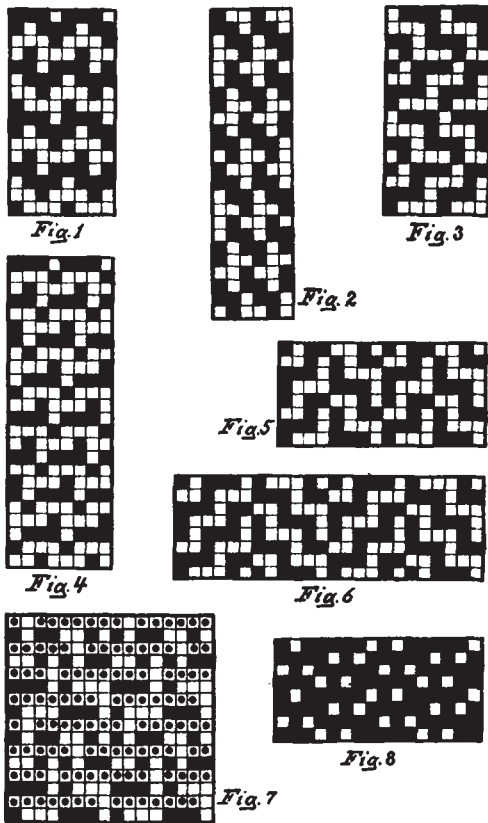


A STUDY IN WEAVE FORMATION.

TRICOT WEAVES.

The object aimed at by the designer in constructing these weaves is to produce a fabric structure showing more or less distinct rib-effects on its face, besides resulting in a fabric presenting a more elastic feel to the hand as compared to fabrics interlaced with other weaves. For instance, in connection with trouserings, fabrics interlaced with tricot weaves are less likely to bag at the knees than fabrics interlaced with twills, satins or other weaves. In the same way, if used for ladies' dress goods, cloakings, etc., they will give the garment a close fit. These weaves are used in the woolen, as well as the worsted industry.



Tricot weaves are subdivided into (a) such as forming rib-effects in the direction of the filling *i. e.* filling tricots, and (b) such as forming rib-effects in the direction of the warp *i. e.* warp tricots.

Filling Tricots.

The same are used for dress dress goods, cloakings, coatings, suitings, etc. The weave combination most frequently met with is 2 picks face to alternate with 2 picks back; other arrangements used are 1 pick face to alternate with 1 pick back, or to 2 picks face to alternate with 1 pick back, the arrangement used depending upon the size of the rib-effect desired to be produced. As a rule, the heavier the back filling used (compared to its mate face filling) the more prominent the rib-effect will be.

Fig. 1 shows a 4-harness, filling effect tricot weave, 2 picks face to alternate with 2 picks back.

Repeat: 4-harness, straight draw, 8 picks.

This weave has for its foundation the combination of the 4-harness broken-twill, warp and filling effect, 2 picks warp effect to alternate with 2 picks filling effect.

Fig. 2 is the 3-harness filling effect tricot weave, 2 picks face to alternate with 2 picks back.

Repeat: 3-harness, straight draw, 12 picks.

This weave has for its foundation the combination of the 3-harness twill, warp and filling effect, 2 picks warp effect to alternate with 2 picks filling effect.

Fig. 3 represents a 4-harness filling effect tricot weave, one face pick to alternate with one pick back.

Repeat: 4-harness, straight draw, 8 picks.

This weave has for its foundation the 4-harness broken-twill, warp and filling effect, one pick warp effect to alternate with one pick filling effect.

Fig. 4 illustrates another 4-harness filling effect tricot weave, 2 picks face in this instance to alternate with 1 pick back.

Repeat: 4-harness, straight draw, 12 picks.

In designing this weave the following feature was observed: Every warp-thread lowered in a back pick was raised in the joining face pick.

Warp Tricots.

This division of tricot weaves includes an endless variety of effects in trouserings, suitings, etc., both in wool and worsted goods. While filling tricot weaves refer more to plain colors, the present system of tricot weaves is used for plain as well as fancy colorings.

Fig. 5 shows an 8-harness, warp effect tricot weave.

Repeat: 8-harness, straight draw, 4 picks.

Harnesses 1, 3, 5 and 7 are for the face, hence the harness where the fancy ends come under consideration, if referring to a fancy color arrangement for the fabric.

Fig. 6 shows a 12-harness, warp effect tricot weave.

Repeat: 12-harness, straight draw, 4 picks.

Harnesses 1, 3, 5, 7, 9 and 11 are for the face, hence carry the fancy coloring, provided such is used.

Sometimes we have to make these tricots a long extra heavy, which may be done by adding a back pick after every face pick. Fig. 7 is an example. *Repeat:* 8-harness, straight draw, 8 picks.

In Fig. 8, a specimen of a tricot weave is given, which, by the proper arrangement of its texture produces a fabric containing a great amount of elasticity, a fabric closely imitating what is known as *Jersey cloth*. It is not upon the weave alone that in this instance we depend for this elasticity to the fabric, the following arrangement of the warp being required in connection with the weave to obtain this pronounced pliability of the fabric:

2 threads of 2-ply cotton (forming, after finishing, the body of the fabric) to alternate with

2 threads of single worsted (forming the face of the fabric, after finishing).

4 threads in repeat of pattern.

The filling is to be a fine, soft, single worsted, and forms the back in the fabric.

Both kinds of warp will be visible on the face after weaving, but during the changes the fabric undergoes in finishing, the cotton warp will disappear from the face, taking its place in the body of the structure.

These fabrics must be laid rather wide in the loom; for instance if dealing with a 54-inch finished fabric, the goods must be woven 92 to 100 inches wide in the loom, according to the texture and quality of the material used, and must have their selvages sewed together at the fulling process.