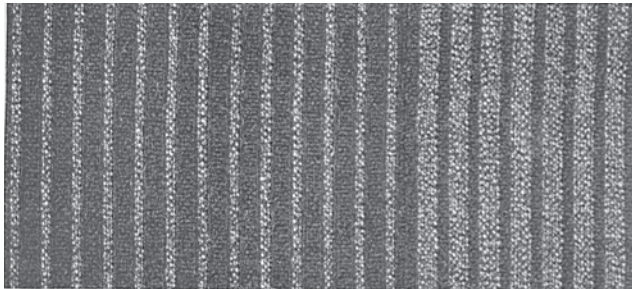


## REVERSIBLES HARNES AND JACQUARD WORK.

(Continued from March issue.)

### Some Fabric Structures.

Fig. 23 is a photographic reproduction of a reversible, double plain, stripe effect, applied to a Worsted



Face **Fig. 23** | Back

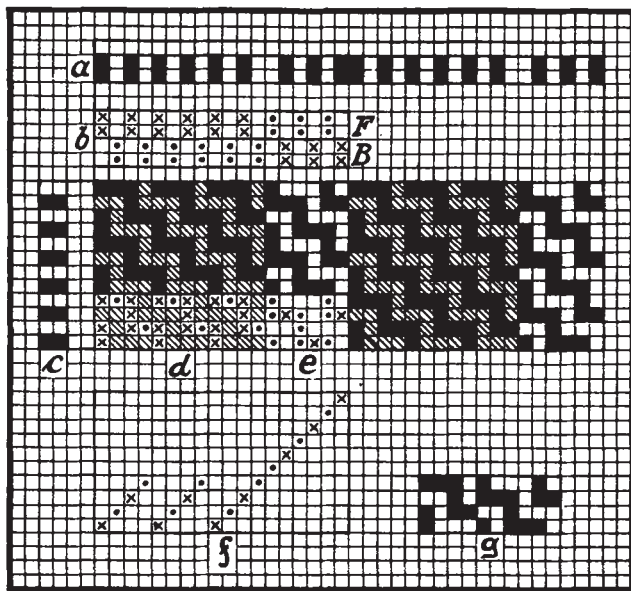
Trousering. This illustration shows part Face and part Back of fabric.

Fig. 24 illustrates details of the fabric structure. Letters of reference of the various diagrams indicate:

(a) Arrangement of warp:

- 1 end dark }  $\times 6$
- 1 " light }
- 1 end light }  $\times 3$
- 1 " dark }

Repeat 18 threads.



**Fig. 24**

(b) Position of Face (F) and Back (B) warp, on the designing paper; the same corresponds to position of these threads in weave plan *d* and *e* given below, and in the dressing of the warp (*a*) as is given above it.

(c) Arrangement of filling, one pick dark to alternate with one pick light.

(d) Construction of the double plain to produce the dark stripes in the fabric. In this diagram, *shaded* type indicates warp down, *i. e.*, equals *empty*, it being used to distinguish the dark stripes from the light stripes in the weave.

(e) Construction of the double plain to produce the light stripes in the fabric.

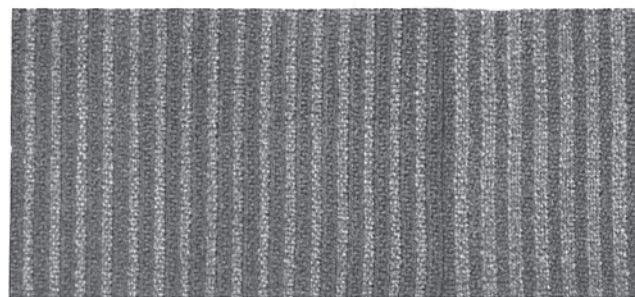
(f) Drawing-in draft for 10-harness, provided it is not desirable to use 18-harness straight draw.

(g) Harness chain for draft *f*.

Fig. 25 is a photographic reproduction of another Worsted Trousering, having double plain reversible for its basis. The arrangement of dark and light in the warp in this instance is selected to produce stripes somewhat more uniform in their width as compared to those shown in Fig. 23, using in the present instance:

- 1 end dark }  $\times 4$
- 1 " light }
- 1 end light }  $\times 3$
- 1 " dark }

in the repeat of 14 warp-threads. Diagrams given

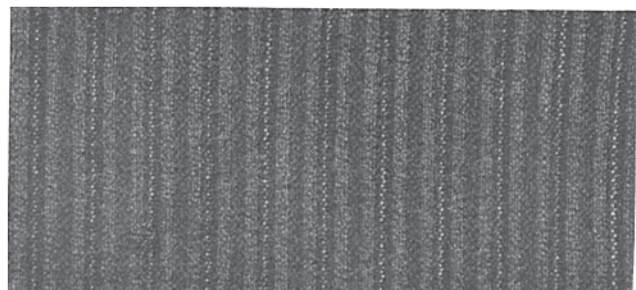


Face **Fig. 25** | Back

previously in connection with Fig. 24 also apply to this fabric, using 4 ends (one repeat of the double plain) less in the dark effect stripe.

Fig. 26 is a photographic reproduction of a Worsted Trousering having the double plain reversible for its basis. The change from light to dark effect in this instance is produced by the weave, in place of changing the color arrangement for the warp, as was done in the previously given two examples. Two ends, interlacing single cloth, are introduced to take care of the fine stripe effect shown.

Fig. 27 illustrates details of the fabric structure. Letters of reference in the various diagrams shown indicate thus:



**Fig. 26**

(a) Arrangement of warp:

- 1 end dark }  $\times 2$
- 1 " light }
- 2 ends light (single cloth) see *circle* type.
- 1 end dark }  $\times 13$
- 1 " light }
- 1 end dark

—  
33 ends, repeat of pattern.

- (b) Arrangement of filling, one pick dark to alternate with one pick light.
- (c) Small dark stripe.

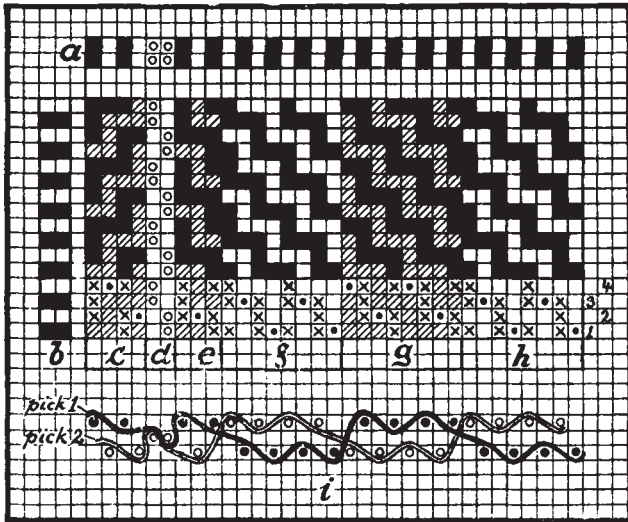


Fig. 27

- (d) Single cloth, *i. e.*, the fine stripe in the fabric previously referred to.
- (e) Small light stripe.
- (f) Small dark stripe.
- (g) Large light stripe.
- (h) Large dark stripe.
- (i) Section of fabric, illustrating the (reversible) principle of interlacing warp and filling, showing pick 1 in black line and pick 2 in outlines, to more clearly explain the formation of the reversible structure. The dark warp is shown by circles in black and the light warp by circle in outlines.

Fig. 28 shows a Worsted Trousering constructed upon the reversible principle, using the 4-harness even sided twill for the interlacing of both plies.

Fig. 29 gives the details of the fabric structure, *viz.*:  
 (a) Weave for each ply of the fabric structure.  
 (b) Arrangement of warp, repeat 24 threads.

- 1 end light }  $\times 4 =$  light stripe
- 1 " dark }
- 16 ends dark = dark stripe, both warps being of one color.

24 ends, repeat of pattern.

- (f) Fabric section, showing the interlacing of pick 1 (which is a dark pick) by full line, and that of pick 2 (which is a light pick) in outlines. The four light warp-threads are shown by circles in outline, and the dark warp-threads by black circles.

(To be continued.)

**Use of Unsuitable Materials in Finishing Cotton Goods.**

A starch that contains an excess of moisture is likely to be mouldy when used. A good starch should never contain more than 10 per cent of water, but as much as 20 per cent is sometimes present. If such a starch has been stored long, it will frequently contain numerous moulds and other organisms, and the temperature of the finishing mixture will often be insufficient to destroy the spores that are present, thus leaving them free to develop subsequently.

Thin starches and dextrans often contain sugar, which is liable to exercise a selective action upon certain moulds or *Torulæ*. Sometimes a starch mixture

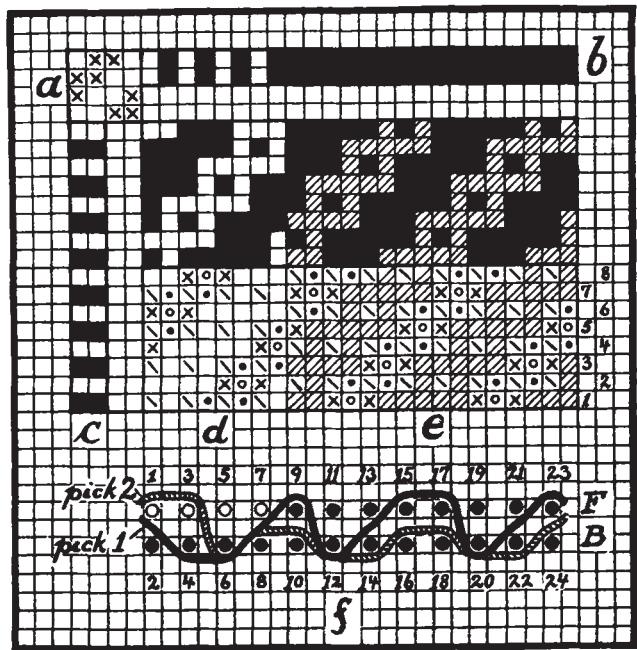


Fig. 29

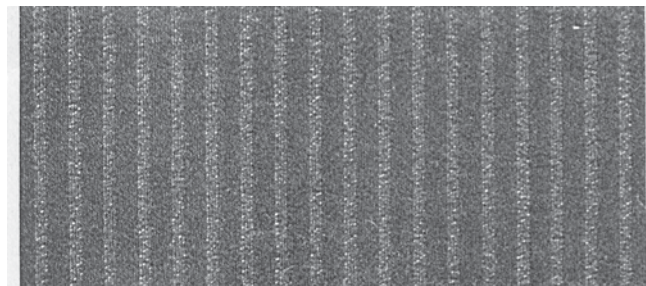


Fig. 28

- (c) Arrangement of the filling, one pick dark to alternate with one pick light.
- (d) Construction of the light stripe, produced with light warp and light filling on the face of the fabric.
- (e) Construction of the dark stripe, produced with dark warp and dark filling on the face of the fabric.

goes "sour" before it is used, and if undetected always causes trouble. This is generally aided by the presence of soluble carbohydrates.

Inferior gelatine and glue are sometimes in a similar manner responsible for bacterial growth. The quality of a gelatine depends upon the proportions of true gelatine and peptone present, since the use of poor raw material or faulty manufacture increases the amount of peptone at the expense of the gelatine. Peptones form an ideal germ food, and are also very hygroscopic, that is, they have the power of attracting moisture from the atmosphere. Thus, goods dressed with a gelatine containing peptones will generally be rather damp, and will contain a quantity of ready formed germ food. On this account they are very liable to be attacked by bacteria. One often sees gelatine-dressed goods which have become mouldy and in which the color has deteriorated, or in some cases even become tender.