

DESIGNING AND FABRIC STRUCTURE.

CORD WEAVES.

By this name we classify weaves forming cords or rib effects in the fabric, said cords being produced by floating (not interlacing) every alternate pick in the repeat of the weave for a certain number of warp-threads, whereas the other picks interlace with a given foundation weave, like the plain weave, the 3 or 4-harness twills, etc. The first referred to series of picks is called the floating picks, the latter the binder picks. If these weaves are used in connection with worsted or woolen goods, the scouring, respectively the fulling in the latter instance, will assist the floating picks to contract (shrink) in itself, in turn raising, *i. e.*, making the cord effect as is interlaced partways with the binder filling, appear more prominently (somewhat raised) in the finished fabric.

These cord effects can be arranged to produce: (a) Stripes, (b) Diagonals, (c) Checks, and (d) Figured Effects.

To illustrate their construction, the accompanying two plates of weaves are given.

STRIPE EFFECTS.

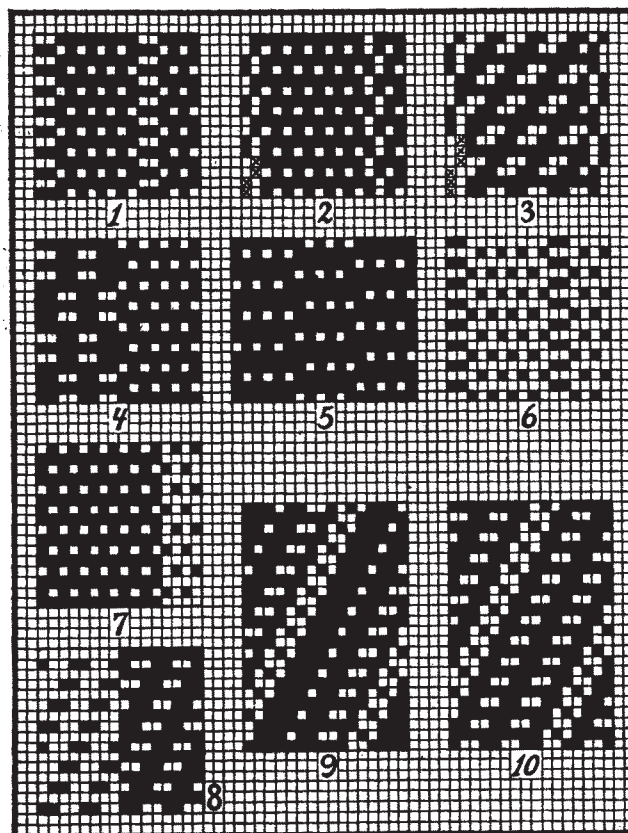
Figure 1 shows a cord effect of 8 threads, the binder picks interlacing with the plain weave, the floating pick resting loose on the back of the fabric for said 8 warp-threads. The cords are cut off, *i. e.*, separated from each other by means of 2 warp-threads of filling effect rib weave, which in the fabric will form prominently depressed, fine rows of stripes. Repeat of weave: 10 warp-threads and 4 picks.

Figure 2 shows cords 10 threads wide, separated by 2 binder warp-threads (see *cross* type) interlacing with the 2 by 4 plain rib weave, warp effect. A similar cut effect may be produced in the fabric by using only one binder warp-thread, interlacing the same with the plain weave, said binder warp-thread being raised when inserting the binder picks, and down when inserting the floating picks. This tight interlacing of such a binder warp-thread however, in many instances, would be the cause of it frequently breaking, for which reason using 2 warp-threads (as shown in weave Fig. 2) is the arrangement most advisable to use. Repeat of weave: 12 warp-threads and 4 picks.

Fig. 3 shows a cord for 12 threads, produced with 2 picks binder to alternate with 1 pick float, throughout the repeat of the weave. The binder picks are interlaced with the 4-harness even sided twill. Two warp-threads, interlacing with the 2 by 6 plain rib weave (see *cross* type) form in this instance the cut effect in the fabric. Repeat of weave 14 warp-threads and 6 picks.

In connection with weave Fig. 4 the cord effect is produced by dividing the repeat of the weave in two

parts or sections, using every pick alternately in one section as floating pick and in the other as binder pick, the next pick being always used in the opposite arrangement from that of the preceding pick. This arrangement makes the use of binder warp-threads unnecessary, giving the designer at the same time a chance for color effects, *i. e.*, using a different color



for each of the two cords in the repeat of the weave. If such is desired, use a different color for each section of the warp, using a corresponding or harmonizing color, for the respective pick covering it. Section 1 (warp-threads 1 to 8) of our weave has its binder picks interlace with the 4-harness basket weave, section 2 (warp-threads 9 to 16) interlacing with the plain weave. Repeat of weave: 16 warp-threads and 8 picks.

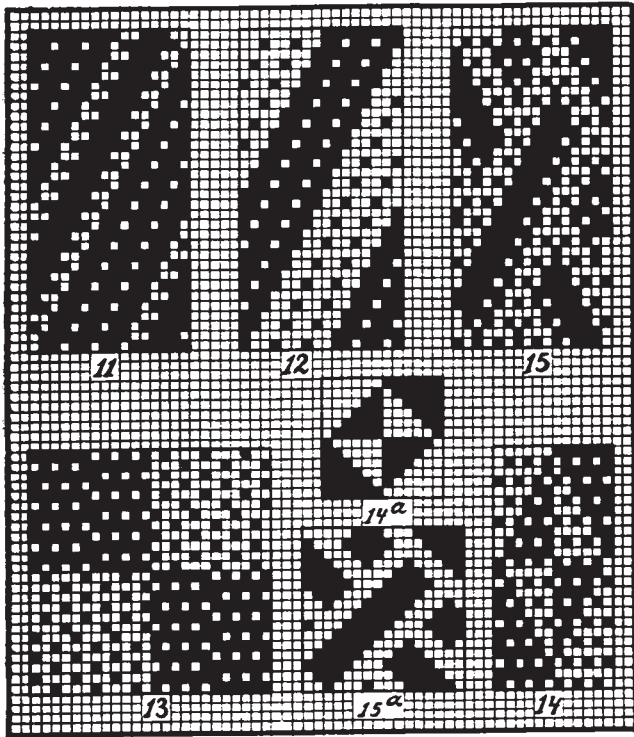
Fig. 5 is a weave which will show three cords (sections) in one repeat of the pattern. In this instance every pick acts for two sections as floating pick, and for the remaining section as binder pick. This will give us a chance, if so desired, to produce each one of these cords in a different color. Each cord

(section) covers six warp-threads, the binder portion of each pick interlacing with the plain weave. Repeat of weave is $(3 \times 6 =)$ 18 warp-threads and 6 picks.

Figure 6 illustrates a cord weave in which the floating portion of the pick shows on the face of the fabric, such cord weaves being termed filling cords. Repeat of weave: 10 warp-threads and 4 picks.

COMBINATION OF WARP AND FILLING EFFECT CORDS.

Weaves Figures 7 and 8 show combinations of warp and filling effect cords. In connection with the first, the plain weave is used for binder pick.



and in the latter weave the 4-harness even sided twill. Repeat of weave Fig. 7 is 16 by 4 and that of weave Fig. 8 is 16 by 8.

Similar cord effect weaves can also be designed having the cords run in the direction of the filling in the fabric, using in this instance one of the warp-threads as binder warp to alternate with a warp-thread floating. This arrangement of designing cord weaves in uni-effects is little if any used.

DIAGONAL CORD-EFFECTS.

Four specimens of the same are shown by weaves Figs. 9, 10, 11, and 12. The diagonal effect is produced by arranging the interlacing of the floating picks in the repeat of the weave in a diagonal direction. These diagonal cords can (similar to the previously explained weaves) have their cords separated by means of single cloth effects (Figs. 9 and 10) which will produce a corresponding depression in the fabric, or the floating pick of one of the sections may be used in connection with the other section in the repeat of the weave as binder pick (Fig. 11), or the floating pick can be made to rest alternately on the face of the fabric in one of the cords, and on the back of the fabric in the joining cord (Fig. 12).

COMBINING WARP AND FILLING CORDS IN THE FORMATION OF DESIGN.

Fig. 13 shows us an entwining effect of these two systems of cords, combined by plain setting. Two six end warp cords entwine with two six end filling cords. Repeat of weave: 24 warp-threads and 24 picks.

Weaves Figs. 14 and 15 are figured effects produced by combining warp and filling cords after a given motive, Figs. 14^a and 15^a respectively. *Empty* squares in the motives stand for filling cords in the respective weaves and *full* squares similarly for warp cords.

In weave Fig. 14 the binder picks interlace with the plain weave throughout the repeat, whereas the floating picks (as regulated by motive Fig. 14^a) rests either on face or back of the fabric structure. Repeat of weave: 12 warp-threads and 24 picks.

In weave Fig. 15, the floating picks interlace according to motive Fig. 15^a, whereas the binder picks in the broken up diagonal cords interlace with the 4-harness twill and in the other portions of weave with the plain weave.

The Creation of Fashions.

If an observer were to take the question of style and fashion a little more into consideration, he would find that persons who prefer to dress always alike, chose plain cloths for their purpose. However, the man that does not go into the realm of fashion, is undoubtedly old fashioned. Manufacturers, themselves, would rather prefer, for obvious reasons, to have the same style reign forever, of course, on the condition that the buying of clothes should continue as freely as formerly.

However, it is self evident, that the majority of people do not like the idea of being always dressed alike, and consequently would not buy suits as often as they would do when there is a change of fashion. It is in the nature of man to despise monotony. In fact, the more civilization progresses, the more is the sense of change developed. These, and many more facts can be produced to show that a variation is desired. But this is not all, the problem assumes the form of what change should take place.

Checks? Yes, but not the checks of last season, of which the fashionable changeable have had rather more than enough.

Stripes? There comes an end to the varieties that can be worked out acceptably and distinctively enough.

Color? There are complexions to be considered, and past experiences with colors which faded or showed dirt: but color is the most obvious help towards a complete renovation of the personal appearance.

In buying anything at all, the natural man seeks for a sign of some advantage or for the gratification of some whim. It rests for man to discover, or his tailor to suggest, wherein the new advantage lies, relatively to the man, to other men, the other sex, or the general public. The purchaser of a good fancy worsted or woolen suit, at the highly enhanced prices put on it by the tailor, is scarcely the one who could be expected to pay this season's price for a last season's suit.

It is a necessity to have one excuse or another for preferring one pattern to another; and a real, if unrecognized, part of the designer's business is to provide, a plausibly good excuse, satisfactory to the reasoning and emotional faculties of the destined wearer.

To satisfy the eternal thirst for progress, every suit must in some material or æsthetic respect be (or at least promise to be) an improvement on the last or on some other.

This restless desire for improvement leads designers round in what are sometimes taken for cycles or circles, but are more probably spirals of a low but ascending pitch. There were always fastidious people, but now there are more of them than ever; and their demands, if not more exacting individually, are collectively more complex and troublesome to fill. They want more and more patterns, and will want more still, although at any one time their ideas of good form may temporarily revolve about one salient feature. Of them, as of some others, it may be written that when they do agree their unanimity is wonderful; but this unanimity of theirs is limited, and is always chasing from one point to another.

We often hear the word fashion used, meaning almost anything in the world. But, after all, what is fashion? What brought about its use? One may think that it is very easy to define fashion. Yet, if he should undertake the task of defining it, he will find it the hardest word for which a meaning can definitely be expressed. The word itself, indicates an absence of all conventional rules; fashion signifies chance, nearly always a product of one's caprice.

Fashion very often determines the financial success of many manufacturers. Some of them are fortunate to produce some innovation which appeals to the æsthetic taste of the wearers, while others have their production entirely disregarded, accompanied by a subsequent failure. This again, goes to show that fashion has no rules by which one can work successfully. It is constantly changing. One fashion destroys another, and it is displaced by a new one, which gives way in turn to another, which will not be the last.

Fashion is the reflection of our inconsistency, the product of our continuous search for variety. It is not an embodiment of that which is good or beautiful, but of that which is uncommon and unique. After a fashion has been once accepted, every one turns out to accommodate himself to the new style, no matter how eccentric it may appear. This leads our prominent moralists to denounce fashion as a mere dame of fickleness. There is, however, just as much weakness in avoiding it, as there is in following it.

There is no definite place, which may be pointed out as its origin. They are diverse and at times even mysterious. Fashion may arise sometimes from the caprice of one of its followers, who wants to be different from others, and so lead in a new style. At other times it may originate in the mind of some fashionable tailor, who combines, effectively, both form and shade into a harmonious arrangement. It is often created unconsciously on the part of the originator, who follows up some idea heard on the market.

Fashion has been often termed as the elder

daughter of good taste, which is true in some instances, even though the product of bad taste enjoyed a great popularity.

Fashion may originate in the theatre or a source may be found in historical memories. Thus the drama of *Madame Sans-Gené* or *Madame la Maréchale*, filled with allusions to the first empire, resulted in Paris, the home of fashion, in a revival of the costumes worn at that time. At another time it may be an actress who brings a new shade or a new cut upon the scene. The fashion thus launched becomes general for a time, thanks to that spirit of imitation which leads the village woman to clothe herself like her sisters in the city.

Sometimes a new product which seems to have no relation to such and such an article or appears even to be destined to compete with it, serves on the contrary to bring the latter into style. Thus the appearance of artificial silk, far from competing with natural silk, has contributed to an increase in the popularity of brilliant silk effects.

It is incontestable that the evolution of manners and customs exercises an important influence upon fashion. Clothing is so intimately connected with social habits that one can almost say it is the exterior sign of culture. The evolution of style is a consequence of the evolution of manners. In our day automobiling has restored furs to favor.

There is no place in the world where fashion is followed at all, where it is not known that style comes directly from Paris. Paris is the empire of fashion because it is the empire of good taste. It is necessary to recognize that the innovations in fashion find at Paris the most favorable conditions for their adoption. The atmosphere of Paris favors the development of novelties which are sought for in vain elsewhere. It is in Paris that the models are created and from Paris that all the cities of the world obtain their ideas for fabrics and costumes which please the taste of mankind. The Paris tailors wield the sceptre of taste and creative imagination. Thus while we may be ignorant of how fashion is created, everyone knows where it is created and from what point it starts in its conquest of the world.

CRINKLING FABRICS.

A late French process has for its object the crinkling of fabrics by causing them to adhere to a stretched elastic support, and then allowing the latter to contract. The adhesive is applied by means of a hollow engraved roller fitted with a doctor, so that only the hollow portions retain the adhesive. The roll is pressed in contact with the fabric, which takes the adhesive in patterns, and when pressed against a stretched rubber band, adheres only in these places, producing a crinkled pattern, leaving the non-adherent portions in their normal state.

TWO-FACED COLORS ON CLOTH.

A METHOD of preparing cotton fabrics to be dyed different shades on the two sides is the subject of a recent German invention. The treatment consists in pressing the fabric, previously well wetted out, and under heavy pressure, between a heated steam cylinder and an elastic opposite cylinder at such a speed that the cloth issues in a damp state. The side affected by the hot cylinder has then less affinity for coloring matters than the other.