Designing.

THE FINISHING OF WOOLLENS.  (Continued from page 99.)

As intimated in our last, the extent to which pieces are mulled must depend wholly upon the effect required by the user. The worst mills, for example, would be supposed that the mixing machine only was used, but it is advisable to impart a fullness to the piece which cannot be obtained in the machine. Thus it is very evident that the principles of the method of mixing in mind little difficulty will be experienced in obtaining; any desired result, provided the proper conditions have been adhered to the preliminary processes.

The process of "tentering" now claims consideration. This simply consists in stretching or pulling the required width, and is best performed in this state, thus as it were "fixing" it at the required width. If the fact be remembered that wool, when moist, is very plastic, and when dry elastic, but resists change in shape, then tentering is readily comprehended. While dealing with this subject it will be well to remember that tailors always shrink cloth received to be made up, since they apparently do not consider what are termed "shrinkage" goods free from the defect of further contraction. It requires little thought to understand that with the mixing machine it has assumed its approximate width and length for the greatest stability; therefore tentering, stretching and even, is effectually done beyond safe limits, and it will, of course, contract at the first opportunity.

Having thus briefly discussed tentering, "raising" must now be considered. The process of "raising" simply consists of pulling—usually by hand—cords on the edges of the cloth, without forming the body of the threads on the surface of the cloth. It is not, of course, desirable to raise a cloth, and even, is likely to injure the woolen twists, in which distinctness of individual threads is desirable, would be more or less spasmodic, even, is a very mild form; again, certain classes of low goods would probably not stand raising, but on coming to such goods as dockens, velvet-finished goods, some meltons, carriage rugs, etc., it is found that raising is the great im- part of beauty, as "dress face," as it is termed, on the dockens, is due to the parallelism of the fibres, obtained by raising, the soft short pile in the velvet finish is dependent on raising, and the soft, woolly fakeness of certain classes of carriage rugs, shawls, etc., is due to the same means.

It is very evident then that in raising the first thing to obtain is a certain amount of wool, care being taken not to injure the body of the threads. Having obtained a fibrous surface the next thing is to arrange the fibres according to the result required: thus, if for a dockens, the fibres must be laid parallel to one another, all leaning in one direction; if, instead of being arranged parallel the fibres are caused to stand straight out by beating the piece on the back; while in the case of meltons, etc., raising is usually applied with the idea of covering the make, and of obtaining a surface that will yield a level piece when subjected to "cutting." The question of raising wet or dry may readily be dismissed, since it depends on the principles just demonstrated. Wool damped is more plastic, and therefore conforms more to the action of the textures of the surface of the cloth; thus such goods as dockens and many of the better-class meltons are generally raised in the wet, while fancy velvets and others in the dry. In the case of worsteds "brushing" may be said to take the place of "raising," and since woolen goods are so varied in character, some classes approximating the worsted qualities of the felt, it is necessary that the various classes of cloth should be treated according to the type of finish required.

As already intimated, "fancies" are in almost all cases used for raising. There was, however, a raising machine shewn at the Manchester Exhibition, which is worked with iron teeth, and which is said to do very good work. The principle simply consisted in giving a two-fold motion to the teeth, as shewn in the accompanying sketch.
(2.) Warp pattern: 24 dark blue, 6 white, 2 red. Weft: dark blue or grey cop.

(3.) Warp pattern: 24 dark blue, 6 red, 6 sky blue, 6 white. Weft: 2/2 spun cop or dark blue.

(4.) Warp pattern: 5 rose pink, 5 white. Weft: 2/2 spun cop.

(5.) Warp pattern: 6 white, 3 dark blue, 6 white, 6 dark blue, 3 red, 6 dark blue: total ends 100. Weft: 2/2 spun cop. 2, 3, 4, and 5. Same red counts and picks as No. 1. By using the dark blue weft they are all adapted for dress goods.

VELVET CORDS.

As there is every appearance of a demand for cut and uncut cords and velvets for the spring and summer seasons, we give three very useful patterns, adapted on Woodcroft's section tappets or other limited machinery.

No. 1. A velvet cord, has 10 picks of weft for the face, and 6 picks for the back (see pegging plan), straight-over draft; 36 reed, 32's double yarn for warp; weft, 24's single, about 8 ounces to the yard. Of course this may vary for very light clothes. The warp and weft ought to be of the best quality, and the pieces well bleached, dyed, and finished. The fancied shadings and tints will be light primrose, canary, shrimp, violet, white, blue, gold, and blue.

No. 2. In a second draft, 8 to the round, and may be made in the same reed with particulars given for No. 1; and dyed in all the fashionable shadings desired.

No. 3. This cord has a round top, which gives the cloth a very pleasing effect. It may be made in No. 6's two-fold twist, and sufficient 50's weft to give 10 ounces to the yard. It is a 20-end draft, 12 to the round, and does not require any complicated machinery for weaving it. Dyed in pink shades, very light cinnamon brown, and peacock green, it would be found well worthy of notice.

VELVET CORDS.

FIGURE 1.

FIGURED DRESS OR MANTLE CLOTH.

Figure 2 is a floral effect suitable for applying to the above goods. A few methods of application will repay discussion, since, though the effect is a very ordinary one, floral groups being largely applied to textiles, yet the fact must be remembered that development plays a large part in textile art, as important a part as actual design. If not, indeed, more so, since a brief analysis of a collection of current textiles will undoubtedly disclose the fact that figures, etc., anything but beautiful are rendered at least passable by efficient development.

Now, there is an aspect of such designs as this which cannot be overlooked by the manufacturer, though undoubtedly it often is by the designer—and that is the question of expense. We have, in these articles, previously impressed upon our readers the necessity for the combination of the arts of design and development in one individual for the production of the highest type of textile design, and still more is this necessary with reference to economical production. In extra weft or warp goods this is very apparent, since the extra material is often very expensive, and when it is realised that something like 50 per cent. of such material can be saved by skillful arrangement of colours, etc., the importance of obtaining designers who fully understand development is fully realised, and it is worthy of note that the French are very proficient in this branch of textile design.

A brief glance at Figure 2 will show that to obtain the perfect development of the figure, two extra warps or wefts are necessary, that is to say, one for the leaves and the other for the flowers, stems, etc., and therefore the skill of the designer in this case must be exercised in reducing the necessity for two extra materials, which will have to be used apparently between every ground thread or pick, unless some other means can be devised. Now, there are four distinct ways of producing the desired effect by weft development. (1st) the method usually employed in the case of silks, i.e., a fine sett warp to form the satin ground or the fabric, and the weft to be of two colours picked one and one, as previously demonstrated; (2nd) to use the ground warp or weft to form the leaves, simply introducing an extra weft for the flowers, etc.; (3rd) to use one extra weft throughout, but of two colours; thus wherever one colour is wanted for the leaves every other extra pick, say odd numbers, must be brought to the surface, and wherever the colour for the flowers is required every other pick, even numbers, must be brought to the surface; and (4th) the method previously indicated of introducing two extra picks between every ground pick. In addition to these four methods there is, of course, that of developing simply by warp and weft float.

Of course, the conditions of development must be selected according to requirements, but it is worthy of note that the most economical use of material is made by the first method, the disadvantage being that it is only usable with fine sets, such as are usually employed in silk goods; in the second method an even distribution of both types of figures, in this case leaves and flowers respectively, is necessary, or the extra material will overpower the more subdued ground warp or weft effect, and a patchy appearance will be produced; the third method is only applicable to bold effects, strongly developed, where little detail is required; and the fourth method is of course applicable under almost all circumstances, but possesses the disadvantage spoken of, viz., expense.

Figure 2 will prove effective in certain classes of silks, developed according to the first method given, or as a simple warp and weft figure an exceedingly good effect will be produced. A fine sett should be used, at any rate one which admits of shading by means of the 8-end satin; the leaves should be developed mostly by shading, bolder rib or twill effects being used to give prominence to the corolla of the flower, care being taken to balance the more boldly developed flower, by the larger surface, but more subdued leaves, for upon this the beauty of the flower will depend.

FIGURE 2.