on a light ground is produced on one side, and a light figure on a dark ground on the other side, as shown in the illustration, the warp being completely hid.

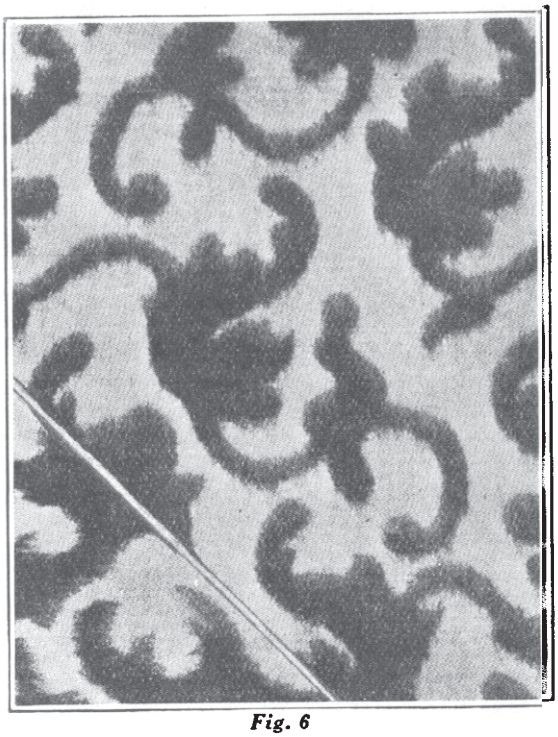

Fig. 6

The best weaves to employ for these raised fabrics, whether made of cotton or wool, are those which produce a perfectly smooth face, such as the 4, 5, 6, 7 or 8 end satin; the 4 and 6 harness weaves are also known as *"crowfoot twills."*

The figure is first blocked in with light transparent color, then the respective weaves are put on the figure and ground, arranged in such a way that where the dark filling is required on the face, the light pick is thrown to the back and *vice versâ*.

The style of the pattern must be determined to a large extent by the purpose to which the fabric is to be applied.

For example, while the designs shown at Figs, 1 and 4 are suitable for dress fabrics, they would be quite out of place if used for a tapestry hanging, while the latter style would be unsuitable for a mantle fabric.

Tapestry Design

can be best woven in an 12 row 600 Jacquard machine (point tie-up = 1200 in repeat of pattern), the figure being produced by variety of coloring in the filling. The particulars of the cloth are as follows:

WARP: 2 threads 2/90's black cotton for binding, 4 threads 2/32's brown cotton for figuring, sleyed 2 threads of brown, 2 threads of black, and 2 threads of brown in each dent of the reed, with 13 1/3 dents per inch.

FILLING: 7 run woolen yarn, or 2/5's cotton in four shades, with 14 picks per inch of each shade.

The warp is drawn through the harness in the following order: The black binder threads are drawn singly through the 1st, 2nd, 5th, and 6th rows; the brown figuring threads, two in each mail, through the 3rd, 4th, 7th, and 8th rows, giving 152 figuring mails in the repeat of the design on the point paper.

In painting the design on to the point paper it is not necessary for the binder threads to be taken into account, as these always work in plain order with as many picks in a shed as there are colors of filling employed, and can be cut for without the working being shown on the plan. Hence the figuring threads only have to be considered, and by painting (blocking) in the effect solid on the point paper, in different colors, according to the order in which the different shades of filling are required on the face of the fabric, as many cards must cut for each pick on the point paper as there are colors of filling employed.

The counts of the point paper is 8 by 4, because, with 13⅓ dents per inch and two figuring mails to each dent, there are therefore 26⅔ figuring ends per inch to 14 picks of each color of the filling per inch, each square of 8 on the point paper being equivalent to two rows of the jacquard.

The cutting particulars are as follows:

For each pick in the point paper:

1st card, cut all but shade 1; 2nd card, cut all but shade 2; 3rd card, cut all but shade 3; 4th card, cut all but shade 4, on the 3rd, 4th, 7th, and 8th rows only. Also on odd picks cut the 1st and 5th holes, and on even picks cut the 2nd and 6th holes in each row.

THE INFLUENCE OF THE TWIST OF THE YARN UPON THE FABRIC.

(Continued from January issue.)

Explanations thus far given, in connection with effects Figs. 3 to 8, refer also to such as require to be given in connection with effects Figs. 9 to 14, the

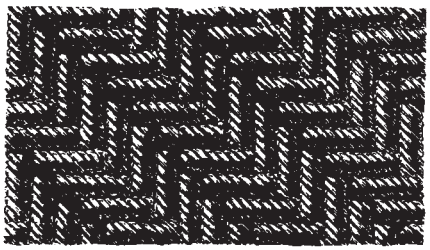

Fig. 9

only difference being, that in the latter case the direction of the twill is reversed, and in the same way in every example (except Figs. 13 and 14) the direction of the twist in warp and filling, *viz:*

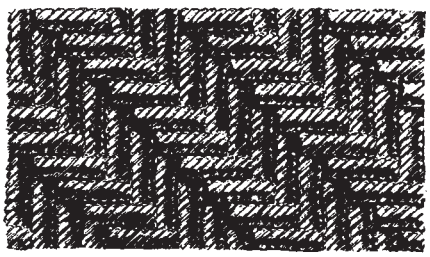

Fig. 10

Effect Fig. 9: warp left hand twist, filling right hand twist.

Effect Fig. 10: warp right hand twist, filling left hand twist.

Effect Fig. 11: warp left hand twist, filling left hand twist.

Effect Fig. 12: warp right hand twist, filling right hand twist.

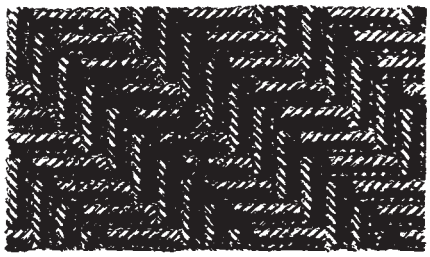

Fig. 11

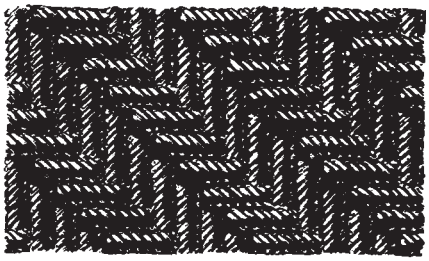

Fig. 12

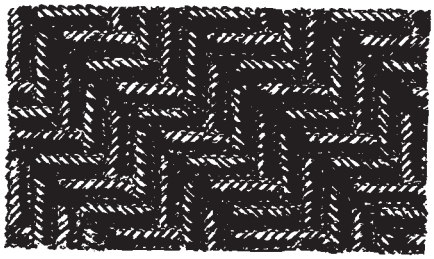

Fig. 13

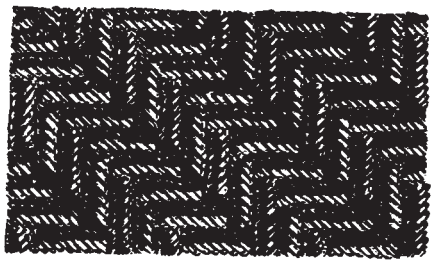

Fig. 14

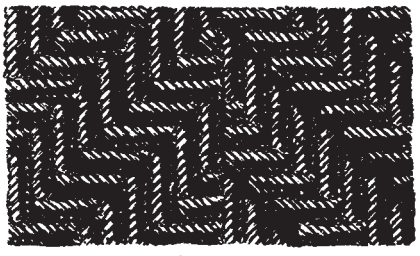

Fig. 15

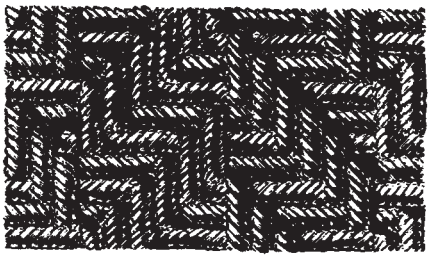

Fig. 17

Effect Fig. 13: warp and filling one end right hand twist to alternate with one end left hand twist.

Effect Fig. 14: warp one end right hand twist to alternate with one end left hand twist, filling all right hand twist.

Effects Figs. 15 to 18, inclusive, are given to illustrate the influence of right and left hand twist for warp and filling, in connection with broken twills; examples being given to illustrate the importance of

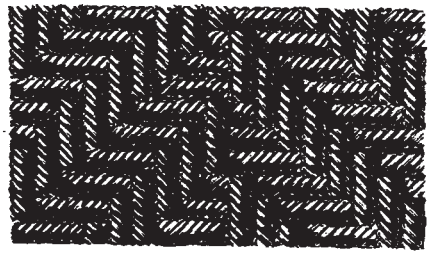

Fig. 16

the twist, with reference to the effect in the fabric in connection with the changes in the direction of the twill in the weave.

Effect Fig. 15: warp and filling right hand twist.

Effect Fig. 16: warp and filling left hand twist.

Effect Fig. 17: arrangement of warp, right hand twist for one direction of the twill to alternate with left hand twist for the warp threads forming the re-

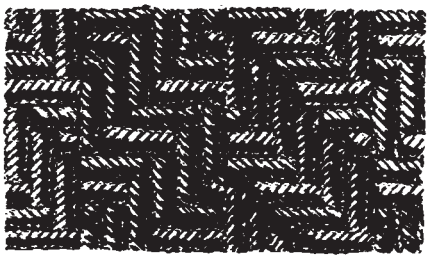

Fig. 18

verse direction of the twill; filling one end right hand twist to alternate with one end left hand twist.

Effect Fig. 18 with reference to warp is similar to the previous example, only that in this instance, we used in connection with the warp, left hand twist, where in the preceding example with said direction of the twill we used right hand twist, and vice versa; the arrangement of the filling is the same as in the previous example. The result is a difference in appearance of the fabric, compared to that of fabric structure Fig. 17.

Fair Export Buying in the Dye Market.

Trading in aniline dyes was again only of routine proportions. The undertone was generally firm, as the present quietness does not seem to produce any change of importance in the general spot quotations.

Export buying is down to a low point for the time being, but the brighter shades are taken wherever offered at attractive price levels. The movement of goods to South America is reported of fair proportions.

Interest in the leading coal tar intermediates is quiet for the time being. PHENOL is rather weak, with offers pressing the market at low prices. ORTHOTOLUIDINE is being offered 50c below previous prices; technical ACETANILID is weak due to competition, technical grades of BENZALDEHYDE is weak, with offers at $1.75@$2; NAPTHALINE seems to be holding steady in all hands under a fair trade.