AU History Club – February 24
History of Cotton in the World

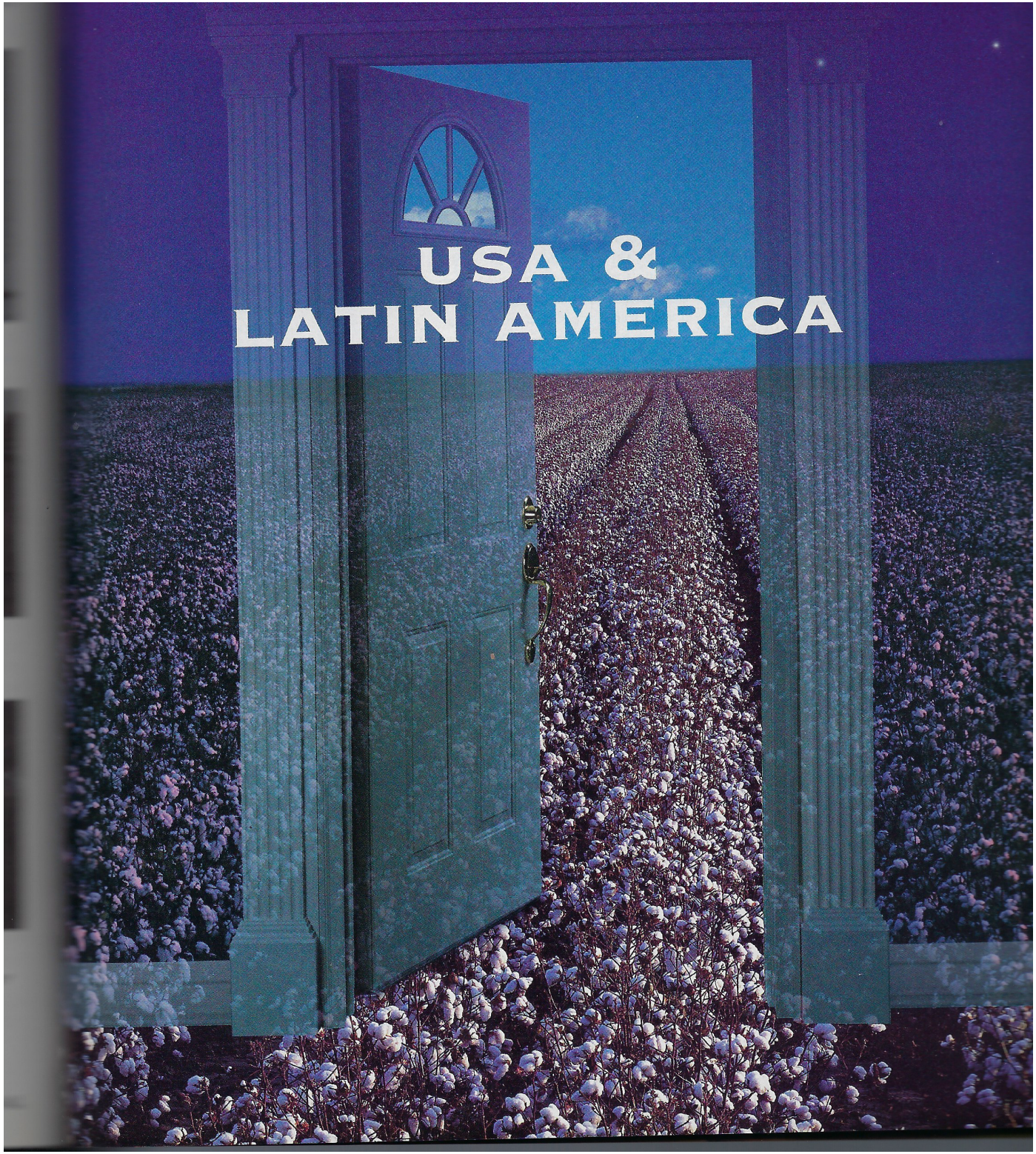
By John L. Steen



"Way Down South in the Land of Cotton"

Courtesy: Cotton-Textile Institute



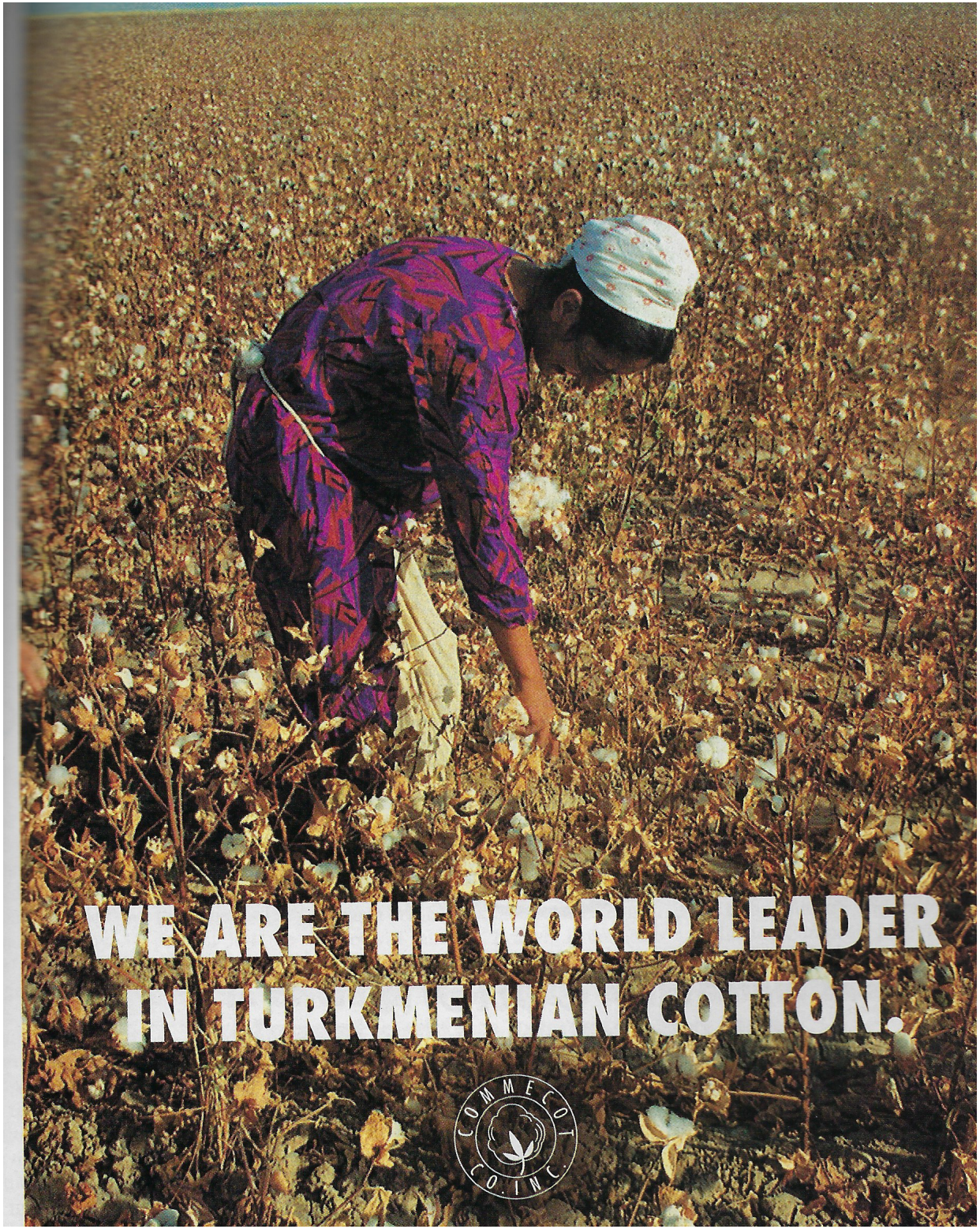

USA &
LATIN AMERICA

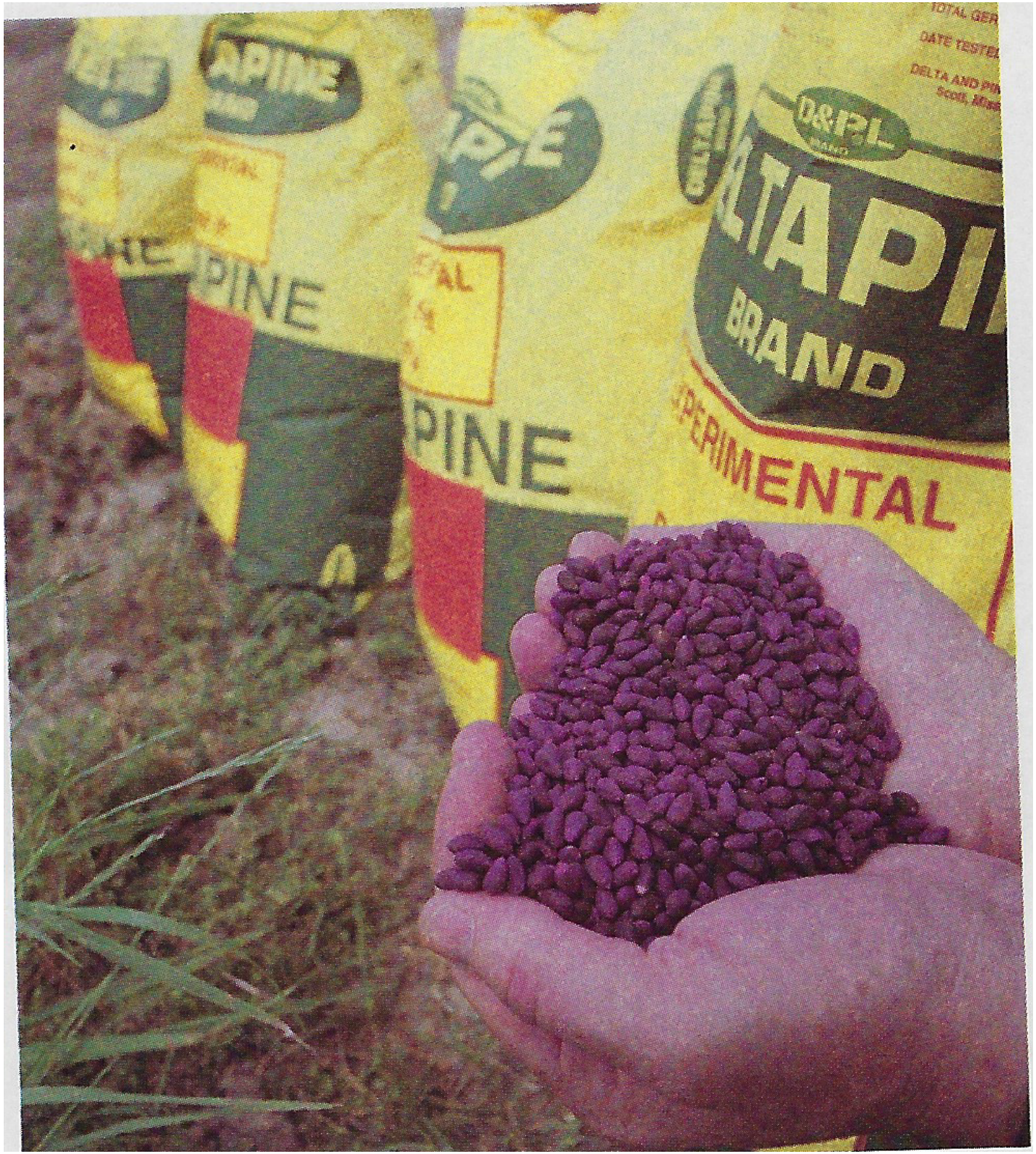






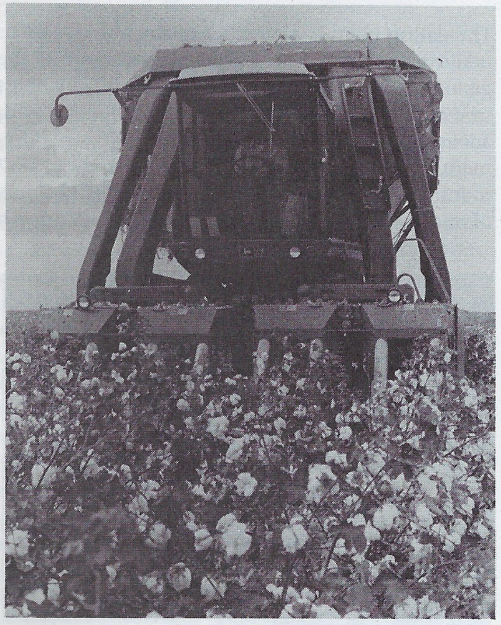



WE ARE THE WORLD LEADER
IN TURKMENIAN COTTON.
COMMECOT
CO. INC.

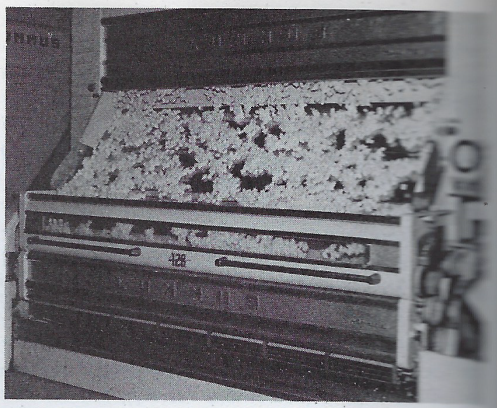

D&PL
BRAND
PINE
PERIMENTAL



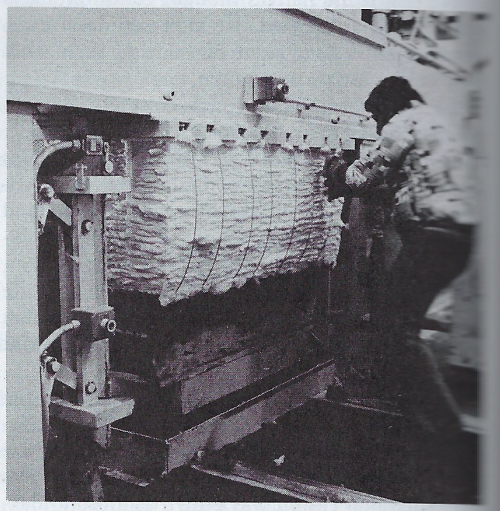
7.3 Mature cotton boll with fibers ready for picking. (National Cotton Council of America)



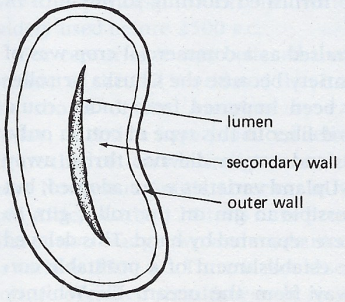
7.4 A modern four-row picker. (National Cotton Council of America)



7.5 A modern cotton gin in operation. (National Cotton Council of America)



7.6 Newly ginned cotton is pressed into a bale. (National Cotton Council of America)



7.7 Diagram of a cotton fiber, cross section.



Figure 2.7 Page from an album of sketches of costumes of south India, *c.* 1842.

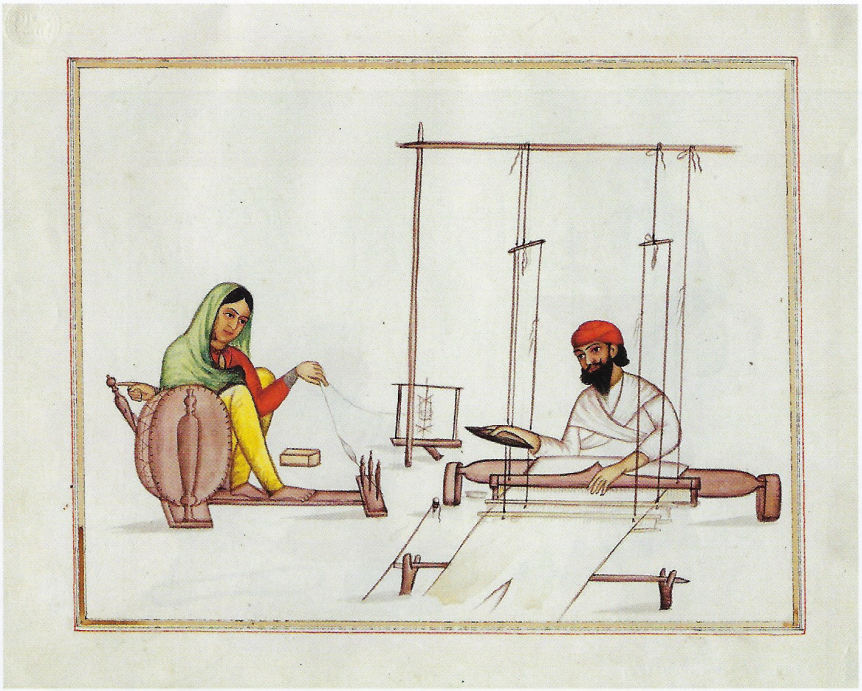


Figure 3.4 Spinning and weaving in India, 1851.

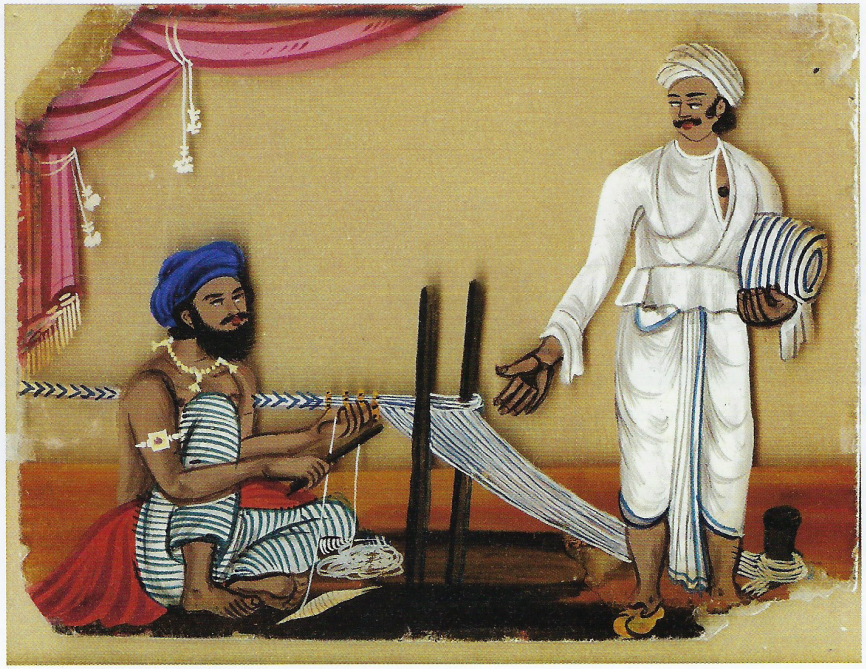


Figure 3.8 'Weaver Seated at a Loom', *c.* 1800–50.



Figure 4.2 Two Indian women winding cotton, early nineteenth century.

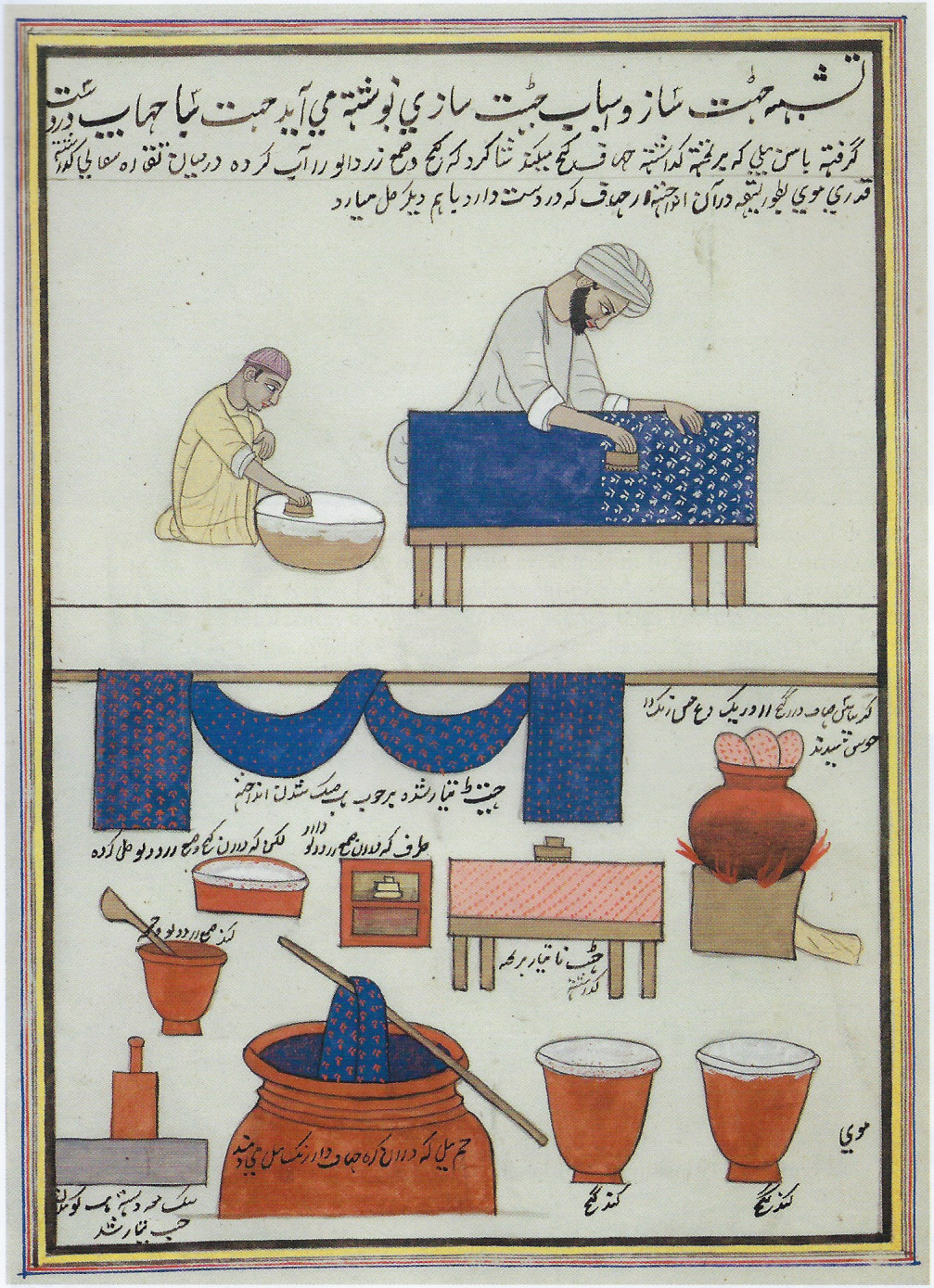


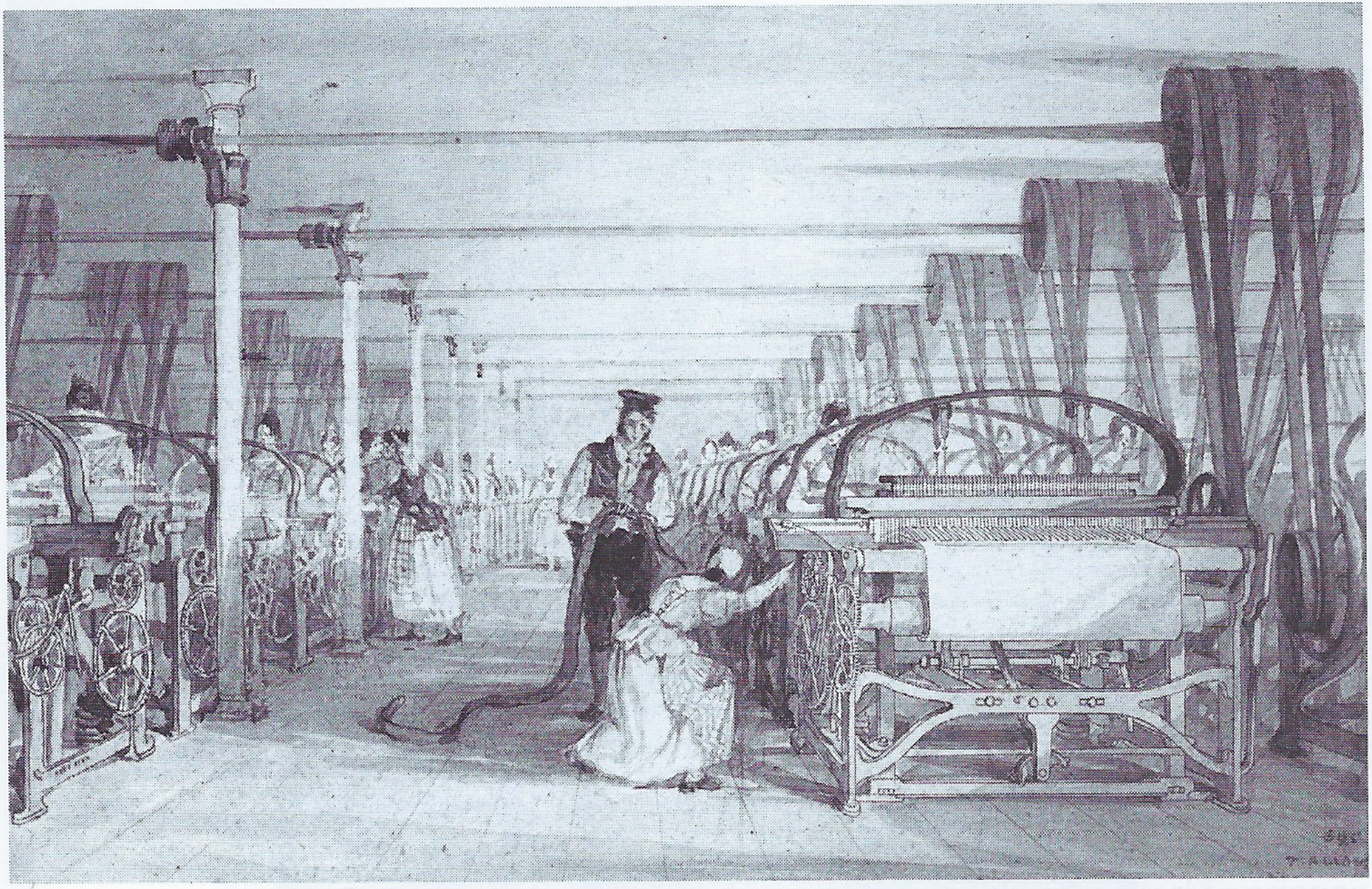
Figure 4.6 'Cloth Printer' from an album of Kashmiri trades, *c.* 1850–60. The inscriptions in Persian are the names of the implements used.



Figure 7.1 *African Woman* by Albert Eckhout (Brazil, 1641).



Figure 7.3 *De Chino, e India, Genizara* by Francisco Clapera (Mexico, *c.* 1780). The woman is spinning the cotton fibre from a basket with which the child is playing. The entire family wears white cotton cloth, possibly the result of household production.



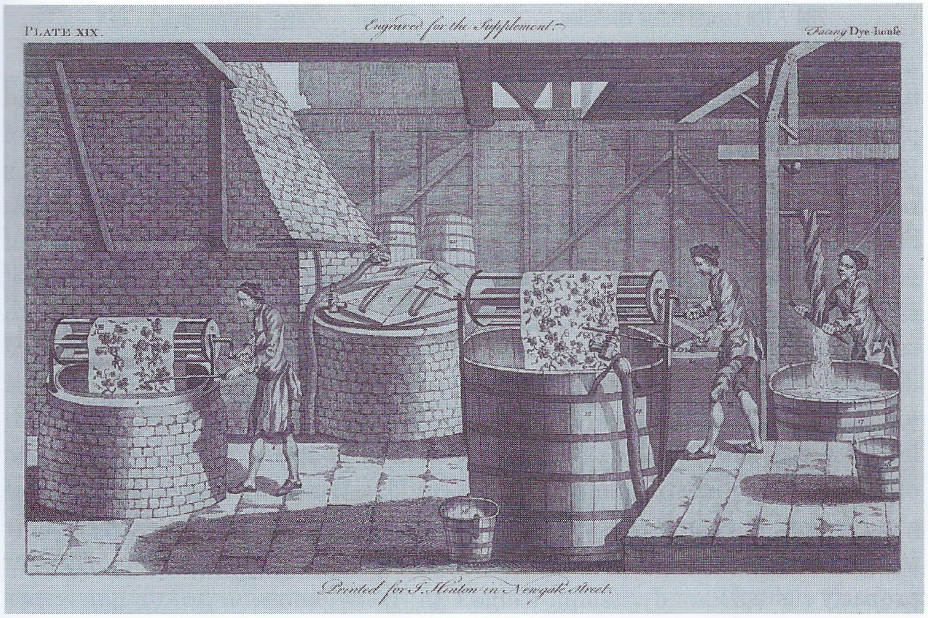


Figure 10.10 'Dye House', from the *New and Universal Dictionary of Arts and Sciences* by John Barrow, 1754. This print, eighty years earlier than the print room at Swainson Birley, shows how manual work was still central to printing and dying, with technologies limited to basic equipment such as wooden and brick vats.

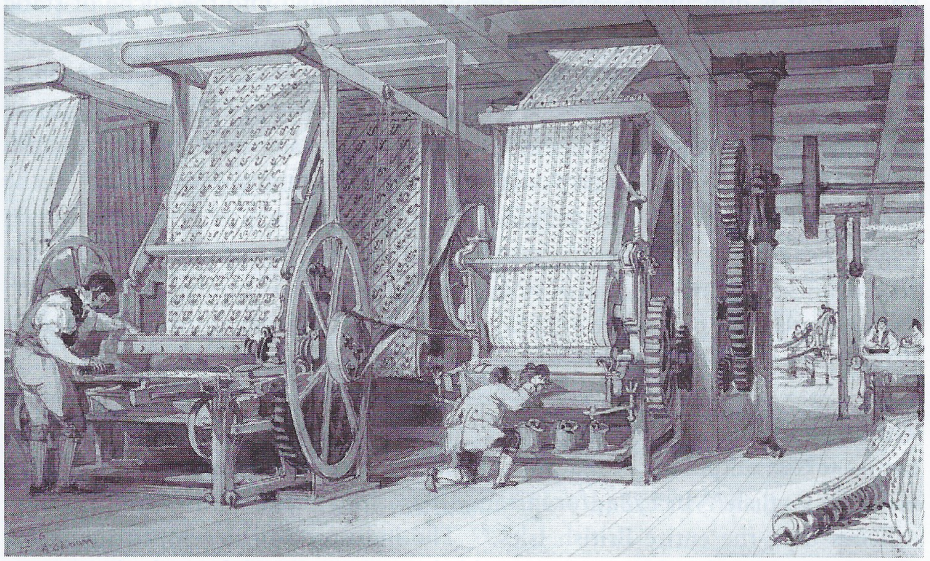


Figure 10.11 'View of the print room at Swainson Birley Cotton Mill', 1834. This is one of five prints from drawings by Thomas Allom representing a cotton mill near Preston in Lancashire. It shows the centrality of roller printing technology and the high volumes of production.

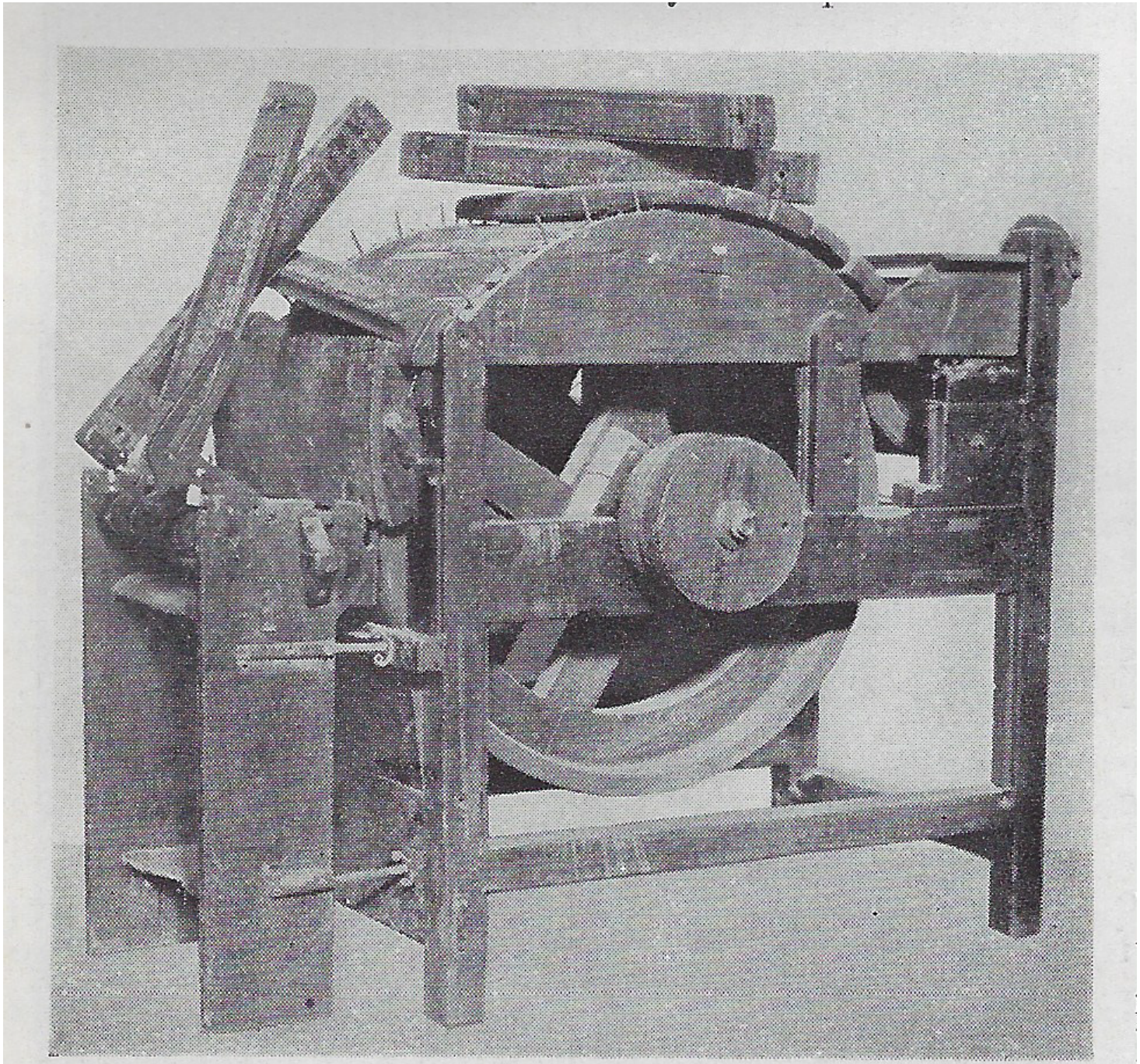
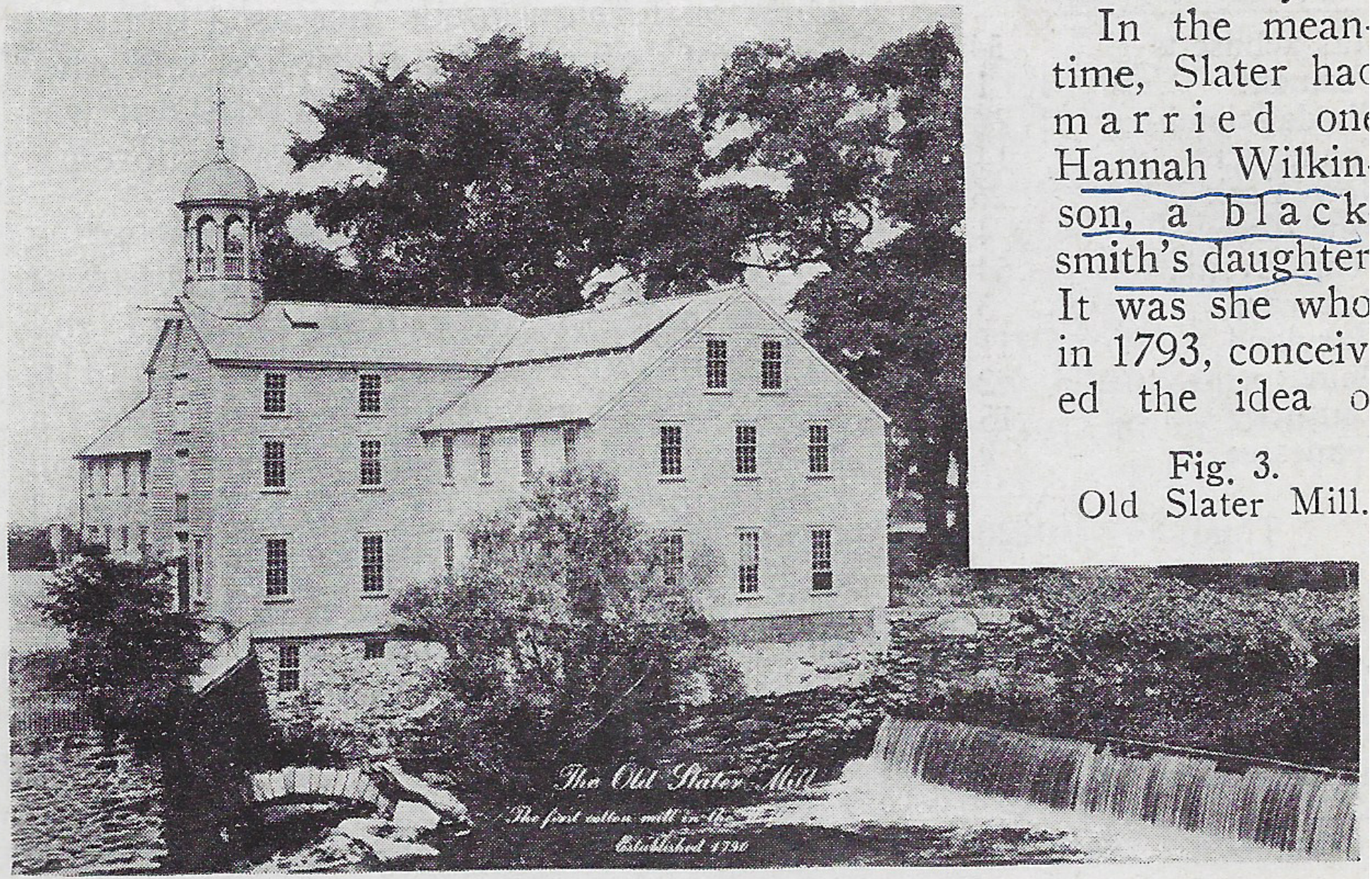


Fig. 2. Cotton carding machine built by Samuel Slater in 1790. *Courtesy U. S. National Museum.*



In the mean-
time, Slater hac
married one
Hannah Wilkin-
son, a black
smith's daughter
It was she who
in 1793, conceiv
ed the idea o

Fig. 3.
Old Slater Mill.

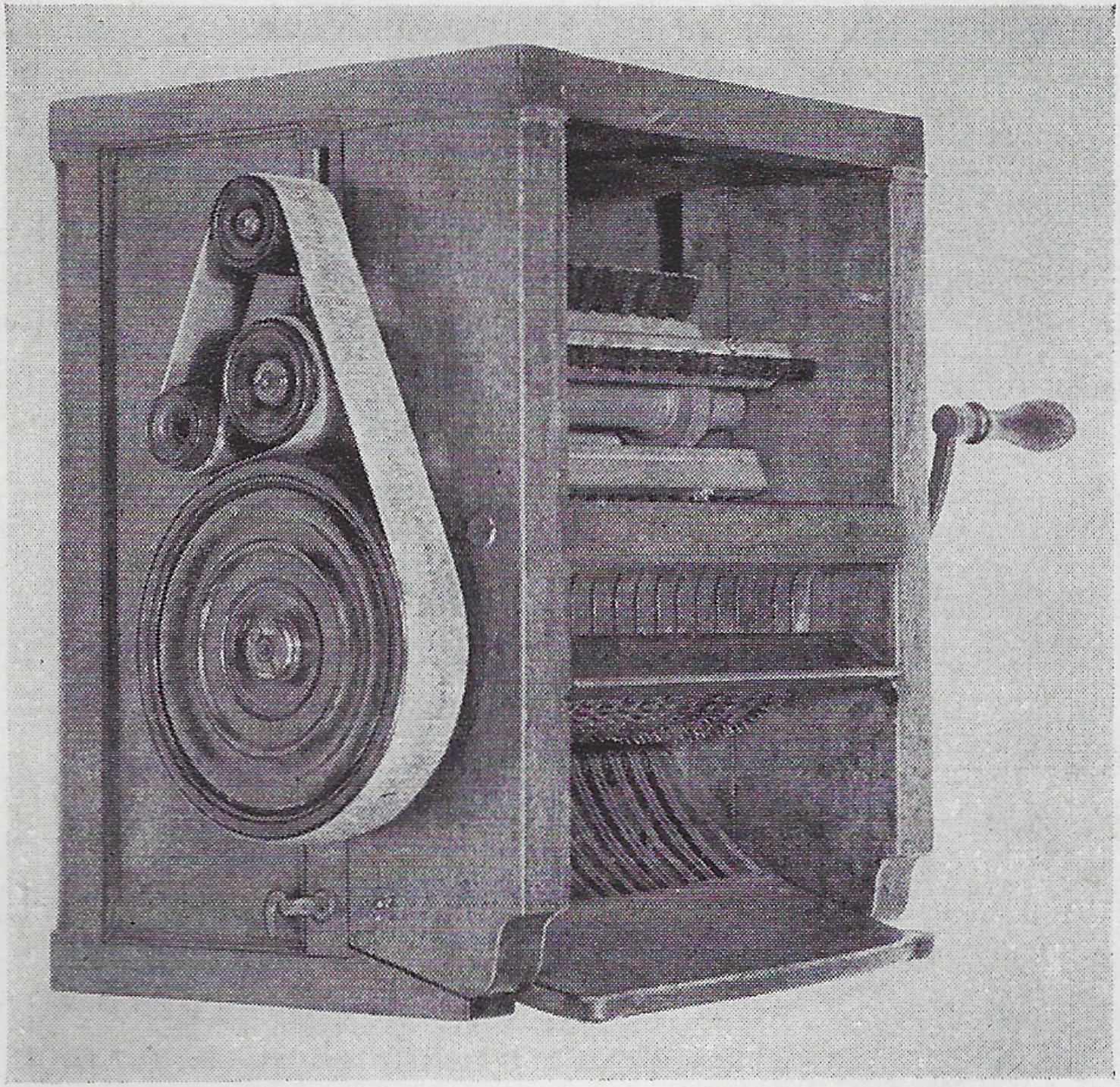


Fig. 4.
Model
of Whitney's gin
made by himself
before 1800.
Courtesy
U. S. National
Museum.

The thirty-three Universal Standard grades are shown in Table 2. Those shown in bold face type are the thirteen for which practical forms are available. The others are called *Descriptive* grades. The grades shown above the horizontal lines may be delivered on future contracts, while those below may not.[6]

TABLE 2. 33 UNIVERSAL STANDARD GRADES FOR COTTON.

Gray	*Extra White*	*White*	*Spotted*	*Tinged*	*Yellow Stained*
		No. 1, or Middling Fair			
		No. 2, or Strict Good Middling			
GMG	GMEW	**No. 3, or Good Middling**.....	GMSp.	**GMT**	GMYS
SMG	SMEW	**No. 4, or Strict Middling**.....	SMSp.	**SMT**	SMYS
MG	MEW	**No. 5, or Middling**.....	MSp.	**MT**	**MYS**
SLMG	SLMEW	**No. 6, or Strict Low Middling**..	SLMSp.	**SLMT**	
	LMEW	**No. 7, or Low Middling**.....	LMSp.	**LMT**	
	SGOEW	**No. 8, or Strict Good Ordinary**			
	GOEW	**No. 9, or Good Ordinary**			

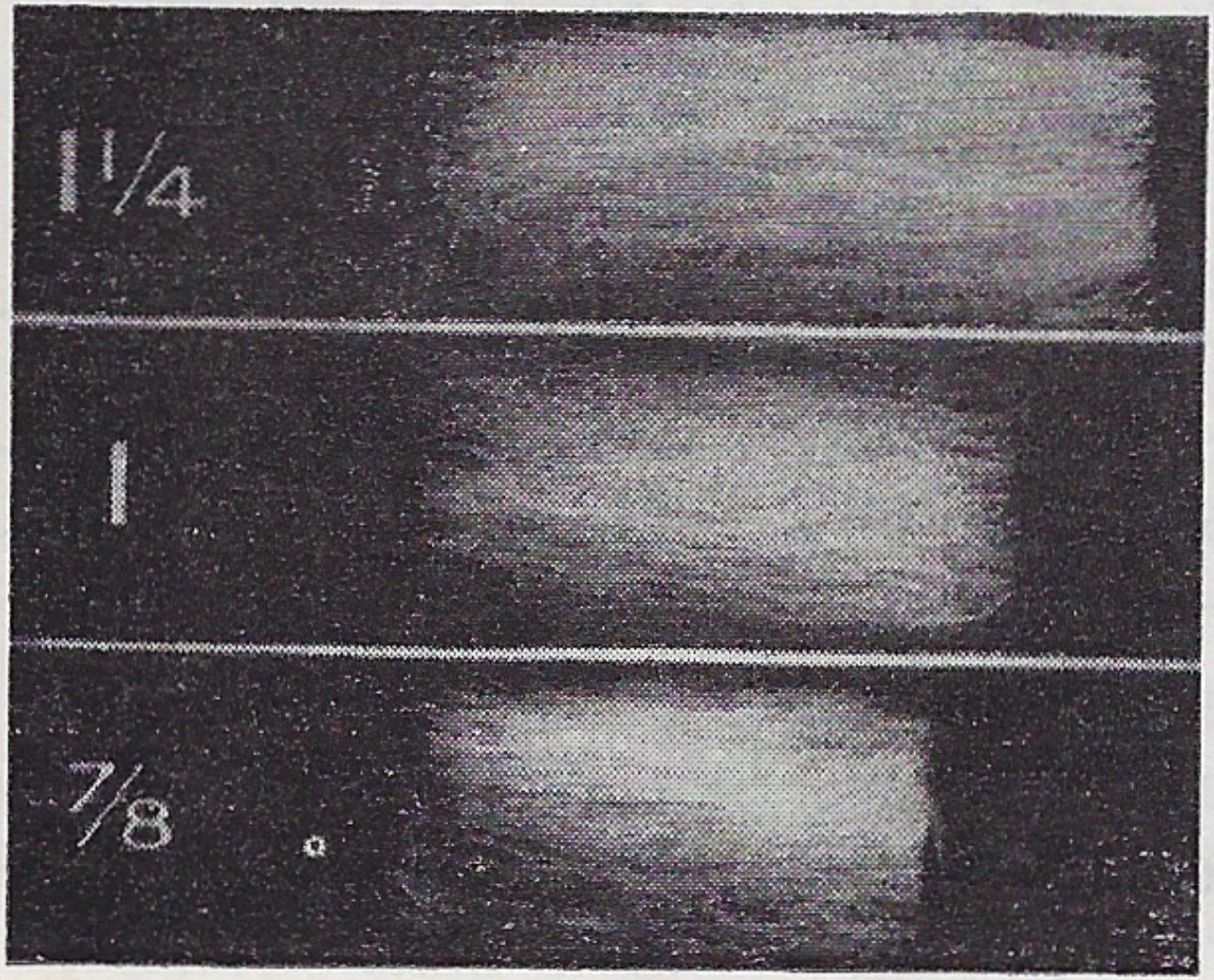
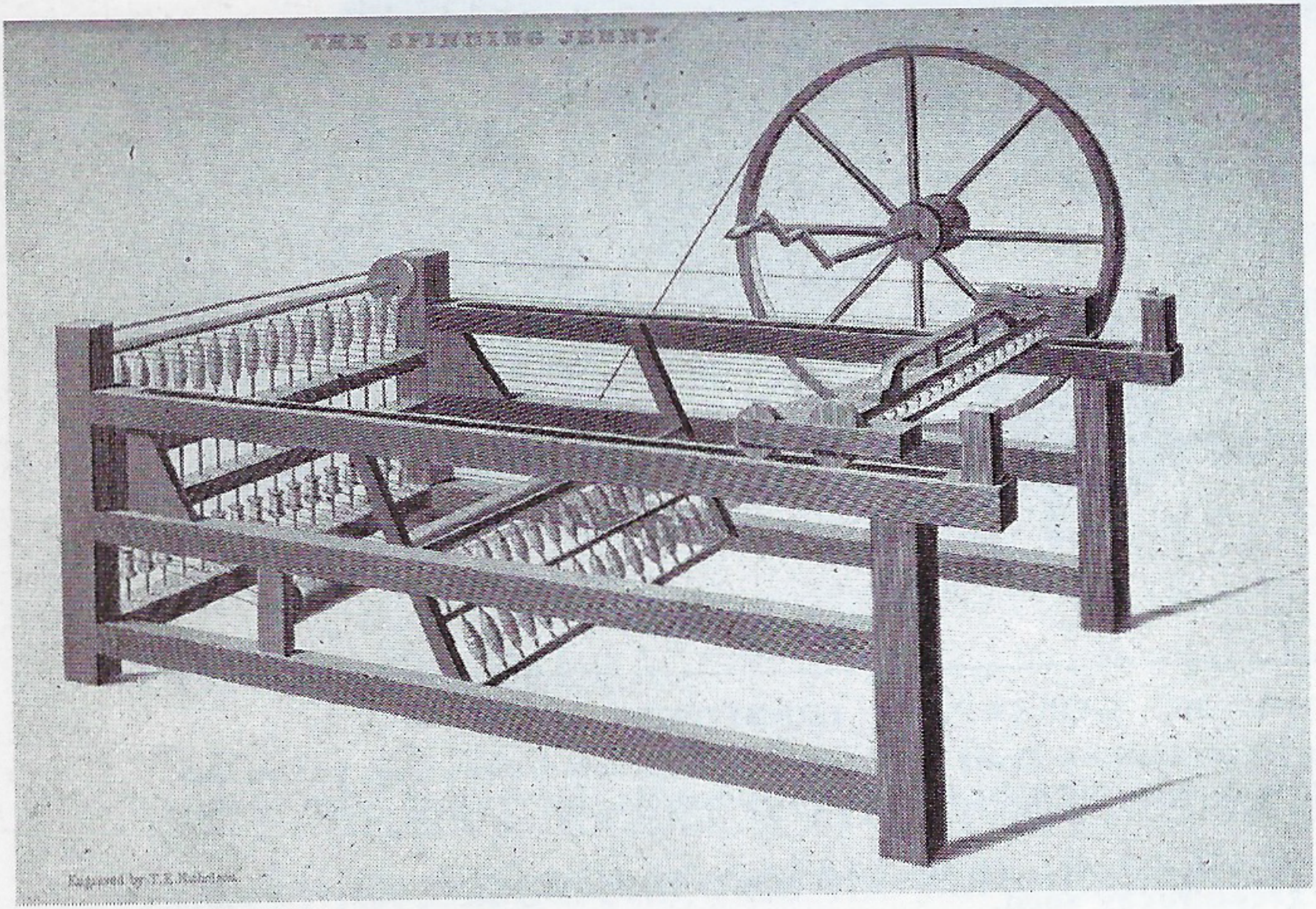


Fig. 9.
Samples of staples drawn by hand. *Photo courtesy of U.S.D.A. Agricultural Marketing Service.*



"Way Down South in the Land of Cotton"

Courtesy: Cotton-Textile Institute



Elegantly simple and efficient, James Hargreaves' multiple-spindle jenny almost cost him his life. Turning its handle, one operative could do the work of sixteen hand-spinners, endangering their livelihoods. *(The British Library)*



Arkwright's original Cromford cotton mill, at right, showing falls that powered the waterwheel. Before being transformed into a museum in the 1970s, it was being used to store toxic paint.

(Courtesy of Letterspace Origination)

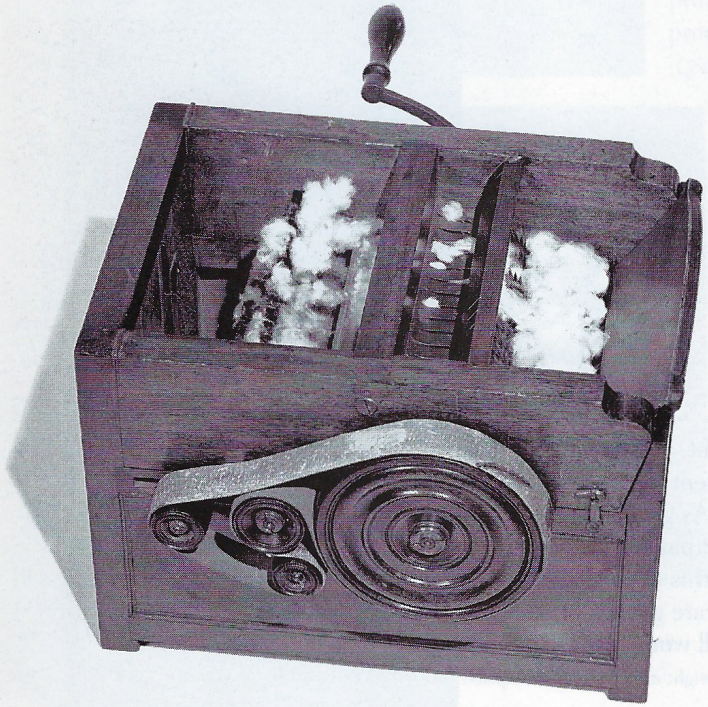






Eli Whitney in a rare portrait as a younger man, a few years after he invented the cotton gin in 1793.
(The New Haven Colony Historical Society)

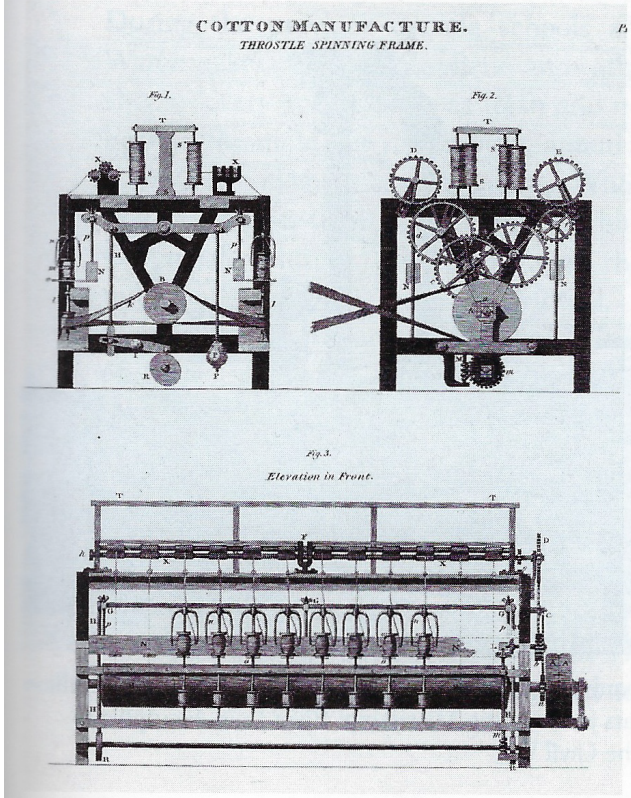
Below: A model of Eli Whitney's original 1793 cotton gin, at the Smithsonian Institute. Hooks pull cotton fiber through slots that dislodge it from attached seeds as the crank is turned and drum rotates.
(Smithsonian Institution)



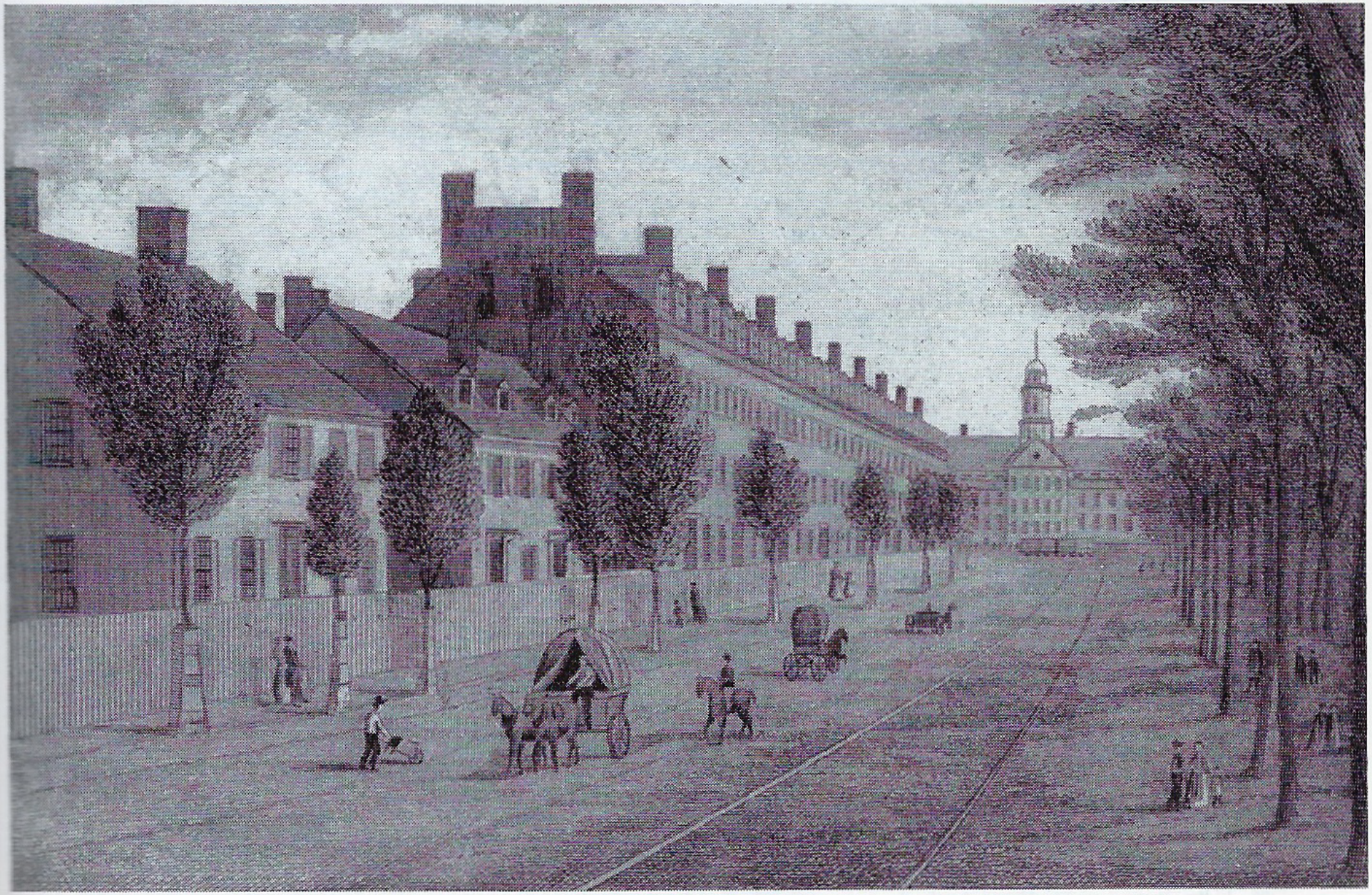




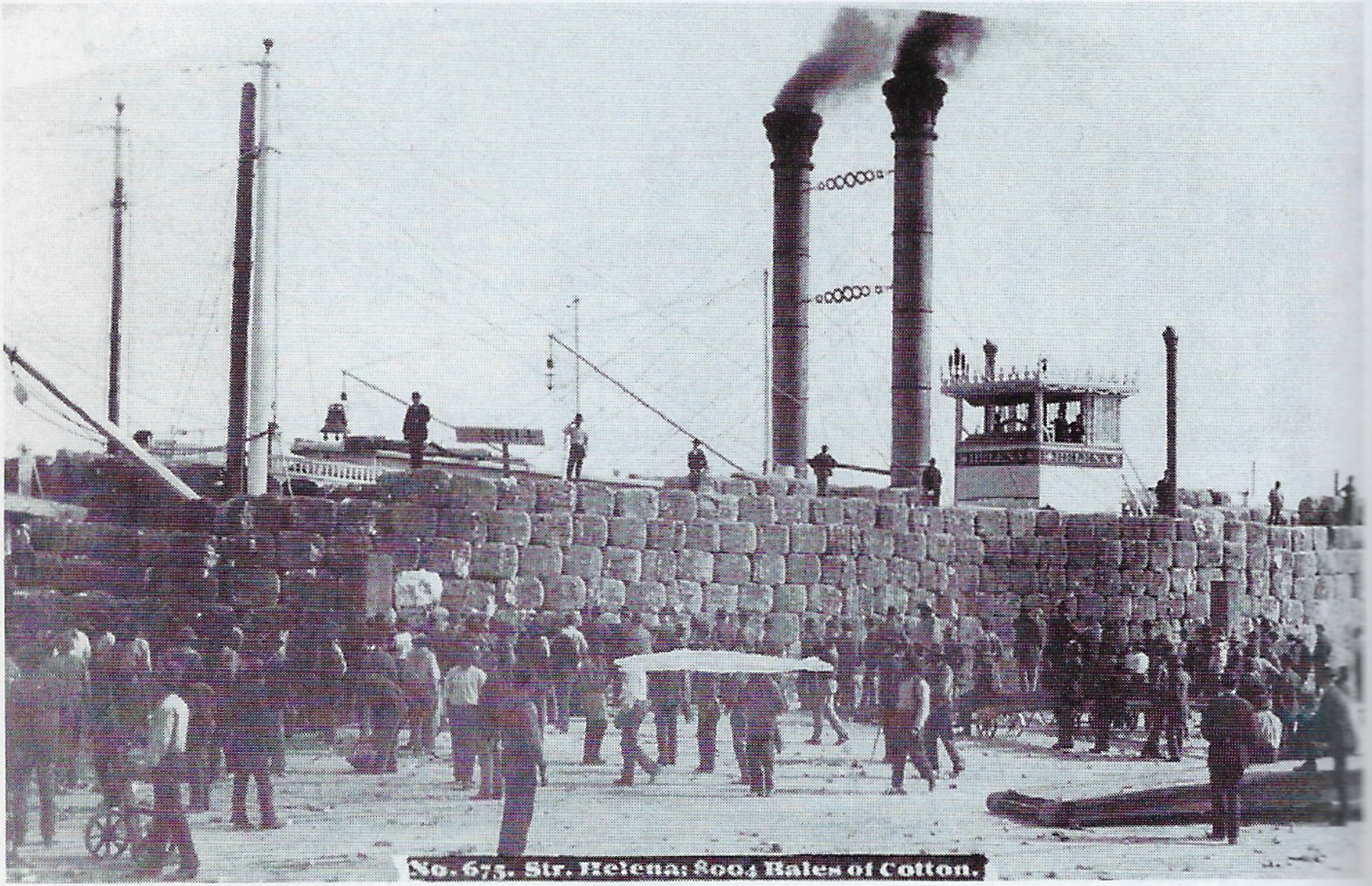
These two immigrants, holding flying shuttles, were among thousands who found work for low wages in Massachusetts mills before the industry moved south.
(American Textile History Museum, Lowell)



By 1850, complex machinery like this sophisticated water-powered spinning frame, seen in three views, engaged gears, pulleys, and cams to spin and twist cotton yarn at lightning speed. For all its improvements, the device owed its basic operation entirely to Arkwright and Kay's water frame of 1768.
(Kress Collection, Baker Library, Harvard Business School)

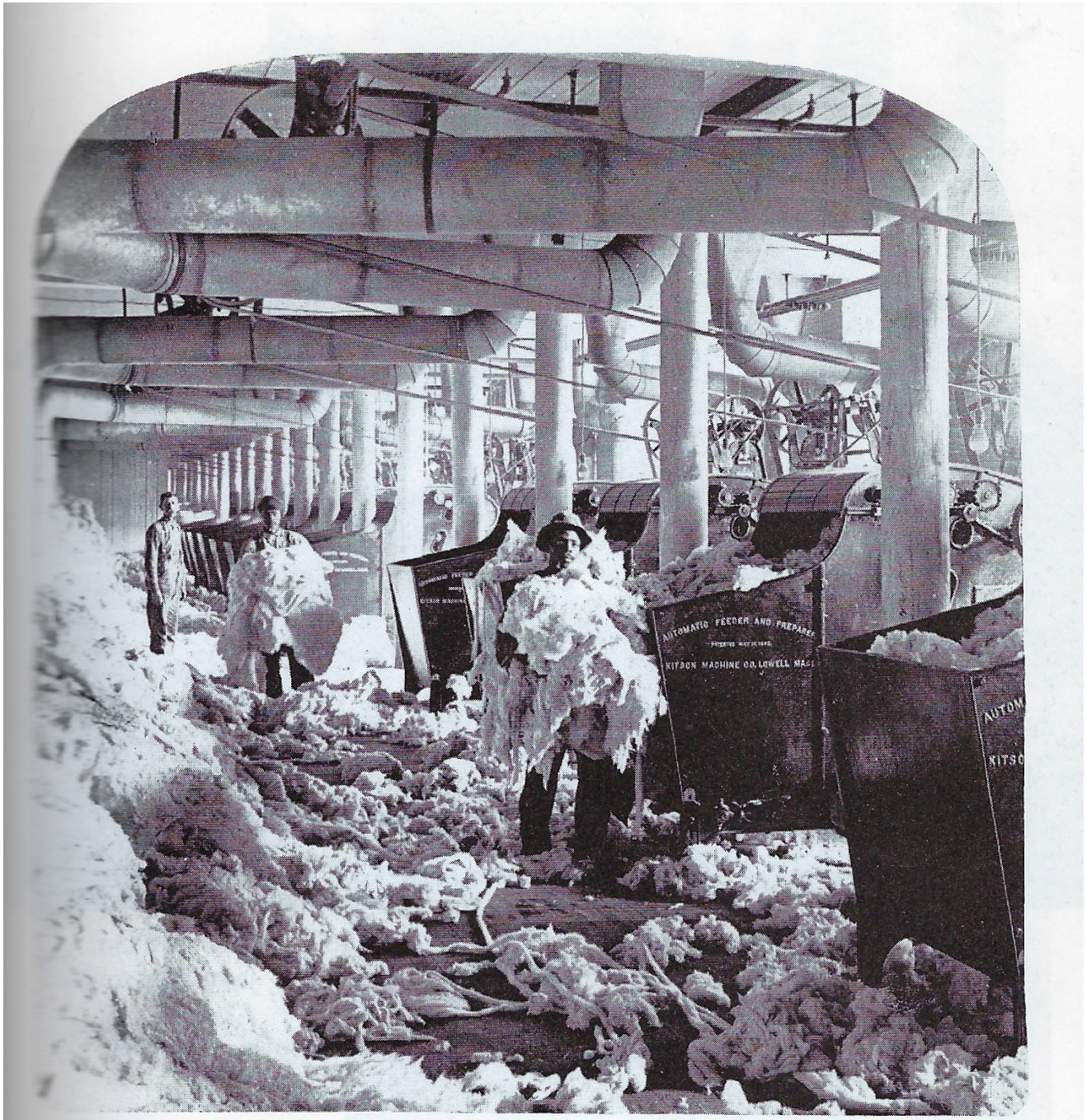


Lowell's tidy, seminary-like boardinghouses line a road that leads to the Merrimack Mill.
(Lowell Historical Society)



One steamboat could hold as many as 9,500 bales of cotton, weighing over four million pounds. Cotton-laden steamboats jammed the Mississippi River from Memphis to New Orleans before and after the Civil War.

(The Historic New Orleans Collection)



Men opening cotton bales at White Oak Mill, Greensboro, North Carolina. This punishing work was one of the few cotton mill jobs open to blacks.

(American Textile History Museum, Lowell)



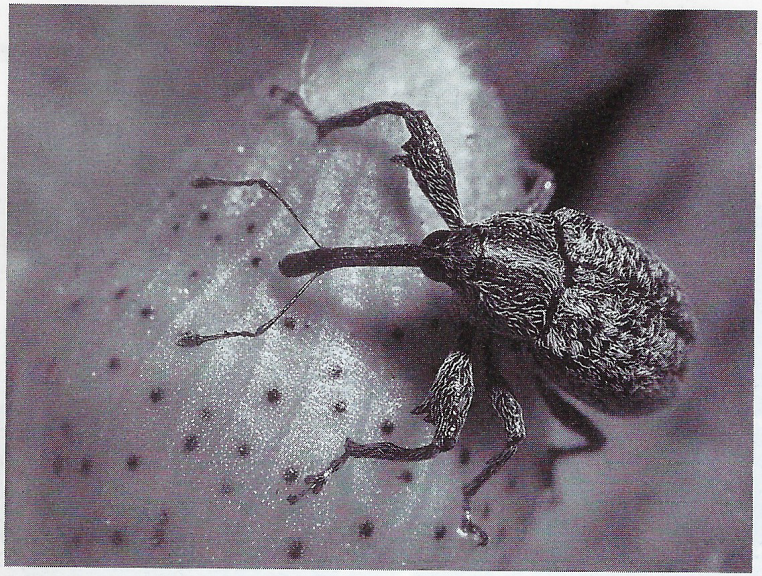
The Tennessee Hagar Cotton Gin in the early 1900s. Cleaning and ginning cotton, blacks and whites by then routinely worked alongside one another—in marked contrast to the past. Horses or mules often supplied the power.

(Courtesy of the Albert Gore Research Center, Middle Tennessee State University, Walter King Hoover Collection)



Black sharecroppers in Dallas cotton field, 1907. Living and working conditions for them were only marginally better than during slavery.

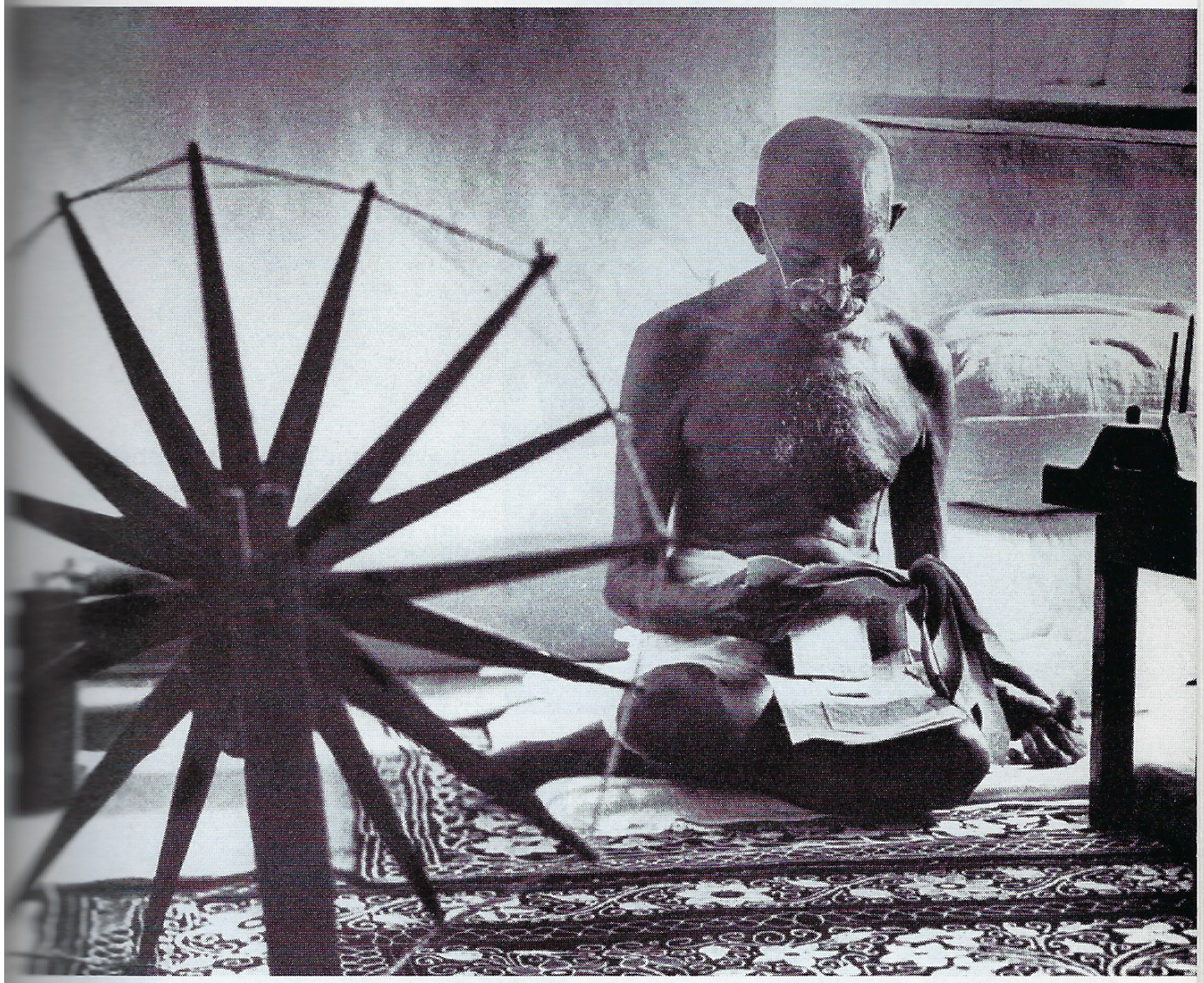
(Center for American History, University of Texas at Austin)





Above: The quarter-inch-long boll weevil, in all its evil glory. Note the long boring snout, used to drill holes in cotton bolls for egg-laying. Once infested, bolls produced no usable cotton fiber.
(Alton N. Sparks Jr.)

Left: If you can't beat it, salute it. The downtown Enterprise, Alabama, monument erected in 1919 that honors the boll weevil, so locally destructive it forced farmers to plant peanuts instead of cotton. Much to their surprise, they prospered.
(Special Collections, National Agricultural Library)



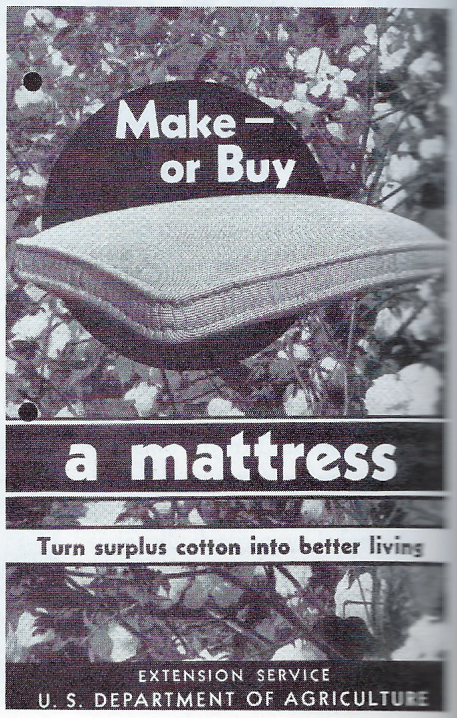
Mahatma Gandhi, as portrayed by Margaret Bourke-White in her classic photograph, "The Spinner." Home cotton-spinning for Gandhi was both a personal obsession and his political symbol for Indian independence.

(Margaret Bourke-White/Getty Images)



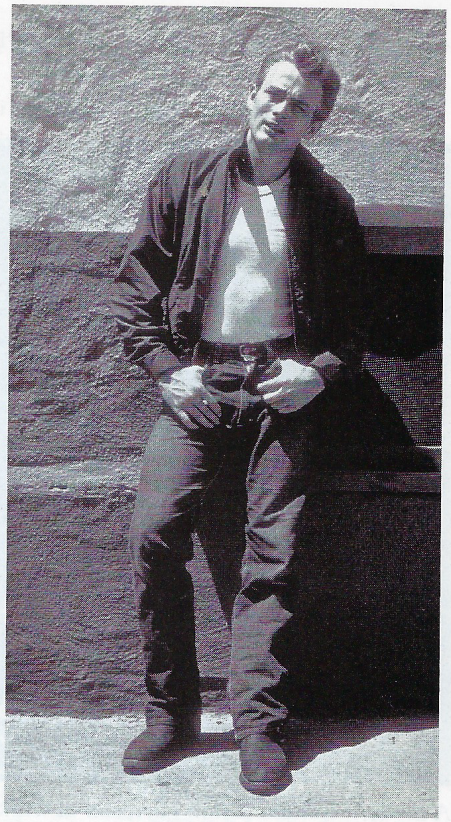
Levis come in from the range to clothe tenderfoots. In this 1930s ad, they've been taught city manners. But note the brand-savvy message, too: "The Rivets Are Still There."

(Levi Strauss & Co. Archives, San Francisco)

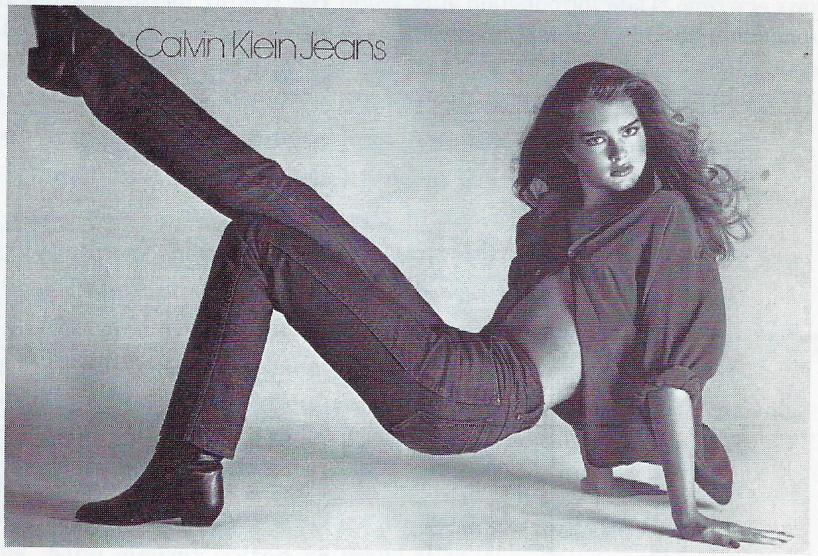


The USDA heavily promoted commercial cotton during the Depression as part of its directive to support impoverished cotton farmers.

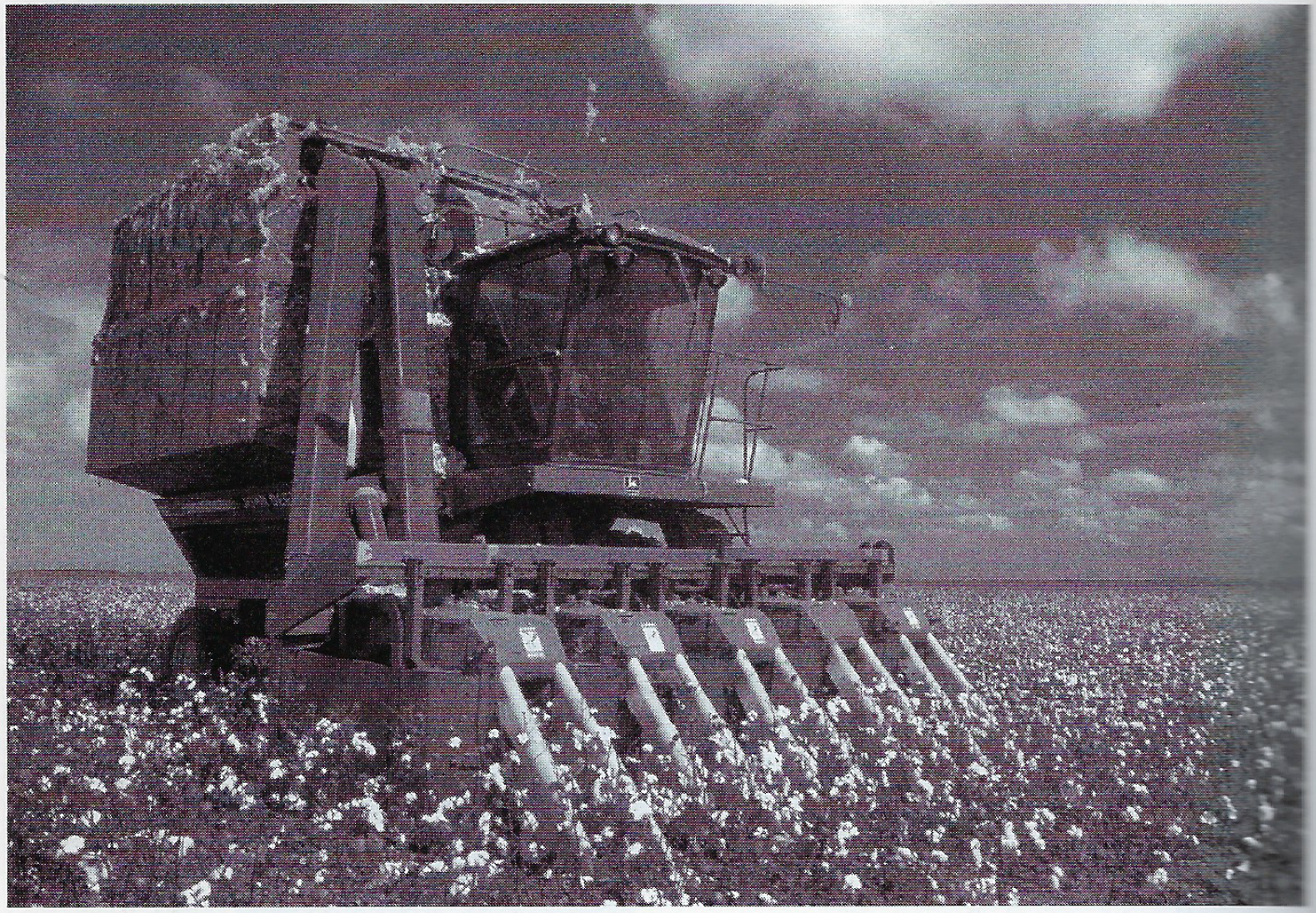
(Special Collections, National Agricultural Library)



Surly but vulnerable, too, down deep. That was James Dean, circa 1955, the quintessential rebel in jeans. Note the thumbs curled into the front pockets, the cocked head. He made denim dangerous.
(Floyd McCarty/MPTV.net)



Brooke Shields for Calvin Klein: "Nothing comes between me and my Calvins." Sorry guys, that includes you, too. One of the most successful clothing ad campaigns ever devised. *(Calvin Klein, Inc.)*



A modern spindle cotton harvester at work. Mechanical harvesters span ten to twelve rows at a time. Their introduction after World War II drove masses of suddenly unemployed Southern black cotton-pickers to leave home and migrate north to find work.

(ARS Special Collections. Photographer: David Nance)



Billy Don Hinkle grows 6,000 acres of cotton in Arkansas, but exports to China have tumbled amid a continuing trade war. Below, a flooded cotton field in the state.

Trade Spat Squeezes Cotton Farms

China's 25% retaliatory tariffs have seen the domestic price for the crop drop about 30%

By Kris Maher

AUBREY, Ark.—When cotton farmers meet at the Aubrey Country Store & Grill, a lunch spot surrounded by farmland in the Mississippi Delta, the talk these days inevitably turns to global trade.

Cotton exports to China have tumbled, and the domestic price for the crop has fallen roughly 30% since China put retaliatory 25% tariffs on U.S. farm commodities last summer. Stockpiles of U.S. cotton are forecast to be the highest in a decade.

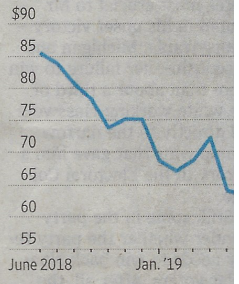
"If China decided it was go-



Cashless Crop

U.S. cotton prices have fallen about 30% since China placed tariffs on U.S. farm commodities last summer.

Average U.S. cotton spot prices by month



Source: U.S. Department of Agriculture

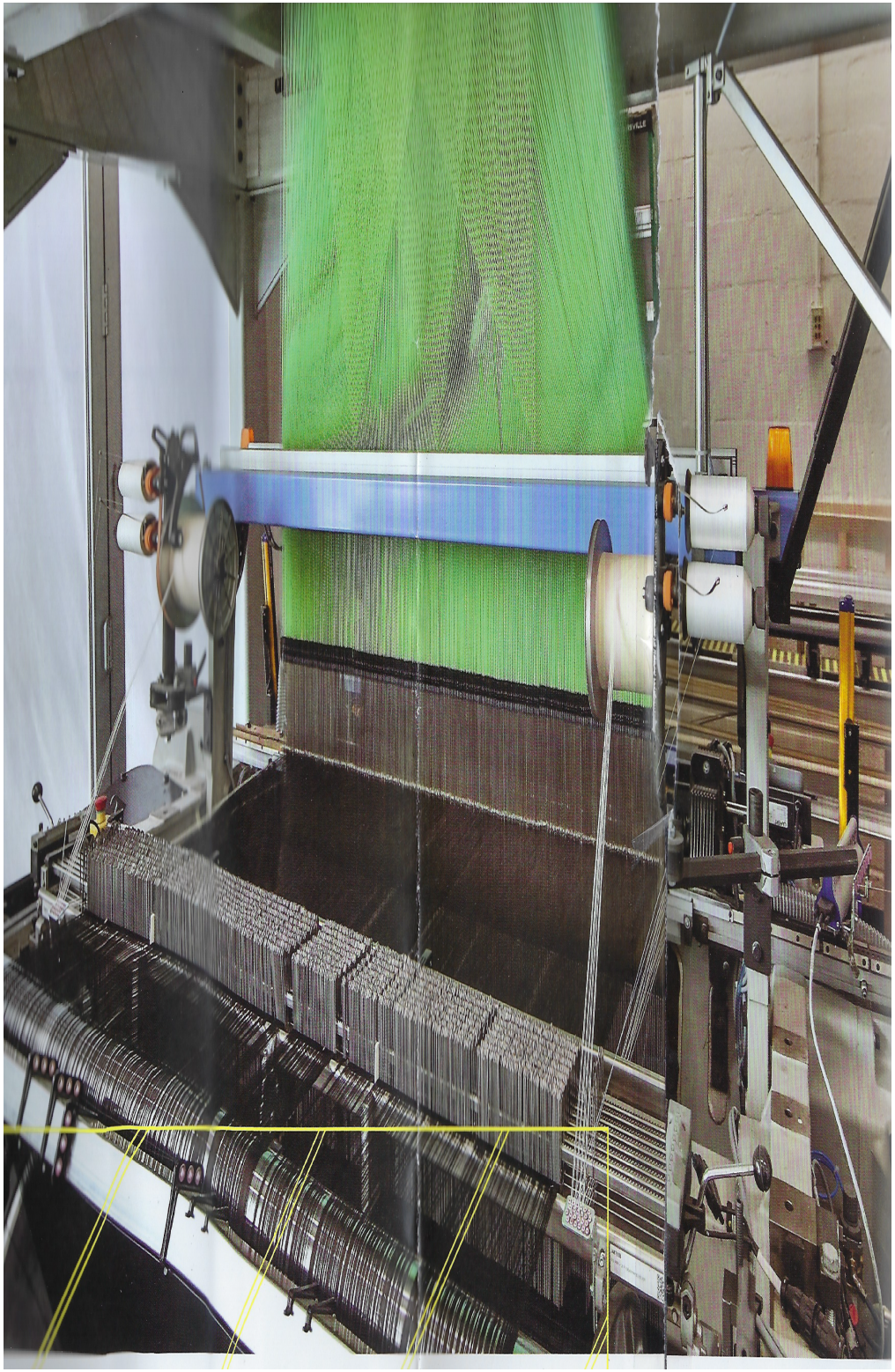


TABLE 1.1 World Production of Man-Made Fibers, Cotton, Wool, and Silk (Data in Millions of Pounds and Percentages in Parentheses)

Year	Rayon and Acetate	Noncellulosic	Cotton	Wool	Silk*	Olefin	Glass	Tot
1950	3,553 (17)	153 (1)	14,654 (71)	2,330 (11)	42	NA	NA	20,7
1960	5,749 (17)	1,548 (5)	22,295 (68)	3,225 (10)	68	NA	NA	32,8
1970	7,573 (16)	10,871 (23)	24,947 (53)	3,499 (8)	83	NA	NA	46,9
1976	7,076 (12)	18,963 (31)	27,513 (45)	3,278 (5)	106	2,335 (4)	1,486 (2)	60,7
1977	7,233 (11)	20,171 (31)	30,690 (47)	3,280 (5)	108	2,609 (4)	1,797 (3)	65,8
1978	7,314 (11)	22,121 (33)	28,600 (43)	3,369 (5)	112	2,833 (4)	2,002 (3)	66,3
1979	7,433 (10)	23,372 (33)	31,460 (44)	3,468 (5)	121	2,996 (4)	2,178 (3)	71,0
1980	7,148 (10)	23,094 (32)	31,451 (45)	3,485 (5)	123	2,964 (4)	1,991 (3)	70,2
1981	7,064 (10)	23,876 (32)	33,999 (46)	3,547 (5)	126	3,089 (4)	2,134 (3)	73,8
1982	6,497 (9)	22,358 (32)	32,357 (46)	3,563 (5)	121	2,987 (4)	1,987 (3)	69,8
1983	6,619 (9)	24,477 (34)	32,022 (45)	3,541 (5)	121	2,608 (4)	2,374 (3)	71,7

*Percentage for silk is below 1 percent.

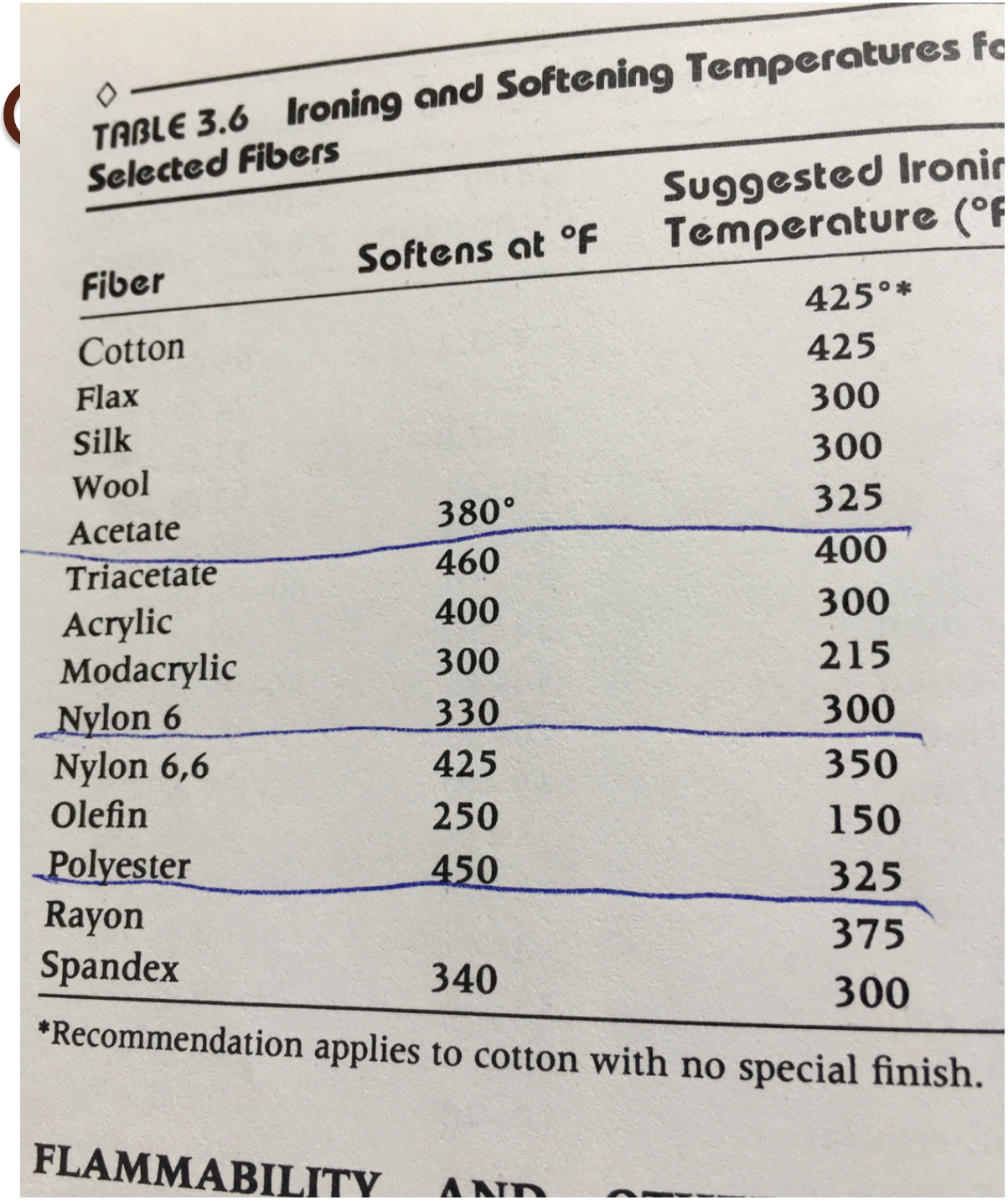
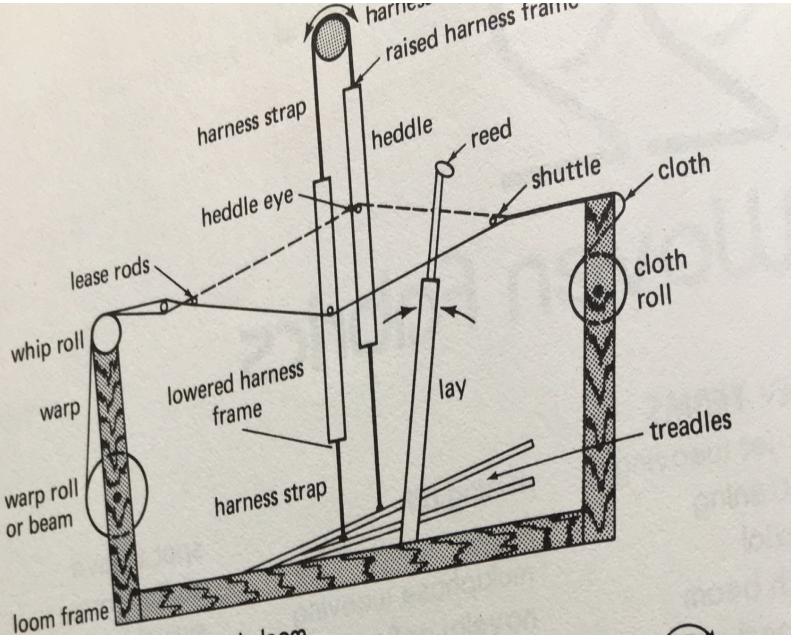


TABLE 3.6 Ironing and Softening Temperatures fo
Selected Fibers

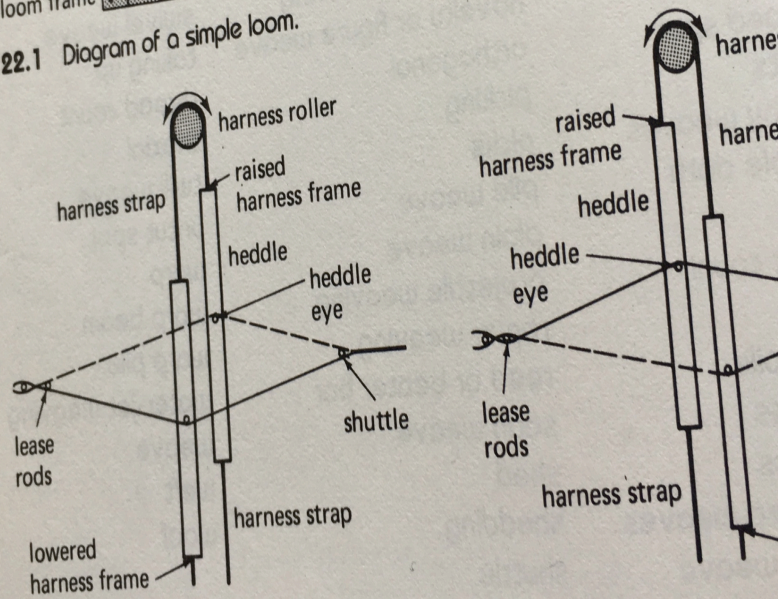
Fiber	Softens at °F	Suggested Ironi Temperature (°F
Cotton		425°*
Flax		425
Silk		300
Wool		300
Acetate	380°	325
Triacetate	460	400
Acrylic	400	300
Modacrylic	300	215
Nylon 6	330	300
Nylon 6,6	425	350
Olefin	250	150
Polyester	450	325
Rayon		375
Spandex	340	300

*Recommendation applies to cotton with no special finish.

FLAMMABILITY AND



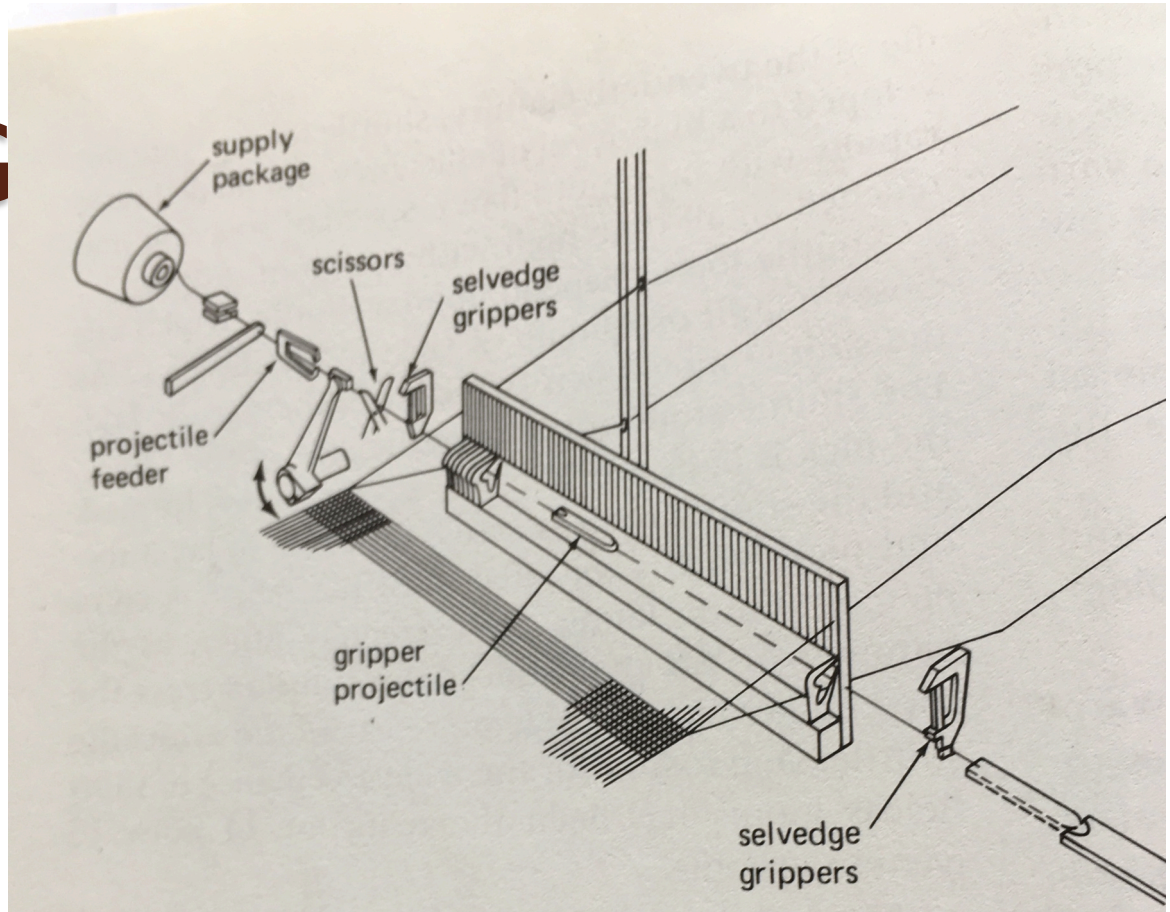
22.1 Diagram of a simple loom.

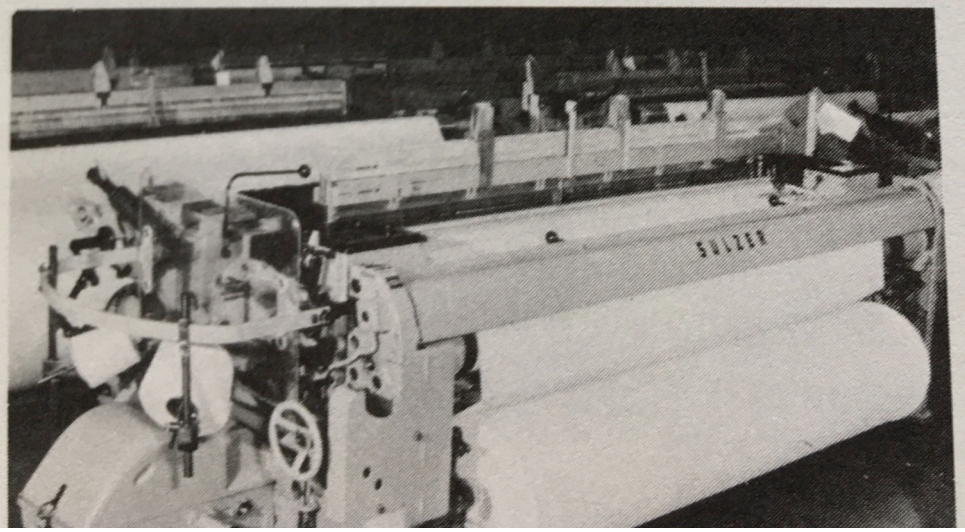


22.2 Diagram showing movement of harnesses and warp yarns to form

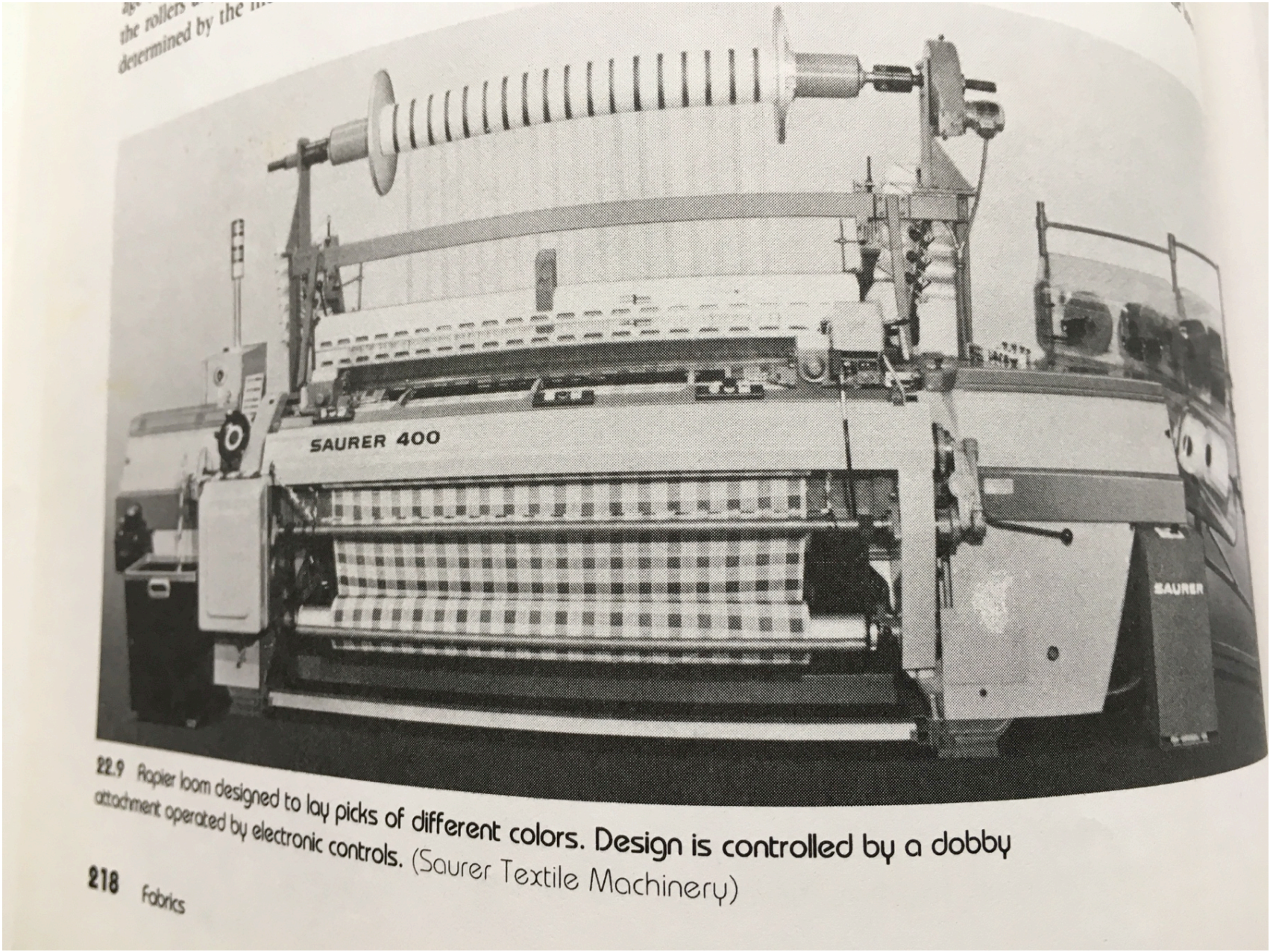


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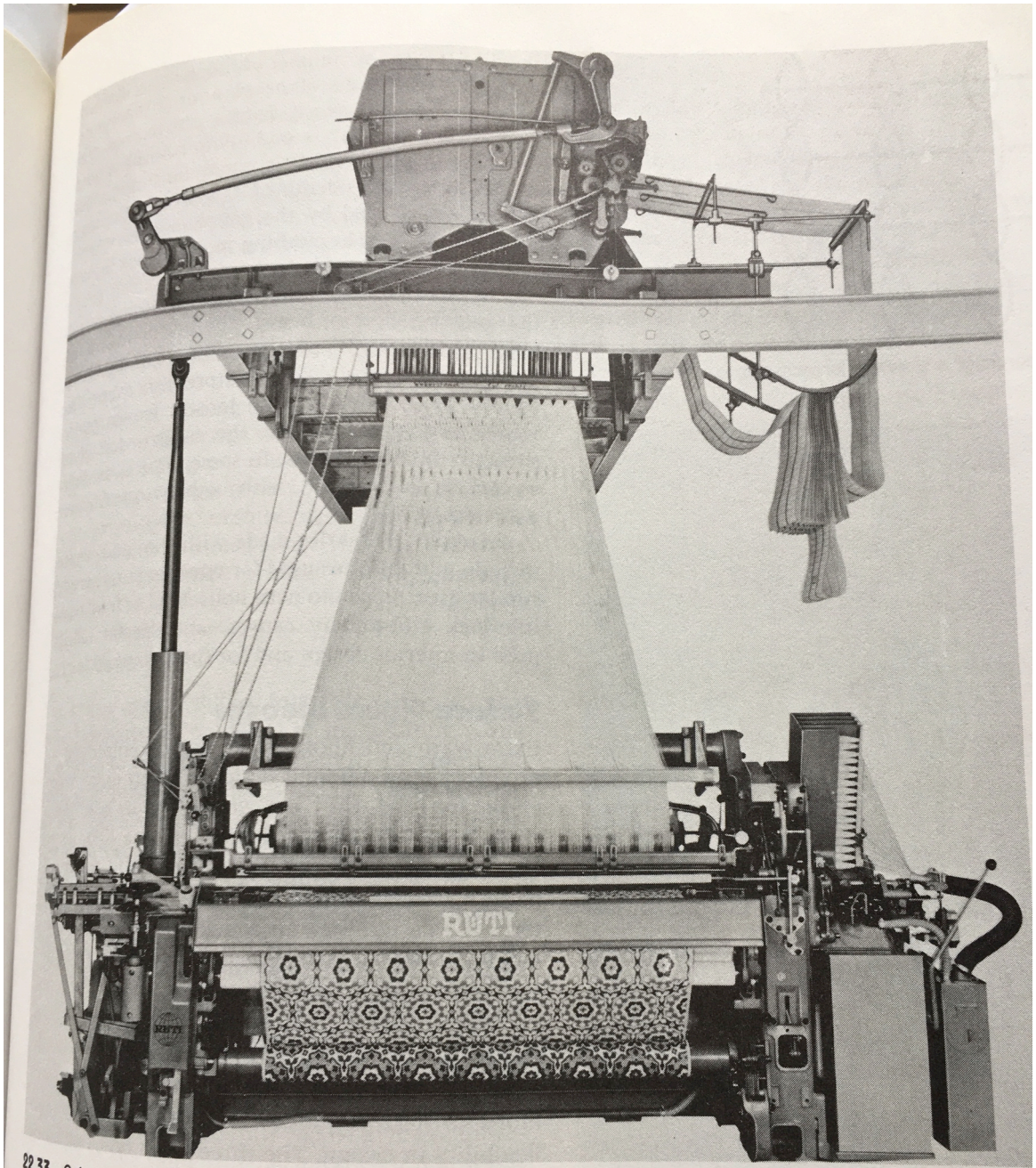




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22.9 Rapier loom designed to lay picks of different colors. Design is controlled by a dobby attachment operated by electronic controls. (Saurer Textile Machinery)



22.33 A Jacquard loom using cards to control yarn sheds. (Sulzer-Ruti)

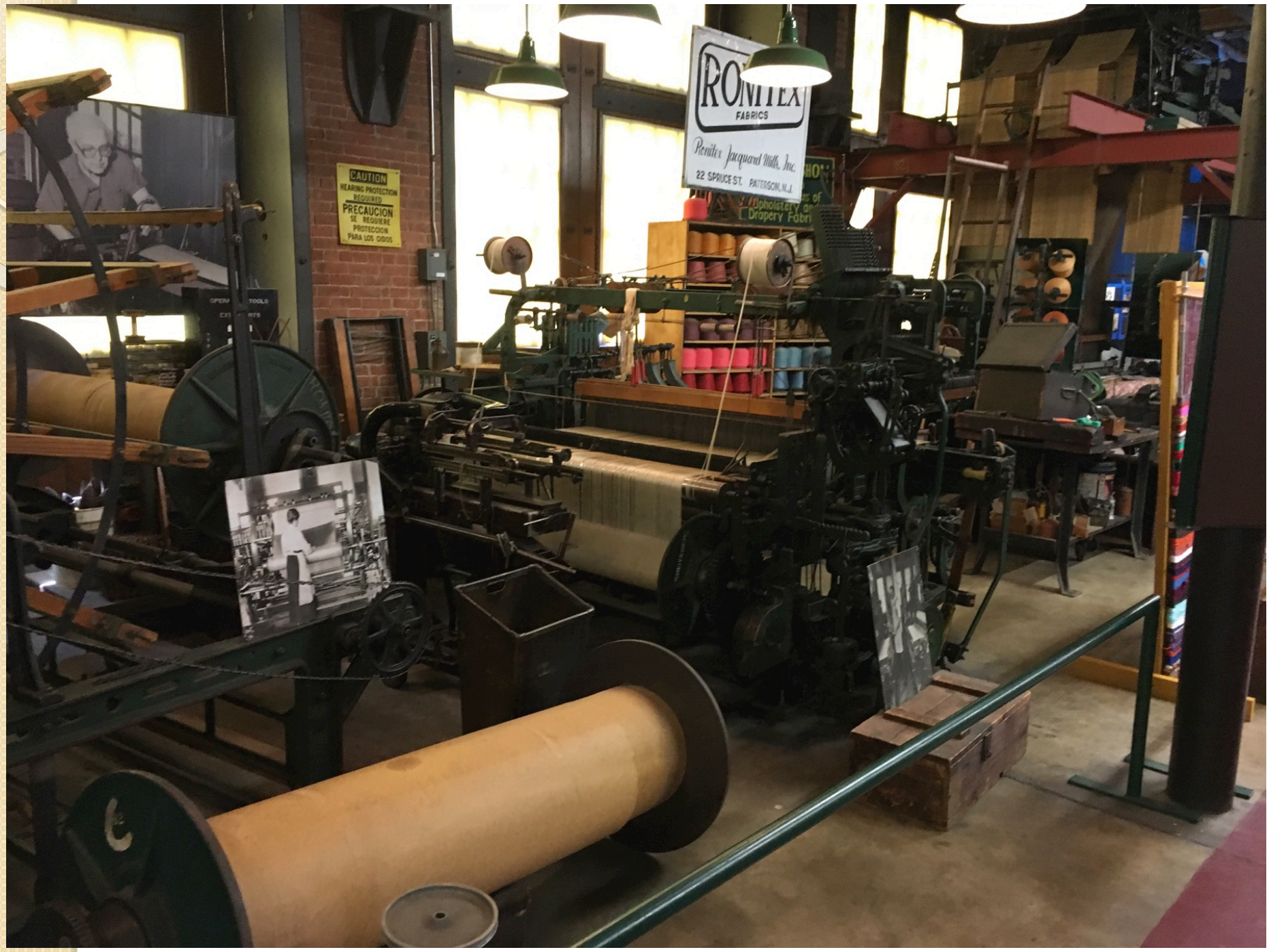


contracts, white

TABLE 2. 33 UNIVERSAL STANDARD GRADES FOR COTTON.

Gray	*Extra White*	*White*	*Spotted*	*Tinged*	*Yellow Stained*
		No. 1, or Middling Fair			
		No. 2, or Strict Good Middling			
GMG	GMEW	**No. 3, or Good Middling**.....	GMSp.	**GMT**	GMYS
SMG	SMEW	**No. 4, or Strict Middling**.....	SMSp.	**SMT**	SMYS
MG	MEW	**No. 5, or Middling**.....	MSp.	**MT**	**MYS**
SLMG	SLMEW	**No. 6, or Strict Low Middling**..	SLMSp.	**SLMT**	
	LMEW	**No. 7, or Low Middling**.....	LMSp.	**LMT**	
	SGOEW	**No. 8, or Strict Good Ordinary**			
	GOEW	**No. 9, or Good Ordinary**			


HORIZONTAL
SWISS WARPER
SIPP MACHINE CO.
PATERSON, N.J.
CIRCA-1920


RONITEX
FABRICS
Ronitex Jacquard Mills, Inc.
22 SPRUCE ST. PATERSON, N.J.
CAUTION
HEARING PROTECTION REQUIRED
PRECAUCION
SE REQUIERE PROTECCION PARA LOS OIDOS


JACQUARD
OFS LOOM
CROMPTON AND KNOWLES LOOM WORKS
WORCESTER, MASS.
CIRCA-1970
Gift of F. Schumacher & Co.
JACQUARD HEAD
CROMPTON AND KNOWLES LOOM WORKS
WORCESTER, MASS.
CIRCA-1950
Gift of F. Schumacher & Co.


ROYLE





SECTIONAL WARPER


UI-305s
BEAMING MACHINE

Show and Tell

Questions?

Thank You for attending History of Cotton