

The weave for the ground structure is the 2 by 4 rib weave.

Repeat of complete weave (see left lower corner of weave) is 3 by 5.

The arrangement of the warp is:

- 1 end ground, see *full* type.
- 1 " pile, see *cross* type.
- 1 " ground, see *full* type.

3 warp-threads in repeat of pattern.

Diagram next to weave illustrates the arrangement of the filling, to read: 4 picks ground, see *full* type, to alternate with 1 wire, see *dash* type.

Next to it, at the right, is given a diagram showing the interlacing of warp and filling of the fabric structure. The pile wires are indicated by triangles. Following the run of the pile warp throughout the diagram clearly shows its *pile-through* principle of interlacing with the ground structure.

(To be continued.)

SOLIDONIA.

By R. Werner.

Solidonia is a bast fibre which has already found application for many kinds of textile materials. The yarn prepared from it has beautiful lustre and a good tensile strength. The fibre is not used alone, but mixed with wool and cotton. Solidonia does not felt, and hence behaves like cotton when mixed with wool.

The fibre can be bleached pure white and can be dyed with any dyestuffs suitable for cotton. It is dyed at low temperatures, and not above 80-90 deg. C., as the material becomes harder and more brittle at the boiling point. For the same reason the material should not be dried at high temperatures.

When dyeing with Benzidine, developed direct colors, and Sulphide dyes, the addition of Monopol soap or Monopol brilliant oil is advantageous to maintain the soft handle of the goods and aid in the production of even dyeing. In the case of the Benzidine colors, 10-20 per cent of Glauber's salt and 1-2 per cent of Monopol soap are added to the dyebath, into which the material is introduced at 40 deg., slowly warmed to 80-90 deg. C., and dyed for one hour. The developed direct colors are dyed in a similar manner, then diazotised and developed. The Benzoform colors are dyed in the same manner as the Benzidine colors and then treated with formaldehyde for 20 minutes; dyeings fast to washing are obtained. Katigen colors are dyed with the addition of 4-8 per cent soda ash and 1-2 per cent Monopol soap or Monopol brilliant oil (without Glauber's salt) at the before mentioned temperatures. Algol colors are dyed as usual for wool, using caustic soda, hydrosulphite, and salt.

The choice of dyestuffs depends on the materials which are to be made from Solidonia. For curtain material, shades fast to light may be obtained by using the benzo light colors, suitable bordeaux and scarlet shades.

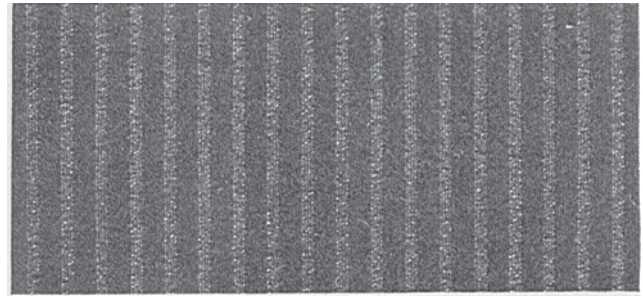
For articles which are to be fast to light in addition to washing, such as hosiery, developed colors are available. In case a simpler method of dyeing is required than that necessary for the Diazo colors, the Benzoform colors may be used.

If it is considered advisable to obtain dyeings fast to light, the Katigen colors are used.

The best general fastness is obtained with the Algol colors.

Worsted Trousering.

Warp: 7680 ends; draw on 16-harness.



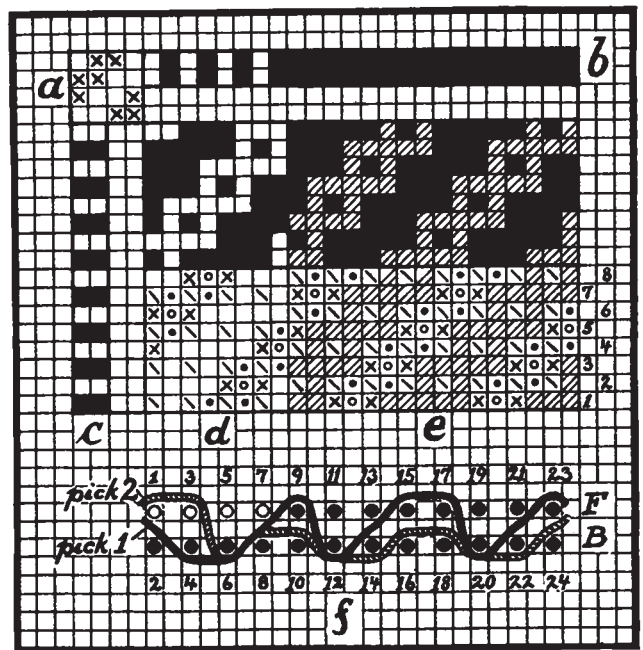
ACTUAL REPRODUCTION OF FABRIC

Dress: 16 sections, each containing 20 patterns @ 24 ends, or 480 ends, total.

Arrangement of Warp:

- 1 end 2/56's worsted, black, twisted over with 90/2 spun silk, pearl. } × 4
- 1 end 2/56's worsted, black.
- 16 ends 2/56's worsted, black.

24 ends in repeat of pattern.



DETAILS OF FABRIC STRUCTURE:

- a: Weave for Face and Back structure, the 4-harness even sided twill.
- b: Color Scheme for Warp.
- c: Color Scheme for Filling.
- d and e: Construction of the two effects, dark and light; repeat of weave 24 warp-threads and 8 picks to be drawn on 16-harness, fancy draw.
- f: Fabric section, cut in the direction of the filling, showing the interlacing of picks 1 and 2 of the weave above. F indicates the warp-threads in the face ply, B those for the back ply. Empty circles show the silk twist, Full circles the plain black warp-threads. Pick 1 shown in full black indicates black worsted pick, pick 2 shown shaded gray mix pick.

Reed: 14½, using 8 ends per dent; 66.2 inches wide, exclusive of selvage.

Filling: 140 picks per inch, arranged thus:

- 1 pick 2/56's worsted, black.
- 1 pick 2/56's worsted, gray mix.
- 2 picks in repeat of pattern.

Finish: Worsted finish, clear face, 56 inches wide.