

the two cloths is done, *i. e.*, whether the back warp stitches into the face filling or the face warp into the back filling. This information will guide you in your work.

In some instances, it may be found of advantage to remove one of the systems of back threads, the warp or the filling, which ever easier and more advantageously removed.

Having mastered the analysis of double cloth, you will have little difficulty to master special subjects, like additional binder warps, binder picks, stuffer warps, stuffer picks, 3-ply cloth, etc., hence no reference necessary; again they may come up in such a variety that an explanation would only bewilder—they belong only within reach of the experienced designer.

HOW TO PICK-OUT PILE FABRICS.

By pile fabrics, in this instance, we refer to woolen overcoatings or cloakings, known as Montagnacs, Flocone, etc., presenting either a wool, alpaca or fine camels hair face, *i. e.*, pile pick; the ground and the backing picks to be wool, and the two systems of warps, either wool (rather hard twisted) or merino or cotton yarn. The stuffer filling, if such is used to increase bulk and warmth of fabric, is, as a rule, a woolen yarn, carrying any amount of shoddy.

The picking-out of these fabrics is generally commenced with singeing or shaving off the fuzz on the back of the sample, in order to be able to ascertain that weave. Next ascertain texture for warp and filling. After this, remove carefully back warp and back filling, ascertaining, at the same time, their counts. Provided the fabric contains a stuffer pick, the same will then rest loosely to the eye of the designer. Ascertain its texture as well as counts of yarn.

We now have a new back structure for the fabric. Singe or shave the same and begin picking-out the face structure; pick-out carefully. No great trouble will be experienced, but it will be advisable to proceed with care and judgment.

In Fig. 9 an enlarged outside view of a striped Flocone is given, as is seen from the back of the fabric after the backing structure and stuffer picks have been removed. The remaining threads of the face structure have been shown with excessively large perforations between the threads, so as to make matters very clear to the reader.

In Fig. 10 a representation of fabric structure Fig. 9 is given on point paper, taking into consideration that Fig. 9 illustrates the back view of the structure.

If we now want the weave for the face of the fabric, we must reverse weave Fig. 10, exchange risers for sinkers throughout the entire weave, in turn obtaining weave Fig. 11, *i. e.*, the reverse of weave Fig. 10.

Fabric plan Fig. 9 clearly explains the subject. We can clearly distinguish the ground picks from the pile picks, also the places where the latter have been torn or broken on the gig and the ends thus produced transformed into flakes, *i. e.*, loose pile ends.

When dissecting the face structure, ascertain the nature of the raw materials used, counts of yarns used,

as well as the texture of warp and filling. Next ascertain, by comparison of textures for face and back structure, the arrangement of face to back in warp and filling.

The most important point to make sure of is the pile pick, its fineness, its proportional arrangement to the ground pick, also whether it refers to a single, 2 or more fold pick, and whether the latter have been entered single or from one bobbin.

NOVELTIES FROM ABROAD.

Woolen Cheviot Suiting.

Warp: 2040 ends; 3½ run woolen cheviot yarn and 2 fold 80/2's spun silk.

Weave: See Fig. 1; Repeat 34 warp threads and 56 picks; 18-harness fancy draw.

Reed: 15½ @ 2 ends per dent; 31 ends per inch; 66 inches wide in reed.

Dress: 1 end wool, black } × 3
 1 " " , white }
 1 end wool, black
 1 " spun silk, white
 1 " wool, black
 1 " " , white
 1 " " , black
 1 " spun silk, white
 1 end wool, black } × 12
 1 " " , white }
 1 end wool, olive
 1 " spun silk, white
 1 " wool, olive
 1 " wool, white
 1 end wool, black } × 11
 1 " " , white }
 1 end wool, black
 1 " spun silk, white
 1 " wool, black
 1 " " , white
 1 " " , black
 1 " spun silk, white

68 ends, repeat of pattern.

Filling: 32 picks per inch, arranged thus:
 1 pick 3½ run woolen cheviot, black
 1 " 2-ply 6 run woolen cheviot, white
 and brown twist

2 picks in repeat of pattern.

Finish: Cheviot finish; scour well, clip on shear, press, 56 inches finished width.

Worsted Suiting.

Warp: 4352 ends, all 2/42's worsted.

Weave: See Fig. 3; Repeat 8 warp threads and 8 picks; 8 or 16-harness fancy draw.

Reed: 16 @ 4 ends per dent; 64 ends per inch; 68 inches wide in reed.

Dress: 2 ends black
 2 " white and dk. gray mix } × 16
 1 end black
 1 " white and dk. gray mix } × 32

128 ends, repeat of pattern.

Filling: 70 picks per inch, all 2/42's worsted; arranged thus:

2 picks white and dk. gray mix
2 " black

4 picks, repeat of pattern.

Finish: Worsted finish, 56 inches wide.

Fancy Worsted Dressgood.

Warp: 3200 ends, all 2/64's worsted.
Weave: See **Fig. 2**; Repeat 16 warp threads and 8 picks; 8-harness fancy draw.
Reed: 16½ @ 4 ends per dent; 66 ends per inch, 48½ inches wide in reed.

Dress: 4 ends white
4 " light reseda
4 " white
4 " dark reseda
4 " white
4 " light reseda
4 " white
1 end salmon
3 ends dark reseda

32 ends, repeat of pattern.

Filling: 75 picks per inch, all single 36's worsted, white.

Finish: Worsted finish, 44 inches wide.

Worsted Suiting.

Warp: 3960 ends, all 2/28's worsted.
Weave: See **Fig. 4**; Repeat 16 warp threads and 24 picks; 16-harness straight draw.
Reed: 15 @ 4 ends per dent; 60 ends per inch; 66 inches wide in reed.

Dress: 1 end black and green twist
6 ends olive
2 " black
6 " olive
1 end black and green twist

16 ends, repeat of pattern.

Filling: 56 picks per inch, all 2/28's worsted, arranged thus:

1 pick black and green twist
10 picks olive
2 " black
10 " olive
1 pick black and green twist

24 picks, repeat of pattern.

Finish: Worsted finish, 56 inches wide.

Worsted Suiting.

Warp: 4292 ends, all 2/32's worsted.
Weave: See **Fig. 5**; Repeat 58 warp threads and 8 picks; 12-harness fancy draw.
Reed: 15 { 1 dent @ 6 ends
13 dents @ 4 ends; 64 inches wide in reed.

Dress: 5 ends black
1 end brown olive & dk. blue tw. } × 26
1 " black
1 " brown olive & dk. blue tw.

58 ends, repeat of pattern.

Filling: 54 picks per inch, all 2/32's worsted, black.
Finish: Worsted finish, 56 inches wide.

Fancy Worsted Dressgood.

Warp: 3888 ends.
Weave: See **Fig. 6**; Repeat 72 warp threads and 48 picks; 14-harness fancy draw.
Reed: 16½ @ 4 ends per dent; 66 ends per inch, 59 inches wide in reed.

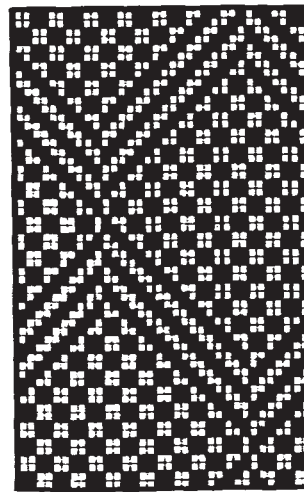


Fig. 1

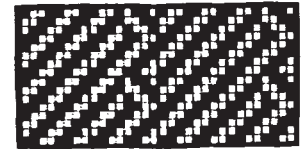


Fig. 2

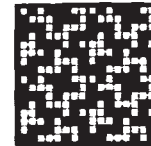


Fig. 3



Fig. 4



Fig. 5

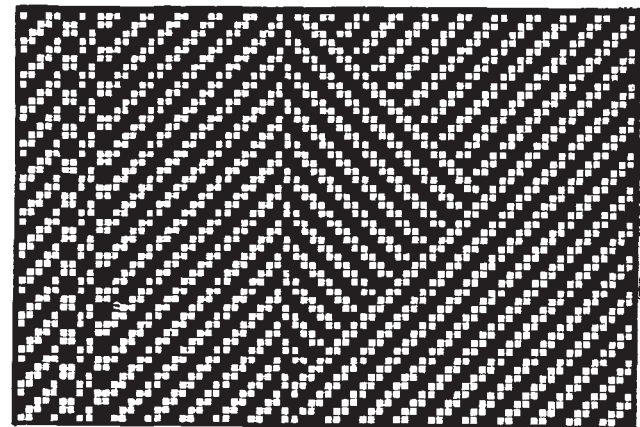


Fig. 6

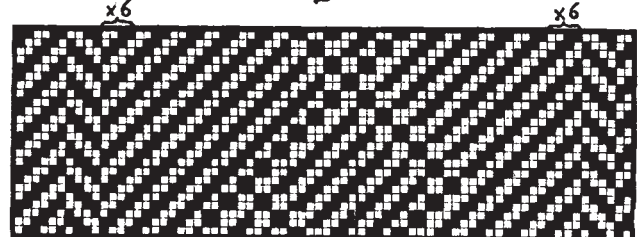


Fig. 7

Dress: 1 end 2/64's worsted, light moss-green
2 ends 2/60's worsted, gray-green
1 end 2/64's worsted, light lilac
68 ends 2/60's worsted, gray-green
72 ends, repeat of pattern.

Filling: 66 picks per inch, all single 30's worsted, tobacco-brown.

Finish: Worsted finish, 52 inches wide.

Worsted Suiting.

Warp: 3584 ends, all 2/36's worsted.
Weave: See **Fig. 7**; Repeat 112 warp threads and 24 picks; 24-harness fancy draw.

Reed: 13½ @ 4 ends per dent; 55 ends per inch; 65 inches wide in reed.

Dress: 1 end green } twice
 2 ends black }
 68 ends medium gray }
 2 ends light gray mix } 8 times
 2 " black }
 4 ends medium gray }
 2 " black }

112 ends, repeat of pattern.

Filling: 60 picks per inch, all 2/36's worsted, medium gray.

Finish: Worsted finish, 56 inches wide.

POINTS ON JACQUARD DESIGNING.

For our subject we will take the principle of setting figures for fabrics executed on the Jacquard loom.

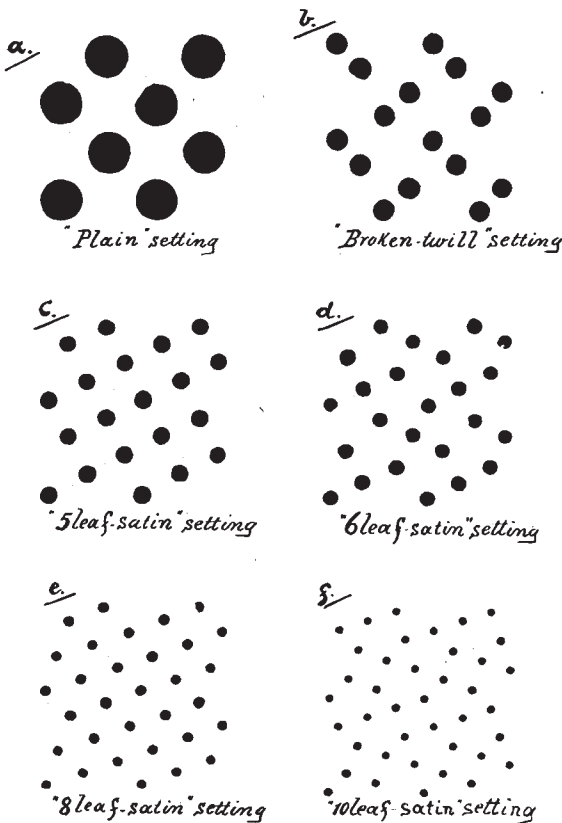
To explain the subject, Fig. 1 is given, illustrating the most frequently used settings.

a explains the *Plain Setting*, the most frequently met with arrangement of placing figures in a design.

b shows to you what is technically termed the *Four-Harness Broken-Twill Setting*, a most excellent plan for the placing of figures in a design.

c illustrates the *Five-Leaf Satin Setting*.

d the *Six-Leaf Satin Setting*, a most excellent placing of figures in a design, since it does away with those twill lines which the 5, 8 and other *regular*



Some of the most frequently used Settings.

Fig. 1.

satins, more or less, produce. Keep this in mind and use this setting as frequently as you can.

e explains the *Eight-Leaf Satin Setting*, a distribution of figures with which you will frequently come in contact with.



Fig. 2.

f shows the *Ten-Leaf (Irregular) Satin Setting*. The same is a most pleasing distribution of figures,

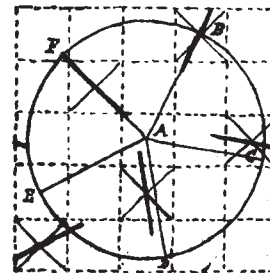


Fig. 3.

requiring, however, a large repeat for the design, (large Jacquard machine) compared to the previously referred to settings, hence it is less used.

Settings thus referred to are those most frequently met with; you will hardly ever be required to go above the ten-leaf satin setting. The seven and nine-leaf satin settings are not referred to, since they produce a more or less prominent twill effect, in placing the figures, in the woven fabric, hence are little used.

Two repeats each way, i. e., four complete repeats of each setting, have been given, to thoroughly explain the subject.

THE VALUE OF THE SATIN ARRANGEMENTS is most readily noticed in patterns with small repeats (dress goods, etc.) and where it is desirable that the repetition should not be evident. They are also of great service, when a simple spot figure is used as the special feature of the design, each spot making a unit in the repeat, and which unit may be placed according to the satin setting selected, or necessary as designated by the size of the Jacquard machine at our disposal. By this we mean, that if a figure requires, for example, 100 threads to work it out, and we only should have a 200 Jacquard machine, straight tie-up, it would be ridiculous to speak of using any satin setting at all. There would be no choice left for the designer, the plain setting being the only one at his disposal.

In our collection of settings given, we used for the motive a common circle set on the square. You