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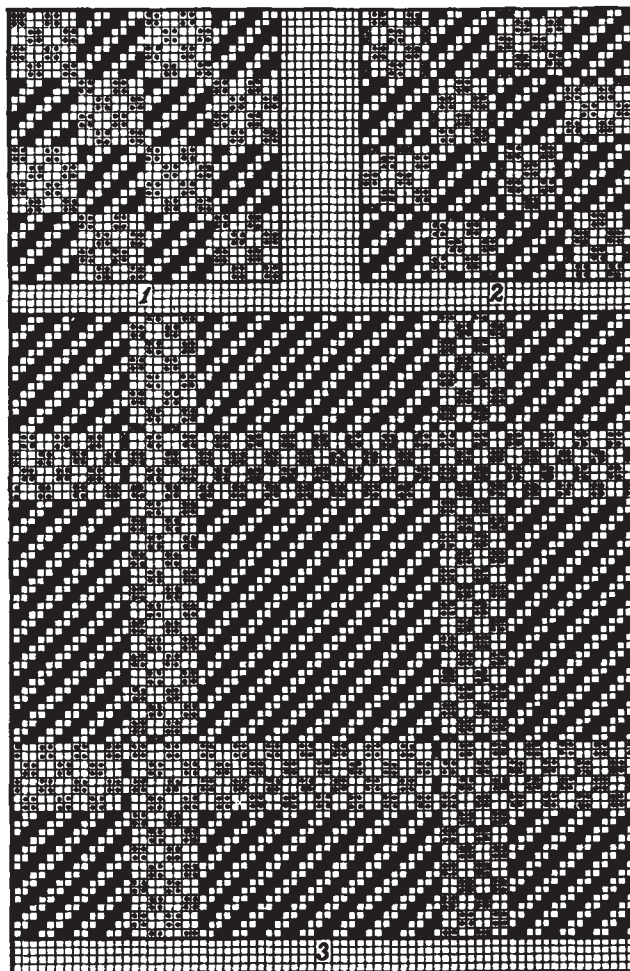
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**A STUDY IN WEAVE FORMATION  
 COMBINING TWILLS WITH THEIR MATE BASKET  
 WEAVES.**

The twills used in the construction of these combination weaves are our regular twills, those most



often met with being the 4 and 6-harness even sided twills, used in combination with their mate 2 by 2 and 3 by 3 basket weaves.

To explain the construction of these combination weaves, the accompanying collection of six weaves are given, and of which the first three claim the 4 by 4 twill and basket for their foundation; the latter three have the 3 by 3 twill and basket for their foundation weaves.

**RULE FOR CONSTRUCTING THESE WEAVES:** After interlacing a certain number of warp-threads and picks with the foundation twill, change onto its mate basket; arrange this exchange of twill to basket effect, using either the plain, or a figured motive for this purpose.

**Using the Combination of 4 by 4 Weaves.**

Weave Fig. 1. The motive observed in constructing this weave is "plain" setting, using 8 warp-threads and 8 picks for each effect, *i. e.*, weave. The twill weave is shown by *full* type; basket weave by *dot* type.

Examining combination weave Fig. 1 more in detail shows us that in the square where twill and basket effect join, in connection with two sides of the square a clear break is produced, the other two sides having the two weaves (twill and basket) join each other, *i. e.*, run into each other. It is impossible to form a clear break on all four sides of the square. Repeat of weave; 16 warp-threads and 16 picks.

If the question should come up to have a clear cut on all four sides of the square, we then have to re-arrange one or the other weave (the twill or the satin) a feature readily explained in the construction of weave Fig. 2, where the first and the last warp-thread of the basket in four of the squares (see *cross* type) have been re-arranged to permit the formation of this clear cut effect on all four sides of the squares. In the remaining four squares of the repeat of the weave, the same affair has been done in the basket weave with reference to the first and last pick of each square.

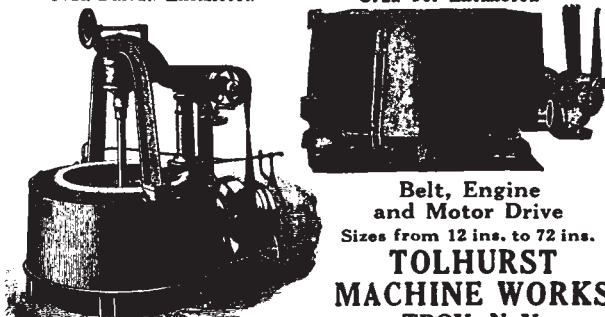
Changing the combination weave as thus explained, *i. e.*, produce a clear cut off on all four sides of the square, in turn produces a weave repeating on 32 warp-threads and 32 picks, *i. e.*, four times the size of repeat of that of weave Fig. 1. By means of using a fancy draw, weave Fig. 2 can be reduced so as to be woven with 12 or 16 harnesses.

Fig. 3 shows us a combination of the present system of weaves having a fancy motive for its effect, *i. e.*, a check effect produced by means of the combination of the 4-harness even sided twill in connection with its mate basket. Repeat of the weave 74 warp-threads and 74 picks. *Cross* type shows where we had to re-arrange, *i. e.*, connect the basket with the twill, the former being shown in the weave by *dot* type, whereas the twill is shown by *full* type.

**Using the Combination of 6 by 6 Weaves.**

Fig. 4 shows us the combination of the 6-harness even sided twill with its mate 6-harness basket weave. 19 by 19 ends of basket are used to exchange with 19 by 19 ends of twill, both warp and filling ways, resulting in a weave repeating on 38 warp-threads and 38 picks. The twill is shown by *full* type, the basket

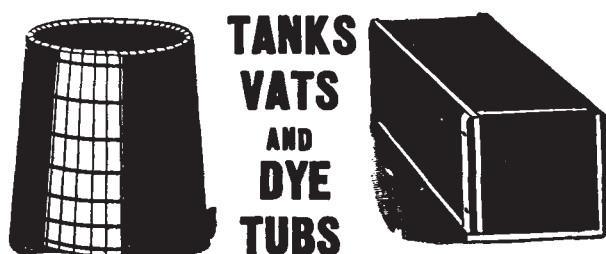
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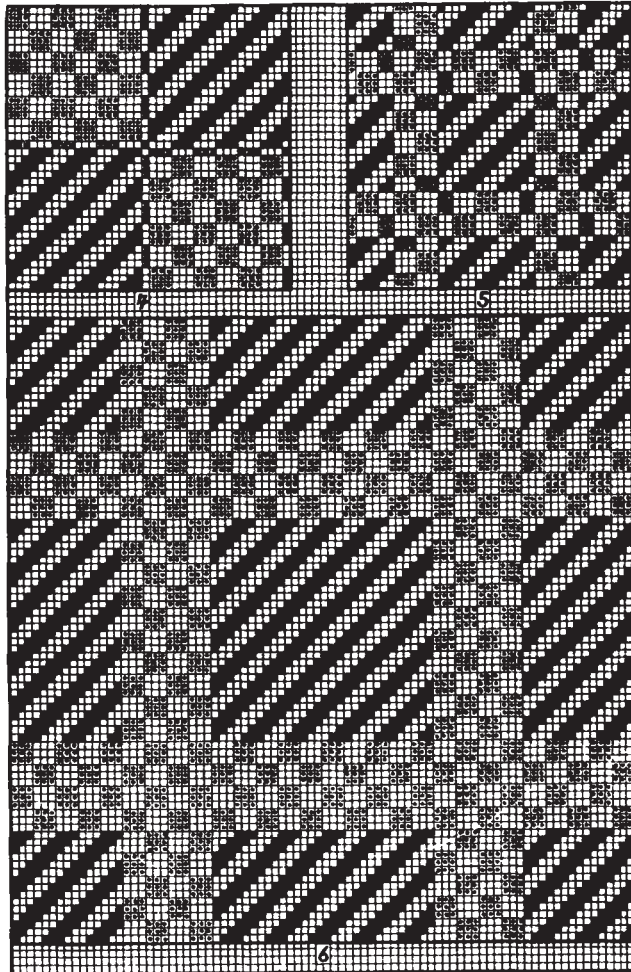
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by means of *dot* type. *Cross* type shows the re-arrangement of the basket to produce the cut-off effect in the weave.

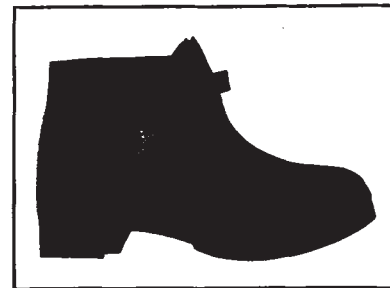
Fig. 5 shows us the combination of twill and basket, the latter forming an over-check, over 13



warp-threads and 13 picks interlaced with the 6-harness even sided twill. Complete basket effects are shown by means of *dot* type, whereas such as had to be modified, in order to produce the clear cut-off on all four sides of the square, are shown by means of *cross* type. Repeat of weave 38 warp-threads and 38 picks, which by means of a fancy draw, can be reduced to six (or more) harnesses.

Fig. 6 shows us a combination (twill overchecked

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with basket) of the 6-harness even sided twill and its mate 6 by 6 basket weave. Only two sides (left and top) of the twill square are cut off, the twill in connection with the other two sides of the square running into the basket weave. The lowest number of harnesses required for this weave on the loom is 6; however 12 is the number more convenient all around to use.

### Cotton Khaki Overalls.

It is reported that an order has been placed in England for 1,000,000 yards of cotton khaki, which will be made into overalls for the soldiers. If the experimental use of the overalls gives satisfaction, a big demand for cotton khaki is expected and thousands of looms now idle in England will be engaged in weaving this particular cloth.