

MANUFACTURE OF RIBBONS, TRIMMINGS, EDGINGS, etc.

(Continued from November issue.)

Formation of Curved Edges.

Similar to the formation of pearl edges in ribbons, as explained in connection with Figs. 110 and 111, the filling may be made to form a curved edge, either on one or both sides of the fabric.

Fig. 178 shows us a sketch for a two shuttle ribbon, to be interlaced with the taffeta weave, and presenting a curved edge at the right hand side of the fabric.

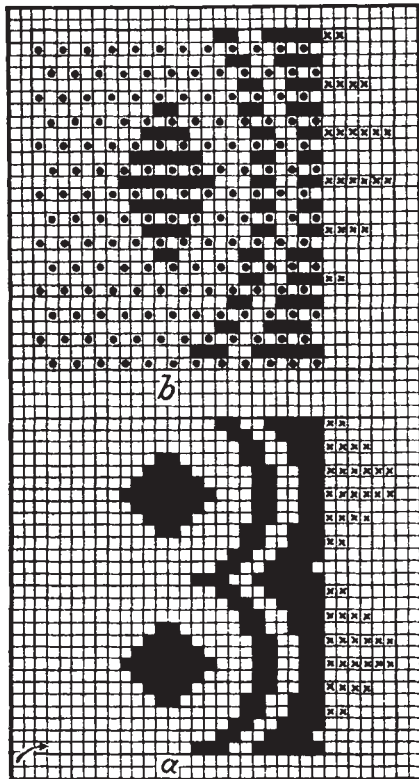


Fig. 179



Fig. 178

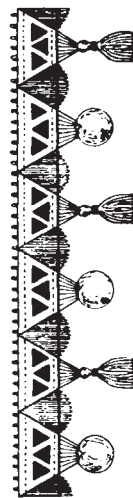


Fig. 180

Fig. 179 shows us at *a* the point paper design, at *b* the analysis of the interlacing of warp and filling. Two repeats of the design are shown in diagram *a*, whereas only one repeat of the working plan, *i. e.*, of the analysis *b* is given.

The repeat of design *a* (figure picks) calls for 14 picks. The arrangement of figure and ground picks is 1:1, hence gives us 28 picks for the repeat of the analysis *b*.

The curve to the fabric is produced by running the filling around brass wires, threaded into heddles on the harness frames and placed in dents next to the fabric.

Cross type indicates six of these wires, working in pairs, two heddles to a harness.

Ground picks are indicated by *dot* type.

The cards are cut, or the chain built, direct from design *a*, no analysis being required. Cut *empty* squares for face up; shown face down in diagrams *a* and *b*.

Every other pick (every uneven number pick in our example) calls for the taffeta, the remaining picks (every even number pick) being figure picks. Two shuttles are used, one for the ground, the other for the figure.

Considering *cross* type only, *i. e.*, the wires for forming the curved edge produced by the filling it will be seen from design *a* that the figure filling (entering filling from left to right on the first pick, *see arrow*) does not interlace with the wires in picks 1 and 2.

On pick 3 the filling passes from left to right over all wires, being caught in its return pick, *i. e.*, held outside the woven portion of the fabric by the first two wires on pick 4.

Pick 5 same as pick 3.

Pick 6 filling held outside of the woven portion of the fabric by four wires.

Pick 7 same as pick 3.

Pick 8 filling held outside of the woven portion of the fabric by all six wires.

Picks 9 and 10 same as 7 and 8, respectively.

Picks 11 and 12 same as 5 and 6.

Picks 13 and 14 same as 3 and 4.

The interlacing of the ground picks, on the edge of the woven part of the fabric, around the loops of the figure picks, will hold the latter in position. The figure pick, being placed on top, in forming the loops works wider than the ground pick, giving the latter a chance to embrace the figure picks, holding, *i. e.*, securing the latter properly every time at every second ground pick, to the woven edge of the fabric.

SCALLOPED, or imitation of embroidery edges, are produced in a similar manner. In this instance, the figure pick interlaces alternately over and below the last edge threads and the nearby placed wires. Said filling thus makes a double loop, which by means of stuffer threads, laid inside, is kept in position. Since these scalloped edges must have the same appearance on face and back, do not have the two systems of filling interfere with each other at weaving, *i. e.*, have them clear the way for each other. For this reason enter from the left two picks ground (as placed low) to be followed with two picks figure (as placed high) entered from the right.

In connection with upholstery trimmings, frequently rather prominent curves of loops are woven, also plain, long loops, *i. e.*, fringes, which afterwards are specially transferred into ornaments, by girls, by hand. Fig. 180 shows a specimen of this work.

Color Effects in Ribbons.

WARP EFFECTS. The plainest styles are such as used for the trimming of men's hats, being one shuttle cotton ribbons, woven on taffeta. The fancy effect is produced by dressing the warp in sections of differently colored yarns. Again in connection with figured ribbons we may use a figure warp composed of different colors throughout the repeat, again either system of the figure may be dressed a different color.

Printing the warp is also much used. In this instance, the dressed warps are printed with various patterns, *i. e.*, color effects. Using in connection with such warps a filling not too heavy in count and interlaced with taffeta, brings out the printed pattern in a peculiar, less pronounced, manner. To increase the effect, weaves technically known as "figuring with the warp upon taffeta ground" are used for the interlacing of these printed warps. Fig. 181 shows us a collection of nine weaves of this character. In the same, white, or *empty* squares, stand for warp up, *i. e.*, shows the

floating figure effect of the printed warp, previously referred to. Black, or *full* type, indicates the filling up.

FILLING EFFECTS. These are produced by using more than one shuttle, *i. e.*, using different colors in the filling. Again we may use a printed filling, *i. e.*, have the skein or hank printed in stripes of different colors. Formerly from 2 to 4 colors were printed upon it, whereas now more divisions are made, *i. e.*, more colors printed upon it. Using a fancy color arrangement for warp and filling gives us an unlimited field for a diversity of color effects.

Woven ribbons, both in plain as well as fancy weave structures, are also printed in the finishing process; they are then either printed in solid colors or fancy effects in two or more colors; again watered effects may be desired. Trade marks or names of firms are also printed on ribbons, in imitation of the woven article. Cigar ribbons are always printed.

In imitation of woven ribbons, for sake of cheapness, broad woven cloth, after printing, is cut up into the widths of ribbons. The absence of solid selvages will readily show them up, the outside warp threads having no hold in the fabric, they will easily unravel.

Other Effects in Ribbons.

Raised effects, open work and other special effects are more variedly used in the manufacture of ribbons as compared to any other branch of the textile industry. The cause of it is that with ribbons we deal with small surfaces, giving little opportunity for the designer to show his skill in connection with elaborate, well-distributed, all-over designs, as is of so much importance when designing for floor coverings, draperies, upholstery goods, dress goods, etc. Having no opportunity to show his skill in that line, the ribbon or narrow ware designer, has to look for other quarters for new ideas. Using all possible kinds of plain and fancy yarns, specialties in manufactured twists,

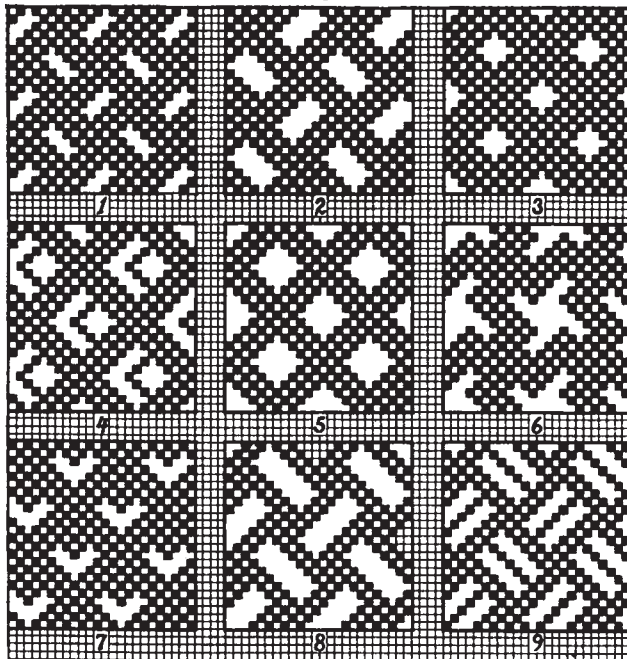


Fig. 181

metal yarns, combinations of diversity of weave effects, etc., must give him this opportunity for new styles, and which are constantly required by the trade.

Preparing the Drawing-in Draft and Harness Chain for Ribbons Figured with One or More Extra Warps.

USING ONE SYSTEM OF FIGURE WARP.

Fig. 182 shows us at *a* the weave for a figured ribbon (one shuttle work), showing rib edges, twill stripes

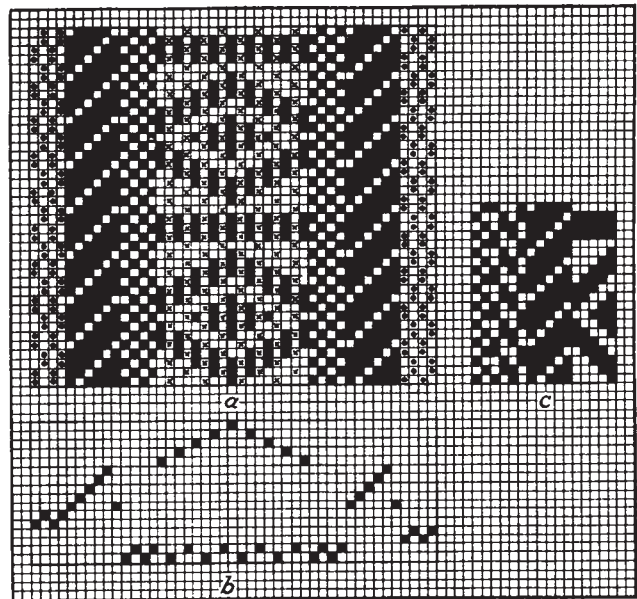


Fig. 182

and a figure effect in the centre, produced by an extra warp upon a taffeta ground. Repeat of weave 45 warp threads and 20 picks.

In examining this rib edge, *i. e.*, selvage of the ribbon, you will notice that the starting of up and down of the $\frac{2}{2}$ 4 pick rib weave is different on both sides (one pick difference). This must be done every time such a rib edge is used, being careful to enter the filling at the same time from the proper side of the ribbon (from the left on first pick in our example). A mistake, *i. e.*, wrong positioning of the shuttle, or wrong placing of the rib weave, would be the cause of the filling pulling out of the rib edge, also out of a portion of the twill effects in our example.

Below the weave (see *b*) is given the drawing-in draft, calling for a 16-harness fancy draw. In the same we have placed the warp-threads interlacing the most (the plain weave) nearest to the reed (*i. e.*, on harnesses 1 and 2); the rib selvage and which is the next tightly interlacing weave is put next to the plain (*i. e.*, on harnesses 3, 4, 5, 6); the $\frac{4}{1}$ 5-harness twill is drawn next on harnesses 7, 8, 9, 10 and 11, followed with drawing the extra figure warp-threads, and which interlace very loosely, on harness 12 to 16, inclusive. This method of drafting the warp-threads is done according to

Rule: For forming the shed the harnesses must be raised in proportion, always higher the further in back from the reed, the one nearest the reed being the one raised the least. For this reason place the threads which interlace the most, hence have to stand the most strain during shedding, on the harnesses raised the least high, *i. e.*, nearest to the reed.

The harness chain is shown at *c*, calling for 16-harness and 20 picks, obtained from weave *a* and its drawing-in draft *b* by

Rule: Indicate the working of each harness (throughout one complete repeat of the weave) only the first time when called by the drawing-in draft.