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no. 80

DEPARTMENT OF COMMERCE

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

B. S. CUTLER, Chief

SPECIAL CONSULAR REPORTS—No. 80

FOREIGN MARKETS

FOR

COTTON LINTERS, BATTING, AND WASTE



PRICE, 10 CENTS

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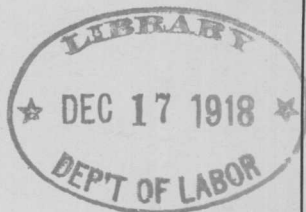
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DEPARTMENT OF COMMERCE
BUREAU OF FOREIGN AND DOMESTIC AFFAIRS
SPECIAL CONSULAR REPORTS - No. 30

FOREIGN MARKETS

COTTON LINTERS, BATTING, AND WASTE



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LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE,
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,
Washington, March 15, 1918.

SIR: There is submitted herewith a compilation of reports on foreign markets for cotton linters, cotton batting, and cotton waste, which were prepared by American consuls in various trading centers throughout the world and transmitted to this Bureau during 1915 and 1916. The scope of the investigation and the data thereby obtained should make this publication of more than ordinary value to American textile interests. The dearth of information available in the past with regard to this important branch of the cotton industry has doubtless handicapped its development along export lines. It is hoped that the present report will supply the preliminary data that are necessary for the expansion of the trade in the foreign field.

Statistics are unfortunately lacking for Saxony, for parts of France, and for Belgium and Poland, where large waste-manufacturing industries were located previous to the war. Wherever feasible, information was obtained with regard to related centers, such as Berlin and Hamburg, Rouen, and Moscow.

It is a cause for regret that the recent pressure of public business that called for immediate attention has prevented the previous publication of these reports; but inasmuch as the present survey applies chiefly to the normal period preceding the war, the delay, it is believed, has not appreciably affected its value to the trade.

Respectfully,

B. S. CUTLER,
Chief of Bureau.

TO HON. WILLIAM C. REDFIELD,
Secretary of Commerce.

LETTER OF SUBMITTAL

The following is a summary of the information provided in the attached report. The report was prepared by the [Name] and is intended to provide a comprehensive overview of the [Subject]. The report is divided into several sections, including an introduction, a description of the [Subject], a discussion of the [Subject], and a conclusion. The report is intended to provide a comprehensive overview of the [Subject] and is intended to provide a comprehensive overview of the [Subject].

FOREIGN MARKETS FOR COTTON LINTERS, BATTING, AND WASTE.

INTRODUCTION.

Not only is the United States the great cotton-producing nation of the globe, but it holds the position of primacy as well in the manufacture of linters and waste. The figures for batting are not given separately, but if available they would doubtless indicate that the first place in this industry also belongs to the United States. Normally the United Kingdom, the United States, and Germany are the three great textile-manufacturing nations of the world, and any discussion of the industry, in whole or in part, must take into special consideration the developments in these producing countries.

The value of a discussion of present conditions in the manufacture and utilization of cotton linters, batting, and waste would be problematical, even if its compilation were not practically impossible. Therefore the reports deal only incidentally with the conditions since the war started, but they attempt to present a detailed survey of the production and distribution of these articles before the war in the world's leading centers of industry and commerce. This survey, it is hoped, will be of service to American manufacturers and exporters as a basis for their plans to develop after-the-war markets.

AMERICAN PRODUCTION AND TRADE IN LINTERS.

The supply of cotton linters in the United States for the 12 months ended July 31, 1917, was 1,759,522 bales, averaging 500 pounds to the bale, as compared with 1,444,901 bales for the year ended July 31, 1916. Of the 1917 supply 869,702 bales were consumed at home and 436,161 bales were exported, while 453,659 bales were held in this country at the close of the year. The mill consumption of linters in the United States in 1916 (880,916 bales) was the largest recorded, surpassing that of 1917, the next largest, by 11,214 bales and that of 1915, which takes third place, by 469,071 bales.

The following table, giving the quantity, value, and average price per pound of the cotton linters produced in the United States during the 18 years ended in 1916, shows the remarkable growth of this industry both before and since the war:

Years.	Bales.	Value.	Average price per pound.	Years.	Bales.	Value.	Average price per pound.
			<i>Cents.</i>				<i>Cents.</i>
1899.....	114,544	\$1,800,000	3.1	1908.....	330,277	\$2,340,000	1.4
1900.....	111,096	1,890,000	3.4	1909.....	296,640	4,770,000	3.2
1901.....	145,103	1,520,000	2.1	1910.....	379,576	6,250,000	3.3
1902.....	150,366	2,030,000	2.7	1911.....	533,098	5,150,000	1.9
1903.....	194,486	4,380,000	4.5	1912.....	583,091	7,450,000	2.5
1904.....	235,586	4,610,000	3.9	1913.....	660,087	7,630,000	2.3
1905.....	219,397	4,190,000	3.8	1914.....	820,274	6,150,000	1.5
1906.....	307,518	3,350,000	2.2	1915.....	931,141	26,120,000	5.6
1907.....	256,487	2,920,000	2.3	1916.....	1,330,714	45,193,000	6.8

The recent high prices for linters are due to the great demand for this article in the manufacture of explosives. For this reason quantities of seed intended for planting purposes during the last two seasons were first passed through the delinting machines. The average production of linters per ton of seed treated in 1916 was 149 pounds, as compared with an average of 106 pounds in 1915, 74 pounds in 1914, 67 pounds in 1913 and 1912, and 57 pounds in 1911.

Prior to 1915 exports of linters were included in "upland and other unmanufactured cotton." The following table shows the quantity and value of the exports of cotton linters from the United States, by principal countries of origin, in the years ended June 30, 1915, 1916, and 1917:

Countries.	1915		1916		1917	
	Bales.	Value.	Bales.	Value.	Bales.	Value.
British South Africa.....	1,442	\$18,379	1,949	\$48,156	1,225	\$49,316
Canada.....	7,744	120,497	3,476	175,341	22,771	1,432,818
France.....	62,177	1,024,110	215,703	7,859,938	394,614	20,266,602
Italy.....	37,067	636,660	5,144	128,057	10,065	466,655
Netherlands.....	37,759	687,555	9,654	248,707	708	37,716
Russia in Asia.....			5,198	86,795	3,713	67,470
Russia in Europe.....			8,684	344,199	3,749	217,633
Spain.....	5,862	104,301	263	9,035	186	9,314
Sweden.....	29,485	477,339	1,193	67,392		
United Kingdom—England.....	29,686	463,722	692	11,049	36,986	1,529,023
All other.....	7,728	132,454	671	14,016	687	34,268
Total.....	218,950	3,665,017	252,627	8,992,685	474,704	24,110,815

AMERICAN PRODUCTION AND TRADE IN WASTE.

The latest available figures showing the production of cotton waste in the United States are those of the Census Bureau referring to the year 1914. In that year there were 49 establishments producing cotton waste, with a capital of \$9,732,000 and products valued at \$16,111,000. In 1914 there were used in the manufacture of cotton goods 53,994,930 pounds of cotton waste, valued at \$3,533,165, and the cotton waste produced for sale amounted to 317,198,319 pounds, valued at \$14,416,870. The cotton waste reported as sold by cotton mills exceeded that purchased by such mills by approximately 260,000,000 pounds in quantity and by \$10,879,298 in value. The waste reported as the product of carpet and rag factories amounted to 2,945,561 pounds, valued at \$149,559. Hosiery and knitting mills reported 12,999,218 pounds of cotton waste, valued at \$628,944.

The total imports of cotton waste into the United States and exports of cotton waste from the United States during the last eight fiscal years are shown in the following table:

Years.	Imports.		Exports.	
	Pounds.	Value.	Pounds.	Value.
1910.....	35,740,475	\$1,579,588	54,311,226	\$3,129,034
1911.....	56,301,467	2,940,078	49,019,414	3,502,982
1912.....	34,437,484	1,646,211	62,157,317	3,518,255
1913.....	44,694,539	2,129,874	78,624,075	4,449,481
1914.....	26,815,142	1,293,864	67,250,583	4,566,769
1915.....	10,403,657	488,424	47,599,365	2,934,654
1916.....	28,304,368	1,309,787	47,965,887	3,871,637
1917.....	25,628,889	1,412,911	50,919,411	6,029,210

In 1913 nearly half of the cotton waste imported into the United States came from Germany and about 30 per cent from England, but in 1916 Germany dropped out altogether as a source of supply, and England sent 20,168,930 pounds out of a total of 28,304,368 pounds. The increasing supplies obtained from Italy, China, and Japan were noticeable, and in the following year (1916-17) the imports from Italy and the Far East continued to grow, while the share of England was reduced to less than half of the total.

Figures for the war years, however, reflect abnormal conditions. The following table, giving the quantity and value of the imports of cotton waste into the United States from the principal countries of origin during the five years ended June 30, 1914, shows the normal takings of this market and the sources upon which it drew:

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IMPORTS OF WASTE OR FLOCKS, BY PRINCIPAL COUNTRIES, 1910-1914, YEARS ENDED JUNE 30.

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COTTON LINTERS, BATTING, AND WASTE.

Imports from—	1910	1911	1912	1913	1914	Imports from—	1910	1911	1912	1913	1914
Europe:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	Europe:					
Austria-Hungary.....	141,362	13,788	.....	11,722	33,289	Austria-Hungary.....	\$5,164	\$514	.....	\$386	\$490
Belgium.....	251,298	325,625	596,976	224,346	71,926	Belgium.....	9,415	14,518	\$31,458	9,630	2,848
France.....	1,047,543	1,102,197	1,113,640	2,611,670	1,074,226	France.....	38,934	45,175	47,600	130,714	45,032
Germany.....	11,031,405	16,581,291	13,894,085	20,061,432	11,289,274	Germany.....	404,725	677,134	611,972	873,604	487,545
Italy.....	3,624,113	4,921,471	3,136,117	3,212,393	2,848,680	Italy.....	157,415	200,113	153,309	139,434	116,629
Netherlands.....	787,465	1,255,635	1,292,642	850,380	338,214	Netherlands.....	28,639	47,794	49,308	34,283	14,430
Portugal.....	231,663	26,400	21,619	.....	.....	Portugal.....	10,715	886	1,769	.....	.....
Russia in Europe.....	.....	.....	.....	17,579	.....	Russia in Europe.....	.....	.....	.....	758	.....
Spain.....	1,611,224	364,579	364,054	421,841	198,344	Spain.....	46,736	11,337	12,976	15,653	7,421
Switzerland.....	.....	.....	.....	12,647	.....	Switzerland.....	.....	.....	.....	1,053	.....
United Kingdom—	.....	.....	.....	.....	.....	United Kingdom—	.....	.....	.....	.....	.....
England.....	11,303,037	25,607,783	10,732,869	13,156,449	8,308,210	England.....	672,119	1,688,195	581,352	756,154	509,315
Scotland.....	95,199	57,309	23,568	31,520	56,540	Scotland.....	2,331	2,566	201	487	3,544
Ireland.....	.....	.....	53,348	.....	.....	Ireland.....	.....	.....	4,135	.....	.....
North America:	.....	.....	.....	.....	.....	North America:	.....	.....	.....	.....	.....
Canada.....	1,674,028	886,496	627,582	1,162,960	1,017,937	Canada.....	50,261	36,508	22,164	43,661	45,923
Mexico.....	919,172	946,146	376,884	33,123	28,704	Mexico.....	32,675	31,466	10,964	1,118	789
West Indies—	.....	.....	.....	.....	.....	West Indies—	.....	.....	.....	.....	.....
Cuba.....	.....	.....	.....	.....	5,909	Cuba.....	.....	.....	.....	.....	203
Santo Domingo.....	.....	.....	2,314	.....	.....	Santo Domingo.....	.....	.....	116	.....	.....
South America:	.....	.....	.....	.....	.....	South America:	.....	.....	.....	.....	.....
Brazil.....	.....	.....	20,382	13,610	11,000	Brazil.....	.....	.....	1,325	854	685
Colombia.....	.....	.....	.....	5,887	24,164	Colombia.....	.....	.....	235	1,933	.....
Asia:	.....	.....	.....	.....	.....	Asia:	.....	.....	.....	.....	.....
China.....	12,188	3,395	.....	1,200	9,041	China.....	1,318	178	.....	73	657
East Indies, British—	.....	.....	.....	.....	.....	East Indies, British—	.....	.....	.....	.....	.....
British India.....	1,309,925	1,286,210	1,178,914	1,260,265	564,070	British India.....	60,420	70,957	74,723	59,335	21,841
Straits Settlements.....	.....	.....	106,400	.....	.....	Straits Settlements.....	.....	.....	5,102	.....	.....
Japan.....	1,700,853	2,923,142	896,090	1,605,515	935,614	Japan.....	58,721	112,737	37,737	62,442	34,579
Total.....	35,740,475	56,301,467	34,437,484	44,694,539	26,815,142	Total.....	1,579,588	2,940,078	1,646,211	2,129,874	1,293,864
RECAPITULATION.	.....	.....	.....	.....	.....	RECAPITULATION.	.....	.....	.....	.....	.....
Europe.....	30,124,309	50,256,078	31,228,918	40,611,979	24,218,703	Europe.....	1,376,193	2,688,232	1,494,080	1,962,156	1,187,254
North America.....	2,593,200	1,832,642	1,006,780	1,196,083	1,062,550	North America.....	82,936	67,974	33,244	44,779	46,915
South America.....	.....	.....	20,382	19,497	35,164	South America.....	.....	.....	1,325	1,089	2,618
Asia.....	3,022,966	4,212,747	2,181,404	2,866,980	1,508,725	Asia.....	120,459	183,872	117,562	121,850	57,077

The cotton waste exported in 1916-17 amounted to 50,865,551 pounds, valued at \$6,027,327. Of this total, Canada took 23,316,487 pounds, valued at \$2,577,479, and England, 18,217,461 pounds, valued at \$2,361,669—the combined purchases of these two countries representing over 80 per cent of the total quantity. Italy and Cuba, with 2,500,000 pounds and 2,100,000 pounds, respectively, and France, with 1,300,000 pounds, were the foreign purchasers next in order of importance. These figures, however, like those for imports in the war years, reflect the disturbances caused by the war. The pre-war markets of major importance for cotton waste were England and Germany, which together took nearly two-thirds of the total, and Canada and Belgium, which together took 70 per cent of the remainder in 1913 and nearly 50 per cent in 1914.

The following table shows the quantity and value of the exports of cotton waste from the United States to the principal countries of destination during the five years ended June 30, 1914.

EXPORTS OF COTTON WASTE, BY PRINCIPAL COUNTRIES, 1910-1914, YEARS ENDED JUNE 30.

Exports to—	1910	1911	1912	1913	1914	Exports to—	1910	1911	1912	1913	1914
Europe:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	Europe:					
Belgium.....	5,303,060	3,595,981	10,957,225	11,769,069	6,500,481	Belgium.....	\$245,145	\$189,051	\$521,607	\$402,446	\$303,821
Denmark.....	180,097		30,708	18,322	17,250	Denmark.....	5,403		1,358	1,440	1,846
France.....	931,737	1,357,731	1,069,226	1,618,311	2,086,399	France.....	87,503	125,574	91,619	109,853	206,964
Germany.....	20,549,046	14,031,732	14,756,450	17,900,757	21,011,705	Germany.....	818,770	772,893	765,791	1,003,260	1,328,130
Italy.....	300,178	618,337	434,349	1,346,719	1,881,476	Italy.....	25,936	63,881	30,669	114,265	147,583
Netherlands.....	538,402	542,307	1,566,094	2,524,265	3,675,885	Netherlands.....	17,586	16,827	47,244	69,075	109,890
Spain.....	802,221	377,654	53,616	474,888	465,654	Spain.....	85,618	40,400	5,498	49,166	40,177
Sweden.....	5,156			100,577	17,939	Sweden.....	250		384	2,041	1,200
Switzerland.....	146					Switzerland.....	8				
United Kingdom—						United Kingdom—					
England.....	17,407,808	20,053,377	24,374,172	32,275,463	22,515,323	England.....	1,317,774	1,749,395	1,477,306	2,007,173	1,817,306
Scotland.....	21,174	47,042	21,822	3,649	4,721	Scotland.....	932	3,281	1,403	346	416
North America:						North America:					
Bermuda.....	777	1,802	1,074	2,318	1,702	Bermuda.....	62	170	97	212	155
British Honduras.....	7,310	14,611	14,085	13,118	16,939	British Honduras.....	391	787	749	733	931
Canada.....	6,782,034	6,522,206	6,612,579	8,517,569	7,288,231	Canada.....	411,683	407,512	408,664	541,292	478,956
Central America—						Central America					
Costa Rica.....	38,402	30,428	40,564	28,611	34,311	Costa Rica.....	2,192	1,919	2,571	2,054	2,466
Guatemala.....	21,188	19,402	11,274	24,985	25,576	Guatemala.....	1,252	1,252	689	1,713	1,936
Honduras.....	6,142	10,395	11,698	26,528	57,768	Honduras.....	372	639	657	1,451	3,069
Nicaragua.....	10,654	22,977	14,477	17,715	16,963	Nicaragua.....	759	1,781	1,058	1,232	980
Panama.....	248,054	439,897	370,547	475,631	207,792	Panama.....	13,878	24,976	25,273	32,871	12,177
Salvador.....	3,739	3,849	9,944	9,951	7,031	Salvador.....	250	335	343	803	667
Mexico.....	57,431	122,787	283,353	154,374	180,866	Mexico.....	3,620	7,884	16,222	10,275	11,836
Miquelon, Langley, etc.				216	352	Miquelon, Langley, etc.		18		19	30
Newf'd and Labrador	35,975	76,825	38,535	51,429	22,136	Newf'd and Labrador	3,004	5,570	2,112	3,370	1,642
West Indies—						West Indies—					
British						British					
Barbados.....			251	368	278	Barbados.....			24	32	24
Jamaica.....		5,589	9,274	9,742	8,773	Jamaica.....		446	704	793	745
Trinidad and Tobago.....	27,478					Trinidad and Tobago.....	2,014				
Other British.....		14,636	17,787	20,563	16,584	Other British.....		1,066	1,287	1,465	1,306
Cuba.....	555,970	625,187	831,050	801,674	728,151	Cuba.....	45,351	46,987	62,550	58,556	54,249
Danish.....	8,499	1,571	3,574	12,463	9,093	Danish.....	600	136	323	1,058	801
Dutch.....	659	3,290	5,386	8,896	11,225	Dutch.....	50	258	442	711	909
French.....	596	541	1,218	2,483	1,744	French.....	50	52	107	232	180
Haiti.....	5,414	10,121	9,195	12,126	10,642	Haiti.....	394	805	536	928	801
Santo Domingo.....	21,180	26,658	33,009	33,821	34,012	Santo Domingo.....	1,386	1,866	2,282	2,410	2,387

South America:					
Argentina.....	40,063	53,309	15,777	5,683	1,579
Bolivia.....				6,963	468
Brazil.....	53,460	130,954	33,012	33,048	18,075
Chile.....	6,292	5,915	6,701	27,782	52,644
Colombia.....	24,920	37,291	72,716	35,684	49,965
Ecuador.....	10,936	18,274	22,341	20,438	16,908
Guiana, British.....	1,510	1,486	600	2,537	2,007
Paraguay.....	180				
Peru.....	2,510	1,000	5,272	28,446	454
Uruguay.....			9,100	2,525	8,235
Venezuela.....	22,295	27,891	35,268	40,883	29,884
Asia:					350
China.....					
East Indies—					
British—British					
India.....					10,210
Dutch.....					105
Japan.....	43,690	100		4,019	2,789
Russia in Asia.....	400	11,200			
Turkey in Asia.....			3,295		5,299
Oceania:					
British—					
Australia and Tas-					
mania.....	7,000	4,615	17,412	6,700	
New Zealand.....	800				
French.....	2,740	5,350	4,700	5,210	9,072
German.....					200
Philippine Islands.....	220,978	141,089	342,947	139,731	175,480
Africa: British Africa,					
South.....	2,895	650	1,200	2,054	6,550
Total.....	54,311,226	49,019,414	62,157,317	78,624,075	67,250,583
RECAPITULATION.					
Europe.....	46,039,025	40,624,161	53,271,100	68,032,020	58,176,833
North America.....	7,831,532	7,956,129	8,315,876	10,229,352	8,683,476
South America.....	162,166	276,120	200,787	204,989	180,219
Asia.....	44,090	11,300	3,295	4,019	18,753
Oceania.....	231,518	151,054	365,059	151,641	184,752
Africa.....	2,895	650	1,200	2,054	6,550

South America:					
Argentina.....	2,987	4,468	1,324	463	121
Bolivia.....				538	41
Brazil.....	4,291	9,741	2,570	2,016	1,310
Chile.....	538	519	507	2,123	3,741
Colombia.....	1,653	2,611	5,406	2,643	3,495
Ecuador.....	945	1,324	1,539	1,513	1,432
Guiana, British.....	93	75	29	131	114
Paraguay.....	12				
Peru.....	156	90	354	1,631	36
Uruguay.....			725	190	587
Venezuela.....	1,683	2,297	2,584	3,302	2,660
Asia:					33
China.....					
East Indies—					
British—British					
India.....					1,514
Dutch.....					9
Japan.....	3,000	10		256	166
Russia in Asia.....	38	840			
Turkey in Asia.....			228		302
Oceania:					
British—					
Australia and Tas-					
mania.....	501	407	1,551	591	
New Zealand.....	45				
French.....	274	576	464	553	958
German.....					22
Philippine Islands.....	20,389	13,969	31,097	12,720	15,954
Africa: British Africa,					
South.....	196	49	90	153	395
Total.....	3,129,034	3,502,982	3,518,255	4,449,481	4,566,769
RECAPITULATION.					
Europe.....	2,604,925	2,961,302	2,942,879	3,758,065	3,957,333
North America.....	487,308	504,704	526,928	662,593	576,546
South America.....	12,358	21,125	15,018	14,550	13,537
Asia.....	3,038	850	228	256	2,024
Oceania.....	21,209	14,952	33,112	13,864	16,934
Africa.....	196	49	90	153	395

EUROPE.

AUSTRIA-HUNGARY.

CARLSBAD.

Consul Wallace J. Young reports that there is no consumption of batting or waste in the Carlsbad district, but that there is an inappreciable consumption of linters, received through Hamburg. No statistics are obtainable.

FIUME.

[Consul Benjamin F. Chase.]

This port is merely the route for imports and exports, as there are no manufacturers in this district and the consumption is small. There are textile mills in Dugaresa and Zagrab (Agram) in Croatia, and at Eszek and Borovan in Slavonia, and cotton is grown to a limited extent in Slavonia, but it is sent to Hungary proper for manufacture. No cotton waste is exported to the United States direct from the port of Fiume.

Imports and exports of cotton linters, batting, and waste are not shown separately in the figures supplied by the Royal Hungarian Office of Statistics at Fiume. The following table shows the imports and exports of the three classes of cotton together at the port of Fiume for 1910 to 1913:

Years and countries.	Pounds.	Value.	Years and countries.	Pounds.	Value.
IMPORTS.			EXPORTS.		
1910:			1910:		
Austria.....	1,655,654	\$121,962	Austria.....	1,888,020	\$139,079
Germany.....	163,801	12,066	Bosnia.....	72,531	5,343
France.....	550,268	40,535	Germany.....	106,923	7,876
England.....	15,432	1,137	Roumania.....	3,748	276
British India.....	18,298	1,348	Serbia.....	32,849	2,420
United States.....	134,260	9,890	Bulgaria.....	7,496	552
	2,537,713	186,938		2,111,567	155,546
1911:			1911:		
Austria.....	3,554,918	314,244	Austria.....	2,027,571	179,231
Germany.....	1,026,021	90,697	Bosnia.....	46,958	4,151
France.....	232,144	20,521	Germany.....	66,358	5,866
Italy.....	661	58	Belgium.....	441	39
Belgium.....	20,502	1,812	Roumania.....	18,078	1,598
England.....	51,808	4,580	Serbia.....	117,505	10,387
British India.....	105,380	9,315	Bulgaria.....	2,205	195
United States.....	54,454	4,814	European Turkey....	1,102	97
	5,045,888	446,041		2,280,218	201,564

Years and countries.	Pounds.	Value.	Years and countries.	Pounds.	Value.
IMPORTS—continued.			EXPORTS—continued.		
1912:			1912:		
Austria.....	3,265,454	\$300,684	Austria.....	2,602,089	\$239,601
Germany.....	1,526,465	140,557	Bosnia.....	14,771	1,360
France.....	24,030	2,213	Germany.....	51,808	4,770
Belgium.....	661	61	Belgium.....	5,732	527
England.....	4,189	385	Roumania.....	14,550	1,340
Russia.....	441	41	Serbia.....	132,937	12,241
United States.....	101,632	9,358	Bulgaria.....	220	20
	4,922,872	453,299		2,822,107	259,859
1913:			1913:		
Austria.....	3,230,841	267,747	Austria.....	2,945,125	244,069
Germany.....	734,132	60,839	Bosnia.....	40,124	3,325
Switzerland.....	24,030	1,992	Germany.....	118,607	9,829
France.....	3,307	274	Italy.....	220	18
Belgium.....	3,748	311	England.....	13,669	1,133
England.....	83,775	6,943	Roumania.....	4,409	366
British India.....	35,494	2,941	Serbia.....	117,285	9,720
United States.....	44,533	3,691	Bulgaria.....	2,646	219
	4,159,860	344,738		3,242,085	268,679

REICHENBERG.

[Consul Nicholas B. Snyder.]

Under normal conditions there is a great demand for cotton, cotton linters, and cotton waste in this district. Owing to disturbed trade conditions at present, however, no cotton, cotton linters, or cotton waste is being imported; and as the dealers have only a very small amount on hand, none is being offered. Consequently there is no fixed market price at present. The manufacturers depend entirely on waste from the local spinning mills.

Cotton linters are used in the manufacture of coarse yarns, cotton hosiery, and cheap grades of textiles. Cotton batting is used by tailors and in the manufacture of quilts, and the finest grades are used for dressing wounds. Soft waste is used for cotton blanket filling and in the manufacture of explosives, yarns, and carpet. Hard waste is mixed with linters, cotton batting, and soft waste in the manufacture of coarse, cheap grades of cloth.

No cotton linters and very little or no cotton batting are exported from the district. Large quantities of waste, especially hard waste, are exported by the fine weaving and spinning mills. In the manufacture the material is first passed through a willow machine, then through a carding machine, after which it is spun. The bulk of the goods manufactured is low-grade cotton hosiery, sheeting, and prints. Common bleached sheeting is marketed in rolls of 25 to 50 yards in length and 27 to 79 inches in width. Samples of cotton waste are not obtainable at present.

Linters are packed in bales weighing 220.50 to 450 pounds. English waste is packed in somewhat larger bales, while the German, Swiss, and Italian waste is packed in sacks varying in weight from 66 to 450 pounds. Cotton batting such as tailors use is sold in sheets or rolls packed in bales weighing 110 pounds.

There are no wholesale firms in the American sense of the term. Manufacturers buy from the large importing houses in Hamburg, Bremen, and London or through agents established here.

The terms of credit are 90 days net or 2 per cent discount for cash.

DENMARK.

[Consul E. D. Winslow, Copenhagen.]

There are only about 70,000 to 80,000 spindles in the kingdom of Denmark and the yearly consumption of raw cotton has never been in excess of 40,000 bales, if indeed it has reached that amount. The exports of waste, which are small, are confined mainly to the lower qualities, such as "sweepings," "oily waste," etc., and sold mainly to Germany. Possibly some fly, strips, etc., may be exported, but the spinners sell all the soft clean waste produced to the home manipulators. Some soft waste, both clean and greasy, is sold to the wool and worsted spinners.

Hard waste is used mainly for cleaning purposes on the railways and in machine shops, etc. Some spinners a few years ago put in breaking-up machines, but they now use all the hard waste produced and bought last year about 50,000 pounds. This broken-up waste is spun into coarse material for welt (filling). Some of it also is sold to the wool and worsted spinners.

In 1914 a leading spinner sold from his mill the following quantities of different kinds of waste: Strips, 110,000 pounds; scutcher droppings, 33,000 pounds; fly, 7,000 pounds; hard waste (from doublers), 17,000 pounds; sweepings, A, 28,000 pounds; sweepings, B, 18,000 pounds; sweepings, C, 18,000 pounds.

The imports of linters are estimated at a few hundred bales annually, which used to come from Germany, but since the beginning of the European war have come from the United States. They are generally packed in bales of 500 pounds.

Cotton batting is manufactured in Denmark from imported raw material. It is doubtful whether imports of batting can compete with the home manufactured article, as there is an import duty of 45 ore per kilo (5.47 cents per pound).^a

Though the imports of soft waste are very small, the quantity of hard waste imported is considerable and is estimated at 11,000,000 pounds annually. Before the war most of this came from Germany, but the war will, no doubt, change this situation in favor of the United States. Copenhagen with its free port, the only one in Scandinavia, will be a stable distributing point for this commodity in transit to Scandinavian and Russian ports.

Batting is used by the tailors, by the manufacturers of bedding, etc., and for medical purposes. Soft waste is used in the manufacture of the lower qualities of wadding. Hard waste is used mainly for cleaning purposes.

FRANCE.

BORDEAUX.

[Consul George A. Bucklin.]

Cotton linters are not used in this district but are imported here for shipment to other parts of France. In the northern Provinces principally, in normal times, they are used in the manufacture of absorbent cotton. There was very little direct importation from

^aThe rates of duty given throughout this publication represent the latest information on file in the Bureau of Foreign and Domestic Commerce. The rates given in the original reports were changed where those rates have been superseded since the reports were written.

cotton-producing countries and supplies came chiefly from German dealers in times of peace. Purchases are now made in Great Britain. One of the principal manufacturers states that linters of American origin used at his factory are delivered at Marseille completely ginned.

The principal wholesale buyers of cotton batting in this district are the chemical-product factories. By them it is distributed to chemists and drug stores, the principal retailers to the public. The trade in this commodity in normal times is not extensive, however. Two categories are known here, American and Indian, the former comprising short-fiber qualities and the latter long-fiber qualities. Three qualities are current, graded as quality 0, quality 1, and quality 2.

It is reported that there is a shortage of cotton waste at the present time. One of the principal uses here is for machine wiping, and this demand has increased owing to the increased shipping at this port. At the same time the supply is considerably curtailed, partly because the cotton industry of France is centered in the Vosges and northern districts, where production is now at a standstill on account of the war. Rouen is the only district of France that can supply any quantity of cotton waste at present. Besides this, German supplies are of course suspended. Great Britain is meeting French wants to a great extent, however.

During the five years beginning with 1910 the imports of cotton linters at Bordeaux were as follows: 1910, from Great Britain and Senegal, 84 short tons; 1911, from Great Britain, Germany, and Haiti, 114 tons; 1912, from the United States (52 tons), Great Britain, Germany, and Haiti, a total of 225 tons; 1913, from the same four countries (United States, 88 tons), a total of 343 tons; 1914, from Great Britain, Germany, and Haiti, 296 tons. Imports of cotton batting amounted to 218 tons in 1914, of which 202 tons were received from the United States.

Exports through Bordeaux of linters and waste amounted to 32, 62, and 66 short tons in 1911, 1912, and 1913, respectively, but rose to 414 tons in 1914, 95 tons of this total being shipped to Great Britain. The average value was \$29 per ton. The exports of cotton batting were almost negligible, not exceeding 11 tons for any year, with an average value of \$48 per ton.

GRENOBLE.

[Consul Thomas D. Davis.]

Though it would seem that the amount of batting and waste consumed in this district is important, no statistics showing the imports are available. There are no exports, the home production, which is small, being insufficient to supply the local demand. The use of linters is unknown in this region.

The city of Vienne, which consumes practically all the batting and waste received by this district, utilizes it in the manufacture of woollen fabrics of various kinds. Formerly the supplies came from Germany, northern France, and Belgium, a great part being produced by the French spinners of the Vosges region. The qualities received from these sources were what are known to the trade as cotons barbes

and cotons doux, grades of hard and soft waste, respectively. A small quantity of American waste, in bales, was received through a German firm. Nothing can be learned of the relative quantities received from various sources.

HAVRE.

[Consul John Ball Osborne.]

Previous to the war no linters, batting, or waste was used in Havre or this consular district. Such merchandise, although sold to houses in Havre, merely passed through this port in transit to the mills of the north and east of France. Official statistics of these imports are not available, but in the trade it is said that 50,000 bales per annum is the usual quantity of linters entered at this port. Since the beginning of the war this figure is estimated at 150,000 bales.

There exists only a wholesale market for linters, batting, and waste in Havre. Terms of credit are drafts at 90 days' sight, drawn on shipment and accompanied by invoice and bill of lading. Bales weigh 220 kilos (485 pounds).

LYON.

[Consul J. E. Jones.]

Before the outbreak of the war the trade in cotton linters, batting, and waste in France was in the hands of several German firms who had succeeded in establishing a practical monopoly of the business. It is claimed that even the English firms had ceased to deal direct with France and had allowed this trade to pass into the hands of German intermediaries. Local consumers of these materials were therefore compelled to look almost entirely to the German firms for their stocks.

All purchases are based on appraisements made of type samples (standards) at Liverpool, London, or (before the war) Hamburg. The expense of appraisal, about 125 francs per 220 pounds, is shared equally by seller and buyer. Cotton waste is packed in bales of 220 kilos (485 pounds).

There is a wide range in price quotations of cotton waste, depending upon the quality, demand, season, etc. The cotton prices usually control the prices of cotton waste as well as of batting and linters. The longest terms of sale are 90 days without discount, the most common being 30 days, with a discount of 2 per cent for cash and an advance payment of 1 per cent.

Unbleached batting is subject to a duty of 22.50 francs per 100 kilos (\$1.97 per 100 pounds) when imported from the United States. On account of the high duty very little of this product and only the cheapest grade is imported from foreign countries.

The exports of cotton waste from France to the United States are known as "bouffin de tissage," a by-product from the cotton mills used for polishing, machine wiping, and packing. This probably corresponds to what is called hard or thread waste in the United States. It is divided into the following classes: "Fils gras," "migras," "separe," and "fil propre." The quantity of exports of cotton waste and batting from this consular district is not known either by the trade or the chamber of commerce, no statistics being kept.

The table following shows the imports and exports of cotton batting and yarn waste into the whole of France during the last five years. Some waste is included in the French statistics of imports of raw cotton, but the figures can not be separated, and therefore only the above items are given here:

Classes of goods.	1911	1912	1913	1914	1915
IMPORTS.					
Cotton in sheets, carded and gummied wadding metric tons..	485.9	363	488.9	951	^a 3,914.4
Waste of cotton yarn.....do....	\$252,251	\$172,349	\$250,900	\$482,693	\$1,986,935
	1,543.4	2,427.3	1,122.9	408.5	578.1
	\$119,081	\$177,946	\$86,657	\$31,459	\$44,583
EXPORTS.					
Cotton in sheets, carded and gummied wadding..... metric tons..	441.9	514.8	535.2	293	226.2
Waste of cotton yarn.....do....	\$244,724	\$262,287	\$293,360	\$165,208	\$127,573
	1,140.9	1,128.5	1,464.4	794.3	798.3
	\$88,008	\$82,797	\$107,308	\$58,286	\$71,796

^a Not including 134.4 metric tons imported for the use of the Army.

The largest consumers of cotton waste and batting are the quilt and blanket manufacturers centered at Cours, Amplepuis, and Serezin in the Department of the Rhone, Vienne (Isere), and Mazamet (Tarn). Vienne uses chiefly the higher grades of waste for manufacturing hangings and carpets. Cours, the seat of the blanket industry, takes rather the lower grades of cotton waste, "gras," and "mi-gras," of which it consumes 20,000 or 30,000 kilos (44,000 to 66,000 pounds) annually.

Linters are consumed chiefly by the powder mills at St. Chamont and Angouleme.

According to information furnished to this consulate, practically all the direct importers of these goods are located at Havre, Rouen, Bordeaux, Marseille, and Paris. The most important manufacturers and sellers of cotton waste are found in the east and north of France and at Rouen. The local manufacturers of waste sell chiefly to local buyers, who generally sell their stocks within the country.

While no specific information is obtainable on the subject, this consulate is informed that the methods of manufacture used are practically the same as those in the United States. Various makes of machines are employed, most of them being of English, Belgian, or German manufacture. Some are obtained in the north of France.

NANTES.

[Consul Clarence Carrigan.]

Some 50 years ago, cotton spinning and weaving were a large industry in the Nantes district, and there were a number of factories in this part of France. Later the rapid development of this industry in the northern Departments caused an exodus of labor from this district, and the local industry was reduced to practically nothing. The last big concern went out of business about 15 years ago.

The present cotton industry of the Nantes district is limited to the Departments of Vendee and Maine-et-Loire. Raw cotton is not used

by these factories, which are engaged in weaving various articles from cotton thread. The thread, which is obtained from Great Britain and also from the northern Provinces of France, especially the Department of Seine-Inferieure, is principally No. 20 (French numbering), but the various threads from 4 to 28 (French numbering) are also largely used in the making of sheets, handkerchiefs, etc.

The factories use principally British and Swiss machinery, the Wilson and Ruty machines predominating. There are also a few Dietrich and Bourgoin machines, which are of French make.

Exports of cotton goods from this district during 1912 were computed at 33,600 kilos (74,075 pounds) and during 1913 at 23,200 kilos (51,147 pounds).

Although factories and machine shops are numerous in this region, there is such a scarcity of cotton waste that none is used for cleaning, polishing, packing, etc. Rags are used almost exclusively for these purposes, but it is interesting to note that some of the local factories use cloths or cotton dusters. These are supplied free every week by certain concerns. The cloths, after use, are returned each week to the house that provides them, and payment is made for any that may have been lost or destroyed. The supplying concern subjects the soiled cloths to a process by which the oil and grease are extracted. It appears that a fair profit is realized from the sale of this oil and grease.

There are said to be no cotton linters handled in this district at present.

Cotton batting is imported by one concern, which does a large business in unmanufactured cotton. The batting is received in bales, which vary in weight from 5 to 20 kilos (11 to 44 pounds), and is used for quilts and bedding.

The firm referred to imports also considerable quantities of unsterilized cotton for the preparation of "hydrophile" cotton used in medicine and surgery. This cotton is received in bales weighing 25 to 45 kilos (55 to 100 pounds).

NICE.

[Consul William Dulany Hunter.]

In the consular district of Nice no cotton linters, batting, or waste is imported, either directly or indirectly, and none is exported from here. The use of cotton linters is unknown, and only one of the merchants interviewed knew what the article is.

Soft cotton waste is not obtainable here, as there are no plants manufacturing any products in which it is used. There is, however, a limited demand for hard cotton waste, chiefly by foreign automobile and yacht owners for cleaning machinery. It is obtainable from only two firms in this city. The total annual sale in the Maritime Alps is estimated at 10 bales of 250 pounds each.

The cotton batting used in this consular district is specially employed for filtering olive oil. Although it is stated that large quantities are used here, it is not obtainable at wholesale, as the olive-oil refiners receive it direct from the cotton mills in northern France and in the Department of the Gard.

ROUEN.

[Consul Albro L. Burnell.]

Rouen is in one of the three important centers of the cotton industry in France. At present it is the only active one; the others, which are in the northern and eastern parts of the country, are greatly hampered by military operations. Cotton spinning and weaving in the Rouen district, which were undergoing a crisis before the war, are being carried on extensively. Mills that had shut down have reopened, and all are running on full time.

The district has 70 spinning mills, with 1,400,000 spindles, normally employing 14,000 hands and having a production valued at \$24,125,000; 60 weaving mills, with 24,000 looms, normally employing 24,000 hands and having a production valued at \$11,580,000; and 9 print-goods plants, normally employing 2,500 hands and having a production valued at \$8,685,000. Cotton is imported by the port of Havre for this region in a roughly estimated quantity of 20,000 bales per month.

In the arrondissement of Rouen alone there are 1,100,000 spindles and 13,200 looms.

Rouen is probably the chief center of the cotton-waste trade in France. Its position in this respect is attributable to the surrounding cotton industry, already described, to its location with respect to the cotton spinning and weaving districts of northern and eastern France and England, and to the importation and exportation of certain grades of cotton waste through Havre and this port. In normal times the region in and about the cities of Lille and Roubaix is said to be next in importance.

Local dealers import soft waste principally from England and, to some extent, from the United States, and they export hard waste to those countries. As the accompanying figures indicate, the trade is very largely with England. The greater number of weaving mills than spinning mills in France and the reverse situation in England account for the exportation of hard waste and the importation of soft waste.

Local importers sell their soft waste to spinners of coarse counts. It is said that English spinners generally manufacture finer counts (Nos. 20, 30, and 40). French spinners buying soft waste manufacture coarse counts such as Nos. 8, 10, 12, and 16.

The following grades of soft waste are used in this country:

Strips.

Laps (mixed with wool in the manufacture of cheap cloth or for making woolen and cotton flannel). Many manufacturers in the Elbeuf woolen center use this grade. Some goods contain as much as 70 per cent of this waste and only 30 per cent of wool.

Rovings (also used as laps). Both grades are employed also in the manufacture of hosiery.

Combings (used with wool and then dyed).

Fly (duvets).

Blowings (batteurs).

Stockings.

Clearers.

Carriage fly.

The last five grades are used in the manufacture of blankets; they are sold by local dealers to manufacturers in the valley of the Rhone at Cours, Thizy, and Amblepuis. It is said that these manufacturers also buy stock from England. In and about Rouen the only grades

used are "strips," "laps," "rovings," and to some extent "combings." In the Rouen and Elbeuf districts together about 150 metric tons of these materials are consumed monthly. In normal times the many spinning mills and mills for the manufacture of blankets in and about Roubaix and Tourcoing (not in this consular district) are large consumers of soft cotton waste. Two such mills at Tourcoing may use 80 metric tons and 200 to 300 metric tons, respectively, per month.

Local dealers purchase hard waste not only from weaving mills in this region but also from other parts of France. The grades are numerous, but the following are the most common: White cop waste (bouts fins blancs); colored winders (bouts fins couleur); white thrums (encollés blancs); colored thrums (encollés couleurs); loom sweep (balayures de tissage). Colored hard waste is used here exclusively for cleaning engines, machinery, etc. White hard waste, especially white cop waste, is torn up and respun.

Cotton waste is purchased by local dealers from mills in this region for cash. They buy from English mills or dealers at 30 days without discount, and they sell under the same conditions on corresponding terms. Sales are made to the United States, generally, for 80 or 90 per cent of the invoiced value in cash against documents (consular invoice, commercial invoice, and bill of lading) paid by Paris or London banking houses, and the balance is paid by check on receipt of shipments by the purchasers.

There is practically no trade in and no production of linters in the district. Some linters may be supplied by this market for the manufacture of gunpowder. Batting is manufactured in large sheets by two mills for making quilts.

No statistics are available to show separately the imports and exports at the port of Rouen, of cotton linters, cotton batting, and cotton waste. Of these products, however, little else is imported but soft waste, and little exported but hard waste. The imports of these products into Rouen from 1910 to 1914, and the amounts received from the principal countries of origin were as follows: 1910—1,424 metric tons, of which 1,366 tons came from the United Kingdom, 56 tons from Belgium, and 2 tons from Germany; 1911—2,094 tons, of which 2,081 tons came from the United Kingdom, 7 tons from Germany, and 6 tons from Switzerland; 1912—2,256 tons, of which 2,183 tons came from the United Kingdom, 33 tons from Germany, 13 tons from the Netherlands, 11 tons each from Portugal and Spain, and 5 tons from Belgium; 1913—1,502 tons, of which 1,422 tons came from the United Kingdom, 42 tons from Germany, 15 tons from Spain, 12 tons from the Netherlands, and 11 tons from Belgium; 1914—1,100 tons, of which 959 tons came from the United Kingdom, 48 tons from Turkey, 29 tons from Germany, 26 tons from India, 19 tons from Spain, 12 tons from Belgium, and 7 tons from Algeria. These figures, however, do not represent the total trade of this part of France, a large part of which is carried on through the ports of Havre and Bordeaux.

The average value per quintal (220.46 pounds) of imports, as estimated by customs experts, was \$28.564 for 1910, \$26.827 for 1911, \$28.564 for 1912, and \$31.073 for 1913.

Following is a table of exports of cotton waste from Rouen, in metric tons, from 1910 to 1914, by principal countries of destination.

These figures are to be accepted with the same qualifications as those of imports.

Countries of destination.	1910	1911	1912	1913	1914
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Austria-Hungary.....	12	21	118	71	62
Belgium.....	2	37	9	16	815
Germany.....	133	1,576	1,673	1,389	311
Great Britain.....	1,697	68	57	245	106
Netherlands.....		171	148	176	5
Norway.....	123				79
Portugal.....		4	38	66	121
Spain.....		170	189	153	66
Sweden.....	141			19	
Tunis.....					
Total.....	2,108	2,047	2,244	2,135	1,555

The average value per quintal (220.46 pounds) of exports, as estimated by customs experts, was \$39.372 for 1910, \$35.319 for 1911, \$36.67 for 1912, and \$36.67 for 1913.

Though no exports of cotton waste to the United States are shown in the foregoing table, shipments were invoiced from this consular district, which perhaps went through the United Kingdom. The exports to the United States shown by the consular invoices were as follows: 1910, \$24,019; 1911, \$42,052; 1912, \$69,580; 1913, \$65,650; 1914, \$26,049.

OTHER FRENCH CITIES.

Calais, La Rochelle, Marseille, and St. Etienne consume such inappreciable quantities of cotton linters, batting, and waste, according to the reports of the American consuls resident in the several districts, that no separate classifications are obtainable. Of course, here as elsewhere, varying quantities of waste are used in cleaning machinery, but the trade is handled through the larger centers, and in so far as American trade is concerned they can best be treated through the cities already mentioned.

GERMANY.

AIX-LA-CHAPELLE.

[Consul Henry C. A. Damm.]

The consulate is informed that cotton linters are not used by the cotton manufacturers in Munchen-Gladbach, though this is one of the chief centers of the cotton industries in Germany. Neither is cotton batting manufactured there.

Munchen-Gladbach's specialty is the production of the coarser grades of cotton yarns and the weaving of cotton blankets, cloths, and trousering. No doubt most of the soft and hard cotton waste is used for these goods. That which can not be worked up in this manner is used as paper stock or for the manufacture of explosives. A factory producing explosives is located at Duren, in this consular district.

There are no available statistics showing the imports or exports of cotton linters, cotton batting, and waste for the Aix-la-Chapelle district.

BERLIN.

[Consul General Julius G. Lay.]

Cotton linters, batting, and waste are used for innumerable purposes in Germany. Besides the common uses, they have helped to build up other German industries, such as the chemical, paper, and textile branches. In the textile industry waste is used principally in the manufacture of cotton blankets and carpet yarns and for packing and filling of various descriptions. In chemical factories it is used for filtering material and the manufacture of high explosives. In other countries hard waste is largely used for machine packing, wiping, and polishing. In Germany it is also considered a product for further manufacture.

A thorough study of the uses of waste and batting has been made by the industrial experts of the principal technical high schools, such as the Technische Hochschule at Charlottenburg. As a result of these investigations, new uses are gradually being discovered.

There are no prominent importers of linters and waste in Berlin. There are some manufacturers of waste and batting, but these are small and insignificant. They buy their raw products from dealers located at Hamburg, Bremen, and various other importing centers. Many of the large German importers of linters and waste have branch offices at the principal German seaports, as well as at the principal exporting centers in the United States and India. A carefully organized business like this can buy cheaply, transport at minimum figures, and dispose of its purchases to advantage to the various small manufacturers of cotton-waste goods.

More than 90 per cent of the raw material utilized by the cotton-waste manufacturing industry is imported from the United States. The major portion of the manufactured product is consumed locally. Small exports are made to European countries. Thus far the re-exportation of manufactures of cotton waste to the United States has occurred only to a limited extent, but if this field is not properly safeguarded by manufacturers of such materials in the United States reexportation from Germany may be expected to develop.

The following statistics, compiled by Consul Harry G. Seltzer, of Breslau, show Germany's foreign trade in cotton linters, sanitary and other wadding, and hard waste from 1909 to 1913:

Products and countries.	1909	1910	1911	1912	1913
Imports:					
LINTERS.					
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
United States	38,165,321	31,117,140	37,984,542	59,511,352	73,482,930
British East Indies	16,350,141	16,833,175	16,978,458	13,916,679	13,633,605
China	1,653,688	1,659,641	2,467,855	900,368	1,303,152
Egypt	2,985,720	2,737,921	3,056,710	2,388,708	4,320,617
Japan		156,970			
Other countries	4,232,215	984,806	2,475,351	1,354,079	2,431,478
Total	63,387,085	53,489,653	62,962,916	78,071,186	95,171,782
Total value	\$2,737,238	\$3,118,276	\$3,398,640	\$3,792,768	\$4,623,424
Exports:					
Austria-Hungary	3,616,462	3,439,431	2,815,964	4,440,771	3,992,792
Belgium	1,883,188	1,797,429	1,634,066	2,110,485	1,795,496
France	809,096				
Italy	781,980	755,524	571,658	1,077,619	1,411,619
Netherlands		524,039	903,675	715,179	854,952
Other countries	1,720,488	1,769,650	1,528,465	1,240,321	1,321,230
Total	8,811,214	8,286,073	7,453,828	9,584,375	9,286,089
Total value	\$529,788	\$574,294	\$484,568	\$623,558	\$669,494

Products and countries.	1909	1910	1911	1912	1913
SANITARY WADDING.					
Imports:	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Belgium.....	3,307	2,866	3,307	2,425	2,646
France.....			2,205	2,866	3,745
Other countries.....	4,189	5,291	3,968	4,189	10,582
Total.....	7,496	8,157	9,480	9,480	16,976
Total value.....	\$1,190	\$1,428	\$1,666	\$1,428	\$2,856
Exports:					
Argentina.....	307,104	265,437	308,206	293,876	330,251
Belgium.....	230,422	242,509	251,327	364,424	355,605
France.....		171,079	274,696	221,344	352,077
Great Britain.....	238,321	312,395	533,739	676,819	515,525
Netherlands.....			106,262	218,699	223,763
Russia.....	770,956	882,951	970,034	1,140,231	1,010,376
Other countries.....	910,729	792,120	966,286	1,000,227	1,088,651
Total.....	2,466,532	2,666,491	3,410,550	3,915,630	3,879,253
Total value.....	\$441,966	\$500,752	\$644,266	\$693,056	\$695,198
WADDING FOR INDUSTRIAL PURPOSES.					
Imports:					
Austria-Hungary.....	22,267	25,133	29,321	67,903	87,303
Netherlands.....	18,519	26,455	16,314		
Switzerland.....			18,519	58,863	61,950
Other countries.....	39,022	36,817	7,937	20,723	32,408
Total.....	79,808	88,405	72,091	147,489	181,661
Total value.....	\$14,280	\$14,280	\$10,234	\$15,946	\$19,516
Exports:					
Great Britain.....			249,784	292,774	238,099
Netherlands.....	262,350	328,710	443,350	301,813	313,718
Russia.....	110,672	182,102	217,375		
Other countries.....	759,933	970,254	850,543	896,620	1,020,299
Total.....	1,132,955	1,481,066	1,761,052	1,491,207	1,572,116
Total value.....	\$150,416	\$173,740	\$197,540	\$158,508	\$183,260
COTTON WASTE.					
Imports:					
United States.....	5,351,061	6,930,450	6,245,476	11,546,930	16,078,312
Austria-Hungary.....	21,558,562	22,649,403	22,245,959	24,188,452	25,177,003
Belgium.....	4,062,016	7,063,611	9,549,763	10,360,182	7,446,995
British India.....	2,435,887	1,860,040	1,960,131	6,617,174	8,426,949
France.....	17,677,986	17,702,897	16,405,476	19,596,888	19,410,819
Finland.....	581,138	636,915			
Great Britain.....	23,059,245	17,651,089	20,127,541	22,676,968	27,613,999
Italy.....	2,851,017	2,047,653	2,197,348	3,170,027	3,439,873
Japan.....		260,366	450,625	601,202	1,842,403
Netherlands.....	12,720,892	11,765,629	11,824,934	13,226,412	14,620,395
Sweden.....	470,908	699,306	563,943	556,226	480,828
Switzerland.....	7,469,041	7,406,429	7,035,392	7,269,743	8,332,591
China.....			348,552	794,986	2,595,062
Other countries.....	3,190,530	1,926,179	1,575,423	1,637,593	1,343,497
Total.....	101,428,283	98,599,967	100,530,563	122,242,783	136,808,726
Total value.....	\$5,496,848	\$6,386,730	\$5,969,040	\$6,598,312	\$7,384,664
Exports:					
United States.....	6,696,100	15,571,247	14,049,396	18,026,977	15,591,971
Austria-Hungary.....	14,740,986	19,035,811	22,193,489	21,325,090	23,143,241
Belgium.....	4,909,915	6,303,015	6,283,394	8,220,154	8,217,289
British India.....	680,346	592,382			
Denmark.....	964,081	1,370,834	1,320,789	1,745,400	1,698,661
Finland.....			274,916	379,195	323,859
France.....	5,750,537	5,366,491	5,555,207	6,250,325	6,279,425
Great Britain.....	4,345,952	6,765,765	5,363,846	5,226,719	5,874,216
Italy.....	457,479	1,483,931	1,982,176	1,774,720	3,041,056
Netherlands.....	16,978,460	20,689,058	24,519,592	21,807,242	23,641,710
Norway.....	503,095	526,684	355,164	712,093	883,172
Portugal.....	101,854				
Russia.....			222,887	904,116	1,514,355
Spain.....	116,184	458,782	279,326	358,251	526,684
Sweden.....	778,893	932,555	1,503,333	1,037,495	1,216,731
Switzerland.....	2,310,664	3,738,599	2,755,117	3,371,088	3,577,662
Other countries.....	1,884,952	2,320,586	3,330,904	2,861,159	2,489,680
Total.....	61,219,498	85,155,740	89,989,596	94,000,024	98,019,712
Total value.....	\$3,256,792	\$5,063,212	\$5,767,216	\$5,516,840	\$6,226,794

HAMBURG.

[Consul Henry H. Morgan.]

The Hamburg consular district is not a manufacturing section and the use of cotton waste, batting, and linters is practically nil. All the imports into Hamburg of these articles are reshipped to the interior, where they are used by German spinners for a large variety of purposes.

The wholesale price of linters during the last five years has varied considerably, not only according to quality but principally according to market conditions. There are three grades of linters, which are classified according to staple and color. The two better grades are used for spinning purposes, mostly in the manufacture of blankets. Large factories engaged in this industry are located in Saxony, principally in the town of Zittau and the neighborhood. The manufacturers as a rule buy the linters direct from the producers in the Southern States of the United States.

The lowest grade of linters is utilized in the manufacture of gunpowder, gun cotton, etc.

The weight of the bales of linters is between 200 and 300 kilos (440 and 660 pounds).

Nearly all grades of cotton waste, except linters, are used for spinning purposes, generally in the manufacture of coarse or fine yarns. A small proportion of clean cotton waste is also used for stuffing purposes, principally for the padding in quilts.

In normal times batting is imported into Germany from the United States in small quantities, possibly not exceeding 300 or 400 tons per year. This batting comes from the establishments assorting rags and is handled by the rag trade. It is put up in bales of about 300 kilos each and is used principally for spinning cheap yarns and for making blankets.

OTHER GERMAN CITIES.

Prior to the outbreak of the war, Germany was first in the manufacture of cotton waste, Saxony being the great center of the industry, and there is every reason to believe that as soon as the channels of trade are reopened, this potential market will again be a great purchaser of waste material of all kinds. In considering the world field, therefore, due allowance must be given this market.

Breslau, Crimmitschau, Werdau, and Zittau are desirable centers where productive results might be obtained. For manifest reasons at this time it is impossible to obtain definite data regarding the imports or exports of the individual fields and the production. The figures for the leading cities, such as Berlin and Hamburg, must be utilized.

Brunswick, Coburg, Leipzig, Plauen, and Stettin all reported an appreciable consumption of waste, linters, and batting prior to the war, but no figures are obtainable.

GREECE.

ATHENS.

[Consul Alexander W. Weddell.]

There are no imports into or exports from this district of cotton linters so far as can be gathered from official statistics. Quilt makers

and others in the territory state, however, that a limited quantity is brought in from Egypt and Turkey, although their needs are supplied principally by local producers.

There is no export movement of cotton batting. Imports of this commodity into Greece by countries of origin were as follows for the five years ended in 1913:

Countries.	1909		1910		1911		1912		1913	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Austria-Hungary....	<i>Lbs.</i> 1,772	\$188	<i>Lbs.</i> 48	\$5	<i>Lbs.</i> 160	\$16	.....	.....	<i>Lbs.</i> 4,763	\$489
Belgium.....	.....	.....	11	2	2	.....	.....	.....	.....	.....
France.....	395	42	96	9	341	37	121	\$12	942	97
Germany.....	11	1	.....	.....	138	14	.....	.....	.....	.....
Italy.....	.....	.....	.....	.....	.....	.....	14	1	17,980	1,846
Turkey.....	.....	.....	107	11	42	4	.....	.....	.....	.....
United Kingdom....	4,559	483	6,929	734	9,833	1,009	21,090	2,164	14,850	1,524
Total.....	6,737	714	7,191	761	10,514	1,080	21,225	2,177	38,535	3,956

This batting pays a duty under the Greek tariff of 145 drachmas per 100 okes, or \$9.92 per 100 pounds.

No official figures of the movement of cotton waste, hard and soft, are obtainable. From various independent sources, however, it has been ascertained that while there is no export movement, there is a steady growth in the imports in direct proportion to the industrial development of the country. The amount brought in yearly is placed at about 150 tons, practically all of which is believed to be hard waste. England and Germany have been the chief sources of supply. Duty is levied on such imports at the rate of 20 per cent ad valorem.

The terms allowed in the past by British and Continental firms for these goods were usually four to six months; at present British firms are demanding cash against documents at a Grecian port.

Imports of linters, batting, and waste are made in great part by local agents who act for the ultimate purchasers. There are local mills that turn out cotton linters, batting, and waste, all, however, for local consumption. There are no exports.

The cotton mills are equipped almost entirely with British machinery; the linters produced locally are in large measure prepared on a three-horsepower machine manufactured in the United States, which is said to have an annual capacity of 16,000 pounds. The product is sold directly to local quilt and mattress makers; the quality of cotton employed is second and third class domestic.

The batting made locally is usually the product of child labor, each operative being supplied with a certain quantity of cotton, a lapboard, and a short stick; the cotton is leveled by means of the stick to the conventional thickness, spread on varicolored paper to which it is gummed, and sold in rolls containing 6 to 10 rectangular sheets, each measuring 50 by 60 centimeters.

Much of the soft waste used locally and in local mills is made up, with linters, into quilts and mattresses. Cotton wadding produced

in the territory is insufficient for local consumption; both the local product and the wadding brought in from abroad are used in the manufacture of clothing.

With regard to the market for cotton waste a local agent made the following statement:

The local production of white and colored waste is insufficient for local consumption. The imported waste has come principally from England, France, and Germany. Since the beginning of the war, however, these countries have stopped exporting waste, and Italy has begun to send its small overproduction for sale in the Hellenic kingdom.

Importers of Piræus and Athens have established a certain trade in the commodity with the United States, but no large orders have yet been given. The excessively high freight for a low-priced article has considerably interfered with the development of business, but it is not the only drawback. American sellers require the total amount of the invoice, including freight, to be prepaid, and while the samples sent have been good, local buyers are timid about making large outlays for fear the goods may not measure up to sample.

PATRAS.

[Consul A. B. Cooke.]

There is no foreign trade in linters in the Patras consular district so far as can be discovered from official sources. There is a small import trade in cotton batting, or wadding, amounting in 1910 to 5,566 pounds, worth \$585; in 1911 to 12,133 pounds, worth \$1,150; in 1912 to 7,436 pounds, worth \$763; and in 1913 to 15,000 pounds, worth \$1,538. The imports of wadding apparently consist of the material used by tailors for padding clothing. This wadding comes in small rolls, the fiber of the cotton being overlaid with a very thin tissue paper, which holds it in form. The width of the material is 18 inches, the length according to order. Tailors state that they import direct from Manchester, England, bringing the wadding in along with their other stocks. It does not appear that cotton batting or wadding is used here for making quilts. Quilt makers state that they use cotton lint, importing it in bales, chiefly from Egypt or Turkey.

SALONIKI.

[Consul Alfred R. Thomson.]

The Saloniki consular district provides cotton linters and a limited quantity of waste, the latter, however, being insufficient to supply domestic needs. Cotton batting used here is entirely of foreign origin and is imported from the United Kingdom and Italy. Italy and Turkey supply the deficiency of cotton waste. Some eight cotton mills in Greek Macedonia, operated on a small scale, produce annually about 170,000 pounds of linters, nearly all of which is exported to the United Kingdom. These mills use English machinery.

There are no official statistics that would indicate this district's foreign trade in cotton linters, batting, and waste. Some figures, however, have been furnished by local cotton mills and brokers. The general Macedonian trade in these commodities has suffered by the partition of Macedonia between Greece, Serbia, and Bulgaria since the Balkan wars of 1912-13. The port of Saloniki now (1916) possesses a hinterland comprising only Greek Macedonia. Some of the

most important cotton mills have been closed and the production of linters and cotton waste correspondingly diminished. The imports of cotton batting from abroad have also undergone a sensible decrease. The only local factory that produced cotton batting was closed some years ago.

The following table shows the imports of cotton batting and cotton waste into Greek Macedonia during the four years ended in 1913:

Articles and countries.	1910		1911		1912		1913	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Batting:	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
England.....	8,900	\$1,100	8,500	\$1,000	3,300	\$410	11,030	\$1,300
Italy.....	8,900	1,100	8,000	910	3,100	400		
Waste:								
Turkey.....	125,000	7,100	125,000	7,100				
Egypt.....	125,000	7,100	125,000	7,100	225,000	13,500	175,000	11,000

Cotton linters are exported directly to the United Kingdom without any manipulation in Macedonia. The packages vary in weight from 140 to 560 pounds each. Cotton batting is imported to Saloniki in bales of 100 kilos (220.46 pounds) each. This commodity is used by the local clothing and quilting industries. Waste is handled in bundles of 562 pounds each. Cotton waste is used here in the manufacture of carpets and coverlets.

ITALY.

FLORENCE.

[Consul F. F. F. Dumont.]

It is stated by leading wholesalers of cotton tissues that 300 to 350 tons of cotton batting are used yearly in the Florence district for cheap pillows, this demand coming entirely from housewives. The old-fashioned cotton mattresses are being replaced by the modern spring mattress or by mattresses stuffed with kapok. Quilts and bedspreads of cotton batting have been replaced by woolen blankets, thick or thin, as the need may be. A small quantity of batting is used by upholsterers. It is estimated that the average yearly consumption of cotton waste does not exceed 60 tons. The demand for batting and waste is supplied by dealers in Lombardy and Piedmont and none is directly imported. There are no wholesale dealers in linters, batting, or waste. There are no exports of cotton in any form from the district.

GENOA.

[Consul General David F. Wilber.]

The small amount of cotton linters imported into the Genoa district is used in conjunction with longer fibers in spinning. Little cotton batting is imported, silk waste being obtained cheaply and being regarded as preferable. Cotton waste is the chief article imported and is employed for many purposes, such as the adulteration of woolen goods, the manufacture of paper, etc.

The following are the figures of imports and exports of cotton batting and cotton waste for the Genoa district in 1913 and 1914:

Articles.	1913		1914	
	Metric tons.	Value.	Metric tons.	Value.
Batting:				
Imports.....		\$155	5	\$7,930
Exports.....	300	52,145	298	73,279
Waste:				
Imports.....	400	77,277	453	91,881
Exports.....	3,550	582,509	3,621	628,898

Machinery is brought in from Great Britain, Germany, and Austria-Hungary for the most part, but a few machines from the United States are imported.

TURIN.

[Vice Consul Piero Gianollo.]

The cotton industry in Piedmont, confining itself to high-grade articles, does not make use of linters or waste; there are no manufacturers of or dealers in batting. The waste made in the Piedmontese mills is sold to one or two small local rag factories and to dealers in Lombardy. None is exported to the United States from this consular district.

Experts state that in Italy linters are used only by a few low-grade hat makers in Lombardy; on the other hand, the trade in waste from Italy's 4,750,000 spindles and in waste imported from Germany, Switzerland, and England is considerable.

No official statistics are available for Piedmont only, and those for all Italy do not differentiate the various qualities of cotton waste. The following are the Italian imports and exports, in metric tons of 2,204.6 pounds, for the years 1910-1914, of cotton waste of all kinds, by principal countries of origin and destination:

Countries.	1910	1911	1912	1913	1914
IMPORTS.					
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Germany.....	762	801	377	629	591
Switzerland.....	559	216	195	333	218
United Kingdom.....	505	324	358	305	268
Other countries.....	469	791	135	476	384
Total imports.....	2,295	2,132	1,065	1,743	1,461
EXPORTS.					
Argentina.....	329	178	395	231	148
Austria-Hungary.....	591	440	595	645	348
France.....	663	551	931	1,739	1,128
Germany.....	1,243	1,289	1,340	1,977	2,557
Roumania.....	267	436	633	144	509
Switzerland.....	635	540	1,076	728	1,041
Turkey in Europe.....	463	375	54	151	121
Turkey in Asia.....	243	296	38	136	62
United States.....	2,325	1,803	1,528	1,299	1,203
Other countries.....	909	756	1,897	1,883	1,737
Total exports.....	7,668	6,664	8,487	8,933	8,859

OTHER ITALIAN CITIES.

Catania, Leghorn, Palermo, and Rome are limited markets for waste, batting, and linters, which are supplied by the producing centers of northern Italy. The consumption being small, there is little prospect, in the estimation of the American consuls resident at these points, of developing a worth-while export trade.

NORWAY.

BERGEN.

[Consul B. M. Rasmussen.]

Cotton manufacturing is not a leading industry in the Bergen district; the mills are few in number and engage in special rather than general manufacture. There is a good market for cheaper-grade cotton and mixed cotton and wool goods, which the local mills aim to supply. Their manufactures comprise cotton batting, blankets, canvas cloths, flannels, sheeting, shirting, toweling, twills, and underwear.

According to information obtained from importing firms through which cotton deals are made, the annual imports of hard and soft waste exceed 1,000,000 pounds. It is soft waste that is used by the factories for mixing with wool.

STAVANGER.

[Consul Maurice P. Dunlap.]

There are no available statistics showing Stavanger's imports of cotton linters, batting, and waste, but, except what is known here as "twist," there are practically no imports. There are no exports of any of these cotton by-products.

One large factory in this district uses soft cotton waste in making woolen underwear. From 10,000 to 13,000 pounds are used yearly by this establishment for sweaters, jackets (hunting jackets), and stockings. Practically all this, however, is waste made in the mill itself. Occasionally the supply has been supplemented by a little from England, which comes carded, in bales of about 100 kilos (220 pounds). This factory is the only large user of soft cotton waste in the Stavanger district.

For cleaning purposes on board ship probably 30 tons of "twist" are used annually in this district. This quantity may be roughly divided between two ports, Stavanger and Haugesund, the former using at least two-thirds. Formerly the supply came mainly from England and France, purchased directly from Christiania agents.

The twist generally comes in bales weighing about 250 kilos (551 pounds) each. These are sewed up in jute and bound with iron hoops.

PORTUGAL.

LISBON.

[Consul General W. L. Lowrie.]

There are no imports of cotton linters into Portugal. Cotton batting is imported in small quantities, especially for use by tailors, upholsterers, etc. Of the raw cotton imported (about 18,000 tons a

year), approximately 10 per cent is cotton waste. Statistics as to the exact quantities of waste imported are not obtainable, however, because the import tariff does not make provision for a separate classification of cotton waste.

The following table shows the imports of cotton batting into Portugal for the years 1909 to 1912:

Countries.	1909		1910		1911		1912	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Belgium.....					6,614	\$1,495		
France.....	254	\$92						
Germany.....	50,147	7,833	31,868	\$5,142	13,137	2,162	34,432	\$3,954
Italy.....							29,180	4,341
Netherlands.....					34,358	6,580	6,415	1,245
United Kingdom.....	1,173	289	3,947	677	611	247	789	239
Other countries.....	190	64	389	98	44	56	290	166
Total imports.....	51,764	8,278	36,204	5,917	54,764	10,540	71,106	9,945

Portugal does not export any cotton linters or batting. There is a small exportation of cotton waste, valued in 1912 at \$10,636. Belgium has been the principal purchaser. The figures for exports of cotton waste from Portugal for the years 1909-1912 are given in the following table:

Countries.	1909		1910		1911		1912	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Total exports.....	735,364	\$6,079	1,039,563	\$11,690	905,720	\$8,602	1,162,191	\$10,636
Belgium.....	309,915	2,925	497,906	4,335	575,142	4,953	905,495	5,771
France.....							37,832	1,130
Portuguese colonies.....							13,511	1,392
United Kingdom.....	387,796	1,759	468,133	5,145	219,115	1,955	189,521	1,988

OPORTO.

[Consular Agent W. H. Stuve.]

The imports of cotton linters, batting, and waste at Oporto, where a large percentage of the cotton used in Portugal is received, are practically nil. As the duties on waste and cotton are the same, both articles appear in the statistical returns as "cotton," so that no details are obtainable as to the quantity and value of "waste" imported.

Linters and batting are not exported from Oporto. Exports of cotton waste for 1911, 1912, and 1913 were as follows: 1911, 616,000 pounds, valued at \$3,700; 1912, 891,000 pounds, valued at \$5,100; 1913, 718,300 pounds, valued at \$7,100.

RUSSIA.

BATUM.

[Consul F. Willoughby Smith.]

There are no foreign imports into the Caucasus of cotton linters, batting, or waste. The duty on cotton waste amounts to 5.75 rubles

per pood (\$0.082 per pound) and is prohibitive. Cotton waste is not used to any extent in this district, its place being taken by hemp waste. Cotton ends are sometimes used in connection with machinery requiring particular attention and cleanliness. The waste used is very inferior tow. For batting and linters the duty is 7.90 rubles per pood (\$0.113 per pound).

MOSCOW.

[Consul General John H. Snodgrass.]

Linters, batting, and waste are extensively used in Poland, but the official statistics do not show the imports separately from imports of raw and carded cotton. Linters and waste are used in the manufacture both of coarse cloth and of guncotton. Batting is extensively used in quilts and as an interlayer for winter clothes, for packing, etc. Before the war practically all the foreign waste imported into Russia was used in the mills of Poland, especially at Lodz, a most important cotton-manufacturing center. "Fly" particularly was imported for the use of the Lodz mills. Waste is packed in bales of various weights, covered with jute cloth, as are cotton bales. Two to four months' credit is frequently allowed.

PETROGRAD.

[Consul North Winship.]

Linters are not produced at all in this consular district, as no cotton is ginned here. All the ginning mills are in Turkestan, where the Russian cotton is grown. Linters, batting, and waste are extensively used, however, and are imported in considerable quantities. Cotton batting is in large demand in Russia for the lining of the great coats and fur coats universally worn in the rigorous winters.

The size of the bales of waste varies greatly, ranging from 72 to 180½ pounds.

RIGA.

[Consul Douglas Jenkins.]

The imports of cotton waste at Riga have declined greatly in recent years, owing to the increasing production of the mills at Lodz and other Russian centers of cotton manufacture. Now that Lodz is cut off from the Russian market, however, the supply of waste is said to be running low, and prices have gone up rapidly.

In 1910 the imports of cotton waste at Riga were valued at \$11,720 and in 1911 at \$12,988; in 1912 they fell to \$3,154 and in 1913 to \$3,428. There is no reference in the statistics to imports of linters or batting, and from Riga there are no exports of either of these articles nor of waste.

Most of the cotton waste handled here is sold to factories and mills in the interior and to the Government railway lines.

The qualities of waste and batting in this district vary greatly, ranging from the best grades to the lowest. The terms of sale are two to four months' credit.

In this market waste is packed in bales varying in weight from one pood (36.11 pounds) to 20 poods (722 pounds), according to the order

of the purchaser. The bales are made up in jute bagging bound with coarse cordage.

A local dealer estimates that 5,000 tons of cotton waste, white and colored, are consumed yearly in this consular district. The waste comes unassorted from the cotton mills to the warehouses in Riga. It is cleaned and assorted here, and some of it is manufactured into batting. Both hard and soft waste are handled, but it is impossible to say in what proportion, for there are no statistics. Cotton and yarn mills in and about Riga are estimated to dispose of 200 to 300 tons of waste per annum, all of which is taken by local dealers.

OTHER RUSSIAN MARKETS.

Odessa does not merit serious consideration on the part of American exporters of waste, batting, and linters, according to Consul John A. Ray. The limited supply consumed is obtained from Moscow, Petrograd, and the Polish textile centers.

Lodz and the other textile-manufacturing cities of Poland are the chief Russian centers of production and utilization of cotton-waste products.

SPAIN.

BARCELONA.

[Consul General Carl Bailey Hurst.]

The cotton industries of Spain are largely centralized in the Province of Catalonia, and Barcelona, its capital, ranks, after Liverpool, Bremen, and Havre, as the fourth cotton port of Europe. During the season from September 1, 1913, to August 31, 1914, some 388,486 bales of cotton were unloaded on the quays of this city. Of these, 275,709 bales came directly or indirectly from the United States, an increase over the previous season of 14,150 bales. The official statistics of the Spanish Government do not, however, specify separately the imports and exports of cotton linters, batting, and waste, but group these articles with raw cotton.

Large quantities of cotton linters and waste are employed in the cotton industries here. Some of these materials are imported, while a portion is produced locally in connection with the cotton manufactures of this country. The important cotton mills of Spain, of which there are over 600, are equipped for all processes; hence there is no actual need of importing linters, waste, and batting. In order to distinguish the articles described as cotton, dyed, sterilized, absorbent, carbolized, and the like from raw cotton, they are tested by throwing them into water. The raw cotton does not sink.

France, Germany, and Great Britain are the chief sources of imports of cotton linters, batting, and waste. While large quantities of manufactured cotton goods and thread are exported, an almost inappreciable amount of raw cotton leaves the country. Linters and waste form a part of such shipments, and no distinction is made in the statistics. Of these small shipments France, Germany, Great Britain, Italy, Portugal, and Turkey are the usual purchasers.

Before the business upheaval caused by the war, the usual terms of payment were cash against bill of lading here, but now payment is

made in advance in the United States. Cotton linters, batting, and waste are sold in packages of about 500 pounds.

Cotton linters are largely used here in the manufacture of absorbent cotton of various kinds, sterilized and carbolized, of which the exportation is at present far greater than under ordinary circumstances. It is estimated that not less than 15,000 bales of cotton, including linters, were devoted to this purpose during the last cotton season, besides a considerable quantity of waste. Linters are also extensively employed in the manufacture of canton or cotton flannel and napped goods, which are largely demanded for the domestic as well as the export trade.

Cotton batting, or wadding, in sheets is required for making light bedquilts and lining heavy garments. Some cotton waste finds its way into the manufacture of absorbent cotton, but most of it is devoted to the production of what are known here as "mantas," a kind of heavy cotton blanket used as a traveling rug or lap robe for carters. Another part is mixed with wool in the manufacture of the better classes of these mantas, while some hard waste goes to making coarse thread. Soft waste is used in making guncotton, and the various uses of the hard waste correspond to those in the United States.

Exports of cotton waste declared at this consulate general for shipment to the United States and the Philippine Islands in 1914 were valued at \$551,092. In 1913 the value was \$463,298.

OTHER SPANISH CITIES.

Jerez de la Frontera, Madrid, Malaga, Seville, and Valencia are supplied mostly from Barcelona. These markets may be reached more advantageously through the great port city than by direct shipments.

SWEDEN.

[Consul Emil Sauer, Goteborg.]

Cotton linters are not produced in Sweden, as there are no cottonseed-oil mills and no cotton seeds are imported. The imports, moreover, under normal conditions are not large. Practically the only use for linters is in the manufacture of gunpowder and guncotton, and the amount consumed in the factories here is small. Linters are not used in the manufacture of mattresses.

Batting for other than medical use is produced in Sweden in practically sufficient quantities to supply the home market. During the years 1908 to 1912, inclusive, the production was valued as follows: 1908, \$223,007; 1909, \$200,148; 1910, \$263,437; 1911, \$231,340; 1912, \$266,494. The imports of batting, practically all of which is cotton, mostly for medical purposes, are shown in the following table. About 95 per cent of these imports come from Germany and almost all the rest from Denmark.

Years.	Pounds.	Value.	Years.	Pounds.	Value.
1908.....	290,195	\$45,362	1911.....	408,964	\$74,467
1909.....	328,319	51,934	1912.....	233,774	42,627
1910.....	313,380	49,218			

The exports of batting from Sweden during 1908 to 1911 went for the most part to Finland and Denmark. In 1912 almost half went to Germany. The quantity and value of batting exported during these years were as follows:

Years.	Pounds.	Value.	Years.	Pounds.	Value.
1908.....	107,351	\$22,586	1911.....	37,791	\$7,293
1909.....	83,435	17,242	1912.....	162,467	29,625
1910.....	56,852	9,007			

The amount of cotton waste produced by the Swedish mills is not very considerable, and most of the waste used in this country is therefore imported. In 1914 the imports amounted to 4,770,851 pounds, as against 7,333,432 pounds in 1913 and 6,416,633 pounds in 1912. These figures include cotton waste of all kinds. The quantity and value of imports of cotton waste for the years 1908 to 1912 are shown, by countries of origin, in the following table:

Countries.	1908	1909	1910	1911	1912
Belgium:					
Pounds.....	150,448	167,297	404,140	840,783	640,330
Value.....	\$9,144	\$12,202	\$29,477	\$61,325	\$66,164
Denmark:					
Pounds.....	218,114	155,900	186,189	128,717	215,350
Value.....	\$13,257	\$11,371	\$13,580	\$9,388	\$22,252
Finland:					
Pounds.....			26,328		33,230
Value.....			\$1,920		\$3,434
France:					
Pounds.....	318,949	480,962	533,541	591,004	676,305
Value.....	\$19,386	\$35,081	\$38,915	\$43,107	\$69,881
Germany:					
Pounds.....	488,509	1,005,623	1,497,488	1,705,379	2,380,029
Value.....	\$29,692	\$73,348	\$109,223	\$124,386	\$245,925
Italy:					
Pounds.....	685,516	604,609	187,924	199,496	180,433
Value.....	\$41,667	\$44,099	\$13,707	\$14,551	\$18,644
Netherlands:					
Pounds.....	1,191,746	1,090,878	783,022	1,136,862	1,060,708
Value.....	\$72,436	\$79,566	\$57,112	\$82,920	\$109,601
Norway:					
Pounds.....	385,392	293,623	284,357	305,466	359,658
Value.....	\$23,425	\$21,416	\$20,740	\$22,280	\$37,163
United Kingdom:					
Pounds.....	232,288	261,241	544,822	515,787	797,132
Value.....	\$14,119	\$19,054	\$39,738	\$37,620	\$82,366
United States:					
Pounds.....	7,209		48,876	53,833	54,399
Value.....	\$438		\$3,565	\$3,926	\$5,621
Other countries:					
Pounds.....	176	22,333	37,752	71,000	19,059
Value.....	\$11	\$1,629	\$2,754	\$5,179	\$1,969
Total:					
Pounds.....	3,678,347	4,082,466	4,534,439	5,548,327	6,416,633
Value.....	\$223,575	\$297,766	\$330,731	\$404,682	\$663,020

As shown by the foregoing table, nearly 40 per cent of the imports of cotton waste came from Germany, 16 per cent from the Netherlands, 13 per cent from the United Kingdom, a little over 10 per cent from France, and a little over 10 per cent from Belgium. Less than 1 per cent came from the United States.

Most of the waste imported, however, appears to be transit goods, as is shown by the following table of exports of cotton waste from Sweden during the years 1908 to 1912:

Countries.	1908	1909	1910	1911	1912
Belgium:					
Pounds.....	22,743	20,825	68,037		29,983
Value.....	\$1,106	\$1,139	\$3,722		\$3,098
Denmark:					
Pounds.....	25,600	38,610	43,841		117,487
Value.....	\$1,245	\$2,112	\$2,338		\$12,140
Germany:					
Pounds.....	374,969	427,324	664,226	778,822	455,177
Value.....	\$18,233	\$23,376	\$36,335	\$42,604	\$47,033
Netherlands:					
Pounds.....	19,412	14,209	103,031	179,396	97,619
Value.....	\$944	\$777	\$5,636	\$9,814	\$10,076
Norway:					
Pounds.....	66,240	62,931	56,694	66,428	640,990
Value.....	\$3,221	\$3,442	\$3,101	\$3,634	\$66,232
Russia:					
Pounds.....		35			221,785
Value.....		\$2			\$22,917
United Kingdom:					
Pounds.....	59,253	158,695	251,382	276,702	82,667
Value.....	\$2,881	\$8,682	\$13,752	\$15,136	\$8,542
Other countries:					
Pounds.....	18,865	17,293	15,469	233,142	13,817
Value.....	\$917	\$946	\$846	\$12,754	\$1,428
Total:					
Pounds.....	587,082	739,922	1,202,680	1,534,490	1,659,525
Value.....	\$28,547	\$40,476	\$65,790	\$83,942	\$171,466

No cotton waste is exported from Sweden to the United States.

The Swedish official statistics of manufactures give but one cotton-waste factory (trasselfabrik) for the whole country. This factory receives hard waste from Swedish cotton mills and from abroad, cards it, and mixes it with other material. Soiled or used cotton waste is washed, disintegrated, and rendered fit for use again. The product is used for making quilts and is sold to batting factories. The value of the output of this factory is given as follows: In 1908, \$117,281; in 1909, \$110,385; in 1910, \$171,956; in 1911, \$154,419; and in 1912, \$184,532.

One of the principal uses made of cotton waste in Sweden is in the manufacture of batting. It appears, however, that the batting factories (vaddfabriker), as a rule, wash and card the waste in their own establishments.

Linters and waste are packed in bales of the same weight as cotton bales, averaging 500 pounds.

SWITZERLAND.

ZURICH.

[Consul General Francis B. Keene.]

The manufacture of cotton goods is one of the principal Swiss industries and the country, therefore, produces considerable quantities of cotton waste of all kinds. The factories sell it exclusively to Swiss dealers, who sort it out by qualities, pack it in bales, and ship it chiefly to Germany and Austria. The trade with Germany, in both imports and exports of cotton waste, is far larger than with any other country and is steadily growing. The imports of cotton waste from the United States, which in 1910 were valued at \$2,534, have also considerably increased, reaching a total of \$12,429 in 1913. The waste is used chiefly for spinning purposes.

The cheap, medium grade of cotton linters is manufactured into nitrated cotton, but the better qualities are used in the manufacture

of batting or rough yarns. Only small quantities of linters have been imported from the United States. There are comparatively few important dealers in linters in Switzerland, the principal consumers being in Germany and in Austria.

In general, linters are packed in bales, firmly compressed. Cotton waste is similarly packed for over-sea shipments, but for the Continental market it is handled chiefly in jute bags of about 100 to 150 pounds. Terms of purchase are usually 30 days with 2 per cent discount for cash.

The imports of cotton waste into Switzerland from 1911 to 1914 and the exports therefrom are shown in the following table:

Countries.	1911		1912		1913		1914	
	Met. tons.	Value.	Met. tons.	Value.	Met. tons.	Value.	Met. tons.	Value.
IMPORTS.								
Austria-Hungary.....	425	\$32,802	471	\$40,872	547	\$52,757	370	\$35,666
France.....	422	24,451	544	42,012	481	41,766	308	26,741
Germany.....	1,203	174,149	1,664	240,835	1,603	247,488	685	105,780
Italy.....	528	30,589	830	48,045	926	62,517	790	99,143
United Kingdom.....	207	59,984	155	29,876	127	24,588	.....	.....
United States.....	33	6,921	11	2,104	64	12,429	124	23,874
All other countries.....	36	4,713	138	6,513	136	6,350	28	4,277
Total.....	2,854	333,609	3,813	410,257	3,884	447,895	2,305	296,481
EXPORTS.								
Austria-Hungary.....	94	14,723	153	24,508	176	40,352	810	162,112
France.....	181	37,569	102	24,806	162	37,567	85	16,438
Germany.....	3,220	545,563	3,427	562,565	3,789	682,281	3,634	663,691
Italy.....	264	65,577	215	49,488	258	67,102	172	45,157
Roumania.....	66	14,997	84	20,301	118	31,268	148	40,878
All other countries.....	118	22,775	105	18,651	98	19,607	39	5,553
Total.....	3,943	701,204	4,086	700,319	4,601	878,177	4,888	933,829

Switzerland's foreign trade in cotton batting during the years 1911 to 1914, inclusive, is shown in the following table:

Classification and countries.	1911		1912		1913		1914	
	Met. tons.	Value.	Met. tons.	Value.	Met. tons.	Value.	Met. tons.	Value.
IMPORTS.								
Bleached and chemically pure....	16.0	\$7,431	17	\$8,202	23.1	\$11,291	16	\$7,526
Germany.....	13.0	6,080	15	7,382	19.0	9,216	12	5,838
Italy.....	2.0	820	2	820	4.0	2,027	3	1,640
All other.....	68.0	27,398	71	20,206	64.4	18,622	42	11,265
France.....	3.0	1,094	3	703	2.0	552	2	463
Germany.....	63.0	25,534	67	19,252	61.0	17,177	39	10,595
Total.....	84.0	34,829	88	28,408	87.5	29,913	58	18,791
EXPORTS.								
Bleached and chemically pure....	8.1	3,147	37	15,777	31.0	12,965	114	51,849
France.....	0.1	60	18	9,235	13.0	5,599	91	42,482
Italy.....	5.0	2,103	9	3,805	13.0	4,698	14	5,035
All other.....	3.3	1,080	56	11,593	69.0	15,661	95	16,893
Bulgaria.....	.....	.....	23	4,497	9.0	1,340	.....	.....
France.....	1.2	414	8	1,792	30.0	8,293	27	5,279
Germany.....	1.3	400	19	4,093	24.0	4,844	43	7,178
Total.....	11.4	4,227	93	27,370	100.0	28,626	209	68,742

OTHER SWISS CITIES.

Basel registers a slight trade in linters, batting, and waste, being supplied from Zurich for the most part. Berne and Geneva likewise afford markets of limited consequence.

TURKEY.

[Consul General G. Bie Ravndal, Constantinople.]

Cotton linters are not known in this district. Cotton batting, however, or cotton used in making quilts, mattresses, etc., is prepared from a low quality of cotton, mainly imported from Egypt, although a certain amount of the inferior native product is also used for this purpose. This cotton is packed in bales of approximately 440 pounds each, and the total consumption in this district for the manufacture of quilts, mattresses, etc., is about 800 bales annually.

The process of batting is carried on locally by means of native hand cards. This card consists of a string stretched on a stick, the entire device being very similar in appearance to a bow, and this string is plunged into the cotton and struck, thus causing it to "open" or become more voluminous. In the case of mattresses, this batting is repeated at intervals of a few months, to keep the mattress elastic.

The only cotton imported into this district in a batted condition is that sold to foreigners in the dry-goods stores of the foreign quarters of Constantinople. No figures for such imports are available, but the amount is insignificant.

In normal times, cotton waste is imported from Germany and England. All of it is hard waste, used mainly for wiping machinery. It is packed in bales of either 220 pounds (100 kilos) or 550 pounds (250 kilos), and the total annual imports amount to about 200 tons, of which approximately 125 tons are German and the rest English. The German waste is in various colors; the English is white.

A large proportion of the cotton grown in Turkey is exported in the raw state. There is, however, besides the mills at Mersina and Smyrna, a spinning mill at Yedi-Coule, near Constantinople, but the price of the hard waste from this mill is so high that users of this article prefer to purchase the imported waste. It is understood that this mill is more interested in respinning the waste than in preparing it for wiping and packing machinery.

UNITED KINGDOM.

BELFAST.

[Consul Hunter Sharp.]

Cotton spinning in this consular district is almost negligible, and according to the returns of the Belfast Harbor Commissioners, there were no exports of cotton batting (locally termed wadding) during the five years 1910 to 1914. Neither do cotton linters appear in the trade returns. Exports of cotton waste amounted to 27 and 18 tons, respectively, in 1910 and 1911, but dropped to 1 and 2 tons in the three following years. These small shipments were principally, if not entirely, cotton thrums exported to the Manchester district of England.

Cotton batting and cotton waste imported during the five years ended in 1914 were as follows:

Articles.	1910	1911	1912	1913	1914
Cotton batting.....	<i>Tons.</i> 23	<i>Tons.</i> 10	<i>Tons.</i> 11	<i>Tons.</i> 17	<i>Tons.</i> 24
Cotton waste.....	431	470	484	428	410

Cotton waste is imported from England and Scotland in bales of 112 pounds, containing approximately 100 pounds net. The cheaper grades are stated to have more or less jute mixed with the cotton. Practically the entire local demand for cotton waste is for machine wiping. It is imported by mill furnishers, who sell to railways, factories, tractor-engine owners, and similar firms. There are no factories here using cotton waste for manufacturing purposes. Except for the small quantities that may at times be found mixed with flax waste no cotton waste is exported from this district to the United States.

Nearly all the cotton wadding sold here is bought in Manchester. It comes in sheets measuring about 36 by 20 inches, one dozen sheets to the packet. It is sold also in 12-yard rolls, but there is very little demand for it in this form in Belfast. About half of the total quantity imported is black and of the remainder two-thirds is gray and one-third bleached.

BRADFORD.

[Consul Augustus E. Ingram.]

So far as can be learned there had been no imports of cotton linters, batting, and waste into this consular district during the five years preceding the war. One large firm of carpet manufacturers uses certain low grades of soft cotton waste, but it buys its supplies in this country.

No linters or batting is produced here, but the weaving sheds where cotton warps are used with wool or worsted weft produce thread waste. Most of this is bought by Lancashire firms, which send their buyers direct to the mills. A certain quantity, however, has been shipped to the United States for several years, the maximum being reached in 1903, when these exports were valued at \$10,072. In 1914 the shipments amounted to 141,383 pounds, valued at \$7,096. The declared values of such shipments to the United States during the five years ended in 1914 have been as follows: 1910, \$8,644; 1911, \$5,952; 1912, \$8,318; 1913, \$8,212; 1914, \$7,096.

The usual Bradford terms are payment in 14 days, but for export shipments, if a firm is satisfied as to the purchaser's financial standing, any reasonable terms are extended. There are apparently no importers in this district, and only two firms export cotton waste. For export the bales are usually packed by hydraulic press and weigh from 600 to 700 pounds each.

Instead of wiping waste the mills in this district are using an increasingly large quantity of wiping cloths, or sponge cloths, as they are called locally, made from a rough thick count of yarn that is in turn made of soft cotton waste. Formerly these wiping cloths were

made of a silk noil yarn, but because of the price cotton has now been substituted. The advantage of the cloths over ordinary wiping waste is that the cloths are easily washed and the oil with which they become saturated is recovered. One firm states that its production of these cloths has increased several fold during the last few years, until now it is turning out 500 gross each week. The cloths are sold with a contract to wash and mend them when needed during a specified period, and by this means last year, washing approximately 250,000 cloths a week, the firm referred to recovered about 300 tons of oil. Some firms, however, especially in the engineering trade, purchase the cloths outright and attend to the washing themselves in order to benefit by the recovery of the oil. Wiping cloths are now being exported to the United States, where it is understood that the same practice of recovering the oil is being followed.

Another advantage that the cloths have over ordinary wiping waste is said to be their freedom from dust or grit that is injurious to machinery parts.

CARDIFF.

[Consul Lorin A. Lathrop.]

Cotton waste is largely used in South Wales, but the sale of cotton linters and cotton batting is very limited. Gray waste, long, clean, and free from such whitening mixtures as china clay, is the product in demand. It is used for cleaning the machinery of the coal mines and of the great fleet of steamships trading from South Wales ports. It comes from Manchester. There are no statistics, but large dealers estimate the annual consumption as fully 25,000 tons. None of this is exported, but probably half goes into vessels in the form of engineers' stores.

An obstacle in the way of shipments direct from the United States to South Wales is to be found in the lack of wholesale merchants and jobbers. Manchester firms deal directly with the consumer or with the firms that sell to the consumer. There is, for instance, no intermediary between Manchester and a large coal mine, and the ship chandlers and marine-store dealers that supply ships also buy direct. Many of the firms, however, do so considerable a business as to justify their importing direct.

CORK.

[Consul Wesley Frost.]

The trade in linters, batting, and cotton waste in Cork is decidedly small, the total consumption being estimated at less than \$75,000 per annum.

For cushions and furniture upholstery, as well as for wadding in cheap saddlery, the common article here is kapok, which is slightly less expensive than linters and is said not to mat so quickly. For filling bedquilts feathers are much more frequently used than in the United States, but the principal kind of cheap bedding is wadded with woolen flock produced by macerating rags. These flock quilts are not washable, in general.

Rag flock is produced by a firm in Leixlip, County Dublin, from which Cork dealers in bedding obtain a good share of their stock.

Cotton batting is mainly purchased from Manchester, which also supplies absorbent cotton. Cotton linters have occasionally been taken here in trial orders, but none very recently.

DUBLIN.

[Consul Edward L. Adams.]

According to statistics for the port of Dublin, Ireland, the number of pounds of cotton wadding imported was 53,760 in 1910, 26,880 in 1911, 29,120 in 1912, 26,880 in 1913, and 35,840 in 1914. Of cotton waste for the same years the imports were 716,800 pounds, 795,200 pounds, 712,320 pounds, 564,480 pounds, and 739,200 pounds, respectively. Values and countries of origin are not officially given, but dealers state that they buy practically all their waste from England, the Manchester district being the main source. As far as could be ascertained, no linters are made or imported in this district, nor are waste and batting manufactured here. Waste is usually bought in packages of 112 pounds. Limited quantities of flax waste and bleached mutton cloths are imported. Waste is used for yachts, power stations, and all kinds of machinery. Dealers generally will pay cash on delivery, with varying discounts, and desire c. i. f. Dublin quotations in English currency. One firm pays quarterly with $2\frac{1}{2}$ per cent discount.

EDINBURGH.

[Consul Rufus Fleming.]

East Scotland is not an important market for cotton or cotton materials. In the fishing-net industry, which is not a large one here, raw cotton is used to a limited extent. It is American cotton, purchased from Manchester importers.

Linters are neither imported nor manufactured and are practically unknown in the district. The cotton seed, principally Egyptian, worked by the local cottonseed oil and cake mills—about 20,000 long tons per annum—is neither ginned nor decorticated here, but passes through the mills in the condition in which it is received.

The consumption of cotton batting is small. The principal users are dressmakers, tailors, and firms or individuals engaged in various kinds of fancy needlework. The product is sold by the principal dry-goods houses and comes to this market almost exclusively from Manchester.

A considerable quantity of hard cotton waste is used in machine shops and shipbuilding and engineering establishments, and also by railway and shipping companies. The product is handled in this district by middlemen only, who buy from Manchester and Glasgow cotton mills. Local ship chandlers and oil merchants sell cotton waste. The usual terms of credit are 30 days, with discount according to quantity.

GIBRALTAR.

[Consul R. L. Sprague.]

Cotton linters and batting are not sold here at all. Cotton waste, however, is imported by ship chandlers, hardware dealers, and barge owners. Before the war it came solely from England, but owing to the high rates of freight and the unavoidable delay in delivery, im-

porters have been compelled to place most of their orders in Barcelona, the center of the Spanish cotton industry. There are no official statistics of the imports of this colony, but it is estimated that the quantity received yearly does not exceed 40 tons. The largest consumers are the Government dockyard, ship chandlers, and barge owners. Considerable quantities are now in demand by the large number of steamers calling at this port. Spanish waste is slightly cheaper than English, but the quality is somewhat inferior. American waste will always find a market provided it can equal the English product in price and quality.

LEEDS.

[Consul Homer W. Byington.]

The Leeds consular district is inland, and no statistics are obtainable as to the quantities of cotton linters, cotton batting, and cotton waste imported or exported. Extended inquiries, however, have secured the following data:

Soft cotton waste is used here in the making of the lower-grade cloths, and supplies are obtained on contract from the adjoining county of Lancashire. The soft wastes are blended with the mungo shoddies and spun into woolen yarn. None is exported. Goods are delivered packed in a kind of bag (locally known as "sheets"), of dimensions about 3 by 1½ yards.

Hard waste (locally known as "thrums") from the factories using cotton warps is produced within the district and is exported at the rate (estimated) of 100 tons per week. No hard waste is imported.

Cotton linters are of small account and when brought in appear to be used in the same manner as the soft wastes. One firm of bedding manufacturers reports that it buys linters in Liverpool and uses them for making batting (wadding). Other similar firms state that they use no linters but use kapok for their waddings.

Hard wastes are contracted for at the mills, the dealer taking the waste as made. Hard wastes are generally opened and then are used for cleaning purposes. They are sold within the district and have been exported to Germany and Canada. Terms have been cash against documents. The wastes are packed in square-ended bales, with iron hoops, holding 7 hundredweight (784 pounds).

LIVERPOOL.

[Consul Horace Lee Washington.]

Liverpool's importance in the trade in cotton linters, batting, and waste is that of a seaport and distributing center. One firm uses a relatively small quantity of linters in the manufacture of lint. Manchester and other manufacturing cities nearby consume all three of these cotton products in large quantities.

The official statistics do not show the trade in linters or batting, but according to a leading importer and merchant, during the 12 months from September 1, 1913, to August 31, 1914, 3,000 bales of linters were imported from the United States, 750 bales from Brazil, and 660 bales from Peru and Chile. The average weight of the bales of American linters is 450 to 550 pounds. American exporters generally draw at 60 days sight on Liverpool banks with documents attached. Frequently cash is paid against shipping documents.

Cotton waste is imported from the United States principally, but also in small quantities from Brazil, Peru, Japan, China, and India. The imports and exports at Liverpool of "cotton waste from worked cotton" during the years 1909 to 1913 were as follows:

Years.	Imports.		Exports.	
	Pounds.	Value.	Pounds.	Value.
1909.....	2,937,700	\$97,660	16,216,600	\$923,734
1910.....	5,185,435	350,207	21,298,200	1,352,940
1911.....	3,281,851	245,570	22,890,000	1,518,055
1912.....	6,337,471	393,188	21,752,200	1,340,009
1913.....	6,908,267	467,743	23,717,100	1,475,424

The imports of cotton waste from the United States during the years 1909 to 1914 were as follows:

Years.	Pounds.	Value.	Years.	Pounds.	Value.
1909.....	420,634	\$25,242	1912.....	3,392,589	\$184,479
1910.....	1,993,902	156,754	1913.....	2,268,460	166,551
1911.....	709,664	64,801	1914.....	2,162,299	112,707

The usual terms of purchase are cash against documents. There is no uniformity in the weight of cotton baled waste, which varies from 150 to 800 pounds per bale. The average weight of American bales is about 500 pounds and of Indian bales 400 pounds. Cotton waste is almost invariably purchased and sold on bulk sample.

LONDON.

[Consul General Robert P. Skinner.]

The table that follows shows the quantity and value of imports and exports of "cotton waste from worked cotton" for the United Kingdom during the years 1910, 1911, 1912, 1913, and 1914.

The term "cotton waste," as used in the official statistics, includes American super strips, American best strips, American ordinary strips, willowing strips, Egyptian best strips, American knur laps, American ring laps, peeler comber, American droppings, cardroom sweeps, spinner sweeps, No. 1 cop waste, ring cop waste, and engine-cleaning waste. Statistics of linters and batting imports and exports are not compiled.

Years.	Imports.		Exports.	
	Pounds.	Value.	Pounds.	Value.
1910.....	37,710,333	\$3,173,566	87,042,400	\$6,007,903
1911.....	31,086,976	2,448,390	97,614,700	7,107,504
1912.....	40,065,608	2,628,898	99,660,700	6,764,002
1913.....	34,839,252	2,510,467	110,737,900	7,596,056
1914.....	34,363,451	2,574,130	69,979,700	4,781,949

Many firms in this district gather cuttings, rags, old curtains, cotton rope, etc., out of which cotton waste is made, but no manufacture of waste, linters, or batting is carried on in the vicinity of London. Cuttings, rags, etc., are baled and shipped to Manchester, to be pulled or otherwise treated. There are no importers in this district.

MANCHESTER.

[Consul Ross E. Holaday.]

The principal use of cotton linters is for the manufacture of absorbent cotton wool, the material being cleaned by willowing, then bleached and carded and put in rolls ready for sale. On the Continent of Europe, it is reported, linters are also extensively used for spinning into coarse counts, such as carpet and bump yarns.

Batting or wadding is largely manufactured in the Manchester district, and in consequence only very small quantities are imported. It is used by tailors, upholsterers, etc., and the very low qualities are now used extensively for banana packing. The gray or black batting used by local tailors is made up in 12-yard pieces.

Cotton waste is both produced and used extensively in the cotton mills of this district. Sheetings, flannelettes, quilts, bedcovers, cotton blankets, sponge cloths, towels, and cretonnes are among the goods manufactured from waste, which also is bundled into hanks and used in making ropes and twines. Sized waste, doubled waste, and other waste not suitable for respinning is made up for cleaning.

The foreign trade of Manchester in "cotton waste from worked cotton" during the five years 1909 to 1913, inclusive, is shown in the following table:

Years.	Imports.		Exports.	
	Pounds.	Value.	Pounds.	Value.
1909.....	18,430,629	\$1,278,166	55,413,000	\$3,130,901
1910.....	27,728,048	2,568,733	51,936,300	3,731,607
1911.....	21,857,070	1,865,324	55,548,500	4,099,023
1912.....	28,326,484	1,956,250	60,043,300	4,192,134
1913.....	27,780,981	1,690,013	63,826,700	4,479,501

NOTTINGHAM.

[Consul Calvin M. Hitch.]

Only one firm of importance in this district is engaged in the manufacture of cotton waste. It makes engine waste only, and does a comparatively small business handling the waste of the lace and hosiery manufacturers located in this district. According to the information at hand, their output, which is practically the total output of the district, amounted during five recent years to approximately 20,000 tons. While statistics are not available, it is believed that the greater portion of this was sold to British concerns, both domestic and colonial, and the balance to various South American railways through their agencies in this country.

Waste is usually put up in 5-hundredweight (560-pound) bales. Terms vary according to the quantity purchased by the customer. In foreign business they are usually cash against documents, except when sold to the foreign concerns having agencies in this country. To these the usual terms of cash in one month are allowed.

SHEFFIELD.

[Consul John M. Savage.]

A considerable quantity of cotton waste is used by the numerous manufacturing plants in this consular district, but statistics as to the amount are not available. As there are no local cotton mills, the waste comes from Manchester, the center of the cotton industry of Great Britain, which is only 40 miles distant. The trade, as a rule, is supplied by local dealers, except in the case of large users, who buy direct. Terms are $2\frac{1}{2}$ per cent, 30 to 90 days, according to the financial reliability of the purchaser.

OTHER CENTERS.

Bristol, Huddersfield, Hull, Plymouth, Southampton, and Newcastle-on-Tyne are markets of some consequence for cotton waste, linters, and batting. They are to be reached either direct or through the larger centers, such as Liverpool, Manchester, Leeds, and Nottingham. Dunfermline, Dundee, and Glasgow are potential markets for these products. Malta is an inappreciable market, owing to the fact that the demand is confined to waste for cleaning machinery of vessels. The island's supply comes from Great Britain.

NORTH AMERICA.

BRITISH HONDURAS.

[Consul William L. Avery, Belize.]

The cotton batting found in the stores of Belize is, properly speaking, cotton wadding, used almost exclusively by the tailoring trade. The amount imported by any one house does not exceed 144 yards, or 24 pounds, per annum, nor does the amount vary. For the entire trade the probable annual imports are estimated at 240 pounds. The country of origin is, and has been, Great Britain.

British Honduras is not a country where machinery is used to any extent, and the demand for waste is very small, but its use has increased of late years with the building of motor boats. The largest single consumer is the Government, for the railway, dredgers, boats, etc. The Electric Light & Ice Co. imports some 3,000 pounds yearly, and a local firm imports for its retail trade an average of 1,300 pounds per annum. The cotton waste used by the Government is ordered from England. The statistics for 1913 and 1914 show values of \$148 and \$168. Several mercantile houses import 100 or 200 pounds yearly for local customers, and from inquiry made by this office it may be stated that the imports of cotton waste into British Honduras for five years before the war (exclusive of Government supplies, ordered through the Crown Agents for the colony in England) averaged 5,500 pounds. Nine-tenths of this amount came from the United States. All of it was hard waste used in connection with machinery.

BRITISH WEST INDIES.

BAHAMAS.

[Consul W. F. Doty, Nassau.]

Cotton waste to the amount of almost 1,000 pounds is imported annually into the Bahamas from the United States for use in cleaning machinery. The importers are hardware dealers and maintain accounts current in the United States. Cotton batting is imported from England in small quantities for coat linings. It comes in packages of 12 sheets 4 by 8 inches in size. There are no imports of linters, and the islands export none of these three products.

BARBADOS.

[Consul Chester W. Martin.]

A very small quantity of cotton batting and cotton waste is imported into Barbados, but the customs do not classify these commodities. There are two local manufacturers and exporters of cotton linters, who ship to England. Statistics are not available, but from information at hand the exports for 1914 amounted apparently to 50 bales of 450 pounds each, a total of 22,500 pounds.

JAMAICA.

[Consul Ross Hazeltine, Port Antonio.]

There are no cotton mills in the Port Antonio consular district, nor is there any demand for cotton linters and batting. One of the leading dry-goods merchants in Port Antonio stated that he was entirely unacquainted with these products. There is, however, a small and steady demand for hard cotton waste, which is used principally for cleaning and polishing. No statistics of imports are available, and the only estimate that this office has been able to obtain is from the largest local importer. This firm imported and sold 2,500 pounds of cotton waste during 1914 and 1915, all of which came from the United States. It is packed in bales varying in weight from 100 to 325 pounds.

There is no demand for cotton linters, batting, or waste in the Kingston district.

TRINIDAD.

[Consul Andrew J. McConnico.]

The consumption of cotton waste in the colony of Trinidad and Tobago is very small, and is limited to the Government railway, the Trinidad Electric Railway in Port of Spain, and the sugar plantations in various parts of the island. Cotton linters and batting are not in demand and consequently not imported. None of the articles is manufactured from the small amount of cotton produced in the colony and hence none is exported.

It is estimated that the total consumption of cotton waste does not exceed 1,200 pounds per month. This estimate is based upon the average monthly sales of the leading importer, which do not exceed 500 pounds. The waste is imported from the United Kingdom and the United States, in bales of 100 pounds each.

OTHER BRITISH ISLANDS.

Cotton linters, batting, and waste are not imported into Turks Island. Cotton rags or other textiles are used for cleaning machinery in the district's seven factories; and even if these factories could be induced to use cotton waste, the amount required would be too small to justify an effort to obtain the trade.

There is no trade worth reporting in the colony of Bermuda in cotton linters, batting, and waste.

CANADA.

CALGARY.

[Consul Harold D. Clum.]

Cotton batting (or wadding) is in general use in the Calgary district. About 1,000 fifty-pound bales per annum are brought into Calgary, and approximately 2,000 bales into the Province of Alberta. Of this amount, only 400 bales, valued at \$10 per bale, are imported from the United States direct, the rest being of Canadian manufacture. Cotton batting is put up in a form locally known as "batts." These batts are 6, 8, 10, and 12 ounce sizes and the number of batts

to the bale is regulated according to the weight of the batt, the bale weighing 50 pounds. The weight of the batt in popular use is 8 ounces. Batting is used principally in making quilts.

Cotton waste is used principally by the various railway companies operating in this district and is supplied by the purchasing departments in Montreal and Toronto. The local hardware stores carry a small stock, obtained from jobbers in eastern Canada, to supply machine shops, which use the waste for both cleaning and packing. Cotton linters are not used in this district.

HALIFAX.

[Consul General Evan E. Young.]

Cotton linters are not used in this consular district, nor is any cotton batting imported. Cotton waste (soft), on the other hand, is imported in a fair amount. Shipments are usually made in 10,000 to 20,000 pound lots and the entire demand is supplied from Canadian and American sources. The bulk of the imports are made by one firm.

MONTREAL.

[Consul General William Harrison Bradley.]

Montreal is the center of Canadian cotton manufacture, and, with Toronto, of the jobbing trade as well. Canadian statistics, however, do not recognize cotton linters, and imports of cotton waste are obscured under the heading of "waste or shoddy from cotton, woolen, or other fabrics, or from yarn or thread machined, garnetted, or prepared for use," of which the total imports were 7,233,610 pounds, worth \$466,438, in 1914, and 4,559,923 pounds, worth \$288,850, in 1915. Of "cotton batts, batting, and sheet wadding," the imports during the five years ended in 1915 were valued as follows: 1911, \$25,688; 1912, \$24,845; 1913, \$33,650; 1914, \$35,237; 1915, \$32,053.

The duty on cotton batting is 25 per cent ad valorem plus $7\frac{1}{2}$ per cent war tax. On cotton waste it is $12\frac{1}{2}$ per cent ad valorem plus $7\frac{1}{2}$ per cent war tax.

Cotton waste is exported from Canada in considerable quantities, as appears from the following table of exports, by countries of destination, covering the four years ended in 1915:

Countries of destination.	1912		1913		1914		1915	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
United Kingdom.....	100,467	\$1,994	249,353	\$9,107	3,661	\$289	231,625	\$12,403
United States.....	667,429	25,584	876,273	25,849	482,251	21,356	1,369,448	60,132
Other countries.....	274,167	7,929	599,087	12,037	25,487	1,324	5,808	201
Total.....	1,042,063	35,507	1,724,713	46,993	511,399	22,969	1,606,881	72,736

A Montreal company is the largest contractor here for soft and thread waste. Some of the soft waste it manufactures into a thread waste for use upon machinery, and it exports large quantities to the United States and Europe. Its exports, which are said to amount to 90 per cent of the total, consist of soft mill waste, including fly,

picker, soft sweeps, roller and card strip, as well as cotton thread waste, as it comes from the mills. The soft waste is packed in bales averaging 450 pounds. Thread waste is packed in 600-pound bales, except that for the convenience of local purchasers it is sometimes put up in 20 to 50 pound bales.

There are no exports of cotton linters, cotton batting, or cotton wadding from this district. Mattress makers are said to use most of the linters, which come to this district annually to the amount of 750 to 1,000 bales (averaging 450 pounds), nearly all from the United States. One company is said to receive 75 per cent of the quantity shipped from the United States and to use it in the manufacture of mattresses.

Cotton batting and wadding in Canada are nearly all made from linters and soft mill waste purchased from Canadian and United States mills, and are consumed in the Dominion. The goods are sold to jobbers. Batting is used principally as filling for blankets. Wadding is used, in the finer quality, as inner lining for women's opera cloaks, while the poorer grades are made into shoulder pads for coats, as well as padding for carriage tops, leather cushions, lounges, and the like. These commodities are packed in 25 to 60 pound bales and sold usually on terms of 30 days net.

Practically all the machinery used comes from the United States, and consists of openers, mixers, teasers, lappers, and cards.

ORILLIA.

[Consul M. B. Kirk.]

Five times as much American cotton batting is used in this district as compared with its only competitor, the home product. This is due to the fact that the American cotton batting is cleaner and better put up. The Canadian article is packed in bales, and the separate batts have a crushed appearance. The American batts, on the other hand, are packed, as a rule, in heavy cardboard cases reinforced with lath strapping, and the batts when removed from these cases present a much better appearance.

The waste used here comes in bales weighing 50 to 500 pounds. The small bale is of great convenience to the retailer, as he can order in small quantities, but generally a 300-pound bale is bought by the large manufacturers.

Although Orillia is the largest and most important manufacturing town in this district, it is estimated that barely 1,000 pounds of cotton waste of all sorts is bought from the retailers. This is usually bought in 5-pound lots.

QUEBEC.

[Consul G. Willrich.]

There are no statistics available showing the imports and exports of cotton linters, batting, and waste in this district. Information obtained from a dealer in waste, however, is to the effect that about 500 tons are used in this section annually, the greater portion imported from England. Cotton batting and wadding are used quite extensively, the former for making quilts, etc., the latter for padding coats and other garments. This is all obtained from a Canadian company.

SYDNEY.

[Consul Charles M. Freeman.]

Cotton batting is retailed in all the dry-goods houses, which usually obtain their stock from other distributing points in Canada, although a certain quantity has been purchased in England by a few of the leading houses. Cotton batting is packed in cases holding 60 pounds each. Very little, if any, is purchased direct from the United States, although practically all is of American origin. Credit terms are usually 60 days net.

Cotton waste comes into the district to be used for polishing, machine wiping, and packing, and is purchased by the iron and steel manufacturers, the railways, and the mining companies. While statistics for the district are not to be had, probably one-third of the total imports have until recently been obtained from Great Britain. A large part, especially that used on the railways and in the machine shops, has come from other parts of Canada, and it is estimated that \$5,000 worth has come from the United States. Since the supply from England has been cut off, the British trade has reverted to Canadian manufacturers, and the supply has come principally from St. John, New Brunswick, and Montreal. The waste used here comes in bales of different weights, and there seems to be no standard; but the trade demands not less than 500 pounds, and the average weight is 700 pounds. Notwithstanding the fact that the supply from Great Britain has been cut out, the manufacturers of the United States have not gained the trade, except as sales of their product have increased at other points in Canada for distribution to users in Cape Breton.

VANCOUVER.

[Consul General R. E. Mansfield.]

Generally speaking, the requirements and demands of the market in British Columbia for cotton linters, batting, and waste are identical with those of similar localities in the United States. There is no local manufacture of these products, however, and figures showing the imports are not available. It is estimated that the annual imports of waste into British Columbia amount to 25 cars, while those of cotton batting and linters amount to 15 cars.

With few exceptions waste is used only for cleaning machinery, while cotton batting and linters are used by local factories in the manufacture of mattresses.

Waste is purchased for the local markets in bales ranging from 100 to 500 pounds in the proportion of about 20 of colored to 80 of white. Nearly all of it comes from the United States, but the market has recently been entered by eastern Canadian firms, who are endeavoring to capture the trade, particularly since the imposition of an additional duty of $7\frac{1}{2}$ per cent as a special war tax, increasing the tariff rate to 20 per cent.

Cotton linters and raw cotton used in this Province are purchased by manufacturers direct from the exporter, principally from American houses, through agents in eastern Canada. The bales average 500 pounds.

In the manufacture of the cheaper grades of mattresses, jute from bags and clippings is substituted for cotton linters and raw cotton. This cheaper material is being obtained locally and from eastern Canadian mills. The only demand for batting in this Province is for domestic uses.

WINDSOR.

[Consul Harry A. Conant.]

A part of the supply of batting comes into the district directly from the United States, American factories maintaining resident agencies. The remainder is procured from the eastern Canadian wholesalers. The batting is largely used in the domestic manufacture of coverlets and other bedding. It comes in 50-pound bales of rolls weighing 16 ounces each, and is sold through the dry-goods stores. As this district is engaged extensively in manufacturing industries, it affords a good market for cotton waste, which is used for wiping machinery. The best grade is made in and imported from the United States. Some not so good is manufactured in Toronto, Canada. Linters are not handled in this district.

WINNIPEG.

[Consul General Frederick M. Ryder.]

Previous to the war linters were manufactured here to some extent, principally for home consumption. At the present time, it being impossible because of the increased cost to import the raw material, which formerly came from the United States, a substitute for the regular cotton linters is manufactured from jute and cotton pickings. The latter are a refuse procured from the textile mills and imported chiefly from the United States, though a small percentage comes from Europe. The refuse is first put through a cleaning machine to separate it from the dust and broken leaves, then through a carding machine. What is termed "shoddy batts" comes principally from Toronto, where a large factory has been established to manufacture this product. The machines used for this purpose are made by an American firm, each machine costing about \$3,000.

A conservative estimate of the imports of linters into this consular district under normal conditions would be about 750 bales per annum for use in manufacturing mattresses and wadding. About 95 per cent goes into mattresses and 5 per cent into wadding for surgical purposes.

The largest consumer of cotton linters in this district is a Winnipeg firm, which practically controls the output of mattresses in the West. This concern manufactures all the linters and batting used in its factories, the raw material being imported principally from the United States. The grade of cotton used is a fiber known as "middling upland."

A large quantity of soft cotton waste is used by the three trans-continental railroad systems centering in Winnipeg. During 1915 one road consumed 100 bales of white cotton and 150 bales of colored cotton waste, while another used nearly 500,000 pounds per month; another about 250,000 pounds of colored and 100,000 pounds of white cotton waste. Most of this waste is bought through the local purchasing departments of the road, the remainder being supplied

through the purchasing agents at the general offices of the companies in Montreal and Toronto. It is put up in bales of 500 to 600 pounds each.

The Canadian product comes principally from Montreal and Toronto, the foreign largely from the United States. The local hardware and machinery-supply houses carry waste in stock.

OTHER CANADIAN MARKETS.

The Canadian market is one of substantial promise. Other cities worthy of consideration are Cornwall, Kingston, Niagara Falls, Ottawa, and Toronto; while Campbellton, N. B., Charlottetown, P. E. I., Fort Erie, Fort William, Moncton, N. B., Prescott, Sarnia, Sault Ste. Marie, St. John, N. B., St. Stephen, N. B., Sherbrooke, Victoria, and Yarmouth are centers where profitable trade might well be developed.

COSTA RICA.

[Consul Samuel P. Lee, San Jose.]

Cotton linters, batting, and waste are not manufactured in Costa Rica, and there are no official statistics showing the quantities imported. Careful inquiry among merchants, however, indicates that approximately 20,000 pounds of cotton batting (or wadding) are consumed each year in Costa Rica. Most of this is of American origin, but one firm at least has purchased small quantities from France. The Costa Rican import duty is 1.1 cents per pound gross weight. Cotton batting is not in general use in tropical countries and is imported in small quantities only by the leading wholesalers at San Jose. Most of the cotton waste imported comes from the United States and is sold by the hardware dealers at San Jose. Some has been purchased in England, however.

Port Limon is a negligible field for the American exporter.

CUBA.

CIENFUEGOS.

[Consul R. M. Bartleman.]

There is a fair market in this district for cotton waste, confined to a few grades only, known locally as class A and class C, both white and colored. Class A waste is for use on machinery of vessels and is not carried in stock but is purchased to order only. Class C is carried in stock and is used for machinery of all kinds. Waste is packed in bales of 100, 200, and 600 pounds. From the subadministrator of customs it is learned that the imports of cotton waste in 1916 aggregated 299,034 pounds, valued at \$19,360. The import duty on cotton waste imported from the United States is \$0.70 per 100 kilos gross weight.

Moderate stocks of cotton waste are carried by hardware firms, who claim to supply some of the sugar mills of this district. Many of the mills, however, buy their waste direct, importing on their own account.

On January 1, 1915, a small factory was started here for making filled quilts and pillows. The machinery used consists of an Ameri-

can motor of 10 horsepower, three large and two small American sewing machines, a revolving machine, and one small hand-crushing machine. The last two machines were made in Habana.

The monthly consumption of filling for the different kinds of quilts amounts to about 19,000 pounds, making a total of 2,300 to 2,500 quilts. Twenty hands are employed. All the material used is American, such as raw cotton, cotton sheetings, and percales. The machinery mentioned can produce 5,000 quilts, consuming 40,000 pounds of filling or waste of cotton, silk, wool, or jute.

There are three similar factories at Habana and one at Santiago de Cuba.

HABANA.

[Consul General James L. Rodgers.]

There is a limited consumption of cotton waste in Cuba, mostly for wiping machinery, packing for mattresses, quilts, etc. Owing to the fact that the island has not yet developed large manufacturing interests, the demand is not great. Railroad shops, sugar-machinery plants, and mattress factories take the bulk of what comes in. Purchases are made direct from the United States and in annual requisitions.

DOMINICAN REPUBLIC.

PUERTO PLATA.

[Consul Frank Anderson Henry.]

No attempt is made to manufacture cotton batting and cotton waste locally, as the demand is almost negligible. Native cotton is sometimes used by individuals for making such articles as quilts, stuffing for pillows, etc.

Small quantities of cotton waste are imported from the United States, but as the use of machinery is very limited, the amounts consumed are negligible. Probably two to three dozen bales per year would cover the entire consumption of the district. The principal users are the two railroad companies. The bales of cotton waste average 150 kilos (331 pounds) each.

SANTO DOMINGO.

[Vice Consul Carl M. J. von Zielinski.]

Imports of cotton waste into the Dominican Republic have ranged in value from \$450 in 1910 to \$800 in 1913. There are no statistics for cotton linters or cotton batting.

According to paragraph 420, raw cotton, with or without seeds, pays a duty of \$10 per 100 kilos (220.46 pounds) gross weight, while paragraph 421 provides a duty of \$6 per 100 kilos gross weight on cotton waste.

Practically all the cotton grown is in the northern part of the island, and only a few attempts at cultivation have been made in this consular district. These have met with little success so far. No batting or waste is manufactured and all that is used is consequently imported. The chief consumers in this district are the sugar estates, which have large machine works.

FRENCH COLONIES.

GUADELOUPE.

[Consul Henry T. Wilcox.]

There is a small demand in Guadeloupe for cotton waste to be used in cleaning machinery, but there is no trade in linters or batting. The principal importer of waste states that prior to the war he imported annually from the United States about 3,000 pounds. Most of the sugar factories also import cotton waste.

ST. PIERRE-MIQUELON.

[Consul John J. C. Watson.]

Cotton linters, batting, and waste are not manufactured in this colony. A small amount of cotton waste, estimated at 3,000 pounds per year, is imported from France. It is put up in 120-pound packages. The usual credit is 30 to 60 days from date of invoice.

GUATEMALA.

[Consul Stuart Lupton, Guatemala City.]

Cotton linters do not appear as a separate item in the customs returns but are included with raw cotton. Imports of cotton batting and cotton waste into Guatemala during the years 1910 to 1914 were as follows:

Years.	Cotton batting.		Cotton waste.	
	Pounds.	Value.	Pounds.	Value.
1910.....	4,321	\$702	996	\$108
1911.....	10,814	1,370	3,836	306
1912.....	6,107	1,433	4,826	346
1913.....	6,287	1,336	227,270	14,686
1914.....	5,097	1,824	8,719	471

The duties leviable, according to the Guatemalan customs tariff, are as follows:

Cotton, with or without the seed, per kilo (2.2 pounds) gross weight, 3 centavos. As far as can be determined, linters and cotton waste come under this classification. Of this duty, 50 per cent is payable in gold and 50 per cent in the local currency. Thus the duty on 100 kilos would be 3 pesos, equal to \$1.50 gold plus 1.50 pesos, a total of approximately \$1.54 gold.

Cotton for interlinings, including batting, per kilo (2.2 pounds), net weight plus weight of inside wrapping, 40 centavos. This is payable half in gold and half in the local currency.

Waste is shipped in bales varying from 50 to 100 pounds in weight. Batting is shipped in various ways, often being wrapped in water-proof paper and burlap and baled. The terms usually granted by American firms to purchasers in Guatemala vary from cash payment to 90 days' credit. European houses often grant six or nine months.

The only power-driven cotton mill in Guatemala is located at Candel, near Quezaltenango, the second city of the Republic. When operating at capacity it consumes some 2,000 bales of cotton per year,

about nine-tenths of which is imported from the United States. The remainder is native grown, coming from the district around Santo Domingo, Retalhuleu, and Mazatenango, on the coast region near Cantel. A former president of the company, an American, first brought seed, and started and encouraged cotton cultivation, which is now quite successful; a good-quality cotton, with a fiber about $1\frac{1}{2}$ inches long, is obtained. This is ginned at Retalhuleu, baled, and shipped to Cantel. The linters are not removed from the seed. Within five recent years the company has brought in a shipment of some 50 bales of linters for mixing with the longer fibers in making coarse cloth and blankets for the Indians. There is one waste machine at the Cantel mill, which, it is understood, is used only in reworking the mill's own waste. This machine, like the rest of the equipment, is of English make and cost between \$3,500 and \$4,000. The product of the Cantel mill is consumed locally.

HAITI.

[Consul Lemuel W. Livingston, Cape Haitien.]

There is no trade in either cotton linters or batting in this consular district. A small quantity of waste is imported by individuals interested in machinery, and one merchant at Cape Haitien imports about 200 pounds a year. The electric-light company and the railroad stations at Cape Haitien and Gonaives use a certain quantity.

None of these articles is exported from this consular district, nor is there any machinery employed for their manufacture.

The trade in cotton waste in the Port au Prince district is insignificant.

HONDURAS.

CEIBA.

[Consul Walter F. Boyle.]

Statistics as to the imports of cotton waste, batting, and linters into this consular district are not available, but it may be estimated that the quantity of hard cotton waste imported for use in cleaning machinery in 1914 amounted to 7,000 pounds and the value to \$400, while the imports of cotton batting were probably 1,000 pounds, with a value of \$100. The imports of linters were negligible. The increase in the imports of waste and batting during the five years ended in 1914 was probably 25 per cent. During this time the total trade was with the United States and there was little danger of European competition.

This district exports no waste or batting or manufactures thereof, nor is it engaged in the manufacture of these articles for its own use.

Practically all the waste and batting is imported by the several American fruit companies, which operate under varying names their own steamship lines, railway lines, terminal facilities, plantations, and other industries in connection with their large interests. These companies maintain their own purchasing departments in the United States and consequently buy on a strictly domestic basis. The use

of waste and batting other than by these corporations is so small that these articles can not be purchased at retail establishments.

Cotton waste is used only for cleaning machinery and the chief use of batting is for calking boats. Most of the boats make occasional trips to the British colony of Belize, however, and at such times purchase articles for their repair and upkeep. The fact that customs duties are much lower at that port almost eliminates the retail demand for batting in this district.

PUERTO CORTES.

[Consul John A. Gamon.]

Cotton linters and batting are not imported in this district, but absorbent cotton, for medical purposes, is brought in in small quantities—probably not exceeding \$500 worth per year. Cotton waste is imported by the railroads and electric companies for engine-room purposes. Statistics are not available, but it is believed that the total imports of waste in this district would not exceed 15 tons per year. The demand would probably be steady. The customary sizes of bales are 100, 200, and 350 pounds.

Cotton is not grown in this district and there are no spinning or weaving industries. The local requirements for cotton products, therefore, will for some time to come be met by imports from foreign countries. The United States stands in a favorable position for this trade and will continue to do so with the present shipping facilities. With the extension of railroads and the establishment of factories there may be a fair demand for all three commodities.

MEXICO.

DURANGO.

[Vice Consul Homer C. Coen.]

As the great Laguna cotton section, which produces 80 per cent of the total cotton of Mexico, is situated in the Durango consular district, a considerable supply of cotton linters and waste is available for local consumption. The linters are a by-product of the two large soap factories at Gomez Palacio (Durango) and at Torreon (Coahuila) and practically all are sold within the country. There are five large cotton-goods factories within this district which manufacture the cheap, unbleached muslin known as "manta," much used by the poorer classes for clothing.

No recommendation can be made to American manufacturers to attempt at the present time to extend trade to Mexico in this line, because it is cheaper under existing conditions to use good cotton for all such purposes than to try to import from the United States. When conditions become normal, however, there will be a big demand for cotton batting for making mattresses.

There is an unsupplied demand for mattresses in this consular district. A mattress factory here, or a mattress made to sell very cheap, will find practically an unlimited market.

SAN LUIS POTOSI.

[Consul Wilbert L. Bonney.]

Cotton waste is used in the San Luis Potosi district to the extent of about 30 tons per annum in normal times. Before the opening of cotton mills in Torreon, Lerdo, Orizaba, and other cities in Mexico, it was imported from the United States, but the native article is now used. It is of inferior quality, not well-classified, and not especially clean, but in this article quality has not been considered of great importance. The waste from native mills is divided into two classes, white and colored. When soaked with oil it is used for fuel. It is stated that a cotton mill in Mexico produces a much larger percentage of waste than do mills in the United States.

Cotton batting is practically unknown in the San Luis Potosi district. Quilts are not used to any large extent, as blankets are much more popular, much cheaper, and of good quality. Cotton is not plentiful nor cheap in San Luis Potosi, and its place in stuffing is taken by straw, ixtle, and hair of local production.

Cotton linters are known only by name in San Luis Potosi. A small amount has been brought at times from Torreon soap factories to San Luis Potosi and used for stuffing mattresses. There is no market at this time.

OTHER MEXICAN CITIES.

Ensenada (Lower California), Nogales, and Monterey afford such limited facilities as to be hardly worthy of consideration in so far as American exporters of waste, linters, and batting are concerned. These markets can well be handled from the more important centers.

NICARAGUA.

[Consul Harold D. Clum, Corinto.]

Imports of cotton waste into Nicaragua amounted to 25,046 pounds, valued at \$1,468, in 1914, as compared with 22,019 pounds, valued at \$1,959, in 1913. Over 75 per cent of the total was obtained from the United States and practically all the remainder from the United Kingdom. No cotton linters or batting is used in this district.

Importers usually buy waste on open account. They also sell on open account as a rule, though small users pay cash. Waste is imported in 100 and 200 pound bales. It is used in this district for machine wiping and packing, the principal users being the railway company, the electric-light company, ice-making concerns, sugar mills, distilleries, coffee-cleaning establishments, and sawmills.

There are no manufacturers and exporters of cotton linters, batting, and waste in this district.

Bluefields offers so limited a field for development as to be negligible. Waste is the only article utilized and it is supplied to engine and machine wipers.

PANAMA.

[Consul General Alban G. Snyder, Panama.]

No cotton linters and batting are imported into Panama and only a little waste. Imports average 75 to 100 bales of 140 to 150 pounds each and are handled almost exclusively by the hardware firms of the city. They are purchased through New York commission houses.

SALVADOR.

[Consul General Henry F. Tennant, San Salvador.]

No official statistics are available showing the imports into this country of cotton linters, batting, and waste, but it is estimated that some 6,000 to 10,000 pounds of waste are imported yearly, all of which comes from the United States. There are no exports, as little cotton is grown here, but about 1,000 pounds of waste are produced yearly and sold within the country.

SOUTH AMERICA.

ARGENTINA.

BUENOS AIRES.

[Vice Consul Eli Taylor.]

Cotton batting is used in a very limited way in Argentina, for the manufacture of quilts. Besides that imported, there is a small amount produced locally for this purpose. Very cheap quilts, which are made in large quantities, are generally padded with old rags. More than half of the quilts made and sold in this country, however, are made with wool, which is quite plentiful.

Cotton waste is used almost exclusively for wiping and polishing purposes in the factories and by the railroads. No distinction could be found between soft and hard waste. The railroads are probably the largest consumers of waste, and as these are in practically all instances British owned, with London offices, through which most of the railroads' requirements are purchased, it can readily be seen why Great Britain figures as the most important exporter of cotton waste to Argentina. Small quantities of waste are produced by the local cotton weaving and knitting mills, which, for the most part, consume their own production.

The import duty on cotton waste in Argentina is 25 per cent on a fixed valuation of \$0.045 per pound, and on cotton batting for quilting purposes, 25 per cent on a fixed valuation of \$0.227 per pound. These duties are increased by a surtax of 7 per cent of the valuation.

Cotton waste is generally received here in very tightly packed bales, containing 400 kilos (882 pounds).

The total imports of cotton waste into Argentina in 1914 were 4,441,313 pounds, valued at \$200,471. For the four years ended in 1913 the quantity and value of cotton waste imported into Argentina, by countries, were as follows:

Countries.	1910		1911		1912		1913	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Belgium.....	87,964	\$3,858	107,945	\$4,735	150,405	\$6,597	104,621	\$4,588
Brazil.....			203,867	8,942	180,908	7,935	492,151	21,935
France.....			516,769	22,668	474,586	20,879	227,057	11,999
Germany.....	383,983	17,229	234,700	10,313	515,985	22,633	385,796	16,924
Italy.....	140,361	6,632	2,765,505	122,045	3,954,992	183,006	379,511	16,747
United Kingdom.....	2,485,388	110,507	12,533	550	15,092	663	3,601,717	165,775
United States.....	54,370	2,381	26,116	1,153	45,151	1,973	20,649	906
Other countries.....	333,874	13,942					37,614	1,206
Total.....	3,485,940	154,549	3,867,435	170,406	5,490,608	250,425	5,249,116	240,080

In the foregoing figures are included imports of waste made from hemp fibers, which, however, constitute a very small percentage of the total.

Of cotton batting for use in quilts, the total imports in 1914 were 67,986 pounds, with a value of \$14,910. The following table shows the imports of cotton batting into Argentina, by countries of origin, in 1912 and 1913:

Countries.	1912		1913	
	Pounds.	Value.	Pounds.	Value.
France.....	19,443	\$4,264	41,320	\$9,063
Germany.....	7,090	1,546		
Italy.....			6,802	1,492
Spain.....	31,495	6,908	60,896	13,356
United Kingdom.....	17,065	3,743	18,009	3,960
Other countries.....	6,610	1,458	4,533	983
Total.....	81,703	17,919	131,560	28,854

So far as could be ascertained, there have been no imports or exports of cotton linters in Argentina.

ROSARIO.

[Consul William Dawson, jr.]

There is a considerable demand for imported cotton waste in Argentina. During the five years from 1908 to 1912, inclusive, an average of 3,870,000 pounds was imported, of which over 70 per cent came from the United Kingdom and about 10 per cent each from Germany and Italy. About 20 per cent of the total imports in 1912 was received at Rosario. In 1913, 5,260,000 pounds of waste were imported.

In 1913 about 70 per cent and in 1912 about 60 per cent of imports were entered free of duty; that is to say, by railways or other public utilities enjoying the privilege of free entry. Waste imported by dealers pays the following duties: Washed woolen waste, 4.20 cents per pound; all other waste, 1.40 cents per pound.

Because a considerable number of firms handle imported waste, competition is very keen and profits are small. A leading local importer who has heretofore made a specialty of high-grade waste has decided that it is more advantageous to carry a good medium grade. All grades of waste are sold here, and even in the same grade the price varies with that of raw material.

While there is little reason to suppose that the railways, which purchase supplies in England wherever possible (this does not include State or French railways), will be open to American exporters of waste, there are large concerns, particularly sugar factories, that buy from local importers, and sometimes place orders ranging from 10,000 to 20,000 pounds. Waste is handled also by machinery-supply houses.

The usual terms are 90 days from arrival of goods. Waste is usually imported in bales of 300 kilos (660 pounds), securely wrapped in bagging and bound with steel bands or wire. Bales are

subdivided into six lots of 50 kilos or three lots of 100 kilos, according to order, each lot being wrapped in bagging.

My informant states that, while he has no doubt that American manufacturers make high grades of waste, the samples submitted to him thus far from the United States have been inferior and generally contained hard fibers that made them unsuitable for fine machinery. American samples, he says, are apt to be too small. For sample purposes, at least half a kilo (1.1 pounds) should be sent. The greatest care should be taken to have orders correspond exactly with samples submitted.

BRAZIL.

RIO JANEIRO.

[Consul General Alfred L. Moreau Gottschalk.]

Cotton linters are the by-product of several cotton-oil pressing plants in this country. They are used for making felts, mattresses, and pads, and where the staple is sufficiently long, for spinning into the coarser yarns. Cotton batting, used in this country for blankets and quilts, is supplied by local establishments, and none, apparently, is imported.

Considerable quantities of cotton waste are imported, and in the export statistics the item "cotton residue or rags" is of some importance. Soft waste is used in this country for making carpet yarns and other cheap textiles. Fly waste and droppings, or motes, as well as the card strips and other long staple wastes, are most often used by the mills themselves, which run on many coarse numbers as well as the finer counts. The small quantities not consumed by the mills are sold to waste dealers. Hard waste is used almost exclusively for machine wiping.

The weight of the bales of linters, batting, and waste varies between 100 and 200 kilos (220 and 440 pounds). In the manufacture of hard waste "teasers," the well-known English machines, are used.

The foreign trade of Brazil in cotton waste is shown in the following table, by countries, for the years 1912 to 1915. "Cotton residues or rags" is the only item in the export statistics that can be considered as representing cotton waste.

Articles and countries.	1912		1913		1914		1915	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
IMPORTS (COTTON WASTE).								
France.....	54,375	\$3,829	157,110	\$10,544	53,718	\$2,809	13	\$1
Germany.....	120,110	7,943	168,863	12,027	77,435	4,106		
United Kingdom.....	593,539	43,954	693,025	5,441	334,203	23,499	286,486	21,917
United States.....	31,348	1,872	60,471	4,776	100,965	9,350	201,816	24,451
Other countries.....	52,106	5,876	26,169	50,931	96,071	6,379	53,061	4,847
Total.....	851,478	63,474	1,105,638	83,719	662,392	46,143	541,376	51,216
EXPORTS (COTTON RESIDUE OR RAGS).								
Germany.....	231,717	16,591	137,791	7,224	40,492	2,178		
United Kingdom.....	585,627	22,184	1,054,178	33,535	690,199	27,090	1,165,266	37,876
United States.....			2,357	76	4,429	343	6,614	100
Other countries.....	3,020	40	113,701	8,385	70,491	2,607	50,442	1,375
Total.....	820,364	38,815	1,308,027	49,220	805,611	32,218	1,222,322	39,351

OTHER BRAZILIAN MARKETS.

Bahia and Pernambuco are fair markets for cotton linters, batting, and waste, but separate statistics for these centers are not available. With the general development of the manufacturing interests of Brazil, as with other countries, the market for these articles will grow. But as yet they are not deemed sufficiently important to be listed separately in the statistics for Bahia and Pernambuco.

BRITISH GUIANA.

[Consul George E. Chamberlin, Georgetown.]

Cotton linters are unknown in the commerce of this consular district, and the market for batting and waste is so limited that there are no statistics of imports. There are no local manufacturers.

Batting is used almost exclusively for padding clothing, none being required for quilts because of the tropical climate. Cotton waste is used chiefly for polishing, machine wiping, and packing.

Until the beginning of the European war imports of batting and waste came from England, but at present all such purchases are made in the United States.

CHILE.

ANTOFAGASTA.

[Consul Thomas W. Voetter.]

Cotton linters and cotton batting are not imported into the northern part of Chile for industrial purposes, although antiseptic cotton for medical purposes is an article of regular use. Cotton waste is a standard article of import, coming from abroad in about the following proportions from the various countries of origin: Great Britain, 75 per cent; Germany, 12 per cent; United States, 7 per cent; Belgium, 4 per cent. Detailed statistics of imports are not available, but the total imports of cotton waste for the ports of the Antofagasta consular district during the calendar years 1912 and 1913 were as follows:

Ports.	1912	1913
Arica.....	\$36	\$3,907
Iquique.....	15,339	15,966
Tocopilla.....	5,203	3,447
Antofagasta.....	16,985	23,318
Taltal.....	6,815	6,322
Total.....	44,378	52,860

Waste is imported in bales of 5 hundredweight (560 pounds). The quality most in demand is hard waste of inferior grade, consisting of threads but with occasional fragments of fabric. No soft waste is imported. The waste is used only for cleaning machinery.

In the manufacture of mattresses and quilts no cotton is used at present. In the better grade they are stuffed with wool and hair, and old rope disintegrated is used for ordinary mattresses.

VALPARAISO.

[Consul General L. J. Keena.]

About 25 metric tons of cotton linters are imported into this country annually, principally from Peru. Some are received from the Province of Tacna, in the north of Chile (the only cotton-producing Province of Chile), but the entire production here is only about 11 metric tons, some of which is shipped to England. Practically all the linters imported are utilized by soap and candle factories. Unginned cotton is imported to some extent by mattress factories, in bales of 450 pounds, on 60 to 90 days' credit.

So little cotton batting is imported that it has not been possible to obtain any data on the subject. There are no exports of this product.

The principal uses of cotton waste are for machinery and engine wiping, and for packing journal boxes, etc. British waste has been the favored article, because it was lower in price, better packed, and cleaner than other waste. There are two sizes of bales, 250 and 100 kilos, respectively (550 and 220 pounds). The following table shows the imports of waste (almost entirely hard waste) into Chile, by principal countries of origin, in 1911, 1912, 1913, and 1914:

Countries.	1911		1912		1913		1914	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Belgium.....	8,234	\$545	.....	.....	.....	.....	7,970	\$527
France.....	11,905	788	6,834	\$453	9,050	\$589	4,563	302
Germany.....	56,669	3,753	450,664	29,845	169,897	11,251	67,053	4,440
Italy.....	11,056	736	.....	.....	.....	.....	17,008	1,826
Peru.....	.....	.....	.....	.....	.....	.....	10,417	690
Spain.....	.....	.....	.....	.....	.....	.....	5,390	357
United Kingdom.....	2,022,996	133,973	2,096,575	138,846	2,328,620	154,223	2,140,632	141,763
United States.....	3,175	210	5,699	377	53,748	3,559	61,960	4,103
All other.....	.....	.....	2,006	133	29,321	1,942	.....	.....
Total.....	2,114,035	140,005	2,561,778	169,654	2,590,636	171,564	2,314,993	153,308

PUNTA ARENAS.

Punta Arenas imports only about 1 ton of waste annually, which is used in cleaning machinery. No linters are imported and no batting. The local production is negligible.

COLOMBIA.

[Consul Ross Hazeltine, Cartagena.]

This consular district does not import cotton linters or batting, and the imports of cotton waste are limited to small quantities supplied from the United States for the use of the local railway and a few small manufacturing industries. There are no exports of any of these products.

Cotton waste is imported in bales weighing 50 to 200 pounds. Owing to the fact that American manufacturers control this trade, it may be well to point out that their packing is far too heavy. The import duty, according to the Colombian customs tariff, is \$0.053 per kilo, levied on the gross weight. The largest local importer in-

forms this office that American cotton waste is packed in 3-ply bagging with four cotton ties—an unnecessarily heavy tare. This importer sells to small coasting vessels, and usually has less than six bales on hand.

ECUADOR.

[Consul General Frederic W. Goding, Guayaquil.]

As Ecuador lies in the Torrid Zone, the use of cotton batting is limited to that part of the country traversed by the Andes, and such use is not extensive. It is not manufactured locally. The only material known here as cotton waste (escorias de algodón) is used for wiping machinery. This is not on sale in the Republic, but is all imported direct by the establishments using it. Some cotton in bales is imported for use by the textile factories in the Quito district, but cotton linters are not known. Imports of cotton batting and cotton waste, by countries of origin, during the years 1909 to 1912, were as follows:

Articles and countries.	1909		1910		1911		1912	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Cotton batting:								
France.....			238	\$34				
Germany.....	401	\$68	174	46	126	\$21		
United Kingdom.....	159	32	11	5			123	\$78
United States.....	11	7			1,634	175		
Total.....	571	107	423	85	1,760	196	123	78
Cotton waste:								
France.....			1,254	37	2,370	145		
Germany.....			110	8				
Spain.....	2,275	193	2,011	680				
United Kingdom.....	99	9	165	36	185	29		
United States.....	9,989	506	16,308	1,067	14,947	875	1,054	838
Total.....	12,363	708	19,848	1,828	17,502	1,049	1,054	838

PERU.

[Consul General W. H. Handley, Callao-Lima.]

This Republic produces more than 25,000 tons of raw cotton a year, consumes a considerable quantity in the manufacture of various grades of cotton goods, and exports raw cotton annually to the value of approximately \$7,000,000.

Notwithstanding the large local production of cotton and cotton goods, however, 8,353 kilos of waste, valued at \$8,131, were imported during 1913. Of this, 85 per cent came from Great Britain and the rest from the United States.

The imports have decreased in recent years, however, owing to the introduction of modern machinery for cleaning and combing. The Peruvian Corporation, which operates most of the railways of the country, with headquarters at Lima, is the principal consumer of waste in Peru. Small quantities are also used by two mining companies of Lima, iron works in Callao, and the Peruvian Steamship Co., of Callao.

There are only two factories in Lima equipped for removing lint from the seed. The other three mills sell their seed to these two. The only use made of lint here is in the manufacture of flour sacks, which are sold to the flour mills of Callao and Lima. Of the 133,073 kilos of lint exported in 1914, Great Britain took about 80 per cent, and the remainder went to France and Germany. The price of lint here, as with cotton, is regulated largely by the daily quotations on the Liverpool market. There is no demand at present for this material.

VENEZUELA.

LA GUAIRA.

[Consul Homer Brett.]

No importation or use of cotton linters or soft cotton waste is discoverable in the La Guaira district. Hard cotton waste for cleaning machinery is in the second customs class, paying duties and surcharges amounting to \$1.37 per 100 pounds gross weight. In the statistics such waste is included with tow, of which relatively large amounts have been arriving recently. Persons qualified to express an opinion estimate that imports of cotton waste at all Venezuelan ports amount to not more than \$1,000 per year. As all railways and many industrial establishments have the privilege of importing their materials free of duty they buy such supplies abroad, so that commercial imports are trivial in amount.

The duty on cotton batting ("algodon aplanchado") is \$2.70 per 100 pounds gross weight. It is not possible to ascertain the amount of imports, as they are combined with fabrics of cotton in the list of imports by ports and countries and with raw cotton in the list of total imports. The consumption is small, however, for Venezuela is a warm country where stuffed or padded quilts are almost or quite unknown and there are no special or peculiar uses of cotton batting. It was necessary to visit three of the largest retail establishments before finding one that had batting in stock, and there the sample shown was of a poorer quality than is ever seen in the United States. It was light-brown in color, filled with dust and with specks that seemed to be flakes from cotton seed. It was similar to the "guata" used in the Canary Islands for wrapping bunches of bananas for shipment. The dealer stated that calls for the article were so rare that it hardly paid to carry it in stock.

Imports have hitherto come from Great Britain, but as New York is beginning to ship cotton goods to Venezuela, and as batting, because of the small quantity needed, is always bought and shipped with other goods, such imports may come from the United States in future. The possibilities of the market do not seem sufficiently great to justify any special efforts to obtain trade in either cotton batting or hard cotton waste.

OTHER VENEZUELAN CITIES.

Maracaibo and Puerto Cabello are such insignificant markets for cotton linters, batting, and waste that they need not be considered as potential fields for development for some years to come.

ASIA.

CEYLON.

[Vice Consul John A. Nye, Colombo.]

Imports of cotton waste into Ceylon, by countries of origin, during 1912, 1913, 1914, and 1915 have been as follows, in hundredweight of 112 pounds:

Countries.	1912		1913		1914		1915	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>	
China.....					80	\$546	60	\$406
India.....	820	\$6,183	620	\$5,221	744	5,141	1,181	8,459
Japan.....	100	1,108	50	385	130	1,101	20	337
United Kingdom.....	757	6,328	845	6,804	938	6,671	1,140	8,513
United States.....			2	83				
Total.....	1,677	13,619	1,517	12,493	1,892	13,459	2,401	17,715

The customs returns of Ceylon do not differentiate between hard and soft waste. There were no imports of either cotton linters or batting between 1912 and 1915, and there are no exports of linters, batting, or waste.

Cotton waste is used almost entirely for motor cleaning and polishing, machine wiping, etc. The principal consumers are the large ironmongery stores, engineering works, and railways. The waste is imported usually in bales of 5 hundredweight (560 pounds), which is considered to be the most convenient size for handling. One firm imports it in galvanized-iron tanks of 400-gallon capacity, dimensions 4 by 4 feet by 4 feet, No. 13 or 14 gauge, with 18-inch cast manhole-cover for opening. These tanks are afterwards sold for oil-fuel storage purposes.

In 1890 an unsuccessful experiment was conducted in the growing of field cotton in Ceylon to supply a spinning and weaving mill located at Wellawatte, Colombo. This mill was built by an English company and operated by it for a short time. As local cotton growing proved unsuccessful, the mill was sold to a native company, which procures its supply of raw cotton principally from India. This mill has 10,000 spindles and 233 looms and produces cloth for the local native trade. All soft waste is respun by the mill for the manufacture of yarns, cotton blankets, sarongs, etc. The hard, or thread, waste is cleaned and sold under contract to the Ceylon Government Railway.

Ceylon tree cotton, or kapok, is exported in small quantities to the value of about \$10,000 gold annually. The latest use for this material is in the manufacture of life belts. It is said to be more buoyant for this purpose than cork.

CHINA.

DAIREN.

[Consul A. A. Williamson.]

Cotton batting and cotton waste are imported into the Dairen district from Japan and, to a small extent, from Great Britain and Germany. Cotton linters are not imported as such, but probably come as raw cotton, which is received from native ports. A small amount is consumed locally as cushion, bed, and cloth filling, but most of it is reexported to Japan and Chosen (Korea). It comes in 400-pound bales without covering.

Cotton batting comes in 12-kwan (about 100-pound) bales, protected by straw wrapping, and is of several grades. The softer and thinner sheets are used for wadding in clothing, bedquilts, etc.

Cotton waste is classified as to color only, and no distinction is made between hard and soft waste. It comes in 40-kwan (about 330-pound) bales covered with gunny bagging. The demand is not large and the local stocks are small. The South Manchuria Railway Co., which is the largest user, buys large quantities at a time by special tender.

There are no cotton mills or manufacturers in this district.

Imports of raw cotton, batting, and waste during the years 1910 to 1914 were as follows:

Years.	Raw cotton.	Cotton wadding.	Cotton waste.	Years.	Raw cotton.	Cotton wadding.	Cotton waste.
1910.....	\$15,980	\$18,615	\$1,026	1913.....	\$76,095	\$36,521	\$4,802
1911.....	26,414	2,098	33,075	1914.....	107,078	36,284	640
1912.....	204,555	44,220	8,142				

HANKOW.

[Vice Consul Horace Remillard.]

Hankow is the logical center of the central China cotton industry, situated, as it is, at the confluence of the Han and Yangtze Rivers, which position enables it to tap the rich Han Valley cotton district. It also has good water transportation with Hunan and western Hupeh and its rail connection to the north with Peking places it in easy reach of Honan and even Shensi.

The cotton industry is not highly organized in Hankow, however, and this staple is little treated except in the household or by the petty merchant. The great bulk of raw cotton is exported, chiefly to Japan. There are no imports at Hankow of raw cotton, cotton linters, batting, or waste.

While there is no considerable export of waste, batting, and linters, there is a large local manufacture of wadded blankets and clothing from batting, which is a house and petty-shop industry. Every Chinese family has at least one cotton quilt, generally two, and sometimes three or four. The native winter garments are also lined with cotton, often a very inferior grade, which is covered with fine white cotton. Very rarely, down or silk is employed in rich families for making blankets for old or invalid persons. This industry is in the hands of the Hunanese, who have a monopoly of the shop trade in Hankow.

In the rural districts wooden gins of old-fashioned model have been employed, which turn out an inferior yellowish-white cotton for domestic consumption. In recent years, however, metal gins of Japanese and Chinese manufacture have been introduced, which turn out a fine white product much more suitable for quilting and wadding. When the cotton is ginned, the growers hire a man to beat it into fine shreds with an instrument for this purpose. When not employed this instrument is attached to the back of the cotton beater, who walks about the streets canvassing for trade. When the cotton has been finely beaten, yarn is entwined on both sides over the square piece in the form of a network and is called "mein shih," in contrast to ordinary raw cotton, or "mein hua" (literally, fine white flower). Covers for "mein shih" are usually made in two pieces, the upper casing usually being better in quality than the lower. Quilts for one person measure 4 feet 6 inches, for two 6 feet 6 inches. In the rural districts, people manufacture their own clothes and blankets. In Hankow the shopkeepers buy cotton from the sellers, have it beaten by their own employees, and prepare it for sale at retail.

HONGKONG.

[Consul General George E. Anderson.]

It is difficult to measure accurately the trade in cotton linters and cotton batting or in material of similar grade in Hongkong, since the larger share of the trade is among the poorer classes of Chinese and much of it is direct with rural producers of cotton. The uses to which all such materials are put by the Chinese are almost without number. The standard winter clothing of the great mass of the people is quilted with cotton batting or linters, kapok, or waste of any and all sorts. The use of linters or batting for such purposes is altogether a matter of price. With cheap cotton the possible use is almost without limit. Such materials are also used freely in the manufacture of cushions, the stuffing of artificial fruits used in Chinese worship, and to some extent in the manufacture of grave clothes and low-grade cloth.

Imports come from India, Japan, and north China through Shanghai, Japan furnishing most of the linters and Indian and Chinese cotton making up most of the batting. The materials come usually in three grades. The trade at present is at low ebb and it is doubtful whether more than 5,000 bales of the local size, aggregating perhaps 750 tons, are imported per year. In normal seasons the imports run perhaps 10,000 local bales, aggregating 1,500 tons. The first and second quality materials are packed in pressed bales of 250 catties (333½ pounds) each. The third-quality goods are packed in loose bales of 120 catties (160 pounds) each.

From time to time in recent years efforts have been made by American exporters to interest the trade here in a quilted cotton batting prepared for the manufacture of cotton comforts and similar articles. There is no question that such a material would be exceedingly serviceable to the Chinese in the manufacture of their quilted clothing and for similar purposes. There is a market for such materials in China nearly all the time, but the materials must be cheap and represent volume rather than high quality.

There is practically no demand here for cotton waste, except in so far as such waste can be adapted to the purposes indicated. Some waste for wiping machinery is used locally and for sale aboard ships, but the volume of trade is inconsequential.

Linters and cotton batting are handled in Hongkong by practically all dealers in piece goods.

MUKDEN.

[Consul General P. S. Heintzleman.]

Almost all the cotton marketed in Manchuria is made into cotton batting. The long, severe winters of this country, with a population of about 15,000,000 people, render the preparation of cotton batting a very important industry. There are no large factories catering to whole districts; each city and town has its factory or factories for its own needs and those of the immediate vicinity. Statistics do not show the countries of origin, but it is certain that practically all the imports come from South China.

A short-staple cotton is grown in South Manchuria, but probably not more than 4,000,000 pounds a year. The cities and towns of Chin Chou Fu, Liao Yang Chou, Kuang Ning Hsien, Hai Nan, Hsiao Hei Shan, Hsin Li T'un, and Cheng An Hsien are the chief centers in the cotton-growing districts of Manchuria.

The imports of raw cotton, cotton batting, and cotton waste into Manchuria for the five years 1909 to 1913 were as follows:

	1909	1910	1911	1912	1913
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Raw cotton.....	3,192	1,341	1,134	2,678	3,309
Cotton batting.....		10	11		
Cotton waste.....	93	90	24	66	40
Total.....	3,285	1,441	1,169	2,744	3,349

The usual terms of credit are 16 days from date of delivery. Raw cotton is packed in straw-covered bales of 100 pounds each, and the cotton batting is packed in straw-covered bales of 70 pounds each.

Cotton batting is made from raw cotton and is used in lining clothing and for making bedding, mats, socks, shoes, cushions, etc. The better grade of cotton is used in clothing and coverlets, while the inferior grade is used in mattresses, screens for doors, and mats. In preparing cotton batting no modern machinery is used. Such as is prepared is done by primitive methods and by primitive contrivances. In many cases the work is done by individual families.

Cotton that is to be made into batting is spread out on a Chinese k'ang (bed). The appliances used for the process are a kung (bow), a wooden hammer, a flat bamboo basket, and a small stick. The kung is made of a heavy piece of bamboo, which is curved at one end and is strung with a string made of a sheep's intestine. This bow is fastened to the end of a split bamboo pole about 10 feet high by means of a rope that permits it to be moved with ease over the cotton. The wooden hammer is used to strike the bowstring, and the basket and the stick are used for edging. The basket is also used for pressing the cotton.

A half-catty (two-thirds of a pound) of cotton is spread upon the matting, and after about 12 minutes of teasing it is pressed, edged, folded, and tied. It is then ready for market. Each workman is able to make about 26 pounds of batting in one day of 12 hours.

SHANGHAI.

[Vice Consul A. Krisel.]

In spite of the fact that China is a cotton producing and manufacturing country, no statistics as to these industries are to be had. The Government keeps no statistics relative to cotton, except the cotton or cotton products exported or imported through the Chinese Maritime Customs. The published reports of the customs do not show any imports of either cotton linters or cotton batting from 1910 to 1914. There have been small imports of cotton waste from Hongkong, which ultimately were exported to some other Chinese port or to Japan. As the cotton mills heretofore situated at Hongkong have now been moved to Shanghai, these imports should, however, cease in the future.

The exports of cotton waste from Shanghai to foreign countries from 1910 to 1914 were as follows:

Years.	Quantity.	Value.	Years.	Quantity.	Value.
1910.....	<i>Cwt.</i> 78,033	\$222,802	1913.....	<i>Cwt.</i> 99,409	\$376,614
1911.....	68,281	207,328	1914.....	80,527	307,119
1912.....	66,699	247,046			

The following table shows, by countries, the total exports of cotton waste from all China during the years 1911 to 1914. Quantities are stated in hundredweight of 112 pounds:

Countries.	1911		1912		1913		1914	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>	
Belgium.....	7,600	\$20,512	5,403	\$16,113	13,928	\$48,090	7,521	\$24,318
France.....	1,021	2,363	657	2,589	4,620	19,927	2,043	8,728
Germany.....	25,139	46,789	25,009	61,371	38,159	119,278	22,807	63,281
Hongkong.....	3,204	13,016	2,205	11,450	2,011	8,109	1,743	6,922
Italy.....	1,349	9,136					115	444
Japan.....	8,144	26,440	8,524	19,630	9,748	22,663	11,807	33,713
United Kingdom.....	2,283	14,533	7,220	50,658	5,732	38,338	8,521	53,736
United States.....	35	112			9	44		
All other countries.....	13	195	462	3,022	597	4,013	401	1,739
Total.....	48,788	133,096	49,480	164,833	74,804	260,462	54,958	192,881

The China cotton waste is usually packed in grass bags of two sizes, 120 pounds and 180 pounds, respectively. The usual terms of credit are cash net. The hard waste is used for wiping mill machinery. The soft waste finds several uses in this district. The Japanese, who are at present taking most of the local cotton waste, make antiseptic cotton wadding from it. Cotton waste is also mixed with native-grown cotton to make quilts, mattresses, and comforters and is also extensively used for padding clothes for winter. Mill manufacturers, as a rule, do not sell their sweepings (No. 1 cotton

fly) but use them for making coarse yarn. This is done by mixing these sweepings with raw cotton.

Before the war Germany was the principal purchaser of all kinds of waste in the local market, but lately Japanese merchants have been making large purchases.

OTHER CHINESE DISTRICTS.

Amoy, Antung, Canton, Changsha, Chungking, Foochow, Harbin, Nanking, Swatow, Tientsin, and Tsingtau are all small markets for cotton linters, batting, and waste. These cities are reached through the larger trade centers. The imports are used in padding heavy garments, in the manufacture of bed clothing in the cooler regions, and in the wiping of machinery wherever needed. The proverbial ingenuity of the Chinese is exhibited in the manner in which certain varieties of waste are utilized.

INDIA.

CALCUTTA.

[Consul General James A. Smith.]

There is no trade in cotton linters in any of the maritime Provinces in India; and no information relative to cotton batting is available except in the Madras Presidency, where it is known as cotton wadding. There are no exports of cotton batting; and the only imports are by retail firms in Madras, who use the greater part of the quantity imported as packing for articles that they manufacture. The quantity (in hundredweight of 112 pounds) and value of the cotton waste imported into India are shown in the following table, by countries of origin, for 1912-13, 1913-14, and 1914-15:

Countries of origin.	1912-13		1913-14		1914-15	
	<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>	
United Kingdom.....	3,274	\$20,891	2,110	\$13,241	1,897	\$13,095
Aden and dependencies.....					2,693	9,840
Other British possessions.....	8	68	4	29	15	126
Total, British Empire.....	3,282	20,959	2,114	13,270	4,605	23,061
Japan.....	396	2,818	232	1,922	748	4,696
Other foreign countries.....	2	4	10	34	24	68
Total, foreign countries.....	398	2,822	242	1,956	770	4,764
Grand total.....	3,680	23,781	2,356	15,226	5,375	27,825

These imports were consumed in the different Provinces as follows:

Provinces.	1912-13		1913-14		1914-15	
	<i>Cwt.</i>		<i>Cwt.</i>		<i>Cwt.</i>	
Bengal.....	2,127	\$12,248	1,393	\$9,504	1,245	\$8,487
Bombay.....	36	136	242	477	3,031	12,161
Sind.....	45	457	10	87	25	209
Madras.....	6	59	74	506	35	136
Burma.....	1,466	10,881	637	4,652	1,039	6,832
Total.....	3,680	23,781	2,356	15,226	5,375	27,825

Information in regard to the trade in cotton waste has been received from the collectors of customs in the various maritime Provinces of India, as follows:

Calcutta.—The mills importing cotton-yarn waste use it for mixing with Indian cotton for low-grade spinnings. The waste production of the local spinning mills is disposed of in retail lots for cleaning purposes.

Karachi.—The imports of cotton waste at Karachi during the last three years were chiefly on account of the East India Tramway Co. for its own use in cleaning machinery and packing axle boxes. There were no exports of waste from Karachi.

Rangoon.—There are no cotton-spinning mills in Burma, and supplies required for local use are derived mainly from India proper. In the fiscal year ended March 31, 1915, 4,807 hundredweight were imported from India and 1,039 hundredweight from foreign countries. Each package weighs 336 to 400 pounds. The waste is used principally for cleaning machinery.

Bombay.—A fairly large export business was done here by several German firms before war was declared, but little or none is being done in this line at present. When imported into India for manufacturing purposes waste is mixed with inferior cotton, and an inferior quality of yarn is made therefrom. Cotton waste is imported for this purpose only when the price of Indian cotton is very high.

As is well known, the cotton industry of India centers in the Bombay Presidency. From a prominent dealer in Bombay the following information has been received:

The result of our inquiries regarding the manufacture in India of cotton linters and cotton waste is very meager. It is only certain that with the exception of one mill in Bombay, utilizing moderately Indian cotton waste, no plant is known to use at present any kind of similar material.

We are informed, however, that on some rare occasions, and when prices permit, superior American waste is being imported by the Bombay, and especially the Ahmedabad, mills for the purpose of mixing with the inferior Indian short-stapled styles for producing counts of yarn below tens, which are used, we understand, in hand looms for the manufacture of country-made carpets (durries); but the bulk of the production of all kinds of cotton waste and droppings, amounting, on an average, to 60,000 bales, is exported.

Madras.—The imports of cotton batting, linters, and waste into Madras Presidency from foreign countries have been almost negligible, consisting of a few hundred dollars' worth of cotton waste and yarn waste from the United Kingdom, Ceylon, and Germany. Cotton batting, which is known locally as cotton wadding, is imported in very small quantities and is not specifically declared in bills of entry. It is not exported. Cotton linters is a term not known locally.

Exports of cotton waste and yarn waste from Madras Presidency to foreign countries average several thousand dollars in value each year, this trade being with the United Kingdom and formerly with Germany. Exports to the latter country consisted of colored thread waste particularly. There are cotton mills of some importance in Madras and elsewhere in the consular district and the waste from these factories is utilized further in local industries, so that there is little surplus to export. The mills supply enough for local needs

and there is generally no necessity for importation. Local mills formerly sent some waste to the Bombay Presidency for utilization there. Most of the soft waste, such as fly, motes, strips, etc., is bought from local mills by native firms for use in making up foundations for carpets.

The price of cotton waste is approximately two-thirds the price of raw cotton. It is sold only in wholesale lots made up into bales of 300 pounds each and is used for cleaning purposes. The usual trade terms are cash, except to approved customers, who are given up to 90 days' credit, the actual period being decided by mutual agreement.

Exports by sea of cotton waste from Madras reached a value of more than \$44,000 in 1912-13 and 1913-14. In other years they have been much less; for example, \$4,400 in 1910-11, \$9,730 in 1911-12, and \$4,700 in 1914-15.

JAPAN.

CHOSEN.

[Vice Consul Raymond S. Curtice, Seoul.]

Practically the entire crop of American cotton produced in Chosen is exported to Japan, the native cotton being manufactured by house industries for use primarily as cotton batting. No separate figures are given for cotton linters; and this product, if found at all, is doubtless included in the exports of raw cotton to Japan. I have been able to learn of no native uses for linters.

There are no cotton mills in Chosen. Consequently there is no production of cotton waste, and as the tables of imports make no separate mention of this article, its use is probably negligible.

The imports of cotton batting into Chosen for the five years ended in 1914 are shown in the following table, Japan and China being the only countries that participate in this trade:

Years.	Japan.		China.	
	Pounds.	Value.	Pounds.	Value.
1910.....	1,461,564	\$144,311	4,488	\$425
1911.....	1,929,312	198,039	2,112	258
1912.....	2,587,068	291,475	6,468	794
1913.....	2,525,556	301,764	5,544	650
1914.....	2,057,220	238,433	2,772	326

Cotton batting is sold in two forms: (a) In bundles of 400 packages, each package weighing 2.12 ounces; (b) in bundles of 400 packages, each package weighing 3.3125 ounces. Thirty to sixty days' credit is granted in wholesale transactions, and in certain cases as much as 90 days is given. Batting is used in Chosen primarily for the manufacture of the native winter clothing and of quilts.

KOBE.

[Consul George N. West.]

Cotton batting is manufactured in the Kobe consular district and is exported in considerable quantities. It is made in two qualities,

the better of which is used for the wadded kimonos, worn by the Japanese in winter, and the second for bedquilts. The better quality is manufactured from cotton that is imported from Tientsin, China, or from the thick-fibered Japanese cotton. The second grade is manufactured from a mixture of fly cotton, made in the mills, and other waste cotton.

Cotton batting for export is usually packed in bales of 12 kwan (about 100 pounds) net weight. Transactions are generally done on letters of credit, but with known customers 30 to 50 days' credit is granted.

There are over 20 cotton mills in this consular district, where about 70 tons of cotton waste and 200 tons of cotton-thread waste are produced in a month. The first kind (cotton waste) is used in Japan for manufacturing guncotton and blankets, or else it is remanufactured into cotton. When the price of the local product is too high, some cotton waste is imported from Shanghai, China, for making cotton blankets, etc.

As regards cotton-thread waste, about two-thirds of the total production is exported, the rest being consumed locally for polishing, machine wiping, packing, etc. Waste is packed for export in bales of 500 pounds net.

The exports from Kobe of wadding and waste during the five years from 1910 to 1914, inclusive, were as follows:

Years.	Cotton wadding.		Cotton-thread waste.	
	Pounds.	Value.	Pounds.	Value.
1910.....	58,837	\$5,695	6,433,901	\$294,569
1911.....	34,615	3,433	3,466,009	170,525
1912.....	50,889	6,209	5,771,193	250,735
1913.....	40,084	5,784	9,735,624	430,192
1914.....	68,837	8,062	11,002,897	447,039

There is no market in this consular district for cotton linters. About 15 years ago, a trial importation of a small amount was made by a cotton company of Osaka, but since then none has been imported. Practically all the raw cotton imported here is already ginned, so that no linters are produced for exportation.

NAGASAKI.

[Consul Carl F. Deichman.]

Nagasaki does not import or export cotton linters, batting, or waste in commercial quantities. A little waste comes in from time to time from other Japanese centers, and a little is shipped to the Chinese mainland occasionally. There is no local production.

TAIWAN.

[Consul Edwin L. Neville, Tansui.]

So far as can be ascertained, there are no cotton mills of any description in Taiwan (Formosa). There is no cotton grown, except a relatively small lot for experimental purposes, and unspun cotton is used only for wadding quilts or wiping machinery.

Statistics of imports of "ginned cotton and cotton wadding" into Taiwan, according to customs returns for the five years ended in 1914, are as follows:

Years.	Pounds.	Value.	Years.	Pounds.	Value.
1910.....	864,351	\$91,092	1913.....	920,794	\$111,148
1911.....	896,695	101,967	1914.....	996,096	115,557
1912.....	889,088	90,161			

All of these imports come from China and Japan. There are practically no exports.

YOKOHAMA.

[Consul General George H. Scidmore.]

Japan exports both cotton wadding and cotton waste but imports very little of these products. None of these goods are shipped into or from Yokohama, however, except as they may be received from Kobe for transshipment.

Exports of cotton wadding from Japan during the four years from 1911 to 1914, inclusive, by principal countries, were as follows:

Countries.	1911		1912		1913		1914	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
China.....	267,621	\$22,378	256,961	\$23,698	217,675	\$21,457	211,680	\$22,914
Hawaii.....	30,013	3,121	25,909	2,614	26,835	2,951	41,736	4,153
Kwantung Province...	388,766	47,588	359,334	44,482	303,116	35,910	298,753	35,176
Russia, Asiatic.....	422,734	56,707	394,844	52,474	428,410	54,512	776,409	114,408
All other countries.....	25,097	2,740	12,832	1,621	20,418	2,875	22,605	189
Total.....	1,134,231	132,534	1,049,880	124,889	996,764	117,705	1,351,183	176,840

The following table shows the quantity and value of Japan's exports of "waste cotton and waste-cotton yarns," by countries of destination, from 1911 to 1914:

Countries.	1911		1912		1913		1914	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Australia.....	321,370	\$20,156	424,414	\$25,477	568,257	\$34,682	1,105,889	\$62,367
Belgium.....	286,222	12,112	1,189,533	49,589	.....	.....	1,720,696	54,030
China.....	305,486	17,340	309,105	14,482	424,729	21,161	272,112	16,204
Germany.....	603,900	25,290	645,096	14,370	2,666,313	101,777	3,467,401	128,411
Hongkong.....	1,270,280	64,322	679,765	38,301	889,865	42,827	1,697,069	65,565
Kwantung Province.....	547,177	17,589	359,889	15,458	698,293	29,654	470,858	20,745
United Kingdom.....	261,139	19,222	517,785	29,588	1,208,714	75,138	1,024,179	56,585
United States.....	1,321,869	50,901	1,376,833	49,067	1,540,633	51,011	727,797	23,018
All other countries.....	393,879	20,589	551,105	24,458	550,361	25,170	1,104,822	45,104
Total.....	5,311,322	247,521	6,053,525	260,790	8,347,165	381,420	11,590,803	472,029

STRAITS SETTLEMENTS.

[Consul General Caspar L. Dreier, Singapore.]

Imports of cotton "wick and waste" are received in the Straits Settlements chiefly from the United Kingdom, though some are

shipped from Hongkong, British India, Germany, China, and, in still smaller quantities, from other countries. During the years 1910 to 1914, inclusive, the value of such imports, by principal countries of origin, was as follows:

Countries.	1910	1911	1912	1913	1914
United Kingdom.....	\$29,647	\$42,329	\$47,707	\$48,988	\$31,937
British India.....		1,356	2,588	1,959	1,243
Hongkong.....	2,920	4,243	2,181	3,858	3,787
Germany.....	4,995	4,300	6,596	3,924	1,349
China.....	181	187	1	9,016	8,568

There are no cotton-manufacturing establishments in the Straits Settlements, nor is there any native cotton.

TURKEY.

SMYRNA.

[Consul George Horton.]

There are no Government statistics showing the annual imports and local industry in cotton linters, batting, and waste in Asiatic Turkey. From information drawn from competent sources, however, the consumption in the Smyrna consular district is estimated to amount to 424,500 to 707,500 pounds of cotton linters, 111,200 to 139,000 pounds of batting, and 45,000 to 48,000 pounds of waste. Of the yearly consumption of linters 227,200 pounds are of native manufacture, and the remainder is imported principally from Italy and Malta. There is no local manufacture of batting; this article is imported from Italy and England.

Waste is both imported and manufactured locally. There are in Smyrna two spinning factories, one producing 110,000 pounds of soft waste and 26,400 pounds of thread waste annually, and the other having a yearly output of 22,000 pounds of soft waste and 3,300 pounds of thread waste. The thread waste is sold locally, but the soft waste is exported to Europe. The imported article is furnished exclusively by Italy, and amounts to 17,600 pounds a year of thread waste and 22,000 pounds of soft waste. Part of the waste produced by the factories here is consumed by them and part is sold to the railway companies, while the waste imported from Europe is used by the mills and in the manufacture of mattresses.

OTHER TURKISH CENTERS.

Aleppo, Bagdad, Beirut, Harput, and Trebizond offer small inducements in the way of American trade in cotton linters, batting, or waste. There are few dealers and no importers.

OTHER ASIATIC COUNTRIES.

Reports received from British North Borneo, French Indo-China, Persia (Teheran), and Siam indicate that these countries offer no prospect of any considerable trade in cotton linters, batting, or waste.

AUSTRALASIA.

AUSTRALIA.

MELBOURNE.

[Consul William C. Magelssen.]

The uses of cotton waste in the Melbourne consular district are practically confined to machinery cleaning, wiping, etc., and of cotton batting or wadding to upholsterers' and tailors' work and other ordinary purposes. Values only are recorded by the Australian customs authorities. The imports of cotton waste and waddings and cotton wool into the States included in the Melbourne consular district are shown in the following table covering 1913 and the preceding four years:

Articles and States.	1909	1910	1911	1912	1913
Cotton waste:					
Victoria.....	\$50,466	\$52,154	\$62,097	\$84,123	\$53,687
South Australia.....	13,767	18,819	23,812	22,551	29,851
Western Australia.....	11,986	22,702	20,386	33,345	23,539
Total.....	76,219	93,675	106,295	140,019	107,077
Waddings and cotton wool:					
Victoria.....	9,456	11,835	13,641	25,871	14,522
South Australia.....	3,703	4,687	3,557	5,163	5,061
Western Australia.....	2,248	2,832	2,745	2,389	3,377
Total.....	15,407	19,374	19,943	33,423	22,960

These imports, with the exception of about one-seventh from Japan and a very small amount from the Straits Settlements, were entirely the product of English factories. Recently, however, Japanese waste is said to have come upon this market in much larger quantities, owing to a substantial increase in English prices and the irregularity of shipments from that country.

Cotton waste is free of customs duty. In waddings local manufacturers operating under the protection of a customs duty of 15 per cent on English goods, increased to 20 per cent on the products of other countries, appear to have the market.

The opinion of all dealers interviewed on the subject of this report is that the absence of American trade in these lines is due solely to price, and that unless British prices can be met there is little prospect of business being done.

SYDNEY.

[Consul General J. I. Brittain.]

Imports into New South Wales of "wadding and cotton wool" increased from about \$16,000 in 1909 to \$28,000 in 1912 but dropped to \$22,000 in 1913. These imports came almost entirely from England. Imports of cotton waste into New South Wales reached the maximum of \$107,000 in 1913. This represented a steady rise from 1909, when the value was \$70,000. By far the largest part came from England, but Japan also contributed an increasing quantity, which in 1913 amounted to about one-fifth.

OTHER AUSTRALIAN MARKETS.

Newcastle is a small market with relatively insignificant takings of cotton linters, batting, or waste. The market is reached through Sydney and Melbourne.

The consumption of these articles in Tasmania is so limited that the aggregate at Hobart is not deemed worthy of separate mention.

NEW ZEALAND.

[Consul General Alfred A. Winslow, Auckland.]

There are no imports of cotton linters or cotton batting in New Zealand. A small quantity of soft cotton waste, ranging from 500,000 to 720,000 pounds per year, is imported from England in bales of 500 pounds each. It is entered free of duty, but is subject to the usual primage tax of 1 per cent ad valorem.

AFRICA.

ALGERIA.

[Consul Dean B. Mason, Algiers.]

According to the statement of importers of cotton waste, confirmed by information from the customhouse, cotton linters are not imported into Algeria. Cotton batting and cotton waste (apparently all hard waste) are imported from France, where they are produced by the large cotton factories at Rouen and other manufacturing centers. There are no cotton factories in Algeria, and the small quantity of cotton grown in this country, which amounted to 303,797 pounds in 1913, is shipped in bales as raw cotton to French factories.

Imports of cotton batting and cotton waste into Algeria during the years 1910 to 1914 were as follows:

Years.	Cotton batting.		Cotton waste.	
	Pounds.	Value.	Pounds.	Value.
1910.....	65,036	\$17,177	95,671	\$3,474
1911.....	77,602	19,493	112,215	3,667
1912.....	113,538	26,248	145,726	4,632
1913.....	70,107	17,370	119,931	4,053
1914.....	91,932	.....	74,295	.....

Cotton batting is generally ordered directly from France by mercers and druggists and is put up in packages of 1 to 5 kilos. Cotton waste is usually imported in packages of 100 kilos. At present cash payments are exacted, but under normal conditions credits of 30 days or of 3 months are allowed after delivery of goods. Cotton batting is used for lining garments, coverlets, etc. Cotton waste is used for cleaning machinery in factories or vessels. Algeria is not an industrial country, however, and the demand for cotton waste is comparatively small. It is generally purchased directly from French manufacturers or their agents.

CANARY ISLANDS.

[Consul George K. Stiles, Teneriffe.]

The import trade in cotton wadding in the Canary Islands is of considerable importance. "Guata," as the wadding is called locally, is extensively used in packing bananas for exportation to England, Spain, and France. Cotton linters have never been imported here, and of cotton waste (soft) not more than 30 tons a year is consumed. This is imported from Manchester, England, packed in bales weighing 112 pounds. About 5 tons of hard waste, produced in the islands as a by-product of the drawn work manufactured by hand in Orotava, Teneriffe, and Santa Cruz, La Palma, is used for wiping machinery.

The cotton wadding for banana packing is made up and packed in the following manner: One hundred and twenty pieces of wadding to each bale; each piece 12 yards long, weighing 22 ounces; width of wadding, 34 to 35 inches; total length in bale, 1,440 yards. These bales are wrapped in stout canvas coverings and are strongly com-

pressed with thin iron bands. [See report entitled "Cotton Wadding for Canary Islands," in Commerce Reports for Dec. 27, 1915.]

The imports of cotton wadding and cotton waste into the Canary Islands during the years 1911 to 1914, inclusive, are shown by countries in the following table. The official statistics do not differentiate between wadding and waste, but private inquiry shows that about nine-tenths of the imports are wadding, or "guata."

Countries.	1911		1912		1913		1914	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Belgium.....	2,407	\$297	45,599	\$5,629	6,086	\$799	11,616	\$1,544
Germany.....	45,619	5,622	8,902	1,099	110	14	202	27
Netherlands.....			5,661	699				
Spain.....	2,711	334	3,218	397	1,230	161	7,700	209
Sweden.....							1,588	1,013
United Kingdom.....	598,070	73,719	537,054	66,292	580,527	76,231	618,200	81,446
United States.....							1,584	194
Total.....	648,807	79,973	600,434	74,116	587,953	77,205	640,890	84,433

LIBYA.

[Consul W. Roderick Dorsey, Tripoli.]

Tripoli is not a cotton-growing district, and the fiber is not imported in the raw state; consequently there is no production or export of cotton linters, batting, or waste. Nor are linters or batting imported, but some waste, all of it hard, is brought in for use in connection with machinery. It comes from Italy packed in bales of 150 kilos (330 pounds) and is principally white, although in some instances the majority of threads are colored.

Prior to the Italian occupation in 1911 machinery was rare and imports of waste negligible. New machines of various kinds have been installed, and an increase in waste consumption has naturally followed. There are no statistics as to quantity or value, but estimates indicate that the demand is still unimportant. Annual imports average about 10,500 kilos (23,100 pounds), valued at 6,700 lire (\$1,300) a year, exclusive of the amount used by the Government for railway and other purposes, which is requisitioned from supply depots in Italy. There are about 125 miles of railway in Tripolitania, operating about 20 locomotives and about 200 freight and passenger cars. There is no chance of great expansion in the demand for waste. Tripoli is not a manufacturing center and, in the absence of mineral and other raw material, as well as fuel, is not likely to become important in the waste trade.

All the principal consumers import direct from Italy. The larger firms have had supplies sent by their own houses in Italy and terms have been a matter of accounting between them. Those who have imported to sell again have bought in such small quantities that terms were usually cash.

MADAGASCAR.

[Consul James G. Carter, Tamatave.]

The customs statistics do not record any imports of cotton linters, but small quantities of batting and waste are imported into Mada-

gascar. Such shipments have ranged during 1910 to 1914 from 3,400 to 13,300 pounds of batting and from 2,000 to 10,000 pounds of waste, the largest amounts having been received in 1912 and 1913.

The cotton batting imported into Madagascar is confined to the kinds used for medicinal and surgical purposes, there being no demand for that used for manufacturing or industrial purposes. "Hydrophile," or absorbent cotton, is used mostly for washing wounds, etc., and is perhaps in greatest demand. The local administration often requires this class of cotton for use in hospitals throughout the island. Carded cotton is also used to some extent in the hospitals and by local physicians for dressing wounds and other surgical and medicinal purposes. Medicated or impregnated cotton may be found in the local pharmacies, but there is practically no demand for this article.

The cotton for the Government, which represents the greater portion of the entire amount imported, is either purchased through adjudication or sent out direct through the purchasing office of the Department of Colonies in France. These orders or contracts usually stipulate that the goods shall be of French make. The small quantity of this cotton handled otherwise by the trade is carried by the different druggists throughout the island. Batting is not carried by wholesale merchants for sale to the local trade. The individual druggists usually place their orders direct, through French commission houses, on open account or credit of 90 days.

The various hardware dealers in the principal towns of the island usually carry in stock about 300 to 350 pounds of this merchandise in order to supply occasional demands, which, in Tamatave, amount to about 75 to 100 pounds per month. This material is also purchased by local firms through French commission houses.

UNION OF SOUTH AFRICA.

CAPE TOWN.

[Vice Consul John W. Dye.]

Cotton linters are practically unknown in this country, apparently not being imported, manufactured, or used. Cotton batting is imported on a small scale, principally for the use of tailors and makers of bedding, but there are no separate statistics for these imports.

Imports of cotton waste into the Union of South Africa during the years 1910 to 1914 are shown, by countries of origin, in the following table:

Countries.	1910	1911	1912	1913	1914
Belgium.....	\$14,881	\$1,031	\$116	\$822	\$19
Germany.....	23,587	52,874	41,608	51,721	22,940
India.....	1,182	1,445	1,260	350	1,070
Italy.....			170		
Japan.....					
Netherlands.....	306				593
Norway.....		5,810		14	
United Kingdom.....		141	199	233	564
United States.....	77,379	97,407	89,417	90,867	93,603
	189	822	1,708	1,109	12,424
Total.....	117,524	159,530	134,478	145,116	131,213
Reexported to all countries.....			472	467	696

These figures indicate that most of the trade is in the hands of England, with Germany second. Imports from the United States became important only in 1914, when they amounted to about 11 per cent of the total. English waste comes principally from Manchester.

Cotton waste is generally imported in bales weighing approximately 560 pounds, or four to the ton. The usual terms of sale are cash against documents, with 2 per cent discount. It is used in this country principally for wiping machinery and for packing, and the railroads and mining companies are the biggest consumers. The demand is almost entirely for cheap, colored, hard waste.

DURBAN.

[Consul William W. Masterson.]

The principal districts in South Africa where waste is used to any extent, according to the leading importer of Durban, are the Rand, where it is used in the high-class machinery of the gold mines, and Natal, where quantities are used in the sugar refineries, other manufacturing industries, and the railroads. The waste for the railroads is generally imported by this large dealer by contract into Durban, and from here distributed throughout the Union. The waste imported for use in Natal is of a low grade, classified as colored waste, and contains a mixture of all sorts of colored material.

There has been a small demand here for waste for special filtering purposes, composed entirely of linen thread, but the demand is diminishing, as filter pads specially made are now coming into use.

The waste used in this district comes in compressed 5-hundred-weight bales, but occasionally it is packed into five bags containing 1 hundredweight each and then pressed into bales. As the trade in waste is comparatively small, most of it being secured by contract for a term of years, the business here is in the hands of one man.

JOHANNESBURG.

[Consul Edwin N. Gunsaulus.]

Cotton waste is used in large quantities in the gold mines of the Witwatersrand, as well as in garages, machinery concerns, and repair shops. Its greatest use is in the cleaning and polishing of metal parts, and in some instances for packing around frictional parts of machinery, in combination with oil or lubricating grease. It is imported in bales of 500 pounds.

There are no manufacturers of cotton waste in the entire Union of South Africa or in Rhodesia, the demand being met by imports principally from the United Kingdom, Germany, and the United States. In the statistics there is no differentiation between hard and soft cotton waste.

According to the best statistics obtainable, the consumption of cotton waste in the mines of the Transvaal during 1914 was as follows:

Items.	Coal mines.	Diamond mines.	Gold mines.	Other mines.	Total.
Pounds.....	34,333	17,074	605,258	12,726	669,386
Value.....	\$3,032	\$1,582	\$55,911	\$1,260	\$61,785

In the Orange Free State the consumption of cotton waste in the diamond and coal mines in 1914 amounted to 35,473 pounds, valued at \$2,871.

Imports of cotton waste into Southern Rhodesia for the five years ended in 1914, with the countries of origin, were as follows:

Countries.	1910	1911	1912	1913	1914
Germany.....	\$510	\$184	\$145	.....	\$34
India.....	2,107	.....	.....	.....	2,408
United Kingdom.....	6,832	4,880	12,302	\$4,219	3,951
Total.....	9,449	5,064	12,447	4,219	6,393

The terms of purchase usually extended to importers of cotton waste are cash against documents, with discount of 2 per cent or more, or a time credit of 30 to 60 days, according to the standing of the customer.

The exports of cotton waste from South Africa are insignificant; the total value of exports from the Union in 1912 was \$470; in 1913, \$465; and in 1914, \$694. All of this, except the little taken for ship's stores, was shipped to Portuguese East Africa and the Belgian Kongo.

Cotton batting (or wadding) is imported and used in comparatively small quantities in South Africa, about the only users being tailors, upholsterers, and cap makers. All of this product hitherto imported has come from the United Kingdom. There are no statistics giving the imports of batting into the Johannesburg consular district or into the country as a whole.

The term "cotton linters" is unknown in a commercial sense by importers and exporters here. No product of this name, in either its manufactured or unmanufactured state, is marketed in this district or exported to other countries, as far as can be learned.

OTHER AFRICAN COUNTRIES.

Reports received from British East Africa and the Kongo indicate that there is little trade in cotton linters, batting, or waste in Mombasa or in Boma. The trade in the Monrovia district of Liberia and in Tangier, Morocco, is likewise insignificant. Portuguese East Africa has a small business in these articles in the district of which Lourenco Marques is the center.

