CRÈPE WEAVES.
(Continued from page 59.)
Reversing of Effect-figures.

This method of designing crèpe weaves results in some of the best fabric structures, and is fully explained by means of weaves Figures 1 to 10.

The rule for constructing these weaves is thus:
(1) Divide the surface of the desired repeat of the new weave wanted, on your point paper, in four equal squares, as is shown in our specimens of weaves by means of extended lines at the left hand side and bottom of the first repeat of the weave, showing the over ruling of the point paper, in its repeat of the weave (in the centre) with one vertical and one horizontal line.

(2) Insert any effect-figure you may choose in one of these four squares, say the one situated at the left hand lower corner. This figure we will call our foundation effect-figure.

(3) Duplicate this effect-figure, painted the reverse (risers for sinkers) and in a turned over position, into the empty square at the right hand side.

(4) Duplicate the foundation effect-figure, again painted the reverse (risers for sinkers) but this time in a turned over position onto the top of the foundation effect-figure first painted.

(5) Duplicate the last obtained placing of the effect-figure, painted again the reverse (risers for sinkers) turned over into the empty square at its right hand side.

(6) This latter movement will correspond to the turning over of the arrangement obtained by rule 2 at its top, and painting it the reverse in the then empty square. Either procedure (5 or 6) will produce the same effect.
Fig. 1 shows the smallest crêpe weave obtained by this kind of construction. Its foundation effect-figure calls for only 2 warp-threads and 2 picks for its repeat. After placing the same in the square in the left hand lower corner, warp-thread 3 is painted the reverse of warp-thread 2, and in the same way warp-thread 4 the reverse of warp-thread 1. Following rule 4 and 6 previously quoted, i.e., turning over on their top, and painting the reverse of effects 1 and 2 thus far explained, will produce the upper half of the repeat of the crêpe weave, i.e., pick 3 is in the exact reverse (risers for sinkers) of pick 2, and in the same way pick 4 the reverse of that of pick 1.

The characteristic feature of these crêpe weaves consists in that the last warp-thread of one effect interlaces the opposite to that of the first warp-thread of the joining effect. The same is the case if considering the picks of the repeat of the crêpe weaves. This feature will result in showing depressions, i.e., cut line effects as we call it in practical work, on the face of the fabric in these places, a most desirable feature with crêpe weaves.

In connection with weaves Figures 2, 3 and 4, the repeat of the respective foundation effect-figures used is 3 by 3 with a repeat of each weave of 6 warp-threads and 6 picks.

In connection with weaves Figures 5, 6, 7, 8 and 9, the repeat of the respective foundation effect-figures used is 4 by 4, with a repeat of each weave of 8 warp-threads and 8 picks.

Figure 10 illustrates somewhat of a change in the construction of crêpe weaves thus far explained. In this instance, two foundation effect-figures are used, using first one change with its mate effect and proceeding as previously explained, both warp and filling ways, after which the other foundation effect-figure is treated similar for two squares, in both directions of the repeat of the weave. As will be seen from our example, both foundation effect-figures must be related to each other with reference to the interlacing of their first and last ends, both warp and filling ways, in order to permit the formation of the characteristic cut lines on the face of the fabric.

The Double Lift Double Cylinder Jacquard Machine.

The object of this machine over single cylinder Jacquards is to provide speed to the loom, in connection with which it is used, i.e., permit the latter to be run at its maximum possible speed, which a single cylinder Jacquard machine would not be able to equal, and where such a high speed would ruin the cards in a very short time, even if it were possible to keep them on the cylinder.

In its principle of construction, a double lift double cylinder Jacquard machine is actually the combining of two single lift machines in one Jacquard, operating each single lift machine for each alternate pick, in turn reducing the speed of each Jacquard machine to one-half of that of the speed of the loom. Thus, when the latter is made to run (for example) 180 picks p. m., (a speed not possible for a single cylinder machine) either section of the double lift double cylinder Jacquard calls for only 90 picks, the complete double cylinder Jacquard thus being equal to the demands of the speed of the loom.

Two sets of needles and two cylinders, one on each side of the machine, are provided. The Jacquard cards are divided into two sets, lacing all uneven numbered cards in rotation (on a Royle Lacer) in one string or set, for use at the cylinder as situated on one side of the machine; lacing all even numbered cards in the same manner in a second string or set, for use with the cylinder situated on the opposite side of the machine.

The cylinders are actuated by the lifting of the knives by means of a cam or ess on the cylinder spindles, and a stud and roller carried by each set of knives. Each of the latter actuates one of the cylinders and as the knives lift alternately, the odd cards are presented to the needles on the first pick, and the even cards on the second pick and so on indefinitely. This reducing of the speed of each section of a double lift double cylinder Jacquard, however, more or less is only in favor of the operation of the cylinder, the needles and the cards, which in connection with a single cylin-