

To accomplish this the warp (one system only being used) is divided into two sheds, one above the other, the top of the lower shed forming the bottom of the top shed. Diagram Fig. 3 is given to explain subject and where

- a* and *b* illustrates the section of the two shuttles,
- c* the fell of the cloth,
- d, c, e* the upper shed,
- e, c, f* the lower shed.

According to whether the fabric is woven "face up" or "face down" on the loom, one of the shuttles carries the ground filling, the other the pile filling.

Guided by the weave, and weaving the fabric face up, the binder warp-threads may occupy any position in either one of the two sheds, while the foundation, *i. e.*, ground warp-threads can only operate up or down in the lower shed.

To render this method of weaving possible, the following rule of constructing the weave must be observed: In all cases in which filling velvet is made in which the shuttles are thrown simultaneously, the binder thread which rises to secure a pile pick must also rise to secure the ground pick thrown at the same moment.

This rule, which may be very simply applied, shows that Fig. 2 as illustrated cannot be worked by means of two shuttles; it will be seen that the foundation pick 1 requires the depression of warp-threads 7 and 16 and that the pile picks 2 and 3 which will be thrown at the same time, require on the contrary these threads to be raised. On the other hand, in this same plan, the weaving of the foundation pick 7 and the pile picks 8 and 9 is possible.

Owing to these conditions, the arrangement shown in Fig. 2 must be altered so as to bring it into conformity with the principles of weave formation previously referred to. It is in fact possible to alter the arrangement by means of varying the arrangement of foundation picks retaining at the same time the method of interlacing of the binder warp-threads with its pile picks.

Fig. 4 shows one of the many arrangements possible for obtaining this effect. Repeat of weave 16 by 12. This weave for practical work calls for eight picks (using a two fold yarn for each pile pick) as shown in Fig. 5.

Fig. 6 illustrates a fine cord weave effect, having the 3 up 1 down 1 up 1 down 6-harness twill for its ground or foundation structure. Repeat of weave 6 by 12.

Fig. 7 shows the application of the new method of weaving velveteens to a Kingscord with a four and six end float, using the 4-harness evensided twill for the foundation structure. Repeat 12 by 8.

Fig. 8 shows a pronounced cord weave, repeat 12 by 8.

Fig. 9 shows a smooth corduroy repeating on 6 by 4.

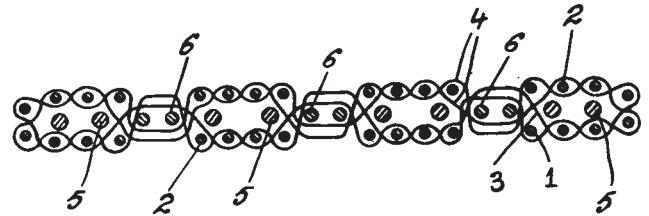
Fig. 10 is the weave for a smooth velveteen, repeating on 6 by 6.

Fig. 11 shows a corduroy weave in which the ground filling forms a line effect on the back of the fabric structure; repeat 12 by 8.

Fig. 12 shows a corduroy woven face down, and when the position of the shuttles in the boxes must then be reversed. Repeat of weave 16 by 8. In some instances, weaving corduroys thus face down in the loom may be found advisable.

Improved Woven Fabric for Shoe Strings, Corset Laces, Etc.

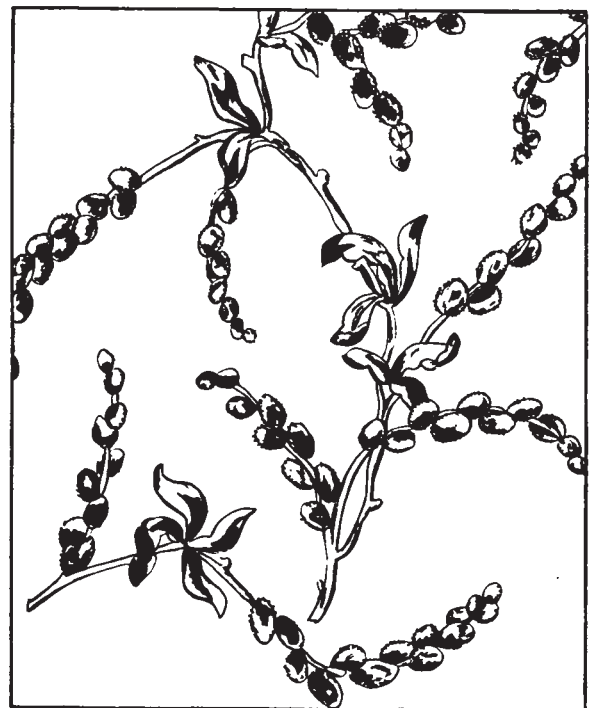
The object is to provide a narrow woven fabric of non-elastic thread, which shall be so woven as to be able to withstand wear and still be fine enough to form a shoe string and laces of various kinds.



As seen from the accompanying diagram, showing a cross section of the new fabric, the same consists of the face warp-threads 1, the back warp-threads 2, face picks 3, back picks 4, stuffer warp-threads 5, and binder warp-threads 6.

The face and back warp-threads are preferably arranged in opposed sets with four threads in each set. The stuffer warp-threads are interposed between corresponding sets of face and back warp-threads, as clearly shown in the illustration; the binder-threads separating each two sets of face and back warp-threads. The picks are interwoven first with the face warp-threads and then with the back warp-threads, or vice versa. The face picks pass behind the binder-threads and the back picks pass in front of the binder-threads and thus the two plies of the fabric are stitched together.

Design for Textile Fabric.



The above illustration shows a plan view of a portion of a new, original and ornamental design for a textile fabric, just patented by H. R. Mallinson.