

the consciousness of these was the only true making of a life worth living. I saw the children of parents, who were what is called "better off" than my own, sent to school till they were 17 or 18 years of age, and I verily believe if I had been allowed the same doubtful privilege I should have turned out to be a like blockhead amongst books, and what is to be learned from them, which they almost universally did. Conventional and prematurely continuous schooling makes a sad wreck of young brains. One of the most accomplished of English mathematicians, once a professor in the Royal College at Sandhurst, had not learned a letter of the alphabet when he was twenty years of age. From a little lad he had worked in a coalpit. I have known three or four very clever schoolmasters whose youth was like unto his. The probabilities are, and I believe the fact generally is, that a child's intellect is as much quickened and as wholesomely trained in the workshop as it is in the school. A uniformly mixed training of mind and body I hold to be the best. And there is no exercise of the body superior to that which little piecers get in either a woollen or a cotton mill; and certainly no better one for the mind than to learn the processes of manufacture carried on in those places. I should think it is the same in most employments which are not unsuitable for children. What better can a child be taught than that it is its duty to get its own living and how to do so?

And now I must risk the appearance of again "sounding my own trumpet" a bit. For 30 or 40 years, on and off, I have felt it my duty to keep a school on Sundays and week evenings for young folk who chose to come, teaching reading, writing, arithmetic, and grammar, and sometimes amongst my scholars I had a few who were regular day scholars, or had been in the certificated schools of the neighbourhood, but invariably with these I had the most trouble, such a lot of unteaching did they require. The bother was to induct them into habits of thought. No work could they do except by rules, about the real nature of which it was most difficult to get them to understand. Much more plastic in faculty and disposition of mind to learn were the lads out of the mills than those who had gone full time to school for eight or ten years. Besides, children who have gone to school only, till in their "teens," acquire a decided indisposition either to work or to learn anything from books. Cricketing and silly footballing, or riding on a bicycle, were their chief accomplishments, except perhaps a masterly disregard of speaking and doing the truth. If I had to have a thousand children they should all be put to work as many hours to earn a wage as they should be to schooling.

I was much struck the other day with a passage from Robinson Crusoe Defoe's "Tour through Britain in 1727." Writing of the country around Halifax, he says: "This place seems to have been designed by Providence for the very purposes which it is now allotted, for carrying on a manufacture which nowhere can be so easily supplied with the conveniences necessary for it. Nor is the industry of the people wanting to second these advantages. Though we met few people out of doors, yet within we saw the houses full of lusty fellows, some at the dye vat, some at the loom, others dressing cloths, the women or children carding or spinning: all employed from the youngest to the oldest, scarce anything above four years old but its hand were sufficient for its own support. Not a beggar to be seen nor an idle person, except here and there an almshouse built for those that are ancient and past working." See you not in these pregnant words that secret of England's great success as a manufacturing country?

Prescott, in his history of the times of Philip, the rascally husband of our "bloody Mary," says: "Ill fares it with the land which has given itself up to the study of the graceful and the beautiful to the neglect of those hardy virtues which can alone secure national independence." Again, speaking of the Netherlands: "The humble classes, in so abject a condition in other parts of Europe at that day, felt the good effects of this general progress (in manufactures) in comfort and civilisation. It

was rare to find one, we are told, so illiterate as not to be acquainted with the rudiments of grammar, and there was scarcely a peasant who could not both read and write. . . . A people the humblest of whom possessed what many a noble in other lands, at that day, was little skilled in—the art of reading." And yet he says: "The processes of simplifying labour were carried so far that children, as we are assured, began at four or five years of age to earn a livelihood."

May I ask, will politicians never learn a bit of common sense? It has the appearance of hopeless madness to talk of forcibly restricting the hours of labour of either men or children in an age when people themselves care only to work as little as possible, and are constantly grumbling over foreign competition.—Yours, &c.,

MORGAN BRIERLEY.

Denshaw House, Delph, June 2nd.

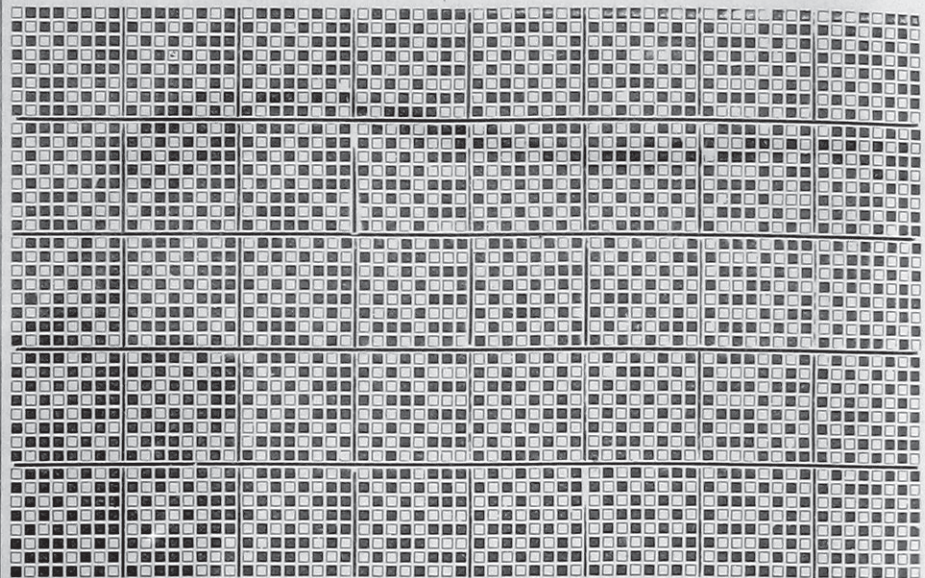
## Designing.

### NEW DESIGNS.

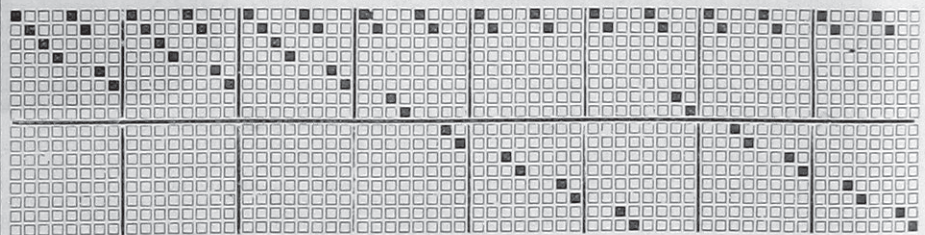
#### OXFORD SHIRTINGS.

This design is for new Oxford shirtings or fancy afternoon aprons, which of course would receive the necessary lace trimmings. The following particulars will be found suitable for shirtings: 80 ends per inch of 30's cotton for warp, 56 picks per inch of 18's cop weft. Warp pattern: 12 of dark blue on 1, 2, 3, 4 shafts, 2 white, 2 dark blue, 2 white, 2 light blue, 4 of red on 3, 2, 1, 4, 1, 2, 3, 4. Weft all cop; 24-end draft, the 4 of red being drawn in two in a heald, two healds on the first shaft, all two in a dent.

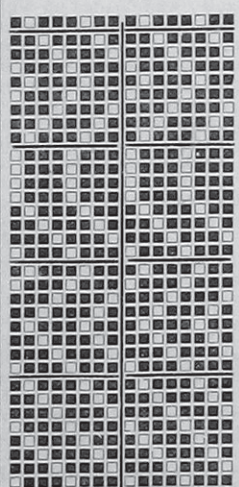
2nd Pattern: 24 dark brown, 20 of dark fawn, 2 light brown, 2 cream, 2 light blue, 2 cream, 2



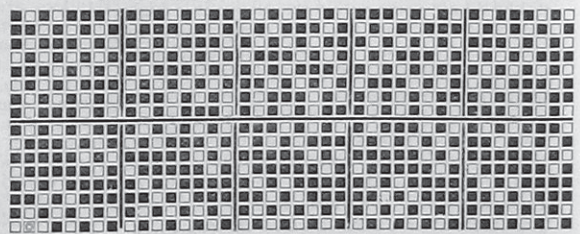
1. DESIGN FOR SILK AND COTTON DRESS GOODS.



No. 1 DRAFT.



2. FANCY OXFORD SHIRTING.



No. 1 PEGGING PLAN.

light brown, 2 cream, 2 light blue, 2 cream, 2 light brown, 2 cream, 2 light blue, 2 cream, all drawn in as shewn in the draft 1, 2, 3, 4 three times over, then 8 on 3, 2, 1, 4, 1, 2, 3, 4, the last two light blue, 2 cream being two in a heald on the first shaft. For aprons 60 ends per inch of 59's cotton for warp, 60 picks per inch of 30's weft. Warp pattern: 20 of light pink on 1, 2, 3, 4 three times, 3, 2, 1, 4, 1, 2, 3, 4; then 48 terra-cotta on 1, 2, 3, 4, six times, 3, 2, 1, 4, 1, 2, 3, 4, three times; weft, all light pink, with the same order of drafting, 20 very light straw, 24 mid gas-green, weft all light straw, and again 20 light strawberry, 24 dark brown; weft, all light strawberry. Any of the lighter tints may be used in one stripe with same for weft provided the second stripe is a



No. 2 DRAFT.

shade in harmony with it, for instance light pink might have rose; very light blue, go with a dark navy blue stripe; very light fawns, with the darkest possible shades of tan, and all direct though not violent contrasts will give good effects.

DESIGN FOR SILK AND COTTON DRESS GOODS.

This design is for a very light texture suitable in dress materials during the Autumn season. It can be produced on 16 shafts, 64-end draft, 49 picks to the round, 48 ends per inch, of 24's cotton twist and 20's two-fold organzine silk for draft; 48 picks per inch of 24's cotton weft. Pattern: 2 mid pink cotton, 1 dark emerald green organzine silk; weft all mid pink. The silk colour may be white, grenat, light claret, dark maroon, sky, or dark prune on the mid pink ground; if cream in all its tones is used as a ground the following colours in silk will be found in good taste:—Mid coral, all the greens of every hue, yellow, drab, mid seal brown, dark havanna, dark olive, dark lavender, mid lilac, and dark orange. A check in the weft of two and two in opposing colours to the warp would be of advantage as a change. Taking the first pattern in the warp, 2 mid pink, 2 dark emerald green, what we mean by opposing colours in the weft pattern would be to keep the same ground by using 2 mid pink weft and 2 of mid coral—a red tint, which would oppose or contrast the dark emerald green silk in the warp. In this way all the coloured silks given may be contrasted by the weft; the same ground colour as used in the warp being also produced by one shuttle of the weft. If necessary, worsted and silk wefts may take the place of cotton if a more expensive fabric is desirable; this make may have black upon ruby or ground, pale blue spotted with brown, pale green ground with cardinal, all dark colours on light grounds, and light colours on dark grounds.

NOVELTIES IN WOOLLENS AND WORSTEDS.

In Designs 45 to 48 we illustrate a novel method of structural modification, which may prove useful for fine woollens or for worsteds. In dealing with certain classes of mantles, quilts, etc., it is no extraordinary proceeding to insert what is termed a "wadding pick," that is to say, a pick which simply acts as filling between two cloths, thereby producing furrows or a raised figure demarked by indentations, the principle of which is illustrated in Sketch 1. Now this principle of structure may be effectively applied to trouserings and coatings, and also in the less pronounced makes even to dress fabrics. The construction of Design 45 will readily be realised from the following:—Two plain cloths are woven separate for six threads, the two wadding threads (developed in cross type) lying in between; for the next six threads the two cloths change places, the back cloth coming to the face, and the face cloth going to the back, with two similar wadding threads coming in between the two cloths. Thus the crossing of the two cloths forms a firm structure, and at the same time produces the indentation, while the wadding threads tend to raise up the face cloth and produce a ridge.



SKETCH 1.



SKETCH 2.

If a smaller effect is required, that furnished in Design 46 should prove effective. In this case the two cloths change places every four threads, and a wadding pick, which may be of any size according to the required roundness of the rib, is inserted in the centre of each section.

Again, it may be desirable to insert the wadding weft-way, under which circumstances Design 47 may prove useful. The principle of construction is the same in this case as in the previous cases, save that there are two face threads and picks to one backing thread and pick, and the furrow is produced not by the two cloths changing places, but by binding the two cloths together.

In Sketch 2 is given a suggestion for a more elaborate effect than any of the above, there being in this case both wadding threads and wadding picks; thus furrows, either warp or weft-way, may be produced, and at the same time a woollen back may be formed of the wadding when it is not forming the furrows.

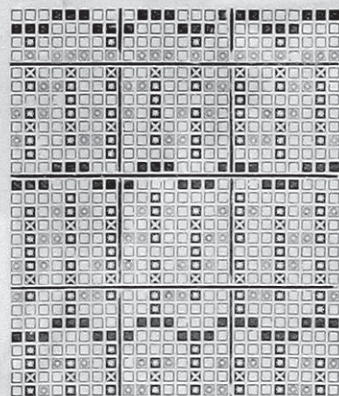
It will readily be imagined that colour will play an important part in these structures. For example, the following will materially assist the weave effect if applied to Design 45:—

Warp. 2 threads black, 2 white, 2 dark grey. Weft. Same as warp, or checked with grey at intervals.

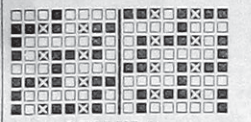
As a worsted the following is a suggestion:—

Warp. 18 threads 2/40's black worsted, 6 " " black worsted and white silk twist, 12 " " black worsted, 12 " " black worsted and white silk twist, 6 " " black worsted, 18 " " black worsted and white silk twist. Weft. 14's red 6's.

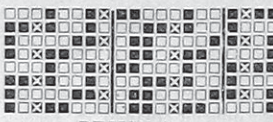
All 20's black worsted; 84 picks per inch. As a woollen the following will prove effective:—



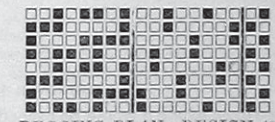
DESIGN 47.



DESIGN 45.



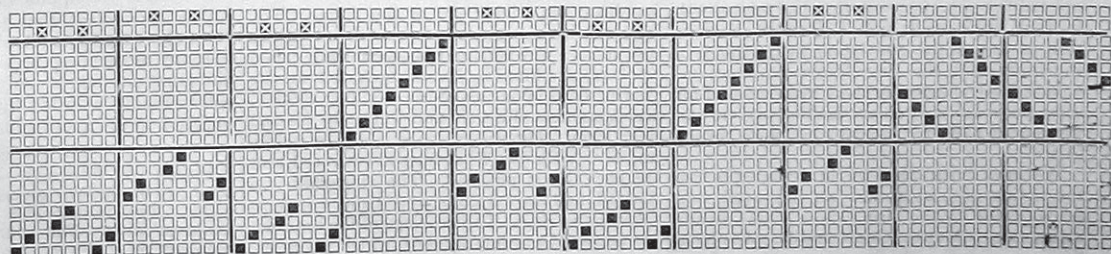
DESIGN 46.



PEGGING PLAN: DESIGN 48.



DESIGN 48.



DRAFT FOR DESIGN 48.

Warp. 2 threads, 26 sk. sky blue } repeat three times. 2 " " white } 2 " " slate } 2 " " browngrey } 2 " " white } 2 " " slate } 12's reed 4's.

Weft. All slate or white, according to the shade required; 48 picks per inch.

Colour and weave effects are also very applicable, and would undoubtedly yield some useful results with stronger colourings.

In Design 48 a combination of furrows and 8-end sateen or buckskin make is given, which, suitably coloured, should prove very effective, the following being a suggestion:—

Warp. 1 thread medium slate } repeat for 18 1 " light lavender } threads. 2 " white stained bluish, 4 " medium blue brown, 2 " white stained bluish, 1 " medium slate } repeat for 12 1 " light lavender } threads. 2 " white stained bluish, 4 " medium blue brown, 2 " white stained bluish, 1 " medium slate } repeat for 6 1 " light lavender } threads. 2 " white stained bluish, 4 threads medium blue brown, 4 " white stained bluish, 1 " medium olive brown } repeat for 20 1 " grey yellow } threads. 4 white stained bluish, 4 medium blue brown, 2 white stained bluish.

Weft. 1 pick light lavender; 1 pick medium slate.

For the above colouring there must be 40 threads of the 8-end sateen in the place of 16, as given in the design.

The draft and pegging plan are given, shewing how the effect may be developed in 18 shafts. Note should be made of the fact that the design has been arranged to require, as nearly as possible, the same number of mails per inch on each shaft.

N.B.—In all the above colourings the wadding threads or picks have not been taken into account, since in this respect they have no effect in the woven piece.

DRESS FABRICS.

Although the above suggestions are given primarily as suitable for woollen and worsted trouserings, etc., yet effective designs may be produced in like manner for dress fabrics. Of course the first objection is weight, but this will readily be overcome by making, say, a stripe of Design 46 and a stripe of ordinary plain, with the warp "crammed" for the double plain effect. By this means, we are convinced, some very effective striped dress fabrics may be produced.