Letters from our Readers.

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

THE ENTIRE UTILISATION OF FLAX, I.E., LIN-FIBRE AND LIN-SEED.

(TO THE EDITOR OF THE TEXTILE MERCURY.)

Sir,—It is well known that flax is grown, or rather two distinct varieties, the 1st., for the lin-fibre, and 3rd., for the lin-seed. If, for the former, the fibre is longer, but the seed is poorer, and therefore generally moreed for, and is allowed to be dried slowly, then the latter (the retting process), if the seed is cared for, only the "straw" and "barren" is threshed, with the result that the latter, whilst the linen, notably poorer, is, shorter, is cast aside as waste to the tune of 150,000 tons annually from one tract or district alone.

This statement is more fully given in a correspondence in the March 1st, 1860, issue of the Textile Mercury.

Now I would ask a question in plain English: Why has this waste of poor lin-seed and short lin-fibre been allowed? and why is it still permitted to continue? Both are fit for something, as I believe. The answer is, apparently the usual one, that flax, as well as all other vegetable fibres, have never been known to "flock," and also because flax has been spun principally only in long lengths. For, if shorter, it would not obtain enough twist to be sufficiently binding. Let me repeat that both the linen lost in retting, and the fibre made from it, are perfectly good, and that the quality of the end product, if the process were better understood, would be better.

This is true, but the nature of the flax fibre, its "green state," as mentioned by the above correspondent, and have treated it by the Sutherland-Esdaile process, with the foregone conclusion that I have before arrived at, that it, as well as home grown flax fibre, can have its qualities of a better and developed fibre, thereby insuring "flocking" and what is more important, that it is in a state for spinning in its short staple, which is a natural consequence.

Further, the treated fibre will be found to be softer than if left untreated by this method. It may be carded on "coarse cotton machinery" as suggested; and that, without any trouble or care than usually exercised with cotton.

Now for an extremely practical view of the question, and one that must commend itself to every manufacturer, capitalist, or political economist. According to your correspondent, the cost of this flax waste laid down at Liverpool would be 2d. to 3d. per lb., say the maximum 5d. per ton, to which add 9d. per lb., or 25 per cent., making the total cost of treatment by the Sutherland-Esdaile process thereby ensuring flocking and spinning, these amount to 355 per ton as the total cost for any corresponding treatment, and which should then exceed 355 per ton. To summarise these figures, taking the 150,000 tons as the annual quantity, at 250 per ton, we have an item for corresponding treatment, the cost of this waste laid down at Liverpool would be £32,870,000, or £32,870,000 per annum.

Now, as this "green fibre"—but, in reality, they are not incomparable at some distance from England, for flax is shipped unretted to Liverpool, with the freight on the waste being covered by the previous treatment of the bulk before retting, thereby making £250,000 to the above amount. as well as proving a great saving to the manufacturer. The irony of this situation, and the difficulty respecting unequal distribution of straw yield not prevent the production of this design. On the proper allotment of space to the insects being thus completed, the next step is to consider the insertion of the branch portion of the design, which, like the insects, consists of one figure reversed. In each case the design commences on the right side of the box, and proceeds in one case to the right, and in the other to the left, each figure being exactly the same. As a rule it will be found advisable first to consider what space is at disposal previous to running into the second figure. Then commence to run in the first figure in the most convenient position, and after thoroughly defining this figure, then commence reversing it in its second position, and thus prevent any possibility of running one figure into the ground to which the reversed figure will eventually couple. This is already determined by the figure already run in.

Bearing these facts in mind, little difficulty should be experienced in working out designs in this principle, and this system of arranging figures once mastered will clear the way to the higher studies of design, which all designers should endeavour to cultivate.

Yours, &c.,
Manchester,
GEORGE EDWARDS, C.E.

THE RATING OF MACHINERY BILL.

(TO THE EDITOR OF The Textile MERCURY.)

Sir,—May I ask for space in your columns to return my thanks to the many friends in your district who have assisted him in the struggle which was brought to a successful conclusion last year? By the time the hon. members who opposed the Bill were passing it on for a second reading, the fact was well known that there was no substantial grievance, the notorious Chard cases were before the Court of Queen's Bench, and that in the absence of any measure of redress, the making of rags was on the cards. Mr. Justice Grantham observed:

"It is difficult to see how in fact that was not a rating of chard."

The valuations of twenty-three mills in the Chard Union alone depended on this decision, while in many other unions the authorities had already stopped holding their hands until the decision was given in this case. I could have supplied the hon. members who opposed the Bill with numerous other cases which have come before me in the course of my experience as a rating surveyor—cases in which not the wealthier manufacturer, but the artisan struggling to establish or maintain his house industries have been taxed in respect of machines with which Mr. Hanson's menu would decline to light his kitchen fire. The majority, however, clearly showed the House believed not only was a second consideration, but the required immediate attention the Chard decision, therefore, became practically obsolete before the Bill was read a second time, on which it had not ceased long, I may add, that this association will be pleased to give any information or assistance to the manufacturers who may be interested in the subject.—Yours, &c.,

G. HUMBERSTON DAVIS,

Designing.

NEW DESIGNS.

THE ARRANGEMENT OF FIGURES.

In our last article on this subject (March 22d) we briefly touched on "reversed figures." One of the figures (Fig. 15) supplied as an example was inadvertently omitted. This figure we now give, supplemened by another illustration, Fig. 17. This latter figure should claim our best attention, since it illustrates a maximum degree the principle under consideration. In the first group of the two insects—practically examples of the little black grubs, so plentiful in the summer—are arranged opposite one another, being placed in such relationship that neither at the top nor side do they overlap, and yet they just verge upon them. A second difficulty respecting unequal distribution of straw need not prevent the production of this design. On the proper allotment of space to the insects being thus completed, the next step is to consider the insertion of the branch portion of the design, which, like the insects, consists of one figure reversed. In each case the design commences on the right side of the box, and proceeds in one case to the right, and in the other to the left, each figure being exactly the same. As a rule it will be found advisable first to consider what space is at disposal previous to running into the second figure. Then commence to run in the first figure in the most convenient position, and after thoroughly defining this figure, then commence reversing it in its second position, and thus prevent any possibility of running one figure into the ground to which the reversed figure will eventually couple. This is already determined by the figure already run in.

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plays in our textile designs is deeply to be deplored, and all who are in favourable positions will do well to try and influence the rising generations of designers towards a more pure and natural art; an art which shall not be dull and spiritless, but rendered bright and beautiful by true inspiration and life.

We need hardly suggest systems of working out the figure illustrated here, as very different means must be employed according to the fabrics to which the design is to be applied. Probably it is most suited for a silk fabric, in which case little difficulty will be experienced in bringing it to perfection, since large jacquards are constantly in use. If applied to coarser classes of stuff the design should be simplified as much as possible, as to attempt the development of too fine effects will only result in failure.

**Design 70** represents the system of producing striped “figured cashmeres.” In the 6-end satin make (warp and weft face), large numbers of pieces are made simply in stripe or stripe form. Very often it is desirable to introduce a figure as well, either in stripes, check, or any other form. Then if the ground be warp face the figure will be weft face, except where the stripe of weft face comes. Then the figure and ground must change places as shown, the ground being weft face and the figure warp face. In our next we intend to give some examples in stripes, and thus continue the subject as promised.

**SUMMER VESTINGS IN COTTON, ETC.**

This design is on six shafts, 24 end draft and 20 to the round, 72 reed, 3 in a dent, or 108 ends per inch; the same amount of picks per inch. We give this basis of warp and weft as suggestive rather than particular, and leave the application to the requirements of the market for this class of goods, which varies considerably in the demand for both heavy and light cloths. There are two-fold yarns glazed to imitate silk, which might be used with great advantage in this make as warp and weft. The warp: White and weft all blue, brown myrtle, chocolate and bronze; or the warp any of these shades and weft all white. The design would make a good shirting in 72 reed, 2 in a dent, 16's twist, all white, and 56 picks per inch of 20's weft, all Oxford blue.

No. 3—This is also on 6 shafts, 6 to the round, straight over draft, two in a head, and two on each tread, a catcher being used at the selvage, where there is only one drop on one side; 106 reed, 4 in a dent, or 112 ends per inch, of 60's two-fold glazed cotton; the same number of picks per inch of weft with same counts of glazed cotton. Warp pattern: 1 white, 2 red, 10 myrtle, 12 white, 2 red, 10 myrtle, total 48; the checking same as warp pattern. As the myrtle is very dark green, the red ought to be bright, if not actually a scarlet, both in warp and weft; many curious effects will take place in making this cloth if the treading and checking be not even with each other, that is, white upon white, myrtle upon myrtle and red on red. If this order be not observed a broken and disagreeable appearance will take place which might perhaps suit some tastes, but would not be in accordance with harmony of colour.

No. 5 is another very simple make of summer vesting on 6 shafts, 12 to the round, straight over draft, in a 60 reed, 3 in a dent, or 50 ends per inch, of 16's twist, 90 picks of 16's weft per inch or 48 reed, 4 in a dent may be used, 2 in a head. Pattern of warp: 6 white and 6 of blue, total 12 ends; checking same as warp. Any other colours or shades may be used, such as dark blue and white, duck-egg green and white, or brown and white. The remarks made in No. 2 also apply particularly to this pattern; the white may be upon white and the blue on blue, when a very pretty star effect will be produced. The glazed yarns warp and weft two-fold would be very appropriate for this pattern. The characteristic and distinctive features of these patterns are their extreme simplicity. As regards effect and the choice of shades in their composition, they cannot fail to be of importance, properly treated. It is not possible on every occasion to make a design speak for itself, hence the necessity for minute details, which may appear tiresome repetition.