AND TERRITORIES: 1890—Continued.

MACHINERY—continued.							MATERIALS USED.					
Looms on woolen and worsted goods—Continued.		Looms on carpets and rugs.			Total number of power looms.	Knitting machines.	Total cost.	Foreign wool in condition purchased.		Domestic wool in condition purchased.		
Narrow looms on worsted goods.	Hand looms.	Ingrain hand looms.	Ingrain power looms.	Rug hand looms.				Pounds.	Cost.	Pounds.	Cost.	
1,436	298	7	1	22	38,791	103	$82,270,335	16,822,138	$4,110,488	168,485,806	$44,749,323	1
					12		10,997			10,569	3,464	2
					24		28,030			67,500	23,325	3
					292		788,916	145,000	50,750	3,554,471	600,110	4
42					2,294	10	5,753,095	656,752	218,727	12,379,858	3,273,214	5
					229		295,605	35,369	6,543	495,829	139,658	6
					119		95,999	32,000	10,200	176,992	57,574	7
					323	2	789,310	59,000	18,340	2,507,621	636,665	8
	1				1,005	1	1,850,809	476,633	98,498	5,687,051	1,344,171	9
					158	5	505,503	300	90	1,880,232	451,223	10
	1	2			1,622		1,365,246	57,037	17,036	2,407,292	649,110	11
	1				1,811		4,960,119	1,231,813	369,411	11,530,733	3,320,263	12
	3	1			110		424,855	100,000	25,000	786,200	298,420	13
6					8,711	16	21,815,199	2,105,248	745,930	46,825,715	12,971,031	14
1					158	8	529,515	88,665	22,757	1,622,034	432,226	15
					125		309,378			1,358,290	261,724	16
					376		508,039			1,565,824	359,239	17
					261		311,881	4,000	840	1,048,229	259,664	18
					1,954		4,834,446	526,759	120,548	12,561,277	3,190,903	19
8					1,140		3,281,979	158,639	32,337	7,966,247	1,976,024	20
15	19				1,280		2,930,932	1,288,483	377,302	4,453,263	1,516,792	21
18					169		198,358	50,760	13,005	398,500	122,259	22
	11				456	35	962,270	174,764	36,408	2,365,636	769,675	23
		1			94	6	327,502			1,366,148	256,374	24
907	144	3	1	22	11,449	9	19,198,990	6,446,668	1,022,445	24,438,385	5,865,342	25
434					2,238	9	6,042,754	1,522,915	591,229	11,509,947	3,364,913	26
5	114				811		760,036	187,625	38,218	1,260,861	407,407	27
					135		188,607			572,400	162,600	28
					99		163,864			800,500	126,240	29
					682		1,435,163	1,279,250	233,038	2,660,820	692,225	30
	2				210		375,175	25,367	6,308	950,378	304,507	31
					153		202,801	5,001	1,389	595,822	177,701	32
					258		978,479	164,090	54,136	2,461,482	699,697	33
	2				33	2	46,483			219,700	41,583	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	MATERIALS USED—continued.						
		Total foreign and domestic wool in scoured pounds.	Shoddy.		Waste and wool noils.		Camel's hair and noils.	
			Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
1	The United States	100,226,094	51,862,397	$5,398,617	13,608,369	$2,353,364	1,781,240	$289,970
2	Alabama	10,569	20,000	6,000				
3	Arkansas	64,500			5,000	2,500		
4	California	1,588,993	53,111	8,050	30,000	6,000		
5	Connecticut	6,341,262	5,211,440	521,756	431,457	112,120	67,568	15,552
6	Delaware	265,599	95,890	16,546	557,398	40,037		
7	Georgia	147,646	10,000	2,250	2,474	397	19,867	4,458
8	Illinois	1,321,559	67,253	17,577				
9	Indiana	3,478,264	144,303	21,729	48,600	8,040	600	282
10	Iowa	960,916	46,000	7,650				
11	Kentucky	1,542,884	707,940	110,016	21,054	2,105		
12	Maine	6,784,485	1,498,807	247,233	196,486	62,544	35,178	12,618
13	Maryland	372,900	40,000	4,000	150,000	42,000		
14	Massachusetts	25,493,874	20,272,168	1,934,590	4,799,883	664,839	375,868	88,610
15	Michigan	897,016	269,148	31,383	9,300	2,304		
16	Minnesota	781,552	4,000	500				
17	Mississippi	810,562	36,000	7,920				
18	Missouri	644,238	7,000	1,256	4,000	400		
19	New Hampshire	6,693,439	3,174,370	263,333	538,851	107,735	105,000	18,600
20	New Jersey	4,466,131	2,778,040	270,902	731,704	130,653		
21	New York	3,520,270	1,197,099	151,513	216,177	56,669	9,409	3,934
22	North Carolina	371,952	40,000	8,000	45,738	4,672		
23	Ohio	1,848,702	199,680	33,768	38,312	7,281	3,600	680
24	Oregon	673,594	5,000	700				
25	Pennsylvania	17,814,990	12,125,904	1,135,070	5,086,267	875,886	1,109,454	131,704
26	Rhode Island	7,043,711	1,803,842	318,389	340,946	133,995	38,284	7,930
27	Tennessee	1,135,578	197,690	33,165	49,100	8,272		
28	Texas	332,160	1,000	145				
29	Utah	365,500			800	64		
30	Vermont	1,766,642	1,562,221	192,936	50,000	12,000	8,650	1,938
31	Virginia	659,745	88,585	16,229	5,547	402	1,500	240
32	West Virginia	438,250	9,632	1,740	832	141		
33	Wisconsin	1,477,461	196,274	34,271	248,443	72,308	6,262	3,424
34	All other states	111,150						

AND TERRITORIES: 1890—Continued.

MATERIALS USED—continued.												
Mohair and noils.		All other animal hair.		Raw cotton.		Yarns not made in mill.						
						Woolen.		Worsted.		Cotton.		
Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
60,533	$15,991	9,619,277	$493,492	36,993,712	$4,198,527	4,982,919	$3,000,984	2,560,619	$2,540,667	23,990,406	$5,239,928	1
				7,500	700							2
				500	50					5,050	1,560	3
				104,782	12,536			161	291	2,536	782	4
198	50	40,803	2,448	1,454,296	218,232	3,880	2,946	293,230	318,917	1,514,150	282,585	5
				62,500	4,063					252,000	50,400	6
				20,815	1,957					67,000	12,150	7
				178,343	23,498			300	270	140,836	19,960	8
				1,845,162	166,162	6,000	3,000	9,000	7,875	116,212	26,228	9
								500	400	10,610	2,758	10
				1,689,664	187,039					1,006,336	215,263	11
640	386			1,756,360	245,329	6,500	3,895	17,766	22,508	552,966	144,557	12
				12,000	1,444					20,050	6,015	13
28,000	4,200	397,678	22,033	5,370,244	686,522	117,564	101,874	775,770	798,912	3,990,832	897,984	14
								30	25	2,440	524	15
												16
				1,000	110					415,000	91,375	17
				128,407	13,471					26,988	6,048	18
56	34	30,000	900	1,626,007	192,721	136,879	39,018	66,381	78,330	1,133,300	243,994	19
				1,341,000	146,814	1,000	400	105,000	150,160	958,600	216,119	20
1,146	355	805,700	38,512	1,281,637	154,564	60,000	48,500	7,967	8,828	1,041,035	197,998	21
		40,374	3,230	258,500	27,009	6,000	3,600			24,300	5,740	22
				71,650	7,268	5,100	2,547	300	210	125,502	25,924	23
				61,536	7,484					45,010	11,120	24
5,956	1,169	8,304,722	426,369	17,256,155	1,801,784	4,459,896	2,652,674	1,012,249	856,708	10,096,883	2,177,771	25
24,537	9,797			1,151,121	153,806	180,000	142,500	261,965	284,733	1,184,149	315,847	26
				693,019	69,465					769,948	166,340	27
				103,000	10,220							28
				14,100	1,540					24,532	4,987	29
				338,677	43,531			10,000	12,500	320,924	80,927	30
				82,172	10,901	100	30			22,940	4,805	31
				12,260	1,302					18,949	3,873	32
				70,245	8,905					41,078	26,244	33
				1,000	100					250	50	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	MATERIALS USED—continued.							
		Yarns not made in mill—Continued.							
		Mohair.		Silk.		Spun silk.		Jute.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
1	The United States	324,181	$297,995	120,571	$632,545	69,358	$281,211	125,327	$13,181
2	Alabama								
3	Arkansas								
4	California	955	1,099						
5	Connecticut	2,445	3,105	13,238	98,141	4,179	16,246	25,000	1,750
6	Delaware								
7	Georgia								
8	Illinois								
9	Indiana			129	555				
10	Iowa								
11	Kentucky								
12	Maine					3,384	5,565		
13	Maryland								
14	Massachusetts	23,000	23,800	16,989	118,221	9,285	62,628	7,207	609
15	Michigan								
16	Minnesota								
17	Mississippi								
18	Missouri								
19	New Hampshire			1,003	8,844	341	1,660		
20	New Jersey			500	4,100	1,109	12,230		
21	New York	35,000	35,500	6,225	44,910	2,268	10,520	500	70
22	North Carolina								
23	Ohio							3,000	300
24	Oregon			10	57				
25	Pennsylvania	237,521	207,043	42,966	248,842	25,568	108,362	89,620	10,452
26	Rhode Island	25,260	27,448	39,111	104,875	23,224	64,000		
27	Tennessee								
28	Texas								
29	Utah								
30	Vermont								
31	Virginia								
32	West Virginia								
33	Wisconsin			400	4,000				
34	All other states								

AND TERRITORIES: 1890—Continued.

MATERIALS USED—continued.												
Yarns not made in mill—Continued.		Oil.		Soap.		Chemicals and dye-stuffs.	Fuel.			Rent of power and heat.	All other materials.	
Linen.							Total cost.	Coal.	Wood.			
Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	
2,529	$895	2,439,573	$773,839	18,572,964	$614,997	$3,213,929	$1,711,169	$1,528,208	$182,961	$108,669	$2,230,554	1
.....	.....	152	53	.....	.....	675	105	.....	105	.....	.....	2
.....	.....	560	165	5,300	110	50	200	200	.....	50	20	3
.....	.....	30,792	13,305	905,306	19,847	28,881	39,586	25,121	14,465	.....	7,679	4
100	25	161,970	53,784	940,640	36,924	242,519	145,010	119,466	25,544	1,550	187,494	5
.....	.....	18,350	1,144	87,011	5,221	9,071	2,410	2,410	.....	.....	20,512	6
.....	.....	2,858	804	17,479	415	1,844	1,255	.....	1,255	.....	2,695	7
.....	.....	21,964	7,174	349,048	11,206	28,417	20,606	20,556	50	360	5,237	8
.....	.....	37,800	11,308	821,132	19,369	102,920	37,828	37,318	510	100	2,744	9
.....	.....	11,225	3,881	234,510	6,081	21,202	6,432	3,913	2,519	.....	5,786	10
.....	.....	37,854	8,702	105,163	2,867	62,852	24,403	23,804	599	300	91,553	11
.....	.....	139,411	42,941	1,280,993	44,317	221,643	123,910	88,152	35,758	4,598	88,401	12
.....	.....	6,615	2,535	24,898	937	10,733	8,331	8,241	90	.....	25,440	13
.....	.....	581,284	204,816	5,168,346	170,237	998,468	504,361	479,662	24,699	26,744	788,790	14
.....	.....	11,341	4,131	255,551	7,980	11,006	14,207	7,017	7,190	290	2,682	15
.....	.....	14,508	4,098	222,180	5,689	9,238	7,462	5,577	1,885	1,642	19,025	16
.....	.....	7,722	2,263	84,700	4,277	13,400	13,455	750	12,705	.....	16,000	17
.....	.....	14,969	4,060	84,950	1,877	8,215	8,862	7,792	1,070	260	6,928	18
.....	.....	123,790	42,994	1,483,349	41,478	240,612	103,285	85,529	17,756	3,300	136,157	19
.....	.....	104,318	35,183	1,075,836	34,568	152,205	69,126	69,126	.....	2,425	48,643	20
500	330	96,839	28,125	680,957	26,077	114,256	57,764	55,861	1,903	2,208	56,205	21
.....	.....	3,792	1,091	49,500	1,250	4,650	1,900	400	1,500	.....	1,952	22
.....	.....	32,608	10,599	345,027	8,906	36,143	16,663	15,673	990	525	5,373	23
.....	.....	14,712	4,550	165,209	6,617	27,591	5,759	.....	5,759	250	7,000	24
1,929	540	722,675	198,558	2,140,597	89,804	547,970	274,421	273,082	1,339	43,814	522,262	25
.....	.....	123,202	49,425	771,394	30,285	175,572	135,427	121,223	14,204	17,296	115,287	26
.....	.....	19,594	4,737	44,502	1,272	14,823	14,650	12,523	2,127	270	1,417	27
.....	.....	2,550	738	101,750	2,060	7,800	3,128	3,125	3	.....	1,916	28
.....	.....	5,041	2,221	99,150	2,892	8,492	5,048	5,038	10	450	11,930	29
.....	.....	37,735	13,628	606,256	18,756	58,434	35,223	30,903	4,320	1,210	38,817	30
.....	.....	18,881	5,120	110,830	2,626	14,487	4,693	3,908	785	.....	4,827	31
.....	.....	8,451	2,192	76,915	2,107	7,273	4,355	4,135	220	.....	728	32
.....	.....	25,520	9,382	231,185	8,865	29,692	19,813	16,212	3,601	927	6,812	33
.....	.....	490	132	3,300	80	2,705	1,491	1,491	.....	100	242	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	PRODUCTS.								
		Aggregate value.	All wool woven goods.							
			Total.		Cloths, doeskins, cassimeres, cheviots, indigo flannels, and broadcloths for men's wear.		Overcoatings, cloakings, and kerseys for both men's and women's wear.		Carriage cloths of all weights.	
			Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	$133,577,977	95,807,636	$51,205,385	23,008,903	$21,648,649	4,020,612	$4,695,723	1,282,921	$626,791
2	Alabama	17,150								
3	Arkansas	38,360	700	400						
4	California	1,325,033	1,366,651	716,576	143,102	131,745				
5	Connecticut	9,082,493	6,342,270	3,338,980	1,624,825	1,527,176	499,466	622,011	766,938	255,032
6	Delaware	482,022	327,612	310,662	263,412	263,412				
7	Georgia	172,245								
8	Illinois	1,299,506	1,646,506	1,068,636	999,959	741,248			150,000	129,500
9	Indiana	2,980,182	3,714,040	1,738,664	450,718	368,981	89,170	115,419		
10	Iowa	695,218	1,176,626	569,792	133,770	121,389	1,290	1,290		
11	Kentucky	2,351,117	29,550	24,315	2,600	2,000				
12	Maine	7,521,317	8,219,000	4,061,092	1,664,838	1,022,606	942,275	1,101,946		
13	Maryland	579,516	579,883	572,156	538,175	557,200	600	450		
14	Massachusetts	35,771,161	35,040,073	17,332,989	6,164,897	6,668,386	1,351,659	1,446,019	152,173	106,492
15	Michigan	844,052	881,329	630,026	715,146	550,164	5,000	3,400		
16	Minnesota	539,995	681,490	464,550	7,675	6,150	4,000	3,000		
17	Mississippi	924,185	9,600	4,900	6,000	3,000				
18	Missouri	548,457	556,739	200,960	6,170	4,513	630	750		
19	New Hampshire	8,004,264	8,806,591	3,287,023	1,332,066	834,236			75,519	24,919
20	New Jersey	5,652,166	1,826,871	1,887,890	1,459,695	1,503,267	139,080	171,098	5,984	7,232
21	New York	5,188,020	3,868,113	2,654,228	1,552,702	1,361,563			126,307	103,616
22	North Carolina	308,946	117,550	58,570	60,650	38,300	11,250	3,700		
23	Ohio	1,513,302	1,704,027	863,864	360,805	238,769	27,750	26,000		
24	Oregon	614,932	117,283	123,938	41,809	79,912				
25	Pennsylvania	29,878,010	10,325,818	4,255,656	1,158,019	772,149	438,353	630,514		
26	Rhode Island	9,884,945	3,502,424	4,102,508	3,142,852	3,732,008	321,572	450,000		
27	Tennessee	1,216,419	109,400	46,085	83,650	34,560				
28	Texas	359,230								
29	Utah	338,534	577,536	197,260	23,381	30,818				
30	Vermont	2,723,083	1,379,555	648,542	41,479	44,166	143,892	89,926		
31	Virginia	609,809	477,382	382,294	359,450	318,449	41,625	27,800		
32	West Virginia	328,800	479,876	200,160	104,128	56,377				
33	Wisconsin	1,669,944	1,695,381	1,278,207	565,730	635,645	3,000	2,400		
34	All other states	104,364	247,760	98,802	1,200	400				

AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.												
All wool woven goods—Continued.												
Dress goods, sackings, tricots, ladies' cloth, broadcloth, and all other goods for women's wear.		Flannels.		Blankets.		Horse blankets.		Carriage robes.		Woven shawls, wool or worsted.		
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
24,608,977	$8,769,257	32,762,273	$10,458,557	4,666,057	$2,532,324	666,625	$357,411	257,298	$145,019	4,533,970	$1,971,654	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	700	400	.....	.....	.....	.....	.....	.....	3
.....	.....	918,105	370,931	305,444	213,900	.....	.....	.....	.....	.....	.....	4
1,644,207	566,949	1,806,834	362,812	.....	.....	.....	.....	.....	.....	.....	.....	5
.....	.....	.....	.....	64,200	47,250	.....	.....	.....	.....	.....	.....	6
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
.....	.....	63,496	26,785	185,851	73,559	.....	.....	684	457	240,516	97,087	8
20,300	9,600	2,686,098	970,098	467,754	274,566	.....	.....	.....	.....	.....	.....	9
.....	.....	752,656	308,744	288,910	138,369	.....	.....	.....	.....	.....	.....	10
.....	.....	3,800	1,420	23,150	20,835	.....	.....	.....	.....	.....	.....	11
2,442,244	841,419	2,677,355	807,895	27,055	16,211	165,149	125,560	11,280	4,324	288,804	141,131	12
.....	.....	35,058	10,906	5,550	3,200	500	400	.....	.....	.....	.....	13
16,379,781	5,607,708	10,548,599	3,244,724	32,515	37,282	1,319	1,364	17,060	10,312	392,070	210,702	14
400	160	101,691	48,367	58,192	28,175	900	360	.....	.....	.....	.....	15
.....	.....	168,372	62,474	501,443	392,926	.....	.....	.....	.....	.....	.....	16
.....	.....	.....	.....	3,600	1,900	.....	.....	.....	.....	.....	.....	17
.....	.....	275,090	70,621	273,949	124,476	.....	.....	900	600	.....	.....	18
2,828,262	958,936	4,240,311	1,302,253	315,119	161,503	.....	.....	15,314	5,176	.....	.....	19
.....	.....	1,112	403	500	330	90,000	75,000	.....	.....	130,500	130,500	20
1,500	900	1,501,870	910,300	49,500	26,385	300	213	45,000	40,000	590,934	211,251	21
.....	.....	24,700	6,620	20,950	9,950	.....	.....	.....	.....	.....	.....	22
6,818	3,072	610,016	203,379	413,418	254,479	135,000	63,000	150,000	75,000	220	165	23
.....	.....	49,056	24,761	21,798	16,492	.....	.....	.....	.....	4,620	2,773	24
337,465	550,713	3,986,916	828,273	1,045,031	441,082	273,457	91,514	17,060	9,150	2,569,517	926,261	25
28,000	7,000	10,000	3,500	.....	.....	.....	.....	.....	.....	.....	.....	26
.....	.....	11,300	3,850	14,450	7,675	.....	.....	.....	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
.....	.....	297,411	99,501	244,391	58,714	.....	.....	.....	.....	12,353	8,227	29
420,000	216,800	648,184	246,650	126,000	51,000	.....	.....	.....	.....	.....	.....	30
.....	.....	25,150	8,760	51,157	27,285	.....	.....	.....	.....	.....	.....	31
.....	.....	340,218	128,643	35,530	15,140	.....	.....	.....	.....	.....	.....	32
.....	.....	734,355	308,325	87,860	88,340	.....	.....	.....	.....	304,436	243,557	33
.....	.....	244,520	97,502	2,040	900	.....	.....	.....	.....	.....	.....	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	PRODUCTS—continued.							
		Union or cotton mixed woven goods.							
		Total.		Unions, tweeds, cheviots, cassimeres, and other goods for men's wear.		Overcoatings and cloakings.		Sackings, tricots, and dress goods for women's wear.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	54,385,108	$23,009,976	20,023,283	$12,103,503	3,528,942	$2,497,092	9,892,377	$2,532,598
2	Alabama								
3	Arkansas	5,850	2,110						
4	California	1,754,649	601,032	74,670	61,583				
5	Connecticut	6,103,276	3,695,312	4,189,326	2,999,552	145,822	166,369	1,373,334	421,501
6	Delaware	1,080,000	162,000	1,080,000	162,000				
7	Georgia	13,774	3,673	13,774	3,673				
8	Illinois	578	500						
9	Indiana	411,048	142,066	1,500	1,700				
10	Iowa								
11	Kentucky								
12	Maine	3,842,467	1,335,243	401,869	266,281	160,425	101,533	2,790,566	800,234
13	Maryland	300	200	300	200				
14	Massachusetts	12,655,898	5,278,427	3,605,066	2,719,290	601,257	599,571	4,833,284	1,097,540
15	Michigan	1,050	360						
16	Minnesota								
17	Mississippi	2,250	450						
18	Missouri	521,174	99,497	520,684	99,302				
19	New Hampshire	5,118,629	1,888,932	860,525	549,798	557,300	438,000	346,083	92,202
20	New Jersey	3,671,300	2,178,644	1,885,600	1,103,397	1,565,700	895,247		
21	New York	3,047,057	1,422,239	401,782	313,506	20,000	18,000	304,625	69,350
22	North Carolina	1,125	330						
23	Ohio	2,700	1,754	700	254				
24	Oregon	483,884	161,040	21,809	29,302				
25	Pennsylvania	11,101,112	3,061,144	3,879,195	1,353,743	186,778	103,600	97,238	20,674
26	Rhode Island	1,353,272	1,292,383	1,353,272	1,292,383				
27	Tennessee	28,265	6,063						
28	Texas	338,000	181,000	240,000	140,000				
29	Utah	171,432	64,569						
30	Vermont	2,072,547	1,199,453	1,120,137	832,431	201,660	174,772	15,750	5,250
31	Virginia	88,410	66,280	83,310	64,220				
32	West Virginia	94,200	28,780	400	240				
33	Wisconsin	420,861	136,495	289,364	110,648			131,497	25,847
34	All other states								

AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.												
Union or cotton mixed woven goods—Continued.						Goods woven on cotton warps, weft partly or wholly of wool or hair.						
Flannels and linseys.		Blankets.		Horse blankets.		Total.		Cassimeres, doeskins, coatings, suitings, and other goods for men's wear.		Overcoatings and cloakings.		
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
11,621,679	$3,314,733	4,804,390	$1,390,660	4,514,437	$1,171,390	111,027,431	$37,199,986	27,882,734	$13,273,684	4,814,989	$3,387,061	1
.....	.....	.....	.....	.....	.....	22,500	10,800	.....	.....	.....	.....	2
3,450	1,150	2,400	960	.....	.....	51,200	16,000	.....	.....	.....	.....	3
1,547,187	448,385	121,030	84,080	11,762	6,984	13,500	7,425	.....	.....	.....	.....	4
300,000	67,500	.....	.....	94,794	40,390	4,654,472	1,548,614	880,717	513,786	95,847	98,581	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
.....	.....	.....	.....	.....	.....	500,002	149,372	.....	.....	.....	.....	7
.....	.....	578	500	.....	.....	502,778	178,550	422,159	105,500	.....	.....	8
255,676	78,804	153,872	61,562	.....	.....	2,691,917	694,100	1,665,944	330,994	.....	.....	9
.....	.....	.....	.....	.....	.....	54,335	28,378	12,000	8,745	.....	.....	10
.....	.....	.....	.....	.....	.....	6,983,577	2,084,492	1,447,643	529,958	.....	.....	11
38,038	13,089	390,937	132,122	60,632	21,984	5,445,247	1,862,348	1,047,104	577,138	97,555	89,809	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
2,772,570	728,830	669,871	101,596	83,850	31,600	29,852,055	10,330,678	3,909,070	3,091,971	1,663,919	1,529,907	14
1,050	360	.....	.....	.....	.....	20,050	9,465	.....	.....	.....	.....	15
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
2,250	450	.....	.....	.....	.....	1,672,167	864,760	.....	.....	.....	.....	17
490	195	.....	.....	.....	.....	183,830	50,835	.....	.....	.....	.....	18
2,062,057	510,727	.....	.....	1,292,664	298,205	6,334,944	2,525,856	1,594,726	943,483	623,885	399,800	19
.....	.....	220,000	180,000	.....	.....	2,107,130	1,089,596	558,300	391,504	959,050	391,422	20
1,729,000	911,550	.....	.....	591,650	109,833	1,056,643	419,361	10,200	10,450	376,405	183,874	21
1,125	330	.....	.....	.....	.....	644,027	146,440	225,027	83,160	312,000	21,060	22
.....	.....	2,000	1,500	.....	.....	434,005	249,652	1,600	1,100	45	68	23
462,075	131,738	.....	.....	.....	.....	451,995	310,103	135,144	153,743	.....	.....	24
1,441,354	140,564	3,117,462	780,169	2,379,085	602,394	36,406,275	10,248,727	10,618,421	3,990,106	269,410	359,057	25
.....	.....	.....	.....	.....	.....	4,751,539	2,374,404	3,667,498	1,913,511	416,873	313,483	26
2,225	542	26,040	5,521	.....	.....	3,523,455	995,467	1,141,100	300,650	.....	.....	27
.....	.....	98,000	41,000	.....	.....	360,000	126,000	.....	.....	.....	.....	28
169,832	63,369	1,600	1,200	.....	.....	86,479	33,986	20,147	3,050	.....	.....	29
735,000	187,000	.....	.....	.....	.....	1,987,060	764,876	488,084	311,455	.....	.....	30
4,500	1,610	600	450	.....	.....	207,205	69,065	24,575	11,520	.....	.....	31
92,800	28,540	.....	.....	.....	.....	27,344	9,796	3,375	1,860	.....	.....	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
.....	.....	.....	.....	.....	.....	1,700	840	.....	.....	.....	.....	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	PRODUCTS—continued.							
		Goods woven on cotton warps, weft partly or wholly of wool or hair—Continued.							
		Satinets.		Wool-filling dress goods and repellents.		Flannels and shirtings.		Blankets.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	18,619,181	$4,287,778	17,150,803	$4,184,262	16,729,685	$4,782,820	8,703,822	$2,546,338
2	Alabama								
3	Arkansas	1,500	600					1,000	300
4	California							13,500	7,425
5	Connecticut	1,078,760	289,466	1,594,451	428,119	948,834	203,246	55,863	15,416
6	Delaware								
7	Georgia								
8	Illinois	1,500	725			600	300	73,419	70,000
9	Indiana	3,111	2,609			315,909	165,675	8,448	5,748
10	Iowa							9,060	4,758
11	Kentucky							370	200
12	Maine	6,600	3,950	2,687,510	679,281	554,000	133,480	1,052,103	378,190
13	Maryland								
14	Massachusetts	15,996,900	3,538,217	1,729,076	286,748	2,569,569	979,430	3,982,561	903,925
15	Michigan	2,600	1,690			2,100	720	14,350	6,805
16	Minnesota								
17	Mississippi								
18	Missouri	480	440					6,850	1,950
19	New Hampshire	264,000	27,720	1,949,076	550,334	819,577	210,783	1,083,680	384,736
20	New Jersey			148,680	54,500			441,100	252,170
21	New York	300	200			312,538	140,737	278,200	44,100
22	North Carolina	27,850	9,700					19,200	10,000
23	Ohio	8,985	6,368			56,230	19,512	13,000	14,820
24	Oregon							316,851	156,360
25	Pennsylvania	36,385	18,082	8,874,413	2,142,327	10,270,155	2,708,121	1,298,722	276,150
26	Rhode Island	440,872	99,151	166,296	33,259				
27	Tennessee					52,500	30,000	2,850	2,125
28	Texas								
29	Utah					23,635	9,454		
30	Vermont	747,738	287,660			751,238	165,761		
31	Virginia					49,225	14,150	22,215	8,600
32	West Virginia	1,400	980	1,301	694	3,375	1,350	9,180	1,900
33	Wisconsin								
34	All other states	200	130			200	110	1,300	600

AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.									
Goods woven on cotton warps, weft partly or wholly of wool or hair—Continued.		Upholstery goods and sundries—woolen.	All worsted woven goods.						
Jeans, kerseys, and linseys.			Total.		Coatings, serges, and suitings for men's wear.		Dress goods, cassimeres, serges, and other goods for women's wear.		
Square yards.	Value.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
17,126,217	$4,738,034	$133,600	3,048,248	$2,626,174	2,030,928	$2,245,287	1,017,320	$380,887	1
22,500	10,800								2
48,700	15,100								3
									4
		65,000	254,382	409,973	253,692	409,513	690	460	5
									6
500,002	149,372								7
5,100	2,025								8
698,505	189,074								9
33,275	14,875								10
5,535,564	1,554,334								11
375	500		900	1,350	900	1,350			12
									13
960	480		619,312	795,616	619,312	795,616			14
1,000	250								15
									16
1,672,167	864,760								17
176,500	48,445								18
			146,561	225,438	146,561	225,438			19
			163,050	92,700	57,050	41,500	106,000	51,200	20
70,000	40,000	40,000							21
59,050	22,430								22
354,145	207,784								23
									24
5,038,760	754,884		1,160,630	769,227	900,000	700,000	260,630	69,227	25
60,000	15,000	28,600	703,413	331,870	53,413	71,870	650,000	260,000	26
2,327,005	602,692								27
360,000	126,000								28
42,697	21,482								29
									30
111,100	34,795								31
8,713	2,952								32
									33
									34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	PRODUCTS—continued.							
		Goods woven on cotton warps, weft partly or wholly of worsted.							
		Total.		Cassimeres, doeskins, coatings, suitings, and other goods for men's wear.		Worsted filling dress goods, delaines, cashmeres, serges and other stuffs for women's wear.		Linings, Italian cloths, and lastings.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	5,268,142	$2,000,031	568,597	$563,225	3,531,356	$990,904	1,168,189	$445,902
2	Alabama								
3	Arkansas								
4	California								
5	Connecticut	23,000	5,250					23,000	5,250
6	Delaware								
7	Georgia								
8	Illinois								
9	Indiana	14,784	3,929					14,784	3,929
10	Iowa								
11	Kentucky								
12	Maine	395,064	134,322					395,064	134,322
13	Maryland								
14	Massachusetts	1,328,984	753,501	303,537	304,096	330,106	153,804	695,341	295,601
15	Michigan								
16	Minnesota								
17	Mississippi								
18	Missouri								
19	New Hampshire								
20	New Jersey								
21	New York								
22	North Carolina								
23	Ohio								
24	Oregon								
25	Pennsylvania	831,250	258,300	150,000	80,000	641,250	171,500	40,000	6,800
26	Rhode Island	2,617,600	766,200	57,600	100,600	2,560,000	665,600		
27	Tennessee								
28	Texas								
29	Utah								
30	Vermont	57,460	78,529	57,460	78,529				
31	Virginia								
32	West Virginia								
33	Wisconsin								
34	All other states								

AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.									
Upholstery goods and sundries—worsted.	Carpets and rugs.	Felt goods.	Wool hats.	Hosiery and knit goods.	Partly manufactured products for sale.				
					Total.		Woolen yarn, all wool.		
Value.	Value.	Value.	Value.	Value.	Pounds.	Value.	Pounds.	Value.	
$1,330,332	$7,334	$22,815	$300	$97,770	48,077,114	$14,304,804	30,768,571	$8,990,106	1
					17,459	6,350			2
					38,500	19,850	6,000	3,600	3
									4
					137,000	24,364	19,000	10,150	5
					78,000	9,360			6
					39,850	20,160			7
				1,500	89,391	50,220	66,891	38,420	8
				8,425	1,137,055	400,848	376,055	217,398	9
				2,500	140,648	94,548	128,248	88,548	10
					430,892	242,310	240,556	146,013	11
					428,855	126,962	17,950	10,840	12
	700				10,796	6,460	8,796	5,460	13
88,285		6,000		8,000	3,021,933	1,140,797	1,218,415	716,770	14
				12,409	341,332	184,592	240,144	135,244	15
					136,700	75,445	63,150	39,525	16
					99,200	54,075	85,500	47,325	17
				183	350,709	196,982	247,023	146,403	18
3,090					199,200	73,925	100,000	51,840	19
125,000					677,391	278,136	627,391	258,136	20
96,000				50	743,867	371,042	316,290	136,913	21
					254,372	103,606	122,000	66,650	22
	60	1,200		3,082	635,582	392,720	582,805	365,441	23
				15,267	8,816	4,584	216	194	24
911,957	6,374	15,615	300	5,765	36,038,277	8,944,048	24,835,968	5,564,624	25
106,000				40,000	1,627,720	752,980	638,300	471,890	26
					382,611	108,804	146,844	76,557	27
					87,460	52,230	85,300	51,150	28
					66,084	41,184	53,372	37,110	29
					57,366	30,283	13,000	11,250	30
	200				177,499	91,970	128,991	72,100	31
					102,006	89,904	121,906	69,704	32
					453,872	252,307	275,760	148,251	33
				589	6,080	3,758	2,700	2,000	34

TABLE 5.—WOOLEN MILLS, BY STATES

	STATES AND TERRITORIES.	PRODUCTS—continued.							
		Partly manufactured products for sale—Continued.							
		Woolen yarn, union or merino.		Worsted yarn.		Cotton yarn.		Woolen card rolls.	
		Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
1	The United States	6,670,757	$2,253,792	2,673,546	$1,306,927	3,159,047	$626,072	1,435,215	$704,581
2	Alabama					7,000	1,120	10,459	5,230
3	Arkansas							32,500	16,250
4	California								
5	Connecticut	7,000	1,610						
6	Delaware	78,000	9,360						
7	Georgia							39,750	20,125
8	Illinois	2,000	1,600					20,500	10,200
9	Indiana	35,000	14,000			682,000	150,000	39,000	19,400
10	Iowa							11,800	5,900
11	Kentucky							190,336	95,697
12	Maine			6,500	5,221	178,499	28,628	153,300	76,013
13	Maryland							2,000	1,000
14	Massachusetts	422,961	156,941	166,746	108,385	70,998	20,329		
15	Michigan							99,438	49,223
16	Minnesota							71,550	34,840
17	Mississippi							13,700	6,750
18	Missouri	2,500	1,875					99,186	48,354
19	New Hampshire	3,600	1,440					30,600	14,320
20	New Jersey	50,000	20,000						
21	New York	291,583	183,112					96,459	47,227
22	North Carolina					81,000	13,365	50,372	23,341
23	Ohio							52,777	27,279
24	Oregon							8,600	4,300
25	Pennsylvania	5,712,413	1,830,589	2,163,000	943,321	1,886,630	356,188	89,716	40,649
26	Rhode Island	64,800	32,400	187,300	160,000	181,920	45,480		
27	Tennessee					70,000	10,362	164,817	81,795
28	Texas							2,160	1,080
29	Utah							12,712	4,074
30	Vermont							37,366	18,233
31	Virginia	900	865					35,599	17,805
32	West Virginia							40,100	20,200
33	Wisconsin			150,000	90,000			28,112	14,056
34	All other states					1,000	600	2,300	1,150

a Includes items as follows: cottonades, $249,839; cotton batts, $1,575; cotton cassimeres, doeskins, $267,176; cotton cloths, $36,000; cotton dusters, $35,000; cotton jeans, kerseys, etc., $27,298; cotton lap dusters, $80,000; cotton piece goods, $254,120; cotton shirtings, $238,085; custom work, $52,445; dyeing, $1,586; flannel shirts,

AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.									
Partly manufactured products for sale—Continued.								All other products. (a)	
Worsted slubbing and noils.		Waste.		Shoddy and mungo.		Wool extract.			
Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	
76,400	$31,840	1,085,178	$180,425	1,583,300	$179,351	625,100	$31,710	$1,639,470	1
									2
									3
									4
				111,600	12,604				5
									6
		100	35					40	7
								100	8
		5,000	50					1,150	9
		500	50			100	50		10
									11
		72,600	6,260						12
									13
		442,813	61,372	700,000	77,000			36,868	14
		1,750	125					7,200	15
						2,000	1,080		16
									17
		1,500	150			500	200		18
				65,000	6,325				19
								200	20
		39,535	3,790					185,100	21
		1,000	250						22
								970	23
									24
		463,350	101,375	679,200	80,262	208,000	27,040	1,400,897	25
76,400	31,840	44,000	5,570	20,500	2,460	414,500	3,340		26
		950	90						27
									28
								1,535	29
		7,000	800					2,000	30
		5,000	500	7,000	700				31
								160	32
								2,875	33
		80	8					375	34

$10,000; fly nets, $27,200; ginghams, $53,750; listings, $2,000; pickings, $69,250; scouring wool, $32,500; stockinets, $450; woolen batts, $3,482; woolen silk yarn, $175,000; miscellaneous, $22,714.

TABLE 6.—WORSTED MILLS,

	STATES.	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	143	$4,109,526	$68,085,116	$27,890,810	$2,842,769	$7,962,865	$17,085,176	$40,194,306	$10,844,736	$15,606,658	$13,742,912
2	Connecticut	10	.....	5,263,201	1,905,153	239,666	570,400	1,095,087	3,358,048	583,981	975,544	1,798,523
3	Massachusetts	33	800,100	21,204,909	8,728,179	1,607,575	2,775,173	4,945,431	12,476,730	3,204,626	5,371,979	3,900,125
4	New Hampshire	4	.....	4,295,688	1,125,440	69,000	197,000	859,440	3,170,248	603,278	1,252,304	1,314,666
5	New Jersey	6	75,000	1,305,271	653,472	38,500	181,500	433,472	651,799	210,661	174,375	266,763
6	New York	16	245,000	5,615,875	2,085,099	247,599	485,968	1,351,622	3,530,776	980,056	1,675,819	874,901
7	Pennsylvania	41	1,794,700	13,929,489	5,432,681	522,500	1,290,684	3,619,497	8,496,808	2,393,752	2,881,667	3,221,389
8	Rhode Island	28	1,161,726	14,949,166	7,249,767	657,519	2,273,205	4,310,045	7,708,399	2,677,811	2,959,159	2,071,429
	All other states (b)	5	33,000	1,521,517	720,019	60,500	188,937	470,582	801,498	190,571	315,811	295,116

	STATES.	MACHINERY—continued.										MATERIALS USED.		
		Spindles.			Power looms.					Hand looms.	Knitting machines.	Total cost.	Foreign wool in condition purchased.	
		Woolen.	Worsted.	Cotton.	Total number of power looms.	Broad looms on woolen goods.	Broad looms on worsted goods.	Narrow looms on woolen goods.	Narrow looms on worsted goods.				Pounds.	Cost.
10	The United States	207,180	470,675	68,225	10,044	1,366	7,445	297	9,936	51	32	$50,706,769	37,869,023	$10,591,129
11	Connecticut	29,100	8,932	.....	827	51	676	.....	100	.....	.....	2,814,186	877,903	354,389
12	Massachusetts	38,262	151,558	14,690	6,488	301	1,633	.....	4,554	.....	.....	14,259,116	16,197,664	4,123,616
13	New Hampshire	2,416	21,184	.....	2,074	12	38	.....	2,024	.....	.....	2,080,295	4,191,453	1,109,490
14	New Jersey	.....	17,648	.....	81	50	20	.....	11	.....	.....	1,417,167	465,481	182,674
15	New York	23,827	40,552	.....	1,512	194	605	5	708	28	6	3,470,580	1,298,049	440,894
16	Pennsylvania	51,035	104,169	31,615	3,271	498	1,294	291	1,188	23	26	11,539,880	6,632,146	1,604,230
17	Rhode Island	58,080	131,424	21,920	4,369	160	3,637	1	1,171	.....	.....	13,932,912	7,406,327	2,600,836
18	All other states	4,460	4,208	.....	422	100	142	.....	180	.....	.....	1,192,633	800,000	175,000

	STATES.	MATERIALS USED—continued.									
		Yarns not made in mill.									
		Woolen.		Worsted.		Cotton.		Mohair.		Silk.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
19	The United States	903,174	$355,592	11,551,264	$11,814,625	9,454,874	$2,441,972	232,071	$212,364	46,138	$344,556
20	Connecticut	.....	.....	1,550,697	1,735,603	328,500	70,500	126	1'6	4,285	44,346
21	Massachusetts	19,078	15,060	2,711,220	2,935,931	2,578,066	833,947	71,990	97,556	2,218	18,480
22	New Hampshire	.....	.....	151,200	138,080	1,398,758	280,634	.....	.....	.....	.....
23	New Jersey	97,480	63,362	219,230	254,999	20,000	4,000	40,000	6,000	1,514	2,271
24	New York	.....	.....	683,885	647,760	720,645	196,265	.....	.....	9,048	64,709
25	Pennsylvania	370,116	144,020	2,871,376	2,683,644	3,462,691	800,421	114,345	92,746	11,846	71,900
26	Rhode Island	410,500	133,150	3,275,906	3,308,920	419,014	136,050	5,610	15,916	17,227	142,850
27	All other states	.....	.....	87,750	109,688	527,200	119,555	.....	.....	.....	.....

a Includes officers, firm members, and clerks. For detailed information see Table 12.

BY STATES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)		MACHINERY			
										Combing machines.		
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	Cards. (Sets.)	Foreign.	American.	
$4,917,760	$296,237	$267,713	$250,385	$808,820	$1,595,813	$1,698,792	43,593	$15,880,183	953	544	129	1
405,369	.....	15,784	26,252	22,480	149,280	191,573	2,261	875,372	96	7	.....	2
1,491,042	78,506	121,349	66,612	334,243	454,924	435,408	12,021	4,556,997	238	177	45	3
129,869	.....	22,575	13,943	1,000	72,031	20,320	1,963	678,552	29	25	4	4
91,406	4,900	2,195	4,869	8,850	38,761	31,831	954	284,102	21	21	2	5
342,073	15,830	20,751	13,457	61,355	162,738	67,942	3,953	1,481,194	96	36	14	6
975,930	127,141	23,763	57,678	180,664	181,063	405,621	9,453	3,350,113	207	141	9	7
1,337,472	67,860	57,833	56,461	175,818	517,819	461,681	11,757	4,263,968	247	128	48	8
144,590	2,000	3,463	11,113	24,410	19,197	84,416	1,231	389,885	19	9	7	9

MATERIALS USED—continued.

Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	Shoddy.		Waste and wool noils.		Camel's hair and noils.		Mohair and noils.		All other animal hair.		Raw cotton.		
Pounds.	Cost.		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
59,832,451	$17,689,158	54,989,746	2,608,831	$347,006	1,391,444	$466,648	4,411,543	$672,392	2,038,732	$824,869	1,083,690	$120,585	3,881,743	$438,637	10
492,211	222,151	796,054	69,000	10,860	6,096	3,054	147	66	220,000	88,000	.....	.....	6,000	1,150	11
13,981,862	4,092,690	15,869,091	398,288	74,743	132,763	28,082	3,321,439	456,559	703,506	204,819	2,113	898	869,053	96,998	12
1,080,527	275,333	3,020,166	163,000	20,788	.....	.....	15,000	2,700	.....	.....	.....	.....	150,400	18,044	13
2,655,886	821,883	1,704,433	100,000	5,000	15,000	5,000	.....	.....	.....	.....	.....	.....	50,000	6,500	14
5,283,237	1,584,526	4,107,493	9,497	1,788	128,841	24,502	565,000	116,250	6,763	3,191	.....	.....	.....	.....	15
15,639,877	4,606,087	14,434,400	1,425,785	149,697	446,227	123,898	266,865	49,699	399,153	167,503	468,616	28,990	1,367,085	144,262	16
19,534,803	5,793,241	13,821,280	364,661	72,430	652,767	278,992	132,092	33,798	109,310	43,356	12,961	697	1,341,705	160,958	17
1,164,048	292,647	1,245,829	78,000	11,700	9,750	3,120	111,000	13,320	600,000	228,000	600,000	90,000	97,500	10,725	18

MATERIALS USED—continued.

Yarns not made in mill—Continued.				Oil.		Soap.		Chemicals and dyestuffs.	Fuel.			Rent of power and heat.	All other materials.	
Spun silk.		Linen.							Total cost.	Coal.	Wood.			
Pounds.	Cost.	Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	
19,427	$127,775	100,350	$50,473	664,750	$258,476	9,486,021	$333,288	$1,445,965	$1,048,245	$1,026,320	$21,925	$62,427	$1,060,587	19
74	857	.....	.....	26,363	14,124	542,719	20,214	116,923	63,513	61,390	2,123	.....	68,290	20
3,269	26,386	.....	.....	154,015	62,694	2,998,509	99,689	394,551	338,510	338,133	407	24,214	243,663	21
.....	.....	.....	.....	11,435	4,679	911,969	20,482	58,650	88,219	84,944	3,275	7,965	55,231	22
.....	.....	.....	.....	20,779	8,489	152,167	6,711	13,140	18,905	18,905	.....	600	17,633	23
100	400	100,350	50,473	29,478	12,082	684,058	38,958	177,287	62,249	62,249	.....	2,648	46,598	24
14,687	90,181	.....	.....	205,983	79,049	1,938,891	68,055	209,937	165,491	165,491	.....	14,380	244,190	25
1,297	9,951	.....	.....	193,717	69,371	1,501,478	58,772	417,155	279,412	274,412	5,000	12,620	363,837	26
.....	.....	.....	.....	22,980	7,088	756,230	20,407	58,322	31,916	20,796	11,120	.....	21,145	27

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Kentucky, 2; Maine, 1; Ohio, 1; Wisconsin, 1.

TABLE 6.—WORSTED MILLS,

	STATES.	PRODUCTS.											
		Aggregate value.	All worsted woven goods.								Goods woven on cotton warps, weft partly or wholly of worsted.	
			Total.		Coatings, serges, and suitings for men's wear.		Dress goods, cassimeres, serges, and other goods for women's wear.		Buntings.		Total.	
			Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	$79,194,652	26,459,038	$23,801,659	15,560,159	$20,141,165	10,331,999	$3,524,511	566,880	$135,983	72,753,678	$21,592,053
2	Connecticut	4,651,402	2,660,351	4,015,498	2,660,351	4,015,498					139,500	125,000
3	Massachusetts	21,933,775	7,176,803	5,909,348	3,616,852	4,654,837	2,993,071	1,118,528	566,880	135,983	34,755,183	6,778,866
4	New Hampshire	2,764,976									13,772,125	2,403,120
5	New Jersey	2,058,662	171,428	239,999	171,428	239,999					225,000	150,000
6	New York	5,763,102	1,722,896	1,834,785	1,722,896	1,834,785					2,691,179	1,026,716
7	Pennsylvania	17,861,776	2,105,712	1,906,731	1,391,334	1,575,950	714,378	330,781			8,327,386	4,690,864
8	Rhode Island	22,319,684	12,621,848	9,895,298	5,997,298	7,820,096	6,624,550	2,075,202			10,624,880	5,723,737
9	All other states	1,841,275									2,218,425	693,750

	STATES.	PRODUCTS—continued.													
		All wool woven goods—Continued.													
		Cloths, doeskins, cassimeres, cheviots, indigo flannels, and broadcloths for men's wear.		Overcoatings, cloakings, and korseys for both men's and women's wear.		Dress goods, sackings, tricots, ladies' cloth, broadcloth, and other goods for women's wear.		Flannels.		Blankets.		Horse blankets.		Carriage robes.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
10	The United States	2,258,947	$2,067,982	806,155	$1,050,292	628,413	$245,220	17,182	$2,662	356,000	$141,250	97,548	$52,258	411,303	$422,835
11	Connecticut			92,500	178,000										
12	Massachusetts	181,088	208,062	5,650	5,651	607	349	13,000	780					147,589	20,692
13	New Hampshire														
14	New Jersey			113,334	136,001										
15	New York	815,589	747,219	98,732	148,241	7,266	3,336								
16	Pennsylvania	406,820	259,694	276,423	325,296	620,540	241,535	4,182	1,882	356,000	141,250	97,548	52,258		
17	Rhode Island	855,450	853,007	219,516	257,103									4,454	4,501
18	All other states													259,260	397,642

	STATES.	PRODUCTS—continued.											
		Goods woven on cotton warps, weft partly or wholly of wool or hair—Continued.								Felt cloth.		Partly manufactured products for sale.	
		Overcoatings and cloakings.		Wool-filling dress goods and repellents.		Flannels and shirtings.		Blankets.				Total.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Pounds.	Value.
19	The United States	863,000	$808,614	505,000	$89,750	33,390	$6,104	2,225,707	$522,328	1,009	$1,524	36,052,126	$23,529,514
20	Connecticut									1,009	1,524	209,030	24,851
21	Massachusetts	306,348	296,426									13,827,404	7,803,844
22	New Hampshire											918,412	309,206
23	New Jersey											1,791,033	1,532,662
24	New York											1,582,981	846,880
25	Pennsylvania	508,661	440,188	505,000	89,750	33,390	6,104	1,587,360	369,308			10,956,323	7,841,563
26	Rhode Island	48,000	72,000									6,368,258	4,918,987
27	All other states							638,347	153,020			397,785	251,521

a Includes items as follows: custom work, $3,514; fire hose, $225,000; oil press cloth, $41,500; scouring wool, $4,292; shorts, $806; sweepings, burs, and springs, $1,179.

BY STATES: 1890—Continued.

PRODUCTS—continued.																		
Goods woven on cotton warps, weft partly or wholly of worsted—Continued.							Upholstery goods and sundries—worsted.								All wool woven goods.		
Cassimeres, doeskins, coatings, suitings, and other goods for men's wear.		Worsted filling, dress goods, delaines, cassimeres, serges, and other stuffs for women's wear.		Linings, Italian cloths, and lastings.			Total value.	Worsted or mohair goods, tapestry, plush, terry, and rep.		Braids and braiding.		Webbings, gorings, elastic fabrics, bindings, fringes, and other sundries.		Total.		
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.			Square yards.	Value.	Running yards.	Value.	Running yards.	Value.	Square yards.	Value.	
10,310,203	$9,349,901	59,026,584	$11,432,534	3,416,891	$869,618		$2,019,636	1,096,293	$1,108,344	82,430,251	$887,022	161,800	$24,270	4,800,230	$4,109,368	1
139,500	125,000						305,000	300,000	305,000					92,500	178,000	2
273,663	307,605	31,654,829	5,764,143	2,826,691	707,118		266,001			20,085,888	266,001			347,934	235,534	3
393,600	256,160	13,378,525	2,146,960													4
		225,000	150,000											113,334	136,001	5
100,530	150,794	2,590,649	875,922				119,270			4,937,240	95,000	161,800	24,270	1,043,267	980,488	6
5,773,016	3,876,323	2,054,370	752,041	500,000	62,500		453,699	522,267	338,327	16,725,373	115,372			1,777,013	1,038,365	7
3,373,669	4,340,269	7,251,211	1,383,468				530,324	60,693	119,675	40,681,750	410,649			1,166,922	1,143,338	8
256,225	293,750	1,872,000	360,000	90,200	40,000		345,342	213,333	345,342					259,260	397,642	9

PRODUCTS—continued.														
All wool woven goods—Continued.		Union or cotton mixed woven goods.								Goods woven on cotton warps, weft partly or wholly of wool or hair.				
Shawls.		Total.		Unions, tweeds, cheviots, cassimeres, and other goods for men's wear.		Overcoatings and cloakings.		Horse blankets.		Total.		Cassimeres, doeskins, coatings, suitings, and other goods, for men's wear.		
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
224,682	$126,869	1,937,774	$1,294,990	1,019,000	$617,094	850,186	$644,019	68,588	$33,877	5,517,176	$2,569,617	1,890,070	$1,142,821	10
														11
		934,908	533,534	928,800	528,444	6,108	5,000			364,493	305,148	58,145	68,722	12
		70,200	52,650	70,200	52,650									13
														14
121,680	81,692									1,136,855	729,963	1,136,855	729,963	15
15,500	16,450	912,666	672,806			844,078	638,929	68,588	33,877	3,329,481	1,249,486	695,070	344,136	16
87,502	28,727	20,000	36,000	20,000	36,000					48,000	72,000			17
										638,347	153,020			18

PRODUCTS—continued.																
Partly manufactured products for sale—Continued.																All other products. (a)
Woolen yarn, wool or merino.		Worsted yarn.		Cotton yarn.		Worsted slubbing and tops.		Worsted noils.		Waste.		Shoddy and wool extract.				
Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.			Value.
3,412,455	$1,221,008	24,763,501	$20,291,046	33,880	$6,777	360,101	$87,676	4,337,621	$1,433,050	3,130,693	$488,914	13,866	$1,043			$276,291
										209,030	24,851					1,529
743,845	286,795	9,776,455	6,712,844			298,427	44,764	1,649,880	486,460	1,358,797	272,081					41,500
253,156	58,492	665,256	250,714													
		1,354,837	1,377,707			625	468	296,290	125,807	140,181	28,680					
		1,026,000	681,495			50,000	32,500	367,214	117,109	139,767	15,776					225,000
2,355,454	839,721	7,402,656	6,624,255			11,049	9,944	926,538	316,267	246,760	50,333	13,866	1,043			8,262
60,000	36,000	4,140,512	4,392,510	33,880	6,777			1,097,699	387,407	1,036,158	96,293					
		397,785	251,521													

TABLE 7.—CARPET MILLS (OTHER

	STATES.	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	173	$1,278,150	$38,208,842	$17,375,384	$2,884,139	$5,559,458	$8,931,787	$20,833,458	$6,754,041	$5,705,756	$8,373,661
2	Massachusetts	7	.....	8,676,924	3,589,730	596,000	1,283,100	1,710,630	5,087,194	1,960,845	1,038,603	2,087,746
3	New Jersey	6	2,700	724,393	293,921	54,100	119,404	120,417	430,472	57,253	116,665	256,554
4	New York	15	70,000	11,178,342	5,239,437	1,210,560	1,653,917	2,375,020	5,938,905	2,385,565	1,838,873	1,714,467
5	Pennsylvania	142	1,205,200	15,129,619	7,466,300	978,539	2,180,776	4,306,985	7,663,319	1,624,680	2,230,986	3,807,653
6	All other states (b)	3	250	2,499,564	785,996	45,000	322,261	418,735	1,713,568	725,698	480,629	507,241

	STATES.	MACHINERY—continued.								
		Spindles.			Total number of power looms.	Looms on carpets and rugs.				
		Woolen.	Worsted.	Cotton.		Total number of looms on carpets and rugs.	Ingrain hand looms.	Ingrain power looms.	Venetian hand looms.	Venetian power looms.
7	The United States	53,046	151,132	4,680	8,538	10,898	631	4,214	157	109
8	Massachusetts	8,078	39,256	1,872	1,150	1,150	.....	311	.....	.....
9	New Jersey	1,820	1,024	.....	207	282	.....	12	.....	.....
10	New York	18,126	78,152	2,808	1,912	2,077	.....	357	.....	.....
11	Pennsylvania	20,242	18,976	.....	4,821	6,936	627	3,235	157	109
12	All other states	4,780	13,724	.....	448	453	4	299	.....	.....

	STATES.	MATERIALS USED.								
		Total cost.	Foreign wool in condition purchased.		Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	Shoddy.	
			Pounds.	Cost.	Pounds.	Cost.		Pounds.	Cost.
13	The United States	$28,644,905	54,742,234	$9,422,031	2,139,332	$433,756	35,726,837	598,512	$39,295
14	Massachusetts	4,731,873	16,470,121	2,244,474	40,085	7,514	8,579,919	.....	.....
15	New Jersey	430,917	703,927	173,056	.....	.....	547,035	.....	.....
16	New York	8,689,413	17,939,285	3,898,321	1,500,000	300,000	13,687,763	6,735	808
17	Pennsylvania	13,548,371	14,581,759	2,428,166	447,694	92,912	9,902,903	591,777	38,487
18	All other states	1,244,331	5,047,142	678,014	151,553	33,330	3,009,217	.....	.....

	STATES.	MATERIALS USED—continued.							
		Yarns not made in mill—Continued.							
		Worsted.		Cotton.		Mohair.		Jute.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
19	The United States	10,555,799	$4,711,249	17,920,498	$2,712,484	182,400	$23,712	23,670,117	$1,696,280
20	Massachusetts	2,316,087	1,142,740	1,474,455	240,731	.....	.....	2,485,603	202,438
21	New Jersey	38,542	16,018	114,082	20,324	.....	.....	496,337	37,061
22	New York	626,567	259,106	3,742,190	584,101	.....	.....	12,486,875	854,675
23	Pennsylvania	7,488,205	3,233,823	12,035,674	1,781,245	182,400	23,712	7,782,870	557,279
24	All other states	86,398	59,562	554,097	86,083	.....	.....	418,423	44,827

a Includes officers, firm members, and clerks. For detailed information see Table 12.

THAN RAG), BY STATES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)		MACHINERY.			
										Combing machines.		
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	Cards. (Sets.)	Foreign.	American.	
$1,819,441	$108,997	$168,468	$125,280	$275,555	$349,378	$791,763	29,121	$11,633,116	392	77	41	1
367,164	.....	69,166	26,175	107,752	96,658	67,413	5,144	1,892,072	40	20	23	2
30,502	182	2,889	3,669	18,456	1,447	3,859	585	212,554	22	.....	1	3
399,322	5,400	35,944	29,886	37,498	93,012	197,582	8,954	3,345,165	201	18	16	4
820,434	103,390	38,293	60,802	81,652	156,564	379,733	12,674	5,509,805	104	19	1	5
202,019	25	22,176	4,748	30,197	1,697	143,176	1,704	673,520	25	20	.....	6

MACHINERY—continued.

Looms on carpets and rugs—Continued.								Looms on woolen goods.			
Tapestry brussels power looms.	Body brussels power looms.	Axminster power looms.	Moquette power looms.	Velvet power looms.	Wilton power looms.	Rug hand looms.	Rug power looms.	Broad looms.	Narrow looms.	Hand looms.	
1,498	1,224	95	462	58	62	1,810	578	194	44	99	7
215	539	72	.....	.....	.....	.....	13	.....	.....	.....	8
26	4	.....	.....	40	1	105	94	30	.....	.....	9
943	107	17	400	18	2	219	14	54	.....	.....	10
314	487	6	.....	.....	59	1,485	457	110	44	99	11
.....	87	.....	62	.....	.....	1	.....	.....	.....	.....	12

MATERIALS USED—continued.

Waste and wool noils.		Camel's hair and noils.		Mohair and noils.		All other animal hair.		Raw cotton.		Yarns not made in mill. Woolen.		
Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
860,246	$146,876	1,001,929	$140,175	32,302	$5,456	3,645,096	$373,823	1,725,761	$181,637	13,763,201	$4,112,324	13
24,897	2,654	.....	.....	.....	.....	.....	.....	765,634	76,033	103,933	41,573	14
.....	.....	.....	.....	2,302	456	487,808	42,806	.....	.....	305,000	82,675	15
251,465	48,243	156,457	24,781	.....	.....	529,556	71,966	960,127	105,004	1,212,621	256,794	16
583,884	95,979	486,951	57,779	30,000	5,000	2,542,447	247,354	.....	.....	16,838,127	3,622,736	17
.....	.....	358,521	57,615	.....	.....	85,285	11,697	.....	.....	213,520	108,546	18

MATERIALS USED—continued.

Yarns not made in mill—Continued. Linen.		Oil.		Soap.		Chemicals and dyestuffs.	Fuel.			Rent of power and heat.	All other materials.	
							Total cost.	Coal.	Wood.			
Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	
9,719,242	$1,504,590	546,734	$184,891	3,118,925	$101,496	$978,877	$446,501	$446,251	$250	$18,055	$1,411,394	19
2,100,439	332,389	102,928	29,591	169,280	4,724	159,357	112,067	112,067	.....	.....	135,588	20
39,088	6,437	8,702	3,690	63,578	2,114	18,579	7,417	7,417	.....	.....	20,284	21
4,424,263	640,792	183,755	61,862	926,899	31,008	342,304	140,917	140,667	250	.....	1,068,131	22
2,845,865	475,192	208,738	75,118	1,548,104	54,683	407,701	145,919	145,919	.....	18,055	187,231	23
309,587	49,780	42,611	14,630	411,064	8,970	50,936	40,181	40,181	.....	.....	160	24

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Connecticut, 2; Rhode Island, 1.

TABLE 7.—CARPET MILLS (OTHER

	STATES.	PRODUCTS.							
		Aggregate value.	Total carpets and rugs.	Carpets.					
				Ingrain, 2-ply.		Ingrain 3-ply.		Ingrain, art.	
			Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	$47,770,193	$46,457,083	32,018,659	$13,780,694	3,251,368	$1,816,484	553,513	$325,984
2	Massachusetts	7,275,009	7,003,956	1,795,300	901,161	308,081	202,286		
3	New Jersey	817,242	579,522	219,000	120,505				
4	New York	14,606,116	14,280,442	2,317,322	1,093,896	519,230	266,263	21,000	11,025
5	Pennsylvania	22,886,416	22,407,753	27,533,220	11,011,721	2,120,486	1,137,742	532,513	314,959
6	All other states	2,185,410	2,185,410	1,053,817	653,411	303,571	210,193		

	STATES.	PRODUCTS—continued.							
		Carpets—Continued.							
		Moquette.		Smyrna.		Rag.		All other.	
		Running yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
7	The United States	3,193,186	$3,247,845	127,177	$332,718	71,310	$23,139	1,312,818	$423,553
8	Massachusetts								
9	New Jersey								
10	New York	2,800,000	2,800,000	15,381	34,186				
11	Pennsylvania	30,000	30,000	111,796	298,532	71,310	23,139	1,312,818	423,553
12	All other states	363,186	417,845						

	STATES.	PRODUCTS—continued.									
		All wool woven goods.						Woolen and worsted upholstery goods.		Felt druggets.	
		Total.		Horse blankets.		Carriage robes.					
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
13	The United States	111,862	$80,300	4,500	$1,250	107,362	$79,050	189,837	$150,565	103,258	$67,118
14	Massachusetts										
15	New Jersey	111,862	80,300	4,500	1,250	107,362	79,050	87,955	90,302	103,258	67,118
16	New York										
17	Pennsylvania							101,882	60,263		
18	All other states										

a Includes items as follows: custom work, $60,000; coverlets, $2,000.

THAN RAG), BY STATES: 1890—Continued.

PRODUCTS—continued.										
Carpets—Continued.										
Tapestry brussels.		Body brussels.		Tapestry velvet.		Wilton or wilton velvet.		Axminster.		
Running yards.	Value.	Running yards.	Value.	Running yards.	Value.	Running yards.	Value.	Running yards.	Value.	
20,008,961	$11,475,846	9,442,348	$8,107,549	2,482,128	$2,239,166	1,030,101	$1,582,409	379,341	$472,915	1
2,460,400	1,494,000	3,376,883	2,949,816	62,430	89,500	577,333	892,768	349,174	434,723	2
35,948	14,549	.....	.....	194,662	183,977	13,218	12,142	.....	.....	3
14,046,304	8,024,238	845,092	728,956	896,996	795,023	65,735	102,678	30,167	38,192	4
3,466,309	1,943,059	4,397,208	3,648,993	1,328,040	1,170,666	294,475	451,844	.....	.....	5
.....	.....	823,165	779,784	.....	.....	79,340	122,977	.....	.....	6

PRODUCTS—continued.										
Rugs.										
Wilton.		Moquette.		Ingrain.		Smyrna.		All other woolen.		
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
40,644	$87,702	60,000	$66,000	6,278	$34,262	1,429,536	$2,367,000	26,845	$73,817	7
10,644	39,702	.....	.....	.....	.....	.....	.....	.....	.....	8
.....	.....	.....	.....	.....	.....	169,985	248,349	.....	.....	9
.....	.....	60,000	66,000	.....	.....	121,024	287,559	4,651	32,426	10
30,000	48,000	.....	.....	6,278	34,262	1,138,527	1,831,092	21,794	40,191	11
.....	.....	.....	.....	.....	.....	.....	.....	400	1,200	12

PRODUCTS—continued.													
Partly manufactured products for sale.												All other products. (a)	
Total.		Woolen yarn, all wool.		Woolen yarn, union or merino.		Worsted yarn.		Worsted noils.		Waste.			
Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	
2,616,410	$953,127	443,573	$104,336	57,637	$12,025	1,922,135	$799,748	84,000	$16,000	109,065	$21,018	$62,000	13
704,728	271,053	.....	.....	57,637	12,025	538,091	238,028	84,000	16,000	25,000	5,000	.....	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
1,023,682	325,674	421,573	94,336	.....	.....	534,044	221,720	.....	.....	68,065	9,618	.....	16
888,000	356,400	22,000	10,000	.....	.....	850,000	340,000	.....	.....	16,000	6,400	62,000	17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18

TABLE 8.—FELT MILLS,

	STATES.	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	34	$128,400	$4,460,621	$1,865,084	$276,780	$714,453	$874,751	$2,594,637	$835,694	$824,370	$934,573
2	Massachusetts	7	9,000	731,976	303,073	62,660	142,625	97,788	428,903	79,025	71,284	278,594
3	New York	11	85,000	1,371,219	561,187	89,500	236,386	235,301	810,032	303,646	256,038	250,348
4	Ohio	4	1,600	520,298	248,432	25,320	71,642	151,470	271,866	38,000	105,382	128,484
5	Pennsylvania	3	7,800	242,207	120,500	5,500	41,000	74,000	121,707	28,050	62,229	31,428
6	All other states (b)	9	25,000	1,594,921	632,792	93,800	222,800	316,192	962,129	386,973	329,437	245,719

	STATES.	MATERIALS USED.											
		Total cost.	Foreign wool in condition purchased.		Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	Shoddy.		Waste and wool noils.		Camel's hair and noils.	
			Pounds.	Cost.	Pounds.	Cost.		Pounds.	Cost.	Pounds.	Cost.	Pounds	Cost.
7	The United States	$2,809,937	1,089,588	$448,350	5,039,495	$1,393,032	4,213,230	1,450,384	$179,505	1,344,619	$262,887	68,250	$3,071
8	Massachusetts	637,928	121,335	39,006	1,091,053	260,326	564,604	765,482	87,914	496,170	110,423	68,250	3,071
9	New York	807,276	716,229	235,253	1,128,919	365,124	1,452,092	375,947	57,350	245,578	44,802	.....	.....
10	Ohio	209,497	.....	.....	559,844	192,112	393,744	.....	.....	.....	.....	.....	.....
11	Pennsylvania	138,736	97,000	15,520	115,000	60,000	147,750	.....	.....	.....	.....	.....	.....
12	All other states	1,016,500	755,024	158,571	2,143,779	515,470	1,655,040	308,955	34,241	602,871	107,662	.....	.....

	STATES.	PRODUCTS.								
		Aggregate value.	Felt goods.							
			Total.		Cloths.		Trimmings and linings.		Table and piano covers.	
			Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
13	The United States	$4,654,768	6,808,115	$3,028,836	2,607,537	$979,364	1,176,114	$90,738	20,000	$57,400
14	Massachusetts	918,890	3,587,529	836,890	1,351,010	239,314	395,114	79,023	.....	.....
15	New York	1,517,199	320,480	824,712	293,980	293,980	.....	.....	.....	.....
16	Ohio	406,700	81,800	365,900	.....	.....	.....	.....	.....	.....
17	Pennsylvania	322,800	374,499	123,000	.....	.....	.....	.....	.....	.....
18	All other states	1,489,179	2,443,807	878,334	962,547	446,070	781,000	11,715	20,000	57,400

	STATES.	PRODUCTS—continued.							
		Felt goods—Continued.		All wool woven goods.					
		Hair felting.		Total.		Cloths, doeskins, cassimeres, cheviots, indigo flannels, and broadcloths for men's wear.		Flannels.	
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
19	The United States	551,760	$188,341	579,337	$497,307	370,148	$360,177	16,145	$10,800
20	Massachusetts	177,261	65,341	.....	.....	.....	.....	.....	.....
21	New York	.....	.....	155,376	105,330	.....	.....	.....	.....
22	Ohio	.....	.....	53,813	31,800	.....	.....	.....	.....
23	Pennsylvania	374,499	123,000	.....	.....	.....	.....	16,145	10,800
24	All other states	.....	.....	370,148	360,177	370,148	360,177	.....	.....

a Includes officers, firm members, and clerks. For detailed information, see Table 12.
b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Connecticut, 2; Indiana, 1; Maine, 1; Michigan, 1; New Hampshire, 2; New Jersey, 2.

BY STATES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)		MACHINERY.				
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	Cards. (Sets.)	Spindles. Woolen.	Looms. Broad looms on woolen goods.	Looms. Narrow looms on woolen goods.	
$232,871	$12,648	$16,000	$29,825	$49,686	$51,758	$72,954	2,266	$1,041,296	198	13,829	200	10	
													1
29,386	768	5,883	4,278	5,820	3,293	9,344	340	140,528	52	.....	.....	.....	2
86,273	8 860	2,496	11,012	9,000	32,148	22,757	820	361,944	63	4,623	53	2	3
28,191	90	2,972	2,444	1,200	6,577	14,908	183	92,161	8	2,826	43	2	4
10,780	780	185	2,560	1,050	2,400	3,805	176	111,682	6	.....	.....	.....	5
78,241	2,150	4,464	9,531	32,616	7,340	22,140	747	334,981	69	6,380	104	6	6

MATERIALS USED—continued.

All other animal hair.		Raw cotton.		Cotton yarn.		Oil.		Soap.		Chemicals and dyestuffs.	Fuel.			Rent of power and heat.	All other materials.	
Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.	Total cost.	Coal. Cost.	Wood. Cost.	Cost.	Cost	
2,355,928	$48,301	395,032	$37,133	10,241	$2,019	41,240	$14,704	834,205	$32,718	$122,100	$92,551	$90,553	$1,998	$750	$172,816	7
1,722,028	17,659	110,800	9,892	1,500	315	3,876	1,638	168,742	5,984	31,309	21,668	21,470	198	.....	48,723	8
600	962	29,700	2,673	6,405	1,153	9,989	4,265	187,788	8,062	13,249	31,904	31,904	.....	.....	42,479	9
300	30	.....	.....	.....	.....	6,700	2,004	100,000	2,817	4,194	4,820	4,820	.....	.....	3,520	10
633,000	29,650	.....	.....	.....	.....	10,000	3,000	65,000	2,600	5,800	5,166	5,166	.....	.....	17,000	11
.....	.....	254,532	24,568	2,336	551	10,675	3,797	312,675	13,255	67,548	28,993	27,193	1,800	750	61,094	12

PRODUCTS—continued.

Felt goods—Continued.

For ladies' hats.		Saddle felts.		Rubber shoe linings.		Endless belts.		Druggets.		
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
36,000	$18,000	45,904	$22,952	2,087,557	$576,946	201,163	$1,070,471	82,080	$24,624	13
36,000	18,000	.....	.....	1,628,144	435,212	.....	.....	.....	.....	14
.....	.....	.....	.....	.....	.....	26,500	530,732	.....	.....	15
.....	.....	1,800	900	.....	.....	80,000	365,000	.....	.....	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
.....	.....	44,104	22,052	459,413	141,734	94,663	174,739	82,080	24,624	18

PRODUCTS—continued.

All wool woven goods—Continued.				Goods woven on cotton warps, weft partly or wholly of wool or hair.		Partly manufactured products for sale.		All other products. (c)	
Blankets.		Horse blankets.				Woolen yarn.			
Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Pounds.	Value.	Value.	
37,668	$21,000	155,376	$105,330	41,961	$25,394	10,000	$9,000	$1,094,231	19
.....	.....	.....	.....	.....	.....	.....	.....	82,000	20
.....	.....	155,376	105,330	15,339	10,226	.....	.....	576,931	21
37,668	21,000	.....	.....	.....	.....	10,000	9,000	.....	22
.....	.....	.....	.....	.....	.....	.....	.....	199,800	23
.....	.....	.....	.....	26,622	15,168	.....	.....	235,500	24

c Includes items as follows: felt boots, $427,433; felt shoes, $366,087; piano felts, $22,000; piano goods, $151,443; piano hammers, $44,227, polishing felt, $83,041.

TABLE 9.—WOOL HAT

	STATES.	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	32	$226,960	$4,142,224	$1,194,389	$144,350	$381,105	$668,934	$2,947,835	$900,459	$1,029,917	$1,017,459
2	Massachusetts	7	50,000	1,043,590	324,439	21,000	104,705	198,734	719,151	211,602	336,742	170,807
3	New York	5	50,000	1,444,767	520,000	67,000	158,000	295,000	924,767	282,323	215,061	427,383
4	Pennsylvania	17	57,500	1,048,804	261,450	41,350	73,400	146,700	787,354	303,969	324,817	158,568
5	All other states (b)	3	69,400	605,063	88,500	15,000	45,000	28,500	516,563	102,565	153,297	260,701

	STATES.	MATERIALS USED.							
		Total cost.	Foreign wool in condition purchased.		Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	Shoddy.	
			Pounds.	Cost.	Pounds.	Cost.		Pounds.	Cost.
6	The United States	$2,802,041	259,325	$75,615	4,278,628	$1,373,184	3,018,114	306,351	$85,963
7	Massachusetts	820,263	35,662	21,989	887,734	289,513	590,045	172,433	50,518
8	New York	860,937	103,953	23,278	1,594,551	447,722	1,064,516	28,203	7,750
9	Pennsylvania	747,700	119,710	30,348	868,080	411,187	868,690	89,487	24,064
10	All other states	364,141	.....	.....	927,363	224,762	494,863	16,228	3,631

	STATES.	MATERIALS USED—continued.							
		Oil.		Soap.		Chemicals and dyestuffs.	Fuel—coal.	Rent of power and heat.	All other materials.
		Gallons.	Cost.	Pounds.	Cost.	Cost.	Cost.	Cost.	Cost.
11	The United States	22,817	$7,102	631,476	$23,857	$128,741	$84,904	$2,250	$707,663
12	Massachusetts	3,710	1,074	157,100	5,773	39,062	23,674	2,250	239,065
13	New York	5,040	1,725	139,258	7,250	31,831	22,543	.....	287,502
14	Pennsylvania	3,243	847	249,764	7,918	45,776	26,604	.....	75,875
15	All other states	10,824	3,456	85,354	2,916	12,072	12,083	.....	105,221

a Includes offices, firm members, and clerks. For detailed information see Table 12.
b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Connecticut, 2; Maine, 1.

MILLS, BY STATES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)		MACHINERY.	
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	Cards. (Sets.)	
$249,568	$19,070	$13,432	$26,703	$36,033	$79,134	$75,196	3,592	$1,363,944	229	1
79,247	3,350	4,576	9,212	14,418	17,451	30,240	1,045	482,002	50	2
54,233	5,500	3,558	7,696	4,999	20,180	12,300	997	361,512	71	3
58,490	4,210	2,211	6,748	11,693	20,494	13,134	1,049	330,050	72	4
57,598	6,010	3,087	3,047	4,923	21,009	19,522	501	189,780	36	5

MATERIALS USED—continued.

Waste and wool noils.		Camel's hair and noils.		Mohair and noils.		All other animal hair.		Yarns not made in mill. Woolen.		
Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
662,092	$166,162	11,688	$5,610	4,508	$2,130	147,600	$113,878	350,000	$24,982	6
29,810	15,355	.....	.....	4,508	2,130	147,600	113,878	350,000	24,982	7
79,921	31,336	.....	.....	.....	.....	.....	.....	.....	.....	8
552,361	119,471	11,688	5,610	.....	.....	.....	.....	.....	.....	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10

PRODUCTS.

Aggregate value.	Hats.						Partly manufactured products for sale.		All other products. (c)	
	Total.		Wool hats.		All other hats.		Waste.			
	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Pounds.	Value.	Value.	
$5,329,921	1,046,381	$5,228,876	972,375	$4,611,851	74,006	$617,025	9,500	$1,045	100,000	11
1,700,486	257,867	1,700,486	186,180	1,088,226	71,687	612,260	.....	.....	.....	12
1,489,132	275,847	1,489,132	275,847	1,489,132	.....	.....	.....	.....	.....	13
1,444,180	386,738	1,443,135	384,419	1,438,370	2,319	4,765	9,500	1,045	.....	14
696,123	125,929	596,123	125,929	596,123	.....	.....	.....	.....	100,000	15

c Scotch caps, 25,000 dozen, $100,000.

TABLE 10.—HOSIERY AND KNITTING

	STATES AND TERRITORIES.	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	796	$4,718,570	$50,607,738	$23,574,761	$2,271,466	$6,194,088	$15,109,207	$27,032,977	$6,501,320	$11,366,176	$9,165,481
2	Alabama	3	.....	94,373	61,223	3,300	20,000	37,923	33,150	200	16,250	16,700
3	Connecticut	27	348,708	4,822,911	1,755,452	125,200	626,735	1,003,517	3,067,459	464,668	1,478,351	1,124,440
4	Georgia	4	.....	121,494	97,500	17,000	48,000	32,500	23,994	3,240	13,185	7,569
5	Illinois	35	334,000	1,254,576	502,133	26,730	78,200	397,203	752,443	273,729	187,828	290,886
6	Indiana	9	15,000	716,989	305,209	38,000	76,446	190,763	411,780	153,127	148,205	110,448
7	Iowa	3	4,300	8,950	8,000	600	5,800	1,600	950	450	400	100
8	Louisiana	3	10,500	106,600	77,000	2,000	8,000	67,000	29,600	5,000	10,100	14,500
9	Maine	4	3,000	28,095	7,425	100	2,500	4,825	20,670	4,170	1,275	15,225
10	Maryland	8	8,600	149,656	56,499	4,950	13,855	37,694	93,157	16,443	22,340	54,374
11	Massachusetts	74	266,500	4,497,940	1,779,119	147,730	474,782	1,156,607	2,718,821	540,784	1,386,169	791,868
12	Michigan	10	32,150	560,917	270,983	37,203	82,700	151,080	289,934	53,709	131,256	104,909
13	Minnesota	3	50,000	247,498	62,750	20,100	15,150	27,500	184,748	26,793	108,839	49,116
14	Missouri	7	34,100	33,247	9,507	.....	.....	9,507	23,740	9,080	8,372	6,288
15	New Hampshire	37	182,400	2,706,065	1,209,423	126,075	291,078	792,270	1,496,642	306,571	891,359	298,712
16	New Jersey	15	15,700	1,352,143	806,454	75,094	227,283	504,077	545,689	81,337	345,743	118,609
17	New York	201	1,683,957	19,608,331	9,859,889	865,177	2,398,628	6,596,084	9,748,442	2,850,014	3,882,491	3,015,937
18	North Carolina	5	6,200	72,900	42,800	2,500	17,000	23,300	30,100	2,300	15,100	12,700
19	Ohio	44	176,560	1,071,007	383,510	81,950	91,400	210,160	687,497	193,725	256,372	237,400
20	Pennsylvania	236	1,076,220	9,121,632	4,539,524	519,137	1,245,087	2,775,300	4,582,108	923,503	1,627,082	2,031,523
21	Rhode Island	16	137,500	1,728,618	942,958	90,200	257,402	595,356	785,660	236,571	325,143	223,946
22	Utah	5	6,000	33,370	14,920	720	2,100	12,100	18,450	3,910	7,540	7,000
23	Vermont	10	157,000	754,882	204,556	9,400	31,000	164,156	550,326	109,692	176,094	264,540
24	Wisconsin	23	135,100	1,214,727	424,719	66,500	120,140	238,079	790,008	183,123	265,032	341,853
25	All other states (b)	14	35,075	300,817	153,208	11,800	60,802	80,606	147,609	59,121	61,650	26,838

	STATES AND TERRITORIES.	MACHINERY—continued.								MATERIALS USED.		
		Spindles.			Looms.							
					On woolen and worsted goods.			On carpets.	Knitting machines.	Total cost.	Foreign wool in condition purchased.	
		Woolen.	Worsted.	Cotton.	Broad looms on woolen.	Narrow looms on woolen.	Narrow looms on worsted.	Venetian hand looms.			Pounds.	Cost.
26	The United States	312,756	6,767	69,830	60	13	75	1	36,327	$35,861,585	2,734,304	$1,127,465
27	Alabama	.....	.....	.....	.....	.....	.....	.....	128	103,893	.....	.....
28	Connecticut	36,068	4,000	5,000	.....	.....	.....	.....	1,195	2,029,921	532,344	288,277
29	Georgia	960	.....	.....	.....	.....	.....	.....	225	70,697	.....	.....
30	Illinois	5,824	.....	.....	.....	.....	.....	.....	1,525	980,780	.....	.....
31	Indiana	7,392	.....	.....	.....	.....	.....	.....	670	408,195	568,758	105,908
32	Iowa	.....	.....	.....	.....	.....	.....	.....	14	1,975	.....	.....
33	Louisiana	.....	.....	1,800	.....	.....	.....	.....	169	58,202	.....	.....
34	Maine	.....	.....	.....	.....	.....	.....	.....	91	33,839	.....	.....
35	Maryland	.....	.....	.....	.....	.....	.....	.....	218	87,315	.....	.....
36	Massachusetts	11,058	.....	20,764	5	.....	.....	.....	3,344	2,552,705	52,989	42,272
37	Michigan	3,680	.....	.....	.....	.....	.....	.....	678	285,057	25,000	6,250
38	Minnesota	.....	.....	.....	.....	.....	.....	.....	152	87,662	.....	.....
39	Missouri	.....	.....	.....	.....	.....	.....	.....	145	30,524	.....	.....
40	New Hampshire	33,526	.....	3,000	.....	.....	.....	.....	3,032	1,777,595	243,850	66,726
41	New Jersey	9,548	.....	.....	.....	.....	.....	.....	694	582,783	188,839	74,214
42	New York	170,077	.....	15,980	.....	3	75	.....	5,434	13,669,169	882,065	438,721
43	North Carolina	.....	.....	512	.....	.....	.....	.....	136	66,925	.....	.....
44	Ohio	2,456	.....	.....	1	4	.....	.....	1,574	914,085	4,000	1,500
45	Pennsylvania	12,492	1,152	3,774	42	.....	.....	1	14,492	8,720,363	10,459	3,397
46	Rhode Island	4,210	1,615	10,000	.....	.....	.....	.....	755	1,618,621	140,000	50,900
47	Utah	.....	.....	.....	.....	.....	.....	.....	73	25,475	.....	.....
48	Vermont	9,584	.....	.....	.....	.....	.....	.....	221	649,004	66,000	43,700
49	Wisconsin	2,800	.....	.....	.....	.....	.....	.....	1,138	899,371	20,000	5,600
50	All other states	3,081	.....	.....	12	6	.....	.....	224	207,429	.....	.....

a Includes officers, firm members, and clerks. For detailed information see Table 12.

MILLS, BY STATES AND TERRITORIES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES (a).		MACHINERY.			
										Combing machines.		
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	Cards. (Sets.)	Foreign.	American.	
$3,627,245	$370,059	$178,944	$273,254	$618,027	$899,939	$1,286,422	61,209	$18,263,272	1,183	14	2	1
3,422	.....	685	607	450	180	1,500	412	64,838	2	.....	.....	2
197,422	20,866	14,963	18,717	30,239	62,681	49,956	3,134	1,073,135	114	7	.....	3
10,605	.....	530	700	300	5,000	4,075	349	71,952	2	.....	.....	4
68,123	22,319	3,922	7,311	3,306	15,028	16,237	1,878	545,109	14	.....	.....	5
70,437	986	2,832	4,858	8,939	27,771	25,051	962	207,519	18	.....	.....	6
419	320	27	32	10	.....	30	9	2,550	.....	.....	.....	7
2,480	870	.....	910	700	.....	.....	284	51,841	.....	.....	.....	8
1,019	280	62	112	415	.....	150	260	30,165	.....	.....	.....	9
9,747	736	298	553	1,300	2,700	4,160	306	61,466	.....	.....	.....	10
315,786	22,539	35,700	23,839	33,499	76,909	93,291	4,675	1,495,260	52	.....	.....	11
57,901	2,846	2,159	3,865	9,871	9,338	29,822	848	208,344	14	.....	.....	12
24,345	2,500	651	1,669	1,125	9,200	9,200	129	46,356	.....	.....	.....	13
3,803	2,684	111	193	105	60	650	125	34,477	.....	.....	.....	14
241,201	13,197	9,536	12,945	41,021	82,045	82,457	3,178	989,130	112	.....	.....	15
101,146	1,316	13,621	4,665	15,198	32,876	33,470	1,277	342,600	33	.....	.....	16
1,389,427	128,500	54,717	107,526	282,871	347,853	467,960	20,299	6,437,308	701	2	2	17
3,097	374	538	481	924	703	77	184	30,410	.....	.....	.....	18
68,991	15,611	4,355	8,565	6,153	10,683	23,624	1,898	466,630	8	.....	.....	19
741,956	98,461	21,534	48,301	103,337	119,736	350,587	15,941	4,732,754	45	3	.....	20
110,720	13,274	5,243	9,353	18,921	35,951	27,978	1,538	487,350	14	2	.....	21
2,146	600	140	531	700	175	.....	70	17,020	.....	.....	.....	22
63,188	9,355	2,607	5,261	11,086	26,157	8,722	718	209,844	37	.....	.....	23
102,727	9,414	2,710	9,017	12,943	28,788	39,855	2,296	449,724	6	.....	.....	24
37,137	3,011	1,994	3,243	5,214	6,105	17,570	439	147,490	11	.....	.....	25

MATERIALS USED—continued.

Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	Shoddy.		Waste and wool noils.		Camel's hair and noils.		Mohair and noils.		All other animal hair.		Raw cotton.		
Pounds.	Cost.		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
18,905,089	$7,126,953	16,771,492	4,735,144	$878,948	5,503,286	$2,021,492	410,154	$139,149	169	$87	14,173	$3,918	32,492,617	$3,712,215	26
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
1,232,862	492,016	1,375,289	47,000	10,840	210,174	96,597	123,656	41,360	169	87	500	80	2,429,183	278,640	28
818,500	193,975	512,300	27,920	5,980	20,000	6,000	17,500	4,000	.....	.....	.....	.....	200,000	12,000	29
526,495	109,119	565,811	143,572	28,176	89,496	22,150	25,762	5,389	.....	.....	.....	.....	125,120	14,050	30
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61,413	7,116	31
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300,000	30,000	33
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35
1,759,087	592,442	1,347,447	44,500	11,074	15,621	8,592	.....	.....	.....	.....	.....	.....	2,637,876	305,420	36
222,081	62,834	139,081	30,937	5,675	63,375	13,066	.....	.....	.....	.....	.....	.....	265,555	29,497	37
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
3,212,324	900,213	2,095,036	960,998	216,614	118,012	35,822	4,200	1,660	.....	.....	.....	.....	728,130	82,166	40
216,008	82,172	216,181	18,623	3,465	36,540	13,958	.....	.....	.....	.....	10,673	2,938	379,620	60,754	41
8,142,627	3,678,132	8,341,895	3,069,939	522,379	4,101,351	1,482,448	212,195	82,407	.....	.....	3,000	900	22,346,828	2,554,026	42
355,000	127,500	308,000	5,000	1,000	20,000	2,000	.....	.....	.....	.....	.....	.....	.....	.....	43
643,583	154,994	352,562	86,342	22,724	223,258	95,416	15,181	1,835	.....	.....	.....	.....	.....	.....	44
648,311	273,605	625,200	12,218	2,716	111,700	48,680	.....	.....	.....	.....	.....	.....	977,171	110,974	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,047,900	114,724	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
510,669	256,000	505,669	16,882	3,522	269,809	126,392	.....	.....	.....	.....	.....	.....	432,860	51,338	48
561,042	180,692	423,021	131,213	24,533	223,000	70,221	11,660	2,498	.....	.....	.....	.....	18,361	2,510	49
56,500	23,250	54,000	140,000	20,250	950	150	.....	.....	.....	.....	.....	.....	482,600	50,000	50

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: California, 2; Colorado, 2; Florida, 1; Kansas, 1; Kentucky, 2 Nebraska, 1; Virginia, 2; Washington, 1; West Virginia, 2.

TABLE 10.—HOSIERY AND KNITTING MILLS,

	STATES AND TERRITORIES.	MATERIALS USED—continued. Yarns not made in mill.									
		Woolen.		Worsted.		Cotton.		Mohair.		Silk.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
1	The United States	6,386,370	$3,791,497	4,146,035	$4,279,105	32,248,849	$7,588,973	125	$98	77,597	$418,075
2	Alabama					545,400	95,742				
3	Connecticut	177,100	115,650	177,331	203,943	467,410	129,986			369	1,713
4	Georgia					286,340	57,269				
5	Illinois	251,020	156,655	72,480	54,340	1,223,500	439,201			6,472	36,385
6	Indiana	74,098	31,736	3,342	3,127	231,413	44,167				
7	Iowa	1,275	1,100			3,000	600				
8	Louisiana					120,000	24,000				
9	Maine	29,075	20,494	12,320	10,883	6,000	1,740			25	225
10	Maryland	54,750	34,130	14,000	14,600	115,700	32,175				
11	Massachusetts	456,440	254,273	278,853	314,481	1,828,589	449,367			13,503	67,676
12	Michigan	121,667	75,989	19,400	16,225	67,400	14,800			6,140	36,925
13	Minnesota	64,000	28,000	41,000	34,400	42,000	8,562			2,160	9,016
14	Missouri	30,325	20,250			37,500	9,500				
15	New Hampshire	96,658	71,051	106,478	122,660	113,609	34,670			3,155	14,235
16	New Jersey	113,600	102,435	36,629	39,922	462,582	100,623				
17	New York	1,034,837	693,938	695,260	745,805	5,635,241	1,261,117			10,223	67,169
18	North Carolina					277,000	62,260				
19	Ohio	851,313	508,349	145,857	153,507	296,392	63,730			2,036	10,380
20	Pennsylvania	1,985,017	1,190,683	1,995,905	2,021,023	17,511,141	4,080,238	125	98	29,654	158,881
21	Rhode Island	108,159	56,769	445,633	441,038	2,289,364	518,536			2,000	5,000
22	Utah	31,375	20,988	2,500	3,287	500	125			25	250
23	Vermont	2,000	1,500			233,588	65,129			1,000	4,600
24	Wisconsin	886,786	394,829	84,047	81,804	249,545	52,516			715	4,600
25	All other states	16,875	12,678	15,000	18,000	205,635	42,980			120	1,020

	STATES AND TERRITORIES.	PRODUCTS.									
		Aggregate value.	Hosiery and knit goods.								
			Total value.	Woolen half hose.		Woolen hose.		Merino or mixed half hose.		Merino or mixed hose.	
				Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.
26	The United States	$67,241,013	$63,318,727	1,360,824	$2,892,822	2,242,544	$4,722,796	376,053	$604,773	433,083	$791,227
27	Alabama	190,725	190,725								
28	Connecticut	3,771,567	3,663,661	83,074	179,746	847	5,480	2,308	4,520		
29	Georgia	166,850	166,850								
30	Illinois	1,990,035	1,912,026	128,569	270,295	129,940	304,363	12,007	24,014	10,609	23,140
31	Indiana	827,104	662,139	96,365	208,722	98,243	198,723	1,748	3,058	10,564	16,799
32	Iowa	5,763	4,938	7	42	20	180				
33	Louisiana	151,180	139,660								
34	Maine	76,603	76,603	1,500	3,700	170	1,000			100	200
35	Maryland	180,823	180,823	40,400	61,300	5,500	16,800				
36	Massachusetts	5,082,087	4,717,024	46,610	135,200	167,898	349,118	4,610	12,000	26,922	154,591
37	Michigan	701,322	595,142	24,290	74,270	20,447	107,720	15,020	36,230	7,000	26,200
38	Minnesota	183,743	181,028	16,300	57,200	1,000	3,167				
39	Missouri	81,445	81,445	1,000	1,525	14,100	24,750			30,000	45,000
40	New Hampshire	3,481,922	3,413,018	223,570	418,863	1,015,337	2,081,895	106,843	177,823	31,066	51,748
41	New Jersey	1,091,403	1,077,452	10	40	27,540	37,685	16,653	37,475	5	21
42	New York	24,776,582	23,494,419	99,775	232,100	40,700	90,250	7,500	9,375	45,000	40,000
43	North Carolina	126,875	126,025								
44	Ohio	1,635,948	1,611,558	200,486	352,389	271,610	499,766	44,167	78,333	27,500	32,600
45	Pennsylvania	16,944,237	15,736,675	152,926	270,774	194,152	297,564	133,597	162,945	187,517	289,723
46	Rhode Island	2,516,664	2,276,070	29,500	78,625	151,900	443,573	300	300	50,000	100,000
47	Utah	53,500	47,960	6,198	24,500	8,350	22,000				
48	Vermont	1,105,958	1,105,958	12,520	46,396						
49	Wisconsin	1,635,641	1,478,752	183,174	450,435	80,680	204,080	31,100	56,700	650	1,705
50	All other states	462,976	375,776	14,550	26,700	14,110	34,682	200	2,000	6,150	9,500

BY STATES AND TERRITORIES: 1890—Continued.

MATERIALS USED—continued.														
Yarns not made in mill—Continued.				Oil.		Soap.		Chemicals and dyestuffs.	Fuel.			Rent of power and heat.	All other materials.	
Spun silk.		Linen.							Total cost.	Coal.	Wood.			
Pounds.	Cost.	Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	
42,744	$182,240	301,695	$65,335	528,504	$135,037	6,647,236	$212,844	$504,053	$509,086	$489,968	$19,118	$87,579	$3,017,436	1
.....	.....	.....	.....	1,200	300	.....	.....	.....	2,043	2,043	.....	.....	5,808	2
8,266	35,867	.....	.....	53,658	9,146	424,209	15,733	26,579	43,496	41,740	1,756	905	239,006	3
.....	.....	.....	.....	243	89	1,500	50	150	1,139	1,133	6	.....	.....	4
2,200	10,200	4,000	8,000	7,892	2,287	150,560	4,657	9,378	9,202	9,202	.....	3,460	23,010	5
.....	.....	.....	.....	9,042	2,704	526,917	3,971	10,297	6,229	6,229	.....	930	27,176	6
.....	.....	.....	.....	.....	.....	.....	.....	10	40	40	.....	.....	225	7
.....	.....	.....	.....	600	100	.....	.....	500	2,352	2,352	.....	450	800	8
.....	.....	.....	.....	10	3	300	8	100	106	6	100	80	200	9
.....	.....	.....	.....	350	35	10,500	525	3,000	1,398	1,398	.....	.....	1,452	10
3,281	11,285	550	500	18,643	4,156	236,397	8,443	78,531	58,709	58,359	350	5,804	339,620	11
300	1,300	.....	.....	3,060	1,197	99,350	3,144	5,187	3,905	3,845	60	850	8,213	12
.....	.....	.....	.....	450	105	10,200	309	226	912	900	12	500	5,632	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	20	20	.....	684	70	14
.....	.....	.....	.....	77,976	14,929	460,240	12,654	63,096	38,679	24,161	14,518	6,153	96,267	15
225	1,200	.....	.....	8,058	3,855	149,410	5,934	14,142	13,688	13,688	.....	660	62,823	16
11,012	50,734	5,600	2,040	259,273	72,355	3,615,139	118,007	161,060	191,867	191,656	211	32,853	1,513,151	17
.....	.....	.....	.....	459	150	6,000	150	300	875	475	400	100	3,150	18
894	4,090	3,000	820	4,400	1,315	65,800	1,572	7,279	5,669	5,669	.....	1,776	23,598	19
9,343	37,593	288,545	53,915	50,298	10,898	466,229	24,936	128,897	77,376	77,376	.....	20,496	516,989	20
5,225	20,970	.....	.....	13,907	5,369	150,405	5,832	33,627	23,513	23,513	.....	2,478	14,864	21
.....	.....	.....	.....	300	75	750	25	200	375	375	.....	.....	150	22
14	58	.....	.....	11,206	3,600	93,923	2,496	6,832	9,207	9,117	90	1,931	72,690	23
484	2,193	.....	.....	6,029	1,974	100,407	2,478	13,842	14,461	13,311	1,150	6,721	37,899	24
1,500	6,750	.....	.....	1,450	395	79,000	1,920	820	3,825	3,360	465	748	24,043	25

PRODUCTS—continued.												
Hosiery and knit goods—Continued.												
Cotton half hose.		Cotton hose.		Merino or mixed shirts and drawers.		All woolen shirts and drawers.		All cotton shirts and drawers.		Leggings and gaiters.		
Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	
5,341,628	$3,936,536	7,387,259	$6,214,052	2,526,226	$15,055,999	1,088,841	$8,881,777	3,240,590	$9,024,221	25,072	$85,401	26
100,000	65,000	134,000	91,600	.....	.....	.....	.....	10,000	34,125	.....	.....	27
36,000	48,000	.....	.....	187,841	1,619,133	68,177	913,416	159,060	424,118	2,000	5,000	28
68,249	47,474	97,900	93,126	.....	.....	.....	.....	15,000	26,250	.....	.....	29
1,044,054	740,401	27,437	34,373	7,882	97,930	885	17,314	100,000	80,000	1,100	5,400	30
105,176	65,078	23,305	24,636	2,400	24,000	2,500	37,500	.....	.....	423	2,638	31
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	180	32
46,400	35,300	105,000	95,000	.....	.....	.....	.....	9,360	9,360	.....	.....	33
2,700	3,375	.....	.....	.....	.....	.....	.....	.....	.....	112	644	34
53,085	50,851	3,115	4,704	.....	.....	766	7,660	8,333	33,332	200	800	35
142,907	255,365	685,134	513,788	30,754	216,980	67,610	558,394	434,380	1,282,337	1,725	8,900	36
56,000	59,000	12,000	25,000	19,874	90,915	1,700	62,600	350	10,500	100	375	37
1,600	1,344	1,000	2,667	5,000	100,000	500	10,000	.....	.....	.....	.....	38
4,500	3,300	1,200	1,070	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	169,000	135,200	57,700	367,550	14,598	143,273	.....	.....	.....	.....	40
35,508	21,269	272,755	237,009	44,393	505,916	3,808	51,652	4,611	40,900	.....	.....	41
58,108	104,177	41,732	34,675	1,888,361	10,158,826	778,011	5,924,735	1,714,825	5,179,811	15,941	49,798	42
69,875	52,075	12,000	13,050	.....	.....	.....	.....	21,750	61,500	.....	.....	43
87,960	66,454	40,150	41,163	11,140	97,950	21,400	194,000	12,600	23,500	450	900	44
3,400,556	2,291,148	5,658,384	4,710,753	147,869	1,051,089	39,941	244,897	655,021	1,502,738	1,942	5,867	45
8,500	9,100	89,040	140,600	19,000	107,000	12,400	130,000	80,000	208,000	954	4,524	46
200	200	100	200	.....	.....	10	225	.....	.....	10	40	47
.....	.....	.....	.....	47,802	384,560	68,645	477,750	18,000	102,000	.....	.....	48
5,700	5,700	9,107	11,763	6,700	58,000	5,950	82,361	3,000	5,000	45	135	49
15,150	11,925	4,000	3,675	49,510	176,240	2,000	26,000	300	750	50	200	50

TABLE 10.—HOSIERY AND KNITTING MILLS.

	STATES AND TERRITORIES.	PRODUCTS—continued.									
		Hosiery and knit goods—Continued.									
		Gloves and mittens.		Hoods, scarfs, nubias, etc.		Cardigan jackets, fancy jackets, etc.		Shawls.		Fancy knit goods, wristers, etc.	
		Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.	Dozens.	Value.
1	The United States	896,150	$1,935,080	342,497	$1,476,430	361,478	$3,576,248	22,990	$115,467	270,533	$759,648
2	Alabama										
3	Connecticut	16,700	23,200			17,800	190,800				
4	Georgia										
5	Illinois	66,540	170,335	12,950	55,491	6,771	57,540	104	260	5,550	31,200
6	Indiana	50,000	74,000	1,600	3,000						
7	Iowa	6	36	300	1,000					1,200	3,500
8	Louisiana										
9	Maine	28,100	58,600	137	2,244	130	2,160	12	180	1,350	4,500
10	Maryland					204	4,076			630	1,300
11	Massachusetts	166,822	328,695	6,660	27,006	49,990	279,762	100	1,800	400	605
12	Michigan	27,840	87,120	1,500	4,500	600	7,200			1,215	3,512
13	Minnesota	2,200	7,200	150	300					25	50
14	Missouri	1,000	3,000			110	1,400			200	500
15	New Hampshire	29,030	35,266							1,000	2,000
16	New Jersey			3,000	18,000	6,702	45,485	50	2,000		
17	New York	92,426	216,360	48,898	210,891	74,473	945,369	4,445	25,200	110,590	263,652
18	North Carolina										
19	Ohio	99,795	167,378	12,476	41,325	200	5,000			13,285	10,800
20	Pennsylvania	78,502	206,780	233,160	1,014,960	128,230	1,943,607	18,209	85,077	75,263	408,567
21	Rhode Island	30,000	52,500	1,800	14,000	1,000	7,500				
22	Utah	125	275			15	500			10	20
23	Vermont	3,200	7,290							53,000	13,022
24	Wisconsin	212,054	493,695	19,836	83,533	679	9,675	50	650	2,715	11,420
25	All other states	750	2,450	30	180	74,574	76,174	20	300	4,100	5,000

a Includes items as follows: abdominal bands, $809; athletic goods, $61,400; bandages, $833; bathing suits and athletic goods, $26,400, blankets, $14,240; braid, $243,000; card rolls, $159; cotton batting, $243; cotton waste, $794; cotton yarn, $09,287; cloaking, $245,000; curtains $186,000; custom work, $825; dyeing cotton yarn, $1,200; eider down, $122,000; elastic hosiery, $13,797; flannels, $150; fleece lining, $22,663; fringes, $15,000; German socks, $83,100; glace lining, $50,000; Guernsey frocks, $150; horse blankets, $1,006; infants' bands, $11,654; infants' shirts, $1,500; jeans, $6,300; knit boots, $43,060; lace, $150; ladies' caps, $623; ladies' silk vests, $13,090; ladies' skirts and bathing suits, $5,600; overshirts, $11,690; pants, overalls, and shirts, $20,000; paper boxes, $0,240; Persian knit slippers, $846; rag carpets,

BY STATES AND TERRITORIES: 1890—Continued.

PRODUCTS—continued.													
Hosiery and knit goods—Continued.				Partly manufactured products for sale.								All other products. (a)	
Boot and shoe linings.		Jersey cloth.		Total.		Woolen yarn.		Worsted yarn.		Cotton yarn.			
Yards.	Value.	Yards.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	
7,596,711	$1,088,558	3,065,057	$2,157,692	1,369,180	$636,345	852,180	$472,703	17,000	$13,642	500,000	$150,000	$3,285,941	1
													2
685,011	247,038	5,136	3,210	13,000	9,692			13,000	9,692			98,214	3
													4
				104,500	63,500	104,500	63,500					14,509	5
		4,000	3,985	69,327	31,775	69,327	31,775					133,190	6
												825	7
												11,520	8
													9
													10
1,101,900	290,600	438,735	301,883	112,000	74,000	112,000	74,000					291,063	11
												106,180	12
												1,815	13
													14
				41,965	29,047	41,965	29,047					39,257	15
		80,000	80,000	1,627	786	1,627	786					13,165	16
		28,600	9,200	58,000	32,300	58,000	32,300					1,249,863	17
												250	18
				2,500	1,500	2,500	1,500					22,800	19
		1,394,106	1,250,186	404,261	212,745	400,261	208,795	4,000	3,950			994,817	20
5,808,000	548,620	514,000	492,628	500,000	150,000					500,000	150,000	89,694	21
												5,600	22
		600,000	75,000										23
1,800	2,300	480	1,600	46,000	21,000	46,000	21,000					135,880	24
				16,000	10,000	16,000	10,000					77,200	25

$1,679; repairing, $100; Scotch caps, $741,163; shirts, $2,400; shirts and bicycle pants, $360; silk, $85,000; silk hose, $18,280; silk mittens, $29,150; silk nail cloths, $10,000; silk shirts, $100; silk towels, $50; silk underwear, $91,750; silk vests, $30,000; silk and worsted goods, $70,939; skirts, $15,040; sporting goods, $10,000; spun silk hose, $1,400; surgical elastic goods, $3,500; surgical hosiery, $33,950; sweaters, $15,800; theatrical goods, $12,000; theatrical tights, $62,084; tubing, $1,489; waste, $38,866; white cotton shirts from cloth supplied, $60,000; Wilton fringes, $1,050; wool boots and shoes, $113,190; wool boot material, $36,180; worsted hose, $42,900; worsted shirts, $9,000; miscellaneous, $470,271.

TABLE 11.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN ALL CLASSES

	STATES AND TERRITORIES.	Number of establishments.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS. (a)									
			Aggregates.		Officers or firm members actively engaged in the industry or in supervision.							
					Males above 16 years.				Females above 15 years.			
			Average number.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
1	The United States	2,489	219,132	$76,660,742	3,117	43	$29.21	$3,902,747	46	38	$12.52	$21,658
2	Alabama	9	428	67,963	5	38	14.44	2,753				
3	Arkansas	6	31	6,231	9	28	11.80	2,950				
4	California	10	1,375	328,824	24	46	23.84	26,120				
5	Connecticut	98	13,047	4,940,783	155	47	37.41	272,752	1	50	10.00	500
6	Delaware	3	297	103,395	5	47	41.43	9,668				
7	Georgia	18	528	104,353	19	29	23.82	12,950				
8	Illinois	58	2,792	858,889	78	43	25.53	85,807	2	50	13.50	1,350
9	Indiana	55	3,109	817,387	91	40	25.05	90,086	2	33	18.75	1,250
10	Iowa	17	387	135,790	17	36	17.52	10,705				
11	Kentucky	44	2,042	615,055	62	34	30.29	63,536				
12	Louisiana	4	286	52,517	7	48	28.19	9,514				
13	Maine	82	5,453	1,991,076	89	40	31.25	111,024	4	28	12.53	1,410
14	Maryland	17	689	185,397	19	46	19.03	16,650				
15	Massachusetts	293	43,098	16,154,034	372	47	38.73	671,394	1	42	12.00	500
16	Michigan	43	1,428	390,147	48	38	19.83	36,631	2	44	10.00	875
17	Minnesota	24	470	167,323	26	34	27.20	23,855				
18	Mississippi	7	1,082	306,270	11	31	29.42	9,930				
19	Missouri	42	635	156,887	40	28	18.24	20,591				
20	New Hampshire	89	9,400	3,341,695	115	46	29.32	154,333	1	46	21.82	1,000
21	New Jersey	50	7,248	2,416,371	73	46	33.61	112,430	1	25	6.24	156
22	New York	339	37,992	13,033,901	456	43	32.43	641,502	12	44	12.47	6,652
23	North Carolina	32	508	95,739	24	30	12.13	8,861				
24	Ohio	113	3,329	915,656	130	41	22.68	120,560	3	43	16.03	2,070
25	Oregon	6	402	175,313	19	36	26.48	17,875				
26	Pennsylvania	703	55,354	19,764,386	838	44	24.49	910,886	13	36	11.07	5,245
27	Rhode Island	85	19,325	7,049,109	124	48	39.35	234,652				
28	Tennessee	49	998	239,657	51	32	22.07	35,705	2	3	14.40	90
29	Texas	4	359	138,795	3	29	15.03	1,315				
30	Utah	14	344	121,176	16	33	26.50	14,025				
31	Vermont	39	2,303	895,284	46	41	25.35	48,375				
32	Virginia	37	612	166,798	32	37	15.73	18,595				
33	West Virginia	32	307	67,380	30	31	12.34	11,642				
34	Wisconsin	56	3,383	810,463	75	43	28.21	90,280	2	29	9.60	560
35	All other states (b)	11	151	46,098	8	39	15.36	4,735				

a The average weekly earnings per employé are computed from individual reports. The average number of employés reported by each establishment is multiplied by the number of weeks embraced by the term of operation; the result is the number of weeks required for one employé to perform the labor. Aggregating such results of individual reports, the number of weeks required for one employé to perform the labor is obtained. This number used as a divisor for the total wages produces the true average weekly earnings.

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AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.																
Clerks.								Operatives and skilled.								
Males above 16 years.				Females above 15 years.				Males above 16 years.				Females above 15 years.				
Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	
1,933	47	$19.34	$1,749,820	177	46	$8.34	$68,623	80,194	47	$9.02	$34,191,923	69,706	47	$5.94	$19,637,084	1
1	50	6.00	300	.....	.....	.....	.....	29	45	7.67	10,036	133	50	4.30	28,596	2
.....	.....	.....	.....	.....	.....	.....	.....	7	33	6.04	1,385	12	31	4.69	1,740	3
20	34	27.19	18,470	.....	.....	.....	.....	853	25	8.74	189,377	363	25	7.23	65,819	4
72	48	19.82	68,306	3	50	7.80	1,170	6,053	48	8.93	2,618,254	3,633	48	6.43	1,125,881	5
2	46	17.78	1,630	2	42	12.00	1,000	79	45	8.84	31,306	37	45	4.45	7,365	6
9	45	10.47	4,277	.....	.....	.....	.....	85	35	7.35	22,118	166	44	4.78	34,734	7
41	46	16.37	30,837	2	46	11.89	1,090	663	46	8.83	271,688	1,259	48	5.44	325,270	8
36	46	14.69	24,277	6	47	6.84	1,937	865	45	7.87	305,782	907	47	4.28	181,835	9
21	46	19.14	18,345	2	29	9.60	560	133	44	8.90	52,552	157	45	5.51	38,887	10
27	47	22.72	28,592	4	38	7.33	1,100	785	45	7.26	257,420	718	46	4.96	164,534	11
.....	.....	.....	.....	.....	.....	.....	.....	20	41	9.92	8,188	158	38	5.02	29,750	12
35	46	16.26	25,982	1	48	7.83	375	2,819	47	8.79	1,160,646	1,659	46	5.98	457,670	13
5	50	18.80	4,700	.....	.....	.....	.....	205	47	7.59	73,667	135	50	5.99	40,019	14
325	49	21.37	339,417	39	50	9.20	17,777	19,478	49	8.79	8,319,824	14,113	49	6.03	4,155,330	15
26	46	18.36	21,917	1	31	2.40	75	377	46	7.96	137,052	458	47	5.28	113,873	16
8	42	29.42	9,806	1	50	14.40	720	179	45	8.39	67,753	148	47	4.74	32,915	17
2	25	27.00	1,350	.....	.....	.....	.....	383	48	8.14	149,616	384	49	4.95	92,800	18
18	39	13.64	9,477	4	43	8.19	1,408	191	34	7.93	51,464	262	40	5.25	55,535	19
55	48	23.57	61,782	6	47	8.48	2,404	3,629	48	8.67	1,525,023	3,196	49	6.11	956,602	20
51	48	20.44	49,667	1	50	26.00	1,300	2,949	49	8.51	1,222,428	2,781	49	4.98	684,605	21
346	46	20.25	321,377	14	42	8.81	5,192	11,637	47	9.69	4,949,948	11,481	48	5.91	3,225,142	22
6	47	16.59	4,700	.....	.....	.....	.....	138	43	5.66	33,529	147	45	3.86	25,708	23
36	48	17.19	29,404	4	50	6.62	1,324	616	44	8.69	233,921	1,112	46	4.42	228,522	24
25	48	12.42	14,900	.....	.....	.....	.....	148	38	12.89	72,406	31	28	6.95	6,087	25
502	47	18.91	442,169	75	47	7.48	26,533	16,794	47	9.84	7,698,239	16,776	46	6.30	4,836,025	26
152	49	17.49	130,654	4	50	7.19	1,438	8,339	49	8.98	3,660,631	6,586	50	6.20	2,023,010	27
18	43	16.64	12,825	.....	.....	.....	.....	332	43	6.48	91,636	412	46	4.02	75,324	28
14	50	24.00	16,800	.....	.....	.....	.....	101	47	10.91	52,100	156	50	5.15	40,150	29
4	39	16.21	2,550	.....	.....	.....	.....	145	41	10.80	64,834	155	44	5.40	36,583	30
11	48	15.03	7,859	.....	.....	.....	.....	1,066	48	9.05	404,286	867	48	6.59	274,021	31
14	45	8.03	5,010	1	42	3.36	140	288	44	7.13	90,852	220	42	4.67	43,160	32
6	39	6.81	1,590	1	29	1.71	50	127	34	7.34	31,790	95	39	4.31	15,788	33
45	46	19.89	40,850	4	40	15.54	2,460	653	47	8.62	261,987	944	48	4.51	204,889	34
.....	.....	.....	.....	2	40	7.20	570	28	35	10.49	10,185	45	41	4.79	8,915	35

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Colorado, 2; Florida, 1; Idaho, 1; Kansas, 2; Nebraska, 1; South Carolina, 1; South Dakota, 2; Washington, 1.

TABLE 11.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN ALL CLASSES

	STATES AND TERRITORIES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.									
		Operatives and skilled—Continued.				Unskilled.					
		Children.				Males above 16 years.				Females above 15 years.	
		Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.
1	The United States	12,761	47	$3.34	$2,013,239	4,333	47	$8.41	$1,728,113	432	48
2	Alabama	250	50	1.94	24,300	1	50	6.00	300		
3	Arkansas	3	33	1.56	156						
4	California	24	15	4.24	1,554	28	26	10.73	7,823		
5	Connecticut	498	49	3.58	86,599	277	48	8.84	116,487	43	49
6	Delaware	39	43	2.63	4,426	8	45	9.58	3,472		
7	Georgia	71	44	2.18	6,835	12	43	6.75	3,472		
8	Illinois	66	45	3.15	9,361	34	49	7.91	13,220	40	49
9	Indiana	131	47	2.08	12,789	38	47	7.59	13,575		
10	Iowa	15	46	2.78	1,908	15	46	8.45	5,860	2	50
11	Kentucky	178	47	3.03	25,105	36	45	8.72	14,124	10	50
12	Louisiana					1	38	9.60	360		
13	Maine	150	47	3.21	22,659	205	47	7.45	71,525	2	50
14	Maryland	68	50	4.31	14,515	5	50	8.80	2,200		
15	Massachusetts	1,678	49	3.56	292,711	1,001	49	8.51	418,655	73	48
16	Michigan	30	37	2.69	3,018	24	49	6.43	7,581		
17	Minnesota	1	29	3.29	96	6	45	10.14	2,725		
18	Mississippi	224	49	2.53	27,742	6	42	7.20	1,800		
19	Missouri	59	32	2.75	5,240	12	33	7.40	2,898		
20	New Hampshire	213	50	3.54	37,386	207	49	8.36	84,246	107	50
21	New Jersey	290	48	3.53	49,433	149	49	8.26	60,206		
22	New York	1,941	48	3.39	315,210	598	46	8.53	232,402	31	43
23	North Carolina	60	48	2.66	7,693	18	49	4.87	4,283		
24	Ohio	196	48	2.95	27,987	40	48	7.76	15,045	1	13
25	Oregon	23	47	3.37	3,625	16	42	8.33	5,555		
26	Pennsylvania	4,521	46	3.47	715,276	1,038	47	8.89	432,700	67	47
27	Rhode Island	1,705	50	3.30	279,171	363	49	8.01	143,733	44	50
28	Tennessee	112	49	2.19	12,101	24	45	6.71	7,251	3	50
29	Texas	41	48	2.84	5,580	12	47	8.42	4,700		
30	Utah	19	36	2.32	1,584	5	38	8.39	1,600		
31	Vermont	39	49	3.14	5,932	80	47	7.53	28,412		
32	Virginia	30	45	2.92	3,982	13	44	5.27	2,994		
33	West Virginia	10	32	1.18	374	6	38	4.01	918		
34	Wisconsin	72	47	2.57	8,781	54	47	6.98	17,541	9	50
35	All other states	4	9	2.93	110	1	50	9.00	450		

OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.						PIECEWORKERS—AVERAGE NUMBER EMPLOYED AND TOTAL WAGES.								
Unskilled—Continued.														
Females above 15 years—Continued.		Children.												
Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Summary.		Males above 16 years.		Females above 15 years.		Children.		
						Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	
$5.31	$110,729	187	48	$3.16	$28,229	46,246	$13,208,577	8,869	$3,823,395	35,632	$9,141,431	1,745	$243,751	1
						9	1,678			9	1,678			2
														3
						63	19,661	8	2,053	55	17,608			4
7.34	15,298	28	49	3.95	5,454	2,284	630,082	350	141,236	1,877	475,531	57	13,315	5
						125	44,528	52	25,220	73	19,308			6
						166	19,967	10	1,500	126	16,140	30	2,327	7
4.80	9,440	3	50	3.00	450	604	110,376	15	4,035	585	106,217	4	124	8
		1	42	2.40	100	1,032	185,756	188	32,912	803	148,944	41	3,900	9
5.00	500	1	50	2.74	137	24	6,276	3	1,200	21	5,076			10
5.00	2,500					222	58,144	13	4,824	209	53,320			11
						100	4,705			100	4,705			12
4.00	400					489	139,985	143	71,197	346	68,788			13
						252	33,646	2	450	185	27,476	65	5,720	14
6.09	21,135	11	48	3.95	2,088	5,947	1,915,203	1,182	544,048	4,612	1,343,844	153	27,311	15
						462	69,125	14	3,278	446	65,727	2	120	16
						101	29,453	1	100	100	29,353			17
						72	23,032	13	6,369	59	16,663			18
						49	10,274	7	2,099	42	8,175			19
5.30	28,245	12	49	3.46	2,038	1,859	488,636	332	118,728	1,492	365,241	35	4,667	20
						953	236,146	142	55,793	765	174,208	46	6,145	21
4.04	5,422	11	44	3.49	1,700	11,465	3,329,354	1,992	790,757	9,291	2,507,475	182	31,122	22
						115	10,965	8	875	83	8,590	24	1,500	23
4.80	60					1,191	256,753	32	13,150	1,126	238,981	33	4,632	24
						140	54,865	37	18,507	103	36,358			25
4.57	14,329	76	46	2.71	9,498	14,654	4,673,486	3,899	1,793,661	9,870	2,760,261	885	119,564	26
5.14	11,300	37	50	3.25	6,014	1,971	558,506	333	157,779	1,504	380,607	134	20,120	27
5.00	750	4	50	2.50	500	40	3,475	3	185	29	2,800	8	490	28
						32	18,150	12	7,600	20	10,550			29
														30
		2	50	2.00	200	192	66,199	19	7,459	172	58,590	1	150	31
						14	2,065	9	1,511	4	545	1	9	32
		1	46	1.09	50	31	5,178	9	2,130	22	3,048			33
3.00	1,350					1,525	181,765	29	9,739	1,452	169,491	44	2,535	34
						63	21,133	12	5,000	51	16,133			35

TABLE 12.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN EACH CLASS

	Classes by states and territories.	Number of establishments.	Average number of employés in each class and average weekly earnings. (a)									
			Aggregates.		Officers or firm members actively engaged in the industry or in supervision.							
					Males above 16 years.				Females above 15 years.			
			Average number.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
1	Woolen mills	1,311	79,351	$28,478,931	1,567	40	$26.71	$1,687,495	12	29	$13.11	$4,505
2	Alabama	6	16	3,125	3	30	11.31	1,025				
3	Arkansas	6	31	6,231	9	28	11.80	2,950				
4	California	8	1,264	287,658	22	46	22.93	23,120				
5	Connecticut	55	5,173	2,035,462	79	47	36.21	134,635	1	50	10.00	500
6	Delaware	3	297	103,395	5	47	41.43	9,668				
7	Georgia	14	179	32,401	12	18	30.75	6,790				
8	Illinois	23	914	313,780	28	38	25.99	27,745				
9	Indiana	45	2,103	600,002	68	37	25.11	62,886	2	33	18.75	1,250
10	Iowa	14	378	133,240	15	36	18.43	9,945				
11	Kentucky	40	1,803	554,544	50	35	28.52	49,486				
12	Maine	75	4,323	1,629,888	83	39	30.98	101,474	2	13	20.40	510
13	Maryland	9	383	123,931	7	39	16.18	4,450				
14	Massachusetts	165	19,813	7,586,575	218	46	34.66	347,786				
15	Michigan	32	518	156,128	29	34	16.98	16,468	1	38	10.00	375
16	Minnesota	21	341	120,967	21	31	23.47	15,155				
17	Mississippi	7	1,082	306,270	11	31	29.42	9,930				
18	Missouri	35	510	122,410	35	26	17.22	15,715				
19	New Hampshire	46	4,189	1,643,168	68	47	30.72	97,777				
20	New Jersey	21	4,228	1,481,315	34	48	32.29	52,470				
21	New York	91	2,969	1,046,778	96	36	23.15	80,911				
22	North Carolina	27	324	65,329	19	26	11.69	5,711				
23	Ohio	64	1,032	294,365	71	35	19.26	48,260	1	50	8.00	400
24	Oregon	6	402	175,313	19	36	26.48	17,875				
25	Pennsylvania	264	16,061	5,729,982	295	44	22.51	290,365	2	38	14.40	1,080
26	Rhode Island	40	6,028	2,297,416	60	49	33.54	97,692				
27	Tennessee	49	998	239,657	51	32	22.07	35,705	2	3	14.40	90
28	Texas	4	359	138,795	3	20	15.03	1,315				
29	Utah	9	274	104,156	11	30	32.87	10,955				
30	Vermont	29	1,585	625,440	38	41	24.69	38,475				
31	Virginia	35	444	117,023	30	38	15.76	17,845				
32	West Virginia	30	287	61,919	27	31	11.88	9,872				
33	Wisconsin	32	982	324,772	45	41	22.05	40,200	1	33	9.00	300
34	All other states (b)	6	61	17,436	5	38	14.81	2,839				
35	Worsted mills	143	43,593	15,889,183	255	47	46.25	556,891				
36	Connecticut	10	2,261	875,372	16	49	38.79	30,667				
37	Massachusetts	33	12,021	4,556,997	58	49	56.43	160,663				
38	New Hampshire	4	1,963	678,552	6	50	32.00	9,600				
39	New Jersey	6	954	284,102	10	50	16.03	7,950				
40	New York	16	3,953	1,481,194	33	48	54.90	86,925				
41	Pennsylvania	41	9,453	3,350,113	71	45	38.29	123,170				
42	Rhode Island	28	11,757	4,263,968	45	49	50.74	112,676				
43	All other states (b)	5	1,231	389,885	16	37	43.06	25,300				
44	Carpet mills (other than rag)	173	29,121	11,633,116	213	48	32.41	329,638				
45	Massachusetts	7	5,144	1,892,072	8	50	109.32	43,500				
46	New Jersey	6	585	212,554	5	50	94.80	23,700				
47	New York	15	8,054	3,345,165	27	50	49.32	66,375				
48	Pennsylvania	142	12,674	5,509,805	165	47	23.29	181,813				
49	All other states (b)	3	1,704	673,520	8	46	38.43	14,250				
50	Felt mills	34	2,266	1,041,296	65	46	32.95	97,754				
51	Massachusetts	7	340	140,528	5	50	54.00	13,500				
52	New York	11	820	361,944	19	45	38.85	33,344				
53	Ohio	4	183	92,161	12	50	30.17	18,100				
54	Pennsylvania	3	176	111,682	8	44	24.74	8,660				
55	All other states (b)	9	747	334,981	21	43	26.59	24,150				
56	Wool hat mills	32	3,592	1,363,944	58	44	31.78	81,837				
57	Massachusetts	7	1,045	482,602	15	49	44.73	32,987				
58	New York	5	997	361,512	6	43	79.61	20,400				
59	Pennsylvania	17	1,040	330,050	32	43	14.81	20,450				
60	All other states (b)	3	501	189,780	5	40	40.00	8,000				

a The average weekly earnings per employé are computed from individual reports. The average number of employés reported by each establishment is multiplied by the number of weeks embraced by the term of operation; the result is the number of weeks required for one employé to perform the labor. This number used as a divisor for the total wages produces the true average weekly earnings.

OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.

Clerks.								Operatives and skilled.								
Males above 16 years.				Females above 15 years.				Males above 16 years.				Females above 15 years.				
Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	
788	47	$16.97	$622,828	69	47	$7.66	$24,909	38,480	47	$8.63	$15,574,144	25,585	47	$5.90	$7,102,070	1
.....	.....	.....	.....	.....	.....	.....	.....	8	32	5.57	1,440	4	50	2.40	480	2
.....	.....	.....	.....	.....	.....	.....	.....	7	33	6.04	1,385	12	31	4.60	1,740	3
20	34	27.19	18,470	.....	.....	.....	.....	844	25	8.67	184,535	303	21	6.93	44,915	4
24	47	16.97	19,308	.....	.....	.....	.....	2,992	49	8.51	1,234,374	1,605	49	6.49	524,427	5
2	46	17.78	1,630	2	42	12.00	1,000	79	45	8.84	31,306	37	45	4.45	7,365	6
5	42	12.37	2,577	.....	.....	.....	.....	57	29	6.50	10,799	55	32	3.55	6,183	7
21	45	13.78	13,038	.....	.....	.....	.....	403	46	8.51	158,613	371	47	5.45	94,467	8
31	47	14.24	20,556	5	47	7.02	1,637	752	44	7.77	259,830	752	47	4.34	151,845	9
21	46	19.14	18,345	2	29	9.60	560	132	44	8.85	51,832	151	45	5.52	37,877	10
26	47	22.60	27,780	2	50	7.40	740	684	47	7.02	226,817	627	49	5.17	158,783	11
30	45	15.71	21,182	1	48	7.83	375	2,446	46	8.82	999,684	1,336	45	6.18	373,517	12
.....	.....	.....	.....	.....	.....	.....	.....	188	47	7.47	66,275	118	49	6.51	37,991	13
135	48	18.38	117,977	8	49	9.64	3,766	11,063	48	8.63	4,565,561	5,989	48	6.42	1,833,259	14
9	41	12.87	4,745	1	31	2.40	75	235	44	7.67	89,040	171	45	4.93	37,611	15
3	44	23.63	3,150	1	50	14.40	720	166	45	8.30	62,271	76	44	4.47	14,915	16
2	25	27.00	1,350	.....	.....	.....	.....	383	48	8.14	149,616	384	49	4.95	92,800	17
17	38	13.58	8,757	2	36	11.35	816	190	34	7.95	51,200	108	38	5.06	32,285	18
31	49	26.28	39,780	4	50	8.91	1,781	2,223	49	8.72	945,486	1,466	49	6.18	443,597	19
28	49	18.38	25,387	1	50	26.00	1,300	1,898	50	8.67	818,694	1,993	50	5.19	509,487	20
34	44	12.33	18,376	1	50	15.60	780	1,290	47	8.74	532,937	981	48	5.58	260,678	21
6	47	16.59	4,700	.....	.....	.....	.....	126	43	5.41	29,029	112	45	3.54	17,708	22
14	44	15.67	9,564	.....	.....	.....	.....	402	41	7.25	119,430	359	44	4.77	74,663	23
25	48	12.42	14,906	.....	.....	.....	.....	148	38	12.89	72,406	31	28	6.95	6,087	24
167	49	17.04	138,039	35	50	5.79	10,124	6,557	47	9.04	2,790,817	4,752	46	5.98	1,307,355	25
56	50	13.66	38,092	.....	.....	.....	.....	3,072	50	8.60	1,311,597	1,868	50	6.32	587,929	26
18	43	16.64	12,825	.....	.....	.....	.....	332	43	6.48	91,636	412	46	4.02	75,324	27
14	50	24.00	16,800	.....	.....	.....	.....	101	47	10.91	52,100	156	50	5.15	40,150	28
4	39	16.21	2,550	.....	.....	.....	.....	145	41	10.80	64,834	95	41	6.02	23,383	29
6	47	14.22	4,000	.....	.....	.....	.....	836	48	8.97	363,291	575	49	6.48	181,466	30
14	45	8.03	5,010	1	42	3.36	140	229	43	6.88	67,627	115	40	3.90	18,060	31
6	39	6.81	1,590	1	29	1.71	50	123	34	7.24	30,199	82	37	4.54	13,688	32
19	47	13.72	12,350	1	33	21.60	720	347	45	8.94	140,886	371	48	4.84	86,520	33
.....	.....	.....	.....	1	29	11.14	325	22	34	10.87	8,197	28	40	4.88	5,515	34
332	49	22.66	366,947	28	48	8.48	11,379	16,862	48	9.17	7,460,463	17,543	48	5.93	5,036,400	35
11	49	21.07	11,434	.....	.....	.....	.....	1,208	49	9.02	536,130	662	48	6.55	206,700	36
109	50	27.16	147,886	19	50	9.33	8,861	4,740	50	8.85	2,093,718	5,006	50	5.88	1,466,404	37
5	50	30.68	7,670	.....	.....	.....	.....	706	50	8.38	295,898	1,091	50	5.91	322,502	38
7	49	13.87	4,710	.....	.....	.....	.....	299	48	8.75	124,402	503	49	4.19	104,301	39
50	49	21.01	51,291	.....	.....	.....	.....	1,434	49	9.20	642,656	1,543	48	5.98	440,547	40
63	47	18.19	53,803	4	48	5.93	1,136	2,990	45	10.19	1,359,197	4,104	46	5.90	1,108,360	41
81	49	21.17	83,341	3	50	6.81	1,022	5,035	48	9.19	2,241,162	4,283	50	6.18	1,310,043	42
6	47	24.40	6,812	2	25	7.20	360	450	46	8.10	167,300	351	43	5.08	77,543	43
166	48	22.30	178,388	6	50	9.50	2,831	11,269	49	9.72	5,389,809	10,702	49	6.49	3,430,044	44
27	50	24.14	32,483	.....	.....	.....	.....	2,177	50	9.11	988,258	2,264	50	5.30	598,761	45
1	50	30.00	1,500	.....	.....	.....	.....	272	50	7.70	104,336	51	50	4.36	11,106	46
48	50	25.30	60,423	.....	.....	.....	.....	3,126	50	9.58	1,491,135	4,123	50	6.14	1,260,120	47
85	47	19.92	78,982	6	50	9.50	2,831	4,938	48	10.29	2,460,197	3,687	49	7.61	1,362,949	48
5	50	20.00	5,000	.....	.....	.....	.....	756	50	9.16	345,883	577	50	6.83	197,108	49
55	49	21.65	58,732	4	47	7.63	1,430	1,286	48	9.99	620,641	346	48	5.51	91,634	50
9	50	14.10	6,345	.....	.....	.....	.....	276	48	8.04	107,465	34	50	4.47	7,591	51
25	50	20.38	25,477	3	49	8.16	1,190	418	49	9.41	191,719	136	49	5.86	38,701	52
4	50	17.00	3,400	.....	.....	.....	.....	105	50	10.62	55,742	39	50	5.08	9,907	53
2	44	17.26	1,510	1	42	5.76	240	68	44	23.75	70,756	4	42	4.81	802	54
15	48	30.34	22,000	.....	.....	.....	.....	419	48	9.66	194,959	133	47	5.59	34,633	55
31	44	22.37	30,827	3	47	9.27	1,304	1,415	44	9.13	571,414	490	44	5.27	113,714	56
11	49	17.73	9,640	2	50	11.24	1,124	512	49	9.79	245,383	194	50	5.75	55,271	57
15	41	28.22	17,492	.....	.....	.....	.....	341	42	9.43	135,113	32	45	4.80	6,903	58
3	44	15.20	1,995	1	41	4.43	180	374	42	7.13	111,901	131	41	4.21	22,672	59
2	42	20.40	1,700	.....	.....	.....	.....	188	40	10.54	79,017	133	39	5.64	28,868	60

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Woolen goods, Idaho, 1; Kansas, 1; Louisiana, 1; South Carolina, 1; South Dakota, 2. Worsted goods, Kentucky, 2; Maine, 1; Ohio, 1; Wisconsin, 1. Carpets, Connecticut, 2; Rhode Island, 1. Felt goods, Connecticut, 2; Indiana, 1; Maine, 1; Michigan, 1; New Hampshire, 2; New Jersey, 2. Wool hats, Connecticut, 2; Maine, 1.

TABLE 12.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN EACH CLASS

	CLASSES BY STATES AND TERRITORIES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.									
		Operatives and skilled—Continued.				Unskilled.					
		Children.				Males above 16 years.				Females above 15 years.	
		Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.
1	Woolen mills	4,299	46	$3.33	$659,520	1,870	47	$8.29	$733,121	87	47
2	Alabama										
3	Arkansas	3	33	1.56	156						
4	California	24	15	4.24	1,554	28	26	10.73	7,823		
5	Connecticut	132	48	3.63	23,217	128	48	8.43	52,197	14	48
6	Delaware	39	43	2.63	4,426	8	45	9.58	3,472		
7	Georgia	25	35	1.82	1,570	7	42	7.19	2,097		
8	Illinois	24	41	2.42	2,361	15	49	8.00	5,898	10	50
9	Indiana	108	47	2.07	10,389	22	47	8.25	8,504		
10	Iowa	15	46	2.78	1,908	15	46	8.45	5,860	2	50
11	Kentucky	178	47	3.03	25,105	32	47	8.55	12,929	10	50
12	Maine	88	45	3.74	14,859	124	45	8.41	46,736		
13	Maryland	68	50	4.31	14,515	2	50	7.00	700		
14	Massachusetts	701	48	3.61	121,183	444	48	8.90	190,912	21	42
15	Michigan	29	37	2.70	2,918	9	49	6.00	2,650		
16	Minnesota	1	29	3.29	96	2	50	13.10	1,310		
17	Mississippi	224	49	2.53	27,742	6	42	7.20	1,800		
18	Missouri	59	32	2.75	5,240	12	33	7.40	2,898		
19	New Hampshire	142	49	3.64	25,508	133	49	8.23	53,342	10	48
20	New Jersey	78	50	3.30	12,886	92	50	7.98	36,612		
21	New York	191	48	3.38	31,072	64	48	8.52	26,176	3	50
22	North Carolina	29	46	2.39	3,193	15	49	4.78	3,483		
23	Ohio	60	45	3.01	8,109	20	47	6.83	6,471		
24	Oregon	23	47	3.37	3,625	16	42	8.33	5,555		
25	Pennsylvania	1,459	44	3.51	227,779	423	48	8.27	166,167	9	50
26	Rhode Island	347	50	3.56	61,555	102	49	8.11	40,941	5	50
27	Tennessee	112	49	2.19	12,101	24	45	6.71	7,251	3	50
28	Texas	41	48	2.84	5,580	12	47	8.42	4,700		
29	Utah	14	31	1.92	834	5	38	8.39	1,600		
30	Vermont	34	49	2.96	4,952	57	49	7.22	20,073		
31	Virginia	30	45	2.92	3,982	11	43	4.90	2,294		
32	West Virginia	10	32	1.18	374	6	38	4.01	918		
33	Wisconsin	7	41	2.16	621	35	46	7.06	11,302		
34	All other states	4	9	2.93	110	1	50	9.00	450		
35	Worsted mills	3,747	49	3.38	623,345	1,100	49	8.16	437,570	184	50
36	Connecticut	147	48	4.02	28,378	32	42	8.57	11,449		
37	Massachusetts	713	50	3.47	123,431	414	50	8.00	165,587	48	50
38	New Hampshire	15	50	3.30	2,472	33	50	7.94	13,100	97	50
39	New Jersey	78	50	3.52	13,650	19	49	8.94	8,309		
40	New York	285	50	3.60	51,317	81	50	7.80	31,545		
41	Pennsylvania	1,056	48	3.44	173,672	195	46	9.90	88,200		
42	Rhode Island	1,310	50	3.25	211,425	242	49	7.88	94,271	39	50
43	All other states	143	50	2.66	19,000	84	49	6.12	25,109		
44	Carpet mills (other than rag)	1,789	49	3.70	327,647	350	49	9.32	160,425	43	48
45	Massachusetts	135	50	4.25	28,697	79	50	9.17	36,142		
46	New Jersey					19	49	7.07	6,542		
47	New York	716	50	3.53	125,503	67	50	8.86	29,539		
48	Pennsylvania	898	49	3.84	152,150	134	48	10.04	64,972	18	46
49	All other states	130	50	3.28	21,297	51	50	9.11	23,230	25	50
50	Felt mills	123	47	3.35	19,410	70	49	9.17	31,418		
51	Massachusetts	8	50	4.02	1,606	8	50	10.05	4,021		
52	New York	40	49	3.15	6,240	36	49	8.56	15,193		
53	Ohio	13	50	3.38	2,200	3	50	10.75	1,612		
54	Pennsylvania	38	42	4.04	6,396	5	43	11.28	2,444		
55	All other states	24	49	2.51	2,968	18	49	9.22	8,148		
56	Wool hat mills	139	46	2.48	15,922	144	44	7.64	48,192	33	42
57	Massachusetts	35	48	2.72	4,555	7	47	9.70	3,192		
58	New York	36	42	3.72	5,595	29	40	10.38	12,001	12	40
59	Pennsylvania	68	48	1.78	5,772	90	45	6.62	26,949	17	43
60	All other states					18	42	8.02	6,050	4	42

OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.						PIECEWORKERS—AVERAGE NUMBER EMPLOYED AND TOTAL WAGES.								
Unskilled—Continued.														
Females above 15 years—Continued.		Children.				Summary.		Males above 16 years.		Females above 15 years.		Children.		
Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	
$4.55	$18,805	68	48	$2.91	$9,443	6,526	$2,042,091	1,780	$752,058	4,487	$1,250,399	259	$39,634	1
						1	180			1	180			2
														3
						23	7,241	8	2,053	15	5,188			4
5.83	3,898	9	48	3.85	1,660	129	41,246	43	20,670	82	19,614	4	962	5
						125	44,528	52	25,220	73	19,308			6
						18	2,385			16	2,260	2	125	7
4.00	2,000					42	9,658	15	4,035	24	5,523	3	100	8
						363	83,165	18	4,912	343	77,953	2	300	9
5.00	500	1	50	2.74	137	24	6,276	3	1,200	21	5,076			10
5.00	2,500					194	50,404	1	144	193	50,260			11
						213	71,551	68	31,525	145	40,026			12
														13
4.20	3,800	6	47	3.55	991	1,228	401,340	412	173,235	708	208,924	108	19,181	14
						34	11,246	6	1,498	26	9,628	2	120	15
						71	23,350	1	100	70	23,250			16
						72	23,032	13	6,369	59	16,663			17
						27	5,499	7	2,099	20	3,400			18
4.46	2,135	12	49	3.46	2,038	100	31,724	26	10,382	59	18,510	15	2,832	19
						134	25,079	1	767	87	18,167	46	6,145	20
4.33	659					309	95,198	33	13,414	267	80,576	9	1,208	21
						17	1,505	4	375	13	1,130			22
						105	27,468	31	12,650	74	14,818			23
						140	54,865	37	18,507	103	36,358			24
3.05	1,372	31	47	2.51	3,623	2,331	793,261	817	347,500	1,464	438,188	50	7,573	25
4.80	1,200	2	50	2.44	244	516	158,166	129	54,608	383	103,154	4	404	26
5.00	750	4	50	2.50	500	40	3,475	3	185	29	2,860	8	490	27
						32	18,150	12	7,600	20	10,550			28
														29
		2	50	2.00	200	37	12,983	10	4,695	26	8,138	1	150	30
						14	2,065	9	1,511	4	545	1	9	31
		1	46	1.09	50	31	5,178	9	2,130	22	3,048			32
						156	31,873	12	4,674	140	27,164	4	35	33
														34
5.75	52,869	44	50	3.56	7,829	3,498	1,326,490	1,109	532,592	2,355	788,448	34	5,450	35
		5	50	4.68	1,170	180	49,444	111	32,440	69	17,004			36
6.94	16,659	3	50	4.89	733	911	373,115	308	148,015	602	224,900	1	200	37
5.38	26,110					10	1,200			10	1,200			38
						38	20,780	10	8,290	28	12,490			39
						527	176,913	174	69,210	353	107,703			40
		1	50	3.12	156	969	442,419	310	190,965	655	250,554	4	900	41
5.18	10,100	35	50	3.30	5,770	684	194,158	122	51,271	533	138,537	29	4,350	42
						179	68,461	74	32,401	105	36,060			43
7.32	15,382	17	50	3.79	3,198	4,566	1,795,754	2,036	960,223	2,331	802,823	199	32,708	44
		2	50	3.64	364	452	163,867	38	21,049	414	142,818			45
						237	65,370	98	29,895	139	35,475			46
						847	312,070	438	181,229	387	126,441	22	4,400	47
6.06	4,982	3	48	3.55	510	2,830	1,200,419	1,454	724,402	1,211	450,209	165	25,808	48
8.32	10,400	12	50	3.87	2,324	200	54,028	8	3,648	180	47,880	12	2,500	49
						317	120,277	118	69,737	160	42,639	39	7,901	50
														51
						143	50,080	42	25,790	100	24,197	1	93	52
						7	1,200			7	1,200			53
						50	20,874	28	17,026	4	1,040	18	2,808	54
						117	48,123	48	26,921	49	16,202	20	5,000	55
3.51	4,833	11	42	2.24	1,026	1,268	494,875	661	360,424	598	133,114	9	1,337	56
						269	130,450	158	99,197	111	31,253			57
3.95	1,878					526	162,130	241	106,912	276	53,881	9	1,337	58
2.94	2,155	11	42	2.24	1,026	322	136,950	189	111,175	133	25,775			59
4.80	800					151	65,345	73	43,140	78	22,205			60

TABLE 12.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN EACH CLASS

	Classes by states and territories.	Number of establishments.	Average number of employés in each class and average weekly earnings.									
			Aggregates.		Officers or firm members actively engaged in the industry or in supervision.							
					Males above 16 years.				Females above 15 years.			
			Average number.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
61	Hosiery and knitting mills	796	61,209	$18,263,272	959	44	$26.94	$1,149,132	34	41	$12.37	$17,153
62	Alabama	3	412	64,838	2	50	17.28	1,728				
63	Connecticut	27	3,134	1,073,135	44	47	38.28	78,800				
64	Georgia	4	349	71,952	7	46	19.08	6,160				
65	Illinois	35	1,878	545,109	50	46	25.31	58,062	2	50	13.50	1,350
66	Indiana	9	962	207,519	21	48	25.49	25,700				
67	Iowa	3	9	2,550	2	38	10.93	820				
68	Louisiana	3	284	51,841	6	48	31.83	9,150				
69	Maine	4	260	30,165	1	28	37.33	1,050	2	44	10.29	900
70	Maryland	8	306	61,466	12	50	20.33	12,200				
71	Massachusetts	74	4,675	1,495,260	68	45	23.79	73,018	1	42	12.00	500
72	Michigan	10	848	208,344	17	45	22.85	17,663	1	50	10.00	500
73	Minnesota	3	129	46,356	5	46	37.62	8,700				
74	Missouri	7	125	34,477	5	43	22.50	4,876				
75	New Hampshire	37	3,178	989,130	37	43	27.50	43,456	1	46	21.82	1,000
76	New Jersey	15	1,277	342,600	18	43	31.41	24,310	1	25	6.24	156
77	New York	201	20,299	6,437,308	275	45	28.88	353,547	12	44	12.47	6,652
78	North Carolina	5	184	30,410	5	48	13.03	3,150				
79	Ohio	44	1,898	466,630	45	47	24.52	51,700	2	40	21.09	1,670
80	Pennsylvania	236	15,041	4,732,754	267	43	24.83	286,428	11	36	10.44	4,165
81	Rhode Island	16	1,538	487,350	18	45	29.73	24,034				
82	Utah	5	70	17,020	5	39	15.68	3,070				
83	Vermont	10	718	269,844	8	44	28.29	9,900				
84	Wisconsin	23	2,296	449,724	27	46	32.33	40,080	1	25	10.40	260
85	All other states (a)	14	439	147,490	14	38	21.79	11,530				

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: California, 2; Colorado, 2; Florida, 1; Kansas, 1; Kentucky, 2; Nebraska, 1; Virginia, 2; Washington, 1; West Virginia, 2.

OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.																
Clerks.								Operatives and skilled.								
Males above 16 years.				Females above 15 years.				Males above 16 years.				Females above 15 years.				
Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	
561	45	$19.29	$402,098	67	45	$8.89	$26,770	10,882	45	$9.28	$4,575,452	15,040	46	$5.63	$3,863,222	61
1	50	6.00	300	.....	.....	.....	.....	21	50	8.19	8,596	129	50	4.36	28,116	62
28	48	19.40	25,864	3	50	7.80	1,170	782	48	9.63	360,720	573	48	5.88	162,313	63
4	50	8.50	1,700	.....	.....	.....	.....	28	48	8.41	11,319	111	50	5.17	28,551	64
20	48	18.57	17,799	2	46	11.89	1,090	260	47	9.33	113,075	888	48	5.43	230,803	65
5	42	17.86	3,721	1	50	6.00	300	96	49	8.93	42,177	133	49	4.01	26,150	66
.....	.....	.....	.....	.....	.....	.....	.....	1	50	14.40	720	6	33	5.05	1,010	67
.....	.....	.....	.....	.....	.....	.....	.....	19	41	10.16	7,876	158	38	5.02	29,750	68
.....	.....	.....	.....	.....	.....	.....	.....	5	41	4.12	850	82	48	2.57	10,125	69
5	50	18.80	4,700	.....	.....	.....	.....	17	49	8.39	7,392	17	50	2.39	2,028	70
34	49	14.92	25,086	10	49	8.19	4,026	710	48	9.37	319,439	626	47	6.58	194,044	71
15	48	22.44	16,272	.....	.....	.....	.....	110	47	8.01	41,612	269	48	5.52	71,962	72
5	40	33.28	6,656	.....	.....	.....	.....	13	44	9.50	5,482	72	50	5.00	18,000	73
1	50	14.40	720	2	50	5.92	592	1	50	5.28	264	94	45	5.54	23,250	74
17	45	16.55	12,532	2	42	7.48	623	663	46	8.76	265,039	614	47	6.38	184,503	75
8	42	16.66	5,570	.....	.....	.....	.....	332	43	7.77	111,672	249	45	4.99	56,411	76
174	44	19.32	148,318	10	34	9.48	3,222	5,028	44	8.77	1,956,388	4,666	46	5.74	1,218,193	77
.....	.....	.....	.....	.....	.....	.....	.....	12	47	8.06	4,500	35	47	4.85	8,000	78
16	50	16.80	13,440	4	50	6.62	1,324	91	47	11.84	50,849	702	48	4.22	141,352	79
182	45	20.61	167,840	28	44	9.81	12,022	1,867	44	10.94	905,371	4,098	43	5.85	1,033,887	80
15	50	12.36	9,221	1	50	8.32	416	231	49	9.59	107,747	435	49	5.85	125,038	81
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60	48	4.57	13,200	82
5	48	15.97	3,859	.....	.....	.....	.....	230	47	9.34	100,995	292	47	6.81	92,555	83
26	44	24.69	28,500	3	42	13.92	1,740	256	48	8.62	106,411	531	48	4.34	110,977	84
.....	.....	.....	.....	1	50	4.90	245	109	46	9.41	46,958	200	44	5.98	53,004	85

TABLE 12.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN EACH CLASS

	CLASSES BY STATES AND TERRITORIES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.									
		Operatives and skilled—Continued.				Unskilled.					
		Children.				Males above 16 years.				Females above 15 years.	
		Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.
61	Hosiery and knitting mills	2,664	45	$3.05	$367,395	799	46	$8.70	$317,387	85	48
62	Alabama	250	50	1.94	24,300	1	50	6.00	300		
63	Connecticut	84	47	3.20	12,707	45	49	10.01	22,071	2	50
64	Georgia	40	49	2.32	5,265	5	45	6.17	1,375		
65	Illinois	42	48	3.50	7,000	19	49	7.85	7,322	30	49
66	Indiana	21	49	2.13	2,200	15	48	6.30	4,580		
67	Iowa										
68	Louisiana					1	38	9.60	360		
69	Maine										
70	Maryland					3	50	10.00	1,500		
71	Massachusetts	86	49	3.16	13,239	49	49	7.87	18,801	4	47
72	Michigan	1	42	2.40	100	13	49	6.60	4,206		
73	Minnesota					4	42	8.39	1,415		
74	Missouri										
75	New Hampshire	56	50	3.36	9,406	39	47	9.12	16,859		
76	New Jersey	117	46	3.92	21,129	13	42	10.85	5,935		
77	New York	673	45	3.13	95,483	321	43	8.50	117,948	16	45
78	North Carolina	31	50	2.90	4,500	3	50	5.33	800		
79	Ohio	42	50	3.08	6,478	16	49	8.42	6,662	1	13
80	Pennsylvania	1,092	42	3.25	149,507	191	46	9.46	83,968	23	49
81	Rhode Island	48	49	2.63	6,191	19	50	8.99	8,521		
82	Utah	5	50	3.00	750						
83	Vermont	5	43	4.52	980	23	43	8.37	8,339		
84	Wisconsin	65	48	2.61	8,160	17	48	6.96	5,725	9	50
85	All other states					2	50	7.00	700		

OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.						PIECEWORKERS—AVERAGE NUMBER EMPLOYED AND TOTAL WAGES.								
Unskilled—Continued.														
Females above 15 years—Continued.		Children.				Summary.		Males above 16 years.		Females above 15 years.		Children.		
Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	
$4.63	$18,840	47	47	$3.07	$6,733	30,071	$7,429,090	3,165	$1,148,361	25,701	$6,124,008	1,205	$156,721	61
						8	1,498			8	1,498			62
6.00	600	2	50	3.00	300	1,571	408,590	94	37,739	1,456	365,998	21	4,853	63
						148	17,582	10	1,500	110	13,880	28	2,202	64
5.07	7,440	3	50	3.00	450	562	100,718			561	100,694	1	24	65
		1	42	2.40	100	669	102,591	170	28,000	460	70,991	39	3,600	66
														67
						100	4,705			100	4,705			68
						170	17,240			170	17,240			69
						252	33,646	2	450	185	27,476	65	5,720	70
3.57	676					3,087	846,431	266	102,552	2,777	735,949	44	7,930	71
						422	56,029	8	1,780	414	54,249			72
						30	6,103			30	6,103			73
						22	4,775			22	4,775			74
						1,749	455,712	306	108,346	1,423	345,531	20	1,835	75
						539	117,417	28	9,341	511	108,076			76
4.04	2,894	11	44	3.49	1,700	9,113	2,532,963	1,064	394,202	7,908	2,114,677	141	24,084	77
						98	9,460	4	500	70	7,460	24	1,500	78
4.80	60					979	193,095			946	188,463	33	4,632	79
5.14	5,820	30	47	2.96	4,183	8,152	2,079,563	1,101	402,593	6,403	1,594,495	648	82,475	80
						771	206,182	82	51,900	588	138,916	101	15,366	81
														82
						155	53,216	9	2,764	146	50,452			83
3.00	1,350					1,361	146,521	9	1,694	1,312	142,327	40	2,500	84
						113	35,053	12	5,000	101	30,053			85

TABLE 13.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF

	STATES AND TERRITORIES.	Number of establishments.	AGGREGATES.		WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK. (a)			
					Males above 16 years.			
			Average number.	Total wages.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.
1	The United States	2,489	219,132	$76,660,742	89,577	7,635	5,478	11,528
2	Alabama	9	428	67,963	36	9	7	5
3	Arkansas	6	31	6,231	16	1	.....	6
4	California	10	1,375	328,824	925	5	156	328
5	Connecticut	98	13,047	4,940,783	6,557	412	321	793
6	Delaware	3	297	103,395	94	2	5	15
7	Georgia	18	528	104,353	125	21	7	25
8	Illinois	58	2,792	858,889	816	105	69	91
9	Indiana	55	3,109	817,387	1,030	212	58	110
10	Iowa	17	387	135,790	186	9	13	13
11	Kentucky	44	2,042	615,055	910	279	78	89
12	Louisiana	4	286	52,517	28	1	9	3
13	Maine	82	5,453	1,991,676	3,148	153	89	466
14	Maryland	17	689	185,397	234	5	17	16
15	Massachusetts	293	43,032	16,154,034	21,176	2,053	1,250	3,152
16	Michigan	43	1,428	390,147	475	79	29	73
17	Minnesota	24	470	167,323	219	14	21	39
18	Mississippi	7	1,082	306,270	402	16	14	240
19	Missouri	42	635	156,887	261	13	6	43
20	New Hampshire	89	9,400	3,341,695	4,006	162	197	475
21	New Jersey	50	7,248	2,416,371	3,222	439	129	721
22	New York	339	37,992	13,033,901	13,037	1,174	857	1,586
23	North Carolina	32	508	95,739	186	85	25	21
24	Ohio	113	3,329	915,656	822	137	54	99
25	Oregon	6	402	175,313	208	1	17	22
26	Pennsylvania	703	55,354	19,764,386	19,172	1,275	1,312	1,264
27	Rhode Island	85	19,325	7,049,109	8,978	445	507	1,297
28	Tennessee	49	998	239,657	425	127	29	124
29	Texas	4	359	138,795	130	2	15	8
30	Utah	14	344	121,176	170	4	17	12
31	Vermont	39	2,303	805,284	1,203	62	76	209
32	Virginia	37	612	166,798	347	93	56	69
33	West Virginia	32	307	67,380	169	36	19	35
34	Wisconsin	56	3,383	810,463	827	201	19	65
35	All other states (b)	11	151	46,098	37	3	.....	5

a In comparing the table of weekly rates and the number of employés at each rate with the average weekly earnings presented in Table 11 it must be remembered that it is not practicable to obtain true average weekly earnings from the table of weekly rates, because the term of employment varies for employés at the respective rates.

PAY IN ALL CLASSES OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.

Males above 16 years—Continued.								Females above 15 years.		
$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	
13,437	10,594	11,011	11,329	8,584	5,483	2,197	2,301	70,361	19,107	1
1	.....	3	6	3	1	1	.....	133	118	2
.....	.....	1	4	2	2	.....	.....	12	10	3
70	39	60	71	59	79	28	30	363	38	4
1,320	765	921	780	576	333	169	167	3,680	773	5
22	5	12	13	6	9	3	2	39	23	6
26	10	2	5	10	7	11	1	166	55	7
66	55	84	108	100	65	28	45	1,303	448	8
151	46	112	103	81	66	45	37	915	666	9
26	17	26	16	25	24	11	6	161	79	10
87	49	47	77	67	67	22	48	732	174	11
1	.....	1	2	.....	4	1	6	158	.....	12
530	554	542	356	195	152	60	51	1,666	416	13
133	7	16	10	9	5	8	8	135	21	14
3,613	2,483	2,786	2,181	1,832	1,040	405	381	14,226	3,858	15
57	48	27	63	37	25	24	13	461	177	16
25	4	34	17	21	22	10	12	149	72	17
22	14	33	14	16	13	6	14	384	112	18
84	24	12	24	25	15	8	7	266	47	19
772	718	632	480	221	186	59	104	3,310	455	20
415	415	252	251	257	191	83	69	2,783	1,057	21
2,100	1,007	1,399	2,222	1,153	730	396	413	11,538	2,933	22
2	3	4	15	20	7	1	3	147	107	23
72	56	66	71	96	64	40	67	1,120	624	24
7	15	28	33	28	21	11	25	31	6	25
2,017	2,324	2,352	3,078	2,832	1,686	531	501	16,931	3,869	26
1,350	1,650	1,277	1,052	666	415	135	184	6,634	1,419	27
27	9	16	16	20	35	9	13	417	339	28
8	13	15	27	11	20	7	4	156	50	29
16	21	17	35	16	15	7	10	155	51	30
272	137	108	107	90	78	40	24	867	231	31
30	19	20	16	19	20	2	3	221	145	32
21	3	7	14	18	15	1	.....	96	60	33
94	79	89	57	71	67	32	53	959	645	34
.....	5	10	5	2	4	3	.....	47	29	35

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Colorado, 2; Florida, 1; Idaho, 1; Kansas, 2; Nebraska, 1; South Carolina, 1; South Dakota, 2; Washington, 1.

TABLE 13.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY

	STATES AND TERRITORIES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—cont'd.						
		Females above 15 years—Continued.						
		$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.
1	The United States	17,098	14,739	8,583	5,563	2,864	1,991	305
2	Alabama	3		5	7			
3	Arkansas		2					
4	California	146	48	48	33	34	9	2
5	Connecticut	728	672	756	420	215	99	12
6	Delaware	3	11					2
7	Georgia	65	21	25				
8	Illinois	331	348	92	40	32	8	1
9	Indiana	118	68	40	9	10	3	
10	Iowa	16	47	10	4	5		
11	Kentucky	512	30	9	2	3	2	
12	Louisiana	158						
13	Maine	310	383	317	110	92	36	1
14	Maryland	16	35	63				
15	Massachusetts	2,912	2,909	2,207	1,211	594	426	86
16	Michigan	110	130	13	14	7	10	
17	Minnesota	36	23	14	2	1		1
18	Mississippi	152	120					
19	Missouri	203	5	1	9		1	
20	New Hampshire	626	1,430	500	142	93	52	11
21	New Jersey	1,052	236	249	135	22	31	
22	New York	3,790	2,113	1,216	860	276	257	74
23	North Carolina	8	24	1	1	3	3	
24	Ohio	343	65	49	3		18	1
25	Oregon	1	5	14	4	1		
26	Pennsylvania	3,189	4,471	2,068	1,462	934	837	86
27	Rhode Island	1,918	1,028	661	1,014	433	188	18
28	Tennessee	34	17	17	6	2		1
29	Texas	40	48	8	5		5	
30	Utah	37	44	14	2	3	2	2
31	Vermont	88	243	121	42	86	40	4
32	Virginia	43	22	11				
33	West Virginia	17	12	1	6			
34	Wisconsin	83	122	53	20	18	13	3
35	All other states	10	7				1	

IN ALL CLASSES OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.								PIECEWORKERS.		
Females above 15 years—Continued.			Children.							
$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	Average number.	Total wages.	
90	17	4	12,948	12,563	333	42	10	46,246	$13,208,577	1
			250	250				9	$1,678	2
			3	3						3
5			24	19	5			63	19,661	4
5			526	509	17			2,284	630,082	5
			39	39				125	44,528	6
			71	71				166	19,967	7
2	1		69	69				604	110,376	8
	1		132	132				1,032	185,756	9
			16	16				24	6,276	10
			178	178				222	58,144	11
								100	4,705	12
		1	150	142	6	2		489	139,985	13
			68	68				252	33,646	14
23			1,689	1,595	63	31		5,947	1,915,203	15
			30	30				462	69,125	16
			1	1				101	29,453	17
			224	224				72	23,032	18
			59	59				49	10,274	19
	1		225	188	37			1,859	488,636	20
		1	290	278	12			953	236,146	21
14	5		1,952	1,876	70	2	4	11,465	3,329,354	22
			60	57		1	2	115	10,965	23
15	2		196	188	8			1,191	256,763	24
			23	21			2	140	54,865	25
10	3	2	4,597	4,506	87	2	2	14,654	4,073,486	26
3	2		1,742	1,719	21	2		1,971	558,506	27
1			116	109	5	2		40	3,475	28
			41	41				32	18,150	29
			19	19						30
12			41	39	2			192	66,199	31
			30	30				14	2,065	32
			11	11				31	5,178	33
	2		72	72				1,525	181,765	34
			4	4				63	21,133	35

TABLE 14.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF

	CLASSES BY STATES AND TERRITORIES.	Number of establishments.	AGGREGATES.		WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK. (a)			
					Males above 16 years.			
			Average number.	Total wages.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.
1	Woolen mills	1,311	79,351	$28,478,931	42,705	3,700	2,652	6,734
2	Alabama	6	16	3,125	11	.....	4	2
3	Arkansas	6	31	6,231	16	1	.....	6
4	California	8	1,264	287,658	914	5	156	328
5	Connecticut	55	5,173	2,035,462	3,223	206	178	530
6	Delaware	3	297	103,395	94	2	5	15
7	Georgia	14	179	32,401	81	18	5	16
8	Illinois	23	914	313,780	467	66	18	82
9	Indiana	45	2,103	600,062	873	182	55	99
10	Iowa	14	378	133,240	183	8	13	13
11	Kentucky	40	1,803	554,544	792	264	76	86
12	Maine	75	4,323	1,029,888	2,683	146	88	378
13	Maryland	9	383	123,931	197	4	13	12
14	Massachusetts	165	19,813	7,586,575	11,860	813	767	1,833
15	Michigan	32	518	156,128	282	54	14	52
16	Minnesota	21	341	120,967	192	12	20	36
17	Mississippi	7	1,082	306,270	402	16	14	240
18	Missouri	35	510	122,410	254	13	5	43
19	New Hampshire	46	4,189	1,643,168	2,455	98	118	300
20	New Jersey	21	4,228	1,481,315	2,052	231	26	605
21	New York	91	2,969	1,046,778	1,484	154	59	202
22	North Carolina	27	324	65,329	166	82	23	13
23	Ohio	64	1,032	294,365	507	105	41	77
24	Oregon	6	402	175,313	208	1	17	22
25	Pennsylvania	264	16,061	5,729,982	7,442	653	606	709
26	Rhode Island	40	6,028	2,297,416	3,290	173	155	565
27	Tennessee	49	998	230,657	425	127	29	124
28	Texas	4	359	138,795	130	2	15	8
29	Utah	9	274	104,156	165	4	17	12
30	Vermont	29	1,585	625,440	937	46	36	188
31	Virginia	35	444	117,023	284	90	46	61
32	West Virginia	30	287	61,919	162	36	19	34
33	Wisconsin	32	982	324,772	446	85	14	33
34	All other states (b)	6	61	17,436	28	3	.....	1
35	Worsted mills	143	43,593	15,880,183	18,549	1,384	1,088	2,070
36	Connecticut	10	2,261	875,372	1,267	34	57	112
37	Massachusetts	33	12,021	4,556,997	5,321	627	257	733
38	New Hampshire	4	1,963	678,552	750	10	31	76
39	New Jersey	6	954	284,102	335	78	22	11
40	New York	16	3,953	1,481,194	1,598	174	175	173
41	Pennsylvania	41	9,453	3,350,113	3,319	160	226	171
42	Rhode Island	28	11,757	4,263,968	5,403	256	318	700
43	All other states (b)	5	1,231	380,885	556	45	2	94
44	Carpet mills (other than rag)	173	29,121	11,633,116	11,998	990	624	808
45	Massachusetts	7	5,144	1,892,072	2,291	491	136	367
46	New Jersey	6	585	212,554	297	36	12	20
47	New York	15	8,954	3,345,165	3,268	197	141	193
48	Pennsylvania	142	12,674	5,509,805	5,322	162	323	179
49	All other states (b)	3	1,764	673,520	820	104	12	49
50	Felt mills	34	2,266	1,041,296	1,476	83	36	145
51	Massachusetts	7	340	140,528	298	25	5	47
52	New York	11	820	361,944	498	15	9	39
53	Ohio	4	183	92,161	124	19	6	1
54	Pennsylvania	3	176	111,682	83	.....	2	3
55	All other states (b)	9	747	334,981	473	24	14	55
56	Wool hat mills	32	3,592	1,363,944	1,648	234	118	206
57	Massachusetts	7	1,045	482,602	545	29	29	75
58	New York	5	997	361,512	391	62	17	23
59	Pennsylvania	17	1,049	330,050	499	126	66	87
60	All other states (b)	3	501	189,780	213	17	6	21

a In comparing the table of weekly rates and the number of employés at each rate with the average weekly earnings presented in Table 12 it must be remembered that it is not practicable to obtain true average weekly earnings from the table of weekly rates, because the term of employment varies for employés at the respective rates.

PAY IN EACH CLASS OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.

Males above 16 years—Continued.								Females above 15 years.		
$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	
7,039	5,285	5,168	4,488	3,497	2,389	892	861	25,753	7,598	1
.....	.....	2	1	2	.....	.....	.....	4	4	2
.....	.....	1	4	2	.....	.....	.....	12	10	3
67	38	60	68	59	79	28	26	303	25	4
591	442	461	308	233	145	63	57	1,680	376	5
22	5	12	13	6	9	3	2	39	23	6
17	2	2	3	8	4	5	1	55	22	7
42	44	40	82	33	34	16	10	381	191	8
116	42	109	90	67	49	34	30	759	546	9
26	17	26	16	23	24	11	6	155	75	10
82	35	38	52	44	60	21	34	639	97	11
443	389	472	342	183	143	56	43	1,339	330	12
131	6	10	8	7	2	4	.....	118	4	13
2,130	1,643	1,575	1,342	862	521	215	159	6,018	1,552	14
37	12	18	51	19	16	7	2	173	88	15
24	4	34	15	13	21	7	6	77	52	16
22	14	33	14	16	13	6	14	384	112	17
84	24	12	23	23	15	6	6	170	41	18
553	331	420	274	153	106	31	71	1,480	247	19
249	254	153	144	195	108	42	45	1,964	578	20
239	125	283	124	131	98	36	33	985	368	21
2	3	4	14	19	2	1	3	112	93	22
45	36	41	43	51	35	14	19	360	195	23
7	15	28	33	28	21	11	25	31	6	24
1,048	1,121	778	783	896	562	151	135	4,798	1,128	25
696	471	347	412	227	124	54	66	1,873	440	26
27	9	16	16	20	35	9	13	417	339	27
8	13	15	27	11	20	7	4	156	50	28
16	20	17	35	16	11	7	10	95	26	29
218	103	86	82	68	65	27	18	575	194	30
20	9	12	9	16	16	2	3	116	100	31
19	2	7	14	17	13	1	.....	83	48	32
57	51	46	45	47	33	15	20	373	220	33
1	5	10	1	2	3	2	.....	29	18	34
2,654	2,801	2,818	2,393	1,580	1,008	340	413	17,755	4,649	35
264	147	212	255	94	53	19	20	662	118	36
1,108	465	708	456	538	217	83	129	5,073	1,177	37
71	336	78	116	14	11	1	6	1,188	153	38
15	26	35	71	22	38	13	4	503	320	39
215	106	174	210	168	101	56	46	1,543	660	40
265	389	642	667	307	316	97	79	4,108	1,191	41
630	1,150	894	599	421	261	67	107	4,325	901	42
86	182	75	19	16	11	4	22	353	129	43
1,654	1,067	1,028	2,842	1,859	652	249	225	10,751	1,680	44
129	270	200	193	272	139	60	34	2,264	946	45
99	67	26	14	5	8	5	5	51	37	46
650	197	128	1,338	254	62	43	65	4,123	382	47
519	493	617	1,216	1,185	410	131	87	3,711	218	48
257	40	57	81	143	33	10	34	602	97	49
259	192	201	181	152	75	66	86	350	130	50
88	26	40	31	19	7	5	5	34	27	51
71	76	113	51	48	35	17	24	139	42	52
10	7	17	20	25	5	1	13	39	12	53
.....	.....	7	18	18	4	6	25	5	2	54
90	83	24	61	42	24	37	19	133	47	55
200	118	253	156	129	128	45	61	526	226	56
63	24	119	65	36	69	14	22	196	56	57
67	28	68	14	45	35	6	26	44	32	58
47	39	35	37	34	9	16	3	149	98	59
23	27	31	40	14	15	9	10	137	40	60

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Woolen goods, Idaho, 1; Kansas, 1; Louisiana, 1; South Carolina, 1; South Dakota, 2. Worsted goods, Kentucky, 2; Maine, 1; Ohio, 1; Wisconsin, 1. Carpets, Connecticut, 2; Rhode Island, 1. Felt goods, Connecticut, 2; Indiana, 1; Maine, 1; Michigan, 1; New Hampshire, 2; New Jersey, 2. Wool hats, Connecticut, 2; Maine, 1.

TABLE 14.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY

	CLASSES BY STATES AND TERRITORIES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—cont'd.						
		Females above 15 years—Continued.						
		$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.
1	Woolen mills	5,332	5,093	3,937	2,126	1,079	453	108
2	Alabama							
3	Arkansas		2					
4	California	136	38	38	28	29	7	
5	Connecticut	267	277	236	318	151	48	4
6	Delaware	3	11					2
7	Georgia	33						
8	Illinois	59	66	31	15	17	2	
9	Indiana	94	59	37	9	10	3	
10	Iowa	15	47	9	4	5		
11	Kentucky	512	15	8	2	3	2	
12	Maine	240	275	269	98	91	34	1
13	Maryland	16	35	63				
14	Massachusetts	953	1,022	1,247	720	315	155	48
15	Michigan	30	35	3	8	4	5	
16	Minnesota	21	3					1
17	Mississippi	152	120					
18	Missouri	115	4	1	8		1	
19	New Hampshire	233	496	302	105	61	28	8
20	New Jersey	796	171	235	131	22	30	
21	New York	212	175	146	56	22	5	
22	North Carolina	2	9	1	1	3	3	
23	Ohio	67	53	44	1			
24	Oregon	1	5	14	4	1		
25	Pennsylvania	865	1,477	780	347	123	42	34
26	Rhode Island	265	431	325	207	143	57	5
27	Tennessee	34	17	17	6	2		1
28	Texas	40	48	8	5		5	
29	Utah	22	24	14	2	3	2	2
30	Vermont	64	148	63	26	56	16	
31	Virginia	13	2	1				
32	West Virginia	17	11	1	6			
33	Wisconsin	45	17	44	19	18	7	2
34	All other states	10					1	
35	Worsted mills	4,624	4,108	1,664	1,525	670	424	70
36	Connecticut	191	111	121	51	37	33	
37	Massachusetts	1,275	1,343	810	295	81	59	23
38	New Hampshire	283	697	22	1	11	21	
39	New Jersey	156	16	7	4			
40	New York	137	436	53	86	64	61	37
41	Pennsylvania	1,070	893	300	284	193	173	3
42	Rhode Island	1,442	512	307	794	284	77	7
43	All other states	70	100	44	10			
44	Carpet mills (other than rag)	3,344	1,665	1,503	1,108	643	752	51
45	Massachusetts	472	342	76	113	111	194	8
46	New Jersey	12	2					
47	New York	2,314	442	521	390	73	1	
48	Pennsylvania	482	782	598	583	450	552	43
49	All other states	64	97	308	22	9	5	
50	Felt mills	56	128	33	2			1
51	Massachusetts	7						
52	New York	3	69	24				1
53	Ohio	25	1	1				
54	Pennsylvania	3						
55	All other states	18	58	8	2			
56	Wool hat mills	111	84	26	34	26	13	4
57	Massachusetts	38	43	6	31	7	9	4
58	New York	2	2	1		5	2	
59	Pennsylvania	27	10	4		10		
60	All other states	44	29	15	3	4	2	

IN EACH CLASS OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.								PIECEWORKERS.		
Females above 15 years—Continued.			Children.							
$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	Average number.	Total wages.	
23	2	2	4,367	4,202	138	17	10	6,526	$2,042,091	1
								1	180	2
			3	3						3
2			24	19	5			23	7,241	4
3			141	128	13			129	41,246	5
			39	39				125	44,528	6
			25	25				18	2,385	7
			24	24				42	9,658	8
	1		108	108				363	83,165	9
			16	16				24	6,276	10
			178	178				194	50,404	11
		1	88	80	6	2		213	71,551	12
			68	68						13
6			707	678	20	9		1,228	401,340	14
			29	29				34	11,246	15
			1	1				71	23,350	16
			224	224				72	23,032	17
			59	59				27	5,499	18
			154	134	20			100	31,724	19
		1	78	66	12			134	25,079	20
1			191	177	9	1	4	309	95,198	21
			29	26		1	2	17	1,505	22
			60	52	8			105	27,408	23
			23	21			2	140	54,865	24
2			1,490	1,469	19		2	2,331	793,261	25
			349	326	21	2		516	158,106	26
1			116	109	5	2		40	3,475	27
			41	41				32	18,150	28
			14	14						29
8			36	36				37	12,983	30
			30	30				14	2,065	31
			11	11				31	5,178	32
	1		7	7				156	31,873	33
			4	4						34
20		1	3,791	3,653	116	22		3,498	1,326,490	35
			152	148	4			180	49,444	36
10			716	659	35	22		911	373,115	37
			15	15				10	1,200	38
			78	78				38	20,780	39
9			285	253	32			527	176,913	40
		1	1,057	1,012	45			960	442,419	41
1			1,345	1,345				684	194,158	42
			143	143				179	68,461	43
5			1,806	1,792	14			4,566	1,795,754	44
2			137	137				452	163,867	45
								237	65,370	46
			716	706	10			847	312,070	47
3			811	807	4			2,830	1,200,419	48
			142	142				200	54,028	49
			123	122	1			317	120,277	50
			8	8						51
			40	39	1			143	50,080	52
			13	13				7	1,200	53
			38	38				50	20,874	54
			24	24				117	48,123	55
2			150	145	5			1,268	494,875	56
2			35	30	5			269	130,450	57
			36	36				526	162,130	58
			79	79				322	136,950	59
								151	65,345	60

TABLE 14.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY

	CLASSES BY STATES AND TERRITORIES.	Number of establishments.	AGGREGATES.		WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK.			
					Males above 16 years.			
			Average number.	Total wages.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.
61	Hosiery and knitting mills	796	61,209	$18,263,272	13,201	1,244	960	1,565
62	Alabama	3	412	64,838	25	9	3	3
63	Connecticut	27	3,134	1,073,135	899	47	66	58
64	Georgia	4	349	71,952	44	3	2	9
65	Illinois	35	1,878	545,109	349	39	51	9
66	Indiana	9	962	207,519	137	26	2	9
67	Iowa	3	9	2,550	3	1		
68	Louisiana	3	284	51,841	26	1	9	2
69	Maine	4	260	30,165	6	3	1	1
70	Maryland	8	306	61,466	37	1	4	4
71	Massachusetts	74	4,675	1,495,260	861	68	56	97
72	Michigan	10	848	208,344	155	23	14	16
73	Minnesota	3	129	46,356	27	2	1	3
74	Missouri	7	125	34,477	7		1	
75	New Hampshire	37	3,178	989,130	756	54	47	97
76	New Jersey	15	1,277	342,600	371	84	60	73
77	New York	201	20,299	6,437,308	5,798	572	456	956
78	North Carolina	5	184	30,410	20	3	2	8
79	Ohio	44	1,898	466,630	168	12	7	20
80	Pennsylvania	236	15,941	4,732,754	2,507	174	89	115
81	Rhode Island	16	1,538	487,350	283	16	34	31
82	Utah	5	70	17,020	5			
83	Vermont	10	718	269,844	266	16	40	21
84	Wisconsin	23	2,296	449,724	326	87	5	19
85	All other states (a)	14	439	147,490	125	3	10	14

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: California, 2; Colorado, 2; Florida, 1; Kansas, 1; Kentucky, 2; Nebraska, 1; Virginia, 2; Washington, 1; West Virginia, 2.

IN EACH CLASS OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.

Males above 16 years—Continued.								Females above 15 years.		
$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	
1,031	1,131	1,543	1,269	1,367	1,231	605	655	15,226	4,824	61
1	.....	1	5	1	1	1	.....	120	114	62
131	90	160	83	92	90	42	40	578	143	63
9	8	.....	2	2	3	6	.....	111	33	64
24	11	44	26	67	31	12	35	922	257	65
34	4	3	12	14	15	11	7	134	102	66
.....	.....	.....	.....	2	.....	.....	.....	6	4	67
.....	.....	1	2	.....	4	1	6	158	.....	68
.....	.....	.....	.....	.....	.....	.....	1	84	80	69
2	1	6	2	2	3	4	8	17	17	70
95	55	144	94	105	87	28	32	641	100	71
14	36	4	6	7	8	17	10	270	77	72
1	.....	.....	2	8	1	3	6	72	20	73
.....	.....	.....	1	2	.....	2	1	96	6	74
142	48	133	73	48	63	25	26	617	43	75
41	9	28	6	19	27	15	9	250	122	76
858	475	633	485	507	399	238	219	4,704	1,449	77
.....	.....	.....	1	1	5	.....	.....	35	14	78
12	9	5	6	18	23	25	31	709	407	79
138	282	273	357	392	385	130	172	4,160	1,232	80
24	29	36	41	17	30	14	11	436	78	81
.....	1	.....	.....	.....	4	.....	.....	60	25	82
54	34	22	25	22	13	13	6	292	37	83
36	27	42	11	22	32	17	28	544	383	84
15	12	8	29	19	7	1	7	201	81	85

TABLE 14.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY

	CLASSES BY STATES AND TERRITORIES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.						
		Females above 15 years—Continued.						
		$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.
61	Hosiery and knitting mills	3,631	3,661	1,420	768	446	349	71
62	Alabama	3		5	7			
63	Connecticut	156	146	71	26	15	11	8
64	Georgia	32	21	25				
65	Illinois	272	282	61	25	15	6	1
66	Indiana	24	5	3				
67	Iowa	1		1				
68	Louisiana	158						
69	Maine			2			2	
70	Maryland							
71	Massachusetts	167	159	68	52	80	9	3
72	Michigan	79	90	10	6	3	5	
73	Minnesota	15	20	14	2	1		
74	Missouri	88	1		1			
75	New Hampshire	100	234	176	36	21	3	3
76	New Jersey	87	33	7			1	
77	New York	1,122	989	471	328	112	188	36
78	North Carolina	6	15					
79	Ohio	251	9	4	2		18	1
80	Pennsylvania	742	1,309	386	248	158	70	6
81	Rhode Island	211	85	29	13	6	4	6
82	Utah	15	20					
83	Vermont	24	95	58	16	30	24	4
84	Wisconsin	38	105	9	1		6	1
85	All other states	40	43	20	5	5	2	2

IN EACH CLASS OF WOOL MANUFACTURE, BY STATES AND TERRITORIES: 1890—Continued.

WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.								PIECEWORKERS.		
Females above 15 years—Continued.			Children.							
$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	Average number.	Total wages.	
40	15	1	2,711	2,649	59	3	.....	30,071	$7,429,090	61
.....	.....	.....	250	250	.....	.....	.....	8	1,498	62
2	.....	.....	86	86	.....	.....	.....	1,571	408,590	63
.....	.....	.....	46	46	.....	.....	.....	148	17,582	64
2	1	.....	45	45	.....	.....	.....	562	100,718	65
.....	.....	.....	22	22	.....	.....	.....	669	102,591	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
.....	.....	.....	.....	.....	.....	.....	.....	100	4,705	68
.....	.....	.....	.....	.....	.....	.....	.....	170	17,240	69
.....	.....	.....	.....	.....	.....	.....	.....	252	33,646	70
3	.....	.....	86	83	3	.....	.....	3,087	846,431	71
.....	.....	.....	1	1	.....	.....	.....	422	56,029	72
.....	.....	.....	.....	.....	.....	.....	.....	30	6,103	73
.....	.....	.....	.....	.....	.....	.....	.....	22	4,775	74
.....	1	.....	56	39	17	.....	.....	1,749	455,712	75
.....	.....	.....	117	117	.....	.....	.....	539	117,417	76
4	5	.....	684	665	18	1	.....	9,113	2,532,963	77
.....	.....	.....	31	31	.....	.....	.....	98	9,460	78
15	2	.....	42	42	.....	.....	.....	979	193,095	79
5	3	1	1,122	1,101	19	2	.....	8,152	2,079,563	80
2	2	.....	48	48	.....	.....	.....	771	206,182	81
.....	.....	.....	5	5	.....	.....	.....	.....	.....	82
4	.....	.....	5	3	2	.....	.....	155	53,216	83
.....	1	.....	65	65	.....	.....	.....	1,361	146,521	84
3	.....	.....	.....	.....	.....	.....	.....	113	35,053	85

TABLE 15.—CUSTOM CARDING MILLS IN THE UNITED STATES, BY STATES: 1890.

NOTE.—In the preceding tables the data relating to custom carding mills are included with statistics of woolen mills.

STATES.	Number of establishments.	CAPITAL.				Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES.					Cost of materials used.	Value of products.
		Value of hired property.	Direct investment.				Aggregates.		Males above 16 years.	Females above 15 years.	Children.		
			Total.	Land, buildings and machinery.	Live assets.		Average number.	Total wages.					
The United States	193	$18,065	$385,411	$348,207	$37,204	$13,802	416	$61,618	354	47	15	$332,050	$476,278
Alabama	5	400	6,825	6,750	75	123	7	1,465	7	.....	.....	3,489	5,180
Arkansas	3	.....	11,635	10,800	835	262	4	1,237	4	.....	.....	7,085	9,250
Georgia	3	.....	3,025	3,025	.....	129	5	600	5	.....	.....	5,173	7,200
Indiana	7	900	36,765	34,065	2,700	912	32	3,451	28	4	.....	17,280	23,738
Iowa	3	.....	4,700	4,700	.....	106	7	2,000	7	.....	.....	11,052	14,500
Kentucky	15	200	23,156	21,202	1,954	952	39	5,075	35	1	3	46,894	62,920
Maine	16	800	55,050	43,475	11,575	2,182	32	8,164	23	8	1	41,819	64,633
Michigan	10	4,750	18,295	16,170	2,125	888	26	4,186	19	4	3	19,931	29,109
Minnesota	6	1,000	11,475	11,125	350	1,166	23	3,950	19	4	.....	14,422	20,951
Mississippi	3	.....	3,200	3,200	.....	55	5	1,150	5	.....	.....	4,575	6,250
Missouri	12	1,900	21,799	18,495	3,304	1,007	23	2,003	18	3	2	14,819	21,530
New Hampshire	4	.....	5,925	5,725	200	315	9	1,246	7	1	1	8,443	12,200
New York	21	2,015	54,475	52,295	2,180	1,142	33	4,871	29	2	2	23,126	33,822
North Carolina	13	.....	10,810	10,580	230	397	23	2,071	19	3	1	12,240	17,911
Ohio	7	3,100	14,020	12,470	1,550	705	25	2,125	18	7	.....	7,397	11,763
Pennsylvania	14	1,300	25,233	21,035	4,198	877	21	2,843	20	1	.....	16,782	24,500
Tennessee	19	.....	17,953	17,055	898	467	33	4,366	30	3	.....	27,332	38,135
Vermont	7	500	8,585	7,810	775	795	9	1,650	8	1	.....	9,133	12,783
Virginia	5	.....	16,010	15,450	560	268	9	1,477	9	.....	.....	5,816	9,300
West Virginia	7	.....	10,190	8,500	1,690	88	15	1,450	15	.....	.....	9,943	13,770
Wisconsin	5	600	9,555	8,650	905	615	15	2,169	12	3	.....	6,035	9,305
All other states (a)	8	.....	16,730	15,630	1,100	351	21	3,075	17	2	2	10,364	27,528

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Illinois, 2; Maryland, 1; Massachusetts, 1; Oregon, 1; South Carolina, 1; Texas, 1; Utah, 1.

TABLE 16.—IDLE CAPITAL AND MACHINERY, BY STATES: 1890.

STATES.	Number of establishments.	CAPITAL.				MACHINERY.				
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Sets of cards.	Combing machines.	Spindles.	Looms.	Knitting machines.
Total	267	$6,100,860	$841,916	$2,273,239	$2,985,705	612	35	172,634	a3,018	1,821
California	4	225,000	22,700	76,300	126,000	9	.....	2,815	31	.....
Connecticut	11	635,408	52,400	320,100	262,908	41	.....	3,620	195	148
Illinois	5	24,300	3,800	10,600	9,900	6	.....	840	24	.....
Indiana	10	83,125	13,725	24,500	44,900	17	.....	3,923	74	20
Iowa	7	177,350	17,550	66,000	93,800	16	.....	4,180	68	1
Kansas	5	47,600	2,600	22,000	23,000	6	.....	2,646	5	45
Maine	7	126,200	8,500	31,500	86,200	25	.....	3,830	62	16
Massachusetts	43	1,184,110	135,395	433,150	615,565	135	.....	34,798	770	318
Michigan	9	195,556	16,300	98,151	81,105	15	.....	1,282	12	426
Missouri	4	23,100	2,000	5,300	15,800	4	.....	888	28	9
New Hampshire	9	121,600	17,200	51,000	53,400	10	.....	1,760	52	50
New Jersey	5	255,000	14,300	46,500	194,200	8	3	4,100	194	8
New York	36	899,711	248,700	301,600	349,411	113	.....	24,654	411	391
North Carolina	6	19,440	3,040	8,600	7,800	2	.....	3,240	5	40
Ohio	18	99,100	12,700	38,700	47,700	18	.....	4,204	70	172
Pennsylvania	47	1,265,460	177,310	434,050	654,100	116	23	48,124	635	56
Rhode Island	6	294,500	38,500	160,000	96,000	30	.....	13,572	208	25
Tennessee	6	25,500	5,000	9,500	11,000	5	.....	1,930	42	12
Virginia	5	29,500	3,100	14,400	12,000	6	.....	950	14	11
West Virginia	3	10,200	2,600	4,900	2,700	3	.....	600	18	.....
Wisconsin	8	163,300	16,196	43,888	103,216	7	9	5,270	6	57
All other states (b)	13	195,800	28,300	72,500	95,000	20	.....	5,408	94	16

a Includes 34 hand looms.

b Includes states in which there were less than 3 establishments that were reported as idle during the census year, in order that the value of individual establishments may not be disclosed. These establishments were located as follows: Arkansas, 1; Delaware, 1; Georgia, 1; Kentucky, 1; Maryland, 2; Minnesota, 2; Nebraska, 1; Texas, 1; Utah, 1; Vermont, 2.

TABLE 17.—SHODDY MANUFACTURE,

	STATES	Number of establishments.	CAPITAL.									
			Value of hired property.	Direct investment.								
				Aggregate.	Value of plant.				Live assets.			
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
1	The United States	94	$457,713	$3,754,063	$1,675,801	$265,500	$556,990	$853,311	$2,078,262	$923,209	$294,781	$860,272
2	Connecticut	7	6,650	395,336	152,666	14,900	72,275	65,491	242,670	142,500	45,100	55,070
3	Illinois	3	8,000	110,037	62,100	6,600	23,500	32,000	47,937	15,500	10,000	22,437
4	Massachusetts	29	36,200	902,850	445,412	87,200	161,854	196,358	457,438	157,597	92,320	207,521
5	New Hampshire	3	10,463	23,000	14,500	1,000	2,500	11,000	8,500	2,000	1,000	5,500
6	New Jersey	4	160,000	193,225	78,900	14,500	25,400	39,000	114,325	31,600	25,000	57,725
7	New York	12	6,500	482,520	239,261	48,800	92,461	98,000	243,259	107,763	32,770	102,726
8	Ohio	3	12,000	744,530	165,530	30,000	40,000	95,530	579,000	311,000	32,000	236,000
9	Pennsylvania	18	144,000	640,382	359,432	50,000	97,500	211,932	280,950	126,899	40,141	113,910
10	Rhode Island	10	62,500	194,250	119,600	9,000	20,000	90,600	74,650	19,000	9,450	46,200
11	All other states (b)	5	11,400	67,933	38,400	3,500	21,500	13,400	29,533	9,350	7,000	13,183

	STATES.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.					POWER.								
		Operatives and skilled—Continued.		Unskilled.			Steam.			Water.				Other power.	
										Water wheels.		Turbine wheels.			
		Children.	Wages.	Males above 16 years.	Females above 15 years.	Wages.	Boilers. (Number.)	Engines. (Number.)	Horse power.	Number.	Horse power.	Number.	Horse power.	Number of motors.	Horse power.
12	The United States	38	$672,335	78	16	$34,764	89	62	4,312	23	1,075	38	1,617	3	55
13	Connecticut	8	71,023	3	.....	1,522	9	6	188	6	310	2	135	.....	.....
14	Illinois	.....	29,754	.....	.....	.....	2	2	215	.....	.....	.....	.....	.....	.....
15	Massachusetts	.....	147,339	12	5	5,274	25	18	1,040	8	380	20	799	.....	.....
16	New Hampshire	.....	10,650	.....	.....	.....	.....	.....	.....	1	50	1	30	.....	.....
17	New Jersey	4	33,805	4	3	1,800	4	3	260	.....	.....	4	130	.....	.....
18	New York	6	56,981	8	.....	3,080	10	6	310	2	150	6	303	.....	.....
19	Ohio	20	157,500	12	.....	5,100	8	3	640	.....	.....	.....	.....	1	30
20	Pennsylvania	.....	102,295	30	8	14,164	24	17	1,256	1	15	.....	.....	2	25
21	Rhode Island	.....	48,256	8	.....	3,260	5	5	283	1	40	5	220	.....	.....
22	All other states	.....	14,732	1	.....	564	2	2	120	4	130	.....	.....	.....	.....

	STATES.	MATERIALS USED—continued.									
		Shoddy.		Waste and wool noils.		Camel's hair and noils.		All other animal hair.		Raw cotton.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
23	The United States	45,136,841	$3,447,172	10,997,044	$1,801,290	405,000	$29,300	30,000	$900	24,000	$2,260
24	Connecticut	4,420,000	339,100	685,000	40,300	.....	.....	.....	.....	14,000	1,160
25	Illinois	3,796,000	100,413	.....	.....	.....	.....	.....	.....	.....	.....
26	Massachusetts	13,672,070	992,656	283,587	91,465	.....	.....	.....	.....	.....	.....
27	New Hampshire	1,008,700	65,176	45,000	8,200	.....	.....	.....	.....	.....	.....
28	New Jersey	1,960,000	116,900	776,400	171,000	.....	.....	.....	.....	.....	.....
29	New York	1,610,171	158,506	2,492,000	156,765	.....	.....	.....	.....	.....	.....
30	Ohio	5,205,000	684,000	500,000	280,000	.....	.....	.....	.....	.....	.....
31	Pennsylvania	8,333,900	631,140	4,004,957	317,160	405,000	29,300	30,000	900	.....	.....
32	Rhode Island	3,316,000	281,300	2,210,100	736,400	.....	.....	.....	.....	.....	.....
33	All other states	1,815,000	77,981	.....	.....	.....	.....	.....	.....	10,000	1,100

a Includes piecework and their wages.

BY STATES: 1890.

MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES.							
							Aggregates.		Officers, firm members, and clerks.			Operatives and skilled. (a)		
Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Average number.	Total wages.	Males above 16 years.	Females above 15 years.	Wages.	Males above 16 years.	Females above 15 years.	
$238,094	$32,488	$13,084	$28,554	$53,814	$24,858	$85,296	2,299	$856,582	142	2	$149,483	1,174	849	1
26,099	400	1,391	3,027	7,029	5,320	8,932	180	85,816	12	2	13,271	139	16	2
11,610	400	395	544	525	4,500	5,246	114	36,254	4	.....	6,500	37	73	3
62,687	2,950	5,268	6,748	18,274	2,004	27,443	435	180,748	29	.....	28,135	288	101	4
1,795	875	180	190	550	.....	.....	25	11,683	1	.....	1,033	24	.....	5
20,150	8,500	900	725	2,375	1,500	6,150	127	43,755	10	.....	8,150	60	46	6
11,640	650	1,068	2,307	2,280	3,185	2,150	192	77,361	19	.....	17,300	132	27	7
28,266	1,200	1,646	5,600	2,100	5,500	12,220	696	182,700	12	.....	20,100	167	485	8
50,305	12,147	1,273	6,206	12,863	1,636	16,180	339	151,175	37	.....	34,716	181	83	9
22,278	4,546	622	3,197	6,200	1,113	6,600	146	68,014	14	.....	16,498	121	3	10
3,264	820	341	10	1,618	100	375	45	19,076	4	.....	3,780	25	15	11

MACHINERY.						MATERIALS USED.						
Cards. (Sets.)	Combing machines.		Spindles.	Looms on woolen goods.		Total cost.	Foreign wool in condition purchased.		Domestic wool in condition purchased.		Total foreign and domestic wool in scoured pounds.	
	Foreign.	American.	Woolen.	Broad.	Narrow.		Pounds.	Cost.	Pounds.	Cost.		
470	1	1	3,170	6	16	$6,003,035	521,000	$84,930	784,400	$297,238	953,400	12
47	.....	.....	510	6	.....	442,852	80,000	12,000	100,000	18,000	98,000	13
12	.....	.....	.....	.....	.....	103,722	.....	.....	.....	.....	.....	14
167	.....	.....	240	.....	16	1,170,868	10,000	6,000	22,400	11,448	32,400	15
12	.....	.....	.....	.....	.....	86,816	15,000	11,250	.....	.....	15,000	16
19	.....	.....	.....	.....	.....	301,113	.....	.....	.....	.....	.....	17
36	.....	.....	.....	.....	.....	343,012	.....	.....	3,000	750	3,000	18
43	.....	.....	.....	.....	.....	1,100,480	16,000	11,680	108,000	63,600	124,000	19
62	1	1	450	.....	.....	1,205,258	400,000	44,000	296,000	76,000	420,000	20
58	.....	.....	1,970	.....	.....	1,165,235	.....	.....	249,000	126,000	249,000	21
14	.....	.....	.....	.....	.....	83,679	.....	.....	6,000	1,440	3,000	22

MATERIALS USED—continued.

Yarns not made in mill.				Oil.		Soap.		Chemicals and dyestuffs.	Fuel.			Rent of power and heat.	All other materials.	
Woolen.		Cotton.							Total cost.	Coal.	Wood.			
Pounds.	Cost.	Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	
10,000	$4,000	25,000	$5,000	296,221	$89,245	267,200	$7,075	$78,519	$88,751	$88,291	$460	$5,809	$61,546	23
.....	.....	25,000	5,000	12,834	3,896	22,000	700	7,596	10,500	10,200	300	300	4,300	24
.....	.....	.....	.....	2,900	860	19,000	480	.....	1,835	1,835	.....	134	.....	25
.....	.....	.....	.....	70,333	26,552	22,500	450	13,620	22,769	22,769	.....	788	5,120	26
.....	.....	.....	.....	2,175	1,050	38,200	1,080	.....	60	.....	60	.....	.....	27
.....	.....	.....	.....	16,209	4,723	1,250	25	1,800	5,765	5,765	.....	500	400	28
10,000	4,000	.....	.....	13,070	3,992	5,000	100	7,223	6,576	6,576	.....	900	4,200	29
.....	.....	.....	.....	47,500	16,900	56,250	1,150	28,900	14,250	14,250	.....	.....	.....	30
.....	.....	.....	.....	113,000	24,252	2,000	70	16,600	18,026	18,026	.....	1,300	46,510	31
.....	.....	.....	.....	14,020	5,780	101,000	3,020	2,780	6,605	6,555	50	1,300	950	32
.....	.....	.....	.....	4,180	1,240	.....	.....	.....	2,365	2,315	50	587	66	33

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: California, 1; Maine, 2; Vermont, 1; Wisconsin, 1.

TABLE 17.—SHODDY MANUFACTURE,

	STATES.	PRODUCTS.								
		Aggregate value.	Horse blankets, all wool.		Boot and shoe linings.		Partly manufactured goods for sale.			
							Total.		Shoddy and mungo.	
			Square yards.	Value.	Dozens.	Value.	Pounds.	Value.	Pounds.	Value.
1	The United States	$7,887,000	30,000	$24,000	54,000	$20,000	45,999,391	$7,750,997	37,002,054	$5,911,219
2	Connecticut	648,060	30,000	24,000	54,000	20,000	4,337,000	604,060	2,398,000	390,760
3	Illinois	182,110					2,528,616	167,607	2,528,616	167,607
4	Massachusetts	1,614,459					11,384,508	1,614,459	10,018,424	1,418,817
5	New Hampshire	111,848					911,763	111,848	911,763	111,848
6	New Jersey	389,640					1,616,000	389,640	1,252,000	315,640
7	New York	471,478					2,820,717	411,578	2,616,000	383,200
8	Ohio	1,377,500					4,800,000	1,377,500	4,800,000	1,377,500
9	Pennsylvania	1,633,770					12,317,832	1,633,770	9,507,875	1,366,663
10	Rhode Island	1,350,792					3,984,379	1,333,192	1,711,000	274,741
11	All other states	107,343					1,298,576	107,343	1,258,376	104,443

a Includes items as follows: rags, $14,503; batts, $59,900; custom work, $17,600.

BY STATES: 1890—Continued.

PRODUCTS—continued.											
Partly manufactured goods for sale—Continued.										All other products. (a)	
Woolen yarn—all wool.		Woolen card rolls.		Worsted noils.		Waste.		Wool extract.			
Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	
443, 739	$82, 432	200	$100	500, 000	$335, 000	4, 544, 597	$948, 026	3, 508, 801	$474, 220	$92, 002	1
.....	.....	.....	.....	.....	.....	139, 000	17, 300	1, 800, 000	196, 000	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14, 503	3
.....	.....	.....	.....	.....	.....	166, 000	16, 600	1, 200, 084	179, 042	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
.....	.....	.....	.....	.....	.....	.....	.....	364, 000	74, 000	.....	6
.....	.....	.....	.....	.....	.....	60, 000	3, 200	144, 717	25, 178	59, 900	7
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
350, 000	40, 000	.....	.....	.....	.....	2, 459, 957	227, 107	.....	.....	.....	9
93, 739	42, 432	.....	.....	500, 000	335, 000	1, 079, 640	681, 019	.....	.....	17, 600	10
.....	.....	200	100	.....	.....	40, 000	2, 800	.....	.....	.....	11

COTTON MANUFACTURE.

BY EDWARD STANWOOD.

The statistics pertaining to cotton manufacture prior to the census of 1840 are meagre and not altogether trustworthy. It was found impossible to reduce them to tabular form for the purpose of comparison with subsequent reports. Therefore, the figures for previous censuses shown in this report are confined to the past five decades. Table No. 1 is a résumé of the statistics pertaining to the cotton industry from 1840 to 1890, inclusive, all the items that were common to a number of census reports being presented.

The growth of the industry during the past ten years is shown in the following statement which presents the leading facts as reported by the censuses of 1890 and 1880:

COTTON MANUFACTURE, SUMMARY: 1890 AND 1880.

ITEMS.	1890	1880	Increase.	Per cent.
Number of establishments	905	756	149	19.71
Capital	*a* $354,020,843	$208,280,346	$145,740,497	69.97
Miscellaneous expenses	$16,716,524	(*b*)	.....	.....
Average number of employés (aggregate)	221,585	174,659	46,926	26.87
Total wages	$69,489,272	$42,040,510	.....	.....
Officers, firm members, and clerks	2,709	2,115	594	28.09
Total wages	$3,464,734	(*b*)	.....	.....
All other employés	218,876	172,544	46,332	26.85
Total wages	$66,024,538	$42,040,510	$23,984,028	57.05
Cost of materials used	$154,912,979	$102,206,347	$52,706,632	51.57
Value of products	$267,981,724	$192,090,110	$75,891,614	39.51
Number of active spindles	14,188,103	10,653,435	3,534,668	33.18
Number of looms	324,866	225,759	99,107	43.90
Bales of cotton consumed	2,261,600	1,570,344	691,256	44.02
Pounds of cotton consumed	1,117,945,776	750,343,981	367,601,795	48.99

a Does not include the value of "Hired property". *b* Not reported.

In presenting the figures relative to cotton manufacture, it should be premised that the establishments here reported are exclusively those engaged in spinning or weaving raw cotton, together with those which convert the waste of cotton mills into a commercial product. The tables do not cover the operation of any establishments for the manufacture of hosiery and knit goods, nor any of those principally engaged in making elastic fabrics or cotton cordage and twines. Moreover, all mills in which mixed textiles are produced are excluded. An inspection of the table which shows the materials of manufacture discloses the fact that less than one-half of 1 per cent of the total value of the fiber entering into the materials of these mills was other than cotton. The comparison is made with those mills which were classed in the census report of the Tenth Census as "specific cotton mills", from which category the special agent excluded "mills employed in working raw cotton, waste, or cotton yarn into hose, webbing, tapes, fancy fabrics, or mixed goods, or other fabrics, which are not sold as specific manufactures of either cotton or wool". The comparison is, therefore, as nearly as possible, between the same classes of mills. But the facts regarding what were grouped under the head of "special mills" in the report for the Tenth Census are now distributed among several classes of manufacture.

CAPITAL.

A comparison of capital employed in the industry in 1880 and 1890 is not to be relied upon as an indication of the increase that has actually taken place. The inquiry at the Tenth Census was not so minute as that employed in the present investigation. At the census of 1890 the purpose was to ascertain the actual value of the property at the time the report was made, whether real estate, stock on hand, or money and book accounts, and whether owned or borrowed. It is evident that the more detailed inquiry results in a considerable apparent increase of capital reported. In other words, it is believed the amount of capital now shown is much more nearly the real capital engaged in the manufacture than that reported at the former census, and the indicated increase is considerably in excess of the real increase.

Aside from the general importance of the item of capital, as a fact bearing upon the conditions of manufacturing, an importance which has no special significance as applied to the industry of cotton manufacturing, the statement of the value of land, buildings, and machinery possesses the largest interest. Were it possible to compare mills spinning the same number of yarn, of the same age, equally well kept up, in different parts of the country, the facts ascertained might be valuable to those who may be called upon to consider where is the best location for a contemplated new mill; but the establishments reported include mills, new and old, large and small, spinning yarn coarse and fine, equipped with the most modern machinery or filled with antiquated appliances.

The value of plant to a spindle throughout the country appears to be $16.28. In New England the amount is $14.45; in the middle states, $20.21; in the southern states, $24.40; in the western states, $21.00. This statement, it should be observed, is to be modified, not only in the light of the facts just mentioned, but also, what is very important, by giving due weight to the fact that all the mills, of which these amounts are an average, are not complete spinning and weaving mills. There are no official returns for any former period with which to compare these figures. The cost of mills per spindle has been the subject of private inquiry at various times. Perhaps the most extensive examination of the question was made by Mr. J. P. Harris-Gastrell, a former attaché of the British legation at Washington, whose report on the subject of textile manufactures in the United States was presented to the British parliament in 1873. At that time the cost of constructing a mill, including the land, was estimated by him at $20 per spindle, in gold. Mr. David A. Wells' report, made in 1869, was quoted, to the effect that a cotton mill which could be built 10 years before for $15 to $17 a spindle, then (in 1869) cost $30 to $32 in currency per spindle, equivalent to $22.50 to $24.75 in gold. Mr. Harris-Gastrell gave several detailed estimates and authenticated statements as to the cost of mills then recently built, ranging from $15 without land to $18 and $20 with real estate, and concluded that the average cost did not exceed $20, including land, this being cost in gold.

MISCELLANEOUS EXPENSES.

The items which go to make up the miscellaneous expenses reported in cotton mills during the census year are as follows:

Total	$16,716,524
Rent paid for tenancy	488,735
Taxes	2,689,632
Insurance	1,213,322
Repairs, ordinary, of buildings and machinery	3,987,748
Interest paid on cash used in the business	4,098,435
Sundries, not elsewhere reported	4,238,652

The insignificance of the amount paid for rent is explained by the fact that the corporations operating the mills reported are almost invariably the owners of the land and buildings occupied by them. It probably is true that some of the large corporations of New England, whose treasurers and active managers have offices other than those at the mill, have included the rent of such offices with the sundry expenses reported above. The use of rented property for the installation of weaving machinery is a feature of the manufacture in the city of Philadelphia, which explains the circumstance that more than one-fourth of all the rent paid is credited to Pennsylvania.

The taxes paid amount, for the whole country, to an average of 1.16 per cent of the total value of the plant. This is, perhaps, a somewhat lower rate than the local taxation upon real estate generally, and the difference is to be accounted for in part at least by the fact that municipalities are accustomed in some states to offer the inducement of exemption from all taxation for a term of years, in order to attract manufactures.

The insurance paid averages 0.58 per cent on the value of buildings and machinery. The difference between the rates in the several geographical divisions of the country is quite marked. It is, in each case on the value of buildings and machinery, in New England 0.50 per cent; in the middle states 0.57 per cent; in the south 0.89 per cent; in the west 0.95 per cent. The explanation of this difference is simple. The great New England corporations adopt in their mills a variety of costly appliances (which enter into the value of their plant) to protect themselves against fire, and having done so either take out no insurance or insure in mutual companies where the cost of the risk is reduced to a minimum by the practice of these companies to insist upon the use of the appliances referred to.

"Interest on cash used in the business" gives no exact information as to the amount of money borrowed. If we may estimate that the average rate was not far from 5 per cent, we shall be led to think that the corporations were debtors for cash employed in their business to an average amount of about $82,000,000, or not far from two-thirds of their live assets. The cost of repairs and the sundries, which complete the above list of miscellaneous expenses, call for no comment.

ITEMS IN COST OF MANUFACTURE.

Although the ascertainment of the profits of manufacturing is no part of the purpose of the Census inquiry, and although the facts which can be procured by an official examination must necessarily omit many items and circumstances which must be considered before the actual profits are disclosed, yet the omissions are now so much fewer than on any former occasion that we can certainly arrive at a nearer approximation to the truth regarding the margin of profit than ever before, as shown by the following statement:

EXPENSES AND PRODUCT.

Value of products		$267,981,724
Cost of materials used	$154,912,979	
Wages	66,024,538	
Salaries of officers and clerks	3,464,734	
Miscellaneous expenses	16,716,524	
		241,118,775
Remainder		26,862,949

This remainder represents 7.59 per cent of the capital, excluding the value of hired property, but it represents much more than the actual profits of manufacturing. All capital expenditures, excepting rent and interest paid for cash used in business, are excluded from the items entering into the cost of production. Ordinary repairs are included, but all renewals and expenditures on account of depreciation of machinery are omitted. The cost of renewal takes a large percentage of nominal profits in a cotton spinning mill. An allowance of 3 per cent of the value of the buildings and machinery is a moderate one. This would be a gross sum of $6,233,054. Reducing the $26,862,949 shown above by this sum the remainder will be $20,629,895, which is 5.83 per cent on the reported capital.

The general relation of the components entering into the selling price of the products of this manufacture may be indicated by the statement that 43.81 per cent represents the cost of the raw cotton consumed, and 14.00 per cent the cost of other materials, so that 57.81 per cent of the whole value consists of materials. The miscellaneous expenses of manufacture stand for 6.24 per cent; labor, including salaries of officers and clerks, for 25.93 per cent, and 10.02 per cent is left to cover the depreciation of plant and the return of a profit to the owners. The following table exhibits a division of the selling price of commodities between these several elements of cost, for each of the geographical divisions of the country:

PERCENTAGES OF DIFFERENT ELEMENTS IN COST OF MANUFACTURE TO VALUE OF PRODUCT.

GEOGRAPHICAL DIVISIONS.	Cotton.	Other materials.	Miscellaneous expenses.	Labor.	Margin.
United States	43.81	14.00	6.24	25.93	10.02
New England	42.38	13.44	6.67	27.56	9.95
Middle states	34.20	22.47	5.14	26.47	11.72
Southern states	59.04	7.84	5.44	18.83	8.85
Western states	47.49	16.53	6.05	21.31	8.62

SPINDLES AND LOOMS.

NUMBER OF SPINDLES IN OPERATION.

The total number of cotton spindles in the United States as shown at the census of 1890 was 14,550,323. Of these spindles 14,188,103 were in cotton mills reported in the accompanying tables, mills which were in active operation during some part at least of the census year; 166,143 were in cotton mills which were idle during the whole of the census year, and 196,077 were cotton spindles in mills devoted to the manufacture of woolen and worsted fabrics, or of hosiery and knit goods. The very small number of idle spindles during the census year indicates the general prosperity of the industry. In almost every case in the northern states the mills which stood idle had for some cause or other become bankrupt in earlier years and were in process of reorganization. No explanation of the nonoperation of the mills in other parts of the country has been obtained. With respect to the spindles in woolen and other mills it need only be said that a certain number of woolen factories manufacture their own warps for use in mixed goods. Where pure cotton goods were a distinct product of factories using both wool and cotton, a double report was made, and such establishments were treated as two separate establishments. The spindles now under notice are in mills where no division was possible.

The full details of spindles in the several states are to be found in the following table:

GENERAL STATEMENT OF COTTON SPINDLES IN THE UNITED STATES, 1890 AND 1880, BY STATES.

	Total cotton spindles.	Active spindles in cotton mills.				1890	
		Total.		1890		Idle spindles in cotton mills.	Cotton spindles in woolen mills.
	1890	1890	1880	Mule.	Frame.		
The United States	14,550,323	14,188,103	10,653,435	5,363,486	8,824,617	166,143	196,077
New England states	11,030,458	10,836,155	8,632,087	4,391,895	6,444,260	96,161	98,142
Maine	914,506	885,762	695,924	344,697	541,065	21,744	7,000
New Hampshire	1,198,643	1,195,643	944,053	364,234	831,409	.....	3,000
Vermont	71,591	71,591	55,081	42,735	28,856	.....	.....
Massachusetts	5,895,109	5,824,518	4,236,084	2,430,719	3,393,799	22,257	48,334
Rhode Island	1,994,602	1,924,486	1,764,569	811,869	1,112,617	35,308	34,808
Connecticut	956,007	934,155	936,376	397,641	536,514	16,852	5,000
Middle states	1,736,319	1,633,722	1,391,164	822,613	811,109	20,300	82,297
New York	649,624	606,796	561,658	334,210	272,586	20,300	22,528
New Jersey	374,442	374,442	232,221	304,480	69,962	.....	.....
Pennsylvania	496,551	439,638	425,391	175,687	263,951	.....	56,913
Delaware	53,916	53,916	46,188	2,880	51,036	.....	.....
Maryland	161,786	158,930	125,706	5,356	153,574	.....	2,856
Southern states	1,613,280	1,554,000	542,048	108,474	1,445,526	49,682	9,598
Virginia	94,294	94,294	44,340	13,198	81,096	.....	.....
North Carolina	344,606	337,786	92,385	30,920	306,866	.....	6,820
South Carolina	334,476	332,784	82,334	4,000	328,784	1,692	.....
Georgia	469,468	445,452	198,656	20,524	424,928	24,016	.....
Alabama	83,002	79,234	49,432	9,460	69,774	3,640	128
Mississippi	57,004	57,004	18,568	.....	57,004	.....	.....
Kentucky	42,942	42,942	9,022	8,784	34,158	.....	.....
Tennessee	107,458	97,524	35,736	21,588	75,936	9,134	800
All other states	80,030	66,980	11,575	.....	66,980	11,200	1,850
Western states	170,266	164,226	88,136	40,504	123,722	.....	6,040
Ohio	16,580	16,560	13,328	8,152	8,408	.....	20
Indiana	80,604	74,604	33,396	16,320	58,284	.....	6,000
Illinois	21,800	21,800	.....	8,000	13,800	.....	.....
Wisconsin	32,592	32,592	.....	5,632	26,960	.....	.....
All other states	18,690	18,670	41,412	2,400	16,270	.....	20

THE UNIT OF CAPACITY—THE SPINDLE.

The foregoing table is that which exhibits most broadly and most accurately the capacity of the cotton mills of the United States. The number of working spindles is by no means an exact measure of capacity, but it is by far the best measure. Either the quantity of raw material, that is of cotton, or the superficial area or weight of the product, as such a measure, is open to the fatal objection that the cheapest goods are those in the making of which the largest amount of cotton is consumed. The value, either of raw cotton used or of the finished product of the spindle and the loom, is comparatively useless as a measure of capacity, since a turn in the market might cause a real increase in mill capacity to disappear, while a turn in the other direction might create an appearance of increase when there had been actually a reduction. The imperfection of the spindle as a true measure of capacity is like the imperfection of a chronometer. Since the amount of correction necessary may always be ascertained with a fair degree of accuracy the relative capacity of production at different periods may be learned within a small limit of error. The improvement in spindles during the century of cotton manufacture has been enormous. For the greater part of the time the improvement in the machinery of cotton mills may be said to have been continuous. Numerous changes for the better in the form of the spindle have been made, and the mills have hardly been equipped with spindles of an improved pattern before a still better spindle was offered them. In recent years there has been steady progress, and during no former decade has the necessary correction of the spindle as a measure of productive capacity been so great as it has during the years from 1880 to 1890. Indeed, not to discuss the question whether the modern carding machine or the modern spindle is the more important agent for economy in manufacture, yet so much more attention has been paid to spindles by manufacturers generally that the introduction of better spindles forms the most important feature of the development of the cotton industry that is brought out by the census. There are two types of machinery by which the spinning of cotton is performed, the mule and the spinning frame. Each of these machines has been brought by experiment and invention to a point where it performs its work with such accuracy and excellence that it seems endowed with more than human intelligence, while its speed and capacity of production are so great that a single operative with modern machinery is more than

the equal of a regiment of hand spinners. The self-acting mule was brought to a high state of efficiency before the principle of self-centering spindles, running in loose bearings, for frame spinning had been invented. Consequently the mule was for a long time and perhaps still is in England the favorite machine, especially for the better and finer classes of goods.

The invention of the ring-spinning frame and the wire "traveler" was a great step in advance, and rendered possible the use of rapid spindles. During the last twenty years invention has been applied with marvelous results to the production of spindles capable of high speed. In 1871 the most rapid spindles were capable of making 5,500 turns a minute. The most improved spindles of to-day can be run 9,000 to 10,000 turns. Inasmuch as the amount of yarn that may be made is almost directly proportioned to the speed of the spindle, it follows that a spinning frame of the latest type can make at least 50 per cent more yarn of the same fineness than was the capacity of the best frames in existence in 1870. While this improvement in machinery did not by any means supersede the use of the mule, it did result in an improved quality of yarn from the frame, and the relative cheapness of this method of spinning reversed the tendency toward mule spinning that had long been a feature of the industry. No attempt was made by the census prior to 1870 to ascertain the respective numbers of frame and mule spindles in the cotton mills of the country. The Ninth Census reported 3,694,477 frame spindles, and 3,437,938 in mules. The respective numbers were not ascertained in 1880, but in 1890 it is found that there were 8,824,617 frame spindles and 5,363,486 mule spindles. Thus, in twenty years the percentage of increase of frame spindles has been 138.86 and that of mules 56.01.

THE REVOLUTION IN RING SPINNING.

In no department of industry is there a greater degree of attention paid by manufacturers to the improvement of machinery in the mills than in the cotton industry. The margin of profit depends upon the saving of a fraction of a cent in the price of a pound of cotton and the economy of another small fraction of a cent in working the cotton into yarn or cloth. In order to effect this second economy the most efficient machinery must be provided, and whatever becomes obsolete must be boldly removed from the mill and replaced by what is better. This being the common practice of cotton manufacturers it will readily be seen what the increase in the number of frame spindles in twenty years signifies. In 1870, as has been said, the highest type of frame spindles was capable of a speed of 5,500 revolutions a minute. But inasmuch as the inventions which gave that result were then comparatively recent, a small proportion only of the spinning frames then in use were supplied with them. Since then most of the mills have replaced their frame spindles at least once, and in a large number of cases twice. This will appear from a table appended which shows the number of frame spindles of the self-centering type sold by all the manufacturers of such spindles in the country, for each year of the decade, from May 1, 1880, to April 30, 1890. From this it appears, as a grand result, that 6,000,193 such spindles, all being of the highest capacity and speed ability, were placed in the cotton mills of the country between the dates of the Tenth and the Eleventh Censuses. Roughly speaking, more than two-thirds of all the frame spindles now reported are of the highest type, since most of the important improvements in frame spindles now in use were patented as early as 1880. Moreover, the change effected is not fully represented even by this statement. While all manufacturers are not able to throw aside their machinery and replace it with that of the most modern type, they are frequently enabled to make an improvement. Machinery which, though by no means worn out, is thrown out of certain highly organized mills, because better machinery has been invented, is disposed of to dealers in second-hand machinery, and is by them sold to mills which can not afford to replace their worn-out plant with wholly new machinery. Bearing this in mind we may say with confidence that while two-thirds of all the frame spindles now in use are of the newest type and the highest capacity, and have been introduced in the last ten years, substantially all the rest are equal in spinning power to the best known up to the year 1870. The following table shows by years and by geographical divisions, north and south, the number of frame spindles in new frames and in old frames:

SUMMARY OF FRAME SPINDLES, SALES FROM MAY 1, 1880, TO APRIL 30, 1890.

YEARS.	Grand total.	NORTHERN STATES.			SOUTHERN STATES.		
		Total frames.	New frames.	Old frames.	Total frames.	New frames.	Old frames.
Total	6,000,193	5,131,485	3,561,896	1,569,589	868,708	760,525	108,183
1880-1881	861,626	828,345	524,587	303,758	33,281	24,586	8,695
1881-1882	563,275	529,571	412,983	116,588	33,704	22,132	11,572
1882-1883	589,863	521,943	405,482	116,461	67,920	53,290	14,630
1883-1884	485,207	421,040	290,007	131,033	64,167	55,682	8,485
1884-1885	231,058	190,062	163,042	27,020	40,996	39,429	1,567
1885-1886	343,257	302,439	192,018	110,421	40,818	40,160	658
1886-1887	545,912	480,795	355,451	125,344	65,117	55,210	9,907
1887-1888	493,533	419,798	240,372	179,426	73,735	66,103	7,632
1888-1889	774,680	555,265	403,954	151,311	219,365	179,690	39,675
1889-1890	1,111,832	882,227	574,000	308,227	229,605	224,243	5,362

In the northern mills there were placed 3,561,896 spindles in new frames, a part of which were of the plant of new mills, or of old mills enlarging operations, and a part were new spindles replacing old ones removed, and 1,569,589 spindles in old frames, all of which represent substitution of new machinery for old. The sum of these numbers is 5,131,485, which is 71.52 per cent of all the active frame spindles reported in the cotton mills of the northern states. Including Delaware and Maryland as among the southern states, the spindles in new frames in the south were 760,525; in old frames 108,183; together they were 868,708, or 52.64 per cent of the 1,650,136 active frame spindles in the cotton mil's of that part of the country. The great improvement in the machinery of cotton mills both north and south which is exhibited in these facts is reflected in more than one of the comparisons which are possible between the production of goods in 1880 and in 1890, but in none more clearly than in the statement of the average consumption of cotton per spindle.

IMPROVEMENTS IN MULE SPINNING.

While the great improvements here noted in frame spinning have been taking place, that marvellous piece of machinery, the mule, has been brought nearer to perfection, and its efficacy has been increased nearly, if not quite, as much as that of the frame spindle. Before 1870 the use of the mule was principally for spinning filling; but for print cloths and other medium goods it was used for making warps also. The great impetus which cotton manufacturing received in the early years of the decade which began with 1871, and the improvement in ring spinning compelled the makers of mules to see what invention could do to make their machinery more efficient. At that time the limit of speed of a mule spinning No. 36 yarn, which is the ordinary yarn for filling for print cloths and other medium goods, was 3¼ to 3½ "stretches" of 60 inches per minute. Inferior and old pattern mules made only 3 stretches, or even less, per minute. As in the case of frame spinning, the speed of the spindle fixed the limit of production; that is to say, while it was easily possible to run the machinery at a higher speed, for that was a mere matter of the application of power, the spindle itself could not be made to produce good yarn of the fineness mentioned if run at a higher speed. The efforts of manufacturers were successfully made in several directions. First, the spindle itself was improved, the change taking chiefly the form of improved workmanship. The new spindle was like the old, but it was better made and stronger, the self-centering principle which has made so great a change in frame spindles being adapted to the mule spindle. Inasmuch as the change required only the addition of a self-adjusting bolster and an improved step to spindles already in use, the improvement was much more readily available than one which rendered necessary the discarding of the old spindles. This improvement dates from 1885. The effort at producing a better mule spindle was a result not simply of competition with frame spindles, but of the tendency to the production of finer yarns. The usual twist in No. 36 filling yarn is 19 or 20 turns to the inch, but as yarns become finer the number of turns increases rapidly. In order, therefore, to produce the same length of finer yarn, spindles must be run more rapidly, though the speed of the carriage does not increase; or the carriage must come to a stop while "standing twist" is given to the yarn, before the motion known as backing off and winding begins. The improvement which was adopted chiefly with reference to fine spinning was of great advantage in the spinning of medium counts; for when the available speed of the spindle had become greater than was necessary to give the requisite twist for 3 or 3½ stretches of 60 inches each in a minute, it was possible both to lengthen the stretch and increase the number. Thus, at present the improved mule when spinning No. 36 yarn is capable of making in one minute 4¾ to 5 stretches of 64 inches each. Indeed, in some cases the stretch is increased to 67 inches by the adoption of a new roller delivery, by which roving continues to be supplied to the amount of 3 inches, one turn of the roller, while the spun yarn is being wound during the return of the carriage. These several improvements have added about 50 per cent to the product of yarn per spindle. The spindle itself had formerly a speed of about 7,000 turns a minute. The new self-centering spindle has a speed of more than 10,000 turns. Since 1884 machinery makers have devoted themselves to strengthening the parts of the mule to enable it to bear the increased speed, and to simplifying it to adapt it to the class of help which the great demand for spinners has required manufacturers to employ; and several other improvements, very important in combination, have been introduced, which are of too technical a character to be described here. Some experimenting has taken place in the direction of a considerable increase in the length of mules. Machines have been made as long as 117 feet and containing 1,100 spindles. The object of this change is partly economical and partly to produce better yarn. One spinner and a helper are employed for a pair of the long mules and breaks are more quickly repaired.

CONSUMPTION OF COTTON PER SPINDLE.

The improvement noted above in both mule and frame spindles does not fully appear in the following table, which shows the consumption of raw cotton per spindle for each of the geographical divisions and for the United States. The increased fineness of goods, which is referred to elsewhere, interferes to complicate the matter. Nevertheless, it should be noted that, taking the country at large, in spite of the greater fineness of yarn spun the average consumption has increased from 70.43 pounds to 78.79 pounds since 1880. In New England, where the average number of yarn, estimated by the only process which is available for purposes of comparison, has increased from 30 to 31.31, the average consumption of cotton has, nevertheless, increased from 62.72 pounds to 65.95 pounds,

and in the south, where the average number is also higher than it was ten years ago, the annual consumption is larger by 5.47 pounds than in 1880. An average of this sort, however, is not very instructive, since, as is explained further on, the consumption of cotton is so very greatly dependent upon the relative coarseness or fineness of the yarn spun. This is evident in the fact that the southern mills consume two and a half times as much cotton to a spindle as those of New England, although the efficiency of southern spindles is, upon the whole, not equal to that of New England spindles. A similar remark may be made as to the teaching of the table on page 167, showing the elements of cost in the product of cotton mills, where it appears that the percentage of cost of cotton is much higher in the southern mills than in the rest of the country. The simple explanation is, of course, that the weight of cotton in the average yard of southern woven goods is much greater than in the New England or middle states.

COTTON CONSUMED PER SPINDLE.

GEOGRAPHICAL DIVISIONS.	1890 (Pounds.)	1880 (Pounds.)
United States	78.79	70.43
New England states	65.95	62.72
Middle states	78.40	78.58
Southern states	161.41	155.94
Western states	147.55	171.55

OTHER IMPROVEMENTS IN MACHINERY.

Other great improvements have taken place in cotton machinery during the last twenty years, and many of them within the last decade. The modern cotton opener is a marvelously more effective machine than that which it superseded, but a still greater improvement is that in cotton cards. It is held by some manufacturers that the new carding machine has introduced an economy in the production of yarn not less important than that in spindles.

LOOMS.

The number of looms in operation in 1890 was 324,866 against 225,759 in 1880; an increase of 99,107 in number, and of 43.90 per cent. The following table shows the number of looms in 1880 and 1890, together with the numerical and percentage increase during the decade for each of the geographical divisions.

NUMBER OF LOOMS: 1890 AND 1880.

GEOGRAPHICAL DIVISIONS.	NUMBER OF LOOMS.		INCREASE.	
	1890	1880	Number.	Per cent.
United States	324,866	225,759	99,107	43.90
New England states	250,116	184,701	65,415	35.42
Middle states	35,074	27,318	7,756	28.39
Southern states	36,266	11,898	24,368	204.81
Western states	3,410	1,842	1,568	85.12

An exhibit is made in the general table relating to machinery of the number of looms at work upon various classes of goods. Inasmuch as the facts of this character were not collected at the Tenth Census no comparison is possible.

THE GEOGRAPHICAL DISTRIBUTION OF THE INDUSTRY.

The geographical distribution of the cotton manufacturing industry is an interesting study, and it is made especially so at the present time by the fact that during the last ten years a change has been taking place, which, if it should continue, will become highly important. New England has been from the beginning the chief seat of the industry. Fifty years ago, when the census first attempted an exact statement of the number of spindles in each of the states, New England had 70 per cent of all the spinning machinery in the country. In 1840 the several New England states ranked in relative importance in cotton spinning exactly as they do to-day. Massachusetts stood first, followed in order by Rhode Island, New Hampshire, Connecticut, Maine and Vermont. The number of spindles was not taken at the census of 1850, but in 1860 we find New England reporting nearly 74 per cent of all the spindles in the United States; in 1870 this group of states had 77 per cent; in 1880 it had 81 per cent; and according to the present census 76 per cent. During this whole period of fifty years, which has seen an increase from 2,284,631 to more than 14,000,000 spindles, New England has retained an almost unvarying proportion of the spindles, and during the whole time the several states of the group have stood in the same relative rank. Moreover the industry has shown an extraordinary steadiness of concentration in certain regions. More than one-fourth of the cotton spindles in the country (29.61 per cent) are in the two adjoining

counties of Bristol in Massachusetts and Providence in Rhode Island. Lowell and Lawrence in Massachusetts, Manchester and Nashua in New Hampshire, Biddeford and Lewiston in Maine, are also large centers of production; and it is still true that either of these centers is more important than any single city outside of New England, except Cohoes, New York. The greatest concentration has taken place in the city of Fall River, Massachusetts, which now reports 41 establishments, having a capital of more than $32,000,000. The mills of this city are very largely devoted to the production of print cloths, of which they turned out during the census year, 443,043,437 square yards, equivalent to very nearly 600,000,000 running yards, or 12,000,000 pieces.

In 1890 Massachusetts contained 41.05 per cent of the entire number of active spindles in the country as compared with 39.76 per cent in 1880, being the only New England state maintaining its percentage in this respect, the percentage of Maine having declined from 6.53 to 6.24; of New Hampshire, from 8.86 to 8.43; of Vermont, from 0.52 to 0.50; of Rhode Island, from 16.56 to 13.56; of Connecticut (the only state in the east which exhibits a decrease in the number of spindles), from 8.79 to 6.58. In the aggregate, although New England added more than 2,000,000 to the number of its spindles, its percentage of the spinning capacity of the country declined from 81.03 to 76.37. The group percentages vary slightly from the sum of state percentages included by reason of the accumulated value of decimals rejected in the details.

GROWTH IN THE SOUTH.

In considering the geographical distribution of the cotton manufacturing industry the most important act is the extraordinary rate of its growth in the south during the past decade. For a great many years, probably ever since the cultivation of the cotton plant in the South Atlantic states had a beginning, domestic spinning and weaving of coarse cotton fabrics has been a common fact in the household economy of that part of the country. Here and there small factories were established for the production of heavy fabrics. It is only within the period since the close of the civil war that mills have been erected in the south for the purpose of entering the general market of the country with their merchandise, and almost all the progress made in this direction has been effected since 1880. According to the Tenth Census there were in the states south of the District of Columbia only 542,048 spindles. If the whole cotton manufacturing in all these states had been concentrated in one state it would have raised that state to the seventh rank only in point of capacity of production A remarkable development of manufacturing enterprise in the south, based on the nearness of supplies of raw material, which began ten years ago, had no more reasonable field in which to exercise itself than that of cotton spinning. New mills sprang up all over the region, but particularly in the states of North Carolina, South Carolina, and Georgia. The number of establishments in these three states, as reported in 1890, is greater by 75 than in 1880, an increase of nearly 73 per cent; but even this does not adequately express the progress that has been made; for a certain number of antiquated mills which have ceased operation forever cause the apparent growth to be less than the real increase. It may be noted, as illustrating the development of the industry in these states, that the average number of spindles to a mill has also increased nearly 73 per cent. The aggregate number of spindles in 1890 was almost three-fold that reported at the previous census. While the largest absolute increase has taken place in these three states there has been quite as large a proportional increase in other states of the south. The table showing the classified products of mills indicates what progress has been made in occupying markets which were previously in the exclusive possession of northern mills. The sheetings and print cloths of the south are consumed in northern homes and southern yarns are woven on Pennsylvania looms and made into hosiery on New York and Pennsylvania knitting frames. While the demand for coarse fabrics for the clothing of colored laborers is still large and is for the most part met by the local production, the mills are also turning out goods of a finer quality, as is indicated by the table which exhibits the average number of yarn spun. The new mills are for the most part equipped with the latest and most approved machinery. The advantages which the south possesses in nearness to the supply of raw material and in the abundance of comparatively cheap labor are partially offset by certain disadvantages, some of which time and experience will cause to disappear. It can not be doubted that the development of this industry in the cotton-raising states is based upon sound commercial reasons, and that it is destined to continue.

The increase of manufacturing in the middle states has been at a slower rate than in any other part of the country. Substantially three-fifths of the increase has been in the state of New Jersey, and is largely due to the development of the spool-thread industry in the great mills in and near Newark. The industry in Pennsylvania is rather of a weaving than of a spinning character. The contrast between these two states is quite marked when we observe that there are in New Jersey nearly 102 spindles to every loom, and only 31 spindles to a loom in Pennsylvania. In Massachusetts, which is both a spinning and a weaving state, the number is nearly 44 spindles to one loom.

The manufacture of cotton goods in the west, while it exhibits a good rate of growth during the decade, is still too small to call for extended notice.

The future development of this industry, considered geographically, depends upon a great variety of conditions, among which may be mentioned the relative cheapness of transportation of the raw material to the several competing regions; nearness to the market where finished goods are sold; economy of power, whether water power or steam; the supply of labor capable of adapting itself to this branch of industry; and the spirit of the state laws regarding the employment of labor. To these considerations some students of the question would

add that the atmospheric conditions must also be taken into account. It is true that while a humid state of of the atmosphere is favorable to good spinning of cotton, particularly of fine yarns, there are certain regions where the degree of natural humidity is both greater and more uniform than it is elsewhere. Nevertheless, the advantage which the climate of the British Isles possesses in this respect has been overcome by mechanical appliances adopted in the American mills, and there seems to be no reason why, if it should be worth while on other accounts to locate mills where the atmosphere is relatively dry, the same means should not be found effectual to neutralize one of the disadvantages imposed by nature.

EMPLOYÉS AND WAGES.

The average number of employés in the cotton industry during the census year, including officers and clerks, was 221,585, an increase of 46,926, or 26.87 per cent. Nearly the whole of this increase occurred in New England and the southern states, and was almost exactly divided between them. The figures which show the number and wages of officers and clerks have significance only as they complete the statistics which indicate the importance of the industry. The facts presented regarding the number and wages of operatives furnish material for some useful deductions.

It should be remarked here that in the spinning and weaving of cotton a very large proportion of the operatives are nominally employed on piecework. The payment of weavers by the "cut" is well-nigh universal, and a very large number of spinners are paid not by the day or the hour but by the number of spindles under their care. It was considered that if all who are employed according to this system were to be classed as pieceworkers the result would give an incomplete and erroneous view of the average earnings of operatives in cotton mills. Moreover, while these operatives are nominally employed as pieceworkers, their wages are in reality so regulated as to enable them to earn a nearly uniform amount from week to week. Consequently an arbitrary rule was adopted that all pieceworkers whose earnings are limited by the speed of machinery were to be included with those paid a specific amount by the week, the day, or the hour. It is probable that many manufacturers in making their returns failed to transfer to the category of wage earners according to the time employed all who should properly have been included in this class. The number of pieceworkers is therefore too large and that of operatives and skilled laborers earning wages is too small, but whatever error there may be corrects itself, and the final result is not affected.

Before taking up the details of the figures relating to the class of "operatives and skilled labor", a few comparisons may be drawn between the number of persons employed, exclusive of officers and clerks, in 1880 and 1890. The number of adult male employés increased 29,152 and of adult females 22,068, while the number of children decreased 4,888. The change in the relative proportion of these three classes in New England mills is marked; for while the number of men increased 18,228 that of women increased but 10,891, and the number of children decreased 7,539. In the southern states, on the other hand, while the number of men increased somewhat more than that of women, the number of children employed was doubled. The proportion of men, women, and children employed (including officers and clerks) in 1890 and 1880 is exhibited in the following table:

PROPORTION OF MEN, WOMEN, AND CHILDREN EMPLOYED (ALL CLASSES): 1890 AND 1880.

GEOGRAPHICAL DIVISIONS.	MEN. (Percentage of all employés.)		WOMEN. (Percentage of all employés.)		CHILDREN. (Percentage of all employés.)	
	1890	1880	1890	1880	1890	1880
United States	41.28	35.36	48.15	48.41	10.57	16.23
New England states	43.75	36.87	49.42	49.20	6.83	13.93
Middle states	37.32	32.29	50.25	46.49	12.43	21.22
Southern states	35.66	30.20	40.62	45.32	23.72	24.48
Western states	32.28	27.30	54.87	51.35	12.85	21.35

The most natural and obvious comparison between the rates of wages in 1880 and 1890 is the result of the general average. According to the census of 1880 there were employed in the cotton mills of the United States 172,544 hands (exclusive of officers and clerks), and the total wages paid to them amounted to $42,040,510. This was an average yearly earning of $243.65. In 1890 the same industry gave employment to 218,876 hands (officers and clerks excluded), and paid them $66,024,538 for their service, an annual average for each person of $301.65. This comparison, taken by itself and without explanation, would naturally be supposed to signify that the average rate of wages throughout the country in this industry has increased in the proportion indicated, that is, by an actual average addition of $58 to the wages of each person employed, more than $1 a week, or by 23.80 per cent. This deduction is not warranted by the facts. It is undeniable that wages have increased. This is proved beyond question by the wage tables of the mills. A glance at the table showing the proportion of men, women,

and children furnishes an abundant explanation of the reason why the apparent increase is greater than the real. It will be seen that the proportion of women employed in New England factories remained almost stationary, the difference between the two periods being only 0.22. The proportion of men increased 6.88 and that of children decreased 7.10. It thus appears that there is a decrease in the class of laborers earning the lowest rate of wages and an increase in the class earning the highest rate.

Turning attention now exclusively to the operatives and skilled laborers, excluding pieceworkers, we find that the sum of $30,761,249 was paid in wages during the census year to an average number of 80,735 adult males, being an average yearly earning of $381.02; $26,019,812 to 95,733 adult females, an average of $271.80, and $2,913,283 to 22,433 children, an average of $129.87 for the year. On the basis of 50 weeks running in each year this is an average weekly wage of $7.62 for men, $5.44 for women, and $2.60 for children. Although, counting each establishment as a unit, the average number of weeks during which all the cotton mills of the country were running appears to have been but slightly more than 49, yet, as a matter of history, the important mills all through the country were running almost continuously, and the basis of 50 weeks is under rather than over the truth. Bringing together the figures for each of the geographical divisions, we have the following exhibit:

GROSS WAGES AND AVERAGE EARNINGS PER YEAR AND PER WEEK OF SKILLED EMPLOYÉS, EXCLUDING PIECEWORKERS, 1890.

GEOGRAPHICAL DIVISIONS.	MEN.				WOMEN.				CHILDREN.			
	Average number.	Total wages.	Average earnings.		Average number.	Total wages.	Average earnings.		Average number.	Total wages.	Average earnings.	
			Yearly.	Weekly.			Yearly.	Weekly.			Yearly.	Weekly.
United States	80,735	$30,761,249	$381.02	$7.62	95,733	$26,019,812	$271.80	$5.44	22,433	$2,913,283	$129.87	$2.60
New England states	58,299	22,735,881	390.85	7.82	65,900	18,906,902	286.90	5.74	9,709	1,549,697	158.63	3.17
Middle states	10,555	4,582,850	434.19	8.68	14,567	4,193,627	287.89	5.76	3,971	536,363	135.07	2.70
Southern states	10,930	3,002,215	274.68	5.49	13,560	2,516,447	185.58	3.71	8,262	773,729	93.65	1.87
Western states	951	390,303	410.41	8.21	1,706	402,836	236.13	4.72	431	53,494	124.12	2.48

From these figures it appears that the highest average wages of both men and women are paid in the middle states, and the highest to children in New England, while the lowest wages to each of the three classes are paid in the southern states. An inspection of the table exhibiting the above facts by states shows that for all classes of working people the rates are more uniform throughout the New England states than in any other part of the country, a circumstance which will cause no surprise to those who know how highly organized factory labor is in the eastern states.

The bearing of the facts relative to actual rates of wages must necessarily be considered in connection with earnings in other branches of industry. In one respect the tables showing the number of employés, the amount of wages, and the number of spindles, when brought together, furnish the material for some useful deductions by manufacturers. It appears from the following table, first, that the number of spindles to each hand employed, taking the country at large, has increased in ten years from 61.74 to 64.82; secondly, that the cost of labor per spindle increased in the same time from $3.95 a year to $4.65. Furthermore, it appears that the number of spindles to each employé is largest in New England, as it was ten years ago, and that the cost of labor per spindle is also lowest in the same geographical division. This, of course, does not signify that wages are lowest in New England, for that is not true. No doubt both the fact now under notice and that just mentioned, which may be put in another form, namely, that fewer hands are required to each 1,000 spindles than elsewhere in the country, are due in some degree to the fact which has already been referred to under the head of "Cost of Plant", namely, that mills spinning and weaving coarse goods require more machinery other than spindles, and consequently more hands than fine mills. Indeed, something like a direct proportion may be established between the average number of yarn spun, for example, in Maine, Massachusetts, and South Carolina, and the number of spindles to each hand, as exhibited in the following table. The labor cost per spindle is complicated by differences in rates of wages and in hours of operation per day. The figures in the following table invite analysis by those who are curious to establish the relationships, and estimate the value of the several elements entering into questions of wages. In some special cases there are local variations which are to be explained on other grounds than any yet mentioned. The immense difference between the showing of New Jersey and that of Pennsylvania is to be ascribed chiefly to the fact that in New Jersey the dominating mills are those for the manufacture of spool cotton thread, while in Pennsylvania the number of spindles is comparatively small and that of looms abnormally large.

NUMBER OF SPINDLES TO EACH EMPLOYE, AND THE AMOUNT PAID FOR LABOR TO EACH SPINDLE: 1890 AND 1880.

STATES.		Average number of employés. (a)	Total wages. (a)	Spindles.	Number of spindles to each employé.	Labor cost per spindle.
The United States	1890	218,876	$66,024,538	14,188,103	64.82	$4.65
	1880	172,544	42,040,510	10,653,435	61.74	3.95
New England states	1890	147,359	47,832,943	10,836,155	73.54	4.41
	1880	125,779	32,170,861	8,632,087	68.63	3.73
Maine	1890	13,912	4,213,523	885,762	63.67	4.76
	1880	11,759	2,936,640	695,924	59.18	4.22
New Hampshire	1890	19,383	6,242,204	1,195,643	61.69	5.22
	1880	16,395	4,290,969	944,053	57.58	4.55
Vermont	1890	724	204,538	71,591	98.88	2.86
	1880	721	161,748	55,081	76.40	2.94
Massachusetts	1890	75,544	25,118,365	5,824,518	77.10	4.31
	1880	61,246	15,828,571	4,236,084	69.17	3.74
Rhode Island	1890	24,576	7,814,767	1,924,486	78.31	4.06
	1880	21,174	5,320,303	1,764,569	83.34	3.02
Connecticut	1890	13,220	4,239,546	934,155	70.66	4.54
	1880	14,484	3,632,639	936,376	64.65	3.88
Middle states	1890	31,841	10,184,589	1,633,722	51.31	6.23
	1880	28,118	6,613,260	1,391,164	49.48	4.75
New York	1890	8,316	2,448,031	606,796	72.97	4.03
	1880	9,227	1,994,755	561,658	60.87	3.55
New Jersey	1890	5,632	1,984,659	374,442	66.48	5.30
	1880	4,179	1,156,961	232,221	55.57	4.98
Pennsylvania	1890	12,666	4,388,017	439,638	34.71	9.98
	1880	9,879	2,502,683	425,391	43.06	5.88
Delaware	1890	971	308,346	53,916	55.53	5.72
	1880	791	192,727	46,188	58.39	4.17
Maryland	1890	4,256	1,055,526	158,930	37.34	6.64
	1880	4,042	766,129	125,706	31.10	6.09
Southern states	1890	36,415	7,116,865	1,554,000	42.67	4.58
	1880	16,317	2,750,986	542,048	33.22	5.08
Virginia	1890	1,990	373,993	94,294	47.38	3.97
	1880	1,085	169,789	44,340	40.87	3.83
North Carolina	1890	8,515	1,475,932	337,786	39.67	4.37
	1880	3,232	439,659	92,385	28.58	4.76
South Carolina	1890	8,071	1,510,494	332,784	41.23	4.54
	1880	2,018	380,844	82,334	40.80	4.63
Georgia	1890	10,314	2,167,636	445,452	43.19	4.86
	1880	6,215	1,135,184	198,656	31.96	5.71
Alabama	1890	2,088	402,608	79,234	37.95	5.09
	1880	1,448	239,998	49,432	34.14	4.86
Mississippi	1890	1,154	263,997	57,004	49.40	4.63
	1880	695	133,214	18,568	26.72	7.17
Kentucky	1890	818	170,573	42,942	52.50	3.97
	1880	348	63,850	9,022	25.93	7.08
Tennessee	1890	2,124	444,573	97,524	45.92	4.56
	1880	1,015	161,071	35,736	35.21	4.51
All other states	1890	1,341	307,359	66,980	49.95	4.59
	1880	261	27,377	11,575	44.35	2.37
Western states	1890	3,261	890,141	164,226	50.36	5.42
	1880	2,330	505,403	88,136	37.83	5.73
Ohio	1890	554	161,613	16,560	29.89	9.76
	1880	481	104,560	13,328	27.71	7.84
Indiana	1890	1,309	310,342	74,604	56.99	4.16
	1880	708	162,829	33,396	47.17	4.88
Illinois	1890	430	123,986	21,800	50.70	5.69
	1880	.....	.....	.....	.....	.....
Missouri	1890	.....	.....	.....	.....	.....
	1880	508	97,680	19,312	38.02	5.06
Wisconsin	1890	490	131,170	32,592	66.51	4.02
	1880	.....	.....	.....	.....	.....
All other states	1890	478	163,030	18,670	39.06	8.73
	1880	633	140,394	22,100	34.91	6.35

a Excludes officers or firm members, clerks or salesmen, and their salaries.

MATERIALS USED.

COTTON.

The total quantity of cotton consumed in the establishments reported was 2,261,600 bales, of an aggregate weight of 1,117,945,776 pounds. This includes foreign and sea island with the ordinary varieties of classified cotton. Inasmuch as the publication of a classified statement by states of the cotton consumed would result in the disclosure of certain facts regarding individual establishments, the totals only of the quantities and values of the several varieties of cotton can be here presented:

KINDS OF COTTON.	Bales.	Pounds.	Cost.
Total	2,261,600	1,117,945,776	$117,392,576
Sea island	21,283	7,891,915	1,980,983
Other domestic	2,231,385	1,103,492,910	114,337,802
Egyptian	8,932	6,560,951	1,073,791

The amount paid for cotton is by far the largest item in the expenditures of a cotton mill. The cost of that which is classed as "Other domestic" is 42.67 per cent of the gross value of products.

The average weight of bales of domestic cotton consumed in cotton mills during the census year was 494 pounds, as compared with 478 pounds in 1880. The commercial report of the weight of bales of the whole American crop in 1890 is 496.13 pounds. The increase in the consumption of cotton in the cotton mills of the United States during the ten years, including sea island and foreign cotton, is shown by the following figures:

YEARS.	Bales.	Pounds.
1889-1890	2,261,600	1,117,945,776
1879-1880	1,570,344	750,343,981
Increase in amount	691,256	367,601,795
Increase per cent	44.02	48.99

The total consumption of cotton in the country, including the consumption in woolen mills, for each of the eleven years ending with 1890 is exhibited in the following statement, taken from the accepted commercial reports, except that for the year 1890 the census figures are substituted. Owing to the variation in the weight of bales the amount is stated in pounds.

YEAR.	Pounds.	YEAR.	Pounds.
1880	792,400,000	1886	911,200,000
1881	847,200,000	1887	969,200,000
1882	878,800,000	1888	1,012,000,000
1883	950,000,000	1889	1,074,000,000
1884	897,600,000	1890	1,193,374,641
1885	763,600,000		

The table following presents the facts relative to the consumption of "other domestic" cotton in each of the states and by geographical divisions as ascertained at the Eleventh Census. A comparison is made with the corresponding figures obtained at the Tenth Census. It should be noted that the statistics of 1880 make no distinction between the several kinds of cotton, and consequently the comparison is not strictly between corresponding facts; but the error is a very small one, both because the use of foreign and sea island cotton is so small, comparatively, and because that use is, except in New Jersey, in states where the consumption of ordinary cotton is so great that the percentage can be affected but slightly.

QUANTITY AND COST OF COTTON CONSUMED, BY STATES: 1890 AND 1880.

STATES AND TERRITORIES.	1890							1880			
	Sea island and foreign.			Other domestic.				All cotton.			
	Bales.	Pounds.	Cost.	Bales.	Pounds.	Cost.	Cost per pound.	Bales.	Pounds.	Cost.	Cost per pound.
The United States	30,215	14,452,866	$3,054,774	2,231,385	1,103,492,910	$114,337,802	$0.1036	1,570,344	750,343,981	$86,945,725	$0.1159
New England states	20,321	9,899,494	2,065,270	1,405,637	794,792,220	74,683,860	0.1060	1,129,498	541,373,880	63,169,434	0.1167
Maine				132,504	65,717,252	7,053,168	0.1073	112,381	54,185,061	6,234,901	0.1151
New Hampshire				214,034	107,319,124	11,203,742	0.1044	157,673	76,386,499	8,629,063	0.1130
Vermont				8,954	4,647,889	498,348	0.1072	7,404	3,562,088	458,607	0.1287
Massachusetts	6,747	3,228,105	663,420	765,773	383,539,221	40,206,887	0.1048	574,857	273,718,889	31,107,154	0.1136
Rhode Island	6,733	3,426,367	700,925	186,558	94,555,788	10,446,155	0.1105	167,480	81,137,172	10,457,770	0.1289
Connecticut	6,841	3,245,022	700,925	97,814	49,012,946	5,275,560	0.1076	109,703	52,384,171	6,281,939	0.1199
Middle states	9,894	4,553,372	989,504	251,260	123,630,916	12,917,244	0.1045	228,729	109,321,428	13,258,526	0.1213
New York	653	483,368	78,560	78,171	39,038,689	4,192,105	0.1074	64,614	31,656,594	3,981,106	0.1258
New Jersey	9,241	4,070,004	910,944	16,482	8,231,147	905,524	0.1100	21,069	9,950,609	1,319,422	0.1326
Pennsylvania				92,705	44,629,588	4,371,093	0.0980	83,997	40,311,809	4,749,428	0.1178
Delaware				8,876	4,465,825	475,490	0.1065	7,512	3,236,184	427,855	0.1322
Maryland				55,026	27,265,667	2,972,432	0.1090	51,537	24,166,232	2,780,715	0.1151
Southern states				526,856	250,837,646	24,508,776	0.0977	182,349	84,528,757	8,890,408	0.1052
Virginia				22,731	10,616,206	1,080,773	0.1018	11,461	5,087,519	601,796	0.1183
North Carolina				114,371	53,546,289	5,396,974	0.1008	27,642	11,832,641	1,125,984	0.0952
South Carolina				133,342	64,000,600	6,242,598	0.0975	33,624	15,601,005	1,723,187	0.1105
Georgia				145,859	69,139,410	6,663,560	0.0964	71,389	33,757,199	3,591,554	0.1064
Florida								350	166,250	16,000	0.0962
Alabama				29,962	14,726,454	1,372,058	0.0932	14,702	7,271,791	729,202	0.1003
Louisiana								1,358	644,000	68,018	0.1056
Mississippi				17,366	8,449,834	793,600	0.0939	6,411	2,881,853	301,226	0.1045
Texas								246	119,986	11,280	0.0940
Kentucky				11,980	5,751,305	554,206	0.0964	4,050	1,882,234	188,856	0.1003
Arkansas								680	340,000	25,000	0.0735
Tennessee				33,114	15,779,360	1,554,851	0.0985	10,436	4,944,279	508,305	0.1028
All other states				18,131	8,828,188	850,156	0.0963				
Western states				47,632	24,232,128	2,227,922	0.0919	29,768	15,119,916	1,627,357	0.1076
Ohio				11,023	5,840,078	383,556	a0.0657	5,323	2,506,182	258,198	0.1030
Missouri								6,399	3,082,132	336,984	0.1093
Indiana				16,306	8,240,434	798,178	0.0969	11,558	6,364,887	679,911	0.1068
Michigan								606	300,000	36,000	0.1200
Illinois				6,405	3,267,188	312,621	0.0957	2,261	1,099,130	110,969	0.1010
Minnesota								400	200,000	22,000	0.1100
Wisconsin				6,924	3,470,388	359,117	0.1035	3,173	1,541,797	180,072	0.1168
Utah								54	25,788	3,223	0.1250
All other states				6,974	3,414,040	374,450	0.1097				

a The low cost per pound of cotton reported from the state of Ohio is caused by the inclusion of an establishment using a large quantity of "linter", or low grade cotton.

SEA ISLAND COTTON.

The consumption of sea island cotton during the census year is reported at 21,283 bales. This is much the largest amount ever consumed in a single year, and it exceeds the commercial reports by more than 2,000 bales, or nearly 10 per cent. There is, nevertheless, reason to believe that if there is an error in the present statement the correction required is an increase rather than a diminution of the amount. While a detailed statement of the consumption of this staple can not be made, for reasons already given, it may be said that mills in only four states return sea island cotton as entering into their raw materials—Connecticut, Massachusetts, New Jersey, and Rhode Island; and in these states the use of it is confined almost wholly to the makers of spool thread.

EGYPTIAN COTTON.

The amount of Egyptian cotton used in American mills is now reported by the census for the first time. For the census year 1890 it was 6,560,951 pounds. The return by the Bureau of Statistics of the Treasury Department of the imports of foreign cotton entering into consumption during the fiscal year 1889-1890 amounted to 8,407,160 pounds. It is not improbable that some users of foreign cotton failed to return the amount separately, but included the whole in their return of domestic. The use of Egyptian cotton in spinning fine yarns is increasing. The following table shows the amount of cotton imported from abroad and entering into consumption, together with the value of the same, as reported by the bureau of statistics for each of the ten years ended with 1890:

IMPORTS OF COTTON.

YEARS.	Pounds.	Value.
1881	4,440,996	$757,352
1882	4,339,776	789,944
1883	4,123,058	802,248
1884	7,093,915	1,382,514
1885	5,115,705	954,760
1886	5,072,359	672,508
1887	4,024,531	533,928
1888	5,497,544	744,795
1889	7,983,699	1,195,368
1890	8,407,160	1,393,071

FIBERS OTHER THAN COTTON.

The consumption of raw fibers other than cotton, as reported in the tables of materials, may be treated as unimportant. The use of such material is reported in an exceedingly small number of establishments, and both the quantity and value are toc insignificant to be noticed at length. A similar remark may be made as to the yarns of fiber other than cotton, although the use of such materials was rather more important than the consumption of the raw fibers.

YARN PURCHASED.

The items representing amount and cost of cotton yarn not made in the mill where it is finally worked into fabrics, are worthy of more attention. As is well known, the spinning and the weaving industries are almost completely separated in Great Britain, where cotton manufacturing has reached its highest and largest development. In the United States the two industries are usually carried on by the same corporation and under one roof. The census returns do not give countenance to the theory, held by some persons, that a divorce of the two processes is impending. It is true there has been a considerable increase in the number of mills devoted exclusively to spinning, but no such increase appears in the number of weaving mills in which no spinning is done. A critical inspection of the returns shows what can not be exhibited in tabular statements, namely, that the users of yarn not spun by themselves are of three classes: (1) establishments which both spin and weave, but which spin too little for their loom capacity; (2) establishments which purchase fine yarns to be converted into sewing thread; and (3) establishments which weave only. These last are located mostly in the state of Pennsylvania, where a very considerable proportion of all the weaving of intricate and fancy fabrics is done. It will be seen by an examination of the table that Pennsylvania, with 3.10 per cent of the spindles in the country and 4.30 per cent of the looms, consumed 45.25 per cent of all the "yarn not made in mill" reported as material consumed.

OTHER MATERIALS.

The other items entering into the list of materials consumed call for but a single remark. With one exception they are expenditures upon the machinery which drives the mills. The exception is starch, a small amount of which is required to prepare warps for the loom. The weight of starch used in all the cotton mills in the country was but 27,448,792 pounds, while the weight of piece goods produced was 758,903,844 pounds. In other words, the total addition of weight to woven goods by the addition of starch was but 3.62 per cent, and this addition was merely that which is necessary to render the warp threads smooth and to give them the additional strength called for by the strain and wear of weaving.

DUPLICATIONS.

Attention should be directed to one fact relating to the table showing materials used, namely, that there is a certain duplication in some items, to be eliminated if any attempt is made to obtain the net amount and value of materials. It will be evident at a glance that substantially the whole of the "cotton yarn not made in mill" is a duplication as being the product of some of these very mills out of the cotton here reported. The total amount of yarn "not made in mill" is 49,457,669 pounds, valued at $11,363,218. Of this amount a total of 677,954 pounds, valued at $509,682, represents yarns of wool, flax, silk, jute, hemp, and other fibers, spun in other mills, and consumed in the manufacture of goods which are composed so largely of cotton that the makers of them do not class

them even as mixed goods. Although purchased cotton yarns used in weaving mills can not be traced to the spindles from which they came, it is reasonable to assume that most of the quantity coming under this head was the product of American mills and appears under the head of "Yarn" in the table of products. The importation of cotton yarns from abroad during the year ended June 30, 1890, was 1,674,262 pounds, valued at $879,326. What part of this quantity was yarn for doubling and twisting in sewing thread mills which do not spin all their own yarn, and what part of it was used in the weaving of mixed goods, can not be ascertained. The item of waste of other mills is also a duplication in the table of materials, but it calls for no explanation. In the table of products a part of the "yarn" item reappears in woven goods, particularly in upholstery goods, and in sewing cotton, while the rest was transferred to the woolen and silk industries or was consumed in the electrical and other arts. The whole of the item of waste reappears in batting, twine, rope, and "all other products".

PRODUCTS.

WOVEN GOODS.

The products of the cotton mills of the United States may be classified under three heads: woven goods, yarns and thread, and miscellaneous products. The value of woven goods produced by the establishments reporting was $198,741,200, which was 74.16 per cent of the total; of warps, yarn, and sewing thread, $44,885,096, or 16.75 per cent; of all other products, $24,355,428, or 9.09 per cent. An examination of the tables in detail brings out the fact, which experience confirms, that an immense proportion of the goods consumed in the country is coarse and medium fabrics which are most durable and substantial for every-day wear. In the ascertainment of the quantities of the several classes of woven goods manufactured, the square yard was taken as the universal unit for all branches of the textile industry. The product of all the mills was reduced to this uniform standard. The advantage of this rule for statistical purposes is too obvious to require either explanation or argument, and the uselessness of statements showing the number of running yards of fabrics varying from the width of print cloths to that of broad sheetings is equally apparent. First in importance, both in quantity and value, among woven goods are brown and bleached sheetings and shirtings, which amounted to 962,238,062 square yards, valued at $55,193,439, averaging 5.74 cents a square yard in value at the mill. This is not only the most extensive but the most widely distributed branch of the cotton industry, while the goods themselves are those which are in most universal use, and which are adapted to the largest variety of purposes in household economy. The amount of print cloths, classed as "plain cloths for printing or converting" is but slightly below that of sheetings and shirtings, being 955,294,320 square yards; but the value, $43,550,174, is far below that of the leading class. The average value is 4.56 cents a square yard. The largest part, by far, of this product is printed, and becomes the calico of commerce. The census accounts for the printing of 722,257,451 square yards, or 75.61 per cent of the whole; but the goods printed were not drawn exclusively from the fabrics technically classed as print cloths. The relative importance of most of the other classes of woven goods calls for no detailed remarks, particularly as the materials do not exist for a comparison of the amounts produced in former years.

The classification of "fine and fancy woven fabrics" draws attention to the extent to which fine goods are now produced in the country, and gives a means of ascertaining the amount of such goods consumed. We find a total amount of 127,373,179 square yards, valued at $12,545,929, produced in domestic mills, which are thus returned at an average value of 9.85 cents a square yard. Among fine goods should also be classed a small, but not ascertainable, part of the ginghams manufactured in New England and Pennsylvania mills. Neglecting this small item we find that of the 3,002,761,037 square yards of woven goods produced in the country 4.24 per cent only in amount is classed as "fine or fancy woven", while in value these goods represent but 6.31 per cent of the total. During the fiscal year ended June 30, 1890, the entries at the custom houses of the country for consumption (including both direct entries and withdrawn from warehouse) of cotton cloth exceeding 200 threads to the square inch, counting warp and filling, amounted to 10,734,281 square yards, valued at $1,559,889. From the comparative insignificance of these numbers it appears that the proportion of fine woven goods is still less than 5 per cent of the total quantity of cotton cloth consumed and barely 7 per cent of the value. It also appears that while more than nine-tenths of the finer goods consumed are produced in the country, the average foreign value of those imported is fully one-half greater to the square yard than the value at the mill of the goods produced in this country which are classed as fine. This illustrates what experience teaches, that the finest goods used in the United States are still imported from abroad.

The manufacture of upholstery goods, which had a considerable development in the last decade, is chiefly remarkable for its localization. Of the whole value, $2,070,239, of these goods reported for the entire country, Pennsylvania returns all except a value of $162,900, divided between Massachusetts and New York, with a small amount in Wisconsin.

YARN MILLS.

The item of "yarns" has already been partially discussed under the head of materials, that is to say, so far as these yarns have been consumed in other mills classified as cotton, but there has been a large production of yarns which have become the material for other industries. They have been used as warps for worsted dress goods, also by the manufacturers of hosiery and knit goods, in the production of elastic fabrics, and for the covering of electric wires, an industry which has had an enormous development during recent years. The erection of mills for the production of yarn for these collateral uses is the leading feature in the extension of yarn production as a separate industry during the decade under review. It is comparatively easy to trace to their ultimate use most of the yarns which were not woven in the mills where they were produced. The establishments here reported produced 166,397,003 pounds of yarn for sale, and the importation during the year was 1,674,262 pounds, a total of 168,071,265 pounds. Of this amount 48,779,715 pounds were consumed in other cotton mills here reported, 83,624,868 pounds were consumed in woolen and hosiery industries, 4,338,789 pounds in silk industry, and 1,474,514 pounds in elastic fabric factories, an aggregate of 138,217,886 pounds, leaving only 29,853,379 pounds to be accounted for in the electrical and other industries not here mentioned.

SEWING COTTON—HISTORY OF THE INDUSTRY.

One of the most important branches of the cotton manufacture is the manufacture of sewing cotton. The quantity returned during the census year was 13,868,309 pounds, having an aggregate value of $11,637,500. Unfortunately, no trustworthy statistics are in existence showing the amount of production at any former period, except that in the census of 1870 the production of 11,560,241 dozens of spool cotton is reported; but there is no measure of comparison with the quantity now reported. This industry is one which has been established in the country in the face of much discouragement and of repeated failure. A century ago linen fabrics were much more common than fabrics of cotton, and linen thread was the ordinary material for sewing. When cotton thread was first introduced, it was a coarse and inferior article made of ordinary cotton, consisting of three cords twisted together, and was put up in skeins or in balls. There can be no doubt that cotton thread of this class was an early product of American spinning mills, although no record of its manufacture is preserved. The first introduction into this country of cotton thread upon wooden spools was in 1820, when the firm of John Clark, jr., & Co., founded at Glasgow, Scotland, in 1817, established an agency for the sale of such thread in New York. During the next twenty years other Scotch firms entered the market. The thread was of much better quality than that previously in use. It was composed of six strands of yarn, two of which were first twisted together in one direction, and then three of the double strands were twisted in the opposite direction. The result was a thread having much greater stability of twist than was possible for the earlier three-cord variety. Notwithstanding its superiority and the attractive form in which it was put up, which made it at once a favorite in the market, it was a long time before its position was so assured as to induce domestic manufacturers to undertake to produce it. There were several establishments in the United States which, in the years from 1840 to 1850, attempted to twist and spool their own thread for sewing purposes, but their efforts were confined to the production of three-cord thread, inferior in strength and finish, and the imperfections of their merchandise were covered by dyeing them in cheap colors. It was suited to some uses. For sewing thin and open woven fabrics, where the strain upon its strength and upon the stability of its twist was not too great, it answered the purpose. Not long before 1850 the Sagamore Company, of Portsmouth, New Hampshire, undertook to manufacture six-cord thread equal in quality to the standard imported thread, but the skill necessary for carding and spinning sea island cotton had not been attained, nor had the managers a mastery of the difficult and intricate processes of making six-cord thread. The enterprise was a failure and was abandoned. A few years later, about 1855, there was introduced into the country from England a three-cord thread known as a "glacé", or finished thread. Its polished surface, produced by mechanical means, made it really superior to any three-cord thread previously in the market, though still greatly inferior to the six-cord thread. The improvement drew the attention of such of the three-cord spool cotton manufacturers as had survived the discouragement attendant upon their efforts to compete with better goods. The first corporation that engaged in the enterprise of manufacturing glazed thread was the Willington Thread Company, of Willington, Connecticut, a small concern having less than a thousand spinning spindles. This company had already been in the business since 1843 or 1844. The competition of this company was, curiously enough, not with the strong and well made six-cord thread which was sold, but with the cheap and poor thread which was given, or "thrown in", and it finally made a breach in the custom of "throwing in" a spool of cotton with the dress pattern. The process of finishing the thread was patented and the Willington Company was licensed to make use of it. About this time the Willimantic Linen Company, of Willimantic, Connecticut, which had been engaged in the manufacture of coarse, unbleached linen fabrics and shoe thread, finding the business unsatisfactory, turned its attention to the production of sewing cotton, and secured all the rights under the patent for glazing thread except the rights under license held by the Willington Company. A year or two later the Willimantic Linen Company, which retained and still retains its original name, although it finally ceased the manufacture of linen when it began the manufacture of spool cotton,

purchased the plant of the Willington Thread Company. Before 1860 other finishing processes were invented and put in use by manufacturers in competition with the Willimantic Company. Glazed cotton was manufactured by the firm of Green & Daniels, of Pawtucket, Rhode Island, and by several other concerns of less note at Pawtucket and Fall River. At the time of the beginning of the civil war a substantial industry in this branch of spool cotton had been established. In 1860 Mr. Timothy Merrick, who had been manager of the Willington Mill, and later had been employed by the Willimantic Company, formed a partnership for the manufacture of "satin finish" thread, which subsequently grew into the Merrick Thread Company. The civil war gave a great impetus to the home manufacture of spool thread, both by the greatly increased demand and by the heavy duties laid on the imported article. Another influence was now operating to compel American manufacturers to make a fresh effort in the direction of the production of six-cord thread. The sewing machine had been invented. The three-cord thread of the time was neither strong enough nor in other ways good enough for machine use. The alternative was presented of supplying that which the change in the market demanded or of retiring from business. At the same time the foreign manufacturers who had obtained a reputation in the American market perceived that under the high duties upon manufactures it would be cheaper for them to produce their wares in the United States than to import them. In some cases they began by importing yarn spun in England to be twisted and spooled here; in other cases they introduced spinning at once. The period between 1860 and 1870 was one of not a little discouragement to the purely American manufacturer of six-cord thread. The chief experimenters were, besides the Willimantic Linen Company, the Merrick Thread Company, and the firm of Green & Daniels, already mentioned, the Hadley Company, of Holyoke, Massachusetts, and the Williston Mills, of Easthampton, Massachusetts. Experience shows that the users of sewing cotton are extremely conservative. It is difficult to persuade them to try a new make of thread when they are satisfied with that which they have been using. The obstacles encountered by manufacturers induced the most of them to abandon a hopeless struggle. Nevertheless some of them persevered, but of them all only the Willimantic Linen Company and the Merrick Thread Company succeeded in producing an article equal in all respects to the foreign brands, and finally established a position and a reputation. Meanwhile, three great British makers of thread transferred the production of their supply for the American market to this country. The first such venture was that of the Clark Thread Company, whose mills were erected at Newark, New Jersey and began operation in 1865. A little later the firm of J. & P. Coats, of Paisley, Scotland, established the manufacturing plant at Pawtucket, Rhode Island, known as the Conant Thread Company. Subsequently, in 1883, John Clark, jr., & Co., the first company to introduce six-cord thread into this country, erected the mills of the Clark Mile-end Cotton Company at Kearney, New Jersey. This completes the list of the large manufacturers of sewing cotton operating in the United States before 1890.

STATISTICS FOR 1890.

The following table gives the important facts relating to the sewing thread industry as ascertained at the Eleventh Census:

MANUFACTURE OF SEWING COTTON: 1890.

Number of establishments reporting product	34
Capital	$27,787,196
Product (13,868,309 pounds)	$11,637,500
Number of spindles employed	679,484

EMPLOYÉS AND WAGES.

EMPLOYÉS AND WAGES.	Total.	Men.	Women.	Children.
Average number of employés	9,220	2,905	5,465	850
Total wages	$3,500,516	$1,571,278	$1,787,243	$141,995
Average annual earnings	$379.67	$540.89	$327.03	$167.05
Average weekly earnings (50 weeks in year).	$7.59	$10.82	$6.54	$3.34

PRINCIPAL MATERIALS USED.

KINDS OF COTTON.	Pounds.	Cost.
Total cotton consumed	21,272,349	$4,412,315
Sea island	7,026,334	1,780,186
Other domestic	7,561,910	863,102
Egyptian	4,011,445	654,226
Yarn purchased	2,672,660	1,114,801

An examination of these figures reveals some interesting facts. In the first place, it will be noticed that the average wages paid are much higher than in the cotton industry generally, and higher than those in the geographical divisions where wages are highest. Thus the average weekly wages of men, based on a year of 50 weeks, are $10.82 as compared with $8.68 for all cotton manufactures in the middle states, where the rate is highest. The average of women is $6.54 as compared with $5.76 for all women employed in cotton mills in the same section; and children's wages are $3.34 a week as compared with $3.17 in New England, where children receive the highest rates. Again, it may be observed that nearly all the sea island cotton and nearly two-thirds of the Egyptian consumed in the country are accounted for by the sewing cotton manufacture directly, while most of the remainder of both varieties is no doubt to be traced in the yarn purchased. In this last mentioned category, nevertheless, is to be found a considerable part of the imported yarn. There is a striking difference between the sewing cotton manufacture and the manufacture of cotton generally in the relations between cost of cotton, cost of labor, and value of products. Whereas, as shown on page 167, the cost of cotton represents 43.81 per cent of the value of products, it accounts for only 37.91 per cent of the selling value of spool cotton, although the average cost per pound of the cotton used is much higher than the price of ordinary cotton. This difference is partially accounted for by the large expenditure necessary for preparing the thread for market in attractive form. Labor, also, is not only more highly paid than in ordinary spinning mills, but labor as a whole forms 30.08 per cent of the total selling value of the product as against 25.93 per cent of the value of all cotton products. The difference, however, is not so marked when we compare the percentage of labor cost in sewing thread with the general returns for New England and the middle states, where most of the factories here under examination are located.

DYEING, BLEACHING, AND FINISHING.

The table which gives the facts relative to bleaching, dyeing, and printing cotton goods in spinning and weaving establishments is, in itself, an incomplete exhibit. In order to ascertain what part of the spun and woven product of the country was subjected to bleaching or coloring processes before entering into consumption it is necessary to include the operations of establishments exclusively devoted to these processes with those of establishments which finish their own goods. But the returns as they stand are interesting as showing the absence in this country of the specialization of industries that has been effected abroad. It is well known that in Europe spinning, weaving, bleaching, dyeing, and printing are five separate and distinct industries, any two of which are rarely carried on in the same establishment. While there are to be found in this country establishments in which but one of these industries is carried on, yet, as is remarked elsewhere, the ordinary custom is to combine two or more of them, and there are great corporations, some of the largest in the country, which perform all five of the processes. Indeed, it appears that more than one-fourth of all the dyeing and finishing of cotton goods was performed in mills operating spindles or looms, or both. The general table showing the amount and value of the processes as performed in cotton mills is useful only in completing the exhibits of these mills. The figures themselves furnish the basis for no important conclusions; but in combination with the returns obtained by Special Agent Peter T. Wood, "Dyeing and finishing textiles", they show the form in which goods reached the market.

It appears that there were produced in the United States during the year 955,294,320 square yards of "plain cloths for printing and converting", in other words, of "print cloths". There were printed in cotton mills 142,590,083 square yards, and in printing mills 579,667,368 square yards, a total of 722,257,451 square yards. Of these goods, which were not printed, and of other plain goods, 40,338,722 square yards were dyed in cotton mills, and 446,496,822 square yards were dyed in dyehouses, a total of 486,835,544 square yards of dyed cloth. In cotton mills 65,540,307 square yards and in bleacheries 454,357,758 square yards of cloth were bleached, a total of 519,898,065 square yards. The dyeing of yarn, 90,792,931 pounds in spinning mills and 48,762,759 pounds in dyehouses, 139,555,690 pounds in all, reappears for the most part in the ginghams, ticks, denims, stripes, and upholstery goods, though some of it represents colored sewing thread and yarn consumed in other ways than by weaving. We have this rough statement of the total production of cloth and of the amount bleached, dyed in the piece or the yarn, and printed:

	SQUARE YARDS.
Total production of woven goods	3,002,761,037
Printed	722,257,451
Dyed in the piece	486,835,544
Dyed in the yarn	436,118,141
Bleached	519,898,065
Total finished	2,165,109,201
Entered into consumption "in the gray"	837,651,836

In obtaining the facts relative to finishing processes, both in cotton mills and in separate establishments, the rule was adopted of obtaining the additional value given to goods by subjecting them to these processes. Thus a duplication of material and product, which is inevitable in the case of many manufacturing industries, was avoided, and an error is escaped which stands as a pitfall for the unwary when one attempts to ascertain the percentage of labor cost in a given product.

FINENESS OF GOODS—AVERAGE NUMBER OF YARN.

It is remarked, in that section of this report which refers to the products of manufacture, that by far the largest part of the goods turned out by the cotton mills of the country are the coarse and medium fabrics which are in ordinary use by all classes in the community. The lines between coarse and medium, and between medium and fine goods are, of course, vague and badly defined, but it is generally understood that yarns under No. 20 are coarse, and those over No. 40 are fine. The yarns which are woven into print cloths, of which the calico of commerce is made, are for the most part No. 28 for warps and No. 36 for filling. The best standard sheetings and shirtings are spun from nearly the same numbers. It will thus be seen how large a proportion of the goods in common use are of no higher than medium grade. It may be well to define the meaning attached by manufacturers to the word "number" as applied to yarn. The quantity of yarn is expressed in hanks of 840 yards, and the "number" of the yarn is the number of hanks which weigh a pound troy. (*a*) Thus "No. 20" is yarn of which 20 hanks weigh 1 pound of 5,760 grains. 1 hank weighs 288 grains. A hank of No. 60 weighs 96 grains, or slightly more than one-fifth (0.2194) of an ounce avoirdupois; and it takes $8\frac{3}{4}$ yards of the same number to weigh 1 grain.

The earliest undertakings in this country, in the spinning of cotton, were for the production of coarse and medium goods, and progress has taken place in the direction both of coarse and of fine goods. The development of such great industries as the manufacture of duck is an example of the growth in one direction. Although in the number of square yards of product duck represents less than 2 per cent (1.84) of the whole amount of woven goods, yet it represents more than 5 per cent of the cotton consumed. The average number of yarn that is woven into duck is less than 10, that is, it is twice as coarse as that in the coarser grades of sheeting and three times as coarse as that in standard sheetings and print cloths. These last mentioned classes of fabrics are themselves an advance in fineness over the early products of American looms. In recent years there has been a marked tendency toward the manufacture of medium fine and very fine yarns and fabrics. Ordinarily each establishment devotes its machinery chiefly or wholly to the production of one general class of goods; that is to say, coarse, medium, or fine, but this rule has many exceptions, and there are a few cases of mills which produce so wide a range of yarns as to include No. 6 and No. 140. A simple average of the fineness of all the yarn spun in a city, a state, or the country, teaches very little that is useful, for the reason that a tendency in the direction of fineness may be wholly obliterated, in such an average, by the existence of a tendency in the other direction also. A large demand for duck at the same time that extensive mills were beginning the production of very fine goods would leave the "average number" substantially unchanged. Nevertheless such returns as have been obtained from the mills do show in a general way that the product of 1890 was yarn of higher counts than that of 1880, but to separate coarse from medium and medium from fine makes the exhibit of more value because less dependent upon an average of things essentially unlike each other.

Two methods of finding the average number of yarn are available. That which was pursued in ascertaining the number as reported by the special agent of the Tenth Census was based upon the spindle as a unit. The method may be best shown by a single example. In mill A there are 30,000 spindles producing yarn for print cloths, average No. 32; in mill B are 20,000 spindles producing yarn for duck, average No. 8; in mill C are 10,000 spindles producing yarn for fine ginghams, average No. 45. We have, then, this calculation:

MILLS.	Spindles.	Number.	Product
Total	60,000	.....	1,570,000
A.....	30,000	32	960,000
B.....	20,000	8	160,000
C.....	10,000	45	450,000

$1{,}570{,}000 \div 60{,}000 = 26\frac{1}{6}$ average of the 3 mills.

This method seems faulty for two reasons. In the first place the spindles in one of the mills may be of the most modern pattern, having a speed of 9,000 to 10,000 turns a minute, while another mill may be filled with the antique machinery of the last generation, whose spindles turn not more than 6,000 times a minute and produce only two-thirds as much yarn per spindle as the new. It is obviously a mistake to average quantities which are stated in terms of units having different values. In the second place the average number of the yarn produced by a number of spindles, all of the same pattern and run at the same speed, spinning one-half No. 8 and one-half No. 32, is not No. 20. It is necessary to put more twist into fine yarn than into coarse. Indeed, the number of turns per inch increases rapidly as the fineness of the yarn increases. There is a twofold result of this fact: first, that spindles running on coarse yarn, which requires but a twist of ten turns per inch, can dispose of twice as much roving delivered to them from the rolls as other spindles run at the same speed upon yarn which requires

a The "number" of sewing cotton has the same basis. Before the introduction of six-cord spool thread "No. 40" sewing cotton was the thread made by twisting together 3 strands of "No. 40" yarn. In six-cord thread the yarn used is of double the fineness. Thus the thread to-day sold as No. 40 consists of 6 strands of No. 80 yarn.

twenty turns to the inch; and, second, inasmuch as there is more contraction where the twist is increased, the proportionate length of fine yarn spun is still further reduced. It will thus be seen that the average number as ascertained by the use of the spindle as a unit would be exceedingly misleading, even as between mills equipped with spindles of identical pattern and speed; and if to this confusion we add that which is inevitable when we are obtaining the average of mills using spindles of widely varying capacity, the uselessness of this method becomes evident. Nevertheless, since this was the only method available at the census of 1880, one calculation has been made on this basis for purposes of comparison.

The alternative method adopted for a second calculation of the average number seems certainly to show more accurately what it is required to find, namely, the average number of the yarn produced. In this calculation the unit adopted is the hank, a given length of yarn. This system is also best illustrated by an example: mill D produces 1,000,000 pounds of No. 28 yarn; mill E, 2,000,000 pounds of No. 10 yarn, and mill F 500,000 pounds of No. 50 yarn. We then have:

MILLS.	Pounds of yarn.	Number.	Hanks. (a)
Total	3,500,000	.....	73,000,000
D	1,000,000	28	28,000,000
E	2,000,000	10	20,000,000
F	500,000	50	25,000,000

73,000,000 ÷ 3,500,000 = 20⅔, average number.

a It may be noted that the figures in this column do not, strictly speaking, show the number of hanks since the number of yarn is based upon the troy pound, whereas the yarn is reported in pounds avoirdupois. But the result of the calculation is not in the least affected by this difference.

The column headed "hanks" shows the actual relative lengths of the yarn spun of each of the numbers, and the final division gives the average number of the whole quantity.

Upon an examination of the table wherein are exhibited the average number of yarn as obtained at the Tenth Census and the number as ascertained by both methods at this census, it will be observed that the second method, based upon production of yarn, yields a lower average in the case of almost every state. The exceptions are without significance and need no explanation. What has already been said with reference to the former method of solution will indicate precisely why the average number is always lower by the second process. Spindles producing high counts not only consume less cotton each than those at work upon coarser yarn (this would make no difference in the average if the consumption were inversely proportioned to the number), but they produce less yarn in length, and therefore the true average of two spindles producing No. 10 and the other No. 20 is appreciably below No. 15.

Accepting for what it is worth the ascertainment of the average number using the spindle as a basis, we find that the spinning of 1890 was of greater average fineness in the country as a whole, in each of the geographical divisions, and in most of the states. There is apparently a slight falling off in three of the New England states, but in the case of two of them, Connecticut and Vermont, the appearance is evidently due to the fact that ten years ago the number was stated in integers. The small decline in New Hampshire is probably to be attributed wholly to the large predominance of a single great establishment. The average number is highest in New Jersey a result which is due entirely to the great relative importance of the sewing cotton industry in that state. While the comparative importance of this industry has increased during the last decade, yet the increase has certainly not been as great as appears, for the reason that the average number in 1880 must have been higher than is stated. New Jersey is also the state in which the widest divergence between the two statements of average number is observable, while Rhode Island is the state having a large number of spindles in which the difference is least. The explanation is obvious to those who study the reasons already given for the existence of any difference. In New Jersey, together with much fine spinning there is also not a little coarse spinning. In Rhode Island the range of numbers is smaller. It did not need the figures of the census to prove that there had been an advance in the south in the direction of fine spinning. If the progress seems to be less than might have been supposed, it may be that the method of ascertaining the number does not reveal the whole truth. It will be seen that the true average number in 1890 is higher than the computed number in 1880, which can be said neither of New England nor of the middle states.

While it can be successfully contended that the computation of the average number on the basis of pounds of yarn spun does show precisely what it purports to show, yet there is no doubt a way in which information of a far more useful character might be obtained. It is suggested that the combination of coarse, medium, and fine yarns results in a concealment of what it is really desirable to know, and that it would be well hereafter to divide yarn products into the several classes. The returns at the Eleventh Census show the weight of goods spun in each state of No. 20 yarn and under, of yarn between No. 20 and No. 40, and of yarn above No. 40, and while it is not possible to give the average number of yarn of each class the statement following will be useful for purposes of comparison.

WEIGHT OF SPUN PRODUCT, IN POUNDS

STATES.	No. 20 yarn and below.	Nos. 21 to 40.	Above No. 40.
The United States	480, 273, 239	386, 723, 173	34, 845, 826
New England states	207, 672, 353	331, 611, 339	34, 800, 452
Maine	26, 577, 650	28, 385, 603	.....
New Hampshire	54, 984, 891	36, 182, 517	.....
Vermont	1, 243, 508	2, 508, 883	.....
Massachusetts	103, 234, 514	186, 750, 241	18, 812, 519
Rhode Island	8, 280, 776	55, 640, 821	11, 116, 338
Connecticut	13, 351, 014	22, 143, 274	4, 871, 595
Middle states	62, 850, 759	40, 139, 655	45, 374
New York	6,553, 540	25, 529, 574	.....
New Jersey	1, 456, 672	4, 631, 593	45, 374
Pennsylvania	32, 215, 744	8, 023, 174	.....
Delaware	2, 325, 960	1, 502, 278	.....
Maryland	20, 298, 843	453, 036	.....
Southern states	197, 443, 432	12, 543, 916	.....
Virginia	7, 719, 379	.....	.....
North Carolina	41, 972, 080	3, 076, 558	.....
South Carolina	53, 275, 593	1, 244, 770	.....
Georgia	52, 611, 129	6, 221, 249	.....
Alabama	11, 699, 255	.....	.....
Mississippi	6, 966, 959	.....	.....
Kentucky	2, 246, 776	2, 001, 339	.....
Tennessee	12, 310, 343	.....	.....
All other (*a*)	8, 641, 918	.....	.....
Western states	12, 306, 695	2, 428, 263	.....
Ohio	1, 425, 000	.....	.....
Indiana	6, 649, 187	.....	.....
Illinois	950, 000	1, 424, 131	.....
Wisconsin	1, 678, 474	1, 004, 132	.....
All other (*a*)	1, 604, 034	.....	.....

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments were distributed as follows: southern states—Louisiana, 2; Texas, 1; Arkansas, 2; western states—California, 1; Iowa, 1; Missouri, 1.

In considering the following tables presenting the statistics of cotton manufacture, reference should be made to the text and tables on the combined textile industries that precede this report.

Table 1 presents for the purpose of convenient comparison the statistics relating to cotton manufacture as reported at different census periods. The table comprises all the items of the inquiry common to a number of such periods and the statistics are given for each decennial year from 1840 to 1890, both inclusive.

Table 2 is a statement in detail for 1890 showing each item of the schedule of inquiry, excepting details relating to employés and wages, by totals for the United States, for geographical groups of states, and for each state.

Table 3 is a presentation of employés and wages for the cotton industry considered in its entirety. It shows by totals for each state and for the United States, the average number of men, women, and children distributed into the following classes: (1) officers or firm members actively engaged in the industry or in supervision; (2) clerks; (3) operatives and skilled labor; (4) unskilled labor; (5) pieceworkers. The average number of weeks employed, the average weekly earnings per employé, and the total wages are shown for men, women, and children, in each class, excepting pieceworkers. The statement for pieceworkers gives the average number of men, women, and children, respectively, and the total wages reported for each.

Table 4 shows the average number of men, women, and children, respectively, employed at each weekly rate of pay, by totals for each state, and for the United States.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY

	STATES AND TERRITORIES.	Number of establishments.	Capital. (a)	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. Aggregates. Average number.	Aggregates. Total wages.	Males above 16 years.
	United States:					
1	1840	1,240	$51,102,359	72,119	.....	.....
2	1850	1,094	74,500,931	92,286	.....	33,150
3	1860	1,091	98,585,269	122,028	$23,940,108	46,859
4	1870	956	140,706,291	135,369	39,044,132	42,790
5	1880	756	208,280,346	b174,659	42,040,510	61,760
6	1890	905	354,020,843	221,585	69,489,272	91,464
	New England states:					
7	1840	674	34,931,399	46,834	.....	.....
8	1850	564	53,832,430	61,893	.....	20,745
9	1860	570	69,260,279	81,403	16,720,920	29,886
10	1870	508	100,103,770	94,775	28,740,788	30,203
11	1880	439	156,754,690	127,185	32,170,861	46,897
12	1890	402	243,153,249	148,718	49,908,591	65,057
	Maine:					
13	1840	6	1,398,000	1,414	.....	.....
14	1850	12	3,329,700	3,739	.....	780
15	1860	19	6,018,325	6,764	1,368,888	1,828
16	1870	23	9,839,685	9,439	2,565,197	2,606
17	1880	24	15,292,078	11,864	2,936,640	3,962
18	1890	23	20,850,754	13,992	4,372,473	5,273
	New Hampshire:					
19	1840	58	5,523,200	6,991	.....	.....
20	1850	44	10,950,500	12,122	.....	2,911
21	1860	44	12,586,880	12,730	2,883,804	3,829
22	1870	36	13,992,710	12,542	3,989,853	3,752
23	1880	36	19,877,084	16,529	4,290,960	5,235
24	1890	27	26,801,933	19,583	6,429,084	8,290
	Vermont:					
25	1840	7	118,100	262	.....	.....
26	1850	9	202,500	241	.....	94
27	1860	8	271,200	379	78,468	157
28	1870	8	670,000	451	125,000	125
29	1880	7	936,096	735	161,748	214
30	1890	6	1,431,986	737	220,742	338
	Massachusetts:					
31	1840	278	17,414,099	20,928	.....	.....
32	1850	213	28,455,630	28,730	.....	9,293
33	1860	217	33,704,674	38,451	7,798,476	13,691
34	1870	191	44,714,375	43,512	13,589,305	13,694
35	1880	175	72,291,601	61,844	15,828,571	22,774
36	1890	187	128,838,837	76,213	26,230,667	33,730
	Rhode Island:					
37	1840	209	7,326,000	12,086	.....	.....
38	1850	158	6,675,000	10,875	.....	4,959
39	1860	153	10,052,200	14,077	2,847,804	6,353
40	1870	139	18,836,300	16,745	5,224,650	5,583
41	1880	115	28,047,331	21,474	5,320,303	8,344
42	1890	94	38,798,161	24,832	8,131,142	10,761
	Connecticut:					
43	1840	116	3,152,000	5,153	.....	.....
44	1850	128	4,219,100	6,186	.....	2,708
45	1860	129	6,027,000	9,002	1,743,480	4,028
46	1870	111	12,710,700	12,086	3,246,783	4,443
47	1880	82	20,310,500	14,739	3,632,639	6,368
48	1890	65	26,431,578	13,411	4,524,483	6,665
	Middle states:					
49	1840	298	11,583,882	18,187	.....	.....
50	1850	352	12,970,445	19,699	.....	8,274
51	1860	340	18,789,069	29,078	5,464,772	12,212
52	1870	274	27,723,306	28,974	7,904,470	8,466
53	1880	139	31,014,759	28,367	6,613,260	9,161
54	1890	239	51,676,249	32,344	10,763,873	12,070
	New York:					
55	1840	117	4,900,772	7,407	.....	.....
56	1850	86	4,176,920	6,320	.....	2,632
57	1860	79	5,383,479	7,659	1,405,292	3,107
58	1870	81	8,511,336	9,144	2,626,131	2,608
59	1880	36	11,399,038	9,305	1,994,755	3,012
60	1890	42	13,290,745	8,401	2,563,730	3,331
	New Jersey:					
61	1840	43	1,722,810	2,408	.....	.....
62	1850	21	1,483,500	1,712	.....	616
63	1860	44	1,320,550	2,534	468,336	1,010
64	1870	27	2,762,000	3,514	1,003,351	1,086
65	1880	17	3,807,750	4,222	1,156,961	1,223
66	1890	17	13,519,972	5,683	2,054,282	1,872

a Value of hired property is not included in the capital reported in 1890, because it was not included in the reports of previous census years.

GEOGRAPHICAL DIVISIONS AND STATES AND TERRITORIES: 1840-1890.

AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.		MACHINERY.		MATERIALS USED.				Value of products.	
					Cotton consumed.				
Females above 15 years.	Children.	Spindles.	Looms.	Total cost.	Bales.	Pounds.	Cost.		
.....	.....	2,284,631	.....	.....	.....	.....	.....	$46,350,453	1
59,136	.....	.....	.....	$34,835,056	641,240	.....	.....	61,869,184	2
75,169	.....	5,235,727	126,313	57,285,534	.....	422,704,975	.....	115,681,774	3
69,637	22,942	7,132,415	157,310	111,736,936	.....	398,308,257	.....	177,489,739	4
84,558	28,341	10,653,435	225,759	102,206,347	1,570,344	756,343,981	$86,945,725	192,090,110	5
106,689	23,432	14,188,103	324,866	154,912,979	2,261,600	1,117,945,776	117,392,576	267,981,724	6
.....	.....	1,597,394	.....	.....	.....	.....	.....	31,611,880	7
41,148	.....	.....	.....	23,800,904	430,603	.....	.....	42,040,178	8
51,517	.....	3,858,962	93,344	37,670,782	.....	283,701,306	.....	79,359,906	9
50,805	13,767	5,498,308	114,982	78,816,481	.....	275,625,278	.....	124,959,053	10
62,568	17,720	8,632,087	184,701	74,290,026	1,129,498	541,373,880	63,169,434	143,363,030	11
73,496	10,165	10,836,155	250,116	101,101,446	1,425,958	714,691,714	76,749,130	181,112,453	12
.....	.....	29,736	.....	.....	.....	.....	.....	970,397	13
2,959	.....	.....	.....	1,573,110	31,531	.....	.....	2,596,356	14
4,936	.....	281,056	6,877	3,319,335	.....	23,733,165	.....	6,235,623	15
6,246	587	459,772	9,902	6,746,780	.....	25,887,771	.....	11,844,181	16
6,481	1,421	695,924	15,971	7,320,152	112,381	54,185,061	6,234,901	13,319,363	17
7,856	863	885,762	21,825	8,446,736	132,504	65,717,252	7,053,168	15,316,909	18
.....	.....	195,173	.....	.....	.....	.....	.....	4,142,304	19
9,211	.....	.....	.....	4,839,429	83,026	.....	.....	8,830,619	20
8,901	.....	636,788	17,336	7,128,196	.....	51,002,324	.....	13,699,994	21
7,490	1,300	749,843	19,091	12,318,867	.....	41,469,719	.....	16,999,672	22
9,596	1,698	944,053	24,299	10,146,904	157,673	76,386,499	8,629,003	17,953,403	23
10,849	894	1,195,643	31,850	12,962,939	214,034	107,319,124	11,203,742	21,958,002	24
.....	.....	7,254	.....	.....	.....	.....	.....	113,000	25
147	.....	.....	.....	114,415	2,243	.....	.....	196,100	26
222	.....	17,600	362	181,030	.....	1,447,250	.....	357,450	27
242	84	28,768	628	292,269	.....	1,235,652	.....	546,510	28
350	171	55,081	1,180	508,297	7,404	3,562,088	458,607	855,864	29
309	90	71,591	1,175	542,065	8,954	4,647,889	498,348	914,685	30
.....	.....	665,095	.....	.....	.....	.....	.....	16,553,423	31
19,437	.....	.....	.....	11,289,309	223,607	.....	.....	19,712,461	32
24,760	.....	1,673,498	42,779	17,214,592	.....	134,012,759	.....	38,004,255	33
24,065	5,753	2,619,541	55,343	37,371,599	.....	130,654,040	.....	59,493,153	34
31,497	7,573	4,236,084	95,321	35,994,109	574,857	273,718,889	31,107,154	72,289,518	35
38,392	4,091	5,824,518	133,227	56,586,283	772,520	386,767,326	40,870,307	100,202,882	36
.....	.....	518,817	.....	.....	.....	.....	.....	7,116,792	37
5,916	.....	.....	.....	3,484,579	50,713	.....	.....	6,447,120	38
7,724	.....	814,554	17,315	5,709,223	.....	41,614,797	.....	12,151,191	39
8,028	3,134	1,043,242	18,075	13,268,315	.....	44,630,787	.....	22,049,203	40
9,199	3,931	1,764,569	29,669	12,291,437	167,480	81,137,172	10,457,770	22,875,111	41
10,889	3,182	1,924,486	43,106	14,347,672	193,291	97,982,155	11,147,080	27,319,499	42
.....	.....	181,319	.....	.....	.....	.....	.....	2,715,964	43
3,478	.....	.....	.....	2,500,062	39,483	.....	.....	4,257,522	44
4,974	.....	435,466	8,675	4,028,406	.....	31,891,011	.....	8,911,387	45
4,734	2,909	597,142	11,943	8,818,651	.....	31,747,309	.....	14,026,334	46
5,445	2,926	936,376	18,261	8,029,127	109,703	52,384,171	6,281,930	16,069,771	47
5,701	1,045	934,155	18,933	8,215,751	104,655	52,257,968	5,976,485	15,409,476	48
.....	.....	487,571	.....	.....	.....	.....	.....	12,222,200	49
11,425	.....	.....	.....	7,349,795	125,392	.....	.....	12,782,718	50
16,866	.....	1,042,480	25,185	13,928,671	.....	87,113,715	.....	20,534,700	51
14,126	6,382	1,246,045	34,974	23,793,595	.....	80,937,906	.....	38,597,705	52
13,188	6,018	1,391,164	27,318	16,191,758	228,720	109,321,428	13,258,526	29,389,286	53
16,253	4,021	1,633,722	35,074	23,044,093	261,154	128,184,288	13,906,748	40,664,476	54
.....	.....	211,659	.....	.....	.....	.....	.....	3,040,237	55
3,688	.....	.....	.....	1,985,973	37,778	.....	.....	3,591,989	56
4,552	.....	348,584	7,885	3,061,105	.....	23,945,627	.....	6,676,878	57
4,546	1,990	492,573	17,218	6,990,626	.....	24,783,351	.....	11,178,211	58
4,201	2,092	561,658	12,403	4,652,745	64,614	31,656,594	3,981,106	8,266,836	59
4,034	1,036	606,796	13,466	5,564,251	78,824	39,522,057	4,270,665	9,777,295	60
.....	.....	63,744	.....	.....	.....	.....	.....	2,086,104	61
1,006	.....	.....	.....	666,645	14,437	.....	.....	1,109,524	62
1,524	.....	123,548	1,567	1,165,435	.....	9,094,649	.....	2,217,728	63
1,745	683	200,580	2,176	1,964,758	.....	7,920,035	.....	4,015,768	64
2,291	708	232,221	3,180	2,018,175	21,069	9,950,609	1,319,422	4,548,275	65
3,398	413	374,442	3 673	3,028,933	25,723	12,301,151	1,816,468	5,902,615	66

b Includes 2,115 officers and clerks for whom no wages are reported.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY

	STATES AND TERRITORIES.	Number of establishments.	Capital.	AVERAGE NUMBER OF EMPLOYES AND TOTAL WAGES. Aggregates. Average number.	Aggregates. Total wages.	Males above 16 years.
	Pennsylvania:					
1	1840	106	$3,325,400	5,522		
2	1850	208	4,528,925	7,663		3,564
3	1860	185	9,203,040	14,994	$2,768,340	6,412
4	1870	138	12,550,720	12,730	3,496,986	3,859
5	1880	59	10,331,985	9,957	2,502,688	3,413
6	1890	158	15,884,936	12,960	4,687,088	5,280
	Delaware:					
7	1840	11	330,500	566		
8	1850	12	460,100	838		413
9	1860	11	582,500	1,109	220,224	520
10	1870	6	1,165,000	726	190,069	225
11	1880	8	874,570	797	192,727	243
12	1890	7	1,683,803	987	324,328	282
	Maryland: (a)					
13	1840	21	1,304,400	2,284		
14	1850	24	2,236,000	3,022		1,008
15	1860	20	2,254,500	2,687	582,780	1,093
16	1870	22	2,734,250	2,860	671,933	686
17	1880	19	4,600,816	4,086	766,129	1,270
18	1890	15	7,296,793	4,313	1,134,445	1,305
	District of Columbia: (a)					
19	1840					
20	1850	1	85,000	144		41
21	1860	1	45,000	95	19,800	70
22	1870					
23	1880					
24	1890					
	Southern states:					
25	1840	248	4,331,078	6,642		
26	1850	166	7,250,056	10,043		3,886
27	1860	165	9,840,221	10,152	1,481,704	4,113
28	1870	151	11,088,315	10,173	1,920,779	3,640
29	1880	161	17,375,897	16,741	2,750,986	5,056
30	1890	239	53,827,303	37,168	7,817,069	13,254
	Virginia:					
31	1840	22	1,299,020	1,816		
32	1850	27	1,908,900	2,963		1,275
33	1860	16	1,367,543	1,441	260,856	694
34	1870	11	1,128,000	1,741	229,750	921
35	1880	8	1,190,100	1,112	169,789	301
36	1890	9	2,966,889	2,019	406,824	592
	North Carolina:					
37	1840	25	995,300	1,219		
38	1850	28	1,058,800	1,619		442
39	1860	39	1,272,750	1,755	189,744	440
40	1870	33	1,030,900	1,453	182,951	258
41	1880	49	2,855,800	3,343	439,659	875
42	1890	91	10,775,134	8,742	1,646,196	3,014
	South Carolina:					
43	1840	15	617,450	570		
44	1850	18	857,200	1,019		399
45	1860	17	801,825	891	123,300	342
46	1870	12	1,337,000	1,123	257,680	289
47	1880	14	2,776,100	2,053	380,844	696
48	1890	34	11,141,833	8,192	1,646,574	2,965
	Georgia:					
49	1840	19	573,835	779		
50	1850	35	1,736,156	2,272		873
51	1860	33	2,126,103	2,813	415,332	1,131
52	1870	34	3,433,265	2,846	611,868	1,147
53	1880	40	6,348,657	6,349	1,135,184	1,987
54	1890	53	17,664,675	10,530	2,366,085	4,061
	Florida.					
55	1840					
56	1850	(b)	80,000	95		28
57	1860	1	30,000	65	7,872	40
58	1870					
59	1880	1	11,000	33	5,000	21
60	1890					
	Alabama:					
61	1840	14	35,575	82		
62	1850	12	651,900	715		346
63	1860	14	1,316,000	1,312	198,408	543
64	1870	13	931,000	1,032	216,679	303
65	1880	16	1,246,500	1,490	239,998	426
66	1890	13	2,853,015	2,137	447,173	783

a Maryland and the District of Columbia are classed in this table as middle states for purposes of comparison.

GEOGRAPHICAL DIVISIONS AND STATES AND TERRITORIES: 1840-1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.		MACHINERY.		MATERIALS USED.				Value of products.	
					Cotton consumed.				
Females above 15 years.	Children.	Spindles.	Looms.	Total cost.	Bales.	Pounds.	Cost.		
		146,494						$5,013,007	1
4,099				$3,152,530	44,162			5,322,262	2
8,582		476,979	12,994	7,386,213		37,496,203		13,650,114	3
6,097	2,774	434,246	12,862	10,724,052		32,953,318		17,490,080	4
4,457	2,087	425,391	8,488	6,105,700	83,997	40,311,809	$4,749,428	11,021,954	5
6,263	1,417	439,638	13,974	10,485,247	92,705	44,629,588	4,371,693	18,431,773	6
		24,492						332,272	7
425				312,068	4,730			538,439	8
589		38,974	986	570,102		3,403,000		941,703	9
286	215	29,534	771	704,733		2,587,615		1,060,898	10
362	192	46,188	822	527,205	7,512	3,236,184	427,855	871,007	11
488	217	53,916	996	587,646	8,876	4,405,825	475,490	1,095,001	12
		41,182						1,150,580	13
2,014				1,165,579	23,325			2,120,504	14
1,594		51,835	1,670	1,698,413		12,880,119		2,973,877	15
1,452	720	89,112	1,947	3,409,426		12,693,647		4,852,808	16
1,877	939	125,706	2,425	2,887,933	51,537	24,166,232	2,780,715	4,682,114	17
2,070	938	158,930	2,965	3,378,016	55,026	27,265,667	2,972,432	5,457,792	18
									19
103				67,000	960			100,000	20
25		2,560	83	47,403		294,117		74,400	21
									22
									23
									24
		180,927						2,241,595	25
6,157				3,332,631	78,140			6,464,488	26
6,039		298,551	6,789	4,954,126		45,786,510		8,460,337	27
4,190	2,343	327,871	6,256	7,419,010		34,351,195		11,372,186	28
7,587	4,098	542,048	11,898	9,999,145	182,349	84,528,757	8,890,408	16,356,598	29
15,099	8,815	1,554,000	36,266	27,764,055	526,856	250,837,646	24,508,776	41,513,711	30
		42,262						440,093	31
1,688				828,375	17,785			1,486,384	32
747		49,440	2,160	811,187		7,544,297		1,489,971	33
507	313	77,116	1,310	937,820		4,255,383		1,435,800	34
530	281	44,340	1,322	640,391	11,461	5,087,519	601,796	1,040,962	35
951	476	94,294	2,517	1,199,578	22,731	10,610,206	1,080,773	1,732,648	36
		47,934						438,900	37
1,177				531,903	13,617			831,342	38
1,315		41,884	761	622,363		5,540,738		1,046,047	39
916	279	39,897	618	963,809		4,238,276		1,345,052	40
1,727	741	92,385	1,790	1,463,645	27,642	11,832,641	1,125,984	2,554,482	41
3,657	2,071	337,786	7,254	6,239,902	114,371	53,546,289	5,396,974	9,503,443	42
		16,355						359,000	43
620				295,971	9,929			748,338	44
549		30,890	525	431,525		3,978,061		713,050	45
508	326	34,940	745	761,469		4,756,823		1,529,937	46
772	585	82,334	1,676	1,808,300	33,624	15,601,005	1,723,187	2,895,769	47
3,075	2,152	332,784	8,546	6,819,320	133,342	64,000,600	6,242,598	9,800,798	48
		42,589						304,342	49
1,399				900,419	20,230			2,135,044	50
1,682		85,186	2,041	1,466,375		13,907,904		2,371,207	51
1,080	619	85,602	1,887	2,504,758		10,921,176		3,648,073	52
2,951	1,411	198,656	4,493	4,019,673	71,389	33,757,199	3,591,554	6,481,894	53
4,009	2,460	445,452	10,459	7,832,230	145,859	69,130,410	6,663,560	12,035,629	54
									55
67				30,000	600			49,920	56
25		1,600	20	23,600		200,000		40,000	57
									58
2	10	816		18,095	350	166,250	16,000	25,000	59
									60
		1,502						17,547	61
369				237,081	5,208			382,260	62
769		35,740	623	617,633		5,246,800		1,040,147	63
445	284	28,046	632	764,965		3,249,523		1,088,767	64
631	433	49,432	863	783,711	14,702	7,271,791	729,202	1,228,019	65
853	501	79,234	1,692	1,459,048	29,962	14,726,454	1,372,058	2,190,771	66

b The number of establishments not given for Florida in 1850.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY

	STATES AND TERRITORIES.	Number of establishments.	Capital.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. Aggregates. Average number.	Total wages.	Males above 16 years.
	Mississippi:					
1	1840	53	$6,420	81		
2	1850	2	38,000	36		19
3	1860	4	230,000	215	$36,264	106
4	1870	5	751,500	265	61,833	78
5	1880	8	1,122,140	722	133,214	203
6	1890	9	2,053,743	1,184	290,981	480
	Louisiana:					
7	1840	2	22,000	23		
8	1850					
9	1860	2	1,000,000	360	49,440	220
10	1870	4	592,000	246	60,600	123
11	1880	2	195,000	108	12,572	43
12	1890 (a)					
	Texas:					
13	1840					
14	1850					
15	1860	1	450,000	130	15,600	130
16	1870	4	496,000	291	68,211	184
17	1880	2	50,000	71	2,466	45
18	1890 (a)					
	Arkansas:					
19	1840	2	2,125	7		
20	1850	3	16,500	31		13
21	1860	2	37,000	25	4,428	14
22	1870	2	13,000	17	4,100	8
23	1880	2	75,000	64	7,339	20
24	1890 (a)					
	Kentucky:					
25	1840	58	316,113	523		
26	1850	8	239,000	402		181
27	1860	6	244,000	246	41,280	130
28	1870	5	405,000	269	57,951	77
29	1880	3	360,000	352	63,850	128
30	1890	5	1,376,132	834	189,039	284
	Tennessee:					
31	1840	38	463,240	1,542		
32	1850	33	669,600	891		310
33	1860	30	965,000	899	139,180	323
34	1870	28	970,650	890	178,156	252
35	1880	16	1,145,600	1,044	161,071	311
36	1890	20	2,928,657	2,174	495,438	717
	All other southern states:					
37	1890 (a)	5	2,067,225	1,356	328,759	358
	Western states:					
38	1840	20	256,000	456		
39	1850	12	442,000	651		245
40	1860	16	695,700	1,395	272,712	648
41	1870	23	1,790,000	1,447	379,095	481
42	1880	17	3,135,000	2,366	505,403	646
43	1890	25	5,364,042	3,355	999,739	1,083
	Ohio:					
44	1840	8	113,500	246		
45	1850	8	297,000	401		132
46	1860	8	265,000	840	151,164	372
47	1870	7	555,700	462	113,520	216
48	1880	4	670,000	484	104,500	126
49	1890	7	1,213,217	584	193,757	264
	Michigan:					
50	1840					
51	1850					
52	1860					
53	1870					
54	1880	1	20,000	88	16,800	36
55	1890					
	Indiana:					
56	1840	12	142,500	210		
57	1850	2	43,000	95		38
58	1860	2	251,000	367	84,888	177
59	1870	4	551,500	504	113,200	119
60	1880	4	1,090,000	720	162,829	205
61	1890	6	1,744,720	1,325	332,676	341
	Illinois:					
62	1840					
63	1850					
64	1860	3	4,700	11	2,640	10
65	1870	5	151,000	98	25,500	26
66	1880	2	240,000	237	47,885	66
67	1890	4	766,405	454	150,386	135

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arkansas, 2; Louisiana, 2; Texas, 1.

GEOGRAPHICAL DIVISIONS AND STATES AND TERRITORIES: 1840–1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.		MACHINERY.		MATERIALS USED.				Value of products.	
					Cotton consumed.				
Females above 15 years.	Children.	Spindles.	Looms.	Total cost.	Bales.	Pounds.	Cost.		
		318						$1,744	1
17				$21,500	430			30,500	2
109		6,344	90	79,800		698,800		176,328	3
88	99	3,526	152	123,568		580,764		234,445	4
313	206	18,568	644	337,149	6,411	2,881,853	$301,226	679,093	5
398	306	57,004	1,352	871,970	17,366	8,449,834	793,600	1,333,398	6
		706						18,000	7
									8
140		6,725	150	226,600		1,995,700		466,500	9
57	66	13,084	292	161,485		748,525		251,550	10
41	24	6,096	120	72,470	1,358	644,000	68,018	86,776	11
									12
									13
									14
		2,700	100	64,140		588,000		80,695	15
52	55	8,878	235	216,519		1,077,118		374,598	16
10	16	2,648	71	14,827	246	119,986	11,280	21,600	17
									18
		90							19
18				8,975	170			16,637	20
11				11,600		187,500		23,000	21
3	6	1,125		13,780		66,400		22,562	22
17	27	2,015	28	33,305	680	340,000	25,000	50,000	23
									24
		12,358						329,380	25
221				180,907	3,760			273,439	26
116		8,192	76	214,755		1,826,000		315,270	27
71	121	7,734	72	375,048		1,584,625		498,960	28
91	133	9,022	73	253,818	4,050	1,882,234	188,856	418,286	29
372	178	42,942	677	643,949	11,980	5,751,305	554,206	1,000,668	30
		16,813						325,719	31
581				297,500	6,411			510,624	32
576		29,850	243	384,548		4,072,710		698,122	33
463	175	27,923	313	595,789		2,872,582		941,542	34
502	231	35,736	818	553,761	10,436	4,944,279	508,305	874,717	35
1,000	457	97,524	2,043	1,765,162	33,114	15,779,360	1,554,851	2,507,719	36
784	214	66,980	1,726	932,896	18,131	8,828,188	850,156	1,348,637	37
		18,739						274,778	38
406				351,726	7,105			581,800	39
747		35,734	995	731,055		6,103,444		1,326,837	40
516	450	60,191	1,098	1,707,850		7,393,818		2,560,735	41
1,215	505	88,136	1,842	1,725,418	29,768	15,119,916	1,627,357	2,981,196	42
1,841	431	164,226	3,410	3,003,385	47,632	24,232,128	2,227,922	4,601,084	43
		13,754						139,378	44
269				237,060	4,270			394,700	45
468		19,664	540	374,100		3,192,500		723,500	46
147	99	23,240	208	493,704		2,226,400		681,835	47
321	37	13,328	42	286,692	5,323	2,506,182	258,198	637,000	48
313	7	16,560	40	903,446	11,023	5,840,078	383,556	1,468,204	49
									50
									51
									52
									53
38	14	5,100	131	41,000	600	300,000	36,000	70,000	54
									55
		4,985						135,400	56
57				28,220	675			44,200	57
190		11,000	375	229,925		1,813,944		344,350	58
179	206	17,360	448	542,875		2,070,318		778,047	59
391	124	33,396	776	b651,434	11,558	6,364,887	b679,911	1,155,029	60
749	235	74,604	1,649	919,566	16,306	8,240,434	798,178	1,350,425	61
									62
									63
1				11,930		95,000		18,987	64
31	41	1,856	16	177,525		857,000		279,000	65
89	82	4,860	24	142,183	2,261	1,099,130	110,969	219,861	66
281	38	21,800	465	337,773	6,405	3,267,188	312,621	563,988	67

b Owing to error in the published statistics for 1880 the cost of cotton in Indiana is shown to be in excess of the total cost of all materials used.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY

	STATES AND TERRITORIES.	Number of establishments.	Capital.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES.		
				Aggregates.		Males above 16 years.
				Average number.	Total wages.	
	Missouri:					
1	1840					
2	1850	2	$102,000	155		75
3	1860	2	169,000	170	$30,600	85
4	1870	3	480,200	361	120,300	107
5	1880	3	890,000	515	97,680	127
6	1890 (a)					
	Wisconsin:					
7	1840					
8	1850					
9	1860					
10	1870					
11	1880	1	200,000	271	67,209	66
12	1890	4	892,509	501	142,470	209
	Minnesota:					
13	1840					
14	1850					
15	1860					
16	1870					
17	1880	1	5,000	22	6,400	4
18	1890					
	Iowa:					
19	1840					
20	1850					
21	1860					
22	1870	1	1,500	6	275	3
23	1880					
24	1890 (a)					
	Utah:					
25	1840					
26	1850					
27	1860	1	6,000	7	3,420	4
28	1870	3	42,000	16	6,300	10
29	1880	1	20,000	29	2,100	16
30	1890					
	All other western states:					
31	1890 (a)	4	747,191	491	180,450	134

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: California, 1; Iowa, 2; Missouri, 1.

GEOGRAPHICAL DIVISIONS AND STATES AND TERRITORIES: 1840-1890—Continued.

AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.		MACHINERY.		MATERIALS USED.				Value of products.	
Females above 15 years.	Children.	Spindles.	Looms.	Total cost.	Cotton consumed.				
					Bales.	Pounds.	Cost.		
									1
80				$86,446	2,160			$142,900	2
85		5,000	80	110,000		990,000		230,000	3
154	100	16,715	415	481,745		2,196,600		798,050	4
207	181	19,312	431	376,081	6,399	3,082,132	$336,984	522,980	5
									6
									7
									8
									9
									10
149	56	10,000	400	194,556	3,173	1,541,797	180,072	328,389	11
239	53	32,592	870	382,833	6,924	3,470,388	359,117	620,196	12
									13
									14
									15
									16
12	6	1,708	24	30,000	400	200,000	22,000	40,000	17
									18
									19
									20
									21
3				4,950		20,000		7,000	22
									23
									24
									25
									26
3		70		6,000		12,000		10,000	27
2	4	1,020	11	7,051		23,500		16,803	28
8	5	432	14	3,472	54	25,788	3,223	7,937	29
									30
259	98	18,670	386	459,767	6,974	3,414,040	374,450	638,271	31

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES,

	STATES.	Number of establishments.	CAPITAL.							
			Value of hired property.	Direct investment.						
				Aggregate.	Value of plant.				Live assets.	
					Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.
1	The United States	905	$8,301,464	$354,020,843	$230,993,567	$23,225,097	$69,742,664	$138,025,806	$123,027,276	$37,796,009
2	New England states	402	3,597,474	243,153,249	156,612,532	17,074,774	47,571,383	91,666,375	86,540,717	26,167,666
3	Maine	23	202,633	20,850,754	13,335,358	1,087,916	3,774,087	8,473,355	7,515,396	2,567,137
4	New Hampshire	27	204,616	26,801,933	16,369,652	1,995,018	4,227,222	10,147,412	10,432,281	3,381,604
5	Vermont	6	.....	1,431,986	1,026,200	125,621	332,870	567,709	405,786	122,289
6	Massachusetts	187	1,325,046	128,838,837	80,892,202	9,021,576	24,630,506	47,240,120	47,946,635	15,217,473
7	Rhode Island	94	1,465,110	38,798,161	27,778,643	3,458,746	7,686,756	16,633,141	11,019,518	2,619,568
8	Connecticut	65	400,069	26,431,578	17,210,477	1,385,897	7,219,942	8,604,638	9,221,101	2,259,595
9	Middle states	239	3,957,161	51,676,249	33,011,849	2,580,935	10,124,364	20,306,550	18,664,400	4,100,971
10	New York	42	1,763,700	13,290,745	10,236,876	401,221	3,678,369	6,157,286	3,053,869	1,380,799
11	New Jersey	17	113,100	13,519,972	7,152,467	506,550	2,233,909	4,412,008	6,367,505	896,419
12	Pennsylvania	158	1,973,424	15,884,936	9,248,088	1,057,364	2,526,486	5,664,238	6,636,848	1,409,592
13	Delaware	7	56,877	1,683,803	1,132,118	149,500	221,000	761,618	551,685	66,984
14	Maryland	15	50,000	7,296,793	5,242,300	466,300	1,464,600	3,311,400	2,054,493	347,177
15	Southern states	239	346,769	53,827,303	37,919,840	3,248,968	10,590,952	24,079,920	15,907,463	6,846,102
16	Virginia	9	132,900	2,966,889	2,253,693	194,000	393,953	1,665,740	713,196	164,265
17	North Carolina	91	21,650	10,775,134	8,102,104	696,316	2,030,074	5,375,714	2,673,030	1,083,319
18	South Carolina	34	166,739	11,141,833	7,388,700	298,372	2,129,319	4,961,009	3,753,133	2,462,663
19	Georgia	53	.....	17,664,675	12,003,806	1,455,297	3,724,049	6,824,460	5,660,869	2,041,557
20	Alabama	13	.....	2,853,015	1,852,950	160,450	630,200	1,062,300	1,000,065	464,898
21	Mississippi	9	.....	2,053,743	1,313,020	77,109	342,895	892,926	740,723	186,892
22	Kentucky	5	.....	1,576,132	930,708	71,782	242,707	616,219	445,424	221,552
23	Tennessee	20	17,500	2,928,657	2,221,703	163,197	655,966	1,402,540	706,954	175,997
24	All other southern states (*b*)	5	8,000	2,067,225	1,853,156	132,355	441,789	1,279,012	214,069	45,049
25	Western states	25	400,060	5,364,042	3,449,346	320,420	1,155,965	1,972,961	1,914,696	681,270
26	Ohio	7	382,060	1,213,217	530,394	70,420	283,244	176,730	682,823	218,193
27	Indiana	6	.....	1,744,720	1,158,447	39,500	413,677	705,270	586,273	178,085
28	Illinois	4	.....	766,405	613,483	76,500	225,486	311,497	152,922	47,909
29	Wisconsin	4	.....	892,509	667,022	104,000	103,558	459,464	225,487	134,083
30	All other western states (*b*)	4	18,000	747,191	480,000	30,000	130,000	320,000	267,191	103,000

a Includes officers, firm members, and clerks. For detailed information see Table 3.

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890.

CAPITAL—continued. Direct investment—Continued. Live assets—Continued.		MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a).		
Stock in process and finished products on hand.	Cash, bills and accounts receivable, and sundries not elsewhere reported.	Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Employés.	Wages.	
$41,388,280	$43,842,987	$16,716,524	$488,735	$2,689,632	$1,218,322	$3,987,748	$4,098,435	$4,238,652	221,585	$69,489,272	1
29,364,303	31,008,748	12,086,430	201,201	2,086,103	701,888	3,173,346	2,730,042	3,193,850	148,718	49,908,591	2
2,187,064	2,761,195	1,185,336	11,920	224,689	74,224	258,108	285,864	330,531	13,992	4,372,473	3
2,710,380	4,340,297	1,340,222	12,277	257,889	85,623	490,999	262,646	230,794	19,533	6,429,084	4
67,017	216,480	59,893	.....	5,795	4,573	5,500	19,480	24,545	737	220,742	5
15,197,131	17,532,031	6,675,285	79,897	1,266,153	355,976	1,864,684	1,552,627	1,555,948	76,213	26,230,667	6
4,985,488	3,414,462	1,871,057	73,090	202,550	102,997	293,473	326,525	872,422	24,832	8,131,142	7
4,217,223	2,744,283	954,637	24,017	129,027	78,495	260,582	282,906	179,610	13,411	4,524,483	8
6,795,321	7,768,108	2,088,631	244,783	262,637	172,456	353,646	544,043	511,066	32,344	10,763,873	9
990,481	682,589	724,405	82,714	126,263	32,074	95,175	138,702	249,537	8,401	2,563,730	10
2,168,512	3,302,574	194,474	6,640	54,282	31,120	45,506	43,734	13,192	5,683	2,054,282	11
2,655,342	2,571,914	730,125	148,012	48,485	75,828	104,154	180,683	172,963	12,966	4,687,688	12
280,583	204,118	85,149	3,417	2,690	6,621	2,799	38,155	31,467	987	324,328	13
700,403	1,006,913	354,478	4,000	30,977	26,813	106,012	142,769	43,907	4,313	1,134,445	14
4,763,444	4,297,917	2,257,660	18,876	315,838	309,329	395,429	752,377	465,811	37,168	7,817,069	15
332,873	216,058	102,565	5,600	11,798	22,670	18,627	40,015	3,855	2,019	406,824	16
736,590	853,121	423,324	1,256	46,567	63,056	93,050	121,097	98,298	8,742	1,646,196	17
766,676	523,794	528,208	10,370	46,049	59,927	59,009	220,076	132,777	8,192	1,646,574	18
1,843,839	1,775,473	724,822	.....	158,296	89,511	119,459	239,508	118,048	10,530	2,366,085	19
238,082	297,085	154,893	.....	14,889	17,215	43,388	27,422	51,979	2,137	447,173	20
286,970	266,861	57,622	.....	6,790	8,693	10,282	19,402	12,455	1,184	299,981	21
117,217	106,655	60,200	.....	4,479	10,784	14,580	11,552	18,805	834	189,039	22
304,921	226,126	173,853	1,050	24,045	21,246	33,702	70,551	23,259	2,174	495,438	23
136,276	32,744	32,173	600	2,925	16,227	3,332	2,754	6,335	1,356	328,759	24
465,212	768,214	283,803	23,875	25,054	29,649	65,327	71,973	67,925	3,355	999,739	25
198,012	266,618	106,399	22,375	6,382	6,548	32,382	19,328	19,384	584	193,757	26
98,796	309,392	73,941	.....	9,500	10,636	9,494	29,164	15,147	1,325	332,676	27
35,288	69,725	18,986	.....	3,306	2,810	6,665	2,280	3,925	454	159,386	28
49,816	41,588	52,477	.....	3,466	4,855	7,986	15,201	20,969	501	142,470	29
83,300	80,891	32,000	1,500	2,400	4,800	8,800	6,000	8,500	491	180,450	30

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Southern states—Arkansas, 2; Louisiana, 2; Texas, 1. Western states—California, 1; Iowa, 2; Missouri, 1.

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES,

	STATES.	MACHINERY.								
		Spindles.			Average number of yarn.			Looms.		
		Total.	Mule.	Frame.	Process based upon number of spindles, 1880.	Ascertained by process based upon number of spindles, 1890.	Ascertained by process based upon pounds of spun product, 1890.	Total.	On plain cloths less than 28 inches wide.	On plain cloths 28 to 32 inches wide.
1	The United States.	14,188,103	5,363,486	8,824,617	28.56	29.36	22.93	324,866	23,648	91,862
2	New England states.	10,836,155	4,391,895	6,444,260	30.00	31.31	26.20	250,116	12,609	72,928
3	Maine	885,762	344,697	541,065	24.00	24.77	22.66	21,825	1,219	2,860
4	New Hampshire	1,195,643	364,234	831,409	26.00	24.43	21.14	31,850	243	10,725
5	Vermont	71,591	42,735	28,856	28.00	27.78	25.95	1,175	62	1,113
6	Massachusetts	5,824,518	2,430,719	3,393,799	28.00	30.70	26.75	133,227	6,907	48,717
7	Rhode Island	1,924,486	811,869	1,112,617	36.00	37.96	34.73	43,106	3,690	5,975
8	Connecticut	934,155	397,641	536,514	37.00	36.60	29.91	18,933	488	3,538
9	Middle states	1,633,722	822,613	811,109	25.40	31.51	20.45	35,074	5,196	10,601
10	New York	606,796	334,210	272,586	33.00	31.04	27.69	13,466	404	6,658
11	New Jersey	374,442	304,480	69,962	32.00	54.92	37.14	3,673	502	307
12	Pennsylvania	439,638	175,687	263,951	17.00	19.39	16.65	13,974	3,458	2,648
13	Delaware	53,916	2,880	51,036	20.00	22.22	22.33	996	486	304
14	Maryland	158,930	5,356	153,574	10.00	10.37	9.35	2,965	346	684
15	Southern states	1,554,000	108,474	1,445,526	13.00	15.35	14.76	36,266	5,803	8,309
16	Virginia	94,294	13,198	81,096	16.00	17.42	17.04	2,517	39	160
17	North Carolina	337,786	30,920	306,866	14.00	15.67	15.30	7,254	2,751	3,174
18	South Carolina	332,784	4,000	328,784	11.00	15.50	15.13	8,546	1,215	1,606
19	Georgia	445,452	20,524	424,928	14.00	15.03	14.35	10,459	1,434	1,513
20	Alabama	79,234	9,460	69,774	11.00	13.69	12.67	1,692	252	584
21	Mississippi	57,004	.....	57,004	12.00	14.72	14.58	1,352	.....	232
22	Kentucky	42,942	8,784	34,158	9.00	17.00	15.75	677	.....	160
23	Tennessee	97,524	21,588	75,936	13.00	12.88	12.22	2,043	.....	128
24	All other southern states	66,980	.....	66,980	.....	.....	.....	1,726	112	552
25	Western states	164,226	40,504	123,722	13.00	15.82	15.32	3,410	40	24
26	Ohio	16,560	8,152	8,408	8.00	7.88	7.73	40	40	.....
27	Indiana	74,604	16,320	58,284	15.00	15.46	14.66	1,649	.....	24
28	Illinois	21,800	8,000	13,800	8.00	19.25	17.20	465	.....	.....
29	Wisconsin	32,592	5,632	26,960	19.00	20.11	20.37	870	.....	.....
30	All other western states.	18,670	2,400	16,270	.....	.....	.....	386	.....	.....

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890—Continued.

MACHINERY—continued.					MATERIALS USED.							
Looms—Continued.						Cotton.						
On plain cloths 32 to 36 inches wide.	On plain cloths more than 36 inches wide.	On twills, including sateens.	On fancy weaves.	On bags and other special fabrics.	Total cost.	Egyptian, other foreign, and sea island.			Other domestic.			
						Bales.	Pounds.	Cost.	Bales.	Pounds.	Cost.	
55,356	71,591	53,726	23,233	5,450	$154,912,979	30,215	14,452,866	$3,054,774	2,231,385	1,103,492,910	$114,337,802	1
35,063	62,508	46,346	18,900	1,762	101,101,446	20,321	9,899,494	2,065,270	1,405,637	704,792,220	74,683,860	2
2,969	6,861	4,961	2,469	486	8,446,736	.....	.....	.....	132,504	65,717,252	7,053,168	3
6,232	3,840	9,770	690	350	12,962,939	.....	.....	.....	214,034	107,319,124	11,203,742	4
.....	.....	.....	.....	.....	542,065	.....	.....	.....	8,954	4,647,889	408,348	5
21,680	26,024	18,895	10,659	345	56,586,283	6,747	3,228,105	663,420	765,773	383,539,221	40,206,887	6
3,129	18,700	9,481	1,828	303	14,347,672	6,733	3,426,367	700,925	186,558	94,555,788	10,446,155	7
1,053	7,083	3,239	3,254	278	8,215,751	6,841	3,245,022	709,925	97,814	49,012,946	5,275,560	8
3,628	5,708	4,930	2,358	2,653	23,044,093	9,894	4,553,372	989,504	251,260	123,630,916	12,917,244	9
1,396	3,395	1,112	175	326	5,564,251	653	483,368	78,560	78,171	39,038,689	4,192,105	10
103	393	959	861	458	3,028,933	9,241	4,070,004	910,944	16,482	8,231,147	905,524	11
1,546	1,350	2,027	1,130	1,815	10,485,247	.....	.....	.....	92,705	44,629,588	4,371,693	12
.....	206	.....	.....	.....	587,646	.....	.....	.....	8,876	4,465,825	475,490	13
493	364	832	192	54	3,378,016	.....	.....	.....	55,026	27,205,667	2,972,432	14
13,956	2,875	2,442	1,975	906	27,764,055	.....	.....	.....	526,856	250,837,646	24,508,776	15
1,380	126	236	576	.....	1,199,578	.....	.....	.....	22,731	10,616,206	1,080,773	16
806	339	73	4	107	6,239,902	.....	.....	.....	114,371	53,546,289	5,396,974	17
3,826	1,001	898	.....	.....	6,819,320	.....	.....	.....	133,342	64,000,600	6,242,598	18
3,915	905	717	1,325	650	7,832,230	.....	.....	.....	145,859	69,139,410	6,663,560	19
684	164	.....	.....	8	1,459,048	.....	.....	.....	29,962	14,726,454	1,372,058	20
700	40	180	.....	.....	871,970	.....	.....	.....	17,366	8,449,834	793,600	21
448	.....	.....	.....	69	643,949	.....	.....	.....	11,980	5,751,305	554,206	22
1,525	.....	258	70	62	1,765,162	.....	.....	.....	33,114	15,779,360	1,554,851	23
672	300	80	.....	10	932,896	.....	.....	.....	18,131	8,828,188	850,156	24
2,709	500	8	.....	129	3,003,385	.....	.....	.....	47,632	24,232,128	2,227,922	25
.....	.....	.....	.....	.....	903,446	.....	.....	.....	11,023	5,840,078	383,556	26
1,273	352	.....	.....	.....	919,566	.....	.....	.....	16,306	8,240,434	798,178	27
440	.....	.....	.....	25	337,773	.....	.....	.....	6,405	3,267,188	312,621	28
866	.....	.....	.....	4	382,833	.....	.....	.....	6,924	3,470,388	359,117	29
130	148	8	.....	100	459,767	.....	.....	.....	6,974	3,414,040	374,450	30

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES

	STATES.	MATERIALS USED—continued.							
		Flax.		Hemp.		Jute.		Yarns not made in mill. Cotton.	
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
1	The United States	120,540	$14,600	766,931	$41,600	1,443,853	$58,310	48,779,715	$10,853,536
2	New England states					12,000	960	17,928,077	4,562,936
3	Maine							864,321	159,150
4	New Hampshire							193,255	40,560
5	Vermont								
6	Massachusetts							11,247,478	2,785,544
7	Rhode Island					12,000	960	3,333,127	852,122
8	Connecticut							2,289,896	725,560
9	Middle states	120,540	14,600	766,931	41,600	31,853	1,350	26,248,657	5,505,267
10	New York	120,540	14,600	766,931	41,600	31,853	1,350	2,551,113	440,934
11	New Jersey							1,169,600	353,204
12	Pennsylvania							21,822,153	4,651,840
13	Delaware							4,790	868
14	Maryland							701,061	58,421
15	Southern states							3,855,882	635,808
16	Virginia							5,293	821
17	North Carolina							1,938,261	327,102
18	South Carolina							945,482	171,203
19	Georgia							865,000	117,677
20	Alabama							3,000	315
21	Mississippi								
22	Kentucky							69,793	13,261
23	Tennessee							26,053	4 779
24	All other southern states							3,000	650
25	Western states					1,400,000	56,000	747,099	149,525
26	Ohio					200,000	5,000	731,499	146,300
27	Indiana								
28	Illinois								
29	Wisconsin							15,600	3,225
30	All other western states					1,200,000	51,000		

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890—Continued.

MATERIALS USED—continued.										
Yarns not made in mill—Continued.										
Woolen.		Worsted.		Silk.		Spun silk.		Linen.		
Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	
196,874	$131,657	87,257	$62,514	32,851	$154,336	18,583	$83,064	17,722	$9,823	1
14,837	10,313	15,763	7,725	17,337	81,109	1,522	6,346	9,500	5,140	2
										3
										4
										5
7,837	4,563	14,981	6,962	10,302	39,183	892	4,270	4,500	2,140	6
2,000	2,000	782	763	235	1,826	130	576	5,000	3,000	7
5,000	3,750			6,800	40,100	500	1,500			8
179,037	120,544	71,494	54,789	15,514	73,227	17,026	76,618	8,222	4,683	9
96	38	14,494	10,918	1,583	7,237	2,510	8,550	69	27	10
										11
178,941	120,506	57,000	43,871	13,931	65,990	14,516	68,068	8,153	4,656	12
										13
										14
3,000	800					35	100			15
										16
3,000	800									17
										18
										19
						35	100			20
										21
										22
										23
										24
										25
										26
										27
										28
										29
										30

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES,

	STATES.	MATERIALS USED—continued.							
		Yarns not made in mill—Continued.				Waste.		Oil.	
		Jute.		Other yarn.					
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Gallons.	Cost.
1	The United States	99,938	$8,976	224,729	$59,312	102,567,306	$4,749,867	1,972,491	$430,393
2	New England states	33,363	2,383			71,855,604	3,359,429	1,417,740	301,432
3	Maine					4,459,851	309,655	110,024	26,718
4	New Hampshire					64,460	3,550	169,061	28,651
5	Vermont							12,480	1,740
6	Massachusetts	2,800	235			61,488,846	2,732,648	829,712	162,371
7	Rhode Island	563	48			4,804,447	240,390	191,665	57,030
8	Connecticut	30,000	2,100			1,038,000	73,186	104,798	24,922
9	Middle states	66,575	6,593	224,729	59,312	10,049,850	618,415	239,037	59,091
10	New York	5,000	400	3,000	1,350	7,160,374	444,556	53,142	13,780
11	New Jersey					200,476	10,549	62,237	15,392
12	Pennsylvania	61,575	6,193	221,729	57,962	2,689,000	163,310	88,453	21,784
13	Delaware							9,669	2,559
14	Maryland							25,536	5,576
15	Southern states					13,983,544	436,861	292,683	61,794
16	Virginia							12,068	1,757
17	North Carolina					415,604	26,057	84,898	20,050
18	South Carolina					7,200	360	56,038	13,158
19	Georgia					12,255,740	326,644	84,429	15,165
20	Alabama							7,884	1,500
21	Mississippi							9,636	2,665
22	Kentucky					225,000	16,300	10,775	2,428
23	Tennessee					1,080,000	67,500	8,405	1,821
24	All other southern states							18,550	3,250
25	Western states					6,678,308	335,162	23,031	8,076
26	Ohio					5,878,308	285,162	1,149	313
27	Indiana					800,000	50,000	9,578	3,320
28	Illinois							1,744	531
29	Wisconsin							740	187
30	All other western states							9,820	3,725

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890—Continued.

MATERIALS USED—continued.										
Starch.		Chemicals and dyestuffs.	Fuel.				Rent of power and heat.	Mill supplies.	All other materials.	
			Total cost.	Coal.	Wood.	Other fuel.				
Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	
27,448,792	$915,644	$4,266,773	$4,252,088	$4,062,958	$137,721	$51,409	$319,611	$4,871,990	$6,236,309	1
20,392,893	708,490	3,278,740	3,113,008	3,054,661	31,658	26,689	182,565	3,475,182	5,256,558	2
2,215,178	81,034	201,962	161,654	160,983	671	.....	39,374	364,048	49,973	3
3,398,612	123,302	711,540	305,150	298,764	6,086	300	24,865	285,011	236,568	4
54,560	1,453	.....	10,394	9,456	938	.....	3,140	25,900	1,090	5
10,963,003	361,419	1,939,579	1,876,222	1,871,088	5,134	.....	93,908	1,735,245	3,971,687	6
2,318,964	84,070	227,336	557,946	548,865	8,681	400	13,638	585,740	573,147	7
1,442,576	57,212	198,323	201,642	165,505	10,148	25,989	7,640	479,298	424,093	8
2,413,935	84,342	427,837	559,256	547,742	.....	11,514	75,198	640,220	704,403	9
687,712	22,522	11,388	117,026	108,928	.....	8,098	9,258	97,486	50,566	10
565,723	22,255	114,665	149,551	149,551	.....	.....	7,175	234,025	305,649	11
777,360	28,778	256,944	203,390	199,974	.....	3,416	35,195	191,987	193,080	12
177,272	4,493	39,397	20,104	20,104	.....	.....	18,670	24,030	2,035	13
205,868	6,294	15,443	69,185	69,185	.....	.....	4,900	92,692	153,073	14
4,122,517	109,510	507,585	515,599	401,280	106,063	8,256	60,698	710,162	216,362	15
265,720	8,342	35,879	17,161	16,761	400	.....	2,344	48,623	3,878	16
545,643	17,851	198,585	100,565	44,821	51,669	4,075	1,550	121,031	29,337	17
807,061	28,654	42,966	111,078	92,695	15,102	3,281	2,500	180,855	25,948	18
1,643,117	39,216	182,406	140,664	125,431	14,333	900	54,204	189,357	112,337	19
108,467	3,048	6,948	23,872	19,740	4,132	.....	.....	51,157	50	20
91,281	2,724	18,000	28,184	16,360	11,824	.....	.....	15,835	10,962	21
174,949	7,129	15,048	8,704	7,504	1,200	.....	.....	18,690	8,183	22
92,688	3,306	7,053	47,525	42,221	5,304	.....	100	53,060	25,167	23
393,591	8,240	700	37,846	35,747	2,099	.....	.....	31,554	500	24
519,447	13,302	42,611	64,225	59,275	.....	4,950	1,150	46,426	58,986	25
114,992	2,643	13,993	9,784	8,234	.....	1,550	500	6,420	49,775	26
265,905	6,078	17,218	22,176	18,776	.....	3,400	.....	16,996	5,000	27
40,950	921	7,500	7,877	7,877	.....	.....	.....	8,323	.....	28
27,600	960	.....	9,496	9,496	.....	.....	650	8,187	1,011	29
70,000	2,100	3,900	14,892	14,892	.....	.....	.....	6,500	3,200	30

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES,

	STATES.	PRODUCTS.								
		Total value.	Plain cloths for printing and converting.		Brown or bleached sheetings or shirtings.		Drills, twills, and sateens.		Ginghams.	
			Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.
1	The United States	$267,981,724	955,294,320	$43,550,174	962,238,062	$55,193,439	334,020,091	$23,601,239	268,996,715	$20,686,390
2	New England states	181,112,453	811,945,763	36,811,201	634,487,634	37,784,925	258,208,026	18,475,344	114,092,225	9,975,197
3	Maine	15,316,909	16,810,752	735,065	90,310,254	5,762,028	32,673,054	2,885,938	15,991,962	1,504,041
4	New Hampshire	21,958,002	57,581,153	2,666,926	79,461,338	4,553,793	50,756,073	3,130,379	27,000,000	1,700,000
5	Vermont	914,685	13,852,465	531,613	.....	.....	.....	.....	.....	.....
6	Massachusetts	100,202,882	610,200,536	27,370,866	279,878,312	16,464,019	104,490,714	7,810,865	63,926,394	6,141,718
7	Rhode Island	27,310,499	76,694,732	3,588,671	141,167,278	8,482,198	46,882,914	3,229,795	4,666,144	418,789
8	Connecticut	15,409,476	36,866,125	1,918,060	43,670,452	2,522,887	23,405,871	1,418,367	2,507,725	210,649
9	Middle states	40,664,476	119,983,537	5,621,564	36,012,784	2,672,270	18,206,659	1,443,168	56,200,311	5,126,992
10	New York	9,777,295	89,881,716	4,369,731	25,906,655	1,976,092	2,195,021	219,502	.....	.....
11	New Jersey	5,902,615	19,262,856	582,671	57,642	4,035	4,578,342	310,898	5,478,627	444,263
12	Pennsylvania	18,431,773	6,254,018	424,969	6,162,427	538,587	8,419,181	733,063	45,685,919	4,228,069
13	Delaware	1,095,001	2,784,947	118,193	.....	.....	.....	.....	3,489,256	348,926
14	Maryland	5,457,792	1,800,000	126,000	3,886,060	153,556	3,013,615	179,705	1,546,509	105,734
15	Southern states	41,513,711	23,365,020	1,117,409	250,526,060	12,729,063	57,153,833	3,651,159	98,481,246	5,570,157
16	Virginia	1,732,648	512,220	21,558	14,265,103	831,531	5,579,736	302,330	.....	.....
17	North Carolina	9,563,443	600,000	25,000	16,810,948	894,339	651,849	62,263	56,634,853	3,028,769
18	South Carolina	9,800,798	1,350,000	54,000	89,909,344	4,426,722	32,432,976	2,052,001	8,749,312	546,849
19	Georgia	12,035,629	20,152,800	979,351	54,918,249	2,908,123	11,608,701	785,336	24,386,396	1,312,413
20	Alabama	2,190,771	.....	.....	17,644,120	944,135	1,128,513	66,851	1,000,000	70,000
21	Mississippi	1,333,398	.....	.....	11,162,809	610,269	2,072,519	143,424	2,329,403	291,349
22	Kentucky	1,000,608	.....	.....	9,070,300	392,995	.....	.....	.....	.....
23	Tennessee	2,507,719	750,000	37,500	14,581,771	719,045	1,992,534	137,734	5,221,282	308,777
24	All other southern states	1,348,637	.....	.....	22,163,416	1,001,904	1,087,005	101,220	100,000	12,000
25	Western states	4,691,084	.....	.....	41,211,584	2,007,181	450,973	31,568	222,933	14,044
26	Ohio	1,468,204	.....	.....	.....	.....	.....	.....	.....	.....
27	Indiana	1,350,425	.....	.....	18,494,154	854,663	450,973	31,568	.....	.....
28	Illinois	563,988	.....	.....	6,454,752	315,178	.....	.....	.....	.....
29	Wisconsin	620,196	.....	.....	10,730,618	570,071	.....	.....	.....	.....
30	All other western states	688,271	.....	.....	5,532,060	267,269	.....	.....	222,933	14,044

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890—Continued.

PRODUCTS—continued.														
Cotton flannels.		Upholstery goods.								Fine or fancy woven fabrics.		Duck.		
		Tapestries.		Curtains.		Chenille.		Other upholstery goods.						
Square yards.	Value.	Square yards.	Value.	Pairs.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	
132,524,706	$10,574,924	642,061	$354,987	676,032	$1,225,364	666,405	$360,706	250,970	$129,182	127,373,179	$12,545,929	55,192,538	$8,664,395	1
110,106,513	8,887,302	.....	.....	.....	.....	.....	.....	35,000	45,000	117,000,295	11,102,236	16,979,346	2,836,615	2
6,145,611	537,434	.....	.....	.....	.....	.....	.....	.....	.....	10,025,222	1,256,471	612,461	140,731	3
23,259,138	1,870,246	.....	.....	.....	.....	.....	.....	.....	.....	3,008,380	352,917	6,073,924	692,224	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
79,001,764	6,319,622	.....	.....	.....	.....	.....	.....	35,000	45,000	59,061,558	5,682,217	6,174,332	1,101,367	6
1,700,000	160,000	.....	.....	.....	.....	.....	.....	.....	.....	20,363,202	2,004,668	.....	.....	7
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,541,933	1,805,963	4,118,620	902,293	8
10,809,242	949,761	642,061	354,987	675,932	1,224,964	666,405	360,706	215,970	84,182	9,968,640	1,405,897	22,541,200	4,190,527	9
.....	.....	250,000	100,000	3,500	17,500	.....	.....	.....	.....	50,000	20,000	150,000	34,500	10
1,750,173	155,421	.....	.....	.....	.....	.....	.....	.....	.....	449,358	31,619	1,165,338	254,917	11
8,810,063	780,022	392,061	254,987	672,432	1,207,464	666,405	360,706	215,970	84,182	8,017,282	1,243,878	.....	.....	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
249,006	14,318	.....	.....	.....	.....	.....	.....	.....	.....	552,000	110,400	21,225,862	3,901,110	14
11,608,951	737,861	.....	.....	.....	.....	.....	.....	.....	.....	404,244	37,796	15,270,658	1,570,917	15
1,172,632	87,947	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,421,120	122,873	16
7,731,783	453,385	.....	.....	.....	.....	.....	.....	.....	.....	164,244	13,796	14,670	2,263	17
460,600	32,511	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
2,051,108	146,664	.....	.....	.....	.....	.....	.....	.....	.....	240,000	24,000	10,309,019	967,799	19
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,379,297	403,342	20
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	85	21
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
192,828	17,354	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	145,552	14,555	24
.....	.....	.....	.....	100	400	.....	.....	.....	.....	.....	.....	401,334	66,336	25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
.....	.....	.....	.....	100	400	.....	.....	.....	.....	.....	.....	.....	.....	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	401,334	66,336	30

TABLE 2.—COTTON MANUFACTURE FOR THE UNITED STATES,

	STATES.	PRODUCTS—continued.									
		Ticks, denims, and stripes.		Yarns.		Twine.		Batting or wadding.		Waste.	
		Square yards.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
1	The United States	167,121,426	$16,987,546	166,397,003	$33,247,596	8,533,730	$1,364,300	20,470,556	$2,094,232	141,109,597	$5,679,701
2	New England states	130,778,135	13,516,387	62,779,938	15,380,453	2,971,413	532,632	9,631,309	921,331	96,882,997	3,754,271
3	Maine	7,581,001	1,129,811	1,718,659	321,024	314,711	59,835	306,620	26,769	3,741,265	145,368
4	New Hampshire	44,251,519	4,613,278	2,347,271	453,826	.....	.....	50,000	4,000	10,927,461	307,272
5	Vermont	.....	.....	1,607,508	369,812	.....	.....	1,500	135	350,000	13,125
6	Massachusetts	61,192,423	6,118,390	39,770,635	9,858,787	1,595,812	255,091	4,849,500	408,003	68,327,318	2,713,722
7	Rhode Island	900,000	60,000	12,569,683	2,953,458	253,814	64,233	4,173,689	462,424	8,794,229	377,317
8	Connecticut	16,853,192	1,594,908	4,766,182	1,423,546	807,076	153,473	250,000	20,000	4,742,724	197,467
9	Middle states	19,468,275	2,257,953	31,532,884	5,699,441	2,778,867	385,076	1,516,694	166,985	17,345,471	939,814
10	New York	.....	.....	7,289,995	1,468,639	691,785	95,000	1,079,713	115,131	9,124,336	502,624
11	New Jersey	.....	.....	379,949	81,283	7,600	2,280	147,212	17,725	2,312,995	110,720
12	Pennsylvania	16,309,604	1,956,998	21,412,876	3,683,790	.....	.....	298,769	34,129	3,307,740	247,460
13	Delaware	2,669,600	239,997	1,917,646	378,894	.....	.....	.....	.....	100,400	4,010
14	Maryland	489,071	60,958	532,418	86,835	2,079,482	287,796	.....	.....	2,500,000	75,000
15	Southern states	16,875,016	1,213,206	67,752,241	11,311,733	1,787,250	285,649	2,383,961	202,655	20,796,367	656,142
16	Virginia	5,069,000	351,796	.....	.....	.....	.....	1,475	147	185,000	7,400
17	North Carolina	879,990	87,284	25,483,803	4,299,020	999,480	154,777	41,986	3,556	2,008,873	64,817
18	South Carolina	28,987	2,029	15,306,665	2,470,535	66,218	13,557	100	62	3,161,108	117,144
19	Georgia	7,869,707	582,608	16,842,028	2,802,766	174,613	26,352	717,250	51,106	13,291,557	390,420
20	Alabama	2,769,590	173,982	2,062,281	332,560	186,723	30,156	.....	.....	460,344	18,313
21	Mississippi	.....	.....	1,583,623	273,496	.....	.....	77,350	5,816	321,119	8,459
22	Kentucky	.....	.....	1,636,776	350,841	137,055	18,649	115,475	10,725	87,500	3,500
23	Tennessee	266,742	15,507	4,683,815	757,995	223,161	42,158	1,430,325	131,243	930,866	32,934
24	All other southern states	.....	.....	153,250	24,520	.....	.....	.....	.....	350,000	13,125
25	Western states	.....	.....	4,331,940	855,969	996,200	160,943	6,938,592	803,261	6,084,762	329,474
26	Ohio	.....	.....	1,425,000	309,250	.....	.....	4,955,000	590,000	5,330,000	307,954
27	Indiana	.....	.....	1,906,940	373,719	.....	.....	901,350	83,001	354,851	7,474
28	Illinois	.....	.....	950,000	169,000	50,000	10,000	557,242	69,810	.....	.....
29	Wisconsin	.....	.....	.....	.....	31,000	5,271	225,000	29,250	274,911	10,296
30	All other western states	.....	.....	50,000	4,000	915,200	145,672	300,000	31,200	125,000	3,750

a Includes the value of "sewing cotton". This item is not shown separately in order to avoid disclosing the operations of individual establishments. 13,868,309 pounds of sewing cotton were manufactured in the United States during the census year 1890, valued at $11,637,500. Of this amount 9,454,240 pounds, valued at $7,860,189, were manufactured in the New England states; 3,729,722 pounds, valued at $3,585,476, in the middle states; and 684,347 pounds, valued at $191,835, in the southern states.

BY GEOGRAPHICAL DIVISIONS AND STATES: 1890—Continued.

PRODUCTS—continued.							PRINTING, DYEING, AND BLEACHING CLOTH AND YARN IN COTTON MILLS.								
Rope.		All other products. (a)	Weight of piece goods produced.	Weight of yarn spun and purchased.	Weight of products other than piece goods and yarn.	Number of printing machines.	Cloth printed.	Additional gross value given by printing.	Cloth dyed.	Yarn dyed.	Additional gross value given by dyeing.	Cloth bleached.	Yarn bleached.	Additional gross value given by bleaching.	
Pounds.	Value.	Value	Pounds.	Pounds.	Pounds.		Square yards.		Square yards.	Pounds.		Square yards.	Pounds.		
3,590,228	$179,415	$31,242,205	758,903,844	164,184,302	226,919,071	74	142,590,083	$3,217,062	40,338,722	90,792,931	$3,717,532	65,540,307	1,671,434	$531,618	1
75,000	11,250	21,078,309	519,013,355	59,227,770	146,622,828	66	142,590,083	3,217,062	8,494,683	63,193,072	2,502,999	55,207,889	602,286	423,908	2
.....	.....	812,394	53,204,318	1,758,935	8,601,052	2	1,912,009	4,877	2,900,743	8,885,429	312,450	26,340,921	.....	190,797	3
.....	.....	1,613,141	88,820,137	2,347,271	11,271,879	16	24,284,721	339,985	.....	14,908,951	747,339	5,300,000	.....	30,000	4
.....	.....	.....	2,144,883	1,607,508	351,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
.....	.....	9,913,215	276,447,550	35,964,705	97,797,086	44	114,319,877	2,692,950	1,304,064	29,486,218	976,832	22,966,968	.....	168,888	6
.....	.....	5,508,946	62,796,766	12,613,169	20,144,123	3	1,948,476	178,000	2,189,876	3,740,931	250,016	.....	362,286	3,623	7
75,000	11,250	3,230,613	35,599,701	4,936,182	8,457,188	1	125,000	1,250	2,100,000	6,171,543	216,362	600,000	240,000	30,600	8
120,822	17,358	7,702,831	85,279,619	32,387,884	34,717,608	5	.....	.....	30,057,104	8,365,480	605,756	.....	999,948	34,582	9
.....	.....	858,576	25,698,119	7,389,995	13,376,202	5	.....	.....	6,255,000	379,473	13,680	.....	.....	.....	10
.....	.....	3,906,783	6,308,690	379,949	6,086,081	.....	.....	.....	19,762,848	1,778,371	276,419	.....	479,948	21,582	11
.....	.....	2,653,469	31,142,757	22,167,876	10,439,621	.....	.....	.....	.....	5,238,410	262,944	.....	520,000	13,000	12
.....	.....	4,981	1,910,592	1,917,646	100,400	.....	.....	.....	3,489,256	738,004	33,552	.....	.....	.....	13
120,822	17,358	330,022	20,219,461	532,418	4,715,304	.....	.....	.....	550,000	231,222	19,161	.....	.....	.....	14
2,894,406	375,807	2,054,157	144,177,852	68,266,708	29,192,081	3	.....	.....	1,786,935	17,992,439	574,479	10,032,418	69,200	70,128	15
.....	.....	7,066	7,719,379	.....	225,732	.....	.....	.....	.....	1,307,350	32,684	.....	.....	.....	16
279,746	37,218	436,956	20,670,453	25,483,797	4,363,605	.....	.....	.....	1,786,935	5,951,730	208,198	.....	.....	.....	17
.....	.....	85,388	39,883,826	15,306,137	2,481,426	.....	.....	.....	.....	1,487,150	57,750	2,438,468	.....	18,288	18
598,353	84,875	973,816	42,157,349	17,357,029	15,465,209	3	.....	.....	.....	6,970,022	220,482	7,593,950	69,200	51,840	19
505,314	55,235	36,197	9,636,974	2,062,281	1,165,416	.....	.....	.....	.....	450,000	18,000	.....	.....	.....	20
.....	.....	500	5,383,336	1,583,623	398,469	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
650,104	87,764	136,194	2,611,339	1,636,776	1,225,629	.....	.....	.....	.....	1,436,820	17,692	.....	.....	.....	22
838,802	107,844	199,598	7,626,528	4,683,815	3,480,863	.....	.....	.....	.....	363,467	18,173	.....	.....	.....	23
22,087	2,871	178,442	8,488,668	153,250	385,732	.....	.....	.....	.....	25,000	1,500	.....	.....	.....	24
500,000	75,000	346,908	10,433,018	4,301,940	16,386,554	.....	.....	.....	.....	1,241,940	34,298	300,000	.....	3,000	25
.....	.....	261,000	.....	1,425,000	11,235,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
.....	.....	.....	4,772,247	1,876,940	1,257,201	.....	.....	.....	.....	891,940	22,298	.....	.....	.....	27
.....	.....	.....	1,424,131	350,000	607,242	.....	.....	.....	.....	200,000	6,000	.....	.....	.....	28
.....	.....	4,908	2,682,606	.....	546,911	.....	.....	.....	.....	.....	.....	.....	.....	.....	29
500,000	75,000	81,000	1,554,034	50,000	2,740,200	.....	.....	.....	.....	150,000	6,000	300,000	.....	3,000	30

TABLE 3.—CLASSIFICATION OF EMPLOYÉS AND WAGES IN COTTON

	STATES.	Number of establishments.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS. (a)									
			Aggregates.		Officers or firm members actively engaged in the industry or in supervision.							
					Males above 16 years.				Females above 15 years.			
			Average number.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
1	The United States	905	221,585	$69,489,272	1,351	48	$34.93	$2,286,461	3	42	$15.34	$1,950
2	Alabama	13	2,137	447,173	27	46	25.18	31,525	.....	.....	.....	.....
3	Connecticut	65	13,411	4,524,483	98	49	36.26	173,586	.....	.....	.....	.....
4	Delaware	7	987	324,328	8	50	25.75	10,300	.....	.....	.....	.....
5	Georgia	53	10,530	2,366,085	96	47	27.31	122,396	.....	.....	.....	.....
6	Illinois	4	454	150,386	10	50	24.10	12,050	.....	.....	.....	.....
7	Indiana	6	1,225	332,676	14	49	29.38	20,324	.....	.....	.....	.....
8	Kentucky	5	834	189,039	12	50	22.37	13,420	.....	.....	.....	.....
9	Maine	23	13,992	4,372,473	42	49	60.29	123,586	.....	.....	.....	.....
10	Maryland	15	4,313	1,134,445	24	46	52.85	58,800	.....	.....	.....	.....
11	Massachusetts	187	76,213	26,230,667	284	49	52.79	736,818	1	44	17.14	750
12	Mississippi	9	1,184	290,981	16	48	24.61	19,100	.....	.....	.....	.....
13	New Hampshire	27	19,533	6,429,084	34	50	44.93	75,824	.....	.....	.....	.....
14	New Jersey	17	5,083	2,054,282	20	49	39.79	38,840	.....	.....	.....	.....
15	New York	42	8,401	2,563,730	48	49	35.10	82,700	.....	.....	.....	.....
16	North Carolina	91	8,742	1,646,196	135	48	18.59	121,730	.....	.....	.....	.....
17	Ohio	7	584	193,757	17	49	21.97	18,460	.....	.....	.....	.....
18	Pennsylvania	158	12,960	4,687,088	182	48	24.22	210,223	.....	.....	.....	.....
19	Rhode Island	94	24,832	8,131,142	128	49	31.61	196,779	.....	.....	.....	.....
20	South Carolina	34	8,192	1,646,574	64	48	34.14	105,970	.....	.....	.....	.....
21	Tennessee	20	2,174	495,438	36	49	21.78	38,185	2	42	14.40	1,200
22	Vermont	6	737	220,742	11	50	26.55	14,604	.....	.....	.....	.....
23	Virginia	9	2,019	406,824	21	48	26.96	27,181	.....	.....	.....	.....
24	Wisconsin	4	501	142,470	6	50	21.33	6,400	.....	.....	.....	.....
25	All other states (b)	9	1,847	509,209	18	46	33.43	27,720	.....	.....	.....	.....

	STATES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.									
		Operatives and skilled—Continued.				Unskilled.					
		Children.				Males above 16 years.				Females above 15 years.	
		Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.
26	The United States	22,433	49	$2.65	$2,913,283	5,105	49	$7.69	$1,934,546	88	50
27	Alabama	473	49	1.78	41,496	78	49	4.77	18,290	.....	.....
28	Connecticut	1,045	49	3.29	168,520	322	50	7.92	126,756	.....	.....
29	Delaware	217	50	2.65	28,703	21	50	9.28	9,748	.....	.....
30	Georgia	2,287	48	1.96	213,175	200	47	6.09	57,733	.....	.....
31	Illinois	38	50	2.47	4,696	6	50	9.00	2,700	.....	.....
32	Indiana	235	50	2.27	26,544	9	50	7.21	3,245	.....	.....
33	Kentucky	178	50	1.89	16,857	5	50	5.40	1,350	.....	.....
34	Maine	705	50	2.88	101,592	303	49	7.98	118,001	15	50
35	Maryland	938	48	2.40	107,442	151	47	7.85	55,792	.....	.....
36	Massachusetts	3,953	50	3.35	655,504	1,759	49	8.21	713,205	29	50
37	Mississippi	237	48	1.67	19,127	38	47	7.09	12,725	.....	.....
38	New Hampshire	841	49	3.03	124,997	498	50	8.80	218,318	5	50
39	New Jersey	398	50	2.70	53,819	86	48	10.68	44,342	6	50
40	New York	1,025	50	3.08	157,466	150	50	7.21	53,968	10	50
41	North Carolina	2,038	49	1.84	184,801	219	49	4.71	50,679	2	50
42	Ohio	7	50	1.63	572	8	49	11.82	4,628	.....	.....
43	Pennsylvania	1,393	48	2.80	188,933	104	49	8.01	64,739	3	50
44	Rhode Island	3,138	50	3.12	486,951	734	50	7.61	276,813	.....	.....
45	South Carolina	2,103	49	1.93	199,991	214	49	5.00	52,735	1	50
46	Tennessee	319	49	2.30	35,742	71	49	6.10	21,401	17	50
47	Vermont	87	50	2.79	12,133	17	50	7.11	6,041	.....	.....
48	Virginia	416	46	2.11	40,719	17	49	6.30	5,225	.....	.....
49	Wisconsin	53	50	1.61	4,264	7	50	9.19	3,215	.....	.....
50	All other states	309	49	2.61	39,239	28	48	8.91	11,997	.....	.....

a The average weekly earnings per employé are computed from individual reports. The average number of employés reported by each establishment is multiplied by the number of weeks embraced by the term of operation; the result is the number of weeks required for one employé to perform the labor. Aggregating such results of individual reports the number of weeks required for one employé to perform the labor is obtained. This number used as a divisor for the total wages produces the true average weekly earnings.

MANUFACTURE FOR THE UNITED STATES, BY STATES: 1890.

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.																
Clerks.								Operatives and skilled.								
Males above 16 years.				Females above 15 years.				Males above 16 years.				Females above 15 years.				
Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	
1,276	49	$18.19	$1,140,901	79	50	$9.04	$35,422	80,735	49	$7.75	$30,761,249	95,733	49	$5.53	$26,019,812	1
21	50	11.85	12,340	1	50	8.00	400	630	49	5.31	164,103	793	49	4.19	162,401	2
88	50	24.79	109,010	5	50	9.36	2,341	6,063	49	7.68	2,289,872	5,223	49	5.69	1,453,728	3
8	50	14.21	5,682	.....	.....	.....	.....	239	50	10.41	124,414	484	50	5.91	143,046	4
116	48	13.36	74,189	4	48	12.72	2,464	3,345	47	5.75	907,724	3,458	47	4.55	745,088	5
13	50	21.15	13,750	1	50	12.00	600	106	50	8.14	43,137	280	50	5.25	73,453	6
2	46	21.93	2,010	.....	.....	.....	.....	316	50	7.69	120,483	616	50	4.39	135,170	7
4	50	25.23	5,046	.....	.....	.....	.....	263	50	5.89	77,516	372	50	4.02	74,850	8
38	49	19.12	35,364	.....	.....	.....	.....	4,710	48	7.52	1,714,820	6,580	48	5.68	1,808,700	9
32	47	13.06	19,749	1	50	7.20	360	1,080	48	7.46	387,820	1,968	48	5.12	483,721	10
345	50	20.90	357,097	39	50	9.04	17,637	30,413	50	8.05	12,154,162	34,379	50	5.89	10,024,634	11
14	47	11.97	7,884	.....	.....	.....	.....	368	48	7.09	126,528	265	49	4.66	60,724	12
112	50	19.52	108,998	4	50	10.29	2,058	7,379	50	7.56	2,775,744	10,079	50	5.83	2,919,999	13
24	50	23.47	28,163	7	49	7.60	2,620	1,703	48	10.44	846,715	2,948	48	6.25	892,363	14
37	50	17.96	32,999	.....	.....	.....	.....	2,973	50	7.62	1,129,685	3,646	50	5.28	960,079	15
91	49	10.90	48,234	1	50	6.00	300	2,362	49	5.25	607,637	3,272	49	3.21	513,130	16
12	49	22.37	13,144	1	46	13.09	600	227	49	9.30	103,895	312	48	3.53	52,518	17
107	48	16.87	87,106	5	49	7.09	1,742	4,560	47	9.71	2,094,216	5,521	48	6.42	1,714,418	18
126	50	18.95	118,776	2	50	8.20	820	9,431	50	7.99	3,737,253	9,335	49	5.70	2,631,457	19
52	49	11.10	28,370	5	47	7.33	1,740	2,587	49	5.17	651,706	2,986	49	3.90	567,939	20
11	48	20.83	11,000	1	50	9.60	480	534	49	6.31	165,661	754	49	3.24	118,742	21
2	50	16.00	1,600	.....	.....	.....	.....	303	50	7.53	114,030	304	50	4.50	68,384	22
8	47	15.15	5,650	.....	.....	.....	.....	516	47	6.29	153,236	908	47	3.54	150,077	23
5	50	19.60	4,900	.....	.....	.....	.....	191	50	6.54	62,460	239	50	5.12	61,231	24
8	50	24.60	9,840	2	50	12.60	1,260	436	49	9.76	208,432	1,011	50	4.05	203,360	25

AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.						PIECEWORKERS—AVERAGE NUMBER EMPLOYED AND TOTAL WAGES.								
Unskilled—Continued.														
Females above 15 years—Continued.		Children.				Summary.		Males above 16 years.		Females above 15 years.		Children.		
Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	
$4.37	$19,167	67	50	$2.16	$7,234	14,715	$4,369,247	2,997	$1,101,722	10,786	$3,126,107	932	$141,418	26
.....	.....	.....	.....	.....	.....	114	16,618	27	5,806	59	9,283	28	1,529	27
.....	.....	.....	.....	.....	.....	567	200,670	94	34,309	473	166,361	.....	.....	28
.....	.....	.....	.....	.....	.....	10	2,435	6	1,377	4	1,058	.....	.....	29
.....	.....	.....	.....	.....	.....	1,024	243,316	304	108,204	547	116,614	173	18,498	30
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31
.....	.....	.....	.....	.....	.....	133	24,900	.....	.....	133	24,900	.....	.....	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
3.37	2,528	5	50	3.00	750	1,594	466,232	180	66,567	1,261	360,680	153	38,985	34
.....	.....	.....	.....	.....	.....	119	20,761	18	4,181	101	16,580	.....	.....	35
5.87	8,447	1	50	3.00	150	5,010	1,562,263	929	345,601	3,944	1,199,736	137	16,926	36
.....	.....	.....	.....	.....	.....	246	44,893	44	12,585	133	24,658	69	7,650	37
5.87	1,467	.....	.....	.....	.....	581	201,679	267	112,950	261	75,708	53	13,021	38
3.94	1,182	3	50	1.89	284	488	145,954	39	27,954	437	116,188	12	1,812	39
4.27	2,136	.....	.....	.....	.....	512	144,697	123	44,562	378	98,941	11	1,194	40
2.08	208	.....	.....	.....	.....	622	119,477	207	49,054	382	68,176	33	2,247	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
2.21	332	5	50	3.78	944	1,020	324,435	267	121,614	734	199,802	19	3,019	43
.....	.....	1	50	3.12	156	1,937	682,137	342	126,718	1,552	548,258	43	7,161	44
4.64	232	16	50	1.85	1,470	164	36,412	48	13,560	83	19,040	33	3,812	45
3.10	2,635	35	50	1.86	3,255	394	97,137	65	16,210	226	63,101	103	17,826	46
.....	.....	.....	.....	.....	.....	13	3,950	5	2,050	5	1,750	3	150	47
.....	.....	.....	.....	.....	.....	133	24,136	30	8,220	43	8,428	60	7,488	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	.....	1	50	4.32	216	34	7,145	2	200	30	6,845	2	100	50

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arkansas, 2; California, 1; Iowa, 2; Louisiana, 2; Missouri, 1; Texas, 1.

TABLE 4.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY IN COTTON MANUFACTURE FOR THE UNITED STATES, BY STATES: 1890.

STATES.	Number of establishments.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK. (a)									
		Aggregates.		Males above 16 years.							
		Average number.	Total wages.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.
The United States	905	221,585	$69,489,272	88,467	15,164	9,924	15,491	10,485	9,120	8,712	8,409
Alabama	13	2,137	447,173	756	377	108	76	58	38	42	11
Connecticut	65	13,411	4,524,483	6,571	906	673	1,401	973	678	622	541
Delaware	7	987	324,328	276	14	14	23	15	15	59	40
Georgia	53	10,530	2,366,085	3,757	1,653	640	641	189	97	126	99
Illinois	4	454	150,386	135	24	7	6	4	12	18	29
Indiana	6	1,325	332,676	341	19	95	78	24	35	17	13
Kentucky	5	834	189,039	284	120	69	11	10	7	42	4
Maine	23	13,992	4,372,473	5,093	704	555	1,340	578	375	516	524
Maryland	15	4,313	1,134,445	1,287	231	225	100	141	122	129	161
Massachusetts	187	76,213	26,230,667	32,801	4,252	3,061	5,779	4,354	3,790	3,938	3,711
Mississippi	9	1,184	290,981	436	93	53	80	50	28	40	25
New Hampshire	27	19,533	6,429,084	8,023	951	1,246	1,385	1,108	750	876	876
New Jersey	17	5,683	2,054,282	1,833	163	65	289	111	354	121	185
New York	42	8,401	2,563,730	3,208	691	552	460	420	156	224	291
North Carolina	91	8,742	1,646,196	2,807	1,333	439	446	145	71	74	59
Ohio	7	584	193,757	264	27	9	17	24	41	20	60
Pennsylvania	158	12,960	4,687,088	5,013	396	331	693	528	447	598	637
Rhode Island	94	24,832	8,131,142	10,419	1,132	876	1,937	1,452	1,877	998	1,000
South Carolina	34	8,192	1,646,574	2,917	1,536	509	360	136	59	76	64
Tennessee	20	2,174	495,438	652	248	55	109	45	26	92	8
Vermont	6	737	220,742	333	52	47	70	50	25	22	26
Virginia	9	2,019	406,824	562	151	176	81	44	18	21	21
Wisconsin	4	501	142,470	209	56	53	28	6	13	11	13
All other states (b)	9	1,847	509,209	490	35	66	81	20	86	30	11

STATES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.										
	Males above 16 years—Continued.				Females above 15 years.						
	$12 and over but under $15.	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.
The United States	5,427	3,027	1,291	1,417	95,903	32,090	20,823	21,731	11,324	5,633	2,810
Alabama	11	5	13	17	794	532	203	42	11	6	.....
Connecticut	369	205	84	119	5,228	1,313	1,262	1,480	750	299	103
Delaware	65	16	6	9	484	106	116	135	58	34	35
Georgia	76	102	66	68	3,462	2,059	599	434	308	48	9
Illinois	1	13	8	13	281	60	149	39	11	16	5
Indiana	26	15	8	11	616	431	126	48	8	3	.....
Kentucky	5	6	4	6	372	292	50	4	9	7	2
Maine	253	109	82	57	6,595	1,666	1,693	1,929	752	244	185
Maryland	85	57	16	20	1,909	1,006	362	376	116	103	6
Massachusetts	2,204	843	339	530	34,448	9,418	6,987	8,427	4,643	2,865	1,512
Mississippi	31	22	11	3	265	108	102	52	3	.....	.....
New Hampshire	459	171	113	88	10,088	2,197	2,979	2,468	1,134	642	368
New Jersey	214	254	42	35	2,961	578	610	718	831	181	34
New York	207	121	40	46	3,656	1,156	947	1,178	281	62	20
North Carolina	70	82	52	36	3,275	2,849	294	111	18	3	.....
Ohio	9	32	9	16	313	281	27	.....	4	.....	.....
Pennsylvania	626	489	142	126	5,529	1,348	1,103	1,153	899	401	335
Rhode Island	513	362	151	121	9,337	2,170	2,030	2,849	1,399	615	168
South Carolina	53	43	37	44	2,992	2,136	692	136	18	6	4
Tennessee	17	18	23	11	774	658	70	36	7	.....	1
Vermont	17	13	3	8	304	171	73	31	21	3	1
Virginia	13	12	15	10	908	853	40	15	.....	.....	.....
Wisconsin	14	8	7	.....	239	69	81	43	10	35	1
All other states	89	29	20	23	1,013	633	228	27	33	60	21

a In comparing the table of weekly rates and the average number of employés at each rate with the average weekly earnings presented in Table 3, it must be remembered that it is not practicable to obtain true average weekly earnings from the table of weekly rates, because the term of employment varies for employés employed at the respective rates.

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Arkansas, 2; California, 1; Iowa, 2; Louisiana, 2; Missouri, 1; Texas, 1.

TABLE 4.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY IN COTTON MANUFACTURE FOR THE UNITED STATES, BY STATES: 1890—Continued.

STATES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.									PIECEWORKERS.	
	Females above 15 years—Continued.				Children.						
	$10 and over but under $12.	$12 and over but under $15.	$15 and over but under $20.	$20 and over but under $25.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	Average number.	Total wages.
The United States	1,152	282	34	24	22,500	21,798	684	15	3	14,715	$4,369,247
Alabama					473	473				114	16,618
Connecticut	14	5	2		1,045	1,032	12		1	567	200,670
Delaware					217	216	1			10	2,435
Georgia		3	2		2,287	2,234	50	3		1,024	243,316
Illinois		1			38	38					
Indiana					235	235				133	24,900
Kentucky	4		4		178	178					
Maine	121	5			710	710				1,594	466,232
Maryland					938	938				110	20,761
Massachusetts	528	53	11	4	3,954	3,655	293	6		5,010	1,562,263
Mississippi					237	237				246	44,893
New Hampshire	280	20			841	822	19			581	201,679
New Jersey	4	1	4		401	394	7			488	145,954
New York	9	3			1,025	876	149			512	144,697
North Carolina					2,038	2,008	25	5		622	119,477
Ohio		1			7	7					
Pennsylvania	93	167	10	20	1,398	1,324	74			1,020	324,435
Rhode Island	85	21			3,139	3,093	44	1	1	1,937	682,137
South Carolina					2,119	2,108	10		1	164	36,412
Tennessee		2			354	354				394	97,137
Vermont	4				87	87				13	3,950
Virginia					416	416				133	24,136
Wisconsin					53	53					
All other states	10		1		310	310				34	7,145

SILK MANUFACTURE.

BY BYRON ROSE.

The very full and comprehensive report prepared by the late William C. Wyckoff, special agent in charge of the inquiry into the manufacture of silk and silk goods at the Tenth Census, which report covered the entire period from the earliest introduction of silk on the American continent to the decennial period of 1880, precludes the necessity in this report for any extended reference to the rise and progress of silk manufacture in the United States beyond such as may be necessary for purposes of comparison.

PRODUCTION.

The growth of the silk industry during the past decade, both in quantity and value of production, may justly be considered as one of leading interest. The value of finished products of silk manufacture in 1890 was $69,154,599, an increase in value over that of 1880 of $34,634,876, or 100.33 per cent. Table 1 exhibits the leading general facts regarding silk manufacture for the census years 1890 and 1880, showing by each state and for the United States the number of establishments, amount of capital, statistics of machinery, miscellaneous expenses, average number of employés and their wages, cost of materials used, and value of products.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY STATES: 1890 AND 1880.

STATES.	Years.	Number of establishments.	CAPITAL.				Miscellaneous expenses. (c)	MACHINERY.				
								Looms.				
								Hand.		Power.		
			Total. (a)	Value of land and buildings.	Value of machinery, tools, and implements.	Live assets. (b)		On broad goods.	On narrow goods.	On broad goods.	On ribbons.	On other narrow goods.
The United States	1890	472	$51,007,537	$6,904,028	$14,181,680	$29,921,229	$4,259,623	413	1,334	14,866	4,389	1,567
	1880	382	19,125,300	3,836,600	5,227,500	10,061,200	.....	1,629	1,524	3,103	(d)	(d)
California	1890	9	112,283	.....	30,409	81,874	10,438	.....	35	.....	1	.....
	1880	5	164,300	16,400	62,000	85,900	.....	.....	24	.....	.....	.....
Connecticut	1890	35	9,037,042	1,295,789	1,617,538	6,123,715	270,426	6	.....	1,053	290	29
	1880	28	4,436,500	746,000	1,247,550	2,442,950	.....	2	10	448	.....	.....
Illinois	1890	10	422,096	93,000	106,200	222,896	35,761	.....	82	.....	.....	44
	1880	5	82,000	25,000	30,000	27,000	.....	.....	51	.....	.....	.....
Maryland	1890	4	50,400	7,500	12,400	30,500	3,798	.....	.....	.....	14	.....
	1880	4	20,900	3,500	10,000	7,400	.....	.....	39	.....	.....	.....
Massachusetts	1890	20	3,353,296	364,800	591,908	2,396,588	484,390	41	55	354	.....	90
	1880	22	1,306,900	194,100	303,950	808,850	.....	62	91	.....	.....	.....
New Jersey	1890	132	16,809,927	2,170,079	5,039,564	9,600,284	1,356,137	218	19	9,146	2,112	229
	1880	106	6,952,325	984,100	2,290,000	3,678,225	.....	1,444	153	2,017	.....	.....
New York	1890	185	11,165,918	1,376,242	3,612,758	6,176,918	1,123,671	80	972	1,838	1,478	572
	1880	151	4,696,775	1,433,000	966,000	2,297,775	.....	85	906	543	.....	.....
Ohio	1890	3	37,830	15,000	1,750	21,080	2,662	8	8	.....	.....	.....
	1880	6	24,700	4,000	12,000	8,700	.....	.....	22	.....	.....	.....
Pennsylvania	1890	66	9,362,063	1,462,502	2,941,679	4,957,882	939,051	60	163	2,306	451	608
	1880	49	1,379,900	422,000	287,000	670,900	.....	36	226	95	.....	.....
Rhode Island	1890	3	122,256	.....	70,364	51,892	17,427	.....	.....	.....	43	.....
	(e) 1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	(f) 1890	5	534,426	119,716	157,110	257,600	15,862	.....	.....	169	.....	.....
	(g) 1880	6	61,000	8,500	19,000	33,500	.....	.....	2	.....	.....	.....

a Value of hired property is not included in the capital reported in 1890, because it was not included in the report of 1880.

b This item was not fully reported in 1880.

c Items under this head were not reported in 1880.

d Not separately reported in 1880.

e Included in group "All other states, 1880".

f Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia 1.

g Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Kansas, 1; Maine, 1; Missouri, 1; New Hampshire, 1; Rhode Island, 1; Vermont, 1.

TABLE 1.—COMPARATIVE STATEMENT FOR THE UNITED STATES, BY STATES: 1890 AND 1880—Continued.

STATES.	Years.	MACHINERY—continued. Power looms—Continued. Total on ribbons and other narrow goods.	Spindles. Winding, cleaning, and doubling.	Spindles. Spinning and twisting.	Spindles. Braiding.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. Aggregates. Average number.	Aggregates. Total wages.	Males above 16 years.	Females above 15 years.	Children.	COST OF MATERIALS USED. Raw silk and silk materials.	Other textile materials.
The United States	1890	5,956	369,035	718,360	167,403	50,913	$19,680,318	18,998	29,049	2,866	$46,351,200	$2,327,684
	1880	2,218	164,218	262,312	81,607	31,337	9,146,705	9,375	16,396	5,566	19,208,683	1,400,480
California	1890	1	799	2,018	29	214	83,566	56	156	2	123,406	13,303
	1880	.....	200	150	754	151	41,400	20	106	25	66,418	3,500
Connecticut	1890	319	45,402	84,262	11,492	5,081	2,006,804	1,649	3,309	123	5,723,328	78,485
	1880	155	35,353	53,472	.....	3,428	1,026,530	785	1,990	653	3,025,325	12,000
Illinois	1890	44	363	369	221	805	295,636	198	597	10	155,931	111,978
	1880	13	.....	.....	.....	259	72,195	67	135	57	73,820	9,500
Maryland	1890	14	6	.....	.....	75	24,233	31	44	.....	29,530	2,799
	1880	.....	.....	.....	.....	82	11,000	12	56	14	11,630	2,980
Massachusetts	1890	90	26,235	55,200	30,403	3,216	1,290,399	1,192	1,936	88	2,861,697	156,120
	1880	88	13,514	16,936	11,000	1,826	521,725	353	1,285	188	1,730,870	161,815
New Jersey	1890	2,341	135,160	224,204	19,366	17,917	7,176,186	8,184	8,834	899	17,191,845	228,811
	1880	939	76,037	134,746	33,429	12,549	4,177,745	4,696	5,360	2,493	8,664,835	83,400
New York	1890	2,050	62,197	92,772	72,635	13,151	5,584,399	4,857	8,014	280	8,571,281	936,248
	1880	552	27,707	39,564	22,784	9,633	2,590,025	2,405	5,459	1,769	4,333,485	730,530
Ohio	1890	.....	96	.....	.....	40	13,685	10	30	.....	8,335	5,488
	1880	.....	.....	.....	.....	135	12,550	21	73	41	14,845	2,075
Pennsylvania	1890	1,054	89,429	228,786	30,217	9,522	2,981,334	2,604	5,625	1,293	10,875,625	794,350
	1880	471	9,497	15,744	6,864	3,189	678,120	1,000	1,870	319	1,207,795	394,680
Rhode Island	1890	43	930	2,463	40	194	61,978	55	109	30	147,015	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	1890	.....	8,418	28,286	3,000	698	156,104	162	395	141	663,207	102
	1880	.....	1,910	1,700	6,776	85	15,415	16	62	7	79,660	.....

STATES.	Years.	COST OF MATERIALS USED—continued. Dyestuffs, chemicals, oil, and soap.	Fuel.	Rent of power and heat.	All other materials.	Gross cost of materials.	Silk material twice included.	Cost of net materials. (a)	VALUE OF PRODUCTS. Gross value of products	Silk product twice included.	Value of net products. (a)
The United States	1890	$717,111	$400,107	$85,409	$1,122,914	$51,004,425	$15,537,520	$35,466,905	$87,298,454	$18,143,855	$69,154,599
	1880	828,314	173,283	.....	856,941	22,467,701	3,898,535	18,569,166	41,033,045	6,513,322	34,519,723
California	1890	458	102	1,734	7,403	146,406	3,500	142,906	271,912	5,600	266,312
	1880	3,552	2,355	.....	5,170	80,995	14,595	66,400	159,175	28,470	130,705
Connecticut	1890	204,864	73,134	3,400	118,665	6,201,876	889,756	5,312,120	9,788,951	1,665,390	8,123,561
	1880	115,040	41,693	.....	117,148	3,311,206	295,190	3,016,016	5,881,000	442,925	5,438,075
Illinois	1890	4,727	1,725	1,740	38,754	314,855	.....	314,855	785,845	.....	785,845
	1880	.....	.....	.....	42,575	125,895	.....	125,895	244,150	.....	244,150
Maryland	1890	6	205	.....	1,765	34,305	.....	34,305	100,361	.....	100,361
	1880	1,150	.....	.....	.....	15,760	.....	15,760	35,415	.....	35,415
Massachusetts	1890	69,976	48,149	870	115,081	3,251,893	746,175	2,505,718	5,557,569	945,610	4,611,959
	1880	64,725	15,775	.....	17,330	1,990,515	121,000	1,869,515	3,764,260	273,167	3,491,093
New Jersey	1890	155,650	143,132	33,453	155,992	17,908,883	5,205,501	12,703,382	30,760,371	5,354,389	25,405,982
	1880	482,472	78,548	.....	369,281	9,678,536	2,502,400	7,176,136	17,122,230	4,271,185	12,851,045
New York	1890	117,735	63,990	33,739	451,825	10,174,818	1,318,742	8,856,076	19,417,796	1,681,481	17,736,315
	1880	109,430	24,167	.....	134,192	5,331,804	533,600	4,798,204	10,170,140	802,115	9,368,025
Ohio	1890	.....	.....	.....	160	13,983	.....	13,983	33,927	.....	33,927
	1880	.....	.....	.....	2,575	19,495	.....	19,495	53,110	.....	53,110
Pennsylvania	1890	137,347	63,502	9,473	214,092	12,094,389	7,017,604	5,076,785	19,357,546	7,953,323	11,404,223
	1880	50,975	10,265	.....	167,270	1,830,985	404,000	1,426,985	3,491,840	638,675	2,853,165
Rhode Island	1890	998	.....	1,000	750	149,763	68,242	81,521	229,062	94,062	135,000
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	1890	25,350	6,168	.....	18,427	713,254	288,000	425,254	995,114	444,000	551,114
	1880	970	480	.....	1,400	82,510	27,750	54,760	111,725	56,785	54,940

a See explanation, page 222.

The following summaries show the value of net production in the various classes of goods manufactured as reported at the census periods of 1880 and 1890:

VALUES OF FINISHED GOODS FOR THE CENSUS YEAR 1880.

Total	$34,519,723
Sewing silk	776,120
Machine twist	6,007,735
Floss silk	225,025
Dress goods	4,115,205
Satins	1,101,875
Tie silks and scarfs	606,675
Millinery silks	891,955
Other broad goods	627,595
Handkerchiefs	3,881,590
Ribbons	6,023,100
Laces	437,000
Braids and bindings	999,685
Fringes and dress trimmings	4,950,275
Cords, tassels, passementeries, and millinery trimmings	1,866,575
Upholstery and military trimmings	1,392,355
Coach laces and carriage trimmings	37,510
Undertakers', hatters', and fur trimmings	59,805
Mixed goods and silk values therein	519,643

VALUES OF FINISHED GOODS FOR THE CENSUS YEAR 1890.

Total	$69,154,599
Machine twist and sewing silk	7,068,213
Fringe, knitting, embroidery, and floss silk	1,849,631
Dress goods, figured and plain	15,183,134
Tailors' linings	3,011,437
Tie silks and scarfs	919,919
Other broad goods	1,928,036
Handkerchiefs	1,913,224
Ribbons	17,081,447
Laces	261,750
Braids and bindings	2,771,382
Velvets and plushes	3,141,026
Upholstery goods:	
Curtains	471,324
Tapestries	1,330,287
Other upholstery broad goods	1,910,721
Gimps and trimmings	3,918,209
Dress and cloak trimmings	4,403,757
Military trimmings	232,600
Hosiery and knit goods:	
Shirts and drawers	26,421
Hosiery	141,183
Mittens, gloves, etc	897,904
Jersey cloth	90,664
Other products	602,330

The values stated in the foregoing summaries represent the value of the product at the factory. The term "net production" signifies the quantity and value of finished goods after allowance has been made for materials "twice included", which is fully explained hereafter in this report.

From the foregoing summaries it will be seen that the value of net production increased from $34,519,723 in 1880 to $69,154,599 in 1890, an increase of $34,634,876, or 100.33 per cent. In considering these figures, however, the fact should be borne in mind that, although values had declined not less than 25 per cent, as estimated by competent authorities, the amount of production in quantities shows a very marked increase.

Tables 2 and 3 show the quantities of silk goods produced in 1880 and 1890, but in this respect the report for the census of 1880 furnished a small basis for comparison with the more comprehensive report prepared for the census of 1890.

TABLE 2.—QUANTITIES OF SILK PRODUCTS: 1880.

STATES.	SEWINGS AND TWIST.	BROAD GOODS AND HANDKERCHIEFS.	RIBBONS AND LACES.	TRIMMINGS AND SMALL GOODS.
	Pounds.	Yards.	Yards.	Pounds.
The United States	821,528	10,856,284	30,129,951	710,149
California	9,500	.....	.....	4,650
Connecticut	394,981	2,253,070	8,541,235	695
Illinois	.....	.....	.....	12,220
Kansas	.....	.....	3,600	.....
Maine	4,225	.....	.....	.....
Maryland	.....	.....	.....	1,784
Massachusetts	273,816	99,120	573,320	39,789
Missouri	.....	.....	.....	65
New Hampshire	1,300	.....	.....	300
New Jersey	25,580	6,975,655	8,794,100	50,405
New York	88,765	1,427,430	10,302,696	403,330
Ohio	.....	.....	.....	2,187
Pennsylvania	23,110	101,000	1,915,000	192,824
Rhode Island	.....	.....	.....	1,900
Vermont	251	.....	.....	.....

TABLE 3.—QUANTITIES OF SILK PRODUCTS: 1890.

STATES.	Number of establishments.	SEWINGS AND TWIST. (a)	BROAD GOODS AND HANDKERCHIEFS. (b)				RIBBONS AND LACES.	TRIMMINGS AND SMALL GOODS. (c)					
		Pounds.	Yards.	Square yards.	Pairs.	Dozens.	Pieces.	Pieces.	Yards.	Dozens.	Gross.	Pairs.	Pounds.
The United States	472	1,449,462	30,171,673	4,642,820	71,049	393,902	25,737,211	5,201,128	217,944	491,512	190,984	2,000	1,140
California	9	18,829	.....	.....	.....	.....	.....	64,060	7,944	1,105	160	.....	.....
Connecticut	35	770,428	2,747,420	675,117	1,904	5,717	872,783	64,942	.....	3,750	18,341	.....	.....
Illinois	10	.....	.....	1,000	.....	.....	.....	265,024	75,000	.....	1,000	2,000	.....
Maryland	4	.....	.....	.....	.....	.....	33,200	11,000	.....	.....	.....	.....	.....
Massachusetts	20	390,683	744,383	.....	.....	.....	.....	331,727	.....	11,395	1,698	.....	1,140
New Jersey	132	44,568	18,180,072	514,295	13,820	386,520	14,629,214	164,036	500	45,936	62,000	.....	.....
New York	185	44,168	4,795,552	726,474	44	1,665	8,447,441	3,276,284	94,500	408,577	106,618	.....	.....
Ohio	3	.....	.....	.....	.....	.....	.....	11,260	.....	.....	.....	.....	.....
Pennsylvania	66	144,173	3,431,093	2,725,934	55,281	.....	1,664,608	983,915	.....	20,749	1,167	.....	.....
Rhode Island	3	.....	.....	.....	.....	.....	89,875	.....	40,000	.....	.....	.....	.....
All other states (d)	5	36,613	273,153	.....	.....	.....	.....	28,280	.....	.....	.....	.....	.....

a Includes 329,637 pounds of "fringe, knitting, embroidery, and floss silk", divided as follows: California, 4,515; Connecticut, 121,177; Massachusetts, 75,658, New Jersey, 27,593; New York, 3,779; Pennsylvania, 81,915; "All other states", 15,000.

b Includes in "Broad goods" the following: dress goods, figured and plain; tailors' linings, tie silks and scarfs, "Other broad goods", tapestries, curtains; velvets and plushes, and "Other upholstery broad goods".

c Includes gimps and trimmings, braids and bindings, dress and cloak trimmings, military trimmings, hosiery and knit goods, and jersey cloth. (Jersey cloth as follows: United States, 75,444 yards, viz., California, 444, and New York, 75,000.)

d Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

DEVELOPMENT OF SILK MANUFACTURE.

In addition to what has been shown regarding the increase in both value and quantity of production during the past decade, a very great advance has ensued in the development of the manufacture through the production of new classes of goods, as well as the consequent increased employment of silk fabrics for many uses previously unknown.

In the meantime the great improvement and increased beauty and variety of designs in our figured silk fabrics attest the rapid advance made in the domestic industry, while qualities have steadily improved in nearly every direction, notwithstanding the decline in prices. Among other noteworthy features distinguishing the past decade may be mentioned the spread of the industry through the establishment of mills at numerous points outside the

recognized seats of the industry in 1880; the almost absolute retirement of the hand loom in weaving broad goods and ribbons, the marked decline in the price of raw silk, and the great improvement in nearly every department of machinery and appliances. The latter feature has led to increased economy in manufacture and larger diversification of product, there being in fact scarcely any class of silk goods required by American consumers not now produced in this country and upon American looms.

Last, but not least, may be mentioned the ascendency in volume of domestic silk fabrics over imported goods. The percentages of silk goods made in the United States, as compared with the whole consumption of such goods in the country at the past four censuses are as follows:

	PER CENT.
1860	13
1870	23
1880	38
1890	55

Each of the features above noted is of sufficient importance to merit more extended reference, since all are factors in the history of the past decade; further allusion will be made to them elsewhere in this report.

SEWING SILK AND MACHINE TWIST.

Taking up in detail the more important lines of the manufacture, consideration may properly be first given to the oldest, that of sewing silk. Previous to 1810 this production, as well as such other manipulation of silk as then existed in the United States, was a household industry. The erection in that year at Mansfield, Connecticut, of a small 1-story frame building, 12 feet square (still standing), and the employment of a water wheel as the motive power for the single crude spinning frame which it contained, may justly be considered the inauguration of silk manufacture as a factory industry in this country. At the census of 1850 the value of sewing silk production had grown to $1,209,426 out of a total value of $1,809,476 for all silk goods manufactured. The adaptation of silk thread or twist for use on the sewing machine, occurring in 1852, created the new classification of "machine twist" and gave immense impetus to this branch of silk industry. At the census of 1880 its production amounted in value to $6,783,855, sewing silk being credited with $776,120 and machine twist with $6,007,735. At the census of 1890 the returns for the two items were consolidated, the total value produced in that year being $7,068,213, an increase of $284,358, or 4.19 per cent. That this increase in value of production was not larger resulted from a decided falling off in price during the past decade. The weight produced in 1880 was 791,525 pounds (*a*), while in 1890 it was 1,119,825 pounds (*b*), an increase of 328,300 pounds, or 41.48 per cent. The ever increasing use of the sewing machine has fully sustained this industry, so that the manufacture of machine twist is at present one of great importance. The manufacture of this class of goods, as in 1880, is more extensively carried on in the states of Massachusetts and Connecticut than elsewhere.

FRINGE, KNITTING, EMBROIDERY, AND FLOSS SILKS.

Fringe, knitting, embroidery, and floss silks are produced by the manufacturers of spun silk and machine twist and sewing silks, and the product has been developed largely since the Tenth Census. The returns for 1880 showed a value in product of floss silk of $225,025, including fringe, knitting, and embroidery silks. In 1890 the value of the combined production aggregated $1,849,631, an increase of $1,624,606, or 721.97 per cent, having kept pace with the largely increased demand for this class of goods for use in art decoration and other purposes.

BROAD SILKS.

The generic or commercial term of "broad silks" is applied in this report to all silk woven fabrics other than handkerchiefs, ribbons, velvets and plushes, upholstery goods, and trimmings of the character designated in the classification hereinafter shown. To better illustrate the growth of this branch of the industry historical reference becomes necessary. Previous to 1840 little, if anything, had been accomplished therein save as a household industry. In that year a start in a small way was made at Paterson, New Jersey, but the insignificant growth of broad silk weaving in the decade following is shown by the returns for the census of 1850, which reported the value of "silk cloth" produced at $17,050. At the census of 1860 no mention whatever was made of this class of production. During the war the production was greatly stimulated, owing in part to frequent deficiencies in the foreign supply and in part to the excessive cost due to the high price of gold, which greatly checked importation. At the close of the war (in 1865) the weaving of broad silks had attained considerable importance and may be regarded as having then become firmly established. Hence very nearly all that has been achieved in this branch

a The total quantity of sewings and twist produced in 1880, reported at the Tenth Census, was 821,528 pounds, but in this amount was included floss silk (which also embraced fringe, knitting, and embroidery silk) to the value of $225,025. The average value of this latter product in that year may be placed at $7.50 per pound, which would give 30,003 pounds as the amount of production, leaving 791,525 pounds as the amount of machine twist and sewing silk produced.

b It will be seen by reference to footnote *a* in Table 3, showing "quantities of silk products: 1890", that from the total of 1,449,462 pounds given for sewings and twist 329,637 pounds of fringe, knitting, embroidery, and floss silk should be deducted, leaving 1,119,825 pounds as the production of machine twist and sewing silks.

of industry has been accomplished within the past twenty-five years. The returns of the Ninth Census reported an annual production of 1,026,422 yards, the value not being given. The value of production reported at both the Tenth and Eleventh Censuses is shown herewith:

BROAD SILKS.

PRODUCTS.	1880	1890
Total	$7,343,305	$21,042,526
Dress goods	4,115,205	15,183,134
Satins	1,101,875	.....
Tailors' linings	.....	3,011,437
Tie silks and scarfs	606,675	919,919
Millinery silks	891,955	.....
Other broad goods	627,595	1,928,036

It will thus be observed that the total value of production in this branch of silk industry in 1890 amounted to $21,042,526, an increase over 1880 of $13,699,221, or 186.55 per cent. Allusion has already been made to the great progress within the past decade in the whole industry in a more extended range of production, and nowhere does this more aptly apply than in the domain of broad silk weaving. The classification is now, in fact, almost illimitable, practically embracing everything made in other and older silk manufacturing countries, while in quality of weave, combination of colors, beauty of design, and excellence of finish the manufacturers are able to meet all requirements. In the meantime, also, values have experienced a great decline, and prices to consumers are much below those prevailing at the time of the Tenth Census.

HANDKERCHIEFS.

The handkerchief production stands almost singly in showing a decline in the value of goods manufactured, having decreased from $3,881,590 in 1880 to $1,913,224 in 1890, a difference of $1,968,366, or 50.71 per cent. This results from the decided change which has occurred during the decade, especially within the past four or five years, in the requirements of the purchasing trade, the tendency being adverse to the class of goods made on American looms, particularly figured effects, and favoring those of oriental production, of which the importation into this country, especially from Japan, has recently grown to large proportions.

RIBBONS.

The development of ribbon manufacture during the past decade has been exceedingly rapid. Its production of $17,081,447 in 1890 stands second in value to that of broad silks, while it exceeds that of dress silks by the sum of $1,898,313. In 1880 the value of ribbons manufactured was reported at $6,023,100. The increase shown by the Eleventh Census is $11,058,347, or 183.60 per cent. Previous to 1861 a few feeble and insignificant efforts were made at various points toward producing this class of goods, but it was not until the commercial exigencies created by the civil war that, similarly to broad silks, ribbon production obtained as a permanent domestic industry, the first mill of real importance having been established at Williamsburg, New York, in 1863. In 1870 the Ninth Census showed a production of 3,224,264 yards, and from that date the progress of this branch of the industry has been marked. The remarks made concerning broad silks apply with equal force to ribbons in both diversification and excellence of product. Goods of a character and beauty the production of which ten years ago the manufacturer would have hardly ventured to predict would be attempted within that period now constitute a large portion of the regular output, while the exceedingly low prices at which they are offered to consumers has created a demand for their use for many purposes never before contemplated.

LACES.

The production of laces for dress and millinery purposes shows a falling off from $437,000 in 1880 to $261,750 in 1890, a decrease of $175,250, or 40.10 per cent. A considerable portion of the decrease can be attributed to the fact that under the Tenth Census lace mitts were classified as laces, while under the Eleventh Census they are included with mittens and gloves.

BRAIDS AND BINDINGS.

In braids and bindings the returns show a value in production of $2,771,382 in 1890, against $999,685 in 1880, an increase of $1,771,697, or 177.23 per cent. In 1880 (fiscal year) the invoice value of this class of goods imported into the port of New York amounted to $1,323,437, and in 1890 it was $1,707,154.

VELVETS AND PLUSHES.

The manufacture of velvets and plushes, with a product in 1890 valued at $3,141,026, has come into existence since the Tenth Census. No separate classification of the two items is made in the summary showing the value of production, but the value of the output of plushes largely exceeds that of velvets. The velvets produced here have been mostly utilized for millinery and dress trimming purposes, while the plushes are largely employed in upholstery. So far only plain goods, made of "schappe" or spun silk with cotton backs, have been manufactured here, no production having been attempted of the high figured effects in both lines, such as are seen among the artistic creations of the Lyons weavers or of the foreign rich all-silk plain velvets.

UPHOLSTERY GOODS.

Under the general head of "Upholstery goods" the summary for 1890 shows the following values of goods produced composed of silk, or of which silk was the component material of chief value: curtains, $471,324; tapestries, $1,330,287, and other upholstery broad goods, $1,910,721; a total of $3,712,332. At the Tenth Census no mention was made of goods of this character; the industry has made rapid progress within the past decade, especially in the city of Philadelphia, the chief center for this class of silk goods. Curtains largely made of silk, but with some admixture of cotton, are now offered to consumers at a less price than were "all cotton" goods ten years ago, while tapestries, principally used in furniture coverings, are fully 30 per cent cheaper and of much better design and quality. Equally in "Other upholstery broad goods", such as brocatelles, light silk damasks for draperies, silk chenilles, etc., the improvement has been exceedingly rapid. The goods produced are sold at lower prices than ever before, and the industry is capable, under favorable conditions, of much larger expansion and diversification of product.

TRIMMINGS.

The variance in classification in the summaries of finished production between the Tenth and Eleventh Censuses renders it somewhat difficult to make a correct detailed comparison. This is especially so in the item of trimmings. The following statement, however, is presented:

PRODUCTS.	1880	1890
Upholstery and military trimmings	$1,392,355	.....
Coach laces and carriage trimmings	37,510	.....
Total	1,429,865	.....
Upholstery gimps and trimmings	.....	$3,918,209
Military trimmings	.....	232,600
Total	.....	4,150,809
Fringes and dress trimmings	4,950,275	.....
Cords, tassels, passementerie, and military trimmings	1,866,575	.....
Undertakers (a), hatters', and fur trimmings	59,805	.....
Total	6,876,655	.....
Dress and cloak trimmings	.....	4,403,757

a Undertakers' trimmings should properly be classed with "Upholstery trimmings", but in 1880 they were classed with "Hatters' and fur trimmings".

This statement shows that the reported value of the entire production of trimmings in 1880 was $8,306,520, while in 1890 it was $8,554,566, an increase of $248,046, or 2.99 per cent, and that while the production of upholstery and military trimmings combined increased in the sum of $2,720,944, or 190.29 per cent, that of dress and cloak trimmings decreased $2,472,898, or 35.96 per cent. The decrease in the latter item can be attributed only to adverse fashions in the use of both dress and cloak trimmings, ribbons having largely taken their place for dress garniture, while plainer styles of cloaks were in favor. This class of goods is perhaps more at the mercy of the ever changing whims of fashion than any other line of the industry.

HOSIERY AND KNIT GOODS.

The manufacture of hosiery and knit goods, with its total production of $1,156,172, is practically a development of the past ten years, no separate mention of goods of this character having been made at the census of 1880. The industry is thriving and rapidly assuming importance, the goods produced being of the highest possible grade.

NUMBER OF ESTABLISHMENTS.

The census of 1880 reported 382 establishments engaged in the silk industry in that year, which included some of those employed exclusively in silk dyeing, finishing, etc., the number of which was less than in 1890. The number of establishments reported in 1890 was 472, being all silk manufacturing concerns, an increase of 90, or 23.56 per cent. To these should be added 52 establishments engaged exclusively in silk dyeing and finishing, making a total for the whole industry of 524 establishments, a net increase over 1880 of 142 establishments, or 37.17 per cent.

The following comparative statement for 1880 and 1890 shows, by states, the number of establishments engaged in the industry (including dyeing and finishing) and the increase or decrease in each:

STATES.	NUMBER OF ESTABLISHMENTS.		Increase.	Decrease.
	1880	1890		
The United States	382	524		
California	5	9	4	
Connecticut	28	36	8	
Illinois	5	11	6	
Kansas	1			1
Maine	1	1		
Maryland	4	4		
Massachusetts	22	20		2
Michigan		1	1	
Missouri	1	1		
New Hampshire	1			1
New Jersey	106	156	50	
New York	151	206	55	
North Carolina		1	1	
Ohio	6	3		3
Pennsylvania	49	71	22	
Rhode Island	1	3	2	
Vermont	1			1
Virginia		1	1	

The following statement, reproduced from the report on "The Dyeing and Finishing of Textiles", shows the number of establishments, amount of capital, miscellaneous expenses, average number of employés and their wages, power used, cost of materials used, and total value of work done in establishments devoted exclusively to dyeing and finishing silk goods and yarns:

ESTABLISHMENTS ENGAGED EXCLUSIVELY IN DYEING AND FINISHING SILK GOODS AND YARNS.

STATES.	Number of establishments.	CAPITAL.		Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)				
		Value of hired property.	Direct investment.		Aggregates.		Males above 16 years.	Females above 15 years.	Children.
					Average number.	Total wages.			
The United States	52	$487,933	$1,880,224	$177,933	1,745	$1,013,325	1,639	102	4
New Jersey	24	193,800	1,313,306	123,607	1,292	744,059	1,233	57	2
New York	21	285,133	466,505	47,706	391	230,034	344	45	2
All other states (b)	7	9,000	100,413	6,620	62	39,232	62		

STATES.	HORSE POWER.			COST OF MATERIALS USED.					Value of work done.
	Steam.	Water.	All other.	Total.	Chemicals and dyestuffs.	Fuel.	Rent of power and heat.	All other materials.	
The United States	1,513	21	10	$1,276,926	$1,092,192	$83,475	$4,675	$96,584	$2,935,101
New Jersey	777		10	1,127,346	987,957	70,582	600	68,207	2,333,716
New York	545			111,129	75,012	9,498	4,075	22,544	478,637
All other states	191	21		38,451	29,223	3,395		5,833	122,748

a Includes officers, firm members, and clerks.

b Includes states grouped, in order that the operations of individual establishments may not be disclosed. These establishments were distributed as follows: Connecticut, 1; Illinois, 1; Pennsylvania, 5.

LOCATION OF SILK MILLS.

Allusion has been made to the spread of the industry during the past decade through the establishment of mills at numerous points outside the recognized centers of the industry in 1880.

A large portion of the spread of the industry to new points has resulted from the location by manufacturers elsewhere engaged therein of "annex" establishments devoted mainly to the "throwing" branch, in which women and children are principally employed, the work being of the lightest kind. This has occurred notably in the state of Pennsylvania, where, in addition to a plentiful supply of otherwise unemployed labor of the character mentioned, fuel is comparatively cheap. The location of mills in this state, as well as in some instances in other states, has, furthermore, been greatly stimulated by the financial inducements offered by various towns, the citizens of which have wished to secure an industry in their localities furnishing light, agreeable, and remunerative employment. Hence liberal subscriptions have been made toward the erection of mills. While these isolated establishments, as a rule, were at the first mere "annexes" devoted to the "throwing" of material to be woven at the parent establishment in one or another of the chief centers of the manufacture, weaving was later also entered upon, while especially among those established in the latter half of the past decade there are a number of well equipped factories, embracing all the branches, from the spindle to the loom.

The question of advantage or disadvantage of an isolated location presents a problem which has been widely discussed. On the one side are cheaper fuel, cheaper help, lower taxes, less expense for factory space, etc., while on the other there are the advantages of proximity to market, to expert textile machinists, and to depots for all manner of supplies, and also of having trained employés, who can hardly be induced to remove to country towns, where almost all the operatives must first be instructed in their several tasks. But whatever the advantages or disadvantages of a remote location, the "throwsters" at the principal centers have found it difficult to compete with these outside establishments, the difference in wages alone being a most important factor.

CAPITAL.

The returns for capital are far more complete at the Eleventh Census than any previously obtained, embracing in detail the "Live assets" and also the "Value of hired property", while at the Tenth Census they were largely confined to the actual investments of manufacturers, and did not include the "Value of hired property", which under the Eleventh Census aggregates $10,355,160, making a total of $61,362,697. In making comparisons with the Tenth Census this amount is omitted. Direct investment in 1890 amounts to $51,007,537 (*a*), as against $19,125,300 in 1880, an increase of $31,882,237, or 166.70 per cent. The items of "Value of land and buildings" and "Total value of machinery" are the only ones with which the returns of 1880 can be fairly compared. The value of land and buildings increased from $3,836,600 in 1880 to $6,904,628 in 1890, an increase of $3,068,028, or 79.97 per cent, while the value of the machinery employed increased from $5,227,500 in 1880 to $14,181,680 in 1890, an increase of $8,954,180, or 171.29 per cent. In 1880 the combined value of land and buildings and machinery was $9,064,100, leaving $10,061,200 as the amount otherwise included as capital, the respective percentages of the above to the whole sum of $19,125,300 being 47.39 and 52.61. In 1890 the combined value of the same items was $21,086,308, leaving $29,921,229 as the amount otherwise included as capital, the respective percentages to the whole sum of $51,007,537 being 41.34 and 58.66. In 1880 the value of finished goods produced for each dollar of capital invested was $1.80, and in 1890 it was $1.36. Although these figures apparently show that the producing capacity of capital was smaller in 1890 than in 1880, the fact that "Live assets" were more fully reported under the Eleventh than under the Tenth Census, and the great decline in prices of products, already alluded to, should be considered in this connection. A careful analysis of these two items will demonstrate that the ratio of production to capital in 1890 was considerably larger than in 1880.

EMPLOYÉS AND WAGES.

The returns show that the average number of employés in 1890 was 50,913 (*b*), while in 1880 it was 31,337, the increase amounting to 19,576, or 62.47 per cent.

The following statement shows the increase or decrease in number and percentage of males, females, and children employed in 1890 as compared with 1880:

AVERAGE NUMBER OF EMPLOYÉS.	1890	1880	INCREASE.		DECREASE.	
			Number.	Per cent.	Number.	Per cent.
Males above 16 years	18,998	9,375	9,623	102.65	.....	.....
Females above 15 years	29,049	16,396	12,653	77.17	.....	.....
Children	2,866	5,566	.....	.....	2,700	48.51

a In addition to these amounts, 52 establishments engaged exclusively in dyeing and finishing silk goods and yarn in 1890 report "hired property" to the value of $487,933 and a direct investment of $1,880,224.

b To these amounts should be added 1,745 employés and $1,013,325 wages, reported by 52 establishments engaged in dyeing and finishing silk goods and yarn, making the total number of employés in the silk industry 52,658, to whom $20,693,643 was paid in wages.

Notwithstanding the growth of the industry, the decrease in the number of children employed is very noticeable, being largely due to the stringent laws which have been enacted during the decade in several states regulating the employment of children in factories.

The total amount paid in wages in 1890 was $19,680,318 (*a*), as against $9,146,705 in 1880, an increase of $10,533,613, or 115.16 per cent.

The following comparative statements show the rates of wages paid per week to classified operatives in 1880 and 1890. It is proper to mention, however, that only 65 per cent of the establishments made detailed reports on this subject in 1890.

RATES OF WAGES PER WEEK TO CLASSIFIED OPERATIVES: 1880.

CLASSES OF OPERATIVES.	Males.	Females.	CLASSES OF OPERATIVES.	Males.	Females.
Raw silk winders	.....	$5.25	Lace machine operators	$14.75	.....
Raw silk cleaners	.....	3.37	Braid machine operators	16.00	.....
Raw silk doublers	.....	5.18	Braiders	.....	$5.41
Raw silk spinners	$5.57	4.87	Passementerie spinners	17.73	12.00
Raw silk twisters	5.98	5.67	Fringe knotters	.....	5.30
Raw silk reelers	.....	4.50	Tassel makers	.....	5.29
Soft silk doublers	.....	4.00	Finishers	13.50	.....
Soft silk winders	.....	6.35	Designers (*c*)	24.71	.....
Soft silk spoolers	.....	4.96	Card cutters (*d*)	11.68	.....
Soft silk warpers	10.71	7.62	Dyers (*e*)	12.77	.....
Quillers and quill winders	.....	4.00	Engineers	12.33	.....
Soft silk beamers	12.11	7.72	Machinists	12.40	.....
Soft silk warp twisters	13.96	.....	Loom fixers	15.87	.....
Hand loom weavers (*b*)	14.15	8.44	Laborers	8.73	.....
Power loom weavers (*b*)	11.43	7.94			

RATES OF WAGES PER WEEK TO CLASSIFIED OPERATIVES: 1890.

CLASSES OF OPERATIVES.	Number of establishments.	Males.	Females.	Children.
Raw silk winders	126	.....	$5.24	$3.10
Raw silk cleaners	18	.....	4.71	2.93
Raw silk doublers	111	.....	5.07	3.03
Raw silk spinners	96	$6.70	4.85	3.58
Raw silk twisters	68	7.52	5.25	3.15
Soft silk winders	193	.....	6.31	3.34
Soft silk spoolers	123	6.09	5.71	3.56
Soft silk warpers	142	13.60	8.74	3.25
Soft silk beamers	56	11.26	9.40	.....
Soft silk warp twisters	91	13.35	10.00	.....
Hand loom weavers	59	14.09	8.52	.....
Power loom weavers:				
Broad goods	108	11.16	9.04	.....
Ribbons	79	15.74	11.28	.....
Braiding machine operatives	30	8.48	6.00	.....
Knitting machine operatives	14	16.00	8.00	.....
Lace machine operatives	4	13.00	.....	.....
Designers	17	23.18	16.50	.....
Card cutters	25	15.05	8.50	.....
Dyers	16	16.00	.....	.....
Finishers	58	13.87	10.12	.....
Laborers	10	9.20	4.50	.....
Other operatives	82	12.34	6.89	3.95

a See note *b* on page 219.

b There is a very great difference in the size of looms for different kinds of goods. The highest rates to power loom weavers are paid to those employed on the large looms used in fringe and trimming manufactures.

c The designer is sometimes also the superintendent.

d The card cutter is sometimes also the designer.

e The chief dyer receives from $20 to $30.

MACHINERY.

BROAD GOODS LOOMS.

Allusion has heretofore been made to the decrease in the employment of hand looms within the past census decade. In 1880 the total number of looms reported in use for weaving broad goods was 4,732; of this number 1,629 were hand looms and 3,103 power looms. In 1890 but 413 hand looms were reported in use, the decrease being 1,216, or 74.65 per cent. In 1880 the respective percentages of hand and power looms employed in this branch were 34.43 and 65.57. In 1890 the total number of broad looms employed was reported at 15,279, of which 413 were hand looms and 14,866 power looms, the total increase over 1880 being 10,547, or 222.89 per cent; of this number 14,866 were power looms, the increase in these being 11,763, or 379.08 per cent. In 1890 the respective percentages of hand and power looms employed in this branch were 2.70 and 97.30.

NARROW GOODS LOOMS.

In 1880 the total number of looms employed in the combined production of ribbon and other narrow goods (no subclassification being made) was 3,742; of this number 1,524 were hand looms and 2,218 power looms. In 1890 1,334 hand looms were reported in use, the decrease being 190, or 12.47 per cent. In 1880 the respective percentages of hand and power looms employed in this branch were 40.73 and 59.27. In 1890 the total number of looms engaged in this branch was reported at 7,290, of which 1,334 were hand looms and 5,956 power looms, the total increase over 1880 being 3,548, or 94.82 per cent. Of the total number, 5,956 were power looms, the increase being 3,738, or 168.53 per cent. Of these 5,956 power looms 4,389 were reported as engaged in the production of ribbons and 1,567 on "Other narrow goods". In 1890 the respective percentages of hand and power looms employed in this branch were 18.30 and 81.70.

Adding together the looms for broad goods and narrow goods, it is found that the total number of hand looms employed in 1880 was 3,153 and of power looms 5,321, making an aggregate of 8,474, while in 1890 there were 1,747 hand looms and 20,822 power looms, an aggregate of 22,569, showing an increase in the latter year of 14,095 looms, or 166.33 per cent. The respective percentages of hand and power looms employed in 1880 were 37.21 and 62.79; in 1890 they were 7.74 and 92.26.

These figures furnish ample warrant for the statement that the hand loom is now a factor of but little importance in silk manufacture; in fact, for weaving broad goods and ribbons but few were in operation at the Eleventh Census. A comparatively small number are employed in making patterns, bookmarks, and badges, while others are engaged in weaving fine veilings, tissues, or other special productions, but the larger proportion is employed in the trimmings branch. This falling into desuetude of the hand loom has been a natural result of the progress of the decade, high speed and the most economical methods having become matters of paramount importance, while the marvelous advance in perfected power driven machinery, on which the most difficult classes of work, including even swiveled effects, can now be executed, has rendered it obsolete, except for the few special purposes indicated.

Referring to the great advance in machinery and appliances employed in silk manufacture, it should be stated that while considerable progress had been made in this department prior to the Tenth Census great and vitally important improvements have since been achieved in all classes of silk machinery. Especially is this the case in power looms for weaving both broad and narrow goods, which have been brought to a high degree of perfection, the natural effect of which has not only lessened the cost of production but resulted in the manufacture of a higher class of fabrics of a character in many instances never before attempted in this country.

Among the most important improvements in this direction is the adaptation of the swivel loom attachment to the power loom. This loom produces swivel or embroidered effects even more satisfactorily than was formerly achieved by the hand loom, which had been regarded hitherto as the only loom on which swivel work could be performed. The capacity of production by the power of the swivel loom is many times greater.

SPINDLES.

The following tabular statement shows the increase in the number of spindles of the various kinds employed in 1890 over 1880, together with percentages of such increase:

SPINDLES.	1890	1880	INCREASE.	
			Number.	Per cent.
Total	1,254,798	508,137	746,661	146.94
Winding, cleaning, and doubling	369,035	164,218	204,817	124.72
Spinning and twisting	718,360	262,312	456,048	173.86
Braiding	167,403	81,607	85,796	105.13

The speed of the modern spinning frame has been accelerated to an extent which some years since would have seemed almost impracticable. But a short time before the census of 1880 throwing machinery was introduced, the spindles of which made 10,000 revolutions per minute, which was almost double the speed previously attained. Subsequently 12,000, 15,000, and even more revolutions were achieved, but in time it was ascertained that there was a point beyond which no advantage was gained by increasing the speed, and hence the tendency of late has been rather toward reducing it, the results being generally more satisfactory. At present about 10,000 revolutions per minute for the "first time over" and about 7,500 revolutions for the "second time over" is the average speed at which spindles are operated on the latest improved machinery, while on frames of less modern construction the speed is very much lower, often not exceeding 5,000 or even 4,000 revolutions.

Equally, as in looms and spinning machinery, has there been a great improvement in all other mechanical appliances, such as winders, doublers, wrappers, quillers, and jacquard dobbies, the running speed of all of which has undergone large increase. The number and kinds of other mechanical accessories reported in use at the Eleventh Census are as follows: jacquard attachments, 5,905; sewing machines, 1,032; knitting machines, 245; lace machines, 78.

MATERIALS USED.

The gross cost of all materials and supplies consumed in 1880 was $22,467,701; in 1890 it was $51,004,425, an increase of $28,536,724, or 127.01 per cent. In 1890 the cost of raw silk and silk materials consumed constituted 90.88 per cent of the cost of all materials used; in 1880 it was 85.49 per cent. In 1890 the gross value of manufactured products was $87,298,454, the percentage of the gross cost of materials and supplies being 58.43 of the product, while in 1880 the percentage was 54.76. The cost of raw silk and silk material consumed in 1890 was $46,351,200. From this amount should be deducted the sum of $15,537,520 for silk material "twice included".

Silk material is "twice included" when it appears, first, as "raw silk" in the returns of a "throwster", and, secondly, as "thrown silk" or "fringe silk", reported as raw material in the return of a weaver or fringe maker. The value of silk products thus twice included is deducted from the gross value of production, leaving a result, which, it will be noticed, exactly agrees with the value of finished goods as shown by the returns. The reasons for this deduction are similar to those which apply to the values of the raw materials. While the gross value of production amounts to $87,298,454, it covers only a real value of product amounting to $69,154,599. It should be noted that the products of partial manufacture go for the most part to be finished to points other than those where they originate. Hence, in many cases, the gross production of a state more nearly represents its industry than would the value of its finished goods. For instance, the gross production of Pennsylvania, amounting to $19,357,546, is much nearer the total value of its silk manufactures than the sum of $11,404,223, the value of its completed goods, because a large portion of the thrown silk produced in that state is not made into goods there, but goes elsewhere for manufacture.

The reference to "thrown silks" justifies some allusion to the throwing branch of the manufacture. Raw silk as reeled from the cocoon differs from the fiber or filament forming the material for other textiles, in that while it is necessary to spin the latter down to a thread of sufficient fineness to weave, it becomes necessary in the use of raw silk to twist or "throw" together a number of the filaments sufficient to form a thread coarse enough to weave. Hence comes the word "throwster", an old English term by which those engaged in this preparatory process of the manufacture are designated, the warp and weft produced by them being known, respectively, as "organzine" and "tram", words derived from the French "organzin", meaning a double-twisted silk, and "tram", meaning weft. In establishments exclusively engaged in this branch the work is generally done on commission for other establishments engaged in weaving, the latter furnishing the raw stock. The returns for 1890 show about 44 establishments of this character, while, in addition, many weaving concerns possess their own throwing plants.

IMPORTS OF RAW SILK.

The following tabular statement exhibits the imports of raw silk by fiscal years from 1880 to 1890, inclusive, as reported by the bureau of statistics, Treasury Department, with number of pounds and value. The receipts of raw silk at the ports of New York and the Pacific coast are likewise presented in number of bales and cases since 1880, according to the records of the Silk Association of America. For purposes of comparison, the imports in the years 1850, 1860, 1870, and 1880 are also presented. Attention is directed to the marked increase in the importation of raw silk.

IMPORTS OF RAW SILK.

[From reports of the bureau of statistics, Treasury Department.]

YEARS.	Pounds.	Value.	Number of bales and cases received at the ports of New York and the Pacific coast.
1850	*a*120,010	$401,385	.....
1860	*a*297,877	1,340,676	.....
1870	583,589	3,017,958	.....
1880	2,562,236	12,024,699	21,741
1881	2,550,103	10,888,264	20,198
1882	2,879,402	12,890,392	21,682
1883	3,253,370	14,043,340	23,927
1884	3,222,546	12,481,496	23,067
1885	3,424,076	12,421,739	23,914
1886	4,754,626	17,232,505	32,997
1887	4,599,574	18,687,245	31,974
1888	5,173,840	19,151,208	36,108
1889	5,329,646	18,544,025	37,583
1890	5,943,360	23,285,099	43,766

a Estimated from current prices, only the value being on record.

The tendency during the last decade has been toward the increased use of finer grades of raw silk as a consequence of the better qualities of goods manufactured. This is demonstrated by the following comparative statement, which gives the valuation of imports of the different classes at the ports of New York and the Pacific coast, as shown by the records of the Silk Association of America (*a*), for the fiscal years 1889–1890 and 1882–1883. The first year for which this classification was kept was 1882–1883, and hence is the first classification that can be presented for comparison.

CLASSES.	1889–1890	1882–1883	INCREASE.	
			Value.	Per cent.
Strictly European	$6,060,776	$3,716,609	$2,344,167	63.07
Japan	12,499,498	6,379,115	6,120,383	95.94
Shanghai	3,491,579	2,768,323	723,256	26.13
Hongkong	2,603,108	1,823,537	779,571	42.75

Reference has been made to the decline which has taken place in the prices of raw silk. This decline may be estimated from the average prices current at the two fiscal years of 1880 and 1890, amounting to from 15 to 20 per cent, which is largely the result of the increased demand consequent upon the development of American manufacture and the stimulation of raw silk production thereby engendered in other countries.

a It will be observed that the valuation of the imports as given by the Silk Association of America in both the years mentioned somewhat exceeds that of the bureau of statistics, although the former does not include ports of entry other than those specified above. The amount brought in at other ports, however, is infinitesimal, while the figures of the bureau of statistics simply relate to the value of the raw silk at the place of export and do not include the expenses of shipping charges, commissions, freight, marine insurance, and the Japanese export duties, as do the estimates of the Silk Association of America.

WASTE SILK, PIERCED COCOONS, AND NOILS.

In addition to the imports of raw silk, the following statement, showing the imports of waste silk, pierced cocoons, and noils from 1880 to 1890, is presented. The manipulation of spun silk was in its infancy in this country ten years ago, but it has kept pace in the development of the industry with the use of reeled silk, and is a factor of no small importance.

IMPORTS OF WASTE SILK, PIERCED COCOONS, AND NOILS.

[From reports of the bureau of statistics, Treasury Department.]

YEARS.	Pounds.	Value.
1881	.....	$559,914
1882	.....	672,384
1883	1,477,736	1,099,812
1884	1,062,342	744,633
1885	884,832	464,490
1886	2,063 434	1,021,763
1887	1,428,517	950,840
1888	1,196,482	778,934
1889	1,315,478	787,885
1890	1,567,080	1,040,432

IMPORTATIONS OF GOODS.

The following comparative statement shows the value of silk goods, by classes, imported at the port of New York, by fiscal years, from 1881 to 1890, inclusive. The imports at New York comprise fully 95 per cent of the total value of silk imports. The largest importation in any year previous to 1881 was in 1872, amounting to $36,448,618. This table exhibits the classes and invoice value of silk goods of foreign manufacture consumed in the United States.

TABLE 4.—INVOICE VALUE OF SILK GOODS, BY CLASSES, IMPORTED AT THE PORT OF NEW YORK, BY FISCAL YEARS, FROM 1881 TO 1890, INCLUSIVE.

[Compiled by Mr. Briton Richardson, secretary of the Silk Association of America.]

ARTICLES.	1889-1890	1888-1889	1887-1888	1886-1887	1885-1886	1884-1885	1883-1884	1882-1883	1881-1882	1880-1881
Total	$36,766,090	$34,057,170	$31,455,215	$29,366,924	$26,147,635	$26,108,190	$34,039,697	$33,967,171	$36,432,706	$30,501,851
Silk piece goods	13,589,511	10,648,570	11,465,076	11,263,296	11,431,840	12,423,750	18,432,599	18,585,896	19,429,606	16,167,056
Satins	486,268	535,414	508,281	534,051	432,789	291,317	173,784	109,666	200,763	272,641
Crapes	126,452	160,472	230,689	247,174	403,763	404,730	473,568	479,962	536,277	489,560
Pongees	11,217	49,761	87,234	16,624	82,374	35,497	24,667	30,938	8,651	16,477
Plushes	2,774,728	4,110,335	3,510,248	2,153,209	1,414,727	1,485,902	1,260,706	875,785	1,121,990	495,496
Velvets	2,482,401	1,883,403	2,746,729	3,527,953	2,747,736	2,786,045	2,831,410	1,940,015	1,402,663	1,575,715
Ribbons	1,692,611	1,617,401	1,194,458	1,240,846	1,253,717	1,243,974	2,618,463	2,229,226	2,707,693	3,103,564
Laces	2,972,655	3,320,131	2,361,735	2,135,393	1,820,692	1,614,374	2,126,979	3,126,597	4,073,891	1,883,236
Shawls	172,854	180,215	193,669	184,606	106,590	138,495	63,654	6,810	7,790	17,466
Gloves	399,425	345,950	379,064	478,153	503,823	610,950	652,942	333,716	170,151	204,703
Cravats	87,144	98,840	83,989	62,971	33,015	18,763	21,095	69,455	60,341	69,914
Handkerchiefs	99,227	146,297	281,015	163,851	169,948	158,298	120,743	59,786	75,671	53,727
Hose	395,096	292,500	317,897	350,169	270,735	327,649	317,861	297,960	179,254	110,277
Threads and yarns	461,311	308,797	162,506	190,445	159,189	129,996	193,782	155,282	128,790	175,627
Braids and bindings	1,707,154	2,396,703	1,559,456	1,350,336	697,938	697,327	1,334,692	1,087,416	1,191,140	1,323,437
Silk and worsted	1,478,252	1,877,522	969,998	727,423	357,800	253,202	180,801	90,786	123,939	174,390
Silk and cotton	7,808,892	6,080,914	5,334,061	4,731,877	4,259,052	3,486,258	3,207,943	4,486,836	5,011,843	4,366,921
Silk and linen	20,892	3,945	2,210	8,547	1,907	1,663	4,008	1,039	2,253	1,644

Table 5 presents by state totals detailed information reported at the Eleventh Census under the general heads of "Capital", "Miscellaneous expenses", "Employés and wages", "Machinery", "Materials used", and "Value of products".

Tables 6 and 7 present the statistics of employés and wages in the various classes.

TABLE 5.—DETAILED STATEMENT FOR THE UNITED STATES, BY STATES: 1890.

STATES.	Number of establishments.	CAPITAL.									
		Value of hired property.	Direct investment.								
			Aggregate.	Value of plant.				Live assets.			
				Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
The United States.	472	$10,355,160	$51,007,537	$21,086,308	$1,691,660	$5,212,968	$14,181,680	$29,921,229	$6,525,692	$15,879,617	$7,515,920
California	9	99,260	112,283	30,409	.....	.....	30,409	81,874	28,300	15,642	37,932
Connecticut	35	228,841	9,037,042	2,913,327	152,589	1,143,200	1,617,538	6,123,715	1,168,840	3,033,256	1,921,619
Illinois	10	326,164	422,096	199,200	33,000	60,000	106,200	222,896	84,950	39,000	98,946
Maryland	4	33,144	50,400	19,900	6,000	1,500	12,400	30,500	6,400	15,700	8,400
Massachusetts	20	306,542	3,353,296	956,708	77,300	287,500	591,908	2,396,588	277,583	1,019,195	1,099,810
New Jersey	132	2,225,314	16,809,927	7,209,643	590,919	1,579,160	5,039,564	9,600,284	2,110,441	5,892,607	1,597,236
New York	185	5,519,537	11,165,918	4,989,000	544,002	832,240	3,612,758	6,176,918	1,502,202	3,265,119	1,409,597
Ohio	3	11,000	37,830	16,750	10,000	5,000	1,750	21,080	6,800	4,100	10,180
Pennsylvania	66	1,482,231	9,362,063	4,404,181	236,850	1,225,652	2,941,679	4,957,882	1,286,296	2,417,660	1,253,926
Rhode Island	3	108,767	122,256	70,364	.....	.....	70,364	51,892	20,629	15,369	15,894
All other states (a)	5	14,360	534,426	276,826	41,000	78,716	157,110	257,600	33,251	161,969	62,380

STATES.	MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES.				
								Aggregates.		Officers, firm members, and clerks.		
	Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Average number.	Total wages.	Males above 16 years.	Females above 15 years.	Wages.
The United States.	$4,259,623	$734,268	$156,444	$220,849	$552,818	$661,663	$1,933,581	50,913	$19,680,318	1,396	135	$1,017,877
California	10,438	7,246	397	1,251	661	210	673	214	83,566	7	4	15,276
Connecticut	270,426	21,630	19,799	19,841	73,438	39,783	95,935	5,081	2,006,804	109	8	159,273
Illinois	35,761	17,035	1,885	6,511	5,245	85	5,000	805	295,636	41	8	54,314
Maryland	3,798	2,435	237	211	85	730	100	75	24,233	3	.....	3,600
Massachusetts	484,390	35,838	21,889	12,908	23,676	91,989	298,090	3,216	1,296,399	215	8	258,115
New Jersey	1,356,137	182,148	67,807	67,264	170,074	252,621	616,223	17,917	7,176,180	411	61	541,570
New York	1,123,671	359,777	19,815	63,177	88,594	171,422	420,886	13,151	5,584,399	401	31	601,336
Ohio	2,662	780	595	327	260	.....	700	40	13,685	2	2	2,512
Pennsylvania	939,051	98,089	22,502	46,588	184,449	97,319	490,104	9,522	2,981,334	184	8	256,049
Rhode Island	17,427	7,940	114	629	1,392	1,482	5,870	194	61,978	6	2	8,507
All other states	15,862	1,350	1,404	2,142	4,944	6,022	.....	698	156,104	17	3	17,325

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

TABLE 5.—DETAILED STATEMENT FOR THE UNITED STATES, BY STATES: 1890—Continued.

STATES.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.								MACHINERY.							
	Operatives and skilled. (a)				Unskilled.				Number of spindles.			Number of looms.				
												Hand.		Power.		
	Males above 16 years.	Females above 15 years.	Children.	Wages.	Males above 16 years.	Females above 15 years.	Children.	Wages.	Winding, cleaning, and doubling.	Spinning and twisting.	Braiding.	For broad goods.	For narrow goods.	For broad goods.	For ribbons.	For other narrow goods.
The United States.	16,718	28,702	2,773	$17,290,315	834	212	93	$472,126	369,095	718,360	167,403	413	1,334	14,866	4,389	1,567
California	41	139	2	64,548	8	13	.....	3,742	799	2,018	29	.....	35	.....	1	.....
Connecticut	1,331	3,186	123	1,716,659	209	115	.....	130,872	45,402	84,262	11,492	6	.....	1,053	290	29
Illinois	154	589	10	239,624	3	.....	.....	1,698	363	369	221	.....	82	.....	.....	44
Maryland	27	44	.....	20,568	1	.....	.....	65	6	.....	.....	.....	.....	.....	14	.....
Massachusetts	892	1,927	56	993,400	85	1	32	44,884	26,235	55,200	30,403	41	55	354	.....	90
New Jersey	7,460	8,763	894	6,481,155	313	10	5	153,455	135,160	224,204	10,366	218	19	9,146	2,112	229
New York	4,393	7,920	264	4,903,590	150	63	16	79,473	62,197	92,772	72,635	80	972	1,838	1,478	572
Ohio	8	28	.....	11,173	.....	.....	.....	.....	96	.....	.....	8	8	.....	.....	.....
Pennsylvania	2,318	5,607	1,254	2,671,333	102	10	39	53,952	89,429	228,786	30,217	60	163	2,306	451	603
Rhode Island	46	107	29	52,357	3	.....	1	1,114	930	2,463	40	.....	.....	.....	43	.....
All other states	135	392	141	135,908	10	.....	.....	2,871	8,418	28,286	3,000	.....	.....	169	.....	.....

STATES.	MACHINERY—continued.				MATERIALS USED.									
	Number of machines.				Total cost.	Raw silk.		Waste silk.		Organzine and tram.		Other silk materials.	
	Jacquard.	Knitting.	Lace.	Sewing.		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
The United States.	5,905	245	78	1,032	$51,004,425	6,376,881	$26,087,371	1,357,618	$1,106,608	3,305,372	$16,518,979	744,223	$2,638,242
California	3	5	1	3	146,406	20,575	71,012	200	500	3,718	31,326	3,071	20,568
Connecticut	230	1	.....	16	6,201,876	1,142,802	4,560,968	648,823	515,738	113,978	584,442	15,527	62,180
Illinois	6	10	.....	3	314,855	5,225	23,500	.....	.....	7,095	34,776	21,798	97,655
Maryland	.....	.....	.....	.....	34,305	.....	.....	.....	.....	4,645	27,705	350	1,825
Massachusetts	42	68	.....	11	3,251,893	558,493	2,128,772	191,909	155,494	97,278	485,995	23,608	91,436
New Jersey	4,195	1	3	187	17,908,883	1,845,242	7,691,253	61,420	56,523	1,858,517	9,093,692	97,793	350,377
New York	846	139	74	712	10,174,818	715,003	3,117,515	59,598	57,003	912,782	4,680,369	159,138	716,394
Ohio	.....	.....	.....	.....	13,983	.....	.....	.....	.....	920	7,473	112	862
Pennsylvania	540	20	.....	100	12,094,389	1,932,396	7,843,024	310,668	250,457	287,159	1,484,599	422,826	1,296,945
Rhode Island	43	1	.....	.....	149,763	.....	.....	73,000	58,413	19,280	88,602	.....	.....
All other states	.....	.....	.....	.....	713,254	157,145	650,727	12,000	12,480	.....	.....	.....	.....

STATES.	MATERIALS USED—continued.												
	Other textile materials.		Oil.		Soap.		Chemicals and dyestuffs.	Fuel.				Rent of power and heat.	All other materials.
								Total cost.	Coal.	Wood.	Other fuel.		
	Pounds.	Cost.	Gallons.	Cost.	Pounds.	Cost.	Cost.		Cost.	Cost.	Cost.	Cost.	Cost.
The United States.	5,624,960	$2,327,684	76,348	$32,514	2,340,098	$126,065	$558,532	$400,107	$372,916	$11,353	$15,838	$85,400	$1,122,914
California	16,920	13,303	94	59	2,900	249	150	102	30	.....	72	1,734	7,403
Connecticut	118,474	78,485	6,977	3,173	589,827	31,055	170,636	73,134	68,382	3,260	1,492	3,400	118,665
Illinois	274,135	111,978	182	107	400	20	4,600	1,725	1,485	.....	240	1,740	38,754
Maryland	7,800	2,799	20	6	.....	.....	.....	205	205	.....	.....	.....	1,765
Massachusetts	212,357	156,120	3,430	1,104	333,724	17,847	51,025	48,149	41,524	6,575	50	870	115,081
New Jersey	314,050	228,811	25,103	10,666	682,315	32,994	111,990	143,132	143,128	.....	4	33,453	155,992
New York	2,176,847	936,248	10,354	4,611	220,554	13,042	100,082	63,990	50,945	65	12,980	33,739	451,825
Ohio	7,975	5,488	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	160
Pennsylvania	2,495,909	794,350	29,223	12,429	297,744	16,906	108,012	63,502	62,372	130	1,000	9,473	214,092
Rhode Island	.....	.....	.....	.....	16,650	998	.....	.....	.....	.....	.....	1,000	750
All other states	493	102	965	359	195,984	12,954	12,037	6,168	4,845	1,323	.....	.....	18,427

a Includes pieceworkers and their wages.

TABLE 5.—DETAILED STATEMENT FOR THE UNITED STATES, BY STATES: 1890—Continued.

STATES.	VALUE OF PRODUCTS.							
	Total.	Organzine and tram.	Spun silk yarn.	Machine twist and sewing silk.	Fringe knitting, embroidery, and floss silk.	Dress goods, figured and plain.	Other broad goods.	Tapestries, curtains, and other upholstery broad goods.
The United States	$87,298,454	$16,880,366	$1,263,489	$7,068,213	$1,849,031	$15,183,134	$9,000,418	$3,712,332
California	271,912	5,600	.....	81,590	24,840	.....	.....	.....
Connecticut	9,788,951	1,356,854	308,536	3,820,463	704,945	1,099,284	1,384,619	62,163
Illinois	785,845	.....	.....	.....	.....	.....	.....	2,000
Maryland	100,361	.....	.....	.....	.....	.....	.....	.....
Massachusetts	5,557,569	688,359	257,251	2,216,213	499,131	.....	784,719	.....
New Jersey	30,760,371	5,265,389	89,000	102,750	119,956	9,297,792	3,517,343	572,842
New York	19,417,796	1,474,841	206,640	254,000	21,259	2,592,508	679,356	665,694
Ohio	33,927	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	19,357,546	7,645,323	308,000	446,197	389,500	1,940,836	2,634,381	2,409,728
Rhode Island	229,062	.....	94,062	.....	.....	.....	.....	.....
All other states	995,114	444,000	.....	147,000	90,000	252,714	.....	.....

STATES.	VALUE OF PRODUCTS—continued.						
	Gimps and trimmings.	Handkerchiefs.	Ribbons and laces.	Braids and bindings.	Dress, cloak, and military trimmings.	Hosiery and knit goods.	All other products.
The United States	$3,918,209	$1,913,224	$17,343,197	$2,771,382	$4,636,357	$1,156,172	$602,330
California	120,360	.....	.....	6,000	23,840	7,346	2,336
Connecticut	112,319	31,300	736,642	139,216	.....	15,125	17,485
Illinois	465,500	.....	.....	65,000	228,745	23,900	700
Maryland	24,000	.....	70,361	.....	6,000	.....	.....
Massachusetts	127,000	.....	.....	660,938	160,000	135,958	28,000
New Jersey	185,949	1,872,559	9,229,387	359,902	54,000	79,212	14,290
New York	1,984,531	9,365	6,031,576	1,154,326	3,199,709	872,800	271,281
Ohio	8,767	.....	.....	.....	25,160	.....	.....
Pennsylvania	889,783	.....	1,195,231	293,000	938,903	21,831	244,838
Rhode Island	.....	.....	80,000	55,000	.....	.....	.....
All other states	.....	.....	.....	38,000	.....	.....	23,400

TABLE 6.—CLASSIFICATION OF EMPLOYÉS AND WAGES FOR THE UNITED STATES, BY STATES: 1890.

STATES.	Number of establishments.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS. (a)												
		Aggregates.		Officers or firm members actively engaged in the industry or in supervision.								Clerks.			
				Males above 16 years.				Females above 15 years.				Males above 16 years.			
		Average number.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
The United States.	472	50,913	$19,680,318	644	49	$36.37	$1,137,043	21	48	$17.80	$17,836	752	49	$19.39	$715,192
California	9	214	83,566	6	50	36.73	11,020	1	50	30.00	1,500	1	44	35.66	1,560
Connecticut	35	5,081	2,006,804	48	50	36.66	87,800	.....	.....	.....	.....	61	50	22.33	68,095
Illinois	10	805	295,636	19	48	31.92	29,060	.....	.....	.....	.....	22	47	20.51	21,324
Maryland	4	75	24,233	3	50	24.00	3,600	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts	20	3,216	1,296,399	44	49	46.28	99,950	1	46	21.82	1,000	171	50	18.13	153,665
New Jersey	132	17,917	7,176,180	201	49	33.57	330,814	3	50	20.00	3,000	210	49	18.55	189,828
New York	185	13,151	5,584,399	220	49	36.82	394,758	13	47	14.99	9,120	181	49	20.65	184,454
Ohio	3	40	13,685	1	50	20.00	1,000	.....	.....	.....	.....	1	50	12.00	600
Pennsylvania	66	9,522	2,981,334	88	46	40.17	163,066	3	49	21.74	3,216	96	48	18.97	87,677
Rhode Island	3	194	61,978	6	49	26.31	7,675	.....	.....	.....	.....	.....	.....	.....	.....
All other states (b)	5	698	156,104	8	46	22.45	8,300	.....	.....	.....	.....	9	49	18.26	7,989

STATES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.											
	Clerks—Continued.				Operatives and skilled.							
	Females above 15 years.				Males above 16 years.				Females above 15 years.			
	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
The United States.	114	48	$8.71	$47,806	10,594	49	$11.35	$5,847,457	19,695	48	$5.73	$5,475,613
California	3	46	8.70	1,196	39	47	13.12	24,266	137	48	5.67	37,318
Connecticut	8	50	8.45	3,378	986	50	12.03	592,705	2,499	50	5.60	700,199
Illinois	8	43	11.50	3,930	136	44	11.88	70,522	535	46	5.88	143,392
Maryland	.....	.....	.....	.....	27	50	8.96	11,980	44	50	3.93	8,588
Massachusetts	7	50	10.00	3,500	808	50	9.97	399,194	1,549	49	5.54	424,363
New Jersey	58	49	6.27	17,928	3,697	48	11.36	2,016,165	5,951	47	6.39	1,798,259
New York	18	47	15.41	13,004	2,965	49	12.80	1,865,914	4,825	49	5.88	1,398,208
Ohio	2	47	9.73	912	8	47	9.68	3,649	28	48	5.64	7,524
Pennsylvania	5	47	8.96	2,090	1,777	48	9.23	792,477	3,767	48	4.93	898,188
Rhode Island	2	46	9.08	832	41	50	9.84	20,006	54	48	5.13	13,427
All other states	3	47	7.31	1,036	110	49	9.42	50,579	306	48	3.16	46,237

a The average weekly earnings per employé are computed from individual reports. The average number of employés reported by each establishment is multiplied by the number of weeks embraced by the term of operation; the result is the number of weeks required for one employé to perform the labor. Aggregating such results of individual reports the number of weeks required for one employé to perform the labor is obtained. This number used as a divisor for the total wages produces the true average weekly earnings.

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

TABLE 6.—CLASSIFICATION OF EMPLOYÉS AND WAGES FOR THE UNITED STATES, BY STATES: 1890—Continued.

STATES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.											
	Operatives and skilled—Continued.				Unskilled.							
	Children.				Males above 16 years.				Females above 15 years.			
	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.
The United States.	2,573	49	$3.09	$390,029	884	49	$9.38	$406,657	212	48	$4.70	$48,177
California	2	50	4.70	470	8	17	10.50	1,454	13	27	6.64	2,288
Connecticut	123	50	3.91	24,076	209	50	10.20	106,575	115	50	4.23	24,297
Illinois	10	48	3.26	1,560	3	49	11.48	1,698	.....	.....	.....	.....
Maryland	.....	.....	.....	.....	1	10	6.25	65	.....	.....	.....	.....
Massachusetts	48	49	4.31	16,075	85	50	8.75	37,064	1	44	6.86	300
New Jersey	858	49	3.07	128,973	313	49	9.73	149,663	10	50	6.37	3,186
New York	249	49	3.10	37,500	150	49	8.22	60,877	63	49	4.99	15,562
Ohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	1,124	49	3.10	171,220	102	48	9.22	45,432	10	48	5.32	2,544
Rhode Island	18	50	3.11	2,796	3	49	6.57	958	.....	.....	.....	.....
All other states	141	49	1.95	13,359	10	50	5.74	2,871	.....	.....	.....	.....

STATES.	AVERAGE NUMBER OF EMPLOYÉS IN EACH CLASS AND AVERAGE WEEKLY EARNINGS—continued.				PIECEWORKERS—AVERAGE NUMBER EMPLOYED AND TOTAL WAGES.							
	Unskilled—Continued.											
	Children.				Summary.		Males above 16 years.		Females above 15 years.		Children.	
	Number.	Average number of weeks employed.	Average weekly earnings per employé.	Total wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.	Number.	Wages.
The United States.	93	49	$3.78	$17,292	15,331	$5,577,216	6,124	$3,095,417	9,007	$2,446,275	200	$35,524
California	.....	.....	.....	.....	4	2,494	2	1,870	2	624	.....	.....
Connecticut	.....	.....	.....	.....	1,032	399,760	345	197,740	687	202,020	.....	.....
Illinois	.....	.....	.....	.....	72	24,150	18	10,110	54	14,040	.....	.....
Maryland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts	32	50	4.70	7,520	470	159,768	84	49,155	378	109,038	8	1,575
New Jersey	5	50	2.42	606	6,611	2,537,758	3,763	1,663,655	2,812	862,160	36	11,943
New York	16	50	3.79	3,034	4,451	1,601,968	1,341	846,287	3,095	753,806	15	1,875
Ohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	39	48	3.19	5,976	2,511	809,448	541	317,327	1,840	474,300	130	17,821
Rhode Island	1	46	3.40	156	69	16,128	5	1,434	53	12,384	11	2,310
All other states	.....	.....	.....	.....	111	25,733	25	7,839	86	17,894	.....	.....

TABLE 7.—AVERAGE NUMBER OF EMPLOYÉS AT THE DIFFERENT WEEKLY RATES OF PAY, FOR THE UNITED STATES, BY STATES: 1890.

STATES.	Number of establishments.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK. (a)											
		Aggregates.		Males above 16 years.									
		Average number.	Total wages.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.
The United States.	472	50,913	$19,680,318	12,874	1,308	473	870	669	688	1,342	1,593	2,175
California	9	214	83,566	54	3	4	.....	4	.....	.....	12	8
Connecticut	35	5,081	2,006,804	1,304	44	49	87	113	64	281	153	192
Illinois	10	805	295,636	180	16	.....	2	.....	.....	32	36	27
Maryland	4	75	24,233	31	1	7	10	1	.....	.....	.....	10
Massachusetts	20	3,216	1,296,399	1,108	63	80	136	82	35	110	66	252
New Jersey	132	17,917	7,176,180	4,421	268	177	317	270	257	512	679	737
New York	185	13,151	5,584,309	3,516	353	111	138	89	214	160	453	605
Ohio	3	40	13,685	10	3	.....	.....	.....	.....	.....	3	2
Pennsylvania	66	9,522	2,981,334	2,063	539	41	143	80	100	247	172	316
Rhode Island	3	194	61,978	50	6	.....	14	7	.....	.....	2	10
All other states (b)	5	698	156,104	137	12	4	23	23	18	.....	17	16

STATES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.											
	Males above 16 years—Continued.			Females above 15 years.								
	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	$9 and over but under $10.	$10 and over but under $12.	$12 and over but under $15.
The United States.	2,151	688	917	20,042	6,523	5,072	4,376	1,371	995	485	885	263
California	13	3	7	154	26	63	29	16	8	7	4	.....
Connecticut	166	57	98	2,622	529	948	975	75	29	45	7	9
Illinois	29	25	13	543	116	186	175	4	54	1	6	.....
Maryland	.....	.....	2	44	39	.....	5	.....	.....	.....	.....	.....
Massachusetts	175	62	47	1,558	364	682	300	95	22	30	13	51
New Jersey	677	274	253	6,022	1,370	1,526	1,487	505	284	254	483	102
New York	846	175	372	4,919	1,493	1,109	951	455	544	122	102	95
Ohio	1	1	.....	30	10	2	15	2	.....	.....	.....	1
Pennsylvania	233	78	114	3,785	2,280	531	407	212	53	24	269	4
Rhode Island	3	3	5	56	25	24	.....	5	.....	2	.....	.....
All other states	8	10	6	309	271	1	32	2	1	.....	1	1

STATES.	WEEKLY RATES OF WAGES PAID AND AVERAGE NUMBER OF EMPLOYÉS AT EACH RATE, INCLUDING OFFICERS, FIRM MEMBERS, AND CLERKS, BUT NOT THOSE EMPLOYED ON PIECEWORK—continued.									PIECEWORKERS.	
	Females above 15 years—Continued.			Children.							
	$15 and over but under $20.	$20 and over but under $25.	$25 and over.	Total number.	Under $5.	$5 and over but under $6.	$6 and over but under $7.	$7 and over but under $8.	$8 and over but under $9.	Average number.	Total wages.
The United States.	37	21	14	2,666	2,561	105	.....	.....	.....	15,331	$5,577,216
California	.....	.....	1	2	1	1	.....	.....	.....	4	2,494
Connecticut	1	2	2	123	121	2	.....	.....	.....	1,032	399,769
Illinois	.....	.....	1	10	10	.....	.....	.....	.....	72	24,150
Maryland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts	.....	1	.....	80	67	13	.....	.....	.....	470	159,768
New Jersey	5	5	1	863	801	62	.....	.....	.....	6,611	2,537,758
New York	30	11	7	265	260	5	.....	.....	.....	4,451	1,601,968
Ohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	1	2	2	1,163	1,141	22	.....	.....	.....	2,511	809,448
Rhode Island	.....	.....	.....	19	19	.....	.....	.....	.....	69	16,128
All other states	.....	.....	.....	141	141	.....	.....	.....	.....	111	25,733

a In comparing the table of weekly rates and the number of employés at each rate with the average weekly earnings presented in Table 6 it must be remembered that it is not practicable to obtain true average weekly earnings from the table of weekly rates, because the term of employment varies for employés at the respective rates.

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

DYEING AND FINISHING TEXTILES.

BY P. T. WOOD.

The dyeing and finishing of textiles are integral parts of the manufacture of textile fabrics.

The tables exhibited in this report do not embrace the statistics of establishments connected with cotton, woolen, or silk factories, but show only the operations of independent dye works, bleacheries, and print works, the value of the products reported being merely the values added to the fabrics by the processes of dyeing and finishing. Much of the dyeing and finishing is done by the manufacturers themselves, the data showing that while chemicals and dyestuffs to the value of $8,407,693 were consumed during the census year in the establishments devoted exclusively to this industry, the silk, cotton, and woolen mills in which dyeing and finishing is done used chemicals and dyestuffs valued at $11,278,970, divided as follows: in woolen mills, $6,453,665; in cotton mills, $4,266,773, and in silk mills, $558,532. It will thus be seen that more dyeing and finishing was done in textile mills than in the 248 establishments devoted exclusively to this industry.

While there was an increase in all the expenses in the census year over those reported at the census of 1880, the returns show that the value of the work done in the dyehouses, bleacheries, and print works has decreased. Thus, while there were 248 establishments engaged in this industry in 1890 and 191 in 1880, an increase of 29.84 per cent, the value of the work done during the census year (1890) was $28,900,560, as compared with $32,297,420 in 1880, a decrease of $3,396,860, or 10.52 per cent. This decrease is all the more marked because of the increase in the products of the silk, cotton, and woolen mills during the decade. At the same time a marked increase is shown in the amount paid for wages, a slight difference in cost of materials, and an apparently large increase in the amount of capital invested. The capital employed (not including $1,819,779 value of property hired) in the industry of dyeing and finishing textiles for 1890 was $38,450,800, an apparent but not an actual increase of $12,226,819 over that employed as reported at the census of 1880. The large increase shown in this item is partly due to the fact that invested capital as returned at the census of 1880 did not take cognizance of all the items that are properly embraced by "Live assets", which, it is believed, were for the first time fully reported at the census of 1890. Hence, in making comparison between the returns of capital invested at the two censuses, these facts should be carefully borne in mind.

Dyers and finishers explain that the decrease in value of the work done as reported for 1890 is due to the fact that competition and improved processes have reduced their charges for work at least 25 per cent. The market cost of chemicals and dyestuffs remains about the same, but it is not necessary to use as much of these articles now in a given quantity of goods as was employed at the census of 1880. This is particularly noticeable in the manufactures of silk, as by the introduction of machinery operated by power it is now possible to do work that ten years ago could only be performed by hand. Therefore the decrease in the value of work done is not due to an increase in the number of manufacturers of textiles doing their own dyeing and finishing, since the proportion of such manufacturers in 1890 is about the same as in 1880.

Notwithstanding the decrease in amount received for work done in the dyehouses an average increase is shown in the wages paid. In 1880 there were 16,698 employés, receiving $6,474,364 in wages, while 20,267 employés earned $9,717,011 in wages during the census year ended May 31, 1890. The percentage of increase in the number of employés is 21.37 and in wages paid 50.08.

At the census of 1880 the cost of materials and wages was $20,138,659 as compared with a product of $32,297,420, while at the census of 1890 the cost of these two principal items was $22,102,231 and value of product $28,900,560. Thus materials and wages cost 62.35 per cent of the value of work done in the former census year, while at the latter census the percentage had risen to 76.48.

The work done, both in quantity and value, is principally in dyeing, bleaching, and printing cotton yarns and piece goods.

The amount of $28,900,560, given as value of product of dyehouses, bleacheries, and print works, does not show the full value added to textile manufactures by these processes. In the woolen mills chemicals and dyestuffs costing $6,453,665 were used. From the returns made by manufacturers it is found that the cost of these materials is 36.18 per cent of the added value. Applying this basis of computation, it would appear that the added value of work done in woolen mills is $17,837,659. Chemicals and dyestuffs costing $4,266,773 were used in cotton mills. The cost of these chemicals and dyestuffs, according to the returns of establishments dyeing, printing, and bleaching cotton goods, is 26.61 per cent of the value added by these processes, which would make the value of the work done $16,034,472. In silk mills the chemicals and dyestuffs cost 37.21 per cent of the value added by their use. The cost of these materials is $558,532, and the value of the work done, which means the cost of the dyestuffs plus the value added by their use, is $1,501,027. The value of this work done in mills engaged in textile manufactures is therefore approximately as follows: cotton, $16,034,472; woolen, $17,837,659; silk, $1,501,027; total, $35,373,158. Adding this total to the value of work done in establishments devoted exclusively to dyeing and finishing textiles, the gross value added by dyeing, bleaching, and printing is shown to be $64,273,718.

Table 1 shows by states, with totals for the United States, the number of establishments, amount of capital, miscellaneous expenses, number of employés by classes and their wages, power, cost of materials used, total value of work done, and classes of goods operated upon.

TABLE 1.—DYEING AND FINISHING TEXTILES, IN THE AGGREGATE, SHOWING CAPITAL INVESTED, MISCELLANEOUS EXPENSES, EMPLOYÉS, WAGES, POWER, MATERIALS, AND WORK DONE.

STATES.	Number of establishments.	CAPITAL.									
		Value of hired property.	Direct investment.								
			Aggregate.	Value of plant.				Live assets.			
				Total.	Land.	Buildings.	Machinery, tools, and implements.	Total.	Raw materials.	Stock in process and finished products on hand.	Cash, bills and accounts receivable, and all sundries not elsewhere reported.
The United States	248	$1,819,779	$38,450,800	$19,879,039	$2,579,114	$7,596,641	$9,703,284	$18,571,761	$3,586,358	$7,213,281	$7,772,122
Connecticut	5	.....	775,352	621,096	58,700	331,184	231,212	154,256	61,864	4,300	88,092
Illinois	3	13,000	26,500	20,500	3,500	6,000	11,000	6,000	2,000	1,000	3,000
Massachusetts	33	139,500	11,996,154	5,187,513	673,931	2,010,687	2,502,895	6,808,641	717,428	2,773,877	3,317,336
New Jersey	41	306,300	5,197,403	2,996,209	333,936	879,577	1,782,696	2,201,194	442,430	713,993	1,044,771
New York	49	516,866	4,963,095	2,225,566	366,300	721,700	1,137,566	2,737,529	1,148,419	1,358,789	230,321
Pennsylvania	83	247,025	6,296,340	3,791,968	598,647	1,354,200	1,839,121	2,504,372	372,193	918,148	1,214,031
Rhode Island	22	578,788	5,739,692	3,763,321	432,600	1,832,398	1,498,323	1,976,371	491,809	621,048	863,514
All other states (a)	12	17,700	3,456,264	1,272,866	111,500	460,895	700,471	2,183,398	350,215	822,126	1,011,057

STATES.	MISCELLANEOUS EXPENSES.							AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES.				
								Aggregates.		Officers, firm members, and clerks.		
	Total.	Rent paid for tenancy.	Taxes.	Insurance.	Repairs, ordinary, of buildings and machinery.	Interest paid on cash used in the business.	Sundries not elsewhere reported.	Average number.	Total wages.	Males above 16 years.	Females above 15 years.	Wages.
The United States	$3,131,081	$168,646	$214,464	$158,996	$866,211	$697,503	$1,025,261	20,267	$9,717,011	636	30	$805,291
Connecticut	77,336	.....	7,618	2,443	35,851	5,785	25,639	489	251,352	12	.....	14,250
Illinois	1,426	920	61	120	125	.....	200	21	10,424	4	1	2,532
Massachusetts	869,669	23,530	82,524	32,675	251,799	250,013	229,128	4,352	1,909,107	78	4	99,320
New Jersey	752,461	38,267	23,507	23,471	145,834	136,041	385,341	3,864	2,057,562	129	.....	179,425
New York	367,935	42,270	22,947	28,630	95,045	133,667	45,376	2,839	1,481,723	112	2	137,473
Pennsylvania	419,456	45,343	21,742	37,357	134,325	30,176	150,513	3,545	1,803,822	184	6	207,257
Rhode Island	393,549	17,206	27,982	24,213	113,746	87,761	122,641	3,720	1,593,055	88	13	130,059
All other states	249,249	1,110	28,083	10,087	89,486	54,060	66,423	1,437	609,966	29	4	34,975

a Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Delaware, 1; Iowa, 1; Maine, 1; Maryland, 2; Minnesota, 1; Missouri, 1; New Hampshire, 2; Ohio, 2; West Virginia, 1.

TABLE 1.—DYEING AND FINISHING TEXTILES, IN THE AGGREGATE, ETC.—Continued.

STATES.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES—continued.								POWER.									Printing machines.
	Operatives and skilled. (a)				Unskilled.				Steam.			Water.				All other power.		
												Water wheels.		Turbine wheels.				
	Males above 16 years.	Females above 15 years.	Children.	Wages.	Males above 16 years.	Females above 15 years.	Children.	Wages.	Boilers.	Engines.	Horse power.	Number.	Horse power.	Number.	Horse power.	Motors.	Horse power.	
The United States.	14,697	2,178	711	$8,186,947	1,813	120	82	$724,773	927	1,011	54,370	11	630	30	2,397	4	45.5	287
Connecticut	368	72	2	223,064	22	13	.....	14,038	14	13	725	5	350	4	111	.....	.....	4
Illinois	12	3	.....	7,392	1	.....	.....	500	3	3	57	.....	.....	.....	.....	.....	.....	.....
Massachusetts	3,164	516	197	1,668,627	363	23	7	141,160	202	132	11,533	3	160	7	663	1	5.0	77
New Jersey	2,976	346	35	1,744,466	359	.....	19	133,671	139	199	7,005	1	20	3	335	1	10.0	56
New York	1,973	390	121	1,250,774	201	25	15	93,476	156	186	12,545	.....	.....	5	225	.....	.....	70
Pennsylvania	2,590	211	164	1,446,157	374	1	15	150,408	226	259	8,663	1	70	.....	.....	.....	.....	17
Rhode Island	2,518	513	119	1,308,696	386	57	26	154,300	135	182	10,535	1	30	4	258	.....	.....	44
All other states	1,096	127	73	537,771	107	1	.....	37,220	52	37	3,307	.....	.....	7	805	2	30.5	18

STATES.	MATERIALS USED.									WORK DONE.		
	Total cost.	Chemicals and dyestuffs.	Starch.		Soap.		Fuel.	Rent of power and heat.	All other materials.	Total value of work done.	Woolen yarns dyed.	
		Cost.	Pounds.	Cost.	Pounds.	Cost.	Cost.	Cost.	Cost.		Pounds.	Value.
The United States.	$12,385,220	$8,407,693	18,649,606	$660,577	6,766,696	$279,272	$1,647,848	$23,138	$1,366,692	$28,900,560	17,999,651	$751,801
Connecticut	300,360	114,126	556,763	17,815	32,318	2,049	58,711	.....	107,659	715,388	.....	.....
Illinois	6,846	4,270	.....	.....	8,200	504	1,072	.....	1,000	26,741	1,031	206
Massachusetts	2,801,364	1,950,550	4,538,183	125,288	753,860	25,599	404,778	6,413	288,736	6,496,215	102,400	9,800
New Jersey	2,711,121	2,068,192	3,184,240	109,466	1,730,738	83,775	239,329	2,500	207,859	6,183,397	138,926	6,043
New York	1,454,119	889,577	2,242,012	73,836	995,683	44,321	216,618	4,775	224,992	3,636,051	459,700	69,352
Pennsylvania	2,395,482	1,808,041	3,517,503	107,269	2,160,788	80,793	284,546	6,250	108,583	5,240,761	b17,216,404	660,657
Rhode Island	1,819,351	1,064,475	3,138,601	129,050	809,774	32,205	351,521	1,200	240,900	4,743,561	29,190	2,543
All other states	896,577	508,462	1,472,304	97,853	275,335	10,026	91,273	2,000	186,963	1,858,446	52,000	3,200

STATES.	WORK DONE—continued.											
	Worsted yarns dyed.		Cotton yarns dyed.		Spun silk yarns dyed.		Thrown silk dyed.		Wool stock dyed.		Cotton stock dyed.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
The United States.	9,342,157	$493,974	48,762,759	$2,036,127	311,830	$119,810	3,322,017	$2,346,387	1,160,666	$48,828	4,676,344	$204,827
Connecticut	.....	.....	110,000	11,500	.....	.....	15,600	15,600	.....	.....	165,000	5,400
Illinois	30,000	3,000	81,720	7,535	10,000	5,000	.....	.....	.....	.....	.....	.....
Massachusetts	500,000	42,500	5,172,909	242,356	.....	.....	.....	.....	280,000	5,000	32,000	4,650
New Jersey	10,615	1,331	1,486,400	27,140	8,400	5,000	2,866,937	2,120,318	75,399	5,770	848,466	28,079
New York	62,000	28,162	871,100	76,368	180,200	85,520	272,815	125,571	125,000	4,500	230,000	7,200
Pennsylvania	8,498,342	398,935	33,499,727	1,346,942	111,730	23,090	166,665	84,898	587,267	25,008	1,525,528	47,446
Rhode Island	241,000	20,030	6,522,037	291,161	1,500	1,200	.....	.....	90,000	7,200	1,875,000	112,000
All other states	200	16	1,018,866	33,125	.....	.....	.....	.....	3,000	750	350	52

a Includes pieceworkers and their wages.

b Includes 400,000 pounds woolens and worsteds.

TABLE 1.—DYEING AND FINISHING TEXTILES, IN THE AGGREGATE, ETC.—Continued.

STATES.	WORK DONE—continued.												
	Wool and worsted piece goods dyed.		Cotton piece goods dyed.		Cotton piece goods bleached.		Cotton piece goods printed.		Silk piece goods dyed.		Mixed textile piece goods dyed.		All other work done.
	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Value.
The United States	20,779,034	$652,998	446,496,822	$5,671,488	454,357,758	$3,369,940	579,667,368	$10,355,032	7,405,399	$394,777	60,716,250	$2,069,765	$384,806
Connecticut	.....	.....	22,398,076	340,201	33,126,636	242,504	4,358,016	68,192	.....	.....	.....	.....	31,991
Illinois	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,000
Massachusetts	7,685,654	92,853	113,430,837	1,388,927	118,891,995	640,375	184,198,408	3,997,087	60,000	6,000	50,000	5,000	61,067
New Jersey	.....	.....	87,748,170	976,956	25,980,644	216,365	94,862,907	1,625,617	4,705,012	116,378	19,700,000	1,029,400	25,000
New York	1,250,150	25,022	30,177,807	399,593	21,316,000	195,762	94,622,693	1,508,307	2,516,787	269,839	14,295,150	691,015	149,849
Pennsylvania	10,793,880	496,509	93,056,440	1,359,002	a8,760,980	175,000	24,187,753	268,206	120,100	1,210	24,167,900	267,225	86,633
Rhode Island	1,002,550	34,964	50,727,100	734,522	192,163,959	1,440,921	140,054,180	2,004,890	.....	.....	2,409,200	75,805	18,325
All other states	46,800	3,650	48,958,392	472,287	54,117,544	459,013	37,383,411	882,733	3,500	1,350	4,000	1,320	950

a Dyed, bleached, and printed.

Table 2 shows by states, with totals for the United States, the returns of establishments engaged in dyeing and finishing woolen and worsted, cotton, silk, and mixed goods and yarns, respectively.

TABLE 2.—DYEING AND FINISHING TEXTILES, BY CLASSES OF TEXTILES, SHOWING CAPITAL INVESTED, MISCELLANEOUS EXPENSES, EMPLOYÉS, WAGES, POWER, MATERIALS, AND WORK DONE.

WOOLEN AND WORSTED GOODS AND YARNS.

STATES.	Number of establishments.	CAPITAL.		Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)				
		Value of hired property.	Direct investment.		Aggregates.		Males above 16 years.	Females above 15 years.	Children.
					Average number.	Total wages.			
The United States	39	$228,700	$2,070,837	$152,628	1,543	$1,046,304	1,482	58	3
Massachusetts	3	.....	65,500	3,171	29	15,550	27	2	.....
New Jersey	3	.....	475,667	39,999	340	297,337	338	2	.....
New York	5	96,000	357,550	45,507	322	278,008	322	.....	.....
Pennsylvania	24	113,500	1,157,706	60,914	819	436,541	765	52	2
All other states (b)	4	19,200	14,414	3,037	33	18,868	30	2	1

STATES.	POWER.			Printing machines.	COST OF MATERIALS USED.					Total value of work done.
	Steam.	Water.	All other.		Total.	Chemicals and dyestuffs.	Fuel.	Rent of power and heat.	All other materials.	
	Horse power.	Horse power.	Horse power.							
The United States	3,794	103	.....	41	$1,238,507	$1,009,537	$132,215	$1,280	$95,475	$2,790,405
Massachusetts	154	18	.....	.....	11,268	5,875	2,700	.....	2,693	41,252
New Jersey	1,183	85	.....	20	332,039	277,759	30,600	.....	23,680	771,665
New York	1,065	.....	.....	21	290,590	247,360	29,880	.....	13,350	662,425
Pennsylvania	1,357	.....	.....	.....	586,637	463,665	66,615	1,280	55,077	1,261,163
All other states	35	.....	.....	.....	17,973	14,878	2,420	.....	675	53,900

a Includes officers, firm members, and clerks.

b Includes states grouped, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Rhode Island, 3; Missouri, 1.

TABLE 2.—DYEING AND FINISHING TEXTILES, BY CLASSES OF TEXTILES, ETC.—Continued.

COTTON GOODS AND YARNS.

STATES.	Number of establishments.	CAPITAL.		Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)				
		Value of hired property.	Direct investment.		Aggregates.		Males above 16 years.	Females above 15 years.	Children.
					Average number.	Total wages.			
The United States	113	$971,646	$29,164,503	$2,453,329	14,491	$6,440,408	11,894	1,844	753
Connecticut	4	.....	771,652	76,686	483	248,752	396	85	2
Massachusetts	24	133,500	8,868,857	706,604	3,279	1,413,333	2,750	342	187
New Jersey	13	112,500	3,178,430	575,755	2,079	938,166	1,740	287	52
New York	16	50,733	3,959,235	261,064	1,958	874,975	1,472	352	134
Pennsylvania	31	106,125	3,786,021	226,197	1,814	885,952	1,539	102	173
Rhode Island	17	560,788	5,161,676	359,964	3,460	1,480,684	2,784	544	132
All other states (b)	8	8,000	3,438,632	247,059	1,418	598,546	1,213	132	73

STATES.	POWER.			Printing machines.	COST OF MATERIALS USED.					Total value of work done.
	Steam.	Water.	All other.		Total.	Chemicals and dyestuffs.	Fuel.	Rent of power and heat.	All other materials.	
	Horse power.	Horse power.	Horse power.							
The United States	44,708	2,863	35.5	212	$8,363,016	$5,289,783	$1,187,035	$16,083	$1,870,115	$19,876,364
Connecticut	715	440	.....	4	294,120	109,126	58,111	.....	126,883	699,788
Massachusetts	10,454	765	5.0	49	2,195,959	1,573,749	305,671	6,413	310,126	5,264,241
New Jersey	4,845	270	.....	36	1,185,616	752,476	126,147	1,000	305,093	2,878,016
New York	10,654	225	.....	43	953,055	489,263	168,483	300	295,009	2,262,412
Pennsylvania	5,631	70	.....	17	1,230,828	927,971	134,973	4,270	163,614	2,621,107
Rhode Island	9,120	288	.....	44	1,617,197	937,826	303,223	1,200	374,948	4,320,707
All other states	3,289	805	30.5	19	886,241	499,372	90,427	2,000	294,442	1,830,093

SILK GOODS AND YARNS.

STATES.	Number of establishments.	CAPITAL.		Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)				
		Value of hired property.	Direct investment.		Aggregates.		Males above 16 years.	Females above 15 years.	Children.
					Average number.	Total wages.			
The United States	52	$487,933	$1,880,224	$177,933	1,745	$1,013,325	1,639	102	4
New Jersey	24	193,800	1,313,306	123,607	1,292	744,059	1,233	57	2
New York	21	285,133	466,505	47,706	391	230,034	344	45	2
All other states (b)	7	9,000	100,413	6,620	62	39,232	62	.....	.....

STATES.	POWER.			Printing machines.	COST OF MATERIALS USED.					Total value of work done.
	Steam.	Water.	All other.		Total.	Chemicals and dyestuffs.	Fuel.	Rent of power and heat.	All other materials.	
	Horse power.	Horse power.	Horse power.							
The United States	1,513	21	10.0	.....	$1,276,926	$1,092,192	$83,475	$4,675	$96,584	$2,935,101
New Jersey	777	.....	10.0	.....	1,127,346	987,957	70,582	600	68,207	2,333,716
New York	545	.....	.....	.....	111,129	75,012	9,498	4,075	22,544	478,637
All other states	191	21	.....	.....	38,451	29,223	3,395	.....	5,833	122,748

a Includes officers, firm members, and clerks.

b Includes states grouped, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Cotton—Delaware, 1; Iowa, 1; Maine, 1; Maryland, 1; New Hampshire, 2; Ohio, 1; West Virginia, 1. Silk—Pennsylvania, 5; Illinois, 1; Connecticut, 1.

TABLE 2.—DYEING AND FINISHING TEXTILES, BY CLASSES OF TEXTILES, ETC.—Continued.

MIXED GOODS AND YARNS.

STATES.	Number of establishments.	CAPITAL.		Miscellaneous expenses.	AVERAGE NUMBER OF EMPLOYÉS AND TOTAL WAGES. (a)				
		Value of hired property.	Direct investment.		Aggregates.		Males above 16 years.	Females above 15 years.	Children.
					Average number.	Total wages.			
The United States	44	$131,500	$5,335,236	$347,191	2,488	$1,216,974	2,131	324	33
Massachusetts	6	6,000	3,061,797	159,894	1,044	480,224	828	199	17
New York	7	85,000	179,805	13,658	168	98,706	148	20	.....
Pennsylvania	23	25,000	1,260,900	126,700	862	446,425	794	64	4
All other states (b)	8	15,500	832,734	46,939	414	191,619	361	41	12

STATES.	POWER.			Printing machines.	COST OF MATERIALS USED.					Total value of work done.
	Steam.	Water.	All other.		Total.	Chemicals and dyestuffs.	Fuel.	Rent of power and heat.	All other materials.	
	Horse power.	Horse power.	Horse power.							
The United States	4,355	40	.....	34	$1,506,771	$1,016,181	$245,123	$1,100	$244,367	$3,298,699
Massachusetts	925	40	.....	28	594,137	370,926	96,407	.....	126,804	1,190,722
New York	281	.....	.....	6	99,345	77,942	8,757	400	12,246	232,577
Pennsylvania	1,529	.....	.....	.....	547,406	393,182	80,343	700	73,181	1,255,343
All other states	1,620	.....	.....	.....	265,883	174,131	59,616	.....	32,136	620,048

a Includes officers, firm members, and clerks.

b Includes states having less than 3 establishments, in order that the operations of individual establishments may not be disclosed. These establishments are distributed as follows: Illinois, 2; Maryland, 1; Minnesota, 1; New Jersey, 1; Ohio, 1; Rhode Island, 2.