Army</u> <u>Civilian</u> '43 \$861,447 \$326,859 '44 \$ 52,840 \$1,012,477 '45 \$195,040 \$814,903	'51 Korean U. S. Gov't Contracts
Legislation		'13 16th Amendment		'33 National Industrial Recovery Act Collective Bargaining '38 Fair Labor Standard Act Minimum Wage Guidelines Banned Child Labor '35 Social Security Act Tax on Labor and Mgt.		Protective Tariffs Reduced '54 Japanese Imports Increase in Volume
Depression				'34 Heavy Losses Mill Closure Voted		
Technological, Industrial				Development of Automatic Looms & Labor-Saving Textile Machinery		Man-Made Fibers Compete with Wool Post-War Move- ment of Textile Industry to the South

low rate by the War Labor Board, which made it difficult for the woolen mill to keep its help.

Legislation affected the mill's management in a variety of ways over the years. In 1913 the sixteenth amendment to the Constitution of the United States brought with it the responsibility of income tax. The National Industrial Recovery Act of 1933, which gave the right to collective bargaining to unions, opened the door for the mill workers to choose a union if they desired. The Social Security Act of 1933 required employers to pay old-age benefit taxes, which in turn, increased labor costs. In 1934, the Minutes Book stated that the National Recovery Administration, created under the NIRA, limited the work week to forty hours. The NRA was later declared unconstitutional by the Supreme Court in 1935, but the hours worked per week at the mill remained forty. The Fair Labor Standards Act of 1938 established guidelines for minimum wages and a maximum work week of 44 hours. It also established a minimum age of 16 years. In 1939 the Wool Products Labeling Act required that manufactured wool products must have their fiber content specified as new, reprocessed, or reused wool. In the 1950's protective tariffs had been reduced and the United States experienced a flood of imported fabrics.

The depression of the thirties seriously affected the management of the mill. Losses were so great that there were steps taken to sell the mill. Workers' wages were cut and they were forced to

sell the mill. Workers' wages were cut and they were forced to work fewer hours. In 1934 they went out on strike, and elected to join the union in an effort to deal with management. The union did succeed in increasing wages which meant higher labor costs for management to handle.

Technological developments began to affect the management of the mill during the late thirties. Advanced textile machinery was being developed (Rainnie, 1965), and it became more difficult for this small mill with antiquated machinery to compete with newer and larger mills. It became the constant request of the manager to secure new machinery. When installed during the 1940's, production did increase. Since the machines were more automatic than the old machinery, they required fewer people to operate them. Man-made fibers were introduced in the 1950's, and the demand for woolen cloth was reduced. Orders for woolen cloth simply were not placed as they had been in the past, according to Tom Kay III (1977).

The postwar movement of the textile industry to the low-paying, non-union South was another development that occurred in the United States. It became difficult for management to compete with the keenly competitive prices Southern mills were able to offer cutters.

Labor

When Thomas Lister Kay built a woolen mill in the capital city of Salem, Oregon, he reestablished a means whereby Salem's pioneer woolen industry could flourish in the Willamette Valley. In so doing, many Oregonians, Americans from other states, and European immigrants were converted from farmers, homemakers, and craftsmen into urban industrial workers of the textile industry.

The textile industry of the later 19th century had become very competitive and manufacturers were forced to exploit labor in order to succeed. The Merrimack Valley Textile Museum publication (1965) states:

In smaller woolen mills scattered throughout America, where mill owners lived and worked alongside their employees, the results of technology and factory organization were less harsh.

The Kays did live and work alongside their employees at their small mill and continued to maintain family control up until the time the mill was closed in 1959. Judging from the workers' very positive attitude towards the Kays, as expressed in interviews, they were decent people for whom to work.

Age

The employment of children in textile mills throughout the country was a common thing at the turn of the century. (Merrimack Valley Textile Museum, 1965). At the Kay mill ten year old boys

were hired for ten hours work at five cents per hour (see Chart 10). They served in such capacities as bobbin boys and "handler-ins" (of the warp thread to the warp dressers). During the 1920's the starting age of mill workers was in the early teens. By 1938, the minimum age for full time employment in the United States became 16 years. This had become the pattern at the Kay mill by then, also.

Number of Employees

Written mill records indicating the total number of workers employed were not available. The Oregon Statesman, 1902 lists the number of employees as between 110 and 115. The Minutes Book, July 31, 1907 entry refers to labor as "being scarce and hard to hold," which curtailed output. The Oregon Statesman, 1916 printed the number of workers hired by Salem employers as compiled by the Salem Community Club. This showed the Thomas Kay Woolen Mill employed 125 people. Only the Spaulding Lumber Company with 175 employees topped the woolen mill's figures in the industrial category. In January 1918 the Oregon Statesman listed the number of employees as 130. World War II resulted in a severe shortage of skilled help, as more workers were needed to meet the increased demands created by government contracts, and the mill workers could earn higher wages in other industries essential to the war effort. The report on mill operation for 1943 indicates an "extremely heavy turnover (70%)

Chart 10. Personal Characteristics and Work-Related Aspects Among Laborers at the Thomas Kay Woolen Mill by Decade from 1900 to 1950. Data Based on Employee Interviews.

Personal Characteristics and Work-Related Aspects		1900	1910	1920	1930	1940	1950
Age		10 yrs. & Up	Same	15-16 yrs.	'38 Minimum Age 16 yrs.	Same	Same
Number		'02 110-115 '07 Labor Scarce	'10 130 '16 125 '18 130			'41-'45 Increased '48 115	
Sex							
Women: Type of Job		No Evidence	Spoolers Loom Dressers Weavers Finishing	Same	Kept on Work During Depression Era	W. W. II - Many Hired as Extra Help	Spoolers Loom Dressers Not Weavers Finishing
Men							
Family Background		European Immigrants Out-of-State Local Farmers Local Townspeople	Same and Descendents	Willamette Valley Residents (Descendents of Earlier Peoples) Other	Same	Same	Same
Kinship Bonds	Considerable Family Membership	Same		Same	Same	War Offered Jobs Elsewhere	Less as Retirement, Death Occurred
Technical Training							
Superintendent		No Evidence	No Evidence	Hired Through Nat'l Emp. Agency	Same	Same	Up From Ranks
Bosses		Previous Training	Previous Training	Up From Ranks	Up From Ranks	Up From Ranks	Up From Ranks
Laborers		No Evidence	Primarily On-The- Job	Same	Same	Same	Same
Hours, Days/Weeks		10 Hrs. Min. 6 Days/Wk. 2 Shifts	Same	'27 Census of Manufacturers Women 48/Wk. Men 50/Wk.	'33 (NIRA) 40/Wk. 5 Days 3 Shifts Hrs. Reduced During Depression	40 Hrs. Paid Overtime '49 1 Shift and Part of Night Shift	Same

Chart 10. Continued.

Personal Characteristics and Work-Related Aspects	1900	1910	1920	1930	1940	1950
Wages (Common Rate Per Hour)	'03 15¢ Traditional Low Wages of Textile Industry	'10 20¢	'20's 37 1/2 to 40¢	'31 32 1/2 to 35¢ '32 Records Not Available After This Post 1934 Raised by Union	Pre-War: Par with Local Industry '42-'45 Wages Frozen by War Labor Board '46 7 1/2¢/Hr. Raise Bonus 12 1/2¢/Hr.	Lower Than Local Industries
Benefits						
Life Insurance (Group)						
Retirement	None	None	None	None	None	None
Social Security	None	None	None	1933 Initiated	Yes	Yes
Vacations	Annual 4th of July Shutdown	Same	Same	Same	'45/week/pay '46 1 week/2 week pay After 5 Yrs.	Same
Working Conditions						
Lighting	Plain Drop Inadequate for Some	Same	Same	Same	Fluorescents Replaced	Same
Floors - Slippery	For Some	Same	Same	Same	Same	Same
Restroom Facilities	M+W Outside, Unheated On Sewer	Same	Same	Same	Indoors	Indoors
Heat	Steam	Same	Same	Same	Same	Same
Accidents				Efficiency Report Said High		
Death	No Evidence	No Evidence	No Evidence	Killed in Shaft	None	None
Loss of Fingers	No Evidence	No Evidence	Occasionally	Same	Same	Same
Injuries - Other	No Evidence	No Evidence	Occasionally	Same	Same	Same
Union Activities						
Strikes	---	---	---	Sept. 5 '34 - 3 week	'40 - 2 week Prohibited By War Labor Board	Threatened but Negotiated
Social Activities			Picnics	Picnics, Baseball Teams, Horseshoes, Volleyball		

which made capacity production impossible." This was a common situation all employers had to face, the report continued.

Some part of the turnover might have been avoided if we could have had an increase in wages approved by the War Labor Board at an earlier date than September, as our employees needed to go no farther than across the street to get jobs at considerable [sic] higher pay.

The report on mill operations for the year 1944 stated

The turnover of employees was terrific and made for inefficiency. We tried to remedy the condition by offering to put in [effect] the U. S. Treasury's bonus plan in which no employee could participate until he had been in the mill three years. This plan which called for putting a set percentage of gross profits in a trust fund could easily have amounted to several thousand dollars for each employee, but was turned down unanimously in favor of a \$25 bonus.

The Capital Journal, 1949 report that the mill employed 115 people and operated on full-shift and part of a night shift indicated a return to the 1902 figure of employees hired. The mill had not proved to be an increasing source of employment to the Willamette Valley residents as envisioned by the residents when the mill began in 1889.

Sex

Photos taken during the decade of 1910 indicate that there were numerous women employed at the Thomas Kay Woolen Mill. Historically, great numbers of women worked for low wages at textile mills (Merrimack Valley Textile Museum, 1965). The mill workers

of this era said that at the Kay mill women were often weavers and loom dressers, as well as performing the less-skilled jobs of finishing such as burling and mending. The early photos indicate some interesting points in regard to women's attire worn at the mill. In one 1917 photo, the "overall girls," as they were nicknamed by a fellow worker, lined up as a group displaying that since they were doing "men's work" during the wartime, they were going to wear men's clothing (see Figure 50). A photo taken around 1926 showed a number of women wearing black sateen dresses. One woman in the photo related that this type of dress was serviceable in that it hid the numerous dark oil stains that were unavoidable when working around the heavily lubricated machinery (see Figure 51).

In the depression era women were not removed from their jobs as jobs became more scarce, but did experience the same deduction of working hours as did men.

World War II was a period in which many women worked at the mill. Even though men were draft exempted during the war because mill work was classified as essential to the war effort, better wages available in other industries such as ship-building in Portland, siphoned off many of the regular male mill workers. Women, whose husbands were in the armed services, helped to fill the need. After the war women continued to work at the mill, but not as weavers on the new automatic looms. They functioned as spoolers and loom



Figure 50. The "overall girls" at the Thomas Kay Woolen Mill about 1917.



Figure 51. Women workers wearing black sateen dresses at Thomas Kay Woolen Mill around 1926.

dressers in the finishing room, and in the sorting of rags for shoddy.

Family Background

The mill workers interviewed indicated a variety of family origins. Those working during the early years of the 1900's came from England, Sweden, and Germany. Many midwestern farmers migrated West to Oregon. Some mill workers originated locally from townspeople and farmers.

The Oregon Statesman, 1918 related

It has been a policy of both father and son (Thomas Lister and Thomas B. Kay) not only to pay the highest rates for Oregon and California wools, but...to keep the mills running all year round and employ Salem men and women as far as possible.

This was the general policy which existed until the mill closed.

Kinship Bonds Among Workers

The mill had many employees who were kin to each other, and who had followed in their parents' occupations by working at the mill. The Donaldsons and the Allports were related, as well as the Mentzers and the Prinzes. Lehman and Seamster were families with a large number of people employed at the mill. Several members of the following families also worked at the mill over the years: Boedigheimer, Brooks, Bush, Pero, Pickens, Picha, and Reid.

Technical Training

A newspaper article in the Oregon Statesman, 1917 noted

A factor which is against the development of a wool manufacturing industry in Oregon is the lack of expert workmen, in the opinion of T. B. Kay.

All of the workers interviewed stated that they received on-the-job training. Relatives or fellow workers were their teachers. The duration of training lasted about one week. The novice, who spun or wove, was paid by the "draw" or by piecework, and would be expected to pay back the wages lost to the person training him. The wages he earned the first week after training would go to the skilled person who initiated him to the job. A number of the department "bosses" had received their training in this manner and had worked themselves up to the higher levels.

Hours, Days Per Week

Timebooks from the 1900's as well as personal interviews indicate that workers put in at least sixty hours per week. Two shifts operated even during the depression when workers only worked two or three days each.

The 1927 Census of Manufacturers report indicated that women worked about 48 hours per week, and men 50 hours per week. As previously mentioned, in 1933 the NRA codes reduced the workers'

hours to forty per week. This led to the introduction of three shifts for departments such as carding and spinning which took more time to keep ahead of orders than other departments, "because the number of cards and mules are badly out of balance with looms" (Scott efficiency report, 1935). President Roosevelt's New Deal legislation had affected the duration of the work week throughout the entire nation, and thus had raised the labor costs of all manufacturing.

Wages

Wages entered in the dyehouse timebook of 1896 showed varying daily rates from fifty cents, one dollar, one dollar and twenty-five cents and three dollars (the boss dyer) for a ten hour day. In 1903 rates of one dollar and fifty cents per day or fifteen cents per hour appeared as the most common wage in the dye house with some people working eleven and twelve hours per day. By November, 1905 the boss dyer earned the top rate of five dollars per day. By 1910 rates of twenty cents per hour were common with the other workers in the dye house. The rates remained fairly constant through that decade. The 1920's showed 37 1/2 and 40 cents per hour as common wages. In 1930 the rates are similar to the previous decade, but by 1931, the wages had dropped back to lower figures of 32 1/2 and 35 cents per hour. This verified the drop in wages proposed in the Minutes Book by T. B. Kay in an effort to continue the operation

of the mill. The annual report for 1933 indicated a 47 1/2% advance in labor costs during that year. After this period there were no more time books kept by the individual department heads. The Minutes Book, however, reports two increases in wages in 1937 with no serious labor trouble.

According to the mill workers, wages at the mill were always considered "good" and comparable with other Salem wages up to the pre-war period. However, by 1942 the mill employees had not received a recent wage increase before wages were frozen at the lower rate by the War Labor Board. Effective April 1, 1946, a pay increase of 7 1/2 cents per hour was granted to all employees, and effective October 15, 1946 a 12 1/2 cents per hour bonus allowance was granted all employees according to a report of a special Board of Directors meeting held December 24, 1946. These increases did not bring wages to a competitive level with other industry wages after the war. The mill began to experience financial problems and management was unable to increase wages as they would have liked, according to Tom Kay III (1977).

Benefits

In 1931 the Minutes Book refers to the "matter of continuing the Metropolitan Life Insurance for the employees for which the

company pays a percentage." The employees did report that they had life insurance through the company.

There never was a retirement income provided by the mill, but Social Security was provided nationally in 1933.

Holidays with pay were reported in the 1945 president's annual report to the stockholders. Vacations were introduced through the union in 1945. In 1946 the union contract (Working Agreement, 1947) was amended to state that "employees are entitled to one week's vacation with straight pay after one year's continuous service, and one week's vacation with two weeks straight pay after five years of continuous service."

Working Conditions

Inadequate lighting was a problem for some mill workers. When the tree leaves which accumulated in the millrace cluttered the grates near the water turbine, the mill's electricity would dim; it was time to go and rake out the leaves. The lighting was improved when flourescent lights replaced many of the plain drop bulbs with shades.

The floors were slippery from the continuous throwout of oil from machines which were oiled as frequently as every few hours. Some mill hands kidded that the floors were slippery because of the

chewing tobacco spit by those workers who "chewed" because of no smoking fire regulations.

Toilet facilities changed from an outhouse and unheated stalls for men and women outside the mill to heated facilities built inside the main building. This was the result of union demands sometime after the union contracts began in 1934, but before the 1937 installation of the fourth carding machine. The rest rooms were located in the new addition.

The mill was heated by steam heat which was very comfortable for some people, inadequate for others. The mill was described by other employees as "always too hot in the summer, and too cold in the winter."

Accidents

The Scott efficiency report of 1935 stated, "The mill accident rate has increased to a figure that should require study." The recollection of mill workers differed; individually, they remember few accidents.

In the 1930's a mill hand had been killed in the dyehouse when his woolen acid-protective apron caught in the pulley. He was carried up to the main shaft and killed. The accident had occurred during the lunch hour when no one was with him to be of help.

The card room was a place where accidents occurred with more frequency than any other department. Hands would get caught in the cards and lost fingers and injured arms resulted. There were some guards on the carding machines, but workers sometimes lifted them. The workers interviewed seemed to think that if one were careful, accidents would not occur. By today's standards, however, the old machinery would be considered hazardous, according to the same mill workers.

Other types of accidents included a fractured leg which resulted when a slippery, wet reel was being replaced by the mill wright. A head injury occurred to another man when the spools from the second floor of the mill were being lowered down below to the first floor, and fell on him. A woman's hair entangled in the moving parts of the head of the loom. Another woman's skirt caught in a pulley, but she was unhurt. A man lost an eye in the dyehouse because of acid used there.

Union Activities

On September 5, 1934 a textile strike was called at the Kay Mill and lasted for three weeks. The Minutes Book claimed it as the worst setback during that difficult year.

Local #2090 of the United Textile Workers of America, affiliated with the American Federation of Labor was voted in by the employees

after the textile strike of 1934. There were varying opinions concerning the union. A number of employees opposed the union. Some workers felt a union was necessary, otherwise the worker was at the mercy of mill management, and would be forced to take cuts in wages and to work long hours as had occurred in the past. Other workers agreed with the idea of a union, but doubted its effectiveness at this particular small mill. There were those mill hands who eventually felt that the union had gone too far in its demands, and called unpopular strikes at the urging of outside union instigators. Others believed that the union was not strong enough in its demands from management.

Relations with labor apparently were favorable in 1938 since the Minutes Book reported no labor troubles. A new superintendent had replaced Chester Paige in 1937, which seemed to improve relations greatly. In 1940 labor troubles over a union shop surfaced and a two week strike ensued. At that time management promised to draw up a profit sharing plan, which it did in 1943, but as mentioned previously, the laborers voted against it in favor of a small immediate bonus. In 1946 the union did secure a pay increase, and a bonus allowance was granted to all employees who worked during that most profitable of all years at the Thomas Kay Woolen Mill.

By the 1950's some employees felt that the union dues were a waste of money, because they couldn't increase wages at this mill,

since management was experiencing losses. They believed that the union sought minor concessions from management in order to appear effective.

Social Activities

The Kay Mill workers had a good baseball team during the thirties, and competed against other local teams. The cloth for their uniforms was woven at the mill. One of the mill workers still has his uniform. The game of horseshoes was a special favorite of many of the men, and the mill hands even constructed a horseshoe shed on the grounds, where they played during their lunch hours. Volleyball was also a popular sport.

In addition to sports, picnics were enjoyed by the mill employees. Family participation was common.

During lunch hours mill workers occupied themselves with a variety of activities, such as tug-of-war across the mill race with weaving room workers pitted against the spinning room crew, for example. For fun, men sometimes wrestled and engaged in physical rough house. In earlier years the young boys would play and swim in the mill race. On Saturday afternoons when the dye vats had been emptied, some of the workers would fill the giant tubs and enjoy a community bath. Fun found its way among the people who worked side-by-side.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Conclusions

The following conclusions concern the four categories of the Kay family, production, management, and labor.

Kay Family

Little did Elizabeth Lister Kaye, whose x mark appears on a certified copy of birth for a boy, or her husband, Isaiah Kaye, clothier, realized that their son would play a significant part in the establishment of what became an institution during the industrial development of the United States. Thomas Lister Kay, at the height of his career, brought a woolen mill to the capital city of Salem, Oregon, in 1889, and reestablished a means whereby Salem's pioneer industry could flourish in the Willamette Valley.

Thomas Lister Kay reared a family whose members were actively interested in the affairs of Oregon government. They contributed to their Oregon community in a political capacity, as well as in the economic way which woolen manufacturing allowed. The Kays' ability and leadership must have been recognized by fellow Oregonians who elected them to many state offices.

The Kay family maintained a textile heritage as some members continued in the manufacture of cloth which earned an international reputation for excellence.

Production

The two and one-half story design of the main building coupled with separate smaller buildings made woolen manufacturing a more labor-intensive, time-consuming operation at the Thomas Kay Woolen Mill than necessary. An efficient continuous flow of operations was not possible in the building designed on the principle of gravity production flow. The building stands as a tombstone for an industry that does not operate as it did in the 19th century when cheap labor was plentiful and thus available for frequent handling of the goods during the manufacturing process.

Very little change in machinery occurred up to 1935 when the Scott Efficiency Report disclosed the inadequacies and listed recommendations for improvement. It wasn't until the 1940's that a modernization plan was undertaken by the company. At that time, up-to-date textile machinery was ordered, but delivery was slowed by the war effort. Production was dramatically increased to meet the wartime demands which proved the efficiency of the new machinery.

The Thomas Kay Woolen Mill relied heavily on the use of coarse local valley wool in the manufacture of woolen cloth. The mill also used a great quantity of shoddy. Success in manufacturing, thus, required skill in the blending of the coarse wool and the reprocessed and reused wool.

The Thomas Kay Woolen Mill evolved as a mill that specialized in the keenly competitive manufacture of less expensive outerwear cloth and blankets. This resulted from the use of coarse Valley wool and shoddy and from the ability of the mill to produce this type of cloth given its limited working capital, its small size, and the minimum technical training required.

Management

Conclusions concerning policy for the period when T. B. Kay was manager of the mill are severely limited by the lack of written records.

When Ercel Kay became manager of the mill in 1931, the United States was experiencing a severe economic depression. The company did survive that era, and because of Ercel Kay's continued efforts, engaged in a modernization program. This enabled the Thomas Kay Woolen Mill to greatly increase production during the war years and tremendous profits resulted. After the war-induced demand ended, the company experienced large losses.

There are meager written records again for the period of the late forties until the mill closed in 1959, but interviews provided some additional knowledge of the period. It was concluded that the mill closed because the market for low to moderate cost woolen goods had been eroded by the demand for man-made fabrics and by the competition of inexpensive foreign imports. Management no longer chose to continue in this competitive market, as it saw labor costs on the rise nationally except in the South and realized the limitations of its historic facilities.

Labor

The Thomas Kay Woolen Mill created a unique environment for the workers in that it was family controlled even up to its closing date in 1959, and the workers knew their employer on a friendly basis. Historically, however, the mill hands worked in an industry that didn't view laborers as people, but rather as a cost. The mill workers received low income for jobs which required skill. They were often born into the trade and consigned themselves to jobs which could never give them good income. It was a type of bondage in which security was traded for service poorly rewarded financially.

Strong kinship links among employees were evident; many of the people operating the machines had followed in their parents' occupation.

A prevailing spirit of comraderie existed among the employees of the Thomas Kay Woolen Mill. The mill hands generally seemed to be compatible with one another. They liked working at the mill and felt as if they all had a part in its continued operation. Many workers were disappointed when the mill did close, but seemed to understand the reasons for management's decision.

Discussion

The story of the rise and fall of the Thomas Kay Woolen Mill appears to be a story of the incline and decline of management. The evidence presented heretofore provided some clues as to why this mill closed, but other woolen mills in the Willamette Valley did survive. Why, then, did the Kay mill close?

When the mill started in 1889, founder, Thomas Lister Kay possessed the technical knowledge and managerial ability to command the mill's operations successfully.

Thomas B. Kay, a strong-willed individual, managed the mill from 1900 to his death in 1931. This 31 year period constituted the longest single managerial span of the mill. It appears to have been a period of gradual decline since Thomas B. Kay permitted little reinvestment of profits into the mill and declared annual dividends. The deteriorating condition of the buildings and equipment received only minimal updating. Thomas B. Kay may have

devoted so much time and energy to politics that little time was left for aggressive and creative management of the mill.

Ercel Kay managed the mill reluctantly and seemingly against his own inclinations and desires. When elected manager of the mill, however, he guided the mill into a sound competitive position in the industry. Judging from the vote of the stockholders to sell the mill in the mid thirties, it appears as if he did not have much support for his attempt to modernize the mill. Although Ercel Kay was himself untrained in textile manufacturing, he was wise enough to hire qualified personnel. World War II economically saved the mill and provided profits which allowed modernization of the mill. Perhaps if Ercel Kay had been able to diversify and to invest profits in related directions, the Kay mill would have been less vulnerable to collapse following the war. The lack of Ercel Kay's usual personal statements to the stockholders after 1948 could have indicated a waning interest in sustaining the mill. In the mid 1950's, Ercel hired an inexperienced superintendent at a critical time in the highly competitive industry.

At the time Tom Kay III became manager in 1953 at the age of 30, it would have taken a highly experienced, costly effort to save the mill.

In 1959 the decision was made to close the mill, and in 1965 it was sold to the Mission Mill Corporation to be developed as a

museum. In 1973 the Thomas Kay Woolen Mill was placed on the National Register of Historic Buildings, thus, assuring it an enduring place in American industrial history.

Recommendations

Uses of the Present Study

This investigation of the Thomas Kay Woolen Mill will provide information for the textile museum so that it might better serve as a center for the study of the role of wool manufacturing in Oregon history.

In an effort to provide periodic demonstrations of the operation of the mill, Samples Book swatches and weaving drafts from the mill could be reproduced on historic looms. They would be used as authentic sources of study of the kinds of woolen fabrics that were produced and used during the first half of the twentieth century.

The use of the organizational categories of production, management, and labor used in this study could serve as a model for other studies of this kind.

Recommendations for Further Study

In-depth investigation of each category could be possible. Each category might be expanded and related to other areas of specific interest to an investigator.

Other textile mills in Oregon and throughout the country could be studied in comparison to the operations of the Thomas Kay Woolen Mill.

CHAPTER VI

SUMMARY

Origin and Statement of the Problem

The Thomas Kay Woolen Mill manufactured cloth in Salem, Oregon from 1890 to 1959. The influence of Kay family members, the mill's importance to the economy of Oregon, and the importance of its products, especially during national emergencies indicated its significance. It is now listed on the National Registry of Historic Buildings and is being restored as a textile museum under the aegis of the Mission Mill Corporation.

Purpose of the Study

The study has two purposes:

1. To investigate the operation of an Oregon textile industry from its early years during the industrial development of the state to its demise during the post-war technological revolution.
2. To describe the textile manufacturer Kay family and to record their political contributions to the Oregon community.

Limitations of the Study

The conclusions from this study are confined to the workings of the mill investigated. Because primary data sources were

unavailable for particular years, this study does not cover some years the mill was in operation.

Procedure

Data were organized into the four categories of Kay family, production, management, and labor. Data sources included mill records, mill employees, Kay family members, official documents, correspondence, and newspaper and printed materials. A questionnaire was developed for interviews with former employees of the Thomas Kay Woolen Mill and the Kay family members. Data were charted by decade according to subtopics of the four categories.

Findings: Kay Family, Production, Management, and Labor

Thomas Lister Kay not only contributed to woolen manufacturing in Oregon, but he founded a family whose members became active in Oregon politics, as well as in the manufacturing industry.

The physical aspects of the plant, the machinery, the raw materials and the manufactured goods remained relatively unchanged for much of the time the mill was in operation except for the modernization that occurred during the 1940's.

Management was under family control during the entire history of the mill. The mill operated at a profit until the depression, when

it experienced financial setbacks. The war effort of the 1940's brought a production boom with accompanying profits followed by losses in the post-war years.

The mill workers had a variety of personal characteristics and often shared kinship bonds. Work-related aspects affected all of them in some way.

Conclusions

Because of Thomas Lister Kay, the Willamette Valley was provided with a woolen manufacturing industry and his family continued in this textile heritage. His family also contributed significantly to the government of Oregon.

The main mill building was an antiquated, multi-storied structure. The machinery was inefficient and the manufacturing process required much hand labor. The mill utilized the coarse Valley wool and shoddy, which had to be blended skillfully. The manufactured products that resulted were primarily coarse fabrics such as outerwear and blankets.

T. B. Kay's management from 1900 to 1931 cannot be evaluated because of lack of records. Ercel Kay recognized the need for modernization in the early 30's and made successful efforts to accomplish this goal by the 1940's. National emergencies such as World War I, World War II, and the Korean War increased the demand

for woolen goods and therefore, were a boon to the mill. Post-war technological developments such as man-made fibers and advancements in machinery were the causes of great changes to the mill. Other factors were the flooding of the market by foreign imports because of lowered tariffs, and the movement of the textile industry to the non-union South. The low-paid textile workers sometimes born into the occupation, shared a spirit of comraderie with one another and felt as if they had a part in the mill's continued operation.

Recommendations

This study could serve as a basis for further investigation of the role of wool manufacturing in Oregon and other parts of the country.

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 February 28, 1947.

APPENDIX I

LETTER SENT TO SALTS (SALTAIRE) LIMITED

May 16, 1975

Salts (Saltaire) Limited
Shipley
Yorkshire BD18 3LB
England

Gentlemen:

According to an article that appeared on 3 January 1890 in one of our local newspapers, the Oregon Statesman, my grandfather Thomas Kay "worked in the mill of Titus Salz [sic] in Yorkshire as a weaver." A good friend of ours from Salem, Oregon who recently visited your mill in Yorkshire told us that the mill was built in 1853, and it is quite possible that Thomas Kay had worked there, since he didn't emigrate to the United States until 1858.

We hesitate to bother you with this matter, but it would be of great interest if it were possible to verify some of Thomas Kay's activities before coming to the United States. His full name was Thomas Lister Kay, and he was born on June 24, 1836 at Apperley Bridge. Before coming to the United States he married Ann Slingsby, and their first child (my grandmother) was born in Shipley.

Thomas Kay eventually arrived in Oregon in 1863, and his descendants have been fortunate to have been able to carry on since that time in woolen manufacturing in the northwest part of the United States.

If your records go back prior to 1858, we would be most appreciative of any information you have on Thomas Kay.

Very sincerely,

B. H. Bishop

BHB/gw

bcc: Mrs. R. L. Gertenrich (with original letter from Salts dated 18.3.75)

APPENDIX II

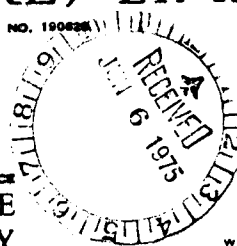
LETTER SENT TO PENDLETON WOOLEN MILLS
FROM SALTS (SALTAIRE) LIMITED

SALTS (SALTAIRE) LIMITED

REGISTERED IN ENGLAND - NO. 190626

TELEGRAMS:
SALTS SHIPLEYTELEX:
51-127TELEPHONE
SHIPLEY 52222

REGISTERED OFFICE
**SALTAIRE
SHIPLEY**
YORKSHIRE
BD18 3LB



DIRECTORS

CHAIRMAN
M. OSTRERDEPUTY CHAIRMAN
I. C. HILL, C.B.E.MANAGING DIRECTOR
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A. G. M. HALL
D. HANSON
J. HARPING. R. MACKAY
J. R. NANKIVELL
J. SWEETING
A. J. WILSONIN REPLY QUOTE REF. EWG/LM

2nd June 1975.

Pendleton Woolen Mills,
P.O. Box 1691,
Portland,
Oregon 97207.

Dear Sirs,

Your kind and interesting letter of 16th May is to hand and, unfortunately, we have no records remaining in this mill covering staff and workpeople who worked here in the 1850's. When our wage records for this period were destroyed we do not know, but we certainly have no records at the present time.

The writer of this letter is a keen local historian and was himself born in Apperley Bridge. It is possible that some details of Mr. Kay's ancestors are in the parish records of Calverley Parish Church. At a time convenient to the Vicar of Calverley we will try and look through these records, and should we find something which refers to Thomas Lister Kay we would be only too pleased to send you particulars.

Yours faithfully,
Redacted for Privacy

E.W. Garnett.

I am, in fact, the Treasurer of Calverley Parish Church!

APPENDIX III

MILL EMPLOYEE INTERVIEW QUESTIONNAIRE

MILL EMPLOYEE INTERVIEW QUESTIONNAIRE

LABOR

1. Personal data: name, birth date and present age, family background.
2. When did you start working at the mill? How did you get your job?
3. Describe your job(s) at the mill. Did your job change in procedure over time?
4. How did you get your technical training?
5. What was your wage/rate scale? Hours, days per week? Incentives?
6. Were there any similarities among your co-workers?
7. Were there many women working at the mill? In what capacity?
8. What are your recollections of the union? Was the union effective?
9. What benefits did you enjoy as an employee of the Kay woolen mill?
10. How did you find the working conditions such as lighting, heat?
11. What accidents occurred? How were injuries handled?
12. What social activities were available to the employees?

PRODUCTION

1. What type of raw materials were used in the manufacture of cloth at the mill?
2. What types of manufactured goods were produced at the mill?
3. Could you describe the quality of the cloth?
4. Can you recall any changes in the building while you worked there? In equipment?

MANAGEMENT

1. What are your recollections of the Kays at the mill? Of the superintendents?
2. Did the mill close down while you worked there? For what reasons? How did this affect you?

KAY FAMILY

1. Did you have any experiences with the Kays other than at the mill? If so, describe them.

MISCELLANEOUS

1. Do you have any photos, fabrics or other items from the mill?
2. Using each decade as a frame of reference, describe any particularly memorable events which you recall that occurred during the time you worked at the mill.
3. Is there anything else you might wish to add to our conversation?