A NEW DOBBY LATTICE LAG.

Makers: Messrs. Stone and Burnett, Bow Lane, Preston.

The dobbey, a well-known modification of Jacquard’s famous machine, has come into very extensive use in Lancashire and Yorkshire during the last 25 years. Many inventors have brought their skill to bear upon its improvement, and the consequence is that there are quite a number of types, most of which possess some special excellence. But it is not to the machine itself, so much as to a principal adjunct that we wish to particularly refer, namely, the lattice. This is an improvement in the construction of the lattice lags, whereby many of the defects and weak parts of the old plan are quite obviated.

The ordinary lags of the dobbey lattice are constructed of wood, and consist of narrow strips perforated with holes for the reception of pegs in which the design is formed, and which through the ordinary connections operate the healds according to requirement. The lags, being of wood, are very considerably affected by atmospheric temperature, the consequences being that the pegs, being rendered loose, are liable, and do, frequently drop out from their places, and if not immediately observed, which is rarely the case, the pattern is damaged by defective shedding which results. A further difficulty often arises in the wood, when worn down in their length, which causes the jacks to lift the healds insufficiently, thereby exposing the threads of the warp, carried in that particular heald or leaf, to great friction from the passing shuttle with its inability to throw it out and do other damage. Broken, missing, or worn pegs, as will thus be seen, may thus do a considerable amount of mischief in the way of spacing cloths. But in addition to these, there is another defect, this is the liability of the lags to split. They have through pegs to bear the pressure of the weight of the healds whilst being lifted, and, as a consequence, frequently split, because in the ordinary construction, each peg is acting as a part of a wedge. From this cause also time is wasted and work is damaged.

A knowledge of these defects has induced Mr. W. G. Thompson of Halifax, to devise a remedy for them, which he has accomplished, as shown in our illustrations. This is a new lag, which is constructed in the ordinary manner in the first instance, but is backed with a metallic plate, as shown on our illustrations. As will be seen, it is attached by three small screws, each passing through a small groove, one at each end and one in the middle. The amount of the plate is sufficiently loose to permit of its being pressed backwards and forwards by the finger or thumb, by which movements the peg holes in the lag are covered or uncovered as the case may be. Fig. 1 shows the improved lag open or with the holes uncovered; Fig. 2 exhibits it closed as in work. It will be observed that by this arrangement it becomes possible to use iron pegs, which could not be done before, owing to their much greater liability to drop out. This is now entirely obviated by forming them with heads as seen in the one dovetailed in Fig. 1. The hole in the lag is countersunk to fit the head of the pegs, so that it can sink sufficiently to allow the plate to slide over it and securely hold it in position from the back.

The lags, it will be obvious to our practical readers, can be pegged on this plan much more quickly than in the ordinary way, and the pegs cannot drop out either from the front or back, as the head holds them from going one way and the plate from going the other. The lag itself is relieved from all the destructive force of the peg acting as a wedge constantly tending to split it, the sliding plate now bearing this force without risk or damage. All that is now necessary is for the person entrusted with the duty of pegging the lattices to drop the metallic pegs into their proper holes, push over the slides, and they are at once secured. There is practically no point of wear now left, excepting the couplings, which will, however, last for years.

Manufacturers of fancy goods will appreciate the advantages of this improvement, relieving them as it will from so many ranks of defects, and the consequent rejection of valuable goods by the merchant when these occur. Those, of course, have to be sold as “jobs” at a considerable sacrifice from the proper value and much below cost of production.

Mr. R. K. Warren, secretary of the Mobile Mills Co., Mobile, Ala., U.S.A., writes:—“We have recently organized the Mobile Mills Co., and propose to equip our mills with the very best and latest improved cotton machinery, and also to employ the best skilled cotton manufacturer we can find to superintend the operations of the mill. Our authorized capital is 500,000 dollars, but the total sum has not yet been subscribed. We hope to be ready to begin construction by February last. We want to find out the best places to buy our machinery.”

Under the title of “Hamburg Wool Combing Co.” a joint-stock company has been formed, which takes over from the Leipzig Wool-combing Company the wool-combing factory, which is in course of erection at Wilhelmsburg, near Hamburg. The capital, of which the Leipzig Co. has half, amounts to 31 millions of marks.

The conditions necessary to successful rope transmission are properly grooved sheaves and a rope of uniform diameter. The sides of the grooves which have contact with the rope should be inclined at an angle of 45 degrees with each other. This affords the greatest resistance to slipping, consistent with a minimum amount of wear, when the groove is carefully turned. A usual mistake in the form of grooves consists in making it round bottomed and slightly smaller than the diameter of the rope. This form of groove has failed to wear out a maximum amount of rope in a minimum amount of time, and its use is largely responsible for numerous failures of ropes to drive satisfactorily.

One of the greatest troubles of the weaver figures forming in the weave, as if by magic under his eyes, his faculty of wonder is greatly excited. When, on inquiry, he is told that the work is done by the machine above, through the him confused mass of cords depending from it, his surprise certainly is not to be accounted for. The initiated, on the contrary, all this is clear enough, and easily comprehended. The machine, its capacities, excellencies, weaknesses, defects, and the complex arrangements of its harness, are also well known, and form no puzzle to the skilful weaver trained in this branch of the textile art.
Bleaching, Dyeing, Printing, etc.

NEW COLOURING MATTERS.

During the past two months a number of new colouring matters have been placed upon the market by various firms, to whom also we are indebted for samples to test. Some of these may only have a transient existence or find at most a limited use; others, however, have all the elements of permanency, and dyers will do well to give them some attention.

Some of our English manufacturers have of late been more energetic than formerly, and we have several new dyes to notify from them. From Messrs. Read, Holliday and Sons, of Huddersfield, we have received samples of a

TITAN PINK.

This dye, which can be dyed direct on unmercerised cotton, is a very strong and clear, 4 per cent. being sufficient to produce a fairly deep pink. It is very satisfactory, and the shade of pink obtained is a slightly blue, not very brilliant, and in this respect it is inferior to Pekin, which, however, possesses the advantage of being faster to light acids and alkalies. Titan Pink is best dyed on cotton, in a bath containing Glaze's saltpetre, soap, and an alkaline bath not (or) colour very well; it should be boiled in this bath for one hour, then treated afterwards in a soap bath.

For calico printing it will be found useful. It is supplied in a very simple form, and a colour is made with the dyestuff and starch thickening, and it is printed, steamed well, and mopped.

This dyestuff is well adapted to the form of a deep brownish-red powder, which is quite soluble in water to a reddish solution. Sulphuric acid added to this changes the colour to a bright magenta, while the addition of hydrochloric acid causes the formation of a red precipitate which rapidly settles, leaving the liquor almost colourless. Caustic soda gives a deeper red precipitate in a brownish yellow liquid.

Mr. M. E. Bowker, of Lower Broughton, Manchester, has sent out

ECLIPS RED 4 B.

a new dyestuff for cotton, having a great resemblance to the familiar benzoin purpureum 4 B. It is dyed on to unmercerised cotton by the same method as in a bath of salt-free, and other alkaline salts. It yields very brilliant shades of red, rather deeper, brighter and more scarlet in tone than benzoin purpureum 4 B. In its properties—action of acids, alkalies, and light—it is almost identical; it is, if anything, a little more resistant, but the difference is very slight.

CLAYTON YELLOW.

This is a new direct cotton colour sent out by the Clayton Colour Co., of Clayton, near Manchester. It is unmercerised cotton in a bath containing soap and phosphate of soda. Giving shades of yellow rather brighter than those obtainable by dyeing from unmercerised cotton, and very soluble in water, it offers some advantages over that colouring matter. It is quite fast to soap- washing, not bleeding in the least; and as far as we have been able to test it in an October and November light, it is pretty fast against that destructive influence.

It can be used in calico printing, and, having no tendency to bleed into the whites on steam- ing, will be found useful in that branch of textile colouring.

The colour on the fibre is turned orange by hydrochloric acid, while nitric acid first changes the shade to orange, and then bleaches it. Acetic acid turns the colour orange, and caustic acid also turns it scarlet. The dyestuff is yellow brown powder soluble in water to a brownish yellow solution; also in alcohol. Acetic acid dissolves it with an orange colour. The addition of hydrochloric acid to the aqueous solution gives an orange scarlet precipitate. In common with the other yellow dyes of this class, Clayton Yellow acts the part of a mordant for the basic dyes—such as a magenta, saframine, and brilliant green, and by such combinations a number of brilliant shades can be obtained; unfortunately, while they are very fast they are not fast to washing and soaking, and we do not recommend these compound shades at all.

The Hebburn Co., of Hebburn-on-Tyne, have sent out

HERBURN FAST BLUE.

This is not exactly a new colouring matter in the strictest sense of the term, being one of the numerous indigines, but the company have much improved the process of making, for which improvements they have secured patents. Thus the dye-stuff yields rather brighter and deeper shades than the indigines hitherto put upon the market. Hebburn Fast Blue is adapted only for wool dyeing, in which it gives fine shades of blue; 2 per cent. gives a good full indigo blue, while 4 per cent. gives a full deep shade of navy blue. The method recommended by the Company, and which gives good results is the following:—Make a dye-bath with the colouring matter and 4 per cent. of soda crystals. Enter the wool, raise to the boil quickly, and continue boiling for one hour; then add 4 per cent. of sulphuric acid, diluted with a little water, and then in small quantities at a time 2 to 3 per cent. of sulphate of alumina for each part of dye-stuff used; the addition taking one hour, boiling all the time. Rod in mark, but when the time is done the goods may be finished as usual. The colour when dyed is fast to acids and scouring and fairly fast to light.

The Farbenfabriken Vorn, V. Bayer & Co.