

COTTON-SPINNING AT SHANGHAI.

THE manufacture of cotton goods by machinery in China—with Chinese, cheap, silver-paid labor, with raw cotton to be purchased in the vicinity, and with a market for the finished articles at hand—was, for many years, an enterprise that appealed strongly to the foreign merchant at Shanghai. It seemed that if piece-goods imported from America and England could be profitably sold in China, in competition with the product of native hand-looms, the building of modern factories on Chinese soil would afford even a more certain profit.

Prior to 1895, frequent efforts were made to obtain the consent of China to the inauguration of this industry ; but the Government resisted, on the ground that steam factories, on a large scale, would derange a native industry and throw Chinese spinners out of employment. The merchants alleged that the treaties with China gave them the right to manufacture or to follow any other pursuit ; but, unfortunately, in no treaty was this right expressly postulated. The British treaty of 1843 provides that British subjects may “ reside, for the purpose of carrying on their mercantile pursuits,” at certain cities. The American treaty of 1859 allows Americans to reside in certain places and to “ trade there.” The Prussian treaty of 1861 allows citizens of the German states to “ reside in, frequent, and carry on trade or industry ” at Shanghai and other places. The Chinese argued that “ mercantile pursuits,” “ trade,” and “ industry ” could not be read to cover manufacturing ; and they maintained their position. It must be explained, however, that no determined effort was made by the foreign ministers at Peking to carry the point. As far as English and American merchants were concerned, they received but lukewarm support from their governments. It was naturally held at Washington and at London, that to demand the right to build great factories in China, to compete with those at home, would be to insist on an uncertain advantage ; that, in fact, the interests of New England and of Manchester were really subserved by the attitude of China.

In 1895, this question was solved by the victorious Japanese. Paragraph 4 of article vi of the Treaty of Shimonoseki, signed April 17,

1895, provides that "Japanese subjects shall be free to engage in all kinds of manufacturing industries in all the open cities, towns, and ports of China, and shall be at liberty to import into China all kinds of machinery, paying only the stipulated import duties thereon." This put an end to the controversy and opened the door to a vista of industrial activity in China, the possible development of which cannot be overestimated.

Cotton-yarn spinning was one of the first industries to be inaugurated under this newly granted privilege. But, curiously enough, no Japanese mills have been started; and the Japanese must be somewhat chagrined to have been the means of granting to foreigners, at Shanghai, the right to compete with their own mills at Kobe and Osaka. The inducements to enter this new industry may be gathered from the statistics. The latter show that China imports cotton goods to the extent of about \$60,000,000 annually. These goods consist of millions of pieces of drill-sheetings, jeans, shirtings, towels, velvets, lawns, muslins, etc.; constituting by far the largest item in the import trade of China. It is gratifying to observe that American cottons are particularly in demand, and that they surpass, in quantity imported, those of any other country. The Chinese, however, like to weave the coarser grades of cotton themselves; for which reason they buy cotton-yarn and have it made into cloth, in their own homes. Even before the mills were started at Shanghai, yarn was imported in considerable quantities; and, in 1897, the amount of English, Japanese, and Indian yarn sold in China amounted to more than two hundred million pounds.

There are now five large mills at Shanghai. They are all on or near the Hwangpu River, and have private jetties carried into it to facilitate the handling of cargo. Of these mills, four were started originally under foreign supervision, as follows: The Soy Che Cotton Spinning Company, Limited, with 40,000 spindles, under the management of Messrs. Arnhold, Karberg & Co.; the International Cotton Manufacturing Company, Limited, with 40,000 spindles, under the control of the American Trading Company; the Laou Kung Mow Cotton Spinning and Weaving Company, Limited, with 25,000 spindles, under the control of Messrs. Ilbert & Co.; the Ewo Cotton Spinning and Weaving Company, Limited, with 50,000 spindles, under the control of Messrs. Jardine, Matheson & Co. The fifth is the Ya Loong Company, with 22,000 spindles, formerly a Chinese company, but now managed by Messrs. Fearon, Daniel & Co.

To this total of 177,000 spindles, now in operation, an addition of 100,000 is about to be made by the Soy Che and Ewo companies. All the machinery for these mills is English. It was supplied, for the most part, by Asa Lees & Co., Oldham; though some of it came from Tweedale of Rochdale, from Platt of Oldham, and from Howard & Buller of Accrington. At present, the work of these mills is still limited to cotton-yarn spinning. In spite of their names they have not, as yet, begun to weave cloth. On account of the varying hours of labor, it is impossible to give an accurate statement of their output. Some of them are working ten hours a day, and others as many as twenty-two. A forty-thousand-spindle mill, running two shifts, night and day, will employ about 2,500 Chinese operatives, and produce about 1,600 bales of yarn a month.

Messrs. Arnhold, Karberg & Co.'s mill, the Soy Che, is the most active and best managed of them all; and an examination of it will show Chinese labor, in this new occupation, in its best light. This mill is located in a suburb of Shanghai, known as Pootung. It is in a handsome, gray-brick building, trimmed with red; and there are other buildings adjoining, which are used as offices, warehouses, machine-shops, and dwellings for Chinese workmen. This mill, which is now running 40,000 spindles, is so arranged as to allow the capacity to be increased to 80,000. The mill was equipped by Asa Lees & Co. of Oldham, and is lighted by electricity. The cost of the entire property was about \$700,000. In appearance and efficiency, it is up to the latest development of the spinning art.

The Soy Che runs two shifts, night and day, twenty-two hours and a half in all, and employs 2,200 Chinese—men, women, and children. The day-shift consists of carders, 295; spinners, 495; reelers, 210; in engine-room, 65; and waste-pickers, 100. The wages are paid biweekly, and range from 5 to 17 cents a day, according to ability. Most of these workers are rude, country people, who were brought into the mill some two years ago, without manual training and without any knowledge as to what would be required of them. It speaks well for them, however, that the productive capacity of this mill has increased 25 per cent in one year. The gain has been due mainly to the fact, that the more intelligent operatives have changed from day- to piece-work. The pickers are mostly women, who are paid by the pound, and earn about 5 cents a day. This work suits them better than the spindles: first, because picking can be done in a sitting posture, and can be diversified by friendly gossip, as well as by attention to the

never-absent baby ; and second, because nearly all of them have small feet—a circumstance which prevents them from moving about quickly, and causes them soon to grow tired. The bound foot is a fatal drawback to Chinese female labor ; and the increased demand for women operatives, in manufacturing, may lead to the abandonment, in the coming generation, of a cruel and foolish practice. “ Olo custom ” could maintain its sway when it was desirable to keep the women at home ; but, among the poorer classes, it can hardly stand the test of the difference in the earning capacity of a “ natural-footed ” girl, as compared with that of her crippled sister. It is often found that the most deeply-rooted Chinese prejudices may be removed—as are the ancestral graves along proposed railroad routes—by the argument of money.

There are no laws in China concerning hours of labor, the employment of children, or Sunday observances. The Chinese will work twelve or fourteen hours a day ; and parents are willing to hire out their children at as early an age as it is found profitable to employ them. This is no hardship to the children, who come from a class with whom the alternative lies between vicious idleness and ignoble toil. And, as for education, it is better training for them to watch the play of engines—the latest product of Western mechanical skill—than to gather refuse along the country roads. As yet, the mills under foreign control do not run on Sundays ; but, there being no law to the contrary, they may do so in the future, if the markets so require.

Messrs. Arnhold, Karberg & Co. are now putting out from their mill from 450 to 480 bales of cotton-yarn a week, of the four grades—or counts—of 10s., 14s., 16s., and 20s., and are consuming for this purpose from 1,500 to 1,800 piculs¹ of cotton every six working days. The yarn is sold chiefly in the city of Shanghai, whence it is taken to the inland cities and towns, to be woven into cloth by hand in thousands of Chinese homes. The cotton used in these mills is Chinese, Indian, and American.

The Chinese cotton is produced chiefly in the provinces along the Yangtze River. The amount produced, however, cannot be estimated. That it is very great is clear from the fact that, in addition to that sold to the foreign mills at Shanghai, Japan takes from three to five million dollars' worth annually ; and the consumption of all the Chinese and Japanese mills combined is inconsiderable when compared with the quantity consumed, on the domestic looms, in the millions of homes

¹ A picul is 133½ English pounds.

of inland China. Chinese cotton is inferior to both the Indian and the American; the fibre being short and lacking in "twist." The Indian is superior to it in twist, the American in length of fibre. To produce the finer grades of cotton-yarn, 25 per cent of American or Indian cotton is mixed with the Chinese. Again, owing to the fact that the Chinese cotton parts easily, the spindles cannot be run at full speed when it is used.

There are still other serious drawbacks to its use. Foreign experts say it fails to produce the proper percentage of yarn; and this is attributed to the vicious custom of wetting it to increase the weight. The waste is also unusually heavy. For these reasons and others the cotton of America and India continues in demand, though paying an import duty of 5 per cent. The import of raw cotton, in 1896, was about 13,000,000 lbs.; and, in 1897, it was almost twice that amount. In the face of this importation, China exported last year nearly 500,000 piculs of raw cotton, which went almost entirely to Japan. Being carefully picked by hand, Chinese cotton has the advantage over the imported article in cleanliness and purity. The cost of the native cotton in Shanghai, at present, is 14 taels per picul, or about \$50 the 100 lbs.

The availability of Chinese labor in cotton mills suggests its adaptability to other industries as well. If Chinese labor—of which there is an enormous supply—should prove generally effective, and remain as cheap as it is at present, the outcry against the "yellow peril" is indeed a warning to which the Western world should give heed. Labor at 10 cents a day of twelve working hours, without a day of rest, is a prospect appalling to the hardiest competitor. The safeguard against it lies in two circumstances; (1) it is not effective, it having been estimated that three good Chinese laborers are about equal to one foreigner; and (2) although the wage standard must always be below that of the West, it cannot remain as cheap as it is now. It is, however, difficult to consider the Chinese laborer in his individual capacity. He is too gregarious for that, and too much subject to leadership. Moreover, as a class, the Chinese are lazy and disposed to shirk. They are hard to control, averse to being driven, and fond of banding together. They steal, if not carefully watched; they are slipshod and inaccurate; and they require constant foreign supervision to maintain the standard of their work. The last is a serious matter; for the average cost of Chinese labor is largely increased when, to the pay-roll, is added the cost of a number of highly-paid, foreign supervisors. In this

respect the mills of Japan have the advantage ; because the Japanese organize better, and get on without the foreign foreman.

One of the most serious difficulties involved in Chinese labor is the fact to which I have already alluded ; namely, that the laborers, so to speak, go in "gangs ;" each gang subjecting itself to some one leader or controller. It is usually through this man that they have secured their job. They look up to him, and secretly hand over to him part of their pay. They practically look upon him as their employer. They will obey him ; and, at his command, they will leave work or demand more wages—just as laboring men do in other countries, at the behest of a trade-union. The leader is often unknown to the foreign employer, who has no means of getting at him. This is only one of the many ways in which the insidious system of "squeeze" corrupts and hampers that country.

Whether or not these defects can be remedied, the future alone can tell. Education, closer association with foreigners, and the extension of the system of piece-work may make a different and more effective man of the Chinese laborer ; but, on the other hand, such general advancement will cause the low wage-rate to disappear. Except in the case of coolie labor, the Chinese in America do not work for less than their competitors of other races ; and a similar condition is sure to develop in China. As yet, not more than ten or twelve thousand Chinese are employed in the mills of Shanghai ; but even this comparatively insignificant demand for operatives has increased the wage-rate to a noticeable degree. When the employment of hundreds of thousands of laborers will be needed to aid in the construction of the proposed railroads, and in the manifold industries which will spring up as a result of the railroads, the wages will probably rise out of all proportion to their worth. It is too early, however, for America to take serious alarm at this Asiatic danger. For decades to come superiority of organization, greater abundance of capital, greater intelligence on the part of the workingmen, and greater genius for invention will keep the mills of America ahead of this rivalry ; and perhaps, in years to come, the problem will have so changed its nature, that the danger point will never be reached.

Thus far, the Shanghai mills have scarcely fulfilled the expectations of their founders. When they first began to operate, some two years ago, everything was rose-colored. The stock advanced from par to a premium of from 10 to 16 per cent. On the other hand, there has been recently a decided retrogression ; and there is not a mill in Shang-

hai whose stock cannot be purchased to-day at a discount of from 10 to 50 per cent. Careful investigation, however, points to the conclusion that this depression is due to temporary causes only, which are destined soon to disappear. Among the latter may be mentioned : First, the money stringency in Shanghai, and the consequent rise in the loaning rate. Second, an unusually high exchange rate, which has stimulated importation, at the expense of local profits. A third reason is thus stated in a recent report of one of the mills : “ The high price of cotton, during the past twelve months, has militated against profitable results ; while the deplorable state of the yarn market, owing to Shanghai having become the ‘ dumping ground ’ for the overproduction of Bombay and Japan, has led to a range of prices below the cost of production.” Not long ago a British ship landed 6,000 bales in one cargo—an amount equal to the output of the three largest local mills for a month. Some of the mills will be little benefited by the present low prices of cotton ; having loaded themselves up with it when prices were high. Of all the mills the Soy Che has been least affected. It continues to run night and day, and its stock is quoted at a discount of only 10 per cent.

Though subject to periods of depression, the outlook for the future of cotton-spinning in Shanghai is favorable. It is, indeed, safe to predict, that the industry will become a great one, and that it will constantly increase in importance. Labor is as cheap in China as it is in Japan ; and American and Indian raw cotton can be laid down as cheaply in the former country as in the latter. There is a great market at the door of the mills—a market protected by an import duty of 5 per cent. If, in spite of these advantages, the cotton industry in China should eventually fail, it would seem vain to hope for success in any other line of Chinese manufacture.

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