

## Foreign News and Correspondence.

### TEXTILE MATTERS IN GERMANY.

[FROM OUR OWN CORRESPONDENT.]

ELBERFELD, APRIL 29TH, 1889.

The improvement in trade in England has not been without consequences in Germany. Our textile industry is again getting larger orders from thence than of late. The trade with Italy has somewhat diminished, and the traffic with the United States is getting smaller, but an equivalent has been obtained by the enlarged orders we have to execute for South American account. From the Argentine Republic, Mexico, Peru, Chili, Columbia, we have now such important orders on hand as never before; the French competition there has been completely ousted by Germany. Most curious, however, it is to note that as we are informed, from several districts of the textile industry, the French competition now makes itself more felt in some European countries, as Holland, Belgium, Switzerland, as also in the Levant. The French try to imitate that advantageous side of our manufacturing method which consists in the production of tasteful articles at cheap prices; they are said to have progressed therein of late. The home consumption has considerably increased, and it is to a great part to that circumstance that we owe the great activity which now prevails on the whole in the German textile industries. The orders for spring have been very satisfactory, and some branches even possess already large orders, for autumn. In short, there is no want of orders; on the contrary, many manufacturers are behindhand with their deliveries.

The "collective travellers" I spoke of in my last letter are sending in fair orders. I was speaking on the subject to a manufacturer from Gera, who has a fifteenth share in the traveller at present in Canada, and asked him a few questions. "The system works well," he says, "and is being adopted by other syndicates of manufacturers. The firms which syndicate are, as far as possible, manufacturers of specialties—I mean to say that the samples carried by the traveller for different houses are distinct. The system is a good one. The syndicate divides expenses which, heavy enough for an individual firm, fall lightly when spread over ten or twenty houses, and it is just as easy for a traveller to show twenty samples as to show one."

All strikes are now for once at an end in Germany, employers and workmen having come to an understanding.

**New Factory.**—The firm Eisenshardt and Schröter, at Greis, i/v, is erecting a large power weaving factory at Borna.

**Dividends.**—Mechanische Leinwandspinnerei Ravensberg, Bidefeld: 11 per cent. Kammgarnspinnerei Brünn: 5 per cent. Mechanische Baumwollspinnerei und Weberei Kauf-Couren: 200 marks. Kammgarnspinnerei, Leipzig: 12 per cent. Kammgarnspinnerei, Wernshausen: 5 per cent. Berlin-Neuendorfer Spinnerei: 4 per cent. Tuchfabrik Langen, Salza (Graeser): 5 per cent. Kölnische Baumwollspinnerei und Weberei: 6 per cent. Dessauer Wollgarnspinnerei: 2½ per cent. Bleicherei und Appretur-Anstalt Stuttgart: 5,8 per cent.

The Power-loom weaving business at Linden, a suburb of Hanover, lost 225,797 marks during 1888.

The Spinning and Weaving Co., of Ulm, reports a profit of 34,629 marks, against a loss in the previous year of 72,923 marks.

At the general meeting of the shareholders of the Bielefeld Joint-Stock Power-loom Weaving Co., a dividend of 12½ per cent. was recommended and adopted. The company has just celebrated its twenty-fifth anniversary. During the first 15 years the average dividend was 5½, during the last ten years 13½.

The cotton factory in the Piræus (near Athens), managed by Hector Psychas, has begun to manufacture wicks for lamps.

The treaty of commerce between Austria-Hungary and Great Britain, which expires on December 31, 1891, will, according to the present intentions of the Government, be denounced next year.

The Spanish customs have decided that jute yarns, twisted with four ends shall stand in category 123, and pay 18 pesetas (1 peseta 3¼d.) 90 cs. Oil cloth in patterns pays duty similarly as tissue felt or carpets.

There appears little chance at present of a satisfactory commercial treaty being renewed between Servia and Great Britain, for the Servian Government still insists on raising the duty on cotton stuffs from 8 to 12 per cent. *ad valorem*.

The Board of Trade have received information to the effect that the Customs duty on the importation of shoddy and goats' hair blankets, whipped or bound, into the Argentine Republic, has been reduced to 25 per cent. *ad valorem*.

The marriage trousseaux of the two sisters of the German Emperor will be made entirely of German manufactured materials. Not a stitch of French silk is to adulterate the make of the dresses, and not an inch of French linen or lace is to be used.

The Swiss Customs authorities have decided that voridine, a mordant, must be classed in category nine and pay duty two francs per quintal. Cop tubes, paper, from the 1st inst. are brought under category 275, and charged 16 francs per quintal.

In the French colony of Gaboon the rates of import duty now levied are on the following articles: Yarns, linen, hemp, cotton, wool and silk, 10 per cent. *ad val.* Tissues of the same materials pay the same amount; when dyed or printed an additional duty of the same amount. Yarns in which gold or silver is twisted are included in the category of gold wares. Goods of French origin benefit by a reduction of 60 per cent.

From January 1st to March 31st, the quantities of silk conditioned in seventeen continental centres were as follows in kilograms:—Avignon, 27,939; Basle, 108,424; Como, 44,048; Crefeld, 162,109; Elberfeld, 81,442; St. Etienne, 270,031; Florence, 12,862; Lecco, 39,455; Lyons, 982,845; Milan, 1,172,740; Paris, 56,829; Privas, 10,173; Roubaix, 17,852; Turin, 154,139; Wdine, 27,785; Vienna, 37,059; Zurich, 204,619.

**A SPANISH STRIKE.**—Consul Wooldridge, of Barcelona, tells in his annual report on trade to the Foreign Office, a naïve story. The labourers struck work for higher wages and less work. The authorities "appealed to their feelings rather than use force," and thus they arrested the strike, and "brought the men to a sense of their duty without conceding anything." This is the way that wages disputes are settled in Barcelona. This district is the great centre of the Spanish textile industries.

The Belgian trade in woollen goods has suffered from the exceptional mildness of the past winter. The products of the industrial arrondissement of Verviers have profited to an important extent by the denunciation of the treaty of commerce between France and Italy. The competition of Italian cheap garments had been making the profit of similar Belgian goods day by day more precarious. Some merchants of the Verviers district have formed themselves into a syndicate, mainly in order to work the Japanese and Canadian markets; much is hoped for from this new departure. Peignés are still the articles which are most in demand. Cheap beavers and the ordinary black peignés of Verviers are successfully resisting English competition.

There is something wrong at Dresden. Mr. G. Strachey H.M. Charge d'Affaires at that City, giving an extract from the report of the Dresden Export Museum, says:—"The report states that the German consulate in the Corea had forwarded to the Museum a set of local export and import samples. It is mentioned that the principal staple of foreign imports to the peninsula is heavy, unbleached English cotton goods, in particular smooth shirtings at from £10 16s. to £12 the piece. Likewise, linen, muslins, and Russian cloth, the last being received from Germany." Now we should like to know what sort of shirtings, grey, white, rough, or smooth, are either in the Corea or anywhere else, sold at the prices named? We could easily have concluded that the l. represented lb. but for that unfortunate 16s. following.

## Machinery and Appliances.

### IMPROVED REVOLVING FLAT CARD-ING ENGINE.

MAKERS: MESSRS. CURTIS, SONS, AND CO.,  
MANCHESTER.

If the carding engine does not soon become the most perfect machine in the cotton trade, it will not be for the want of an abundance of inventive talent and labour bestowed upon it. During the past ten years the carding engine has probably had as much labour put into it as nearly all the other machines together. The result, it is satisfactory to say, has been that great progress towards making the card everything that can be desired, has been made, as was strongly evident at what might be termed the competitive display in the recent Exhibition at Manchester.

Amongst the eminent firms showing improved cards at that time was Messrs. Curtis, Sons, and Company, who have occupied a conspicuous place in the trade as cotton machinists during the past half century. The card then shown has undergone further improvement in details, accomplished mainly by the introduction of many special tools designed and constructed by the firm, for the purpose of securing the most perfect accuracy in the construction of the working parts, which has been found absolutely essential to the production of the best work.

Formerly the cylinders and doffers were surfaced in the lathe, but the firm have constructed special lathes for this purpose, and after being turned in these the cylinders and doffers are ground with consolidated emery wheels on the Horsfall principle. This corrects any slight irregularity that may have been left in the turning, and makes the peripheries perfectly cylindrical. The importance of obtaining a good foundation of this kind for the reception of the clothing will at once be obvious, as when the clothing is subsequently laid on, providing it be of good quality and uniform in thickness, the new periphery described by the points of the wire will be equally true with that of the foundation on which it is laid. Result: very little grinding of the wire is needed to put the card into perfect working order. Thus time, labour, and wire are saved. So perfectly can the cylinders be constructed on this plan that the makers guarantee that they shall not vary more than the thickness of thin tissue paper, or say one-thousandth part of an inch. So much for the cylinders.

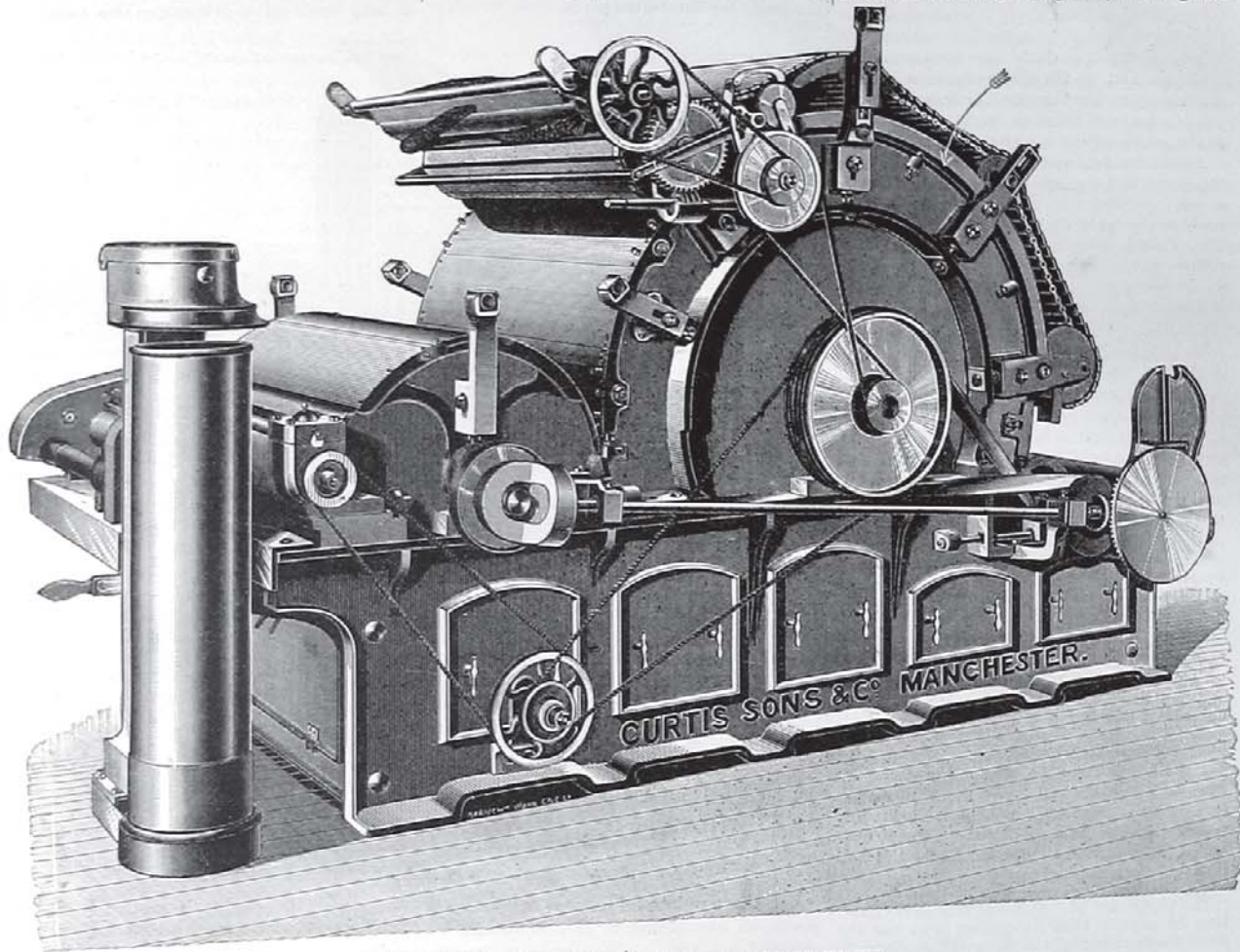
To render the cylinders perfect, however, would avail little to the production of good work, provided the bends were wanting in the same degree of perfection. Any irregularity in these would bring the flats in the course of their traverse improperly near to, or would carry them further away from the cylinder than ought to be the case for good work. Provision has been made against this occurring by constructing them on an improved flexible system, and trueing them up from their own cylinders in working position. The apparatus by which they are finished leaves them absolutely accurate. An exceedingly simple setting arrangement is provided, which renders it unnecessary to rely on the sense of hearing, the usual method of testing the correct performance of this task, and which is only applicable when the mill is stopped. This consists of the provision of an aperture under the flexible bend, through which the flats can be seen at work, and the ordinary

carders' gauge inserted between the wire of the flats and that of the cylinder. The head of the arrow in our illustration indicates this aperture. In process of time of course the flats will require adjusting, and for this purpose there are four setting points, with a setting-up screw between each, provided. By these the bend is practically sustained at seven places, which secure perfect rigidity and ensure perfect working. By former provisions the flats were brought down simultaneously to the carding surface, by means of a rack and pinion, but the clothing being in hardened and tempered steel wire, readjustment was required only at such long intervals, that the complications of this arrangement were not compensated for by its advantages.

Even with the above excellencies others must be combined, or good work cannot absolutely be

ended to end by a clip which keeps it from puckering between the rivet holes. This is highly necessary in order to prevent the cotton sticking to the edges. After the flats are clothed they are put on their own chain as when at work on the card, and placed on a machine upon which the grinding fixings are an exact counterpart of the carding engine, which grinds them up and burnishes them in the short space of a couple of hours. This precludes the necessity of any lengthy grinding at the mill and thus prevents the waste of a considerable amount of time ordinarily lost in that operation, when spinners are equipping a new establishment, or replacing the old type of roller engine. Each set of flats is cast from a mixing of metal, which has been found by the makers to contain the greatest amount of rigidity with a minimum of weight, and each set of flats being

doffer, and flats. The makers in this case have arranged an improved slow motion for both cylinder and doffer, by which the speed of the former can be reduced from 170 to 7 revolutions per minute, whilst the grinding roller revolves at 600. It is a light and portable arrangement, easy to handle and apply without disturbing any other part, and it can be used in combination with the "Horsfall" grinder. The grinding fixings are made with a loose brass bush, under which are inserted a few pieces of stiff paper on each side of the card. These are removed one at a time, and the grinding roller is thereby lowered very slightly, and avoids the possible chance of hooking the wire as is often done when lowering it by means of the adjusting screw. Messrs. Curtis have also invented and patented a convex grinding roller for grinding flats, which grinds



MESSRS. CURTIS, SONS, AND CO'S IMPROVED CARDING ENGINE.

guaranteed. These are that the flats shall be sufficiently strong so as neither to break nor bulge. The former, it must be obvious, will cause much mischief on occurring, whilst the latter is an ever present evil when the flats are too weak, as they bulge in the middle bringing their wire into contact with that of the cylinder thus nepping the cotton on its passage and deteriorating the work. In order to obviate both these defects all the flats are tested to bear a strain of 18 cwt. at a distance of 1½ inches from their ends, the weakest parts. Special machines for drilling the flats for the rivets have been provided. These drill the flat at one operation by means of the Morse twist drills. When clothing the flats, the clothing is stretched from

cast at one time ensures the equal wear of the flat ends. The makers guarantee that no flat shall vary in thickness more than that of the finest tissue paper. They have a special apparatus showing the amount of variations to the greatest nicety.

So far everything has been done to construct and equip this card in such a manner as to leave nothing to be desired in the way of rendering it perfect for its purpose. Something, however, yet remains, and that is to provide for its maintenance in this condition as far as possible can be done in the case of things in work and wear. In the revolving flat card, one of the most essential requisites of good work is the provision of means to ensure the best grinding of both cylinder

them in such a manner that when in position at work they lie perfectly straight across the cylinder. This corrects the ineradicable tendency or determination of a straight bar to bend inwards when suspended on its extremities. The use of this new roller soon shows itself in the improved and visible results.

A common defect in carding, and one obvious to every observer, under the old and comparatively unimproved systems, was the cloudiness of the web shown when being stripped from the doffer. Great improvements have been effected in this matter, Messrs. Curtis having perfectly obviated it in this machine by the introduction of a patent combined feeder and mote knife, which is easily adjusted for all staples of cotton. The under-

casings are made on a new principle, the bars being of D shape and are solid, thereby preventing the cotton accumulating as is often the case where angular tin bar is used, though the corner where they are soldered being left rough.

Amongst other details we may mention that the taker-in is shrouded at the ends, and heating prevented. The strap driving the doffer is on the opposite side of the card to that driving the taker-in from the cylinder, thus avoiding any undue strain upon the bearings. The doffer is also driven by a double carrier, which permits a larger pulley to be placed on the end of the taker-in, and a smaller one on the Barrow motion, which gives a quicker surface speed of the strap, and thereby helps to prevent slipping. The principle of the coiler is the same as used on their Improved Drawing Frames, whereby the can rotates in the same direction as the coiler top and the layers of sliver in the can are laid over each other instead of under as here. tofore, and it will no doubt have been noticed by managers that in the old arrangement it sometimes happens that the cotton is drawn from the can in a loop and the sliver breaks when it comes to the guides behind the Drawing Frames.

All the brackets and fixings are machined to templates, and a number cast on each, which is a great convenience to spinners when they require any part replacing, saving a deal of labour and annoyance.

The matter of production is so dependent upon conditions and circumstances that any statement upon this head would require these elucidating. It may, however, be said that these cards produce on an average of good middling American cotton about 800 lbs. per week, and of Egyptian 500 lbs.

We have thus brought the salient points of this excellent card sufficiently before our practical readers to enable them to form their own opinion of its merits, and in their hands we must now leave it. Messrs. Curtis will always be pleased to show intending purchasers the card in their own establishment, or at work in the mill, or afford any other information that may be desired.

**NOTON'S BALLOONING AND SNARL PREVENTER.**—This excellent little device for preventing ballooning, and the occurrence of snarls in reeling hard twisted yarns, has been a great success, over 40,000 brushes having been made and applied. Mr. William Noton, Friory Chambers, Oldham, is the inventor.

Mr. John Bullough, of Accrington, Mr. W. Johnson, of Liverpool, and Mr. Walter Morrison, M.P., have each subscribed £1,000 to the Trust for the Cultivation of Derelict Farms in Ireland. The trustees are the Duke of Abercorn, Lord Stalbridge, Mr. Bullough, and Sir E. Harland, of Belfast.

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### COLEBY'S IMPROVED YARN BUNDLING PRESS.

MAKER: MR. THOMAS COLEBY, 14, ST. ANN'S SQUARE, MANCHESTER.

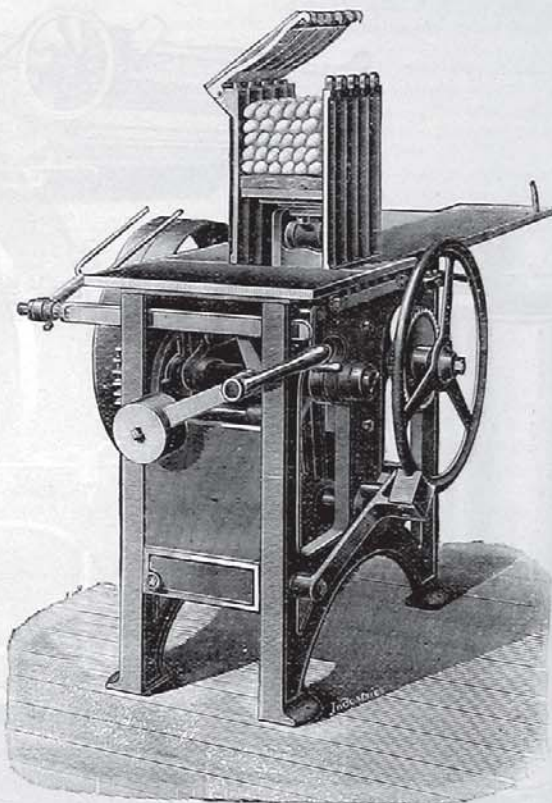
We have been invited by the patentee and maker to inspect the latest construction of this machine, the first form of which many of our readers may remember to have seen as shown by him at the Jubilee Exhibition in this city. The accompanying illustration shows its general appearance.

The making up of short bundles of yarn for export was almost, if not quite, the last process connected with the cotton trade in which sheer physical strength was requisitioned to perform the duty, rendered necessary in this to operate the heavy top bars of the press.

and remove the bundle, having done which he begins to repeat the operation.

This labour is altogether saved in the machine under notice, as when the yarn has been placed in position the attendant has only to start the press by shifting the driving belt, the bars are then automatically brought down and self-locked, when the yarn has been sufficiently pressed, and the bands tied, the press is again started. When the bars are by a very ingenious arrangement automatically lifted, and the bundle is taken out. This completes the series of the operations.

In its construction we particularly approve of the method of raising the table by cam-bolts to the large driving wheel, instead of the eccentric pin and side rods usually employed. By this means a two-thirds of the teeth in the driving wheel are brought into operation instead of only one-third as formerly. This relief of



BUNDLE PRESS.—MR. THOMAS COLEBY, MANCHESTER.

But the novel and ingenious application of power, as exemplified in this invention, has captured even this position, and now throughout every operation in the cotton industry the physical strength of the worker has ceased to be an essential quality.

The ordinary bundling press consists of a small oblong table, and a number of vertical bars affixed against each of the longer sides, so as to enclose on two sides a cubic space, the ends being open. To the top of the back bars are hinged a third series, so as to be brought over to those in front. The yarn having been placed in position the operative brings down and fastens the covering bars, the table or bottom of the press is raised by the usual means, generally power, and when the yarn is sufficiently pressed and secured by bands of twine, the operative has to unlock the top bars and to lift them up

strain upon the gearing is a strongly obvious improvement, and together with the impossibility of overrunning now secured almost absolutely precludes the breakdowns to which the ordinary form of the bundling press is so liable.

We were very favourably impressed by the substantial character and strength of the machine. The top bars and those in front are of steel and forged iron respectively.

The inventor seems to have incorporated in the machine to render it an efficient, automatic, durable, and almost unbreakable press. Its use yields a great economical advantage, as boys are now competent to perform the work, and where several presses are at work they may be employed under the superintendence of a responsible man.

Mr. Coleby may be addressed as above, and we may also add that Messrs. Platt Bros. and Company, Limited, Oldham, are licensed makers of the press.

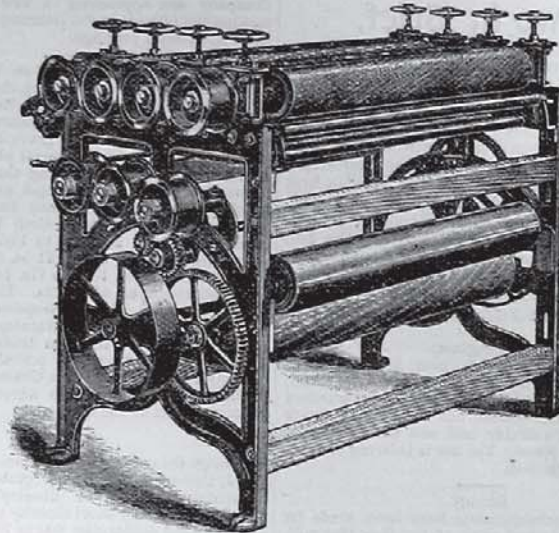
**FOUR-CYLINDER NAPPING MACHINE.**

The accompanying illustration of a napping machine, represents an American four-cylinder machine, made by a well-known builder of textile machinery in Philadelphia.

Cotton goods with a nap raised upon them have for a year or two past been received with a certain degree of favour, and the consumption, we believe, is growing. It is quite possible that the demand may in the early future become of considerable importance.

This napper is stated to be one of the simplest and most effective machines in use for producing a nap upon both cotton and woollen goods. Each cylinder is independent in its adjustment, and the cradle carrying the tension rollers is operated by a cam-motion, and can be raised or lowered with great rapidity.

The machine is said to occupy smaller space upon the floor than any other napping machine, and it is especially adapted to the work of napping domet flannels and the finer French shirting flannels.



FOUR-CYLINDER NAPPING MACHINE.

**PATENT BALLING MACHINE.**

We show on this page an illustration of a Patent Balling Machine, which we extract from the *Textile Record of America*. Several years ago the firm making this machine began the manufacture of the Walcot Chain Warper for making long chains containing from 500 to 1,200 ends. Many manufacturers, however, prefer to make their chains with a less number of ends, some prominent mills running from 350 to 500 ends in a chain. For these chains the ordinary slasher warper has been used, first warping the yarn on a beam, and then drawing it off from the beam into a chain to be dyed. This makes two processes, warping and drawing off, and in drawing off the chain from the beam there is a liability

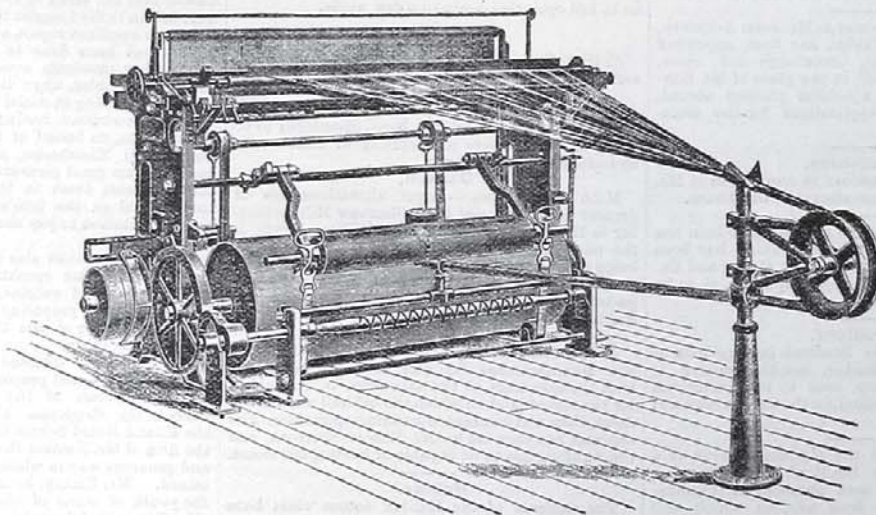
to produce these results with the least possible labour and cost, is a combination of the Improved Slasher Warper, represented here with the a leasing motion and clock and Balling Machine. By these arrangements it is possible to procure chains weighing as high as 250 pounds or more without any slack threads, wound in the shape of balls, and with a thread lease taken at convenient intervals; and all this without adding materially to the cost of beam warping. The process is extensively in use in some of our best mills, and is giving entire satisfaction.

The operation of this balling machine is very simple. The ends are taken from the bobbins in a creel through the regular slasher warper to the front comb, in place of which is a leasing arrangement; after passing through this the

**Reviews.**

Messrs. Dowson, Taylor, and Co. have issued, in the form of a little pamphlet, particulars of the various fires which have been extinguished in this country by the Grinnell Sprinkler up to the 30th March last. These are thirty in number, and nearly all the outbreaks have taken place in this district.

DYMOND'S ESSAY ON WAR, a great favourite with the late Mr. Bright, has just been republished, with a preface by the right honourable gentleman. It has been said that Mr. Bright drew from this source many of his well-known views on the subject.



PATENT BALLING MACHINE.

ity of stretching the yarn from the ends of the beam, because the distance is greater from the ends than from the centre of the beam to the eye or bite of the drawing rolls. If the outside threads are not stretched, those from the centre of the beam are liable to be slack.

Another difficulty arises in this method of handling chains from the liability of the kinks setting before the work goes to the boiling vats, and to overcome this there have been various arrangements, the one most universally adopted being to wind the chains on small beams in the form of balls.

A simple, cheap and economical machine for doing this work, having in mind, first, the best possible results, and second, to

threads are brought together in the trumpet and carried over the pulley as a chain and back to a trumpet, which traverses the length of the ball back and forth on the same principle as a card grinder. The chain is carried diagonally round a shaft which forms the centre of the ball and rests against the cylinder of the warper, being held by weights. Enough weight is carried to make the pressure on the cylinder sufficient to wind a ball compact and hard enough to stand any transportation required without injury to the chain.

The warper clock is adapted for stopping the machine so that a thread lease may be made every 500 yards, or any other length that may be required.

Messrs. George Bell and Sons have recently issued the third edition, each of 2,000, of Mr. Richard Marsden's *DEVELOPMENT, PRINCIPLES, AND PRACTICE OF COTTON SPINNING*. The work continues in steady demand. We may add that the complementary volume on *MANUFACTURING*, the appearance of which has been hindered for a long time, is in active preparation.

Sir Joseph Lee will not be able to accept the chairmanship of the forthcoming Lancashire Water-Gas Company, as he has resolved not to undertake any responsibilities in connection with public companies until he sees the Manchester Ship Canal right through.