

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 *mow* 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:—

1918	10,965,530 piculs
1919	9,316,390 "
1920	6,750,000 "
1921	5,438,000 "
1922	7,342,000 "

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 handcraft" 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 modern 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 1890. 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 3,550,108 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; 35 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:—

Name	Site	Nationality	Estab.	Capital	Spindles	Looms
Ewo No. 1 ...	Shanghai	British	1895		73,952)	1,900
" " 2 ...	"	"	1914	T. 6,000,000	56,532)	
" " 3 ...	"	"	1910		25,576)	
Oriental ...	"	"	1895	1,500,000	54,768	440
Laou Kung Mow	"	"	1895	800,000	50,096	500
Total of British Mills (5) in Shanghai				8,300,000	260,924	2,840
Shanghai 1 ...	Shanghai	Japanese	1908		20,392	376
" 2 ...	"	"	1908	Y. 4,000,000	25,480	510
" 3 ...	"	"	1908		50,592	
" 1 ...	"	"	1895	Y.10,000,000	83,056	500
" 2 ...	"	"				
" 3 ...	"	"				
Naigai Wata 3	"	"	1911		23,040	
" " 4	"	"	1913		41,536	
" " 5	"	"	1915		65,420	
" " 7	"	"	—			600
" " 8	"	"	—		20,416	
" " 9	"	"	—		26,936	1,000
" " 12	"	"	—		20,800	
" " 13	"	"	—		24,000	
" " 14	"	"	—		24,000	
" 1	"	"			30,720	
" 2	"	"			15,312	
"	"	"			58,240	
"	"	"			40,704	
"	"	"			27,372	
" 1	"	"			10,000	
" 2	"	"		\$9,000,000	15,360	
" 3	"	"			20,000	
"	"	"			50,000	
Total of Japanese Mills (24) in Shanghai					693,376	2,968

The above table does not include the Japanese mills in other parts of China, such as Tsingtao 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):—

Province	Mills	Spindles	Looms	Hands	Cotton Consumption	Yarn Production
Kiangsu	48	1,337,882	9,124	67,707	1,975,443	560,836
Chihli	9	308,552	800	12,470	507,810	144,510
Hupeh	5	249,328	1,500	10,900	195,419	45,659
Honan	4	113,000	200	6,930	165,650	47,920
Chekiang	3	56,624	375	5,158	148,900	40,000
Shantung	2	58,000		4,634	144,000	40,000
Anhwei	1	10,000		1,000	43,200	10,800
Hunan...	1	40,000		2,260	84,516	25,488
Kiangsi	1	15,360	300			
Shansi	1	12,880				
Fengtien	1	20,000	200			
K'tung	1	10,000				
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 weaved 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):—

Year	Yarn manufactured in China	Yarn imported	Per cent. of import	Total Consumption
1912	800,000	2,300,000	74	3,100,000
1913	1,200,000	2,700,000	70	3,900,000
1914	1,600,000	2,500,000	60	4,100,000
1915	1,600,000	2,600,000	61	4,200,000
1916	2,500,000	2,400,000	50	4,900,000
1917	2,600,000	2,000,000	43	4,600,000
1918	2,700,000	1,100,000	29	3,800,000
1919	3,300,000	1,400,000	30	4,700,000
1920	4,000,000	1,300,000	25	5,300,000
1921	4,500,000	1,200,000	21	5,700,000

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 191,308 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; Whittin 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 2,066,582 spindles.

CHINA COTTON MILL STATISTICS

Number of Spinning Spindles:—

	Aug. 1, 1923	Feb. 1, 1923	Aug. 1, 1922	Feb. 1, 1922	Aug. 1, 1921
Ring Spindles	2,207,228	2,203,033	1,972,763	1,732,632	1,552,950
Spindles in course of erection	234,480	619,744	243,282	181,344	120,000

(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:—
(in bales of 500 lbs.)

	Half-Year Ending		July 31, 1922		July 31, 1921	
	July 31, 1923	Jan. 31, 1923	July 31, 1922	Jan. 31, 1922	July 31, 1921	Jan. 31, 1921
Chinese Cotton	424,142	492,162	394,689	349,387	378,715	378,715
American Cotton	30,484	58,115	82,956	71,970	20,804	20,804
East Indian	153,453	135,330	187,951	110,314	67,718	67,718
Egyptian	900	2,569	708	505	—	—
Sundries	240	1,450	554	81	649	649
Total	609,219	689,626	666,858	532,257	467,886	467,886

Cotton Mill Stocks:—
(in bales of 500 lbs.)

	Aug. 1, 1923	Feb. 1, 1923	Aug. 1, 1922	Feb. 1, 1922	Aug. 1, 1921
Chinese Cotton	84,678	211,775	131,068	181,613	129,947
American Cotton	16,163	20,188	48,500	44,747	13,800
East Indian Cotton	72,902	50,857	96,792	40,087	41,729
Egyptian	380	330	1,190	1,860	—
Sundries	100	100	24	—	652
Total	174,223	283,350	277,574	268,307	186,128

Short Time:—

	Half-Year Ending		July 31, 1923		Jan. 31, 1923	
	July 31, 1923	Jan. 31, 1923	July 31, 1923	Jan. 31, 1923	July 31, 1923	Jan. 31, 1923
Number of spindles stopped	680,325	243,243	680,325	243,243
Average number of hours stopped	1,820	1,472	1,820	1,472
Number of weeks during which the spindles from which returns have been received were stopped	425	134	425	134

COTTON MILLS

廠紗華振

ANGLO-CHINESE COTTON MFG. CO.

(CHENG HUA COTTON MILL)

Office: 65 Peking Road, Shanghai. Mill: 4 Lay Road, Shanghai. Established: 1905. Capital: Tls. 300,000; Reserve, Tls. 100,000. Officers: General manager: V. T. Sih; Mill superintendent: H. C. Chow; Engineer: P. C. Lee.

Employees: 700. Annual Cotton Consumption: 28,000 piculs. Annual Output: Yarn and thread, 8,000 bales. No. of Spindles: 13,548, Howard & Bullough. Power: Steam, 350 h.p. Trade Marks: Two Elephants, Two Dragons.

廠紗織紡州常

CHANGCHOW COTTON SPINNING & WEAVING CO., LTD.

Mill: Outside South Gate, Changchow, Kiangsu Province. Shanghai Office: Fu Wah Savings Bank, 45 Kiangse Road, Shanghai. Established: November, 1920. Registered: May, 1921. Capital: \$1,000,000. Officers: Chien 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: 956. 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.

廠紗新振

CHEN HSIN COTTON SPINNING & WEAVING CO.

Location: West Gate, Wusih, Kiangsu Province. Established: January, 1906. Registered: December, 1906. Capital: Tls. 1,000,000. Officers: Managing director: J. G. Tai; Business manager: S. F. Woo; Engineers: D. O. Sze, W. S. Yung and S. Z. Tong. No. of Spindles: 18,000, Asa Lees; 12,000, Dobson and Barlow. Laborers: 2,558. Power: Electric, A. E. G. and Siemens turbo-generators; 2 B. & W. boilers, 2,825 sq. ft. h.s.; superheaters and mechanical stokers. Annual Consumption of Cotton: 68,000 piculs. Annual Output: 20,000 bales of yarn. Trade Mark: "Sze Hai Sung Ping."

CHENG HUA COTTON MILL

See Anglo-Chinese Cotton Mfg. Co., Shanghai.

廠紗襄震

CHEN HUANG COTTON MILL

Location: South Bank, Sha Hsin Ho, Wuchang, Hupeh Province. Hankow Office: Wei Lung Shih St. Established: December, 1922. Registered: June, 1923. Capital: Tls. 1,000,000. Officers: Liu Tse-ching, general manager; Hung Tse-ting, mill manager. No. of Spindles: 20,736, Asa Lees. 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.

廠紗興成

CHEN SHING COTTON SPINNING & WEAVING CO., LTD.

Location: Wuchih, Honan Province. Established: January, 1907. Registered: December, 1907. Capital: \$250,000. Officers: Chief director: Lo Lien-chen; General manager: Lo Hsueh-tien. Annual Consumption of Cotton: 2,450 piculs. Annual Output of Yarn: 1,320 bales. No. of Spindles: 11,000, Saco Lowell. Power: Steam, 280 h.p. Laborers: 230. Trade Marks: Shwang Hsi, Aeroplane, Pagoda.

CHENG TAI COTTON MILL

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

廠紗崎長

CHIANG CHI COTTON MILL

Location: Tsingtau, Shantung Prov. A Japanese enterprise. Spindles: 20,000 projected. This mill is listed (without details) in the 1922 report of the Chinese Cotton Millowners' Association.

廠紗記公泰濟

CHI TAI COTTON SPINNING & WEAVING CO., LTD.

Location: Taitsang (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: Ching Pai-yien, and Fan Yui-chang; Mill manager: Chen Yi-yang. Annual Consumption of Cotton: 22,660 piculs. Annual Output of Yarn: 6,450 bales. No. of Spindles: 22,700 in operation; Looms: 200 projected, Power: Steam, 670 h.p. Laborers: 1,170. Trade Mark: Shwang Feng.

History: The mill was established and opened by Chiang Pai-yien. 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.

司公織紡華晉

CHIN HUA COTTON SPINNING & WEAVING CO.

Head Office and Mill: Yutze, Shansi Province. Branches: 44 Chiao Chen Koo, Hsuan Wu Men Wei, Peking; Foo Kung Sze, Tung Chi Hu Yang, Taiyuan, Shansi Province. Established: 1921. Capital: \$1,500,000. Officers: J. T. Liu, manager; J. C. Hsu, chief director. No. of Spindles: 12,800, 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."

廠 紗 豐 慶
**CHING FONG COTTON SPINNING &
WEAVING CO.**

Office: Pei Tang, Wusih, Kiangsu Province. *Mill:* Chow San Pang, Wusih. *Shanghai Office:* 52 Ching Shun Li, Peking Road. *Established:* April, 1921. *Registered:* June, 1921. *Capital:* Tls. 1,000,000. *Officers:* P. C. Daung, managing director; K. Y. Daung, mill manager; Z. C. Van, engineer. *No. of Spindles:* 14,800, Dobson & Barlow. *No. of Looms:* 250, Wm. Dickinson & Sons. *Operators:* 1,300. *Cotton Consumed Annually:* 50,000 piculs. *Annual Output:* 14,300 bales cotton yarn. *Trademarks:* Double Fish and Shepherd. *Power:* Electric, 650 B.H.P. The plant is steam turbine self-generating set of 2,000 k.w. by English Electric Co., 3 B. & W. boilers, 2,852 sq. ft., h.s. with engine stokers and economisers. *Particulars:* The mill building is of modern reinforced concrete construction, equipped with the latest fire extinguishing apparatus by Witter & Sons, Ltd.

廠 織 染 明 啟
CHI MING DYEING & WEAVING CO.

Plant: Sia Chiao, West Gate, Shanghai. *Business Office:* Nih Shing Li, Nanking Road, Shanghai. *Established:* 1913. *Registered:* May, 1920. *Capital:* \$300,000. *Proprietor:* Chu Wen-chi. *Products:* Satin, felt cloth, fancy piece-goods, etc., trade mark, "Two Boys"; red and blue towels, trade mark, "Two Boys"; yarns and thread.

司 公 緯 經
CHING WEI WASTE COTTON SPINNING CO.

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

司 公 織 紡 泰 振
**CHUN TAH COTTON SPINNING &
WEAVING CO., LTD.**

Office: Q493 Tientsin Road, Shanghai. *Mill:* Jessfield Road, Shanghai. *Established:* 1919. *Capital:* Tls 800,000. *Officers:* Managing director: C. Y. Wong; Mill manager: K. S. Ching; Superintendent engineer, J. W. Brierley.

No. of Spindles: 20,120 Dobson & Barlow. *No. of Doubling Spindles:* 5,040 Dobson & Barlow; Average Counts 20s. *Employees:* 2,000. *No. of Looms:* 100, Wm Dickinson. *Power:* Electric, 700 B.H.P.

Particulars: The mill derives its current from the Shanghai Municipal Council Electricity Department. The driving is of the group system of motors, each section being driven by a separate 3 phase induction motor of 350 volts. Electrical equipment manufactured by Brush Electrical Engineering Co. (Calder-Marshall & Co., agents).

Trade Marks: Locomotive, Boat and Balloon.

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 Dyeworks: Managing director: C. Y. Wong; Advisor: J. Tomlinson; Mill manager: A. D. Young.

DAH KONG COTTON MILL

See Dai Nippon Cotton Spinning Co., Ltd.

廠 紗 豐 大
DAH FOONG COTTON MFG. CO., LTD.

Office: A43 Kiangse Road, Shanghai. *Mill:* Tan Tse Kiang, Pan Kya Wen, Shanghai. *Established:* 1902.

Capital: \$1,000,000. *Proprietor:* Zee Ping-we. *No. of Spindles:* 20,736. *Looms:* 200. *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 mow. Dormitories built by the mill management accommodate 500 workmen. This mill was purchased by Zee Ping-we in June, 1923. Zee had the following official notice printed 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, I, 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 at Tan Tse Kiang, 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-we."

廠 紗 興 大
DAH SHING COTTON MILL

Office and Mill: Shihkiachwang, Chihli Prov. *Established:* November 26, 1921. *Capital:* Tls. 1,200,000. *General Manager:* E. F. Chang. *Equipment:* The mill is planned for an ultimate capacity of 50,000 spindles and 1,000 looms. At present it is running with 20,000 spindles. The picking machinery, cards, drawing, slubber, intermediates and roving frames are manufactured by the Woonsocket Machine & Press Company of Woonsocket, R.I., U.S.A., and the spinning frames by the Fales & Jenks Machine Company of Pawtucket, R. I., U.S.A., supplied by the Wah Chang Trading Corporation of Shanghai, the sole agents of the above manufacturers in China. The whole mill buildings are of reinforced concrete fire-proof construction. Provisions for heating and ventilation are well taken care of. *Power:* Electric. For details of 1,000 k.w. Westinghouse power plant, see Electric Light and Power Dept. *Humidifier System:* The humidifiers installed in this mill are of the turbo type manufactured by the Parks & Cramer & Co. This system gives a uniform humidity throughout the mill building. The average relative humidity in the spinning room is about seventy, and that in the card room is about fifty. *Electric Drive:* Both group and individual systems of electric drive are employed in the mill. The motors are 40 degree rating squirrel cage induction type of Westinghouse manufacture. The size and capacity of the induction motors were specified exactly according to power requirements of the spinning frames in order to secure better power factor on the generator, and therefore higher efficiency. *History:* The completion of a 20,000 spindle cotton mill together with a 1,000 k.w. central power station within eleven months is a record which the Dah Shing Cotton Mill accomplished. The company was organized in November, 1921 by Shu Yung-lung, president of the Hupeh Government Cotton Mills, and E. F. Chang, former mill manager of the Hua Feng Cotton Mill, Woosung. The contract of supplying machinery and the complete mill equipment including designing and erection was awarded after competitive bidding to the Wah Chang Trading Corporation of Shanghai on December 5, 1921. Plans were completed in January, 1922 and construction began the following month. On September 20, the first 1,000 k.w. turbo-generator unit was installed and tested and the first 10,000 spindles began to produce yarns. By November 1, the 20,000 spindles were in full operation.

廠 紗 綸 大
**DAH LUNG COTTON SPINNING &
WEAVING CO., LTD.**

Mill: Outside South Gate, Changchow, Kiangsu Province. *Wholesale Department:* East No. 1 Street,

Changchow. *Established:* February, 1920. *Registered:* July, 1920. *Capital:* \$1,000,000. *Officers:* Liu So-pai, chief director; Chiang Kwang-tsu, general manager; Chiang Yue-ching, vice-manager Mr. Brary of the Ziang Hing Co., Shanghai, engineer. *Annual Consumption of Cotton:* 36,000 piculs. *Yearly Output of Cloth:* 51,200 pieces. *No. of Spindles:* 10,000 Dobson & Barlow. *No. of Looms—Hand Power:* 120; *No. of Looms—Power:* 260, Wm. Dickinson Sons. *Power:* Steam Engine 600 I.H.P. by Hick Hargreaves & Co. *Employees:* 1,300 *Trade Marks:* "Six Cranes," "Eagle," "Eagle and Globe," "Butterfly and Globe."

廠 紗 生 大

DAH SUNG COTTON MILLS

(DAH SUNG COTTON SPINNING & WEAVING CO. LTD.)

Head Office: Tang Kai Tsah, Nantungchow, Kiangsu Province. *Shanghai Office:* 22 Kiukiang Road. Cable Add., "Navi gatrad," Shanghai. *Location of Mills:* Nos. 1, 4 and 8 at Nantungchow; No. 2 at Chiu Lung Chen, Tsungming, Island of Tsungming, Kiangsu Province; No. 3 at Chang 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. 7,200,000 (approximate). *Officers:* Chang Chien, former Minister of Agriculture and Commerce. President; Chang Cha, 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. 9,705,782, 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. 437,500. *Directors:* Chang Chien and Chang Cha; *Mill manager:* Ching Liang-fu. *Annual Consumption of Cotton:* 160,700 piculs. *Annual Output, Yarn:* 1/12 cts. yarn, 34,300 bales; 1/14 cts. yarn, 35,000 bales; 1/16 cts. yarn, 7,000 bales; 1/20 cts. yarn, 500 bales; 2/42 cts. yarn, 100 bales. *Annual Output, Cloth:* Plain calico, 120,720 pieces; bale cloth, 38,600 pieces. *No. of Spindles:* 79,680, Hetherington. *No. of Looms:* 700, Lowell, and Henry Livesey. *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 20,680 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 gins 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

Location: Chiu Lung Chen, Tsungming, Tsungming Island, Kiangsu Province. *Established:* July, 1904. *Registered:* August, 1905. The mill was completed in March, 1907. *Capital:* Tls. 1,200,000; Reserve; Tls. 350,000. *Officers:* Chong Shi-yuen, manager; Woo Huching, mill manager; Mr. Tenny (British), engineer. *Annual Consumption of Cotton:* 80,000 piculs. *Annual Output of Yarn:* 20,000 bales. *No. of Spindles:* 35,000 Howard & Bullough. *No. of Looms:* 200 under installation. *Employees:* 3,900. *Power:* Steam, 1,200 h.p. *Trade Mark:* "Shou-hsing" (Long Life Old Man)

DAH SUNG MILL No. 3

Location: Chang Lo Chen, Haimen, Kiangsu Province. *Established:* 1919. *Capital:* Tls. 2,000,000. *Manager:* Fei Shan-pen. *No. of Spindles:* Operating, 8,000; under installation, 26,000. *No. of Looms:* 420, Henry Livesey. *Power:* Steam, 1,000 h.p. *Trade Mark:* "Shou-hsing."

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:* \$1,500,000. *No. of Spindles:* 24,000, Whitin. *No. of Looms:* 400.

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.

司 公 織 紡 通 大

DAH TUNG COTTON MFG. CO., LTD.

Office: 62 Kiangse Road, Shanghai. *Mill:* Tsungming Island, Kiangsu Prov. *Officers:* S. C. Yao, managing director; S. S. Tu, asst. mgr.; L. C. Soo, Chinese secretary; M. F. Sze, English secretary; C. J. Loo, chief textile dept.; S. C. Tu, chief business dept.; Y. S. Vai, chief acct. dept.; Z. K. Sze, chief gen. affairs dept.; W. Z. Yue, statistician. *Established:* February, 1920. *Registered:* June, 1920. *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, scutching, 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 intend 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 & Doxey (1920), 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 scutchers, 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 126 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.

廠紗康大

DAI NIPPON COTTON SPINNING CO., LTD.

(DAH KONG COTTON MILLS)

Head Office: Osaka, Japan. Shanghai Office: 53 Szechuen Road. Cable Add.: "Dah Kong," Shanghai. Established: June, 1889. Capital: Y.51,000,000.

MILL No. 1, DAH KONG COTTON MILL

Location: 2 Teng Yueh Road, Yangtzepoo, Shanghai. Officers: G. Miyano, mill mgr.; Y. Takahashi, sub-mgr. No. of Spindles: Working, 12,000 Brooks & Doxey, and 12,288 Whitin Mach. Wks.; projected, 15,840.

MILL No. 2

Location: 2 Teng Yueh Road, Yangtzepoo, Shanghai. No. of Spindles: 32,000, projected.

TSINGTAU MILL

Location: Tsingtau, Shantung Prov. Established: April, 1920. Capital: Y.3,000,000. Mill Manager: G. Matsuda. No. of Spindles: 25,344 Platt Bros., and 25,000 Whitin Mch. Wks. 5 B. & W. boilers, 4,510 sq. ft. h.s.; superheater and stokers.

廠紗興同

DOKO BOSHOKU KABUSHIKI KAISHA

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

Head Office: 42 North Soochow Road, Shanghai. Cable Add., "Dokobo," Shanghai. Branch: c/o Osaka Godo Boseki K.K., 6 Nichome, Dojima Homa Dori, Kita-ku, Osaka, Japan. Mills, No. 1 and No. 2: 45 Gordon Road, Shanghai. Established: March, 1920. Capital: Y.15,000,000; paid up, Y.3,750,000. Directors: S. Taniguchi, president, H. Akiyama, M. Sumida, I. Iio, Shanghai Manager: N. Yamaguchi. No. 1 Mill: Spindles working, 35,400 Platt Bros.; projected, 22,800. No. 2 Mill: Spindles projected, 28,000. Looms: Projected, 952. Power: Electric, current obtained from Shanghai Municipal Council Electric Department. Trade Mark: "Sun Crane."

廠紗昌同

DONG CHONG COTTON MILL

Location: Nantao, Shanghai. Established: 1908, by Chu Tze-yao. Capital: Tls. 600,000. Officers: General manager: Shen Ming-hsien, Mill manager: Shen Chung-hsien. Annual Consumption of Cotton: 26,495 piculs. Annual Production of Yarn: 7,680 bales. Employees: 760. No. of Spindles: 11,592 (second-hand). Trade Mark: "Peacock."

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.

廠紗和怡

EWO COTTON MILLS, LTD.

General Managers: Jardine, Matheson & Co., Ltd., Shanghai.

Capital: (authorized), Tls. 6,000,000; divided into 1,000,000 ordinary shares of Tls. 5 each and 10,000 cumulative preference shares of Tls. 100 each; Issued Tls. 4,900,000; unissued, 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 Yangtsepoo Cotton Mill, Ltd., three British mills, located in Shanghai and controlled by Jardine, Matheson & Co., Ltd.

Ewo MILL

Location: 46 Yangtzepoo Road, Shanghai.

Mill Manager: James Harrop.

Registered in 1895 and in operation since May, 1897; is equipped with 72,512 ring spindles (Platt Bros.), four doubling frames and 812 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 Tls. 750,000. Later in 1919, seven per cent. cumulative preference shares were issued to the value of Tls. 400,000, making a total capitalization of Tls. 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 122 per cent. on the reduced capital, with a reserve fund of Tls. 350,000 and an equalization of dividend fund of Tls. 500,000.

Result 1897 to 1918 inclusive, Tls. 50 shares:

	Tls.
Profit...	4,624,755
Depreciation...	1,522,392
Reserves ...	1,180,000
Dividends on ordinary shares ...	155

The last dividend paid by the company before the amalgamation (for 1920) was: ord. int. div., Tls. 22; final div., Tls. 68; reserves, Tls. 2,087,809.

KUNG YIK MILL

Location: 16 Robison 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 Tls. 1,000,000. For the ten years of the company's separate existence the dividends amounted to Tls. 24.40 per Tls. 10 share, equivalent to an annual return of 24.4 per cent. At the time of the amalgamation the reserve funds amounted to Tls. 610,943, on a paid-up capital of Tls. 750,000. The progress of the company is shown by these comparative figures for the years 1911, 1915 and 1920:

	1911.	1915.	1920.
	Tls.	Tls.	Tls.
Net Profits ...	1,08,460	207,755	940,518
Reserves ...	—	95,000	610,943
Dividend ...	12%	15%	8.0%

YANGTSEPOO MILL

Location: Wetmore 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: Pref., 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 \$900,000 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 \$56. 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 \$1,656,000 local currency. The company was reconstructed 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 Yangtzepoo Mill 1915 to 1918 inclusive, Tls. 5 shares :

	Tls.
Profit... ..	1,280,487
Depreciation	343,928
Reserves	340,000
Dividends on ordinary shares	2.05

廠 紗 昌 早

FU CHANG COTTON SPINNING & WEAVING MILL

Location : Loon Pah-dau, Tingyen, Jukao, Kiangsu Province. *Established* : September, 1922. *Capital* : (authorized), \$1,500,000. *No. of Spindles* : 15,000. *Looms* : 200. *Promoters* : Sha Kien-an, Pan Sing-pa, Sha Shih-tu and Kuo Yih-ting.

廠 紗 士 富

FUJI GAS BOSEKI KABUSHIKI KAISHA

(FUJI GAS SPINNING Co.)

See also Cotton Mills, Japan.

Head Office : 115 Gochome, Oskima Machi, Minami Katsushika Gun, Japan. *Mill* : Tsingtau, Shantung Prov. *Established* : October, 1921. *Capital* : Y.41,000,000. *Representative* : H. Tomoda. *No. of Spindles* : (projected) 31,360. *Platt Bros.* 3 B. & W. boilers, 4,570 sq. ft. heating surface, with superheater, stokers, etc. *Shanghai Mill* : The company has projected a spinning mill in Shanghai with 50,000 spindles.

廠 紗 華 中 大

GREAT CHINA COTTON MFG. CO., LTD.

Location : Pao-shan-hsien, Woosung, Shanghai, Kiangsu Province. *Shanghai Office* : 58 Szechuen Road. Cable

Add., "Chinagreat," 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, Doney & Co.); one 1,000 k.w. turbo-alternator (German) G.M.A.; one 1,000 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, Doney & 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 *mow*; 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 company officials 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, 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 限 有 織 紡 一 第 口 漢

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

Office : 53 Mariin Skaia, R.C., Hankow, Hupeh Prov. *Mill* : Sze Ma Lo, Wuchang, Hupeh Prov. *Officers* : Lee Tse-wing, managing dir.; Simon Lou, sub-mgr. and sec.; Hsu Feng-chuan, mill manager. *Established* : January, 1916. *Registered* : June, 1920. *Capital* : \$3,000,000; reserve, \$120,000. *Annual Consumption of Cotton* : 44,419 piculs. *Annual Output of Yarn* : 12,659 bales. *No. of Spindles* : Operating, 33,440. *Asa Lee & Co.* : projected, 55,152. *Employees* : 3,500. *Trade Marks* : Huang Ho Lou, Nine Stars. *Plant* : Power, steam, 5,000 h.p. Spinning machinery, accessories and mill gearing from Asa Lee & Co.; Westinghouse motors. The mill is fitted throughout by the Grinnell sprinkler system, supplied by Mather & Platt. Electricity is obtained from the Wuchang Electric Light Co.

廠 紗 二 第 口 漢

HANKOW NO. 2 SPINNING AND WEAVING MILL

Location : Wuchang, Hupeh Prov. *Promoter* : Lee Tse-wing, gen. mgr. of No. 1 Mill. *Established* : 1923.

HENG CHANG YUEN COTTON MILL

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

廠 紗 大 恒

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-*

lished: February, 1920. Registered: April, 1920. Capital: \$1,000,000. Officers: S. C. Moh, chief director and general manager; T. H. Chung, mill manager. No. of Spindles: 15,532 Saco-Lowell. Power: Electric, 400 h.p. Laborers: 970. Trademarks: Golden Cock, Butterfly, Flower and Butterfly.

局新織紡豐恒
**HENG FOONG COTTON MANUFACTURING
CO., LTD.**

Mills: 1-2 Whashing Road, Yangtzepoo, Shanghai. Town Office: 9, Ningpo Road, Second Floor, Shanghai. Established: 1890. Capital: Tls. 1,080,000. Officers: C. C. Nieh, Managing Director; C. L. Nieh, Mill Manager; S. C. Chu, L. C. Mow and T. S. Foo, engineers. Annual Cotton Consumption: 104,794 piculs. Annual Output: Yarn 30,266 bales; cloth (in pieces) 339,112. No. 1 Mill: No. of Spindles: 21,696 British. No. 2 Mill: No. of Spindles: 23,040 American. Weaving Mill: No. of Looms: 604 British. Power: Electric, 1,806 h.p. Trade Marks: Yarn, 10s "Golden Lion," 10s-20s "Pony," 10s-20s "Cloud Stork." Cloth; "Stork," "Goat," "Horse," "Ox," "Eagle," "Dragon," "Tower," and "Globe." History, No. 1 Mill: This mill, known formerly as "The Chinese New Cotton Spinning Company," was promoted by H. E. Li Hung Chang and some prominent business men of Shanghai in 1890, and is, therefore, one of the very oldest in the industry. It began spinning with the old-fashioned roller cards which, in 1915, were superseded by the revolving flat cards and other modern machines. The whole of the original equipment was imported from England. The mill was acquired by the Nieh family in 1907, and has, since then, been run by them as a private concern under the management of Mr. C. C. Nieh and his brothers. The new owners, realising the superiority of electric over steam power, were the first in China to install electricity as a motive power. No. 2 Mill: This, one of the most modern mills in China, commenced work in 1919 with American-made machinery, excepting that of the blowroom which is of English make. The building is a three-storied one of reinforced concrete construction. The "Cloud Stork" yarn of these mills is the standard chop of the first Cotton Exchange, known as the Chartered Stock and Produce Exchange, on which are based the values of other chops. Both the yarn and cloth produced by these mills, owing to their popularity, are in good demand in various parts of the country.

廠紗源恒
**HENG YUAN COTTON SPINNING &
WEAVING CO., LTD.**

Office and Mill: Yu Wei Lo, Hopei, Tientsin, Chihli Province. Established: May, 1920. Registered: November, 1920. Capital: \$4,000,000 of which \$510,000 was subscribed by Chinese government officials and \$3,490,000 by merchants; Reserve: \$236,000. Officers: President: H. E. Tsao-jui, civil governor of Chihli Province; Vice-president: J. T. Chang; Mill manager: J. M. Wang. Equipment: There are 25,000 spindles (Saco-Lowell) in operation with 15,000 more projected. The weaving department has 100 Draper sheeting looms and 100 Knowles duck looms. The reeling room is one of the few in China operated by power. The Saco-Lowell slasher and sizing system is used. Curtis and Marble machinery is used in the cloth room. General Electric Co., motors are employed throughout the mill. In the picker room the cotton is conveyed from the bale breaker to the bins in galvanized iron pneumatic tubes. The picker room machinery is from the Kitson Shops of Lowell, Mass. The complete equipment of the factory was purchased through and installed by Andersen, Meyer & Co. Boilers: Stirling type, B. & W., with Murphy underfeed stokers.

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: 3,627. 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.

廠紗豐和
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 \$900,000 in April, 1922. Officers: Chief director: Tai Jui-ching; General manager: Lu Tse-ching. Annual Consumption of Cotton: 86,400 piculs. Annual Output: 24,000 bales of yarn. No. of Spindles: 23,200, Brooks Doxey. Power: Steam, 800 h.p. Laborers: 2,500. Trade Marks: Unicorn, Wave, 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 Chiu Yuen Cotton Mill, destroyed by fire in 1917. The Tung Chiu Yuen Mill was founded in 1894. It had a capital of \$900,000 and was operating 23,900 spindles and 216 looms. Profits (1921): \$700,571.89 of which \$59,548 was placed in the reserve.

廠紗章鴻
**HONG CHANG COTTON SPINNING,
WEAVING & DYEING CO., LTD.**

Mill: S.S. 875 Markham Road, Shanghai. Office: 60 Kiangse Road, Shanghai. Established: 1921. Capital: Tls. 1,500,000. Officers: Kok Tse-ping, Director; Chen Bie-tse, Gen. Manager; E. E. Lever, Mill Manager; W. C. Seeds, Secretary; and Kok Tse-tsang, 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 Yue Cotton mill and it was promoted by the shareholders of the latter. The mill site covers 35 mow. Operation began in May, 1922.

司公織紡裕鴻
**HONG YUE COTTON SPINNING &
WEAVING MILL CO., LTD.**

Head Office: 60 Kiangse Road, Shanghai. Mill: 55 Markham Road, Shanghai. Established: 1916; registered, 1916. Capital: Tls. 1,800,000; reserve, Tls. 160,000. Officers: Kok Tse-ping, Director; Chen Bei-tse, General Manager; Kok Laing-foo, Supt.; W. C. Seeds, Secretary, E. E. Lever and Chen Yoh-nan, Mill Managers. No. of Spindles: Operating, 27,648, Asa Lees; in project, 10,752, Asa Lees. No. of Looms: 240, Henry Liversey. Employees: 3,400. Power: Electric, 1,400 h.p. Boilers: 1 B. & W., 1,098 sq. ft. h.s. Annual Consumption of

Cotton: 80,580 piculs. **Annual Output of Yarn:** 20,042 bales. **Trade Marks:** Yarn, Paoting, Fish: Cloth, Paoting, Jenting, etc.

廠 紗 生 厚

HOU SUNG COTTON MILL, LTD.

Mill: 22 Seoul Road, Yangtzepoo, Shanghai. **Office:** A137 San Wo Li, Kiangse Road, Shanghai. **Established:** August, 1917. **Started Operation:** June, 1918. **Capital:** Tls. 2,400,000; **Reserve:** Tls. 80,000. **Staff:** H. Y. Moh, general manager; Chao Kwai-feng, English secretary and superintendent of the twisting department; Pih Yung-cheng, superintendent of the cotton department; Hsu Han-san, superintendent of the Cloth department. **Annual Consumption of Cotton:** 79,770 piculs. **Annual Output:** 17,904 bales of yarn and thread; 8,350 pieces of cloth. **No. of Spindles:** 50,688. **No. of Twisting Spindles:** 11,104. **No. of Looms:** 396. **Power:** Electric power is obtained from the Electric Department, Shanghai Municipal Council. **Plant and Equipment:** The spinning machinery is from America (Saco-Lowell) and the looms from England (Compton and Knowles); 2 small boilers; 13 pickers; 156 carders. **Employees:** 3,721. **Trade Marks:** 10s Yarn, Double Happiness; 16s, Pagoda; 20s, Pagoda; 32s, Double Happiness; 42s thread, Double Happiness; 11-lb. sheeting, Three Tigers; 13-lb., Aeroplane; 12-lb. drills, Three Riches; 12-lb. jeans, Double Happiness. **Particulars:** The company was established with a capital of Tls. 900,000 and with 12,672 spindles, 1,024 twisting spindles and 300 looms in operation.

司 公 織 紡 豐 華

HUA FENG COTTON SPINNING & WEAVING CO., LTD.

Mill: Wan Tsao Pang, Woosung, (Shanghai) Kiangsu Province. **Town Office:** P-59 Nanking Road, Shanghai. **Cable Add.:** "Huafeng," Shanghai. **Established:** August, 1920. **Registered:** December, 1920. **Capital:** Tls. 2,000,000. **Officers and Staff:** Y. M. Chien, President; Dr. C. T. Wang, General Manager; S. M. Wong, Associate General Manager; C. S. Tsui, Acting Manager for Dr. Wang; Singno Joe, Chief Secretary; L. H. Chow, mill manager; T. S. Fan, Mill Superintendent and Textile Engineer; George Sze, Textile Engineer. **Annual Consumption of Cotton:** 80,130 piculs. **Annual Output of Yarn:** 25,200 bales. **Number of Spindles:** 25,000 spindles. **Employees:** Staff, 60, workmen, 1,600. **Power:** Electric, 800 k.w. **Trademarks:** Fort and Heavenly Lady.

廠 紗 新 華

HUA HSIN COTTON MILLS

(HUA HSIN TEXTILE Co., LTD.)

Tientsin Mill: Seaou Yu Chwang, Ho-Pei, Tientsin, Chihli Province. **Business Office:** 19 Corso Vittorio Emanuele III, Italian Concession, Tientsin. **Established:** August, 1916. **Registered:** September, 1916. **Capital:** \$2,420,900; **reserve:** \$179,700. **Officers:** W. Y. Yang, Managing Director; H. H. Ling, General Manager; C. C. Wang, Business Manager; K. P. Yang, Mill Manager. **Annual Consumption of Cotton:** 80,000 piculs. **Annual Output of Yarn:** 24,000 bales. **No. of Spindles:** 27,072; **Saco-Lowell.** **Power:** 1-800 k.w. Turbo-Generator and 1-1,000 k.w. Turbo-Generator. **Employees:** 1,200. **Trademarks:** San Sing, San Yuan, Shih Chuan.

HUA HSIN MILL, No. 2

Location: Chih Mu Hsien, Tsingtau, Shantung Province. **Business Office:** Men Chwang, Tientsin, Chihli Province. **Established:** 1917. **Capital:** \$1,200,000; **reserve,** \$20,000. **Officers:** Chou Chih-se, chief director; Pei Ching-yuan, general manager; Suan Chuen-yi, mill manager. **Annual Consumption of Cotton:** 45,000 piculs. **Annual Output:** 13,000 bales of yarn. **No. of Spindles:** Operating,

27,000 Whiting Mch. Wks.; projected, 5,000. **Power:** Steam, 600 h.p. **Employees:** 3,000. **Trademarks:** Fu Lo Shou Kou, Five Sons. **Particulars:** Plans, specifications and equipment were supplied by Gaston, Williams & Wigmore. **Note:** The mill was granted exemptions from likin since March 22, 1923.

HUA HSIN MILL, No. 3

Location: Tangshan, Chihli Province. **Business Office:** Fu Shan Lee, Tientsin, Chihli Province. **Established:** 1918. **Capital:** \$800,000. **Managing Director:** Wang Siao-ting. **No. of Spindles:** 24,000, Hetherington. **Trade-mark:** Five Sons.

HUA HSIN MILL, No. 4

Location: Weihaiwei. **Business Office:** Men Chwang, Tientsin. **Established:** 1920. **Capital:** \$2,800,000. **Officers:** Hsu Yue-mei, chief director; Chang Hsun-peh, general manager. **No. of Spindles:** 22,000. **Operators:** 1,000. **Boilers:** In these mills there are in use six B. & W-boilers, 18,313 sq. ft. h.s.; superheaters and stokers.

HUA SHIH KUNG SSU

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

廠 紗 一 第 南 湖

HUNAN NO. 1 COTTON MILL

(HUA SHIH KUNG SSU)

Location: Changsha, Hunan Province. **Established:** 1919; began operation, 1921. **General Manager:** Hua Shih Kung Ssu. **No. of Spindles:** 40,000 (Asa Lees) half of which are in use. **Power:** Steam turbine. **Boilers:** 3 B. & W., 2,852 sq. ft. h.s.; superheaters. **Employees:** 2,600. **Monthly Output:** 1,120,000-lbs. or 2,800 bales of yarn. The yarn is sold locally. **Particulars:** With the exception of the generators and dynamos 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 by the local authorities to Hua Shih Kung Ssu, 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 95 bales of yarn daily, part of which finds a ready sale locally and part of which is taken by Kiangsi and Kweichow. 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.

局 布 北 湖

HUPEH GOVERNMENT MILLS

(WUCHANG COTTON MILLS)

Location: Wuchang. **Lessees:** Tsu Shin Co. **Capital:** Tls. 780,000. **General Manager:** Shu Yung-tung. **Annual Consumption of Cotton:** 130,000 piculs. **Annual Output:** 30,000 bales (420 lbs. per bale) of yarn and 18,000 bales of piece goods. **No. of Spindles:** 90,000, Brooks, Doxey; Platt Bros., and Asa Lees. **No. of Looms:** 1,600. **Employees:** 5,100. **Trade Marks:** Sze Hsi and San Tu. **Particulars:** The four mills, generally known as the Wuchang Cotton Mills, were erected by the Chinese Government. The first unit—the silk mill—was built in 1891 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 comprador 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 Tsu 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 organisers 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 Cloth Factory; (3) The Silk Filature; (4) The Chinagrass 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 preponderating 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 out turn has varied from 170 to 200 piculs. **Chinagrass and Jute Mill:** This mill dates from 1898, but appears to have been entirely neglected until 1915 when the present lessees took it in hand and began the manufacture of canvas and gunny cloth.

廠紗華日

JAPAN-CHINA SPINNING & WEAVING CO., LTD.

(NIKKA BOSEKI KABUSHIKI KAISHA)

General Offices: 55 North Szechuen Road, Shanghai. Cable Add., "Hiho". **Branch:** 13 Nichome, Nakani-shima, Kita-ku, Osaka, Japan. **Established:** July, 1918. **Capital:** (authorized), Y.10,000,000; Paid-up, Y. 6,000,000; Legal reserve, Y.765,000. **Directors:** T. Wada (President); T. Tanage (Managing director), M. Kita; S. Kawasaki, R. Oshima, T. Ito, S. Hibiya and K. Yano. **Manager:** K. Ochi.

MILL No. 1, formerly International Cotton Mill.

Location: Pootung, Shanghai. **No. of Spindles:** 42,000, Asa Lees. **No. of Looms:** 200, Gregson & Monk. **Power Plant:** Hick Hargreaves. **Laborers:** 3,770. **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 plant 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. 6,337,502; 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.41,484 was carried forward.

MILL No. 2

Location: Pootung, Shanghai. **No. of Spindles:** 21,056, Platt Bros. **No. of Looms:** 300, Gregson & Monk. **Power Plant:** Hick Hargreaves.

MILL No. 3

Location: Opposite 11 Robison 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.110,850; Buildings, Y.413,000; Machinery and Imple-ments, 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.1,569,247; Balance brought over from the last account, Y. 612,034; Total, Y. 2,181,331; Legal, Y.300,000; Officials' Bonus, Y.150,000; Dividend, Y.1,200,000 (at 40 per cent. per year, Y.6 per share); Balance carried forward to the next account, Y.531,331.

MILL No. 4

Location: Shanghai Spindles: 24,800 projected.

廠紗安久

KIU AN SPINNING & WEAVING CO., LTD.

Location: Kiu An, Nantungchow, Kiangsu Province. **Shanghai Office:** 8 Chusan Road. **Established:** 1920. Began operation, April, 1922. **Capital:** \$300,000, in 8,000 shares of \$100. **Managing Director:** Ku Chi-hsien. **No. of Spindles:** 10,440, Whitin Mch. Wks. **Power:** Electric, 400 h.p.

KIU CHENG COTTON MILL

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

廠紗興久

KIU SHING COTTON SPINNING & WEAVING CO., LTD.

Location: Kwan Pai Cha, Pinhingchow, Kiukiang, Kiangsi Province. **Shanghai Office:** 121 Bubbling Well Road. **Established:** 1921. **Registered:** August, 1922. **Capital:** Tls. 1,800,000. **Officers:** Chang Shao-hsuen, chief director; Tao Sing-ju, general manager. **No. of Spindles:** 15,360, Saco-Lowell. **No. of Looms:** 300, Compton and Knowles. **Power:** Electric, 750 k.w. **Particulars:** Among the promoters were Sun Sze-chen, Fu Tze-ching, Pao Fei-lun and Chow Foo-kiu. Chang Chien invested \$100,000 and General Chang Hsun, \$160,000.

KUNG DAH COTTON MILL

See Shanghai Silk Spinning Co.'s Cotton Mill.

司公績紡勤廣

KWANG CHING SPINNING AND WEAVING CO., LTD.

Head Office: Peitang, outside North Gate, Wusih, Kiangsu Prov. **Mill:** Chang Yuen Kiao, outside North Gate, Wusih. **Established:** December, 1916. **Registered:** December, 1921. **Capital:** \$1,000,000. **Officers:** Chow Chi-tsi, Chow Tsi-pu, Chow Tsi-chin, directors; Liu Hsiang-sun, Yang Bai-nan, auditors. **Annual Consumption of Cotton:** 30,000 piculs. **Annual Output:** (Yarn and Thread), over 11,000 bales. **No. of Spindles:** 22,848, Hetherington. **Power:** Steam 600 h.p.; 3 boilers, British made. **Operators:** 2,000. **Trademarks:** Tuan Ho, Chiu Ho.

廠紗新廣

KWANG SING COTTON SPINNING & WEAVING CO.

Location: Outside the East Gate, Changchow, Kiangsu Province. **Established:** November, 1920. **Registered:** April, 1921. **Capital:** \$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.

廠紗益廣

KWANG YIH COTTON SPINNING MILL, LTD.

Location: Changte, Honan Province. **Capital:** \$1,500,000. **Officers:** General managers, Z. M. Zuan

and Q. S. Koo; Mill superintendent: S. C. Yuan; Business manager: W. C. Lee; Engineer: H. Z. Soong. *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 estimates 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. 52.80 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.

廠紗茂公老

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

General Managers and Agents: Ilbert & Co., Ltd., 4 The Bund, Shanghai. *Mill*: 40 Yangtzepoo Road, Shanghai. *Established*: 1895. *Capital*: (paid-up), Tls. 800,000 in 8,000 shares of Tls. 100. *Staff*: T. Webster, manager; G. Frankland, engineer; C. Kearsley, carding master; J. A. Ryley, spinning master; G. Southworth, weaving master. *No. of Spindles*: 50,096, Tweedales and Smalley. *No. of Looms*: 515. *Accounts*, for year ending December 31, 1922: Loss, Tls. 244,866.31. Against this loss there was a sum of Tls. 340,000 set aside as "development reserve," inaugurated in February, 1920. During the year, Tls. 79,647.12 was spent on repairs and renewals. *History*: This mill was established by British merchants in the same year as the Fwo 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.

司公織染新麗

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

Head Office: Outside Kwang Fu Gate, Wusih, Kiangsu Prov. *Plant*: Ton-wei Road, Wusih. *Shanghai Office*: 52 Ching Zung Lee, Peking Road. *Established*: January, 1920. *Capital*: Tls. 600,000. *Officers*: S. D. Dong, chairman; C. D. Chen, general manager; G. Thomas, adviser. *Equipment*: Bleaching, dyeing and finishing machinery made by Sir James Farmer & Sons, Ltd. 100 Wm. Dickinson looms. Power plant, Marshall installation.

廠紗民利

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 Millowners' Association.

廠紗用利

LEE YOUNG COTTON SPINNING CO., LTD.

Location: Kiangyin, Kiangsu Province. *Established*: July, 1905. *Registered*: January, 1909. *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, Asa Lees. *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. The ground, buildings and equipment had cost Tls. 540,000 and it became necessary to mortgage the plant 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.

廠紗豐魯

LOO FENG COTTON SPINNING & WEAVING CO.

Location: Tsinan, Shantung Province. *Established*: 1917. *Capital*: \$1,200,000; Reserve, \$12,000. *Officers*: Pan Fu, general manager; Chin Yung-yu and Lee Fu-hsin, directors; L. H. Chow, mill manager; M. C. Y. Kung, engineer. *Annual Consumption of Cotton*: 39,000 piculs. *Annual Output of Yarn*: 13,400 bales. *No. of Spindles*: 27,376, Hetherington. *Power*: Steam, 500 h.p. *Laborers*: 1,634. *Trade Mark*: Pao Ping (Luck Lamb). *Plant*: 3 boilers; one Uniflow Engine 500 i.h.p.; 1 bale breaker; 1 winnow machine; 2 automatic feeders; 4 scutchers; 60 cards; 7 drawing frames, each containing 6 deliveries, and arranging in 3 process; 6 slubbing frames, each 92 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 Reiss & 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 bath rooms and a hospital for the workers. It is announced that this company is planning to build three new mills in Shantung Province, at Tsining, Lintsing and Tehchow.

司公布織洲滿

MANCHURIA WEAVING CO., LTD.

Location: International Settlement, Tieling, Fengtien Prov. Began operation in April, 1922. *Officers*: K. Yamada, managing director, with 5 colleagues on the directorate, including 1 Chinese, in addition to 3 auditors, inclusive of 1 Chinese. *Capital*: G.Y. 750,000; 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 2 1/2-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 caters to the interior trade. The mill has been short of funds from the start, and nearly Y.50,000 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.

社會織紡洲滿
MANSHU BOSEKI KAISHA

(MANCHURIA 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 30,000 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 75 bales 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 23 yards long and 1 1/5-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. 846,700. 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.

廠織紡生民
MING SUNG WASTE COTTON SPINNING AND WEAVING CO., LTD.

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

廠紗紡天奉
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 \$4,500,000, increased to \$6,000,000 in 1923. The Fengtien Provincial Government subscribed for 45,000 shares, one-half of the original number issued, and the other one half was subscribed by Chinese merchants. *Officers:* T. C. Sun, manager; Han Kong-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 later will engage in wool weaving. A sum of \$1,500,000 has been set aside for the purchase of cotton from various 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 guarantor of good credit, or with proper security, contract for a loan 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.

廠紗外內

NAIGAI WATA KAISHA, LTD.

FACTORIES:

- No. 1 Mill, Dembo, Osaka.
- No. 2 Mill, Nishinomiya, Hiogo.
- 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, Tsingtau.
- No. 11 Mill, Tsingtau.
- 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: Dojima Kitamachi, Kitaku, Osaka, Japan. *Shanghai Office:* 1-a, Jinkee Road. Cable Add., "Naigai" Shanghai. *Capital:* Y. 16,000,000. Net profit, half year, ending November 25, 1922: Y. 3,799,219.29; reserve: Y. 11,187,300. Dividends, 1922: Ordinary, 12 per cent; special, 48 per cent. per annum. *Directors:* A. Takei, president; H. Abe, S. Amaki, K. Kawamura, K. Onishi, N. Otani, K. Sasaki, E. Tamaki, Representatives for Shanghai Branch: K. Kwamura, 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 Morcom triple-expansion engines. The power plant for the group of mills nos. 5, 7, 8 and 12, consists of a 2,000 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; chai grate stokers. In addition to these three boilers, the mills have 13 B. & W. and Lancashire boilers with a total of 16,929 sq. ft. h.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 repulsion type using part current from the town mains and part, when 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:* 1912. *Mill Manager:* J. Susuki. *No. of Spindles:* 40,000 Howard & Bullough.

No. 5 MILL.

Location: Macao Road, Shanghai. *Established:* 1914. *Mill Manager:* S. Manago. *No. of Spindles:* 66,240 Howard & Bullough.

No. 7 MILL.

Location: Macao Road, Shanghai. Established: 1918.
Mill Manager: J. Yogi. No. of Looms: 800 Toyoda.

No. 8 MILL.

Location: Macao Road, Shanghai. Established: 1918.
Mill Manager: S. Matsuno. No. of Spindles: 20,768 Saco-Lowell.

No. 9 MILL (FORMERLY YU YUEN MILL).

Location: 60, Markham Road, Shanghai. Established: 1921.
Mill Manager: N. Nakashima. No. of Spindles: 23,296 Dobson & Barlow. No. of Looms: 800 Toyoda.

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.

Location: Gordon Road, Shanghai. Established: 1923.
Mill Manager: K. Nagaye. No. of Spindles: 32,000 Dobson & Barlow.

No. 16 MILL.

A new mill project for Shanghai with 20,000 spindles.

TSINGTAU MILLS.

Representatives for the Tsingtau Branch: K. Sasaki, Director; T. Arakawa, Sub-manager. Office at No. 6 Mill, Sufang, Tsingtau, Cable Add., "Naigai," Tsingtau.

No. 6 MILL.

Location: Sufang, Tsingtau. Established: 1917.
Mill Manager: M. Sakaushi. No. of Spindles: 20,800 Platt Bros.

No. 10 MILL.

Location: Sufang, Tsingtau. Established: 1923.
Mill Manager: M. Sakaushi. No. of Spindles: 20,000 Platt Bros.

No. 11 MILL.

Location: Sufang, Tsingtau. Established: 1922.
Mill Manager: M. Sakaushi. No. of Spindles: 23,200 Platt Bros.

CHINCHOW NO. 1 MILL.

Location: Chinchow, Fengtien Prov. Mill site adjoins S. M. Ry. area and has a railway siding. Established: 1922. To begin operation in 1924. Capital: G.Y. 600,000. Mill Manager: M. Murayama. Spindles: 24,000 Howard & Bullough. Daily Capacity: 80 bales. Power: Electric, 800 k.w., purchased from the S. M. Ry. Water is obtained from a well at Palichuangtun and carried in iron pipes the distance of 8,400 ft. This mill was planned and built by the staff at the company's No. 6 mill at Tsingtau.

廠紗滿南

NAMAN BOSEKI KAISHA

(SOUTH MANCHURIA COTTON SPINNING & WEAVING Co., LTD.)

Location: Mukden, 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 eventually will be abandoned.

廠紗清日

NISSHIN BOSEKI KABUSHIKI KAISHA

(NISSHIN SPINNING Co., LTD.)

Head Office: Tokyo, Japan. Tsingtau Office: Masuko Yoko Bldg. Mill: Sau fang, Tsingtau. Capital: Y.11,000,000. Branch Established: April, 1922. Representative: T. Fukushima. No. of Spindles (projected): 30,000, Platt Bros.

廠紗方東

ORIENTAL COTTON SPINNING & WEAVING CO., LTD.

Location: 34-36 Yangtzepoo Road, Shanghai. General Managers: Arnhold Bros. & Co., Ltd., 6 Kiukiang Road, Shanghai. Established: 1895. Mill Manager: J. Walker. Capital: Tls. 2,000,000; increased, April 15, 1920, from Tls. 1,000,000 by 1,000 new pref. shares of Tls. 100 and 30,000 new ord. of Tls. 30. Reserve and Depreciation Funds: Tls. 1,000,000. Annual Output of Yarn: About 38,000 bales; 14 count, No. of Spindles: 54,768, Asa Lees. No. of Looms: 440, G. Keighley. Power: Steam for old machines; 5 boilers; 1 steam engine, 900 h.p.; average daily coal consumption, 25 tons. The new machines are driven by electricity, purchased from the Shanghai Municipal Council Elec. 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 merchants.

Company Accounts for year ending December 31, 1921: Balance at the credit of profit and loss account, including the carry forward from 1920, Tls. 578,791.15. From this was deducted the interim dividend absorbing Tls. 219,920, leaving for distribution the amount of Tls. 358,871.15, as follows:—

	Tls.
To pay a final dividend of Tls 0.50 per share..	109,960.00
To general managers' commission according to agreement	25,608.35
To carry forward to new account	223,302.80

Tls. 358,871.15

Plant and Machinery.—An item of Tls. 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 Tls. 135,386.24, showing an addition of Tls. 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.

廠紗成資

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; Tsai 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.

MILL No. 1

Location: Robison Road, Shanghai. *Office:* 242-44 North Soochow Road, Shanghai. *Established:* March, 1919. *Registered:* November, 1919. *Capital:* Tls. 1,600,000; Reserve, Tls. 250,000. *Annual Consumption of Cotton:* 140,580 piculs. *Annual Output of Yarn:* 26,690 bales. *No. of Spindles:* 41,472, Saco-Lowell. *No. of Looms:* 200, Compton & Knowles. *Power:* Electric. *Laborers:* 2,500. *Trade Marks:* Shwang Hsi; Pagoda, Cloud and Lion; Three Tigers, Aeroplane, etc.

Particulars: When running to capacity the mill will have 100,000 spindles, 400 looms, and 1,500 waste spindles. The machinery is housed in a three-story reinforced concrete structure and will have a productive capacity of 100,000 pounds of yarn a day. The textile machinery is from the Saco-Lowell Shops, Mass., U.S.A. The contract was handled by Andersen, Meyer & Co., and executed by Tom Wong, a graduate of Harvard and the New Bedford Textile School. An inspection of the mill revealed hand reeling equipment, and the explanation was made that with the cheapness of labor this system is almost as fast, and just as economical as reeling by machine.

MILL No. 2

Location: Robison Road, Shanghai, near Mill No. 1. *Established:* March, 1920. *Registered:* January, 1921. *Capital:* Tls. 2,400,000. *Annual Consumption of Cotton:* 223,650 piculs. *Annual Output of Yarn:* 30,000 bales. *No. of Spindles:* 69,952, Saco-Lowell. *Power:* Electric. *Laborers:* 4,300. *Boilers:* The Shanghai mills are using 6 B. & W. boilers; 8,040 sq. ft. h.s.; all equipped with mechanical stokers and superheaters.

MILL No. 3

Location: Siao Chen Chwang, Tientsin, Chihli Province. *Registered:* November, 1921. *Capital:* \$3,000,000. *Annual Cotton Con.:* 70,290 piculs. *No. of Spindles:* 51,072, Saco-Lowell *Power:* Electric, Em ployees: 1,700 *Trade Mark:* Ju Yi.

廠 紗 昌 寶

PAO CHANG COTTON SPINNING & WEAVING CO.

Location: Siao-haichen, S., Nantungchow, Kiangsu Province. *Capital:* (authorized), \$500,000 in \$100, shares; *Paid-up,* \$250,000. *Established:* April, 1922. *Promoters:* Chang Siao-sha, Chow Chik-an and Wong Chi-ching, etc. *No. of Spindles:* 1,120, projected. *Plant:* 1 G.E. 15 k.w. generator; one 75 h.p steam engine and boiler.

PAO FENG COTTON MILL

Location: Shanghai. This mill burned in 1920.

PAO TUNG COTTON MILL

See Su Lun Cotton Mill, Soochow, Kiangsu prov.

司 公 織 紡 一 第 業 商 洋 北
PEI YANG (COMMERCIAL No. 1)

COTTON SPINNING & WEAVING CO., LTD.

Location: Kwa Chia Chih, Tientsin, Chihli Province. *Established:* November, 1915. *Registered:* April, 1920. *Capital:* \$2,000,000. *Officers:* Fan Tsoh-chai, chief director; Huang Hsien-tsen, general manager; Ma Tze-tsing, mill manager. *No. of Spindles:* 25,536, Saco-Lowell. *Power:* Electric, 800 k.w. *Boilers:* 2 B. & W., 5,238 sq.ft. h.s.; 2 superheaters. *Laborers:* 1,520. *Trade Marks:* Blue Tiger, Gun.

廠 紗 益 博

PU YIH COTTON SPINNING & WEAVING CO., LTD.

Office: P. 576 Nanking Road, Shanghai. *Capital:* \$2,000,000; Reserve, \$150,000. *Established:* November, 1916. *Registered:* July, 1917. *Officers:* General manager: Hsu Ching-jen; Mill manager: Wang Hsu-tung. *Trade Marks:* Atlas, Cricket, Black Dragon.

MILL No. 1

Location: Corner Tongking and Robison Roads, Shanghai. *Annual Consumption of Cotton:* 60,000 piculs. *Annual Output of Yarn:* 16,000 bales. *No. of Spindles:* 26,520, Howard & Bullough; 1,200 doublers. *Power:* Electric, 800 h. p. *Laborers:* 1,600.

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 wren mill which began operation in the spring of 1922. The mill has a site of 40 *mow*.

司 公 限 有 織 紡 新 三

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

Head Office: 7 The Bund, Shanghai. *Mill:* 87 Yangtzepoo Road, Shanghai. *Established:* 1895. *Capital:* Tls. 1,500,000. *Directors:* Sheng En-yih (chairman), K. E. Newman, M. Reader Harris, Sheng Zung-yi, Sheng Sung-ye, Sheng Yoh-chang, Gordon Morriss, P. W. Quincey. *Officers:* H. C. Marshall, actg. chief mgr.; Sheng Yu-lin, mill mgr.; J. M. P. Remedios, sec. *Cotton Used Annually:* 146,000 piculs. *Yarn Output Annually:* 60,000 Bales; Average Counts 14s. *Trademark:* Tramcar. *No. of Spindles:* 65,000, Dobson & Barlow; 2,880, Howard & Bullough; on order, 4,000, Dobson & Barlow. *No. of Looms:* 1,000 Japanese, Toyoda 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 superheater. *Laborers:* 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 Yue 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 Shimonoseki an article providing for the freedom of Japanese subjects to engage in all kinds of 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 thereby 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.

廠紗海上

SHANGHAI COTTON MFG. CO., LTD.

(SHANGHAI BOSHOKU KABUSHIKI KAISHA).

Office: 49 Szechuen Road, Shanghai. *Mills*: No. 1, 68 Yangtzepoo Road; No. 2 and 3, 90 Yangtzepoo Road, Shanghai. *Directors*: M. Nodaira (chairman), J. Prentice, W. J. N. Dyer, H. E. Morriss and K. Otani; Mitsui Bussan Kaisha, Ltd., agents. *Officers*: K. Kuroda, mgr.; T. Enjoji, chief eng.; K. Kojima, mill manager. *Established*: 1908; reconstructed, 1920. *Capital*: Tls. 6,000,000, increased from Tls. 4,000,000 in August, 1923. *Annual Consumption of Cotton*: 272,580 piculs. *Employees*: 7,677.

MILL No. 1

Location: 68 Yangtzepoo Road, Shanghai. *Established*: 1896. *No. of Spindles*: 20,392, Howard & Bullough and Asa Lees. *No. of Looms*: 376, Platt Bros. *Power Plant*: J. & E. Wood (Brit.).

MILL No. 2

Location: 90 Yangtzepoo Road, Shanghai. *Established*: 1895. *No of Spindles*: 25,480, Dobson & Barlow. *No of Looms*: 510, Platt Bros. *Staff*: Y. Watanabe, mill manager; K. Enjoji, engineer. *Power Plant*: Lamberton.

MILL No. 3

Location: 90 Yangtzepoo Road, Shanghai. *Established*: 1919. *No. of Spindles*: 50,592, Platt Bros. *Power Plant*: J. Musgrave. *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 that of the San-tai Cotton Spinning Co., Ltd. These assets comprised: At 68 Yangtzepoo Road:—land, buildings, power plant and textile machinery (23,000 spindles), known as the No. 1 Mill. Within this compound was a silk filature, 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 Yangtzepoo Road, was the No. 2 Spinning Mill comprising: land, buildings, power plant, and textile machinery (23,000 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. 803,993. 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.

廠紗大公

SHANGHAI SILK SPINNING CO.'S COTTON MILL

(KUNG DAH COTTON MILL)

Office and Mill: 200 Pingliang Road, Shanghai. *Established*: 1921; began operation in May, 1922. *Capital*: Tls. 10,000,000. *Managing Director*: S. Kurachi. *Spin-*

dles: 42,000 Platt Bros.; doublers, 7,000 Platt Bros. *Power*: Electric, 1,000 k.w.; current obtained from Shanghai Municipal Council Electricity Dept. *Amount of Raw Material Consumed Annually*: 40,000 bales raw cotton—Chinese, American and Indian. *Annual Output*: About 31,000 bales of 400 lbs. each. *Trademark*: Paw Kwang. *Extensions*: Mr. Kurachi, the managing director, stated in June, 1923, that the company anticipated extending the plant to the river side of the Chinese road to Woosung. Upon the completion of this extension, considerable new equipment will be purchased.

廠紗集新

SING CHIH COTTON SPINNING & WEAVING CO., LTD.

Office: 12 Chi Chi Hu Tung, Peking. *Mill*: Paoti Hsien, Peking. *Established*: 1913. *Capital*: \$200,000 *Officers*: Wu Sung-chia, general manager; Chang Yau-ting, mill manager. *Annual Consumption of Cotton*: 4,500 piculs of *Spindles*: Operating, 1,030; projected, 12,400, Dobson & Barlow. *Power*: Electric, 800 h.p. *Laborers*: 110.

廠紗綸蘇

SU 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*: 15,800 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, 60 k.w. each; 3 boilers, Thomas Beely 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.

廠紗新申

SUNG HSIANG COTTON SPINNING & WEAVING CO., LTD.

Head Office: 58 Kiangse Road, Shanghai. Cable add., "Mowsiflour," 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

Location: Brenan Road, Shanghai. *Established*: 1916. *Registered*: July, 1922. *Capital*: \$3,000,000. *Mill Superintendent*: Y. T. Yung. *Annual Cotton Consumption*: 82,500 piculs. *Annual Output*: Yarn and

Thread; 74,300 bales; Cloth, 180,000 pieces. *No. of Spindles*: 39,752; 30,528, Saco-Lowell, and the rest Asa Lees. *No. of Looms*: 1,100, Toyota Loom Works, and Gregson & Monk. *Power*: Electric. *Employees*: 4,000. *Trademarks*: Man and Bell.

MILL No. 2

Location: 4 Ichang Road, Shanghai. *Established*: 1907. *Capital*: \$1,000,000. *Mill Superintendent*: T. Z. Ting. *Annual Cotton Consumption*: 41,000 piculs. *Annual Output*: Yarn and Thread, 37,000 bales. *No. of Spindles*: 34,934; Whiting, Platt Bros., Dobson & Barlow. *No. of Looms*: 500, Wm. Dickinson, projected. *Power*: Electric and steam. *Employees*: 1,850. *Trademarks*: Yarn and Thread: Flying Horse. *History*: Chinese and Japanese merchants established the mill in 1907 under the name of Kiu Cheng Cotton Mill. 4,224 spindles, made by Dobson & Barlow in 1894, were brought from Japan where they had been saved from a mill which burned. In addition, 5,200 new spindles were purchased from Platt Bros. Shortly after the mill was opened the entire control was obtained by Japanese. After the mill had operated at a loss for some years it was closed in 1916. The following year a Chinese concern, the Heng Chang Yuan Cotton Spinning & Weaving Co., Ltd., organized by Tso Lan Fong, purchased the mill and operated it for several years when it was bought by T. K. Yung.

MILL No. 3

Location: West Gate, Wusih, Kiangsu Province. *Established*: 1921. *Capital*: \$3,000,000. *Mill Managers*: T. S. Yung and N. S. Yung. *No. of Spindles*: 56,668, Saco-Lowell, Howard & Bullough, Whiting. *Looms*: 500. *Annual Cotton Con.*: 94,500 piculs. *Employees*: 3,800. *Trademarks*: Sze-pin-lean. *Power*: Electric. All motors in mill aggregate 1,500 h.p. Boilers, 4-4,780 sq. ft. B. & W. with superheaters, stokers, economisers, induced draught fan, feed pumps, etc.; supplied through Jardine Engineering Corp., Ltd. *Note*: The mill was granted exemptions from likin, March 23, 1923.

MILL No. 4

Location: Kiao Kow Wei, Hankow, Hupeh Province. *Established*: 1921. *Capital*: \$500,000. *Employees*: 1,200. *Annual Cotton Con.*: 31,000 piculs. *Power*: Steam. *No. of Spindles*: 15,000, Saco-Lowell.

廠 紗 大 德

TEH DAH COTTON SPINNING CO., LTD.

Office: No. 1 Tsin Yuen Lee, Peking Road, Shanghai. *Mill*: 76 Ward Road, Shanghai. *Established*: 1914, with a capital of Tls. 300,000. *Capital*: Tls. 1,000,000. *Officers*: H. Y. Moh, General Manager; S. C. Moh, Office Manager; T. Y. Tsang, Mill Manager; T. K. Zee, Engineer. *Annual Raw Cotton Consumption*: 35,000 piculs. *Annual Output*: Yarn and thread, 10,000 bales. *Spindles*: 2,880 for thread and 16,140 for yarn, John Hetherington. *Employees*: 834. *Power*: Electric, 486 h.p. *Trademarks*: 10's, 14's, 16's, 20's, Pagoda; 32's and 42's thread, Civilized Beauty.

司 公 毛 棉 津 天

TIENTSIN COTTON AND WOOL WEAVING CO., LTD.

Office: 4 Sixth Road, Italian Concession, Tientsin. *Cable Add.*, "Menmokoaisa." Cotton and woollen threads, blankets; wool and cotton whipped. Weaving, spinning and whipping machines. *Established*: 1920. *Capital*: Y.200,000, one quarter paid up. *Officers*: J. Nakayama, managing director; K. Suzuki, chief engineer; K. Ujihara, manager.

廠 紗 新 鼎

TING SING COTTON SPINNING & WEAVING CO., LTD.

Location: Keng Chen Bridge, Hangchow, Chekiang Province. *Shanghai Office*: U. 367 Peking Road. *Established*: 1906. *Capital*: \$400,000. *Officers*: Managing director: S. C. Kao; Mill manager: K. C. Kao. *Cotton Used Annually*: 42,000 piculs. *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 i.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, as well as cotton from Tungchow and Shanghai, but for 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.

社 會 式 株 織 紡 華 東

TOKWA BOSEKI KABUSHIKI KAISHA

(TOKWA SPINNING CO., LTD.)

Location: 87 Ward Road, Shanghai. *Officers*: C. Shiba, manager director; M. Baba, director; I. Kodani and T. Ogino, managers; K. Ishida, chief engineer; S. Dan, engineer. *Capital*: (authorized), Y.30,000,000 in 600,000 shares at Y.50 per share; Paid-up, Y.10,500,000. (Y.17.50 per share.) *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.20,000,000 was amalgamated in May, 1921, with the Chukwa Kaori Kabushiki Kaisha which had an authorized capital of Y.10,000,000 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.388,588; Factory equipment and implements, Y. 24,299; Buildings, Y. 281,168; Reserve implements, Y. 97,965; Machinery, Y.1,094,570; Weaving Machinery Deposit, Y.1,653,458; Machinery Fittings, Y.44,449; This term's loss, Y.932,072; Loss balance carried forward to the next account, Y.916,960.

社 會 式 株 織 紡 洋 東

TOYO BOSEKI KABUSHIKI KAISHA

(TOYO COTTON SPINNING CO., LTD.)

Operating Yu Fong Cotton Mills.

Town Office: 6 Kiukiang Road, Shanghai. *Mills*: 103 Yangtzepoo Road, Shanghai. *Cable Add.*, "Toyo Boseki." *Officers*: T. Iwao, mgr. dir.; S. Nakayama, mgr.; T. Nishimura, chief eng. *Established*: June, 1917. *Capital*: Y.50,000,000 *Mill Site*: 30 mow. *Mill No. 1*: 5,000 (American) spindles operating; projected, 20,600 (American). *Mill No. 2*: 20,000 spindles projected.

廠 紗 田 豐

TOYODA COTTON SPINNING & WEAVING CO.

Business Office: 69 Szechuen Road, Shanghai. *Established*: May, 1921. *Capital*: Tls. 5,000,000. *Location*: No. 1 and No. 2, 97 Yu Yuen Road, Shanghai.

MILL No. 1

No. of Spindles: 30,720, Platt Bros.

MILL No. 2

No. of Spindles: 15,312, Whiting Machine Wks.; projected, 9,744.

廠紗淵鐘
TSUNG YUEN COTTON MILL

Location: Tsingtau, Shantung Prov. A new enterprise promoted by Japanese. Spindles: 40,000 projected. The mill is listed (without details) in the 1922 report of the Chinese Cotton Millowners' Association.

TUNG CHU COTTON MILL

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

廠紗公惠通
TUNG WEI KUNG COTTON MILL

Location: Siaoshan, Chekiang Province. Shanghai Office: Ju Yi Lee, Honan Road. Established: December, 1906. Registered: February, 1916. Capital: \$600,000. Officers: Lou Ying-chai, chief director and general manager; Chu Man-chi, mill manager. Annual Consumption of Cotton: 24,000 piculs. Annual Output of Yarn: 6,000 bales. No. of Spindles: 10,920 (projected, 1,640), Brooks Doxey, Lord Bros. Power: Steam, 320 h.p. Laborers: 738. Trade Mark: Lily Flower and Bee.

廠紗益統
TUNG YIH COTTON SPINNING & WEAVING CO., LTD.

Office: 2-511 Tientsin Road, Shanghai. Mill: Mokanshan Road, Shanghai. Established: September, 1920. Registered: December, 1920. Capital: Tls. 1,800,000. Officers: General manager: Wu Ling-shu; Mill manager: Chung Yuin-chuang. Annual Consumption of Cotton: 36,000 piculs. Annual Output of Yarn: 10,000 bales. No. of Spindles: 35,712, Saco-Lowell. Power: Electric, 1,400 h.p. Laborers: 3,400. Trade Marks: Teh Li, Tuan Lung Flower.

廠紗通緯
WEI TUNG COTTON SPINNING & WEAVING FACTORY, LTD.

Location: Cor. Pingliang and Lay Roads, Yangtzepoo, Shanghai. Town Office: 34 Avenue Edward VII, Shanghai. Established: October, 1919. Registered: February, 1920. Capital: \$1,200,000. General Manager: Cheng Kai-tah. Annual Output of Yarn: 18,240 bales. No. of Spindles Operating: 8,064; under installation, 15,744, Brooks & Doxey Co. No. of Looms: 200. Power: Electric, 920 h.p. Laborers: 1,200. Trade Mark: Golden Red Peacock. Particulars: The chief shareholders of the company are Cheng Yu-ting 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 site has an area of 23 mow. 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:

Department	No. of Motors	H.P. each	No. of turns per minute
Cotton Mixing Room ...	1	50	960
Cotton Purification Room ...	1	64	725
Cotton Carding Room ...	1	125	730
Thick Yarn Room & Baling Room ...	1	220	730
Thin Yarn Room ...	2	220	720
Fitting Shop ...	1	21	
Total			920 h.p.

Machines (all from Brooks & Doxey Co.):

Kind	No.	No. of turns per minute	No. of H.P. each requires
Willow ...	1	960	3
Roving Waste Opener ...	1	805	2
Thread Extractor ...	3		$\frac{1}{2}$
Hard Waste Opener ...	1	875	12
Hopper Bale Breaker with Mixing Lattice ...	1	308	$4\frac{1}{2}$
Feed Lattice ...	2		1
Automatic Hopper Feeder ...	2	245	$2\frac{1}{2}$
Porcupine Feed ...	2	795	4
Single Vertical Exhaust Opener and Single Beater Scutcher ...	2	900	10
Single Beater Scutcher ...	5	910	4
40" Cards ...	90	164	.875
Drawing Frames ...	15	389	$1\frac{1}{2}$
Slubbing Frames (80 spindles ea.)	13	492	$1\frac{1}{2}$
Intermediate Frames (126 spindles ea.) ...	17	657	2.1
Roving Frames (16 spindles ea.)	34	977	2.3
Ring Spinning Frames (384 spindles ea.) ...	61	8,005	4.8
Single 40 Hank Hand Reels...	160		
10-lb. Yarn Bundling Presses...	6	64	$\frac{1}{2}$
Hydraulic Baling Press ...	1	253	$1\frac{1}{2}$
Quick Traverse Winding Presses ...	2	517	5
Ring Doubling Frames ...	4	8,111	8
30 Spindles Banding Machines	1	365	$\frac{1}{2}$
Paste Spreaders ...	2		
Cutting Up Boards ...	2		
Splicing Machines with Measure Arrangement ...	2		
Screen Presses with Brass Turn Table ...	2		
Pulling on Machines ...	2		
Roller Ending Machines with Fan Complete ...	2		
Automatic Roller Calenders ...	2		
Stripping Appliances ...	2		

廠紗安永
WING ON TEXTILE MFG. CO., LTD.

Office: Wing On Co. (Shanghai), Ltd., Nanking Road, Shanghai. Mill: Hsin Hsiang, Yangtzepoo, Shanghai. Cable Add., "Wingon," Shanghai. Established: 1921; began operation in October, 1922. Capital: Tls. 6,000,000. 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. Trademark: Eagle. Mill Building: The main mill building is 565-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 insure 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 stairways 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 350-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. *History*: In 1920 the directors of the Wing On Co., Ltd., decided to invest part of the company's surplus in a textile plant. This company originated about twenty-eight years ago in Sydney, Australia, with a department store. Since that time the Wing On Company has opened stores in Hongkong and Shanghai and hotels in Canton and Shanghai. A large part of the output of the textile mill will be marketed through the company's department stores.

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 cloth, carpets, etc. Manufacturers of dyes and chemicals used in the textile trade.

廠紗勤業 YEH CHIN COTTON MILL

Location: Hsin Lung Bridge, Wusih, Kiangsu Province. Operated by the Foo Chen Co. *Capital*: \$300,000. *Officers*: S. C. Yang, managing director; P. K. Yang, mill manager; T. C. Chang, business manager. *Annual Consumption of Cotton*: 20,000 piculs. *Annual Output*: 7,500 bales of yarn; 12, 14 and 16 counts. *No. of Spindles*: 13,832, Dobson & Barlow. *Power*: Steam, 350 h.p. for cotton mill, 100 h.p. for gin house. Gin has one 10 k.w. electric generator, Japanese make. *Laborers*: 1,200. *Trade Mark*: "Sze Hai Sun Pin". *History*: The Yeh Chin Cotton Mill was promoted in 1895 by Messrs. Yang I-fong and Yang Ou-fong 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, 1916, the Foo Chen Co., (capital, \$200,000) leased the mill for ten years at an annual rental of \$30,000.

廠紗一第中裕 YU CHUNG (NO. 1) COTTON SPINNING & WEAVING CO.

Location: Tao Kou, Wuhu, Anhwei Province. *Shanghai 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 i.h.p. Boilers, 2 B. & W., 1,966 sq. ft. h.s. *Annual Consumption of Cotton*: 43,200 piculs. *Yearly Output of Yarn*: 11,000 bales. *Laborers*: 1,000. *Trade Marks*: Boy, Fish, Crane, Kou, Kiu Tai, Yung Kwe. *Particulars*: The net profit for 1921 was \$100,000. The shareholders at a meeting in January, 1922, voted to increase the capital from \$800,000 to \$1,000,000 and to make these additions in physical equipment: 5,000 spindles to cost \$273,000; other machinery to cost \$47,000; and a warehouse to cost \$60,000.

YU FOONG COTTON MILLS

See Toyo Boseki Kabushiki Kaisha, Shanghai.

廠紗豐豫州鄭南河 YU FOONG COTTON MILL

Head Office: 137A Kiangse Road, Shanghai. *Branch Office*: 17 Shensun 2nd Road, Hankow. *Mill*: Chengchow, Honan Province. *Cable Add.*, "8760." *Established*: June, 1919. *Capital*: Tls. 3,000,000. *Officers*: H. Y. Moh, managing director; M. C. Woo, superintendent and business manager. *Annual Consumption of Cotton*: 160,000 piculs. *Annual Output*: Yarn, 42,500 bales; cloth, 80,000 pieces. *Spindles*: 51,840 Saco-Lowell. *Looms*: 200 Compton and Knowles. *Power*: Electric, 3,000 k.w. *Other Equipment*: Foundry, machine shop, etc. *Employees*: 4,400. *Trademarks*: 10s yarn, Double Happiness and Aeroplane; 12s, 14s, Pagoda; 16s, Pagoda, Aeroplane; 20s, Pagoda, Aeroplane; 12-lbs. drill, Five Elders; 13-lbs. sheeting, Precious Book. *Remarks*: The machinery is from the Saco-Lowell Works of Boston and the electrical equipment from the International General Electric Company of New York supplied and installed through Andersen, Meyer & Company of Shanghai. The mill is located about 15 miles from the Yellow River, necessitating the sinking of seven artesian wells, 250 to 300-ft. deep for the mill water supply. Several other wells are to be sunk for the supply of the workers.

司公織紡厚裕 YU HOÜ COTTON SPINNING AND WEAVING CO., LTD.

Location: Changsha, Hunan Prov. *Established*: April, 1923. *Acting Manager*: Hung Pun-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.

廠紗華裕 YU HUA COTTON SPINNING AND WEAVING CO., LTD.

Office: Sen Cheng Li, Hankow, Hupeh Prov. *Mill*: Sha Hsin Ho, Wuchang, Hupeh Prov. *Capital*: Tls. 1,560,000. *Established*: 1921; began operation in April 1922. *Officers*: Hsu Yung-ting, chairman of the Board of Directors; Chang Sung-chiao, manager. *Spindles*: 30,000, Asa Lees. *Looms*: 350, G. Keighley. *Daily Output*: 30,000 lbs. of 16's cotton yarn and 700 pieces (each 40 yds. long) of shirting. *Employees*: 1,100. *Power*: Steam; uniflow engine. Boilers, 3 B. & W., 2,960 sq. ft. h.s.; superheaters. *Power plant capacity*, 1,600 h.p. *Trademarks* (for cloth and yarn): "Evergreen," "The Altar of Heaven," "Horse-Racing" and "Double cocks."

廠紗康豫 YU KONG COTTON SPINNING & WEAVING CO. LTD.

Location: North Gate, Wusih, Kiangsu Province. *Established*: November, 1920. *Registered*: April, 1921. *Capital*: \$800,000. *Officers*: Hsueh Nan-ming, chief director; Fang Shou-yi, general manager. *No. of Spindles*: 14,000 (British). *Power*: Steam, 500 h.p. *Laborers*: 1,200.

廠 紗 大 裕
**YU TAH COTTON SPINNING & WEAVING
CO., LTD.**

Office: 24 Hsin Tsin Li, Japanese Settlement, Tientsin, Chihli Province. *Mill:* Laozentow, Tahchikosha, Tientsin, Chihli Province. *Established:* May, 1920. *Registered:* June, 1922. *Capital:* \$3,000,000; paid-up, \$1,500,000. *Officers:* Wong Ke-min, chief director; Chen Huai-sung, general manager; Ko Teh-yi, mill manager. *No. of Spindles:* 35,712, Saco-Lowell. *Power:* Electric, 1,500 k.w., Westinghouse. *Laborers:* 2,000. *Trade Mark:* San Kuang. *Trade Marks:* Yarn and Thread Dragon, Aeroplane.

廠 紗 泰 裕
**YU TAI COTTON SPINNING & WEAVING
CO., LTD.**

Location: Chitang, Changshu, Kiangsu Province. *Established:* July, 1905. *Registered:* January, 1906. *Capital:* Tls. 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:* 1,095. *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 Tls. 30,000. Hung Ming-tu and Chu Yao-ching formed the Shen Kee Co., with a capital of Tls. 50,000. When the lease expired in July, 1922, Chu operated the mill until January 1, 1923, when he leased the plant to Koo Hsin I at an annual rental of Tls. 40,000. An additional 5,000 spindles will be purchased.

廠 紗 元 裕
**YU YUAN COTTON SPINNING & WEAVING
CO., LTD.**

Head Office: Kotobuki Road, Japanese Concession, Tientsin. *Cable Address:* "Yuyuan" or "4791". *Manufacturers and sellers of cotton yarn and cloth. Mills:* No. 1 Spinning Mill, No. 2 Spinning Mill, No. 3 Weaving Mill, and No. 1 Weaving Mill, all located at Siao Liu Chwang, Tientsin. *Established:* November, 1915. *Registered:* 1917. *Capital:* \$3,600,000; Reserve, \$236,000. *Officers:* General manager: Chao Ping-ching; Mill manager: Chao Ching-ming; Directors: Wang Tze-lung, Tuan Kuo-hsiang, Nee Ping-wen, Wei Sing-chen and Woo Chih-nan. *No. of Spindles:* 71,840, Saco-Lowell. *No. of Looms:* 500, Compton and Knowles. *Laborers:* 4,200. *Power:* Electric, 1,600 k.w. Boilers, 6 B. & W., 13,386 sq. ft.h.s.; stokers and superheaters. *Production:* A daily output of 24,000-lb. of yarn generally is consumed in Tientsin and the neighboring districts. *Annual Output of Yarn:* 25,191 bales.

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 yarns is nearly 90, and of 10's over 110-lb. These two things have made the mill successful in the manufacturing end. Roving, draw 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.

廠 紗 豫 永
YUNG YU COTTON SPINNING CO.,

Office: B.193 Sinza Road, Shanghai. *Mill:* NW Soochow Creek, Ferry Road, Shanghai. *Established:* August, 1919. *Registered:* January, 1920. *Capital:* Tls. 400,000. *General Manager:* Hsu Sung-chuen. *No. of Spindles:* 12,000; Brooks and Doxey. *No. of Looms:* 200. *Power:* Steam, 280 h.p. *Laborers:* 280. *Trade Mark:* Great China.

廠 紗 信 崇
ZOONG SING COTTON MILLS LTD.,

Town Office: 8 Rue Du Consulat, Shanghai. *Mill:* Pang Poo, Dan Kai Doo, Shanghai. *Agents:* R. D. Tata & Co., Ltd., 6-10 Rue du Consulat, French Concession, Shanghai. *Established:* June, 1920. *Capital:* Tls. 2,000,000. *Directors:* B. D. Tata (chairman), Zao Sung-dau, Woo Ling-shu, E. Nissim and A. David. *Staff:* B. H. Chavala, Manager; C. C. Mavelvala, carding and spinning master. *No. of Spindles:* 30,000, Howard & Bullough. *Power:* Steam. *Trademark:* Ticket "Shi-ji-da-fah."