

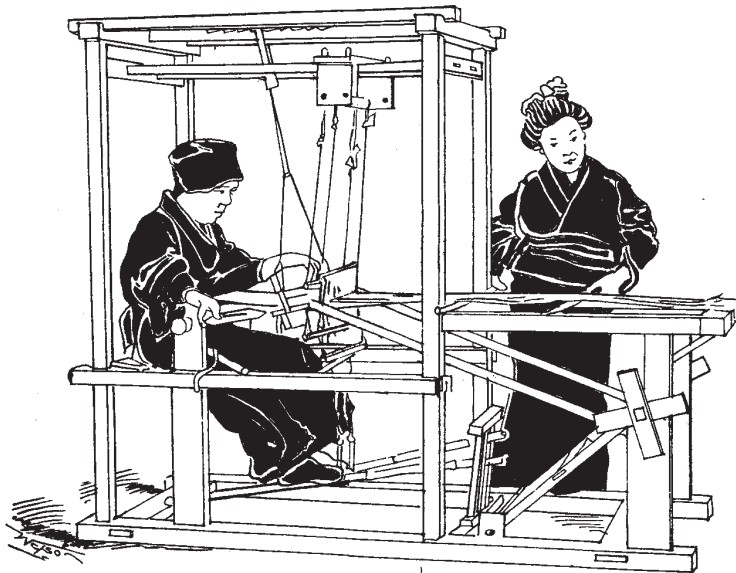
### Cotton Spinning in Japan.

**M**R ROBERT P. PORTER, in a letter to the *Cleveland World* writing from Tokyo, gives the following account of the rise and present condition of the cotton industry in Japan. Our illustrations, which originally appeared in the same paper, show in the first figure a Japanese hand loom and in the second the hand gin or *churka* and the ancient spinning device.

"Before taking up the centres of the cotton industry in Japan," Mr. Porter writes, "it may be well, in connection with

cotton spinning by machinery in Japan is best told by the following table :—

Year.	Amount imported. Kin.	Amount produced in the country. Kin.	Total. Kin.
1887.....	47,439,093 ...	5,542,438 ...	52,982,077
1888.....	42,810,912 ...	20,938,963 ...	63,749,875
1890.....	31,908,302 ...	32,512,250 ...	64,420,552
1891.....	17,337,600 ...	45,306,406 ...	62,644,006
1892.....	24,308,491 ...	64,064,925 ...	80,975,140
1893.....	19,405,152 ...	63,632,100 ...	82,705,509
1894.....	15,942,797 ...	92,285,550 ...	101,854,759
1895.....	14,591,083 ...	uncertain ...	uncertain



these general statistics, to give such data as the Government has been able to supply me with at Tokyo. The spinning and manufacture of cotton into cloth by power machinery is one of Japan's new industries. In an incredibly short time they have reduced their imports, and experts believe that they have facilities enough

"Thus, since 1888, Japan has reduced the importation of cotton yarn from England and India by 33,000,000 kin, or 46,000,000 pounds. Actually the importation has gone down as the home product increased. It is also noteworthy that relatively the consumption of cotton yarn by the people has increased with



to supply the home demand. If this is true, the British cotton manufacturer may well be on the lookout, for Japan will most assuredly capture the Chinese market. Last year Japan exported about 5,500,000 dols. of manufactures of cotton, mostly to China, though we took over 1,000,000 dols. of cotton rugs. This does not seem much, and yet our own exportation of cotton goods is only 11,000,000 dols. When we recall what Japan has done in the manufacture of silk and of matches in four or five years, five millions of exports of cotton goods must seem like a good beginning with the home market supplied. The story of the rise of

the manufacture at home. The following table shows the amount consumed per head in one year :—

	1894. Kin.	1893. Kin.	1892. Kin.	Average. Kin.
Amount consumed.....	101,845,759	84,799,553	80,083,563	88,896,261
Population .....	41,695,565	41,385,040	48,669,942	41,390,182
Amount consumed per head.....	2.4	2.0	1.9	2.1

"It will be seen that the amount of consumption per head increased year by year, and this increase is still going on at the present time.

"The latest report on the growth of cotton manufacturing, especially spinning, may be found in the following official figures of the number of spindles at work since 1890 :—

Year.	Perpendicular spindles.	Oblique spindles.	Total.
1890.....	141,921 ...	111,545 ...	253,466
1891.....	213,729 ...	103,366 ...	317,095
1892.....	239,014 ...	99,294 ...	238,308
1893.....	269,669 ...	70,588 ...	340,255
1894.....	409,404 ...	66,588 ...	475,992
1895.....	489,202 ...	42,555 ...	531,757

"According to the examination made in December, 1895, the number of spindles is over 632,130, and the spindles under construction, or planned, are over 352,427, which, when added together, make a sum of 984,557. Moreover, as people are still planning new enterprises, the number of spindles will exceed 1,000,000 before the close of this year.

"Japan, with 1,000,000 cotton spindles rattling and clattering in the neat little factories which abound in the Osaka district, will close up the market as tight as a drum against John Bull, and give him a close fight in China.

"But will Japan stop at 1,000,000 ?

"The question may well trouble the Manchester millowner, especially when he contemplates the following table, which is official, and has been supplied me by M. Motoyama, chief statistician of the Imperial Cabinet :—

Year.	Number of Cotton Operatives.		Average Daily pay per Operator.	
	Men.	Women.	Men.	Women.
1895.....	8,129 ...	26,929 .....	17.1 ...	8.9
1894.....	6,164 ...	12,214 .....	17.4 ...	9.4
1893.....	6,354 ...	18,978 .....	17.4 ...	8.9
1892.....	5,051 ...	14,246 .....	17.7 ...	9.0
1891.....	4,089 ...	10,330 .....	17.0 ...	8.2
1890.....	2,539 ...	5,391 .....	17.1 ...	8.1

"The wages are given in sen, which at the present rate of exchange means that the men engaged in cotton spinning in Japan receive, according to the official reports, less than 10 cents per day of about twelve hours, and the women about 5 cents per day. It must be remembered that this is good, efficient labour, and that these people make excellent operatives in textile mills. Those who ridicule the idea of a still further development of this industry should note that in six years the number employed in this branch of the cotton industry in Japan increased four-fold, from 8,930 in 1890 to 34,058 in 1895. In no country, except possibly the United States, have such stupendous industrial advances been made in so short a time."

**The Production of Small Clean Castings.**—A contribution to the *Colliery Guardian* states that many of the difficulties attendant on obtaining clean small castings would be overcome by using ferro-sodium in the ladle or crucible just before the metal is poured, as the action of this material is to increase the heat and fluidity of the metal, thus allowing all impurities to rise in the ladle, while in all cases the metal is rendered more homogeneous and free from cracks and blowholes, as there is no possibility of grains of sand or other substance remaining in the metal in the mould, as these rise to the surface in either the head or riser as the case may be. The cost of ferro-sodium varies from less than 1d. to possibly 2d. per cwt. of molten metal, and this expenditure is compensated for by the saving effected by having fewer wasters. With iron of a low grade, however, ferro-sodium gives greater results than with steel, the iron being rendered homogeneous and uniform in texture, and tooling up without speck or flaw. In fact, it is possible to use common London cast scrap—practically the worst mixture of iron to get sound, homogeneous castings from,—and from this to produce really good sound engineers' castings. Of course, this means a lot from a money point of view, as scrap of this kind cannot be purchased under 25s. per ton; and although possibly only 15 cwt. of castings can be had from each ton of scrap metal, yet this is far cheaper than pig-iron castings.

## Advance of Wages at Messrs Howard and Bullough's Works, Accrington.

WE have much pleasure in printing the following extract from the *Accrington Observer and Times* of August 29th, bearing on the advance of wages recently given to their hands by this eminent firm of machinists :—

Years ago, Messrs. Howard & Bullough had the distinction of being the first firm in the country to reduce the hours of labour to 54 per week. The experiment was, at the time, considered very daring, but time proved that the step was a wise one. Then, in order that the men might have a full half-holiday on the Saturday, the hours at Globe Works were further curtailed to 53, the works being opened at half-past eight on the Monday morning instead of eight, and closing at 11-30 instead of 12 noon on Saturday. This concession was much appreciated by the work-people. It enabled them to take advantage of the early half-day trips, and to enjoy themselves in various ways. And now the great Company have taken another step in advance. Without solicitation and without any preliminary notice, they gave what practically amounts to an all-round advance of wages last Saturday. The secret had been well guarded, and great was the surprise of the hands to find (as they thought) that a "mistake" had been made in their respective wages—an event of very rare occurrence under the very careful mode of checking at Globe Works; and it was gratifying to see the large number who returned to the pay-box to point out the supposed error. The question may be asked: "Why did not the firm take the course adopted by some other firms, and give, say, a month's notice of the advance?" This certainly would have afforded an opportunity for the "blowing of trumpets," but would not have been in keeping with the quiet and business-like methods of Howard and Bullough. Since the formation into a Limited Liability Company, Globe Works have made gigantic advances. The output of the firm is, at the present moment, greater than ever, and, although one large extension has followed another with startling rapidity, during the past few years, the management are still crippled for room to deal with the large increase in orders, and have just completed the purchase of the large spinning mill, with weaving shed and land adjoining, in possession of Councillor Ratcliffe, and have plans before the Council for a further large extension. The Board of Directors may be congratulated on the excellent results of their policy in the past. In giving an advance of wages, which the men had not even asked for, the Directors have demonstrated that while they strive for the prosperity of the company they are not unmindful of the welfare of their work-people. The extent of the increase has not transpired, but it is known that some of the men received 1s. 6d., 1s. 9d., and even 2s. more than usual last Saturday. To the firm of Howard and Bullough this will mean many thousands of pounds of an increased outlay in wages per annum, which will make a wonderful difference in the spending powers of the work-people, and Accrington will derive benefit from the generous action of the Company in many ways.

## Importation of Turkey Red Yarn.

A RESOLUTION by the Government of India, Finance and Commerce Department, says :—With the despatch of the 26th December, 1895, the Secretary of State forwarded a memorial from certain firms of Scotch dyers complaining that hanks of Turkey-red yarn of lengths less than the minimum prescribed by Rule IV of the rules under the Merchandise Marks Act, 1889 (published in Home Department Notification No. 1474, dated the 13th November, 1891) are imported into India from Germany and Switzerland. The memorialists suggested that such importations, being clear evasions of the law, should be prohibited by the issue, if necessary, of new or amended regulations.

2. From the replies of the local Governments, to whom the matter was referred for enquiry and report, it appears that such yarns are not imported into Madras and Burmah, that they have not been imported into Bombay since 1893, and that imports into Bengal have also recently ceased.

3. Such imports are distinctly in contravention of the rule which has the force of law, and the consumer, it is understood, is deceived by goods so described. These imports should therefore be dealt with, in case of renewal, in accordance with law. No amendment of existing rules is necessary.