

## FABRIC ANALYSIS.

(Continued from page 5.)

### When to Pick Warp Out of Filling.

With a great many fabrics, like corkscrews, diagonals, etc., it will be found advisable to pick out the warp from the filling in place of the filling out of the warp threads, as thus far referred to; it will come easier on account of the less frequent change of the interlacings met with in a given number of ends.

When picking warp out of the filling, whether we deal with single or double cloth

Remember: You obtain in your record sinkers where there should be risers in the weave for the loom, and vice versa, risers where there should be sinkers. Either indicate correspondingly correct on your record while picking-out, or re-design your record after picking-out correctly for the weave for the loom. The first will be the best plan, *i. e.*, while picking-out, indicate filling ends up with dots, and filling ends down with crosses, or paint square full, or whatever mark you are accustomed to make for risers in your practical work. Next turn weave plan 45 degrees and your weave for the loom is the result.

The procedure will be readily explained by examples Figs. 3, 4, 5 and 6.

Example: consider weave Fig. 3, our 11-harness corkscrew weave. Examining in this weave the filling, we find the same to interlace with the warp as  $\frac{1}{4} \frac{1}{1} \frac{1}{1}$  respectively, for each pick, whereas if considering the interlacing of the warp threads with the filling, for the same number of threads in our weave, we find it to be  $\frac{4}{2} \frac{3}{2}$ , or in other words, in connection with picking filling out of warp, we have 4 changes from risers to sinkers, in every eleven threads of the repeat of the weave, vice versa, picking the warp out of the filling, and where we only find 2 changes from risers to sinkers, in every eleven threads of the repeat of the weave.

The latter certainly is the easier plan, since there is nothing more bewildering, in picking out, than any amount of 1 up 1 down in a high textured fabric, the latter item being characteristic to the warp texture of the corkscrews; you will often not be sure whether the 1 up or the 1 down is the next thread to be considered, whereas with threads in sets of 2, 3 or 4, the ends will prominently rest side by side, when under the needle, at the picking-out process.

In the same manner, the diagonal weave Fig. 4, repeating on 11 warp threads and 11 picks, will, much easier and safer, pick-out warp from filling, then vice versa, it being easier to pick out  $\frac{4}{2} \frac{3}{2}$  for every eleven ends, in the repeat of the weave, if picking the warp out of the filling, compared to picking out  $\frac{2}{1} \frac{2}{1} \frac{1}{1}$  respectively, for every eleven warp threads, across each pick.

Another example: Weave Fig. 5, a skip-twill, repeating on 16 warp threads and 8 picks, will show that it will be easier to pick out  $\frac{3}{1} \frac{1}{1}$  compared to  $\frac{1}{1} \frac{1}{1} \frac{2}{2} \frac{1}{2}$ , *i. e.*, it will be found easier to pick-out the warp threads from the filling than vice versa.

### Double Cloth.

After having mastered the picking-out of single cloth, fabrics constructed with

2 systems warp and 1 system filling

1 system warp and 2 systems filling

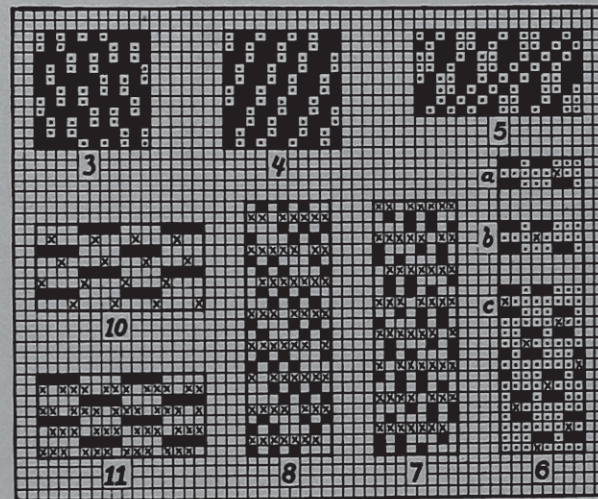
2 systems of warp and filling, can be taken up.

Two plans of procedure may be observed, *viz*:

1st: Proceed the same as if dealing with single cloth, and which in many cases will be the best all around, although possibly more tiresome, or:

2nd: (a) Ascertain weave for the back.

(b) Ascertain arrangement of face to back threads, inserting for this purpose, two pins about one inch apart from each other, through the fabric and



counting the threads between, on face and back. This will readily indicate to us whether the arrangement is 2 face 1 back, or 1 face 1 back, the two most often met arrangements.

(c) Remove the back warp.

Remove the back filling, or

In connection with double cloth, remove the back warp and back filling.

Lift these threads carefully out of the structure, gradually loosen them with the needle out of their interlacings. A pair of fine pinchers or a burling-iron may be found a convenient instrument to assist with their removal.

(d) You now have the face structure in single cloth, and which analyze in the regular way.

(e) Construct the complete weave by theory from facts obtained by points *a*, *b*, *c* and *d*.

We will now deal with picking-out these fabrics in the regular way, *i. e.*, treat them as single cloth.

### 2 SYSTEMS WARP, 1 SYSTEM FILLING.

The same will pick-out easier warp out of filling.

(a) Ascertain arrangement of face to back (as before explained) *i. e.*, whether 2 : 1, or 1 : 1; it will make matters easier for you.

(b) Prepare sample in the regular way for the picking-out.

*Arrangement: 1 Face 1 Back.*

Pick-out and record interlacing of first face thread.

Pick-out and record interlacing of first back thread.

Pick-out and record interlacing of second face thread.

Examine on your record, position where back warp stitches to face filling.

If the same stitches (up) between two face warp threads rising at the same pick, you are proceeding correctly, and thus may continue with your pick-out, until repeat of weave is obtained.

If, however, you find on your record, on said pick, one of the face warp threads up and the other one down, you have not struck the correct combination of face and back warp to each other; you have, previously to picking-out, liberated either the wrong face or back warp thread ahead, from your sample; except you deal with a face weave where a perfect stitching is not possible and when you have to pick-out more, or the complete weave, and then settle matters by theory.

Fig. 6 is given to explain the subject, showing three different ways, how you may get hold of the two systems of warp threads when picking-out. The face warp threads are shown in the same position in all three diagrams. The record is shown in position as you will pick it out from sample, and has to be turned by you 45 degrees for regular position of weave.

Filling-up, at picking-out is shown by *dot* type for all warp threads. *Full* type in the weave indicates face warp threads *up* in the weave. *Cross* type in the weave indicates back warp threads *up* in the weave.

6<sup>a</sup> shows that we liberated from the sample one more back thread previously to picking-out. Start picking-out for a new record, beginning with a face end next, and weave will come correct.

6<sup>b</sup> shows that we left one back thread in the sample, that should have been pulled out previously to starting picking-out. Pull out two (2) back warp threads from sample, and start picking for a new record, with one end face warp, and when weave will come correct.

6<sup>c</sup> shows the correct start, *i. e.*, sample was prepared correctly for the picking-out, showing also that picking-out for alternate picks  $\frac{1}{2}\frac{1}{2}\frac{3}{1}$  and  $\frac{1}{7}$  is easier, compared to picking-out for every pick  $\frac{3}{3}\frac{1}{1}\frac{1}{7}$  and where you are always apt to mix face and back warp, which in most instances are of the same count of yarn.

*Arrangement: 2 Face 1 Back.*

Explanations thus far given will fully explain subject, remembering that 2 face warp threads are always picked-out in rotation, before using 1 back warp thread. At the start, after having recorded the interlacing of your first face warp thread, be careful and experiment if the back warp thread or another face warp thread is the next to be used by you. Careful consideration for a few moments will guide you to start at once with the proper combination of face and back warp. Remember that you must master the subject of picking-out yourself, by actual work.

When handing the weave-plan to the weave-room,

have the same start and end with one end face warp, and not start 2 face 1 back. It will result in a better flannel from the loom, since the reed wires will then come between two face threads, the reeding observed most frequently being 3 or 6 threads per dent. This will cover more perfectly the interlacing of the back warp to the face structure already in the loom. Said interlacings, with the back warp thread working against the wires of the reed, would show them up more prominently, resulting, in turn, also in small, open spaces, running throughout the entire length of the fabric, technically known as reed marks; both items, in many instances, may become a detriment to the face of the finished fabric.

Regarding picking-out samples, constructed with 2 systems warp, it will be advisable to mark down at once upon the design paper which are the face threads, besides indicating specially any fancy threads among them, also for the back warp if a fancy arrangement is used there; it will facilitate the work of picking-out, since by thus being able to compare pick-out, as it is built up, with the fabric sample under operation, the work is made easier, besides you will be able, at any time, to detect errors, which may happen even with the most experienced, and thus be able to correct them at once.

(To be continued.)

**NOVELTIES FROM ABROAD.****Granite Dressgood. (Piece Dye)**

CORD EFFECT.

Warp: 4200 ends.

Weave: See Fig. 1; repeat 23 warp threads and 16 picks; 10-harness fancy draw.

Reed: 21 { 5 dents @ 4 ends  
1 dent @ 3 ends (cord effect)  
52 inches wide in reed.

Dress: 21 ends 2/70's worsted in the grey, twisted over with white cotton.  
1 end 4/52's worsted in the grey.  
1 " 2/70's worsted in the grey, twisted over with white cotton

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23 ends, repeat of pattern.

Filling: 72 picks per inch, all single 48's worsted in the grey.

Finish: Scour, piece dye light blue, clear face on shear, press; 48 inches wide.

**Worsted Dressgood.**

Warp: 4000 ends, all 2/60's worsted.

Weave: See Fig. 3; repeat 80 warp threads and 16 picks; 16-harness straight draw.

Reed: 19 @ 4 ends per dent, 52½ inches wide.

Dress: 16 ends light gray green  
2 " light violet  
13 " light gray green  
2 " light violet  
14 " light gray green  
2 " light violet  
14 " light gray green  
2 " light violet  
13 " light gray green  
2 " light violet

—  
80 ends, repeat of pattern.