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 Glauher’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
diamined and developed. The Benziform colors are
dyed in the same manner as the Benzidine colors and
then treated with formaldehyde for 20 minutes; dye-
ings 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 (with-
out Glauer’s salt) at the before mentioned tempera-
tures. 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 addi-
tion 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
Benziform 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. \( \times 4 \)

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: 14\(\frac{1}{2}\), 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.