

THE ART JOURNAL for February is a most excellent number, though for textile readers it does not this month possess any technical interest, a promised article on lace having been held over until next month on account of there not having been sufficient time to complete it. "The Pilgrims from Winchester to Canterbury" is an article well written and charmingly illustrated, and the concluding portion of the article on the home of Lord Tennyson's childhood is deserving of similar commendation.

Mr. J. WORRALL, Central Works, Marlborough-street, Oldham, has just issued a second edition of his "Textile Directory of the manufacturing districts in Ireland, Scotland, Wales, and the counties of Chester, Derby, Gloucester, Leicester, Nottingham, Worcester, and other manufacturing districts not included in Worrall's Textile Directories of Lancashire and Yorkshire, with the approximate number of spindles and looms; and the pay days, telegraphic addresses, and telephone numbers of the principal firms." (Price 5s.) This comprehensive title is amply justified by the contents of the directory, which are characterised by the thoroughness and practical common-sense arrangement usual in all Mr. Worrall's directories, and so generally absent from the more pretentious compilations of many other publishers.

**Letters from our Readers.**

*The Editor does not necessarily endorse the opinions of his correspondents.*

**A COTTON "COURT OF APPEAL."**

(TO THE EDITOR OF *The Textile Mercury*.)

SIR,—Falling markets and had crops of cotton are generally conducive to dissensions between buyers and sellers in our textile and probably in many other markets. The present time is no exception; merchants who have bought too soon or who have suffered by the fluctuations of exchange, are anxious to cancel orders, and generally find an excuse, more especially if their manufacturers, in trying to make ends meet in bad times, have given short pick or finer counts, or gone on a cheaper yarn. The cotton merchant, rather than pay the premium on higher-class cotton, tenders his spinner something below the mark, or the spinner, annoyed at the vagaries of the Yankee weather, sends in a claim for excessive moisture. The manufacturer is not altogether guiltless, for he is one of the quickest to discover when his order book shows that the yarn to be delivered is at too high a price, and devises ways and means of avoiding it, while the spinner in his turn is generally very dilatory at delivering against old orders at qd. if qd. can be obtained for quick delivery. Thus the ball rolls merrily, and, as usual, the weakest goes to the wall. With a cotton bill to meet on the morrow and nothing to meet it with, the spinner cannot very well say nay to the manufacturer if he wants to dock his account, and there are manufacturers who give in to the merchants' demands rather than go home on Friday night without cash for Saturday's wages. Even those strong in the back gain nothing by delay. The amount in dispute in many cases is too small to take into a court of law, and, judging from the few cases of cotton disputes that appear in the legal columns of the newspapers, spinners, merchants, and manufacturers all seem to be well aware that even a victory in a law court is dearly bought.

I have referred to disputes as to cotton—the raw material I mean—but wish to draw attention to the comparatively rapid and satisfactory manner in which disputes in Liverpool are arranged. Should two parties not be able to agree on any question arising in trade, or in case of a disputed claim for allowances, there is no quarrelling—each names a member of the Liverpool Cotton Association to represent him as his arbitrator, and pays a fee of half a guinea or a guinea. A meeting is arranged, samples are inspected, contracts investigated, and generally the same day the arbitrators make

their award. Should this not be agreeable to one of the disputants, an appeal is made to the Committee of the Association, and their decision is accepted as final. Attempts obviously unfair by one trader to over-reach the other are penalised by a fine to be paid in addition to the fair allowance for damage sustained. Now my object, Mr. Editor, in writing you, is to suggest that the spinners, manufacturers, and merchants of Lancashire and its borders should organise a similar scheme. It is time we made our Spinners' Association and our Manufacturers' Association useful—at present they look very well as ornaments, but are not of much use, and it is not to these that we should appeal.

Let a central committee be formed to divide the cotton counties into districts, leaving each district to elect one representative for every 10,000 looms, and one for every million spindles, and the merchants and agents of Manchester to select from among themselves some 40 delegates. There would then be from 40 to 50 representatives of each branch of the trade selected, it is to be hoped not merely for their prominence in their town, nor for their wealth or their leadership of either this party or that, but because of their sound practical knowledge of the trade. A joint committee of 20 could be selected from these, having the management of the scheme, and being a final court of appeal. If a dispute arose between members of any branch of the Association, each would nominate a friend from the arbitrators, who would probably be within call on the boards of the Exchange, and very frequently in the afternoon of the same day they would meet, enquire into both sides of the question, examine samples, and probably there and then give an award. In some cases an adjournment would be necessary, but in most a result would be at once arrived at in accordance with the weight of the facts and evidence. This solution of disputes is rapid and effective, and if the system were adopted, and it were held a point of honour to abide by the arbitrators' award, many serious, often lengthy, breaches of connections in business would be avoided, while disputes would be of less frequent occurrence, the aggressor knowing that his customer had a means of bringing him to book easily, and putting him to a guinea or two of expense besides. A merely nominal subscription would be necessary to provide for the expense of registration, calling meetings, etc., and it is to be hoped that the scheme will commend itself to members of all branches of the trade.—Yours, etc., FABRIC.

Manchester, Jan. 30, 1891.

**THE DRAWING OF COTTON.**

(TO THE EDITOR OF *The Textile Mercury*.)

SIR,—Permit me to thank your correspondent "E. Whittaker" for the correction made by him in your last issue. I had already noticed the error, and by the substitution of a single word the sentence is an absolutely accurate one. Otherwise it is open to the remarks of Mr. Whittaker. I may be permitted to point out that if the whole paragraph is read it shews that I was illustrating a principle and not laying down a hard and fast line, and the reference in the preface to the aim of the book clearly shews that it is the machinery and not the manipulation of the material which is dealt with mainly. With the latter I may deal later, and perhaps demonstrate more fully my alleged ignorance of the subject. I may say, in conclusion, that if Mr. Whittaker ever has to issue a work of this sort, in the midst of other engrossing occupations, he will be surprised to find how many things he has said which he did not mean to say, and how many he has left unsaid which he intended to say.—Yours faithfully, JOSEPH NASMITH

February 5th, 1891.

**QUERIES.**

HAS a jacquard on a Schofield and Kirk's reverse woollen loom ever been worked with lags and pegs?—H. P., (Radcliffe.)

H. P., (Radcliffe.)—The jacquard, or more correctly the dobby, of Schofield and Kirk's old woollen loom was never worked with anything but lags and pegs. For their Crompton loom, a patent has been taken out by Mr. James Wild, St. John's-road, Huddersfield to effect this.

**Designing.**

**NEW DESIGNS.**

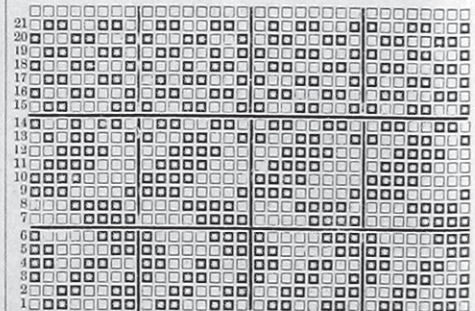
**NEW DESIGN FOR OXFORD AND HARVARD SHIRTINGS.**

We introduce to the manufacturers of shirtings a new and extremely useful design for the above, with pegging plan. It may be made either as an Oxford or Harvard, in browns, dark blues, china blues of dark shades, or a creamy fawn ground; a new colour or shade called bark (rather redder than the outside covering of trees), might be used as a ground. It will be seen by the pegging plan that there are 21 shafts, 32 to the round; 80 ends to the inch of 24's twist, for warp 64 picks of 16's (soft twisted cop weft) to the inch. Pattern of warp and draft:—22 ends of dark blue or dark brown, on the shafts marked 1, 2, 3, 4 on the pegging plan, 4 double ends or 8 of red, two in a heald, on 5, 6, 7, 8 shafts, 2 of white on 3 and 4 shafts, 8 of dark sky, two in a heald, on 9, 10, 11, 12 shafts; 10 of fawn on 1, 2, 3, 4 shafts, 16 of bright red, two in a heald, on 5, 6, 7, 8, 9, 10, 11, 12 shafts; 72 fawn on 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 4, 1, 2, 13, 4, 14, 2, 15, 4, 16, 2, 17, 4, 18, 2, 19, 4, 20, 2, 21, 4, 3, 1, 2, 87, 4, 21, 2, 20, 4, 19, 2, 18, 4, 17, 2, 16, 4, 15, 2, 14, 4, 13, 2, 1, 4, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3 shafts; 16 red, two in a heald, on 12, 11, 10, 9, 8, 7, 6, 5 shafts; 10 fawn on 2, 1, 4, 3, 2, 1, 4, 3, 2, 1 shafts; 8 dark sky, two in a heald, on 12, 11, 10, 9 shafts; 2 of white on 4, 3 shafts; 8 red, two in a heald, on 7, 6, 5, 9 shafts, making the entire pattern as follows:—22 fawn, 8 red, 2 white, 8 dark sky, 10 fawn, 16 red, 72 fawn, 16 red, 10 fawn, 8 dark sky, 2 white, 8 red; total, 182 ends. The greatest care would be required in drawing in this draft, as the slightest mistake would alter the general effect of the design. The colourings given may be altered at will, as they are not like the laws of the Medes and Persians. The design may not please everyone, but, nevertheless, it will be found a good all-round pattern, and will not look out of place in any material or style.

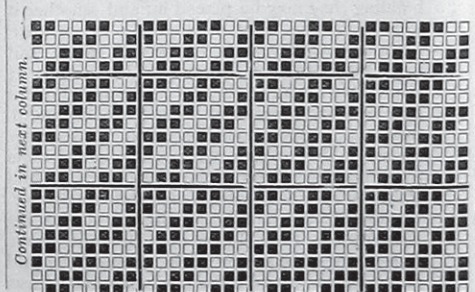
**THE FINISHING OF WOOLLENS.**

(Continued from page 81.)

After due consideration, and the selection of the most suitable condition of twining and twilling to effect the desired result in the finishing process, attention must now be directed to the actual weaving operation. Now since the treatment of these preliminary operations will be rather long our readers may begin to ask "When will finishing really claim attention?"



**PEGGING PLAN. FANCY SHIRTINGS.**

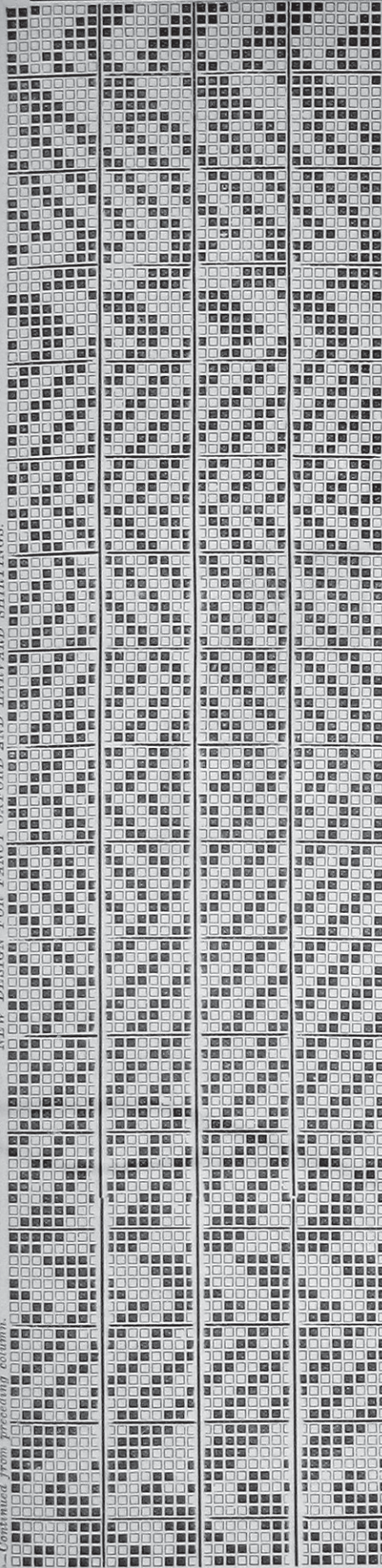


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SHIRTINGS DESIGN.

NEW DESIGN FOR FANCY OXFORD AND HARVARD SHIRTINGS.

Continued from preceding column.



But let us assure them that the full and efficient consideration of all preliminary processes lies at the root of the matter, for a good suitable finish cannot be put on a piece not prepared to receive it.

In the operation of weaving, a cloth receives to a considerable extent some of its final characteristics. For example, the number of threads and picks per inch are practically decided, though it is true that a slight alteration in this respect can be produced by milling up in length or width. The difficulty often experienced in getting in the full number of picks, then, may fairly claim some attention. This, of course, is limited by the size of the yarn and the weave, primarily; but notwithstanding these limitations much may be done—to steam or soften the yarn, rendering it more compressible; to cross the shed before the reed touches the cloth; and to raise the backrest, thereby throwing the top half of the shed slack, renders weaving more easy, and thus produces a stouter, firmer cloth, as required.

In the case of weave applied with the sole idea of producing a cloth to take a specific finish very great care is necessary, since the designer has not only to calculate on the shrinkage of the wool, but also on the contraction owing to the make, which as previously shewn has a very decided influence.

On the cloth leaving the loom it is "perched" or looked over and through to note imperfections, etc.; mending follows, and then scouring, this latter process being the only one that requires our attention. Owing to the quantity of oil, etc., often not of the best, put into yarn, a good clean scour is very necessary, bringing the wool fibres into a condition favourable to milling, for if all the oil, etc., be not extracted it is easy to see that the scales of the wool fibre being clogged up are to a certain extent antagonistic to interlocking; but this is a hardly less desirable condition than that which results from the use, or rather abuse, of certain strong scouring agents—soda ash, for example—which tend to rid the wool fibre of the scales and consequently of the characteristic properties which prove so effective in the following processes.

At this stage it will be well to classify the cloths, so that having a definite idea of what it is necessary to obtain, the why and the wherefore of the subsequent processes will be better understood. The first class of finish coming under notice is the Melton and the closely allied Scotch finish. The classes of goods treated thus are as follows:—Meltons and the numerous classes of tweeds which incline towards the rough. The second class comprises all these goods to which a greater or less

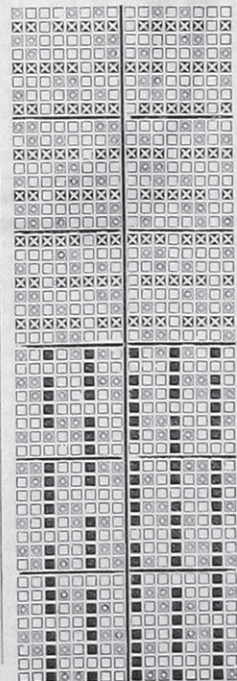
amount of permanent lustre is imported, as doeskins, etc.

Now, on coming to the "milling" operation, as already intimated, a certain difference of treatment is adopted, even when dealing with cloths coming within the first class. For example, a tweed of good quality must receive very different treatment to a typical Melton. In the first-named cloths it is sometimes desirable to impart almost a worsted finish—that is to say, to mill only to such an extent that a firm, good-handling cloth is obtained, retaining intact each individual thread; while in the case of a Melton milling is undertaken with the idea of breaking up the warp and weft, eliminating all traces of any thread-like structure. Again, it is often desirable to produce a sort of nap or fibrous surface on some classes of goods, and of course these require again specific treatment, which we will now proceed to demonstrate.

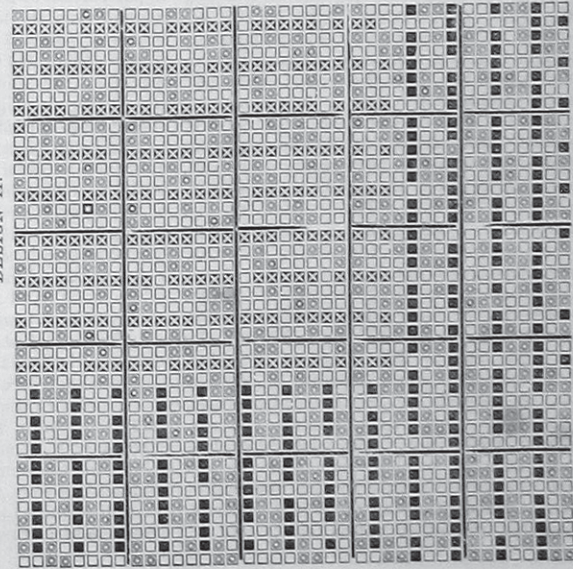
To "mill" or compress cloths, two machines are in use, one the "milling machine" and the other the "stocks." These latter are probably the oldest form of machine, since their action resembles the trampling of feet, which was the primitive method of effecting the desired result. The effect on cloth subjected to treatment by these machines varies considerably. The machine seems to act more by continued compression, producing an effect somewhat akin to saddening when compared with the effect of the stock, which practically keeps hitting and turning over the cloth under treatment, thus tending to burst the thread and produce a fluffy surface, which is very desirable in certain classes of goods, but not in all. According to the class of finish desired, then, is the method of milling selected. Respecting the question of heat, etc., developed in the machines we do not propose to write, since it is more the structural effect that we wish to demonstrate.

NOVELTIES IN DOUBLE CLOTHS.

It is now some time since we called attention to a type of dress fabric, which was very effective and yet comparatively simple, consisting, in fact, simply of two plain cloths woven together and changing places for the figure, as shewn in the design. Now it appears to us that some exceedingly effective novelties could be produced in coatings or trousers by using, in the place of cotton and mohair for the thin and thick cloths respectively, worsted and woollen yarns, thus producing a woolly stripe or check on a bare worsted ground. It is not an uncommon occurrence to find threads of various thickness in cloths, and if in addition to this threads can be used which take a different finish it seems as though a very novel kind of pattern would result. Design 11 gives a two-and-two twill for the worsted and plain for the woollen, this latter coming to the surface in stripe form. Design 12 is a checked design of the same type.



DESIGN 11.



DESIGN 12.