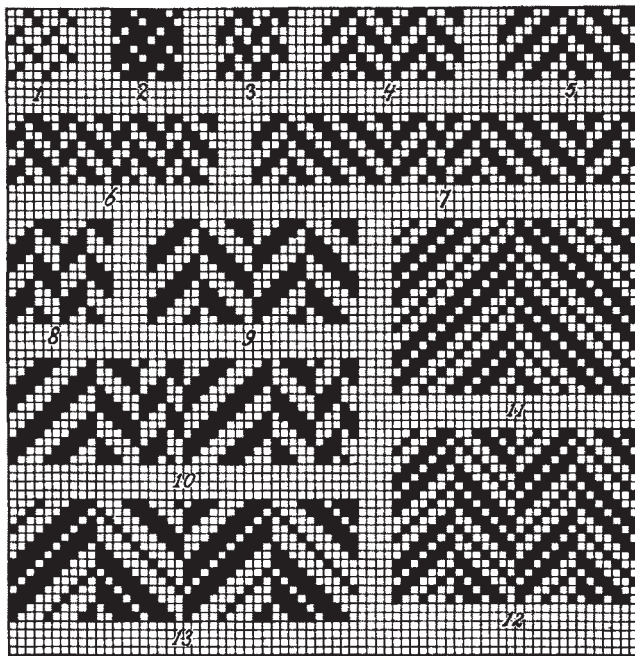


## WOOLEN AND WORSTED DESIGNING.

### Herring-bone Effects.

The same form one of the most frequently met with designs in this class of fabrics, both for men's and women's wear. In the former they are used for trouserings, suitings, as well as overcoatings, in the latter for dress goods as well as cloakings, for which reason a description of their construction will prove of interest. They are obtained from our regular twills by running the latter for a certain number of warp-threads in one direction to alternate with running said twill for a certain number of warp-threads in the reverse direction, arranging a clear break wherever the two directions of twills meet. This drafting of the twill alternately in one direction and then in the other is continued until the repeat of the herring-bone weave is obtained.



In most instances the two twill lines are selected to balance, and when then the repeat of the herring-bone weave is obtained at once; in other cases an uneven drafting of twills is resorted to, and when then one or more repeats of the drafting may have to be used in order to obtain the complete repeat for the weave.

To produce the clear break, where the twill lines meet, will indicate that even-sided twills must be used as foundation weaves for herring-bone effects. The only exception is the 4-harness broken twill, as shown in Figs. 1 and 2, which is a weave extensively used, but which will not show the characteristic herring-bone effect; it is a weave which will show a smooth-face on account of the minute broken twill effect. Provided we would continue the drafting of each twill line for more than 2 threads, as done in connection with Figs. 1 and 2, for instance draft each twill say for 12 or more threads before changing on the reverse twill, the herring-bone effect would then appear prominently in the fabric.

The other ten weaves of herring-bone effects given

in our collection have even-sided twills for their foundation, and naturally they show the herring-bone effect distinct. The more threads of the twill we draft in one direction previously to changing on the other, the more pronounced the herring-bone effect will become, a feature readily explained by comparing weaves Figs. 3, 4 and 5, all of which have the common 4-harness even-sided twill for their foundation, the only difference being the number of ends drafted for each twill, and when in connection with weave Fig. 3 we drafted 2 ends twill from left to right, alternately with 2 ends twill drafted in the reverse direction.

In connection with herring-bone weave Fig. 4 we increased the number of threads drafted in each direction to 4 ends each, and in connection with weave Fig. 5, to 8 ends each, producing in turn herring-bone weaves repeating respectively on 4, 8 and 16 ends.

Weaves Figs. 6 and 7 show two fancy herring-bone effects having the same foundation weave as the previously given three examples. A different, fancy drafting of twill lines is used in either instance; in connection with weave Fig. 6 we drafted respectively 2 and 4 ends each, which, in order to obtain the repeat of the weave, had to be drafted twice over, giving us 12 ends for the repeat of the complete herring-bone weave. In connection with weave Fig. 7 we drafted thus: 4, 12, 4 and 2, and which drafting had to be repeated twice, in order to give us one complete repeat of the herring-bone weave, *i. e.*, 44 warp-threads for the repeat of the latter.

When a more pronounced effect of herring-bone is desired, we consequently have to change our foundation twill, changing for instance the 4-harness even-sided twill as used in the previously given examples to the 6-harness even-sided twill.

Weaves Figs. 8, 9 and 10 illustrate the subject, *i. e.*, producing herring-bone effects having for their foundation the 6-harness even-sided twill, using in connection with weave Fig. 8 an alternate exchanging of 3 ends, and in connection with weave Fig. 9 an alternate exchanging of 6 ends. Weave Fig. 10 shows a fancy drafting compared to the previously given two examples, *i. e.*, draft in succession 10, 5, 3 and 2 ends, the complete herring-bone calling for 20 threads.

Weaves Figs. 11, 12 and 13 show herring-bone weaves having for their foundation fancy twills, *i. e.*, regular twills showing in their repeat more than one twill line, and this of a fancy nature.

Weave Figs. 11 and 12 have for their foundation a 10-harness even-sided twill, drafting 14 threads of this weave alternately in one direction and then in another, obtaining a herring-bone weave repeating on 28 ends, whereas weave Fig. 12, using the same regular twill for the foundation, shows a drafting of only 7 ends alternately, the complete weave repeating on 14 threads.

Fig. 13 shows a more pronounced effect compared to the previously two examples of herring-bone, a somewhat bolder effect using a 3 up and a 3 down twill effect in place of the 2 up and the 2 down twill effect used in the previously given two examples, *i. e.*,