THE MANUFACTURE OF UPHOLSTERY FABRICS.

REPP OTTOMAN.

(*Continued from July issue*)

How to Prepare the Point Paper Design and How to Stamp the Jacquard Cards from It.

In planning the latter only the face warp-threads and the binder picks are taken into consideration by the designer when calculating for the kind of ruled point paper to use, and which in our example will give us

$$74 : 15 : : 12 : x$$

$$\frac{15 \times 12}{74} = 2\tfrac{1}{2}$$

The point paper to use then would be 12 x 2½ or 6 x 5.

To simplify matter somewhat to the reader we will show in our point paper design the stuffer picks, but which the designer in his work would omit, since it only would mean for the card stamper no work—these cards being cut on a Repeater all alike: *cut* all needles which control all the face warp-threads, *omit* all needles which operate all the binder warp-threads, *i.e.*, ⅔ rd. of the holes of the Jacquard card are punched, ⅓ rd. left empty.

Illustrating then our stuffer picks on the point paper design will call for the following proportion to ascertain ruling of point paper wanted:

Face Warp-threads per inch		Picks per inch		Ruling of paper Warp Ways		Its Ruling Filling ways
74	:	31	: :	12	:	x

$$\frac{31 \times 12}{74} = 5$$

12 x 5 is the point paper to use, and which we used in our design Fig. 12.

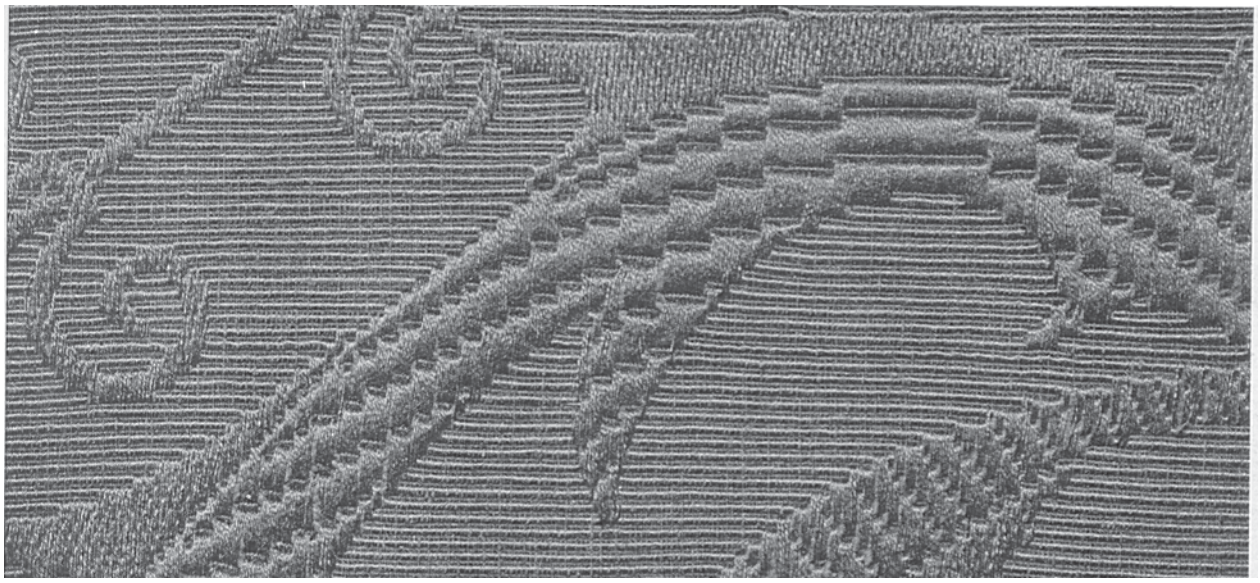

Fig. 11.

JACQUARD REPP OTTOMAN (*Actual Size Reproduction*) Showing One Heavy Pick Used for Stuffer-pick.

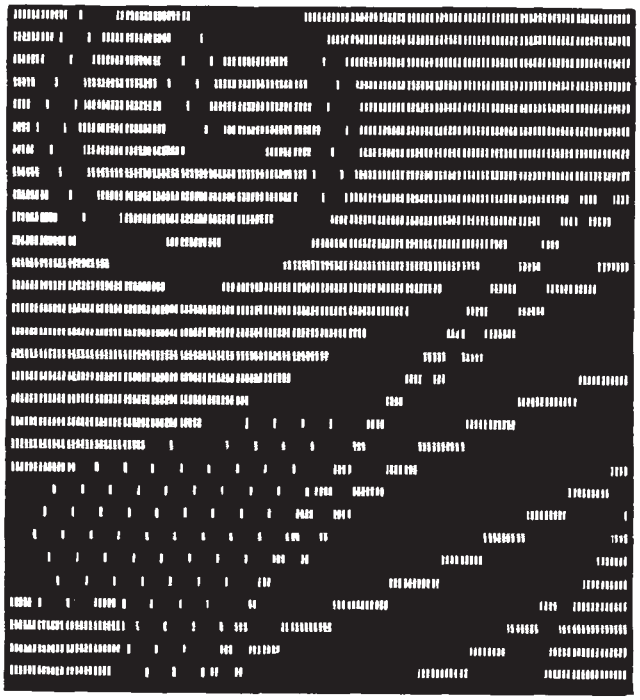

Fig. 12

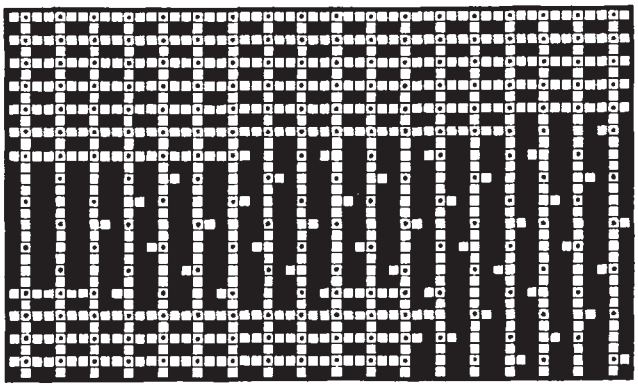

Fig. 13

The latter represents 1¾ inches fabric structure of Fig. 11 considered for warp, *i.e.*, width-ways in our fabric sketch, and not quite 2 inches in length of the latter, *i.e.*, we show the interlacing of 132 face warp-threads and 60 picks (30 binder and 30 stuffer). tion of the fabric design is the 6-harness satin, sometimes called the crow foot twill on account of its nature of effect, 3 ends satin twill in one direction alternating 3 ends twilling in the opposite direction, resulting in a weave which is not surpassed by an-

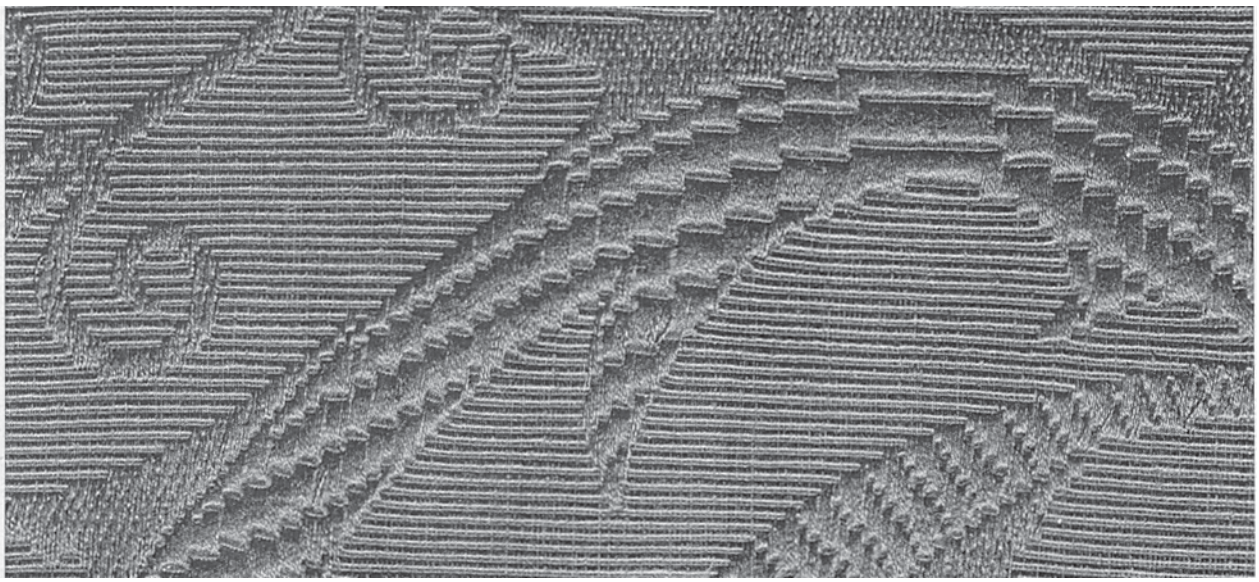

Fig. 11a

JACQUARD REPP OTTOMAN (*Actual Size Reproduction*) Showing Two Heavy Picks Used for Stuffer-pick.

Showing in this way the stuffer picks will keep the point paper design more in relation to its appearance in the fabric.

We next have to indicate on our point paper design the interlacing of our binder warp-threads, which when forming clear rib effect on the face of the fabric must be *all up* on every binder pick and *all down* on every stuffer pick. When not producing this plain rib effect, and when the face warp-threads form design or figure, as we may also call it, the binder warp-threads then interlace with the binder filling (which then works on the back of the fabric structure) on the plain weave, in order to hold the thin floating stuffer picks in position in the fabric, forming as we might call it, a net-work on the back of said heavy floating stuffer picks.

The interlacing of these binder warp-threads is next indicated by the designer on the point paper design, using for it the respective ruled lines and painting the weave on these ruled lines in a bright color (say yellow) for the card stamper to go by.

This we cannot show on our design Fig. 12, since we cannot use a third color in printing, for which reason we prepared Fig. 13, which gives us a complete analysis of the interlacing of a portion of the fabric Fig. 11; showing the interlacing of 36 face warp-threads and its mate, 18 binder warp-threads in connection with 32 picks (16 stuffer and 16 binder) or in other words showing us the complete analysis of the portion of design Fig. 12 outlined slightly heavy in its lower left hand portion.

Full type in analysis Fig. 13 indicates face or figure warp up.

Dot type shows the interlacing of the binder warp-threads.

The weave used for interlacing the smooth portion of the fabric design is the 6-harness satin, sometimes called the crow foot twill on account of its nature of effect, 3 ends satin twill in one direction alternating 3 ends twilling in the opposite direction, resulting in a weave which is not surpassed by another one in producing a smooth face effect to the fabric.

How to Determinate Small Amounts of Wool in Cotton Fabrics.

By Dr. Heermann.

The determination of the proportion of wool contained in a mixed fabric of wool and cotton is ordinarily attained by dissolving the wool in a solution of caustic soda, and weighing the residual cotton.

This estimation of the wool by difference lacks in precision altogether when the proportion of wool is small. It is preferable to make a direct estimation of the wool on the basis that cotton is soluble in cold sulphuric acid at a certain degree of concentration while the wool is insoluble. Experiments made have shown that the best results are obtained with an acid corresponding in strength to 80 per cent of H_2SO_4. This acid dissolves the cotton in two to three hours. After a contact of six hours with this acid the wool loses only 1½ per cent of its weight, and does not alter in aspect when viewed under the microscope. The determination may be carried out by extracting 5 to 10 grms. of the pattern in ether, then in 96 per cent alcohol. The sample is next left in contact with 10 to 20 times its weight of 80 per cent sulphuric acid, stirring from time to time. The cotton becomes completely dissolved. The whole is diluted with cold water, the wool collected on a copper sieve, washed well first with water and then by means of dilute ammonia, dried and weighed. The drying may be made at 105 to 110 deg. *C.*, or at the ordinary temperature. In the latter circumstance the wool takes up about 17 per cent of moisture, which is approximately the normal amount of the air-dried fibre.