

TEXTURE #4.

Warp: 2/38's worsted, crossbred.

Reed: 34 with 2 ends per dent.

Filling: 60 picks per inch, 38's crossbred.

TEXTURE #5.

Warp: 2/40's mohair.

Reed: 34 with 2 ends per dent.

Filling: 60 picks per inch, 32's worsted, crossbred.

TEXTURE #6.

Warp: 2/48's worsted, fine crossbred.

Reed: 39 with 2 ends per dent or 26 with 3 ends, if necessary.

Filling: 56 picks per inch, 32's worsted, crossbred.

REVERSIBLES.

(Continued from January issue.)

Points on the Construction of Double Face Reversibles.

While it is of the greatest importance to use the proper weave for these fabrics, there are other considerations to be taken into account before a fabric which will be a seller and command a good price can be obtained. It is well therefore to refer to some effects that are hard and in some cases not possible to be made successfully. For instance, a pure black face and white back in connection with a fabric requiring fulling is a hard and most likely impossible proposition to produce. The fulling and for a fact even the scouring, would cause the fibres of one side to work through, *i.e.*, show through on the other side, even if the chafing of heddles and reed during weaving would not have accomplished this before.

In some instances the most unlikely thing may occur, but such cases are scarce. For example, a certain mill received orders for a double faced reversible of a navy blue face and white back. The first piece, a sample piece, against expectations proved a success and an order for 10 pieces was taken, but when in their manufacture the unlikely thing did not repeat itself, and the mill had job pieces, *i.e.*, seconds on hand. Oxford face and white back may be made; oxford face and light grey back is quite safe.

When strongly contrasted reversibles are required, it is advisable to set the cloth a little better than for ordinary contrasts, and to full them a little less. In some cases, too, it is safer to twist the light color yarn a little harder in order to reduce its liability to open in the fulling process. It is the fulling process which tends to work the fibres from one ply, through the fabric onto the face of the other ply.

To make a pure white face with a pink back would be rather risky, but white with a pink check may work out all right, for instance using:

6 inches white.	1 inch pink.
½ inch pink.	1 inch white.
1 inch white.	½ inch pink.

Thin reversibles require very close attention if they are to be well done. The most difficult are those with an equal number of ends on each side. The difficulty is reduced provided the face end is a little thicker than the back, and is still less if the face is woolen and the back worsted.

An easily managed thin cloth can be made of one end 3 run woolen face, and two ends 2/60's worsted back. In this make the comparatively thick woolen

threads swell in the fulling, and spread themselves over the worsted.

The greatest trouble on thin cloths is with a bright over-check on the back. If the cloth is woolen on both sides, the checking color may be made of worsted; and if that is not possible, the bright color may be twisted harder to reduce its liability to open in the fulling. Even in the case of a worsted back, bright checking is less likely to come through, provided the yarn is twisted harder.

A light colored face in a fabric made with kempy wool or with long fibres of strong wool, used in connection with a dark colored back, is an impossible cloth to produce.

Provided the designer is at liberty to choose his own styles for the back, he can avoid dangerous combinations without altogether sacrificing good effects. If, for example, he has to make an oxford face, with checks of black and white on the back, in a cloth that is likely to allow the check to shine through, it will be advisable for him to avoid large masses of either color in his designs. While checks of 2 and 2, 4 and 4, or 6 and 6 may be safe, such as 16 and 16 or still larger checks may show through just enough to produce the shadow of a check on the face of the cloth. Larger effects can be made by working on the overcheck idea, say 4 and 4 for 3 inches and 2 and 2 for 3 inches; or various sizes of 3 and 3 and 1 and 1, or 2 and 2 and 1 and 1, will be all right—for if the white should show through, there not being any large mass of either color at one place, the effect will be just enough to make the face somewhat light all over, but there will be no check showing through on the face.

Another safeguard not to have the back show on the face is to have one of the colors common to both face and back.

Precautions quoted of course refer more particularly to fabrics of a thin texture. A well-balanced heavy textured cloth, made with one end of heavy count of yarn on face and 2 ends of a fine count yarn on back will be perfect in most any combination of colors. There is neither much danger in an end-and-end thick cloth made reasonably well.

A class of fabrics of these double face reversibles known the world over are the Scotch tweeds. The famous Bannockburn tweeds are made of cheviot, and the very best dark heather over-coatings are produced in Sutherland Cheviot wool. For less highly colored cloths the various qualities of merino are employed, which produce a finer looking, smoother, and softer handling fabric. A feature characteristic of a fabric made of good merino stock is the clear and clean appearance of the plain colors that compose the ground—an effect only to be obtained by the careful finishing of fabrics made of good wool. A good merino woolen cloth does not need bright color; neither does a good cheviot, but where bright color is wanted cheviot shows the best. A very large proportion of tweeds are made with very little fancy color and in small designs. The average consumer does not like a conspicuous color, and prefers a design rather under than over 2 inches in size, and yet he must have distinction. It is this that constitutes the greatest difficulty of the tweed designer. Everyone knows it is much easier to make something distinctive in a large design and a high color than to make something different in a small design and a quiet color. Loudness is easier produced than quiet effects.

Not infrequently two or more qualities are combined in one cloth to get new effects. These qualities may be mixed in the manufacture of the yarn. For instance camel hair may be mixed with wool to give a new handle, or mohair may be mixed to give a new effect, again they may be mixed in weaving. A merino cloth gets a new character when it has a little cheviot mixed with it in the filling. The warp may be of a light color and the filling dark, composed in whole or in part of a good quality of cheviot. The latter responds to the filling more quickly and in a different way, and gives a cover on the cloth before the merino shows any signs of bursting. The clearness of the merino shines through the cover of the cheviot, and the resulting effect is very good.

Color is the most important point in Scotch tweeds. The first thing a prospective buyer sees when he looks at a range of samples is the color. After further examination he may not like the cloth, the design or the price, but if the color does not satisfy him he passes it over. If, on the other hand, the design is not to his taste, he may suggest modifications or he may even be induced to take it as it is if the colors are really well done.

THE MANUFACTURE OF RIBBONS, TRIMMINGS, EDGINGS, etc.

(Continued from January issue.)

Fringes and Pearl Edges.

FRINGES.

In some instances trimmings are made with fringes, the latter, after being woven, being knotted by hand,

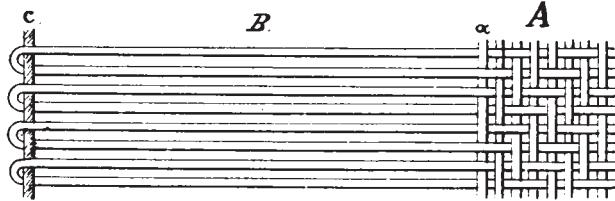


Fig. 202

again a regularly woven fringe may be all that is required. Fabric sketch Fig. 202 explains the subject. In the same *A* indicates the body portion or heading of the fabric which may be of any width and interlaced by any kind of weave, plain or figured, single

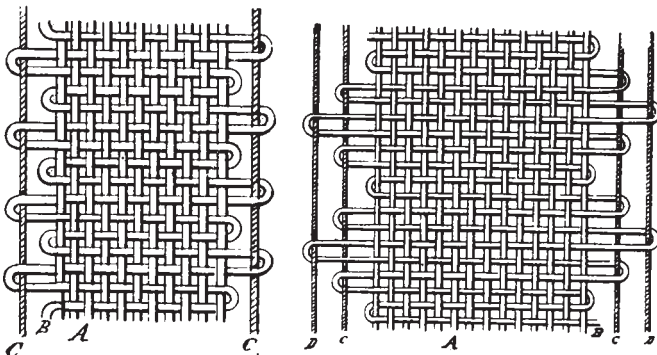


Fig. 203

Fig. 204

cloth or using one or two extra systems of warp for figuring; we used the plain weave in our example. *B* is the fringe, produced by placing a wire *C* some distance apart (as regulated by the length of the fringe required) parallel with the warp-threads through a dent of the reed. This wire is fastened to some of the

back parts of the loom and extends in front for some of the length of the woven fabric, out of which it pulls itself automatically while the fabric in passing through a pair of take-up rollers from where it is automatically delivered into a receptacle as placed below the loom. In place of a wire a common heavy count of cotton

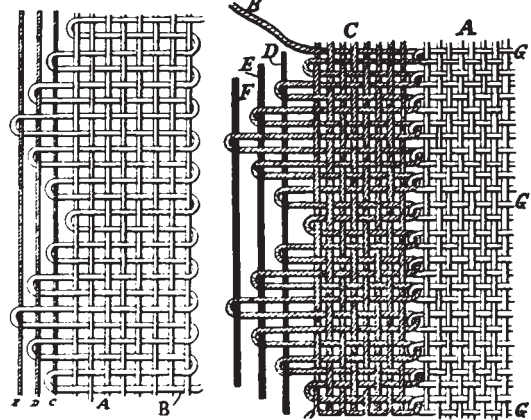


Fig. 205

Fig. 207

yarn may be used, the same then weaving as a regular warp-thread throughout the entire length of the fabric, being afterwards pulled out of fringe. Either wire or warp-thread *C* interlaces on plain weave, *i. e.*, one pick up, one pick down and thus catches the filling for forming the fringe.

PEARL EDGES.

The selvages of ribbons and trimmings are sometimes formed with loops, either in a straight line or variegated. They are called pearl edges and are produced by means of temporarily interlacing the filling around horsehairs or wires as was explained before in connection with fringes, or using heavy cotton threads in place of it throughout the weaving of the ribbon, liberating the cotton thread after the fabric has left the loom. To illustrate subject of constructing these pearl edges to ribbons, the four illustrations Figs. 203 to 206 are given. In the same letters of references indicate thus: *A* the warp-threads for the ribbon; *B* the filling; *C, D, E, F, G* wires, horsehairs, or regular heavy counts of cotton yarn as previously referred to.

Fig. 203 shows a one size loop produced first on one side and then on the other side of the ribbon, using one horsehair *C* for this purpose.

Fig. 204 shows 2 different sizes of loops, produced by using 2 horsehairs, wires or waste cotton threads *C, D* on each side of the ribbon.

Fig. 205 illustrates three different sizes of loops only on one side of the ribbon or trimming, produced by three horsehairs, wires or waste cotton threads *C, D* and *E*.

In a similar way Fig. 206 shows the formation of five sizes of loops formed on each side of the ribbon by using five horsehairs, wires or waste cotton threads *C, D, E, F* and *G*.

By reference to Figs. 110 and 111 the influence of the twist imparted to the filling, *i. e.*, to the loops as formed, has been shown.

TWO COLOR EFFECTS.

The object is to impart to a trimming a different colored edge compared to that of the body portion. Fig. 207 illustrates the subject and in which the portion of warp and filling shown in outlines, *i. e.*, white, refers to the threads that form the body portion of the fabric, the differently colored edge being shown by