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## THE MANUFACTURE OF UPHOLSTERY FABRICS.

### REPP OTTOMAN.

These fabrics, as indicated by their name, are characterized by their repp, *i.e.*, prominent ribbed ground, upon which by means of floating the face or figure warp the design is formed. The greatest variety of yarns are used in their manufacture, comprising Wool, Worsted, Mohair, Cotton, Spun Silk, True Silk, Artificial Silk, Ramie, etc.

1, 2 or 3 picks of a heavy count of yarn, known as stuffer pick. Either single yarn or a 2 or more ply yarn may be used for this stuffer pick, the latter selection reducing the cost of manufacture.

#### Plain Repp Effect.

Either the common plain weave, or one of the

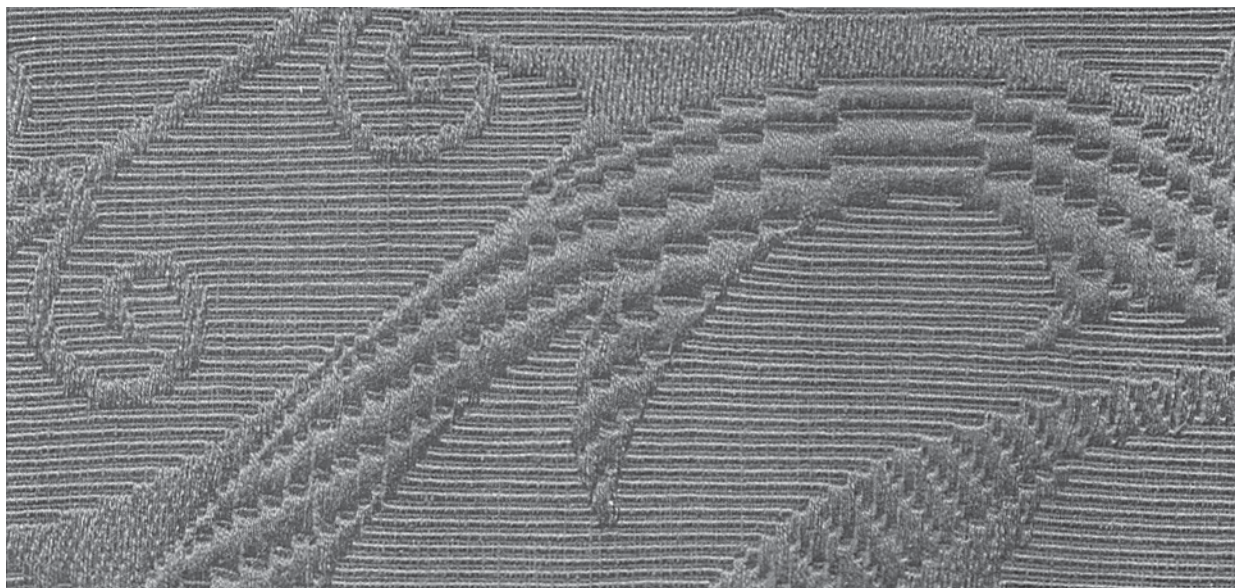


Fig. 11.

JACQUARD REPP OTTOMAN. (Actual Size Reproduction.)

For details of texture see page 3; for point-paper design and its analysis see Figs. 12 and 13 with full details in August issue.

The weave used is the common plain with one pick of a high count to alternate with one pick of a very heavy count of yarn, in turn imparting to the fabric structure the characteristic rib effect by every heavy pick showing an elevated rib line, bound on either side by a depressed line, produced by the joining pick on either side and which are of a fine count.

Other weaves used are the combinations of the  $\frac{1}{2}$  and  $\frac{1}{1-2}$  or the  $\frac{1}{3}$  and  $\frac{1}{1-3}$  warp rib effects.

Two systems as well as two kinds of warp are used, in order to heighten the rib effect in the fabric, *viz.*:

- 1 end of a high count of yarn and which we may consider as the binder warp, to alternate with
- 1, 2 or 3 ends of a heavy count of yarn, and which is the face, or figure warp. As a rule 2 ends are used.

In the same way two kinds of filling are used, *viz.*:  
1 pick of a high count of yarn, known as the binder pick, to alternate with

warp effect rib weaves previously referred to are used. Two kinds of warp and filling are used in either case.

#### PLAIN WEAVE.

*Warp*: 2 ends Face (heavy count of yarn)  
1 end Binder (high count of yarn)

—  
3 ends in repeat of pattern.

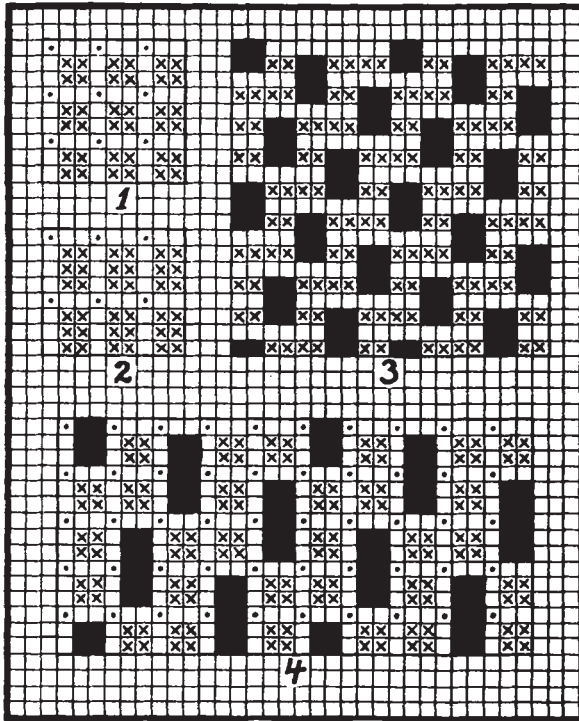
*Filling*: 1 pick Stuffer (heavy count of yarn)  
1 pick Binder (high count of yarn)

—  
2 picks in repeat of pattern.

Insert stuffer pick when all face warp is up, thus forming the elevated ridge line in the fabric; this stuffer pick rests not visible on the face of the fabric, between the two kinds, *i.e.*, systems of warp threads, showing somewhat through on the back of the structure on account of the lower back warp texture. The binder pick is inserted when all the binder warp is up, producing in turn the depressed ridge in the fabric.

## RIB WEAVES.

Weaves Figs. 1 and 2 are given to illustrate the subject. Fig. 1 shows the rib weave with 3 picks to



the round, and Fig. 2 that with 4 picks to the round.

With reference to weave Fig. 1 the following arrangement is used:

*Warp:* 1 end Binder, see *dot* type  
2 ends Figure, see *cross* type  
—  
3 ends, repeat.

*Filling:* 2 picks Stuffer, see *cross* type  
1 pick Binder, see *dot* type  
—  
3 picks in pattern.

Weave Fig. 2 shows the same arrangement of warp used with 3 stuffer picks to alternate with 1 binder pick, *i.e.*, 4 picks in repeat of pattern.

## Figured Repp Effects.

In this instance designs are produced by having certain figure warp-threads (after a given design) skip the respective binder pick or picks, *i.e.*, floating on the face of the fabric a distance of 2, 3 or more stuffer picks as well as the binder picks as situated between them. Figs. 3 and 4 are given to illustrate subject.

Fig. 3 shows us the face effect of such a repp fabric structure.

*Full* type shows the floating of the figure warp over:

- 1 Stuffer pick
- 1 Binder pick
- 1 Stuffer pick,

arranged after the 5-harness satin weave motive, using 2 figure warp-threads as one of the satin spots. The binder warp is omitted. *Cross* type shows the ridge produced after the principle of plain repp structure previously explained.

Fig. 4 shows the complete analysis of the fabric, showing:

*Warp:* 1 end Binder, see *dot* type  
2 ends Figure, see *full* and *cross* type  
—  
3 ends in repeat of arrangement.

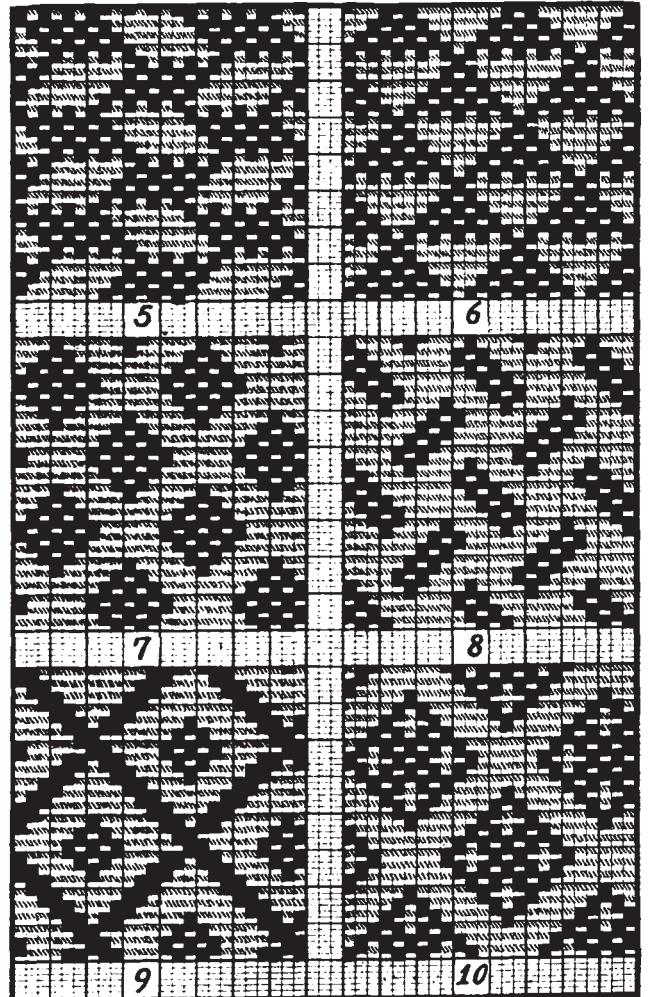
*Filling:* 2 picks Stuffer, see *cross* and *full* type  
1 pick Binder, see *dot* and *full* type  
—  
3 picks to the round of the arrangement.

Using 3 warp-threads for each spot of the 5-harness satin motive gives us  $(3 \times 5 =)$  15 warp-threads as the repeat of the weave. The same holds good filling ways.

In drawing the warp in the reed, separate the 2 figure warp-threads by the dent wire in order to get a perfect, smooth face; this will prevent any over-riding of the warp-threads on the face of the fabric.

In place of using 2 picks in a shed, as shown in weave Fig. 4, we may use in its place only one pick of a heavy count of yarn, or 3 stuffer picks, etc.

Using only one heavy stuffer pick will result in a round, rather elevated repp, *i.e.*, rib effect line, whereas 2, 3 or 4 stuffer picks inserted successively in one shed, in place of it, will result in a somewhat flatter rib line effect. The latter will result in a more



expensive fabric structure, *i.e.*, higher counts of yarn spun, more picks per inch, will equal less production.

In connection with large floating figure effects,



either the respective binder warp or the figure warp, or both, are stitched, in either case interlacing after a suitable arrangement (weave) with the binder picks.

Figs. 5, to and inclusive 10, show six designs of face effects for these figured repps. No notice of a binder warp is taken.

*Full* type shows the floating of the figure warp to produce the design.

*Shaded* type shows the rib line produced by the figure warp interlacing on plain repp weave.

The one warp-thread used in these six designs, in practical work on the loom, stands for 2 figure warp-threads. In the same way the one stuffer pick shown may also stand for 2 or 3 picks in one shed in the loom, depending upon the character of the fabric structure desired to be made.

Designs given refer to what we consider Dobby work.

Fig. 5 can be made on 10 figure harness shafts, plus 2 or 4 harnesses for the binder warp. In the same way

- Fig. 6 calls for 6 harnesses for the figure warp,
- Fig. 7 calls for 7 figure harnesses,
- Fig. 8 calls for 10 figure harnesses,
- Fig. 9 calls for 10 figure harnesses,
- Fig. 10 calls for 9 figure harnesses.

To these figure harnesses add in connection with weaves Figs. 6, 7, 8, 9, and 10, one or two (or more if so required by the texture of the fabric under consideration) harnesses for the binder warp.

**Jacquard Work.**

This subject is best explained by means of a fabric analysis, and for which reason Figs. 11, 12 and 13 are given.

Fig. 11 shows actual size, a photographic reproduction of such a Jacquard Repp Ottoman fabric, showing only a small portion of its complete repeat, the latter being too large for reproduction. Two systems of warp and filling yarns are used, *vis*:

*Warp*: 2 ends spun silk twist, old gold, for face threads, heavy count of yarn.  
 1 end 2 ply fine count of cotton yarn, imitation old gold shade, for binder.

3 ends in repeat.

*Filling*: 1 pick binder, fine single cotton yarn, imitation old gold shade.

1 pick stuffer, 3 fold very heavy count of cotton yarn, with hardly any twist in it (3 fold 6's or 8's yarn) imitation old gold shade.

2 picks in repeat.

**Texture of Fabric.**

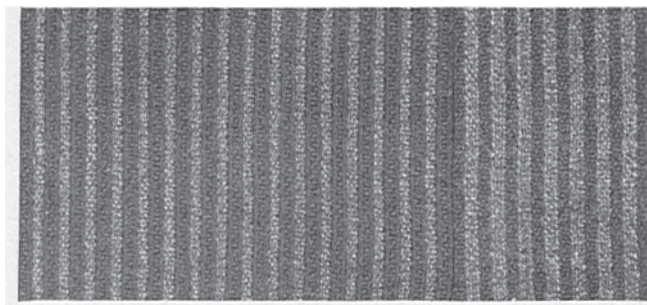
- 74 ends Face warp, spun silk
  - 37 ends Binder warp, fine cotton twist
- 
- 111 ends per inch in finished fabric.
- 31 picks per inch, of which
- 15½ picks are binder, fine single cotton yarn
  - 15½ picks are stuffer, 3 fold heavy cotton yarn.
- 
- 31 picks per inch in finished fabric.

(To be continued in August issue.)

**WORSTED TROUSERING.**  
*(Reversible Stripe Effect.)*

*Warp*: 6318 ends; draw on 18-harness straight or on 10-harness fancy draw.

*Dress*: 13 sections, each containing 27 patterns @ 18 ends, or 486 ends, total.

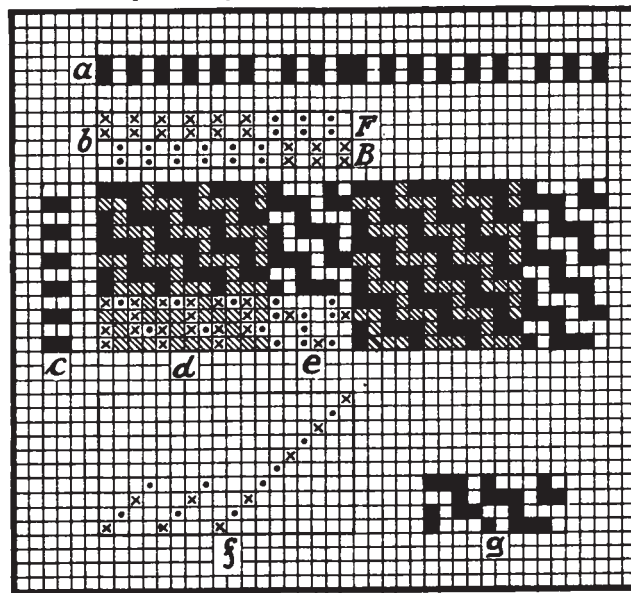


Face of Fabric Back  
 ACTUAL REPRODUCTION OF FABRIC

*Arrangement of Warp:*

- 1 end 2 fold 2/56's worsted, hard twist, black.
- 1 end 2/56's worsted, dk. gray and white } × 4
- 1 end 2/56's worsted, black.
- 1 end 2/56's worsted, dk. gray and white.
- 1 end 2 fold 2/56's worsted, hard twist, black.
- 2 ends 2/56's worsted, dk. gray and white.
- 1 end 2/56's worsted, black.
- 1 end 2/56's worsted, dk. gray and white } × 2
- 1 end 2/56's worsted, black.

18 ends repeat of pattern.



**DETAILS OF FABRIC STRUCTURE:**

- Weave for Face and Back structure, the plain weave.
- a: Color Scheme for Warp.
- b: Scheme for Face and Back Warp in Weave.
- c: Color Scheme for Filling.
- d and e: Construction of the two effects, dark and light; repeat of weave 18 warp-threads and 4 picks.
- f: Drawing-in draft for 10 harnesses, fancy draw.
- g: Harness-chain for draft f.

*Reed*: 16, using 6 ends per dent; 66 inches wide, exclusive of selvage.

*Filling*: 85 picks per inch, arranged thus:  
 1 pick 2/56's worsted, black.  
 1 pick 2/56's worsted, dk. gray and white.

2 picks in repeat.

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