Machinery and Appliances.

AN IMPROVED CHAINING MACHINE.
MAKER: M. W. HURST, SMITH STREET, ROCHDALE.

The chained or linked warp is a form of warp best known in the districts where bleached and dyed fabrics are usually manufactured. It is a process of linking-up a long warp into such a form as to give it the appearance of a chain. This shortens the length very much and facilitates the handling in the processes of bleaching or dyeing, whilst it permits free access of the bleaching liquor or colouring fluids to every portion of the warp. It is, therefore, a great convenience in these stages, and is extensively used in Scotland, Yorkshire, and some districts of South-East Lancashire.

The best machine for accomplishing this purpose that we have ever seen, and, so far as we know, the best yet constructed, is the chaining machine invented and made by Mr. William Hurst, cotton spinner, Bowling Green Mills, Smith Street, Rochdale.

As will be seen from our illustration, the chaining machine is incorporated in connection with an ordinary beaming frame, taking the yarn from the creel and through the mechanical parts of the machine. A brief description of the construction of the machine is all we can give. The inventor fixes two projecting hooks or horns to the frame, and around these causes a trumpet guide to pass in such a manner as to carry the warp alternately around these horns. Within the horn grooves are constructed in which are two other hooks moving backward and forward. Beneath the fixed projecting horns, mounted upon the tops of two vertical shafts are two revolving loopters, and so the trumpet guide passes around the fixed horns the warp is carried on, occurring upon one of them. The sliding hook in the latter then advances and draws the warp inward along the horn. The sliding hook is then liberated from the warp in order to be in readiness for its next movement. While these actions have been taking place the revolving loopters have passed the previously formed loop of the warp over the second loop, and close the extremity of the fixed horn. This completes the operation which has begun anew. This shows the action of one side of the machine, and whilst it has been in operation the corresponding side, identical in construction and action, co-operates with the first, and between the two the warp is chained in the most simple and perfect manner, and with the greatest expedition and ease.

The warp when chained is carried over pulleys, and laid in a box, and then tied up in a bundle. It may be allowed to fall upon the floor or into any suitable receptacle, or may be passed over carrier rollers or pulleys to any convenient place, or by various other appliances may be laid in any convenient form that may be desired.

The chaining machine will take and chain a warp from a beam through a beaming machine directly from bobbins, or from a warping mill, or any appliance by which warps are usually made. The warp is conveyed by means of drawing-off rollers, in such a manner as to prevent any strain on its passage to the chaining machine. In other cases the chain or linked warp may be formed by taking the threads directly from the bobbins, passing between or around rollers, and through a reed to preserve their parallel order and for the purpose of obtaining a neat and deliver them in a manner suitable for weaving.

The inventor has had the machine in use some time in his own mills, and has also supplied several other spinners with it. In every case it has given the most thorough satisfaction. By its use perfect uniformity of the link is secured—a short link being made as shown in the illustration. The link thus made is drawn out with the greatest ease and the least possible friction upon the threads, whilst all through the process the last are kept in their place. This preservation of the parallel order of the threads is highly necessary to the most satisfactory work.

The machine can be seen at work on application to Mr. Hurst, Bowling Green Mill, Smith Street, Rochdale.

IRON BELTING.—A contemporary reports that in a factory in Massachusetts a compound metal belt is being now driven by iron belting. The pulley is about 3½ in. in diameter, and receives its movement from a second pulley about 15 in. in diameter, which is fixed on to a shaft giving 220 revolutions per minute, whose centre is about seven feet distant from the centre of the first pulley named; both of these pulleys are of iron, with their faces turned smooth. Originally the pulleys were drawn by a leather belt, but it was found that the belt slipped occasionally. In order to remedy this, a belting iron belt was supplied similar to what is used for making chimney tubes, and it was riveted, the width was exactly the same as the leather belt, but it was slightly longer in order to compensate for its want of elasticity. Our correspondent informs us that this new belt has been in use for 12 months and has never slipped. We have very strong doubts as to the correctness of the statements made above, and should certainly not advise any of our readers to make alteration relying on its correctness.
ANOTHER IMPROVED YARN BUNDLING PRESS.

Makers: Mr. Joseph Stubbs, Mill Street Works, Manchester.

The yarn press shown in the accompanying illustration, is the latest improved type of this machine yet brought out by this well-known firm of makers. It is constructed for working by hand or power. The main difference between this press and the one formerly made by them is the introduction of a new lifting motion, consisting of two cams, one bolted to each side of the driving wheel and which lift the press table with perfect uniformity and with a more certain action than that of the old plan. By this lifting arrangement no over-running is possible, and no breakage can occur from this cause as when the top centre is passed the table begins to descend again. In order to ensure perfect uniformity in the construction of these cams, and through this the most accurate working, the two are bolted together and finished as one before being keyed upon the shaft in position. When in action they operate through contact with revolving bows.

This arrangement does away with the necessity for a brake to prevent over-running, and there is no reversal required. Since the firm introduced the improved lifting arrangement by means of the cams referred to, which is now about fifteen months, they have made upwards of eighty of these presses which have in every instance given the utmost satisfaction.

Our illustration shows the press as ordinarily made for 10lb. bundles, with box 12in. long by 8in. wide and to receive four strings. The plates are of the best quality of wrought iron and are forged, experience showing that this construction gives the soundest results. All the parts are made and finished by special tools, constructed to ensure accuracy in every detail. When intended to be operated by hand a four arm handle or lever is supplied with it, which is not shown in the illustration. We ought to add that the press can be made to any size required. The makers may be communicated with as above.

THE PATENT DARNING WEAVER.

Makers: Edwards and Barnes, Birmingham.

Everybody knows that weaving is an ancient craft, and that its origin is quite lost in the mists of the most distant times. It would require a volume to tell the story of its development from its simple stage to the comparatively crude form which even yet survives in the secluded districts of this and many continental lands. It would require a much larger one to follow and enumerate with any detail the almost

numberless inventions that have been brought out and combined to bring into existence the modern system of mechanical weaving; one of the greatest wonders of civilization. It is singular to observe, however, that through the thousands of years that have elapsed since the art was invented, and, in spite of the marvels of inventive genius brought to light within the past century, the art of weaving in its simplest form has survived through all, and continues to be practised in almost every household in the land. If any of our readers have failed to discover it in their own homes, we need only point them to the homely occupation of mending stockings, commonly called "darning." This, in
THE TEXTILE MERCURY.

May 11, 1889.

The contract for the erection of new premises for the Manchester and County Bank has been let to Messrs. R. Bell and Sons, Manchester. The building premises to be a building of great size and importance to the public buildings of the town.

The Proposed Stephenson Memorial.—At a meeting of the committee of the Blackburn and Districts Printed Weavers’ Association, it was decided to make a collection among the weavers of £10, per loom, in order to contribute to a permanent memorial of the late Dr. Stephenson. The collection will continue to receive contributions until a sum sufficient to form the memorial shall be raised.

We learn that the trustees of the late Mr. Haydock, who for several years held the situation of an accountant in the firm of Messrs. W. Dickenson and Sons, have made arrangements to place the head of the estate in the hands of gentlemen. The establishment, which was closed for lack of taking and valuation purposes on Mr. Haydock’s death, has since been under the care of Messrs. W. Dickenson and Sons.

The new firm will consist of Mr. Joseph Crook and Mr. Son, and have obtained the services of a few of the spinners, which has caused a large crowd of workmen who have been employed for several years to be engaged in the factory. The new firm is also engaged in the manufacture of cotton, which has been the staple of the business for many years.

The story of the textile industry and its development is one of the most interesting in the history of mankind. The early days of the industry were marked by the creation of new inventions and the improvement of existing ones. The invention of the spinning jenny by James Hargreaves in the late 18th century was a major milestone in the development of the textile industry.

The spinning jenny was a significant improvement over the traditional methods of spinning yarn. It allowed for multiple threads to be spun simultaneously, increasing the efficiency of the process. This invention led to the establishment of cotton mills, which became the primary manufacturing centers for textiles.

The cotton mill was a large building, typically made of brick or stone, with a spacious floor plan designed to accommodate the spinning machines. The mills were often located near water sources, providing the necessary water power for the operation of the machinery.

Over time, the cotton mill evolved to include additional machinery, such as weaving looms and carding machines. These machines were essential for the transformation of cotton fibers into usable fabric.

The cotton mill was not only a place of work but also a significant social institution. It housed the workers’ families, providing them with a sense of community and a means to support their families. The mill owners often played a significant role in the lives of the workers, offering them housing, food, and other necessities.

The cotton mill was a symbol of the industrial revolution, representing the transition from a hand-based economy to a mechanized one. It marked the beginning of the modern factory system, which would have a profound impact on society and the economy.

The story of the textile industry is a testament to human ingenuity and the power of collaboration. It is a narrative of innovation, progress, and the continuous evolution of technology and society.