TEXTILES

THE COTTON INDUSTRY

Although there is a lack of accurate statistics, it is generally supposed that China ranks third in the world's production of cotton with an annual output of two million bales (four piculs per bale), India being second with four million bales and America first with an annual yield of fourteen million bales. It must be admitted that very scant care has been given to cotton cultivation in China. Only recently have Chinese cotton merchants been encouraging the cotton growers to improve the quality of their product and to increase the quantity thereof. Experimental work in the introduction of American seeds and the improvement of native crops are being carried on very effectively by the Chinese cotton mill owners' association, the ministry of agriculture and commerce and the missionary educational institutions. According to the latest investigation, there were in China more than 31 million mou of land under cultivation with a yield of more than ten million piculs of cotton in 1918. As a result of flood in the Yangtze Valley, the 1919 cotton crop was greatly decreased to only 9,316,390 piculs. In 1920, there were not only floods in Kiangsu and Chekiang provinces, but also drought in the north, the cotton crop was, therefore, again decreased to only about seven million piculs. The following figures will show the general trend of cotton production in China from 1918, the crown year of production to 1922, the year of slight recovery:

<table>
<thead>
<tr>
<th>Year</th>
<th>Piculs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1918</td>
<td>10,965,630</td>
</tr>
<tr>
<td>1919</td>
<td>9,316,390</td>
</tr>
<tr>
<td>1920</td>
<td>6,750,000</td>
</tr>
<tr>
<td>1921</td>
<td>5,438,000</td>
</tr>
<tr>
<td>1922</td>
<td>7,342,000</td>
</tr>
</tbody>
</table>

Cotton manufacturing in China, in a modern sense, is of comparatively recent development. Before 1890 cotton spinning and weaving in China, there was only the so-called "household handicraft" type. It was 1889 that Li Hung-chang, the noted diplomat of the Manchu dynasty, launched a campaign, under his official capacity as viceroy of Peiyang for the erection of a cotton mill, under the name of "Foreign Cloth Factory" which was most unfortunately destroyed by fire after three years' careful planning and construction. The Modern Spinning and Weaving Factory which started at the same time was completed, however, in 1899. Li's plan was later on brought up before the attention of Sheng Kung-pao who was at that time a Tientsin customs' governor general. Sheng was fully aware of the importance of such an establishment, consequently he took up the responsibility for raising Tls. 800,000 by public subscription. The prosperity of the cotton manufacturing industry in China, is not due entirely to the efforts of the Chinese. Out of 120 mills with 3,560,108 spindles and 27,514 looms, only 80 are entirely owned and managed by the Chinese with 2,221,486 spindles and 20,745 looms. The rest being five of British interests with 257,866 spindles and 2,800 looms; 25 of Japanese interests with 1,070,756 spindles and 3,969 looms. In Shanghai the number of mills, spindles and looms owned and managed by the Chinese and Japanese is practically the same. Competition between the Chinese and Japanese is therefore very keen. The following table shows the position of foreign mills in China:

<table>
<thead>
<tr>
<th>Name</th>
<th>Site</th>
<th>Nationality</th>
<th>Estab.</th>
<th>Capital</th>
<th>Spindles</th>
<th>Looms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ewo No. 1</td>
<td>Shanghai</td>
<td>British</td>
<td>1895</td>
<td>T. 6,000,000</td>
<td>73,952</td>
<td>1,900</td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1914</td>
<td>56,532</td>
<td>25,576</td>
<td></td>
</tr>
<tr>
<td>Oriental</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1910</td>
<td>54,768</td>
<td>440</td>
<td></td>
</tr>
<tr>
<td>Lou Kung Mow</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1888</td>
<td>800,000</td>
<td>50,096</td>
<td>500</td>
</tr>
<tr>
<td>Total of British Mills (5) in Shanghai</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1895</td>
<td>2,221,486</td>
<td>2,840</td>
<td></td>
</tr>
<tr>
<td>Shanghai 1</td>
<td>Shanghai</td>
<td>Japanese</td>
<td>1910</td>
<td>Y. 4,000,000</td>
<td>25,480</td>
<td>510</td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1910</td>
<td>20,392</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1908</td>
<td>50,692</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1908</td>
<td>83,056</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Naigai Wata 3</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1911</td>
<td>23,040</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1913</td>
<td>41,536</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1915</td>
<td>66,420</td>
<td>20,416</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1895</td>
<td>26,936</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1910</td>
<td>24,000</td>
<td>40,704</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1910</td>
<td>30,720</td>
<td>27,372</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1913</td>
<td>15,312</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1915</td>
<td>50,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Total of Japanese Mills (24) in Shanghai</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1908</td>
<td>$9,000,000</td>
<td>695,376</td>
<td>2,968</td>
</tr>
</tbody>
</table>
The above table does not include the Japanese mills in other parts of China, such as Tungtso and Mukden, where eleven mills are either already established, or still under construction.

The following is a list showing the number of Chinese-owned mills in different provinces (up to January 1922):—

<table>
<thead>
<tr>
<th>Province</th>
<th>Mills Spindles</th>
<th>Looms Hands Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiangsu</td>
<td>45 1,377,882</td>
<td>9,124 67,707 1,975,443 560,836</td>
</tr>
<tr>
<td>Chihli</td>
<td>9 308,552</td>
<td>800 12,470 507,810 144,510</td>
</tr>
<tr>
<td>Hupeh</td>
<td>5 243,288</td>
<td>1,500 10,000 195,419 45,039</td>
</tr>
<tr>
<td>Honan</td>
<td>4 113,000</td>
<td>200 6,930 165,650 47,920</td>
</tr>
<tr>
<td>Chekiang</td>
<td>3 56,624</td>
<td>375 5,158 148,000 40,000</td>
</tr>
<tr>
<td>Shantung</td>
<td>2 58,000</td>
<td>4,634 144,000 40,000</td>
</tr>
<tr>
<td>Anhwei</td>
<td>1 10,000</td>
<td>1,000 43,200 10,800</td>
</tr>
<tr>
<td>Hunan</td>
<td>1 40,000</td>
<td>2,260 84,516 25,488</td>
</tr>
<tr>
<td>Kiangsi</td>
<td>1 15,360</td>
<td>300</td>
</tr>
<tr>
<td>Shansi</td>
<td>1 12,880</td>
<td></td>
</tr>
<tr>
<td>Fengtien</td>
<td>1 20,000</td>
<td>200</td>
</tr>
<tr>
<td>K'uei</td>
<td>1 10,000</td>
<td></td>
</tr>
</tbody>
</table>

Total 77 2,237,486 12,459

The above list indicates that Kiangsu is leading in the cotton manufacturing industry with Chihli in second place and followed by Hupeh, Chekiang, Honan, Shantung, etc., while Anhwei, Hunan, Kwangtung and Fengtien are still in the infant stage.

A country with multitudes of people dependent largely upon cotton, both in its raw and woven state, as a material for clothing and in many sections where climate is sufficiently mild throughout the greater part of the year to permit the general use of cotton cloth, China certainly has a very bright future in cotton manufacturing industry.

The following table shows the yarn consumption in China during the last decade (1912-1921):—

<table>
<thead>
<tr>
<th>Year</th>
<th>Yarn manufactured in China</th>
<th>Yarn imported of consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>800,000</td>
<td>2,300,000</td>
</tr>
<tr>
<td>1913</td>
<td>1,200,000</td>
<td>2,700,000</td>
</tr>
<tr>
<td>1914</td>
<td>1,600,000</td>
<td>2,800,000</td>
</tr>
<tr>
<td>1915</td>
<td>1,800,000</td>
<td>2,600,000</td>
</tr>
<tr>
<td>1916</td>
<td>2,500,000</td>
<td>2,400,000</td>
</tr>
<tr>
<td>1917</td>
<td>2,600,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>1918</td>
<td>2,700,000</td>
<td>1,100,000</td>
</tr>
<tr>
<td>1919</td>
<td>3,300,000</td>
<td>1,400,000</td>
</tr>
<tr>
<td>1920</td>
<td>4,000,000</td>
<td>1,300,000</td>
</tr>
<tr>
<td>1921</td>
<td>4,500,000</td>
<td>1,200,000</td>
</tr>
</tbody>
</table>

The modern cotton spinning and weaving industry started in the British empire, where cotton machinery was first invented. Naturally, the British are leading the rest of the world in supplying the bulk of cotton machinery used in China. Recently, however, with the return of American-trained students, America-made machinery is coming in very rapidly.

British Make—Asa Lees 287,916 spindles; Howard and Bullough 216,148 spindles; Dobson and Barlow 212,792 spindles; Brooks and Doxey 191,303 spindles; J. Hetherington 189,564 spindles; Platt 28,118 spindles; Tweedales Smalley 14,560 spindles; manufacturers unknown 40,000 spindles; Total 1,190,406 spindles.

American Make—Saco-Lowell 614,820 spindles; Whitin 36,836 spindles; Woon socket 35,000 spindles; Moson 5,000 spindles; manufacturers unknown 10,440 spindles; Total 722,096 spindles; other makes; Total 164,080 spindles. Total cotton spindles in China 2,066,682 spindles.

CHINA COTTON MILL STATISTICS

Number of Spinning Spindles:

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug. 1</th>
<th>Aug. 1923</th>
<th>Aug. 1924</th>
<th>Aug. 1925</th>
<th>Aug. 1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Spindles</td>
<td>2,207,228</td>
<td>2,203,033</td>
<td>1,972,763</td>
<td>1,732,632</td>
<td>1,552,950</td>
</tr>
<tr>
<td>Spindles in course of erection</td>
<td>234,480</td>
<td>619,744</td>
<td>243,282</td>
<td>181,344</td>
<td>120,000</td>
</tr>
</tbody>
</table>

(It is estimated that there exist in the whole country about 2,680,000 spinning spindles, not including those in course of erection, which are estimated to be 700,000)

Quantity of Cotton Consumed:

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug. 1</th>
<th>Aug. 1923</th>
<th>Aug. 1924</th>
<th>Aug. 1925</th>
<th>Aug. 1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Cotton</td>
<td>424,142</td>
<td>492,162</td>
<td>394,689</td>
<td>349,387</td>
<td>375,715</td>
</tr>
<tr>
<td>American Cotton</td>
<td>30,484</td>
<td>68,115</td>
<td>82,956</td>
<td>71,370</td>
<td>20,804</td>
</tr>
<tr>
<td>East Indian</td>
<td>153,453</td>
<td>135,339</td>
<td>187,951</td>
<td>110,314</td>
<td>67,718</td>
</tr>
<tr>
<td>Egyptian</td>
<td>900</td>
<td>2,509</td>
<td>708</td>
<td>505</td>
<td>—</td>
</tr>
<tr>
<td>Sundries</td>
<td>240</td>
<td>1,450</td>
<td>554</td>
<td>81</td>
<td>649</td>
</tr>
<tr>
<td>Total</td>
<td>609,219</td>
<td>689,626</td>
<td>666,858</td>
<td>532,257</td>
<td>407,886</td>
</tr>
</tbody>
</table>

Cotton Mill Stocks:

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug. 1</th>
<th>Aug. 1923</th>
<th>Aug. 1924</th>
<th>Aug. 1925</th>
<th>Aug. 1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Cotton</td>
<td>84,678</td>
<td>211,775</td>
<td>131,068</td>
<td>181,613</td>
<td>129,047</td>
</tr>
<tr>
<td>American Cotton</td>
<td>16,183</td>
<td>20,188</td>
<td>48,500</td>
<td>44,747</td>
<td>13,800</td>
</tr>
<tr>
<td>East Indian Cotton</td>
<td>72,902</td>
<td>50,857</td>
<td>96,792</td>
<td>40,087</td>
<td>41,729</td>
</tr>
<tr>
<td>Egyptian</td>
<td>380</td>
<td>330</td>
<td>1,190</td>
<td>1,860</td>
<td>—</td>
</tr>
<tr>
<td>Sundries</td>
<td>100</td>
<td>100</td>
<td>24</td>
<td>—</td>
<td>652</td>
</tr>
<tr>
<td>Total</td>
<td>174,223</td>
<td>288,350</td>
<td>277,574</td>
<td>268,307</td>
<td>186,128</td>
</tr>
</tbody>
</table>

Short Time:

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug. 1</th>
<th>Aug. 1923</th>
<th>Aug. 1924</th>
<th>Aug. 1925</th>
<th>Aug. 1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of spindles stopped</td>
<td>686,325</td>
<td>245,243</td>
<td>1,829</td>
<td>1,472</td>
<td>—</td>
</tr>
<tr>
<td>Average number of hours stopped</td>
<td>425</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Number of weeks during which the spindles from which returns have been received were stopped</td>
<td>134</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
COTTON MILLS

ANGLO-CHEINESE COTTON MFG. CO.


CHANGCHOW COTTON SPINNING & WEAVING CO., LTD.

Mill: Outside South Gate, Changchow, Kiangsu Province. Shanghai Office: Fu Wah Savings Bank, 15 Kiangse Road, Shanghai. Established: November, 1920. Registered: May, 1921. Capital: Tls. 1,000,000. Officers: Chen Ling-shu, general manager; Yu Hwai-chung, manager. Annual Output: 25,000 bales of yarn. No. of Spindles: 20,612 (12,000 British and 8,612 American). Power: Electric, 1,300 h.p. Turbine motors from Jardine, Matheson & Co. Boilers: 2 B. & W., 2,852 sq. ft. h.s.; superheaters. Operators: 858. Trade Mark: Girl in the Moon. Particulars: The mill owns a site of 43 mow bought from the government for $3,000. The original machinery came from England. American spindles were added in the summer of 1921. The water supply comes from an artesian well, 340 ft. deep, on the mill grounds. The water pump has a capacity of 150 shih per hour. The factory building is of reinforced concrete and has space for 500 looms. A dormitory built for workmen has 200 rooms. It was reported in September, 1922, that this mill had shut down. Note: In July, 1923, the creditors of this mill obtained official permission to liquidate the company, selling its plant by public tender. Assets of the mill, including land, buildings and machinery, are valued at $2,000,000.

CHEN HSIN COTTON SPINNING & WEAVING CO.


CHENG HUA COTTON MILL


CHENG HUANG COTTON MILL

Location: South Bank, Sha Hsin Ho, Wuchang, Hubei Province. Hankow Office: Wei Lung Shih St. Established: December, 1922. Registered: June, 1923. Capital: Tls. 1,000,000. Officers: Liu Tsing-chung, general manager; Hung Tsing-ming, mill manager. No. of Spindles: 20,736. Ass. Loes: Power: Steam; 1 Sulzer Bros. uniflow steam engine, 810 i.h.p. Boilers: 4 B. & W., 8,010 sq. ft., h.s.; stokers and superheaters. Employees: 1,000; to be increased to 2,000. By special arrangement, 500 experienced hands were transferred from another mill in Wuchang. This is a new mill.

CHEN SHING COTTON SPINNING & WEAVING CO., LTD.


CHENG TAI COTTON MILL

See Chun Tah Cotton Spinning & Weaving Co., Shanghai.

CHIANG CHI COTTON MILL


CHI TAI COTTON SPINNING & WEAVING CO., LTD.

Location: Taitang (near Shanghai), Kiangsu Province. Operated by Kung Kee Co. Established: October, 1905. Registered: October, 1906. Capital: Tls. 500,000; Paid-up, Tls. 300,000. Officers: Managers: Chiang P'ai-ying, and Fan Yin-chung; Mill manager: Chen Yi-ying. Annual Consumption of Cotton: 22,680 piculs. Annual Output of Yarn: 6,450 bales. No. of Spindles: 22,700 in operation; Looms: 260 projected; Power: Steam, 670 h.p. Labourers: 1,170. Trade Mark: Shwang Feng. History: The mill was established and opened by Chiang P'ai-ying. There was an early operating loss of Tls. 150,000, due, it is said, to inferior equipment supplied by a German trader. Names of machines, makers, etc., were omitted from the purchasing contract and Chiang had no redress. "The production of yarn was not much while the coal consumption was abundant." The owner was forced to rent the mill, first to Yih Kee and then to Feng Kee, and again in October, 1911, to Kung Kee, the present operator.

CHIN HUA COTTON SPINNING & WEAVING CO.

Head Office and Mill: Yutze, Shanxi Province. Branches: 44 Chiao Chen Koo, Hsuan Wu Men Wei, Peking; Foo Kung Sze, Tung Chi Hu Yang, Taiyuan, Shanxi Province. Established: 1921. Capital: $1,500,000. Officers: J. T. Liu, manager; J. C. Hsu, chief director. No. of Spindles: 12,500. Brooks & Doxey. Power: Steam, 540 h.p. Particulars: The officials of the company reported in June, 1923: "The mill machinery has been fully installed, but the water supply for operating the plant is insufficient. We are building a pipe line from a spring, 20,000 ft. distant from the mill site. We expect to begin operation in the autumn of this year when the pipe line is completed."
CHING FONG COTTON SPINNING & WEAVING CO.


CHI MING DYEING & WEAVING CO.


CHING WEI WASTE COTTON SPINNING CO.

Office: 37 North Socowch Road, Shanghai. This is a new mill.

CHUN TAH COTTON SPINNING & WEAVING CO., LTD.


China Dyeing Works, Ltd.

The dyeworks are owned by the mill company and are operated in conjunction with it. This department is equipped with appliances for bleaching, dyeing, finishing and mercerising; manufactured by Sir James Farmer & Sons, Ltd. Officers of the Dyeeworks: Managing director: C. Y. Wong; Advisor: J. Tomlinson; Mill manager: A. D. Young.

DAH KONG COTTON MILL

See Dai Nippon Cotton Spinning Co., Ltd.

DAH FOONG COTTON MFG. CO., LTD.

Office: A,3 Kiangne Road, Shanghai. Mill: Tan Tye Kiang, Pan Kya Wen, Shanghai. Established: 1902. Capital: $1,000,000. Proprietor: Zee Pings-wo. No. of Spindles: 20,738. Looms: 209. Workmen: 1,500. Power: Electric, 800 h.p. Particulars: The total output of yarn—20,000 bales per annum—was used for making cotton cloth for flour bags for the Chang Foong Flour Mill. The cotton mill occupies a site of 70 mom. Dormitories built by the mill management accommodate 500 workmen. This mill was purchased by Zee Ping-wo in 1923. Zee had the following official notice in the press: "Notice is hereby given, that in pursuance of an Agreement dated the 22nd day of May, 1923, and entered into between the Dah Foong Cotton Manufacturing Co., Ltd., of the one part and myself of the other part, the undersigned, have acquired the whole of the undertaking, including all the machinery, building and land, together with the goodwill, trademarks, and other assets of the Company and its Mill, situated in the City of Shanghai. Pan Kya Wen for the price of Tls. 1,150,000.00 and Notice is also hereby given that any claim or claims against the said Company should be made against it direct. Dated the June 8, 1923. Zee Ping-wo."
China Section—Cotton Mills

Dah Sung Cotton Mills

(Dah Sung Cotton Spinning & Weaving Co., Ltd.)

Head Office: Tang Kai Tsah, Nantungchow, Kiangsu Province. Shanghai Office: 22 Kiu Kiang Road. Cable Add., "Navi getrad," Shanghai. Location of Mill: Nos. 1, 4 and 8 at Nantungchow; No. 2 at Chiu Lung Chen, Tsungming, Island of Tsungming, Kiangsu Province; No. 3 at Chiang Lo Chen, Haimen, Kiangsu Province; No. 5 at Jukao, Kiangsu Province; No. 6 at Tungtai, Kiangsu Province and No. 7 at Hsien Chen, Kiangsu Province. Total Capital of all Mills: Tls. 7,300,000 (approximate). Officers: Chang Chien, former Minister of Agriculture and Commerce; President; Chang Chia, Vice-President; C. C. Woo, Manager; Y. M. Tseng, Secretary. Net Profit: The net profit during the 23 years of operation, 1899 to 1922, amounted to Tls. 9,705,192, and incidental losses Tls. 97,079. Particulars: All the branches are more or less independently organized and capitalized. But the shareholders of the principal company are the first called upon and are granted the preferential right of taking one moiety of the whole shares, the rest being open to public participation. The products, in a great measure, supply local demands for native clothes for which there is a very large market in North China. Raw cotton is sufficiently obtained locally and in the surrounding districts. Trade Mark: "Quei Sing" (God of Wisdom).

Dah Sung Mill No. 1

Location: Tang Kai Tsah, Nantungchow, Kiangsu Province. Established: 1895. Registered: August, 1905. Capital: Tls. 2,500,000 in shares of Tls. 100; Reserve, Tls. 37,500. Directors: Chang Chien and Chang Chia. Mill manager: Chiang Li-fu. Annual Consumption of Cotton: 160,700 piculs. Annual Output: Yarn: 1/12 cts. yam, 34,300 bales; 1/14 cts. yam, 35,000 bales; 1/16 cts. yam, 7,000 bales; 1/24 cts. yam, 100 bales. Annual Output, Cloth: Plain calico, 120,720 pieces; bale cloth, 38,600 pieces. No. of Spindles: 78,680, Hetherton. No. of Looms: 700, Lowell, and Henry Livsey. Employees: 6,000. Power: Steam, 2,200 h.p. Two steam engines (A, 1,200 h.p. and B, 1,000 h.p.) and two Lancashire boilers. History: The Dah Sung Cotton Mill was established in 1895 under the leadership of Hon. Chang Chien. It is located about five miles from the city proper. Its initial capital was 1,130,000 taels and was equipped with 45,000 spindles. In 1914, the capital was increased by 800,000 taels and 26,680 additional spindles and 400 plain looms were installed. This was the first cotton mill founded and run by Chinese in China. The mill is situated in one of the leading cotton-growing districts of China. By the terms of an imperial charter no competitor was permitted to invade the district of the mill for a term of fifteen years beginning with 1900. Mr. Chang has established a textile school and a grammar school for the education of the employees. A number of small steam engines are used for ginning the cotton consumed in the mill, and an oil mill with modern machinery is operated near the spinning mill for the production of cotton seed oil and meal. By purchasing cotton in the seed and utilizing the seed in the oil mill, considerable economy is effected in the cost of raw material. Most of the machinery in the cotton mill is British and is in good condition.

Dah Sung Mill No. 2


Dah Sung Mill No. 3


Dah Sung Mill No. 4

Location: Nantungchow, Kiangsu Province. No. of Spindles: 50,000, projected.

Dah Sung Mill No. 5

Location: Jukao, Kiangsu Province. No. of Spindles: 25,000, projected.

Dah Sung Mill No. 6

Location: Tungtai, Kiangsu Province. No. of Spindles: 25,000, projected.

Dah Sung Mill No. 7

Location: Hsien Chen, Kiangsu Province. No. of Spindles: 25,000, projected.

Dah Sung Mill No. 8

Under construction in June, 1922. Location: Outside South Gate, Nantungchow, Kiangsu Province. Capital: Tls. 1,500,000. No. of Spindles: 24,000, Whitins. No. of Looms: 600.

Dah Sung Mill No. 9

Location: Sze-tung-ho, Woosung, Shanghai. It is announced that the Dah Sung Cotton Spinning & Weaving Co., Ltd. is planning to establish branch mill No. 9 at Woosung with a capital of Tls. 1,500,000. 20,000 spindles and 400 looms (American) are projected.

Dah Tung Cotton Mfg. Co., Ltd.

Office: 62 Kiangse Road, Shanghai. Mill: Taungming Island, Kiangsu Prov. Officers: S. S. Tsu, managing director; S. S. Tu, assistant manager; J. C. Soo, Chinese secretary; M. F. Sze, English secretary; C. J. Loo, chief textile dept.; S. C. Tu, chief business dept.; Y. S. Yai, chief acct. dept.; Z. K. Sze, chief gen. affairs dept. Establishment: February, 1929. Registered: June, 1929. Capital: $640,000. No. of Spindles: 10,000, Brooks & Doxey. Equipment: The entire plant was contracted for and imported by the Jardine Engineering Corp., Ltd., who act as agents in China for the textile machinery firm of Brooks & Doxey of Manchester, England. The whole of the mixing, spinning, carding, and spinning machinery was manufactured by this firm, and represent the most up-to-date and improved types of textile machines made in England. At present, the plant is equipped with 10,000 spindles for the production of 10 to 20 counts, but provision has been made for considerable extensions. In addition, the Dah Tung Company intends to install in the near future a number of looms for the manufacture of cloth. The power plant consists of two Babcock & Wilcox water-tube boilers, each with 2,010 square feet of heating surface, working at 160 lbs. pressure. The boilers are
provided with superheaters one Green's economizer, and two Weir's feed pumps. The main engine is a Sulzer Brothers Uniflow type of 400 B.H.P. In the engine room is also a 45 kilowatt General Electric generator driven by a 75 h.p. Fairbanks-Morse crude oil engine. In the various departments are found the following machines, all from Brooks & Doyce (1929), Limited: — 1 bale breaker, 1 roving waster opener, 1 patent thread extractor, 1 improved automatic hopper feeder, 1 improved porcupine feed table, 1 improved vertical exhaust opener, 4 single beater scutters, 42 revolving flat carding engines, 6 drawing frames each three heads and seven deliveries, 6 improved slubbing frames 80 spindles each, 8 improved intermediate frames 128 spindles each, 16 improved roving frames 150 spindles each, 25 warp ring spinning frames 400 spindles each, 3 improved yarn bundling presses, 1 high speed 16 spindle braiding machine, 1 patent automatic flat grinding machine.

**DAI NIPPON COTTON SPINNING CO., LTD.**

(DAI KONG COTTON MILLS)


*Established*: June, 1889. *Capital*: Y.51,000,000.

**Mill No. 1**, DAI KONG COTTON MILL

*Location*: 2 Teng Yuch Road, Yangtszefoo, Shanghai.

*Officers*: G. Miyano, mill mgr.; Y. Takahashi, sub-mgr.

*No. of Spindles*: Working, 12,000 Brooks & Doyce, and 12,282 Whitin Mach. Wks.; projected, 15,840.

**Mill No. 2**

*Location*: 2 Teng Yuch Road, Yangtszefoo, Shanghai.

*No. of Spindles*: 32,000, projected.

**TSINGTAU MILL**


*No. of Spindles*: 25,344 Platt Bros., and 25,000 Whitin Mch. Wks. 5 R. & W. Boilers, 4,510 sq. ft. h.s.; superheater and stokers.

**DOKO BOSHUKU KABUSHIKI KAISHA**

(DONG SHING SPINNING AND WEAVING CO., LTD.)

*Head Office*: 43 North Soochow Road, Shanghai.


**DONG CHONG COTTON MILL**


*Particulars*: The cotton mill company owns and operates the Dong Chong Oil Mill in conjunction with the cotton mill. The mill is used to manufacture cotton seed oil.

**DONG SHING SPINNING AND WEAVING CO., LTD.**

See Doko Boshoku Kabushiki Kaisha, Shanghai.

**EWO COTTON MILLS, LTD.**


*Capital*: (authorized), Y.6,000,000; divided into 1,000,000 ordinary shares of Y.5 each and 10,000 cumulative preference shares of Y.100 each; issued Y.4,900,000; unsailed, Y.1,100,000.

This company is an amalgamation effected in March, 1921, of the Ewo Cotton Spinning and Weaving Co., Ltd., the Kung Yik Cotton Spinning and Weaving Co., Ltd., and the Yangtszefoo Cotton Mill, Ltd., three British mills, located in Shanghai and controlled by Jardine, Matheson & Co., Ltd.

**EWO MILL**

*Location*: 46 Yangtszefoo Road, Shanghai. *Mill Manager*: James Harrop.

Registered in 1896 and in operation since May, 1897, it is equipped with 72 ring spindles (Platt Bros.), four doubling frames and 512 looms (Platt Bros., and Henry Livesey) besides a waste plant consisting of 2,108 mule and ring spindles and 20 looms with raising, dyeing and bleaching plants. This is one of the mills promoted immediately after the Sino-Japanese war on the assumption that cheap labor, skilled management and abundant supplies of raw cotton would assure a handsome profit. To inspire confidence, small dividends were paid in 1897-98 but in 1902 it was found expedient to write down the capital by one-half, or Y.750,000. Later in 1919, seven per cent. cumulative preference shares were issued to the value of Y.1,400,000, making a total capitalization of Y.1,150,000. Under this radical change in its financial status, the company rapidly expanded its business, and during the five years ending 1915 it paid 16 taels per share, representing 125 per cent. on the reduced capital, with a reserve fund of Y.350,000 and an equalization of dividend fund of Y.500,000.

Result 1897 to 1918 inclusive, Y.50 shares:

- **Tls. Profit...** 4,624,755
- **Depreciation...** 1,522,392
- **Reserves...** 1,180,000
- **Dividends on ordinary shares...** 150

The last dividend paid by the company before the amalgamation (for 1920) was: ord. int. div., No. 22; final div., No. 68; reserves, No. 2,087,809.

**KUNG YIK MILL**

*Location*: 16 Robinson Road, Shanghai. *Mill Manager*: W. K. Smith.

*No. of Spindles*: 25,376, Tweedales & Smalley.

*No. of Looms*: 500, Platt Bros.

The company was formed in 1907 and was incorporated in 1910 with a capital of Y.1,000,000. For the ten years of the company's separate existence the dividends amounted to Y.24.40 per Y.10 share, equivalent to an annual return of 24.4 per cent. At the time of the amalgamation the reserve funds amounted to Y.610,943, on a paid-up capital of Y.750,000. The progress of the company is shown by these comparative figures for the years 1911, 1915 and 1920:

- **1911.**
  - Tls. **1915.**
    - Tls. **1920.**
      - Tls. **Tls.**

- **Net Profits...** 108,460
- **Depreciation...** 207,755
- **Reserves...** 95,000
- **Dividend...** 12% 15% 8.0/o

**YANGTSZEFOO MILL**

*Location*: Wemore Road, Shanghai. *Mill Manager*: W. Shaw.

*No. of Spindles*: 56,532, Platt Bros.
No. of Looms : 441, Platt Bros.
The company was promoted in 1914 with a capital of Tls. 1,500,000 to acquire the valuable plant of the Hongkong Cotton Spinning, Weaving and Dyeing Co., Ltd. One-third of the capital was raised on 7 per cent. cumulative preference shares, the balance ranking as ordinary shares. At the end of the first year the funds permitted the payment of interest to the preference shareholders though the holders of ordinary shares had to forego any return, a result that in no way affected public confidence as the shares maintained their popularity with investors, The last dividend before the amalgamation (for 1919) was: Prod., 7 per cent.; Ord., Tls. 3.50 ; Reserves, Tls. 750,000.

History: The Hongkong Cotton Spinning, Weaving & Dyeing Co., was organized in 1898 with a capital of $906,000 local currency and under the general management of Jardine, Matheson & Co. Its history followed the ups and downs of the cotton-spinning industry in the Far East generally, which was not satisfactory or profitable at that time, and in addition it faced conditions which made success in the spinning business in Hongkong impossible. From the beginning there was a question as to results, and $100 shares were quoted at $80 by the time the mill was running, and three months later they were quoted at $50. By the middle of 1901, as a result of the abnormally high price of cotton, the prevalence of plague in the colony, and the Boxer troubles the mill was closed down with a debit balance against it in favor of its general managers of $1,650,000 local currency. The company was reconstituted with a capital of $1,250,000 local currency, the loss written off, times improved, and for two years the mill paid dividends of 10 per cent. Later the dividends fell to 5 per cent., partly paid out of a dividend equalization fund, and still later they were stopped and losses were experienced year after year and in 1914 the company commenced to dispose of its machinery and plant to Shanghai mills which also were under the control of Jardine, Matheson & Co.

Result of the Yangtsepeo Mill 1915 to 1918 inclusive, Tls. 5 shares :

<table>
<thead>
<tr>
<th></th>
<th>Tls.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit</td>
<td>...</td>
</tr>
<tr>
<td>Depreciation</td>
<td>...</td>
</tr>
<tr>
<td>Reserve</td>
<td>...</td>
</tr>
<tr>
<td>Total</td>
<td>3,000,487</td>
</tr>
</tbody>
</table>

**FU CHANG COTTON SPINNING & WEAVING MILL**


**FUJI GAS BOSEKI KABUSHIKI KAISHA**

(FUJI GAS SPINNING CO.)

See also Cotton Mills, Japan.


**GREAT CHINA COTTON MFG. CO. LTD.**

Location : Pao-shan hsien, Weosung, Kiangsu Province. Shanghai Office : 58 Szechuen Road. Cable : "Chinggreat," Shanghai. Established : June, 1919 : began operation, April 4, 1922. Capital : Originally Tls. 900,000, increased to Tls. 1,200,000 and again, in 1921, to Tls. 2,000,000. Present property, including bldgs. and machinery valued at Tls. 800,000. Profits, 1922 : Tls. 22,000. Officers : C. C. Nieh, President; E. R. Yin, Vice-President. Employees : 2,200. Product : Yarn of 10 to 40 counts, principally the lower counts. Trade Mark : Map of China. Equipment : 11,000 American Spindles (Saco-Lowell) and 35,000 British Spindles (Brooks, Doxey & Co.); one 100 k.w. turbo-alternator (German) G.M.A.; one 100 k.w. turbo-alternator (English, Dick, Kerr Works, Preston); 4 English Babcock & Wilcox boilers. Heavier machinery, such as mixers, scutching machines, etc., divided between Saco-Lowell (American) and Brooks, Doxey & Co. (British). The machine shop is equipped with ten lathes, planing machines, saws, chiseling machines and grinding machines, all of British make. This shop manufactures accessories in addition to making repairs. Water Supply : The water is taken from the river and from an artesian well. The pumping plant, located on the river bank, is projected by a concrete embankment. Buildings : The factory building, 120 by 700 ft., covers 12 mou; reinforced concrete construction; two stories. All motors are installed on platforms, 9 ft. above the ground. Separate office building of two stories. A dormitory for machine shop employees has 44 rooms; brick structure. Workers' dormitory has 132 rooms with accommodations for 1,000 persons. History : The company was promoted in June, 1919, by C. C. Nieh and several associates when there was a strong demand for Chinese cotton yarns as a result of the boycott against the Japanese. The first shareholders' meeting was held on October 12, 1919, and the company was registered with the Ministry of Agriculture and Commerce in July, 1920. Note : Owing to depression in the cotton market, this mill closed temporarily for two months, beginning July 1, 1923.

司公 有限 織物 第一 纖

HANKOW DEE YEE (FIRST) COTTON SPINNING AND WEAVING CO., LTD.


HANKOW NO. 2 SPINNING AND WEAVING MILL


HENG CHANG YUEN COTTON MILL

See Sung Hsing Cotton Mill, No. 2, Shanghai.

HENG DAH COTTON SPINNING AND WEAVING CO., LTD.

Office : 1 Chin Yung Li, Peking Road, Shanghai. Mill : Yang Sze Bridge, Yang Sze Siang, Pootung. Estab-
HENG FOONG COTTON MANUFACTURING CO., LTD.

Mills: 1,2 Whashing Road, Yangtze-Poo, Shanghai.

Annual Consumption of Cotton: 87,000 piculs. Annual Output of Yarn: 11,700 bales. Power: The power plant, isolated from the factory, has a present capacity of 750 k.w. (General Electric Co. Curtis turbine) with 1,250 k.w. under construction. General Electric Co., equipment is used throughout the power plant. All electrical standards are according to the American usage with 110 volts for lighting and 550 volts for power. All wires are enclosed in flexible steel conduits from the Sprague Mfg. Co. Employees: 3,687. Trademarks: Pine and Crane. Blue Tiger and gun Carriage.

Products: Drills, light duck and heavy canvas. It specializes in the latter and there is no other mill in China which makes heavy cloth in quantity. Most of the mill's output of light duck and canvas is purchased by the Chinese government for army tents and cartridge belts for the soldiers.

HO FENG SPINNING & WEAVING CO., LTD.

Location: Ningpo, Chekiang Province. Established: September, 1905, with a paid up capital of $600,000. Registered: December, 1905. Capital: $1,500,000 in shares of $100; increased from $600,000 in April, 1922. Officers: Chief Director, T. C. Tong; General Manager: Yu Kee-ching; General Manager: Lu Tow-ching. Annual Consumption of Cotton: 86,400 piculs Annual Output: 24,000 bales of yarn. No. of Spindles: 52,200, Brooks Dhecyx. Power: Steam, 900 h.p. Laborers: 2,500. Trade Marks: Unicorn, Venus, Sea Moon. Particulars: The capital of the company was furnished by Chinese, but the mill began operation under Japanese management. The machinery was purchased in England by a Japanese expert. The original number of spindles—11,000—has been more than doubled. The mill is lighted with electricity from its own plant, and spare power is sold for lighting in the native city. In 1918 the company bought the factory site of the Tung Chi Yuem Cotton Mill, destroyed by fire in 1917. The Tung Chi Yuem Mill was founded in 1894. It had a capital of $900,000 and was operating 23,000 spindles and 216 looms. Profits (1921): $700,571.89 of which $59,648 was placed in the reserve.

HONG CHANG COTTON SPINNING, WEAVING & DYEING CO., LTD.

Mill: S.S. 875 Markham Road, Shanghai. Office: 60 Kiangze Road, Shanghai. Established: 1921. Capital: Tls. 1,500,000. Officers: Kok C Ae-ping, Director; Chen Chi-see, Gen. Manager; E. E. Lever, Mill Manager; W. C. Seeds, Secretary; and Kok C Ae-see, Supt. No. of Spindles: 25,808, Asa Lees. No. of Looms: 260, G. Keighley. Power: Electric, 1,000 h.p. Trade Mark: Balloon. Particulars: This mill is situated near the Hong Yoe Cotton Mill and it was promoted by the shareholders of the latter. The mill site covers 35 mow. Operation began in May 1922.

HONG YUE COTTON SPINNING & WEAVING MILL CO., LTD.


HUA FENG COTTON SPINNING & WEAVING CO., LTD.


HUA HSIN COTTON MILLS

(Hua Hsin Textile Co., Ltd.)


HUA HSIN MILL, No. 2


HUA HSIN MILL, No. 3


HUA HSIN MILL, No. 4

Location: Weihaiwei. Business Office: Men Chwang, Tientsin. Established: No. of Spindles: 22,000. Operators: 1,000. Boilers: In these mills there are in use six B. & W-boilers, 18,315 sq. ft. h.s.; superheaters and stokers.

HUA SHIH KUNG SSU

See Hunan No. 1 Cotton Mill, Changsha, Hunan Prov.

HUNAN NO. 1 COTTON MILL

(Hua Shih Kung Su)

Location: Changsha, Hunan Province. Established: 1919; began operation, 1921. General Manager: Hua Shih Kung Su. No. of Spindles: 40,000. Bales of yarn, all of which are in use. Power: Steam turbine. Boilers: 3 B. & W., 2,582 sq. ft. h.s.; superheaters. Employees: 2,600. Monthly Output: 1,120,000 lbs. of yarn. The yarn is sold locally. Particulars: With the exception of the generators and dynamo which came from Germany, all mechanical equipment is of British make. The mill is under the control of the provincial government. After the machinery had been installed it was handed over to the local authorities to Hua Shih Kung Su, and operation began early in 1921, but not until experienced workmen imported from Hankow and Shanghai had been sent back and replaced by Hunanese operators. Concerning this mill the maritime customs reported for 1922: "The Hunan No. 1 Cotton Mill has, with a short break due to a successful strike for higher wages and better treatment, been in full swing, turning out some 85 bales of yarn daily, part of which finds a ready sale locally and part of which is taken by Kiangsi and Kwei-chow. The average price is about $210 per bale. About 60 per cent. of the raw cotton consumed is purchased locally, the remainder coming from Hupeh." Profits: $162,525.24 (July, 1921—June, 1922) and about $160,000 (July, 1922—June, 1923). Subsidy for Provincial Government: About $46,000 for 1921-1923.

HUPEH GOVERNMENT MILLS

(Wu Chiang Cotton Mills)

Location: Wu-chang. Leesee: Tai Shin Co. Capital: Tls. 780,000. General Manager: Shu Yung-tung. Annual Consumption of Cotton: 120,000 piculs. Annual Output: 30,000 bales (420 lbs. per bale) of yarn and 18,000 bales of piece goods. No. of Spindles: 90,000. Brocks, Dovey, Platt Bros., and Hess Loes. No. of Looms: 1,800. Employees: 5,100. Trademarks: Sze Hai and San Tu. Particulars: The four mills, generally known as the Wu-chang Cotton Mills, were erected by the Chinese Government. The first unit—the silk mill—was built in 1881 under the direction of Viceroy Chang Chih-tang. The cotton spinning mill was established in 1894. The capital invested in them by the Government is variously estimated at from two to three million taels. While under government control the mills did not pay, and some years
before the revolution they were leased to a Chinese company, with a capital of Tls. 700,000. After working the mills for about a year with some success the company sold the lease to the compradores of the Hongkong and Shanghai Bank, who is said to have made a profit of about Tls. 200,000 in one year. In 1912 the Government made a new lease agreement with the present lessees, the Tzu Shin Company, for a period of ten years at an annual rental of Tls. 130,000. The capital of the company is Tls. 700,000, made up of Tls. 270,000 preference shares, held by the organizers of the new company, and Tls. 430,000 ordinary shares given to the shareholders of the old concern as the price of their rights. The new company has now been working the mills for three years, and in each year 100 per cent. and 60 per cent. dividends have been paid on the preference and ordinary shares respectively. The four factories are: (1) The Cotton Mill; (2) The China-grass and Jute Mill; (3) The Silk Filature; (4) The China-grass and Jute Mill.

Cotton Mill: This mill has been worked at full pressure since the company began operations. The yarn is spun of Shensi and local cotton, the former predominating on account of its better quality and longer staple. Cloth Factory: There are 1,600 looms which turn out 18,000 bales of cloth annually woven out of yarn obtained from the cotton mill. This factory also works at full pressure. Silk Filature: There are 1,000 spindles and the annual output turns have varied from 170 to 200 piculs. China-grass and Jute Mill: This mill dates from 1898, but appears to have been entirely neglected until 1913 when the present lessees took it in hand and began the manufacture of canvas and gunny cloth.

JAPAN-CHINA SPINNING & WEAVING CO., LTD.

(Nikkawa Boskei Karushiki Kaisha)

General Office: 55 North Szechuan Road, Shanghai.

MILL No. 1, formerly International Cotton Mill.

Location: Pootung, Shanghai. No. of Spindles: 42,000, Ass. Less. No. of Loomes, 200, Oregon & Monk. Power Source: Hick Hargreaves. Established: 1895. Capital: Y.50,000. PARTICULARS: This mill, established in 1895 and one of the oldest mills in China, was acquired by the Japan China Spinning & Weaving Co., in 1918. English machinery was used throughout the mill at first and much of the original equipment had been renewed before the present lease was bought by the Japanese. The following financial statement was issued in December, 1919, at the end of the first year of Japanese ownership: Receipts, Y.537,602; disbursements, Y.6,020,597. A bonus absorbed Y.15,000; a similar amount was carried to legal reserve; a dividend of Y.1 per share, equivalent to 12 per cent. absorbed Y.200,000, and Y.11,484 was carried forward.

MILL No. 2


MILL No. 3

Location: Opposite 11 Robinson Road, Shanghai. No. of Spindles: 20,000, Platt Bros. working; projected, 10,000. Company Accounts, for the year, ending December 31, 1921: Laborers’ Relief Fund, Y.100,000; Land, Y.110,830; Buildings, Y.413,000; Machinery and Implements, Y.1,000,000; Buildings and Machinery Depreciation Fund, Y.400,000. Settlement of the profit for the 2nd Half-year, 1920 was: Net Profit for the 2nd half-year 1920, Y.1,526,247; Total, Y.2,181,331; Legal, Y.300,000; Officials’ Bonus, Y.150,000; Dividend, Y.1,230,000 (at 40 per cent. per year, Y.6 per share); Balance carried forward to the next account, Y.531,351.

MILL No. 4

Location: Shanghai Spindles: 24,800 projected.

KIU AN SPINNING & WEAVING CO., LTD.


KIU CHENG COTTON MILL

See Sung Hsing Cotton Mill, No. 2, Shanghai.

KIU SHING COTTON SPINNING & WEAVING CO., LTD.


KUNG DAH COTTON MILL

See Shanghai Silk Spinning Co.’s Cotton Mill.

KWANG CHING SPINNING AND WEAVING CO., LTD.


KWANG SING COTTON SPINNING & WEAVING CO.

Location: Outside the East Gate, Changchow, Kiangsu Province. Established: November, 1920. Registered: April, 1921. Capital: Y.240,000. PARTICULARS: This new mill, promoted by Changchow merchants, was sold to Sheng Tze-ying and Ko Shao-ching, Chekiang merchants, for $128,000 in 1922 before operations had been started.

KWANG YIH COTTON SPINNING MILL, LTD.

Location: Changte, Honan Province. Capital: Y.1,000,000. Officers: General managers, Z. M. Zuan.
and Q. S. Koo; Mill superintendent: S. C. Yuan; Business manager: W. C. Lee; Engineer: H. Z. Boong. Annual Consumption of Cotton: 50,000 piculs. Annual Output: Yarn, 15,000 bales. Equipment: 38,592 spindles, Brooks Dockey: power, steam, 800 h.p. Trade Marks: 10-14, Mill Site: 16-20, Dragon and Horse. Remarks: This mill was established in 1908 and started operations on January 11, 1909. At that time it was the only mill in the five northern provinces, purchasing its cotton from local growers. Although conditions are now different, the following figures and costs given in its prospectus are of interest: Raw cotton was paid for at 240 cash per catty. Each bale of yarn requires 330 catties of cotton, costing 79,200 cash, or about Tls. 62.80 at 1,500 cash to the tael. The cost of production was estimated at about Tls. 15. The cost for coal was $3.30 per ton obtained from the near-by mines of Li Ho Kow, with wages at 280 cash per day. The total cost of a bale of yarn was worked out at Tls. 67.80 and the near-by market in the adjoining provinces called for 100,000 bales per year at rates, then prevailing, of Tls. 90 per bale.

LAOU KUNG MOW COTTON SPINNING AND WEAVING CO., LTD.

General Managers and Agents: J. H. & C., Ltd., 4 The Bund, Shanghai. Mill: 40 Yangtse-poo Road, Shanghai. Established: 1895. Capital: (paid-up), Tls. 800,000 in 8,000 shares of Tls. 100. Staff: T. Webster, manager; G. Franklin, engineer; C. Kearsley, carding master; A. Riley, spinning master; G. Southworth, weaving master. No. of Spindles: 50,096, Tweedale and Smalley. No. of Looms: 515. Accounts, for year ending December 31, 1922: Loss, Tls. 24,486.31. Against this loss there was a sum of Tls. 340,000 set aside as "development reserve," inaugurated in February, 1920. During the year, Tls. 79,067.12 was spent on repairs and renewals. History: This mill was established by British merchants in the year 1895 as the Ewo Cotton Spinning & Weaving Co., Ltd. In 1896 the Laou Kung Mow mill started an innovation in cotton buying methods by establishing a chain of purchasing stations in the principal cotton growing districts of China. This field work was in charge of A. B. Rosenfeld, head of the present firm of A. B. Rosenfeld & Son, cotton merchants.

LEE HSING WEAVING, DYEING AND FINISHING CO., LTD.


LEE MING COTTON MFG. CO.

Location: Changchow, Kiangsu Prov. This mill was projected by Chinese merchants to spin waste cotton. It is listed (without details) in the 1922 report of the Chinese Cotton Makers' Association.

LEE YOUNG COTTON SPINNING CO., LTD.

Location: Kiangyin, Kiangsu Province. Established: July, 1905. Registered: January, 1906. Capital: Tls. 720,000; Reserve, Tls. 100,000. Officers: Hsueh Li-chuan, chief director; Chien Yi-hsiang, general manager. Annual Consumption of Cotton: 28,000 piculs. Annual Output of Yarn: 8,000 bales. No. of Spindles: 15,000. Ass. Lees, 30% Power: Steam, 500 h.p.; 3 boilers. Employees: 1,200. Trade Marks: Old Lion, Lion Awake. History: The company was organized by Sze Tze Ying in 1905, and the mill began operation in 1908 with an inadequate capital of Tls. 300,000. Several years later, the company's buildings and equipment had cost Tls. 540,000 and it became necessary to mortgage the property to the Hou Sung Co., of Soochow for a loan of Tls. 240,000. In accordance with the terms of the loan, the Soochow concern took over the operation of the plant for a period of five years from the autumn of 1910. When the lease expired in 1915, the original shareholders resumed the management, increasing the capital from Tls. 300,000 to Tls. 720,000 which included Tls. 360,000 subscribed by Hsueh Pao Yung.

LOO FENG COTTON SPINNING & WEAVING CO.

Location: Tsinian, Shantung Province. Established: 1917. Capital: $1,200,000; Reserve, $120,000. Officers: Pan Fu, general manager; Chin Yung-yu and Lee Fu-hain, directors; L. H. Clow, mill manager; M. C. Y. Kung, engineer. Annual Consumption of Cotton: 30,000 piculs. Annual Output of Yarn: 13,400 bales. No. of Spindles: 27,376. Hetherington Power: Steam, 500 h.p.; Laborers: 1,064, Trade Mark: Po Fung (Lum Lamb). Plant: 3 boilers; one Uniflow Engine 500 h.p.; 1 bale breaker; 1 winnow machine; 2 automatic feeders; 4 cutters; 80 cards; 7 drawing frames, each containing 6 deliveries, and arranging in 3 process; 6 slubbing frames, each 22 spindles; 7 intermediate, each 140 spindles; 18 roving frames, each 180 spindles; 44 ring frames, each 364 spindles; 120 winding machines; 5 banding machines.

Particulars: The mill was established in 1917 under Pan Fu's direction with a capital of $800,000. All the machinery was ordered from J. Hetherington and Sons, Ltd., England, through Rees & Co. The equipment was installed in 1919 and the same year the capital was increased to $1,200,000. The mill is managed according to American methods. The mill superintendent, Mr. Chow, is an American returned student. A weaving mill of 300 looms is under preparation. The mill has opened an evening school for laborers, and established moving pictures for amusement. The mill also has baths, rooms and a hospital for the workers, and announced that this company is planning to build three new mills in Shantung Province, at Taining, Linting and Techehow.

MANCHURIA WEAVING CO., LTD.

Location: International Settlement, Tcheng, Fengtien Prov. Began operation in April, 1922. Officers: K. Yamada, managing director, with 5 colleagues on the board of directors, including 1 Chinese, in addition to 5 auditors, inclusive of 1 Chinese. Capital: 50,750,000 yen; one-quarter paid up. Looms: Steel looms for minor width, 180; those for major width, 180. Output: Native imitation cloth, 750 pieces (1 piece being 23 yards long and 1 1/5-ft. wide) per day and 22 rolls (1 roll being 40 yards long and 21-ft. wide) of grey sheeting, 26 days, average working days per month. Power: One steam engine of 100 h.p. Water supplied from a well. Employees: 20 Japanese and Chinese clerks, 638 Chinese workmen, 12 Japanese male hands, and 91 Chinese female hands; total, 761. Particulars: This plant chiefly produces the coarser goods like native imitation cloth, grey sheeting, etc., and principally competes with the interior mills of the country. The mill has funds from the start, and nearly 5,000 yen is paid annually as interest on loans. A loss of about Y.10,000 was incurred.
in the latter half of 1922. With sufficient working capital at command, the mill might realize a fair profit.

MANSHU BOSEKI KAISHA
(MANCHELIA COTTON SPINNING & WEAVING CO.)

**Location**: Liaoyang, Fengtien Prov. Founders general meeting held in Tokyo, March 15, 1923. Officials expect to begin operation in the spring of 1924. **Capital**: G.Y.5,000,000; paid up, G.Y.4,000,000. The shares of the new mill have been taken up by the Fuji Spinning Mill, Ltd., and the South Manchuria Railway Co., each to the amount of 35,000 shares, the remaining 20,000 shares having been offered for public subscription. The first installment of the share capital was paid in on February 10, 1923, to be followed by the second installment payable on arrival of the spinning machinery. **Area of Site**: 50,000 tsubo (1 tsubo equals 36 sq. ft.). **Spindles**: 30,000 projected. **Looms**: 1,000 projected. **Power**: Electric, 1,500 k.w. **Output**: The estimated daily output will be 85 tsus of cotton yarn of 16's on an average and 1,750 pieces of cotton cloth (on the basis of grey sheeting), 1 piece being 25 yards long and 1 1/2 ft. wide. **Building Contract**: The contract for building the plant was awarded to the Hasegawa-gumi of Manchuria, May 28, 1923, on a bid of Y.646,700. The work includes the construction of the spinning mill No. 1, the warehouse, the quarters for Japanese and Chinese factory-hands, a club, and auxiliary buildings, having a total floor area of 8,000 tsubo; to be completed at the end of November, 1923.

MING SUNG WASTE COTTON SPINNING AND WEAVING CO., LTD.

**Office**: 46 Peking Road, Shanghai. **Mill**: 1-A Warren Road, Shanghai. **Established**: 1921. **Capital**: Y.350,000. **Officers**: Nishi Yum-dai, Moh New-ten, directors; Woo Pi-kiang, Chen Tsi-hao, auditors. **Spindles**: 5,000.

MUKDEN GOVERNMENT COTTON MILL
(THREE EASTERN PROVINCES COTTON MILL)

**Location**: Outside West Gate, Mukden, Fengtien Prov. **Organized**: 1921, as a semi-government enterprise. Began operation in July, 1923. **Capital**: The original capital was Y.4,000,000, increased to Y.6,000,000 in 1923. The Fengtien Provincial Government subscribed for 45,000 shares, one-half of the original number issued, and the other half was subscribed by Chinese merchants. **Officers**: T. C. Sun, manager; Han Kung-chin, sub-manager; W. F. Ma, engineer. **Spindles**: 20,480, Saco-Lowell. **Looms**: 200, Compton & Knowles. **Power**: Electric, 1,000 k.w. **Area of Site**: 280 mow. **Water obtained from a well. **Daily Output**: 1923: Averaged 55 bales of 15's. **Particulars**: In addition to cotton weaving the mill will engage in wool weaving. A sum of Y.5,000,000 has been set aside for the purchase of cotton from a variety of districts, and a set of regulations for the encouragement of cotton culture has been drawn up as follows: 1. The imposition of an embargo on the export of cotton from the Three Eastern Provinces. 2. The distribution among local farmers of pamphlets giving methods of cotton culture. 3. Farmers who lack the capital necessary for planting cotton may, with a guarant or of good credit, or with proper security, contract from this mill at a low rate of interest. 4. The dispatch of delegates to various districts to encourage the farmers to grow cotton. Owing to the inferior quality of Fengtien cotton and the lack of experience on the part of mill workers, the operation of the mill for the present will be confined to yarns of 15 to 20 counts.

NAIGAI WATA KAISHA, LTD.

**Factories**:

No. 1 Mill, Dembo, Osaka.
No. 2 Mill, Nishinomiya, Hyogo.
No. 3 Mill, West Soochow Road, Shanghai.
No. 4 Mill, West Soochow Road, Shanghai.
No. 5 Mill, West Soochow Road, Shanghai.
No. 6 Mill, Shihosho, Tsingtau.
No. 7 Mill, West Soochow Road, Shanghai.
No. 8 Mill, West Soochow Road, Shanghai.
No. 9 Mill, Markham Road, Shanghai.
No. 10 Mill, Tsingtao.
No. 11 Mill, Tsingtao.
No. 12 Mill, West Soochow Road, Shanghai.
No. 13 Mill, Robison Road, Shanghai.
No. 14 Mill, Robison Road, Shanghai.
No. 15 Mill, Gordon Road, Shanghai.

No. 16 Mill, projected for Shanghai.

Chinchow No. 1 Mill, Chinchow, Fengtien Prov.

**Head Office**: Dohima Kitamachi, Kitaku, Osaka, Japan. **Shanghai Office**: 1-A, Jinko Road. **Cable Add.**: "Naigai" Shanghai **Capital**: Y.16,000,000. **Net profit** half year, ending November 25, 1922: Y.3,790,219.29; reserve: Y.11,187,300. **Dividends**: 1922: Ordinary, 12 per cent; special, 4 per cent. per annum. **Directors**: A. Takei, president; H. Abe, S. Amake, K. Kawamura, K. Onishi, N. Otani, K. Sasaki, E. Tamaki, Representatives for Shanghai Branch: K. Kawamura, and K. Onishi, Directors: G. Okada and K. Yamaguchi, Managers. **Mills**: No. 1, Osaka, No. 2, Nishinomiya, Japan; Nos. 3, 4, 5, 7, 8, 12, 14, and 15, Shanghai; Nos. 6, 10, and 11, Tsingtau, China; Chinchow No. 1, Chin chow, Manchuria. **Power**: Most of the Shanghai mills are supplied by current by the Shanghai Municipal Council's Electricity Department. Several mills, however, have their own electric power plants for regular or emergency use. The power plant operating mills No. 3 and 4 consists of 2 Siemens dynamos, 600 k.w. each, driven by two Bellis and Marconico triple-expansion engines. The power plant for the group of mills Nos. 5, 7, 8, and 12, consists of a 250 k.w. Brown-Boveri turbo-generator set and 3 B. & W. boilers, each, 4,780 sq. ft. or 14,340 sq. ft. total heating surface; chas grates stokers. In addition to these three boilers, the mills have 13 B. & W. and Lancashire boilers with a total of 16,929 sq. ft. b.s.; about one-half are provided with mechanical stokers and superheaters. A feature of No. 4 and No. 5 mills is the application of the variable speed drive to the ring frames for the first time in the Far East. The motors for this work are of the Brown-Boveri single-phase regulation type using part current from the town's main and part, required from a private electric installation. The Brown-Boveri motor as fitted in the Naigai Wata mill has a very reliable and simple stator winding and is designed for a pressure of 500 volts without the intermediate transformer. The winding of the rotor is independent of the winding of the stator and the voltage induced in it does not exceed 100 volts in starting and only 10 volts when running.

No. 3 Mill

**Location**: Ichang Road, Shanghai. **Established**: 1911. **Mill Manager**: S. Miyake. **No. of Spindles**: 23,040 Platt Bros.

No. 4 Mill

**Location**: Ichang Road, Shanghai. **Established**: 1915. **Mill Manager**: J. Suzuki. **No. of Spindles**: 4,000 Howard & Bullough.

No. 5 Mill

**Location**: Macao Road, Shanghai. **Established**: 1914. **Mill Manager**: S. Manago. **No. of Spindles**: 66,340 Howard & Bullough.
CHINA SECTION—COTTON MILLS

No. 7 MILL.

No. 8 MILL.

No. 9 MILL (FORMERLY YU YUEN MILL).

No. 12 MILL.
Location: Macao Road, Shanghai. Established: 1921. Mill Manager: J. Yogi. No. of Spindles: 20,800 Dobson & Barlow.

No. 13 MILL.
Location: Robison Road, Shanghai. Established: 1922. Mill Manager: B. Kawamura. No. of Spindles: 24,000 Dobson & Barlow.

No. 14 MILL.
Location: Robison Road, Shanghai. Established: 1922. Mill Manager: B. Kawamura. No. of Spindles: 24,000 Dobson & Barlow.

No. 15 MILL.

No. 16 MILL.
A new mill project for Shanghai with 20,000 spindles.

TAINTAU MILLS.

No. 6 MILL.

No. 10 MILL.

No. 11 MILL.

NAMAN BOSEKI KAISHA
(SOUTH MANCHURIA COTTON SPINNING & WEAVING CO., LTD.)
Location: Mulchien, Fengtien Prov. Capital: G.Y. 2,000,000, all paid up. Spindles: 20,000 projected. Arrangements to build this mill were made jointly by the Wakayama Spinning & Weaving Co., Ltd., and the East Asia Development Co., Ltd. The former withdrew from the enterprise and it is now managed as the Spinning Department of the East Asia Development Co., Ltd. Tentative arrangements were made in 1923 to lease a site of 18,000 tsubo from the S. M. Ry. Co. The project has not been developing satisfactorily and it is asserted by certain observers that the enterprise will eventually be abandoned.

NISSSHIN BOSEKI KABUSHIKI KAISHA
(NISSSHIN SPINNING CO., LTD.)

NISSSHIN SPINNING & WEAVING CO., LTD.
Location: 34-36 Yangtseepoo Road, Shanghai. General Manager: Arnhold Bros. & Co., Ltd., 6 Kiukiang Road, Shanghai. Established: 1923. Mill Manager: J. Walker. Capital: Ts. 2,000,000; increased, April 15, 1920, from Ts. 1,000,000 by 1,000 new pref. shares of Ts. 100 and 300,000 new ord. of Ts. 30. Reserve and Depreciation Funds: Ts. 1,000,000. Annual Output of Yarn: About 38,000 bales; 14 count, No. of Spindles: 54,768, Ass. Looms. No. of Looms: 440, G. Keighley. Power: Steam for old machines; 6 boilers; 1 steam engine, 800 h.p.; average daily coal consumption, 25 tons; The new machines are driven by electricity, purchased from the Shanghai Municipal Council Electric Dept. Trade Marks: Anchor and Marriage. Laborers: About 2,000. History: This mill was re-organized from the "Soey Chee Cotton Spinning Co., Ltd.," established by a German in the same year with the Ewo Cotton Spinning and Weaving Co., Ltd. Part of the capital was subscribed by British investors. Company Accounts for year ending December 31, 1921: Balance at the credit of profit and loss account, including the carry forward from 1920, Ts. 578,791.15. From this was deducted the interim dividend absorbing Ts. 219,920, leaving for distribution the amount of Ts. 358,871.15, as follows:—

Tls. To pay a final dividend of Ts. 0.50 per share... 109,960.00
To general managers’ commission according to agreement ... ... ... 25,668.35
To carry forward to new account ... ... 223,302.80

Ts. 358,871.15

Plant and Machinery.—An item of Ts. 3,743.56 represents necessary additions to the spinning machinery to bring it up to date. On the recommendations of the new staff, the company expended considerably more than customary on repairs and renewals. As a result of these steps, the efficiency of the plant has been materially improved. Weaving Plant.—This now stands at Ts. 135,386.24, showing an addition of Ts. 40,960.01. During the year the mill’s activities were confined to spinning. Two-thirds of the looms were in position in March, 1922, and the department ready for operation.

PAO CHEN COTTON SPINNING & WEAVING CO., LTD.
General Office: 9a Robison Rd, Shanghai. Mills: Nos. 1 and 2 in Shanghai, and No. 3 in Tientsin. Officers: Liu Poo-sung, chief director and general manager; Ma Jen-sung, mill manager in Shanghai; Tsui Chi-hung, mill manager in Tientsin. Note:—It was reported in the press that this company borrowed Y.5,000,000 from the East China Industrial Development Co., February 1, 1922, giving a mortgage on the three mills.
PU YIH COTTON SPINNING & WEAVING CO., LTD.

Trade Marks: Atlas, Cricket, Black Dragon.

MILL NO. 1


MILL NO. 2

Location: Godon Road, Shanghai. Capital: Tls. 1,000,000. No. of Spindles: 24,000. Howad & Bullough. No. of Looms: 500. Henry Livesey. Note: This is a new mill which began operation in the spring of 1922. The mill has a site of 40 mow.

SAN SING COTTON MANUFACTURING CO., (1923), LTD.

Head Office: 7 The Bund, Shanghai. Mill: 87 Yangtsze-poo Road, Shanghai. Established: 1895. Capital: Tls. 1,500,000. Directors: Sheng En-yih (chairman), K. E. Newman, M. Reader Harris, Sheng Sung-yi, Sheng Sung-yee, Sheng Yoh-chang. Gordon Morris, P. W. Quincey. Officers: H. C. Marshall, actg. chief mgr.; Sheng Yu-lin, mill mgr.; J. M. P. Remedios, sec. Cotton Used Annually: 140,000 piculs. Yarn Output Annually: 60,000 Bales; Average Counts 14s. Trade Mark: Tamcra. No. of Spindles: 65,000. Dobson & Barlow 2,880. Howard & Bullough 4,000. Dobson & Barlow. No. of Looms: 1,000 Japanese, Toyota Loom Wks. Power: Steam, 1,400 i.h.p.; Electric, 1,215 b.h.p. Boilers, 1 B. & W. 4,020 sq. ft. h.s.; mechanical stokers and superheaters. Labourers: 4,887. History: This was the first modern cotton mill in China. Established in 1891 by a semi-official Chinese syndicate, the concern lost money and experienced various misfortunes and changes before the business was finally placed on a sound basis in recent years. One of the chief organizers was H. E. Li Hung Chang, then Superintendent of Northern Trade; and the Dowager Empress is said to have taken a personal interest in the experiment. The original equipment came from America. When the mill was destroyed by fire in October, 1913, and rebuilt two years later British machinery was installed. During the early years of the mill there were several reorganizations of the syndicate, and the name was changed to Yao Sing and later to Chih Chen and finally the original name was resumed. In one of the readjustments a controlling interest was obtained by ex-Viceroy Sheng Kung Pao, and his relatives are the chief owners at this time. The company was placed under British registry in 1912 since which time the mill has been managed under British supervision. When the mill was established, H. E. Li Hung Chang and his associates claimed for themselves a quasi-monopoly, and prohibited outsiders, who were not prepared to pay a fixed royalty for the privilege from engaging in similar undertakings. Although certain Chinese accepted this onerous condition, foreigners resented it as an undue interference with their treaty rights, and it was only when Japan, in 1895, after her war with China, inserted in the Treaty of Shimonsiki an article providing for the freedom of Japanese subjects to engage in manufacturing industries in the open ports of China, and permitting them to import machinery for such purposes, that outsiders were afforded an opportunity of exploiting the rich field for commercial develop-
ment thereof thrown open. Accordingly, so soon as the Japanese treaty came into force no time was lost in turning this particular clause to account, and the erection of no less than 11 mills—Chinese and foreign—was taken in hand.

**SHANGHAI COTTON MFG. CO., LTD.**


**MILL NO. 1**


**MILL NO. 2**


**MILL NO. 3**

*Location: 90 Yangtseapo Road, Shanghai. Established: 1919. No of Spindles: 30,502. Platt Bros. Power Plant: J. Munger. History: The Shanghai Cotton Manufacturing Co., Ltd., with a paid-up capital of Tls. 1,000,000 was incorporated under the Hongkong Ordinances, December 5, 1908, for the object of taking over as going concerns, as from July 1, 1908, the respective assets and business of the Shanghai Cotton Spinning Co., Ltd., and of the San-tai Cotton Spinning Co., Ltd. These assets comprised: At 68 Yangtseapo Road—land, buildings, power plant and textile machinery (23,000 spindles), known as the No. 1 Mill. Within this compound was a silk fatture, foreign machinery, which had but little value, having for years been worked by a Chinese lessee, often at a loss. As a tenant was not available, it was decided to realize upon the machinery and to demolish the buildings; upon this same site is now located No. 1 Weaving Mill with its own power plant, etc., which was installed and brought to the producing and earning stage during 1914-1915. At 90 Yangtseapo Road, was the No. 2 Spinning Mill comprising: land, buildings, power plant, and textile machinery (33,000 spindles). With the exception of the mill proper, the various buildings were of miscellaneous class and some were razed. During 1911-1912, within the No. 2 compound was installed the requisite buildings for power plant and 510 looms which were brought to the producing and earning stage and are known as No. 2 Weaving Mill. By purchase the area of land at both compounds was increased. The combined assets of the two companies: land, buildings, power plant and 45,872 spindles, had in July, 1908, a ledger value of Tls. 893,993. Pursuant to resolutions passed at general meetings of the shareholders on June 30 and July 15, 1920, the company was changed from British to Japanese registry.*

**SUN LUN COTTON MILL**

*(PAO TUNG COTTON MILL)*

*Location: Outside Pan Men Gate, Soochow, Kiangsu Province. Established: 1896. Capital: Tls. 557,600; to be increased. Operated by the Sheng Kee Co.; Chang I-pang, manager. Annual Cotton Consumption: Over 55,000 piculs. Annual Output: 15,500 bales of yarn; 10, 12, 14 and 16 counts. Equipment: 22,568 spindles, Dobson & Barlow; 10 carding machines, Dobson & Barlow; 1 compound engine, John & Edward Wood, England; 2 electric generators, 90 K.W. each; 3 boilers, Thomas Boley & Hyde. Laborers: 2,000. Trade Mark: Tien Kwan. History: This mill was closed a few years after its establishment because of bad management. In 1917, Liu Pai-sung formed the Pao Tung Co. and rented the mill at a time when there was a strong demand for cotton yarn. Profits, consequently, were large at first. The company began to lose money before the expiration of the 5-year lease, and the mill was operated for about one year by Wong Sheng-tze and Wong Chia-loh. In the spring of 1922 the Sheng Kee Co. managed by Chang I-pang, leased the mill, repaying Tls. 140,000 which had been spent on improvements by Wong and Wong. The mill was closed during August, 1922, for a complete overhauling of the machinery. About $100,000 was spent by the Sheng Kee Co., for repairs.*

**SUNG HSING COTTON SPINNING & WEAVING CO., LTD.**

*Head Office: 58 Kiange Road, Shanghai. Cable add., "Mowaihflour," Shanghai. General Manager: T. K. Yung. Mill Managers: Y. K. Yuen, U. S. Yung, Y. C. Yung and T. Z. Ting. Established: August, 1916, with 12,376 spindles and 250 looms in Mill No. 1, and a capital of $200,000. Branches have since been established at Shanghai, Wushi and Hankow. The average working daily output is 90 bales of cotton yarn and 1,000 pieces of cloth. About 400 pieces of cloth are used daily for manufacturing flour bags supplied to nine flour mills under the management of T. K. Yung, general manager of the cotton mill company.*

**MILL NO. 1**

TING SING COTTON SPINNING & WEAVING CO., LTD.

Location: Kong Chen Bridge, Hungchow, Chekiang Province. Shanghai Office: U. 307 Fekir Road. Established: 1904. Capital: $400,000. Officers: Managing director: S. C. Kao; Mill manager: K. C. Kao. Cotton Used Annually: 42,000 bales. Yearly Output of Yarn: 12,000 bales. No. of Spindles: 20,360. J. Hetherington & Sons, Ltd., and Dobson & Barlow, Ltd. No. of Looms: 375. Power: Steam, 50 H.P. Trademarks: Unicorn, Wave, Sea Moon for yarn; and Unicorn, Deer, Elephant Lion for cloth. Note: Raw cotton has been imported from abroad increasing quantities to meet the requirements of the Ting Sing Cotton Mill. The cotton grown in the province is also used. Ting Sing is located in Shanghai, and the finer counts it has been found essential to rely on the American article because of its longer staple. The products of the Ting Hsin Cotton Mill suffice to supply the needs not only of the immediate neighbourhood but a growing market at places south of Shanghai.

TOKUWA BOSEKI KABUSHIKI KAISHA
(TOKUWA SPINNING CO., LTD.)

Location: 97 Ward Road, Shanghai. Officers: C. Shiba, manager director; M. Baba, director; T. Kodani and T. Ogino, managers; K. Ishida, chief engineer; S. Dan, engineer. Capital: (authorized), Y. 2,000,000 in 600,000 shares at Y. 50 per share, Paid-up, Y. 1,500,000, (Y. 1,000,000). Registered April 10, 1920, with Japanese Consulate General in Shanghai. Equipment: 10,000 spindles are in operation at Mill No. 1, Shanghai. Orders have been placed (Hetherington) for 15,360 spindles for Mill No. 2, and 20,000 spindles for Mill No. 3; both mills to be in Shanghai. Note: The Tokwa Boseki Kabushiki Kaisha, with an original capital of Y. 2,000,000 was amalgamated in May, 1921, with the Chuluka Kauri Kabushiki Kaisha which had an authorized capital of Y. 1,000,000 with Y. 2,500,000 paid-up, making a total capital of Y. 30,000,000 for the T. B. K. K. Accounts, March 31, 1921: Lands, Y. 338,588; Factory equipment and implements, Y. 24,299; Buildings, Y. 281,168; Reserve implements, Y. 97,065; Machinery, Y. 1,964,570; Weaving Machinery, Y. 693,491; Machinery Fittings, Y. 44,449; This term’s loss, Y. 932,072; Loss balance carried forward to the next account, Y. 916,960.

TOYO BOSEKI KABUSHIKI KAISHA
(TOYO COTTON SPINNING CO., LTD.)

TSUNG, YUEN COTTON MILL


TUNG CHU COTTON MILL

See Ho Feng & Weaving & Weaving Co., Ltd., Ningpo, Chekiang Prov.

TUNG WEI KUNG COTTON MILL


TUNG YIH COTTON SPINNING & WEAVING CO., LTD.


WEI TUNG COTTON SPINNING & WEAVING FACTORY, LTD.

Location: Cor. Pingliang and Lay Roads, Yangszepoo, Shanghai. Town Office: 34 Avenu Edward VII, Shanghai. Established: October, 1919. Registered: February, 1920. Capital: $1,200,000. General Manager: Cheng Kai-tah. Annual Output of Yarn: 17,240 bales. No. of Spindles Operating: 8,500; under installation, 6,744, Brooks & Dockey Co. No. of Looms: 200. Power: Electric, 120 h.p. Laborers: 1,200. Trade Mark: Golden Red Peacock. Particulars: The chief shareholders of the company are Cheng Yu-teng and Cheng Yu-ju, both of Chaochow, Kwangtung. The company was organized in 1919 and the factory buildings were completed in the summer of 1920. The factory has an area of 28 acres. The main building (fire-proof) is two stories high and has a floor space of 111 x 425 ft. The group of other buildings is composed of the business offices, staff dormitory, godowns, fitting shop, boiler house, bundling room, etc. The plant is served by both water and rail transportation. Electric power is obtained from the Shanghai Municipal Council Electricity Department. Motors: No. of H.P. No. of turns Motors each per minute

<table>
<thead>
<tr>
<th>Department</th>
<th>No. of H.P.</th>
<th>No. of turns per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton Mixing Room...</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Cotton Purification Room...</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>Cotton Carding Room...</td>
<td>1</td>
<td>125</td>
</tr>
<tr>
<td>Thick Yarn Room &amp; Balancing Room...</td>
<td>1</td>
<td>220</td>
</tr>
<tr>
<td>Thin Yarn Room...</td>
<td>2</td>
<td>220</td>
</tr>
<tr>
<td>Fitting Shop...</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>920 h.p.</td>
<td></td>
</tr>
</tbody>
</table>

Machines (all from Brooks & Dockey Co.): Willow ... 1 960 3
Roving Waste Opener ... 1 805 2
Threading Opener ... 1 875 12
Hopper Bale Breaker with Mixing ... 1 308 4 4
Feed Frame ... 2 245 2
Automatic Hopper Feeder ... 2 775 4
Perforating Feed ... 2 795 4
Single Vertical Exhaust Opener and Single Beater Scuffer ... 2 400 10
40" Cards ... 5 910 4
Drawing Frames ... 15 389 1.5
Slubbing Frames (20 spindles ea.) 13 452 1.5
Intermediate Frames (126 spindles ea.) ... 17 657 2.1
Roving Frames (18 spindles ea.) ... 34 977 2.3
Ring Spinning Frames (394 spindles ea.) ... 61 8,005 4.8
Single 40 Hank Hand Reels ... 160 10 lb. Yarn Bundling Presses ... 6 64
Hydraulic Baling Machines ... 1 253 12
Quick Traverse Winding Presses ... 2 517 5
Ring Doubling Frames ... 4 8,111 5
30 Spindles Bending Machines ... 1 365 1
Paste Spreaders ... 2 50
Cutting Up Boards ... 2 50
Splicing Machines with Measure Arrangement ... 2 50
Screen Presses with Brass ... 5 50
Turner Tables ... 2 50
Pulling on Machines ... 2 50
Roller Ending Machines with Fan Complete ... 2 50
Automatic Roller Calenders ... 2 50
Stripping Appliances ... 2 50

WING ON TEXTILE MFG. CO., LTD.

Office: Wing On Co. (Shanghai), Ltd., Nanking Road, Shanghai. Mill: Hsin Hsing, Yangszepoo, Shanghai. Cable Addr., "Wingon," Shanghai. Established: 1921; began operation in October, 1922. Capital: T$3,000,000. Officers: Ko Lo, chief director; Ko Shen, general manager. Spindles: 30,720 Saco-Lowell, designed to spin 10's and 20's yarn. Power: Electric. Trade Mark: Eagle. Mill Building: The main mill building is 365 ft. by 120 ft., two stories, with a two story L 50 ft. by 80 ft. It is of reinforced concrete throughout with steel sash and has two monitors 40 ft. wide extending practically the length of the building, which incure light and ventilation for the top floor. Throughout the building hardwood floors are used for all working spaces. There are three elevators for conveying stock from one floor to the other and several staircases located at convenient points. The lighting is well arranged, all units being equipped with metal reflectors of approved design and all wiring for motors and lighting is concealed in steel conduit. The mill is heated from its own heating plant. The picker room is equipped with automatic sprinklers. Spinning (Room): In the room there are ninety-six spinning frames, the standard 4-frame motor drive being used. These motors, as well as all others in the mill, were supplied by the International General Electric Company. The arrangement of machinery in this room allows plenty of working space and the natural lighting is excellent. Heating Plant: The heating plant is located approximately 500 ft. from the main mill. A vacuum steam heating system is used with two 5-48-10 American Radiator Company's "Ideal" boilers, but
provision has been made in the boiler room for the installation of three additional boilers of the same size for future extension to the mill. The 8-in. steam supply from boiler house to mill building is carried in concrete trench. American Radiator Company’s “Peerless” wall radiation is used throughout the mill. A Worthington vacuum handles return water of condensation and Hoffman return steam traps are used on the radiation for drips on the mains. Ample and efficient fire protection equipment has been provided throughout the entire mill. The plant was designed by Andersen, Meyer & Company, who furnished all of the textile and electrical equipment, supplies, transmission material, and heating equipment with the exception of machinery and transmission material in reeling room, which were furnished by local concerns.

YAMATO SENRYO SEIFU KABUSHIKI KAISHA

(YAMATO DYE-STUFF AND CLOTH MFG. Co.)

Head Office: No. 90, Chiyoda-cho, Dairen. Capital (authorized): J.G.Y.2,000,000; paid up, J.G.Y.500,000. Products: Cotton cloths, carpets, etc. Manufacturers of dyes and chemicals used in the textile trade.

YEH CHIN COTTON MILL

Location: Hain Lung Bridge, Wusih, Kiangsi Province. Operated by the Foo Chen Co. Capital: $300,000. Officers: S. C. Yang, managing director; F. K. Yang, mill manager; T. Y. Chang, business manager. Annual Consumption of Cotton: 20,000 bales. Annual Output: 7,500 bales of yarn; 12, 14 and 16 counts. No. of Spindles: 13,332, Dobson & Barlow. Power: Steam, 250 h.p. for cotton mill, 100 h.p. for gin house. Gin has one 10,000 kw. electric generator, Japanese make. Laborers: 1,200. Trade Mark: “Sze Hai Sun Pin”. History: The Yeh Chin Cotton Mill was promoted in 1899 by Messrs. Yang L-long and Yang Ou-long with a capital of $300,000. The business did not prosper and the mill was rented to the Fu Cheng Co., in 1909 for four years. The Tung I Co., took over the operation of the plant in 1913. In March, 1918, the Foo Chen Co. (capital, $200,000) leased the mill for ten years at an annual rental of $30,000.

YU CHUNG (NO. 1) COTTON SPINNING & WEAVING CO.

Location: Tao Kung, Wuhu, Anhwei Province. Shanghaishu Office: 601 Honan Road. Established: 1919. Registered: April, 1921. Capital: $1,000,000; reserve, $10,000. Officers: F. N. Hao, Managing director; M. F. Chen, Business Manager; Y. Q. Chen, and K. L. Yih, Engineers. No. of Spindles: 15,000 Dobson & Barlow. Power: Steam, 450 h.p. Boilers, 2 B. & W., 1,900 sq. ft. h.s. Annual Consumption of Cotton: 43,200 bales. Yearly Output of Yarn: 11,000 bales. Laborers: 1,000. Trade Marks: Boy, Fish, Crane, Kou, Kiu Tai, Yang Kwe. Particulars: The net profit for 1921 was $100,000. The stockholders at a meeting in January, 1922, voted to increase the capital from $800,000 to $1,000,000 and to use these additions in physical equipment: 5,000 spindles to cost $275,000; other machinery to cost $47,000; and a warehouse to cost $80,000.

YU HOU COTTON SPINNING AND WEAVING CO., LTD.

Location: Changsha, Hunan Prov. Established: April, 1923. Acting Manager: Hung Pung-li. A preliminary office was opened at 9 Hankow Road, Shanghai, early in 1923. Equipment for the manufacture of cotton yarn was purchased in Shanghai in March, 1923. The promoters were Tai Lien, Hung Pung-li and 23 other men. The mill was established to supply the demands for cotton yarn in Hunan Province which exceeded the output of existing mills. The promoters of the new enterprise consider that cotton mills in Hunan Province have these advantages over the Shanghai mills: The cheapness of foodstuffs and wages in Hunan, the abundance of cotton and coal, the large demand for cotton yarn in the neighboring provinces of Kwangtung and Kweichow and the difficulty in importing yarn from Shanghai and Hankow during the latter part of autumn and early part of winter.

YU HUA COTTON SPINNING AND WEAVING CO., LTD.

YU TAH COTTON SPINNING & WEAVING CO., LTD.

Location: Chitang, Changshu, Kiangsu Province. Established: July, 1905. Registered: January, 1906. Capital: T$ 300,000. General Manager: Chu Yu-hung. Annual Consumption of Cotton: 25,000 piculs. Annual Output of Yarn: 7,500 bales. No. of Spindles: 15,000 (3,000 Asa Lees). Power: Steam, 380 h.p. Laborers: 1,085. Trade Mark: Weaving Girl. History: After operating at a loss, Chu leased the mill in July, 1917, to the Shen Kee Co., for five years at an annual rental of T$ 30,000. Hung Ming-tu and Chu Yau-ching formed the Shen Kee Co., with a capital of T$ 50,000. When the lease expired in July, 1922, Chu operated the mill until January 1, 1923, when he leased the plant to Kuo Hsin I at an annual rental of T$ 40,000. An additional 5,000 spindles will be purchased.

YU YUAN COTTON SPINNING & WEAVING CO., LTD.


Remarks: The first unit of the mill was constructed in 1917, and was under operation in 1918 with 25,000 spindles. The promoters are high officials, and the mill has been financed by a few men. During the first three years enormous profit was realized, and with this the second extension of 25,000 spindles was made in 1920, and a third extension of 21,840 more spindles and 500 looms was made in 1921. Thus with a total of 71,840 spindles and 500 looms, it becomes the largest mill under the same management in the North, and one of the largest mills in China. Among the factors that have contributed to its success are honesty and efficiency on the part of the manager, together with good systems of bookkeeping, recording of production, and laborers, etc. The mill employs practically all young men, called apprentices, from 12 years old and upwards, with a few women operatives. Lodging and food are provided free to the apprentices and mechanics’ families. The tenement rooms are built of one story near the mill for all operatives. The daily production per spindle for 16’s yarn for so-called 24 hours is over 1 lb., and for 10’s nearly 2 lb. On the average the percentage is from 5 to 10 higher than other Chinese mills. The breaking strength of 16’s yarn is nearly 90, and of 10’s over 110 lb. These two things have made the mill successful in the manufacturing end. Roving, drawing frame and spinning frame operatives are paid by hanks. In average Chinese mills there are about 650 employees per 10,000 spindles for both day and night shifts, but this mill employs 5 to 10 per cent. less. In other mills many small children, not tall enough to reach the front roll of spinning frames, are employed; in this mill no person under 12 years of age is employed. Dining halls are provided for operatives outside the mill proper. The welfare features for the employees have been developed. Pool rooms, mill school, lecturing system, reading room, library, etc., are provided. Nearly every operative receives a bonus twice a year of from $10 to $150. Every salaried man receives more than 200 per cent. bonus monthly. The shareholders have been receiving over 30 per cent. dividends besides the additional shares for the new additions. American equipment supplied through Andersen, Meyer & Co.