

THE WEAVING OF FILLING LENO

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For more than twenty years there have been to my knowledge in various textile journals in this country and abroad frequent

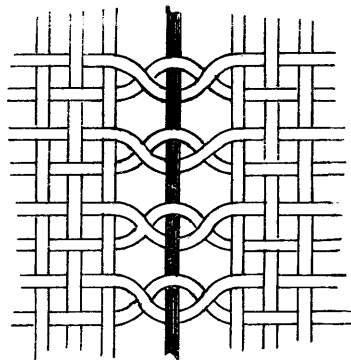


FIG. 1. THE SIMPLEST FORM OF FILLING LENO

inquiries for information regarding the methods employed for weaving filling lenos, such as are seen in certain kinds of scrim and curtains, and occasionally in imported towelings. This information no one seemed

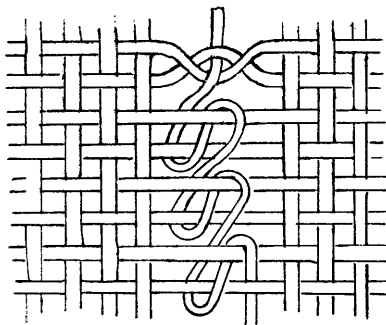


FIG. 2. SHOWING THE LAY OF THE BINDER THREAD

able or willing to impart. One reason is perhaps that many of the filling leno effects are not woven automatically, but are put in

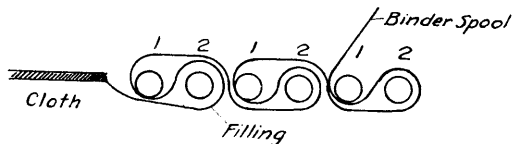


FIG. 3. A SECTION OF THE BINDER THREAD

by hand, and come under the head of hand-drawn work. The lack of information obtainable as to the weaving methods of filling

leno effects is due principally to the fact that no one has tried to produce this weave in any quantity, because it is the general conclusion that, outside of the interest usually taken in

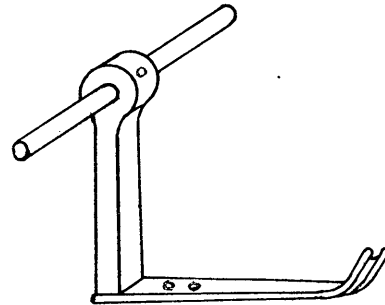


FIG. 4

novelties, the manufacturer of filling leno would have no better chance of selling his

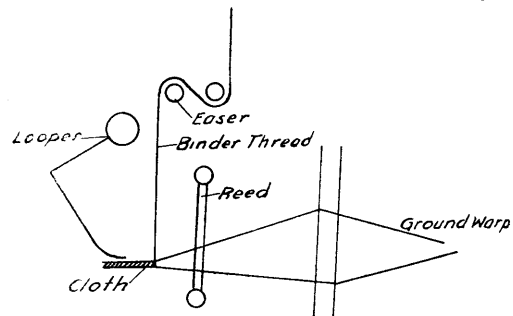


FIG. 6

product over the counter than he would have of disposing of any good warp leno of

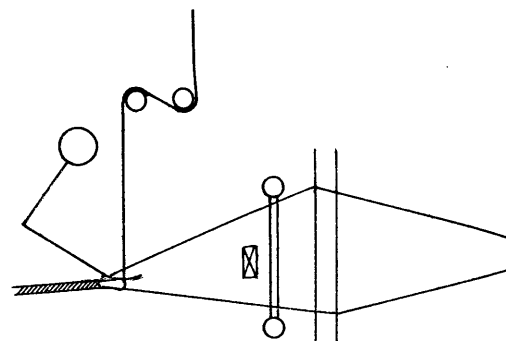


FIG. 7

the same grade, and that the production of the filling leno is consequently not worth the effort. Many manufacturers and weavers have grown up with the idea that a filling leno is practically impossible and unprofitable, and a good thing to let alone.

Before allowing ourselves to concede that

anything is impossible simply because someone has said so, let us recall for a moment the story of Columbus and the egg. After

filling leno. Fig. 2 shows the lay of the binder thread, looking down from above the cloth, as it appears before being drawn

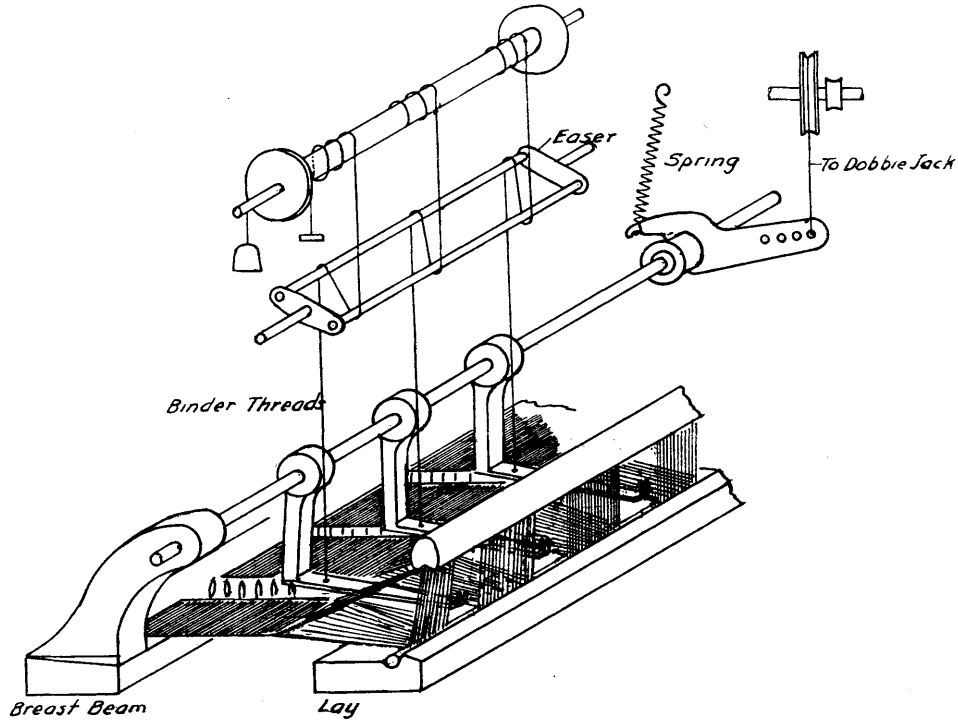


FIG. 5. THE DEVICE FOR WEAVING FILLING LENO

a study of the accompanying sketches, it should be remembered that all things are not what they seem to be, and that a filling leno is not a filling leno until after it is

tight. Fig. 3 shows a section of the same binder thread. After a careful study of Figs. 1, 2 and 3 there can be no question remaining except as to how the binder thread

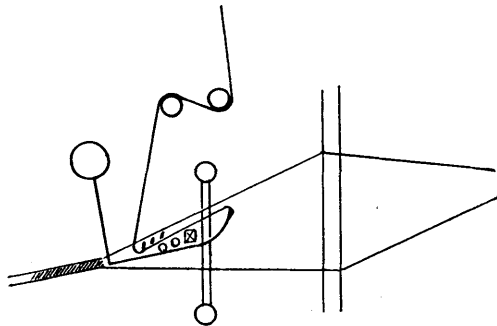


FIG. 8. SHOWING POSITION OF LOOPER AT FOURTH, FIFTH AND SIXTH PICKS

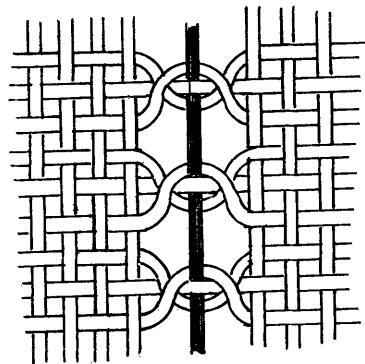


FIG. 9. A FILLING LENO

woven. In other words, the crossing of the filling threads does not occur until after all the picks are in, and is then due to the tightening up of the binder threads.

Fig. 1 is a sketch of the simplest form of

can be inserted during the process of weaving. If this can be done, we are well on our way toward the successful accomplishment of one kind of so-called filling leno.

I will now consider the attachments required on a common power loom to insert a binder thread as shown in Figs. 2 and 3. Mounted in brackets fastened to the breast

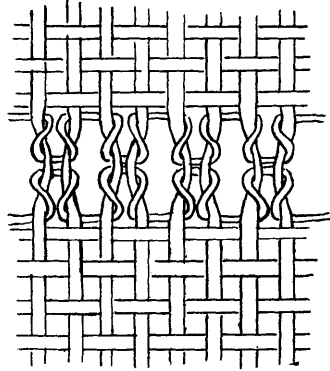
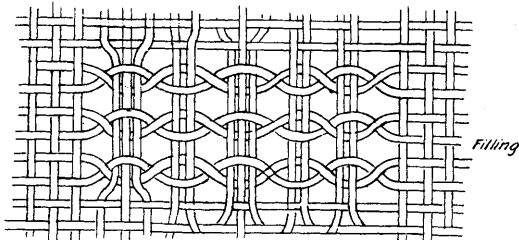


FIG. 10. A FILLING LENO

beam, 6 inches above and directly over the fell of the cloth, is a 7/8-inch shaft, on which brass castings are fastened at intervals. To the lower end of each of these are



Filling Leno Ground Warp as Binder

FIG. 11. A FILLING LENO

brazed or otherwise fastened strips of spring steel, 1/16 inch by 1/4 inch, bent to the proper form and forked at the end to en-

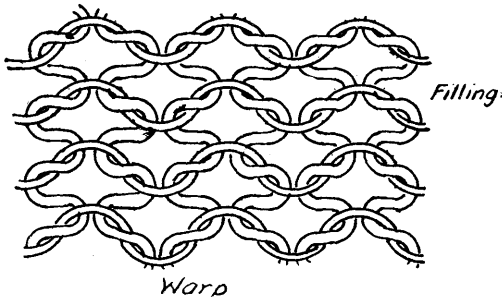


FIG. 12. A FILLING LENO

gage the binder thread. Fig. 4 illustrates the principle involved, but no attempt is made to show the exact form required. Fastened to the most convenient end of the

shaft is a double end lever, to one end of which is fastened a spring; and to the other end a strap or cord, which passes over a

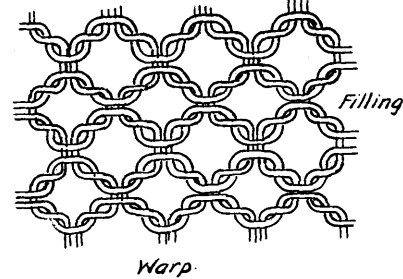


FIG. 13. FILLING LENO NET EFFECT

pulley to the jacks of an open shed dobby. Mounted on the arch of the loom are brack-

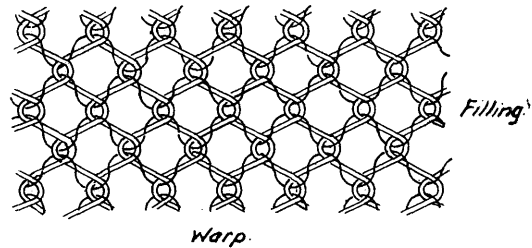


FIG. 14. FILLING LENO NET EFFECT

ets carrying a spool of binder yarn, and an easer similar to a trailer lappet. Fig. 5 shows this device and also the openings in

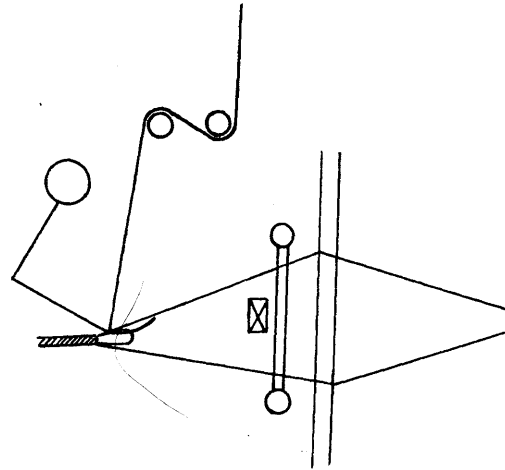


FIG. 15. SHOWING THE POSITION OF THE LOOPER AT THE SECOND PICK

the reed through which the loopers project.

In weaving the filling leno shown at Fig. 1, it makes no difference whether it is one pick crossing one or ten crossing ten, the motion is the same. The loopers must be

made to assume three different positions (which can be readily accomplished with an open shed dobby) all the way out, half way

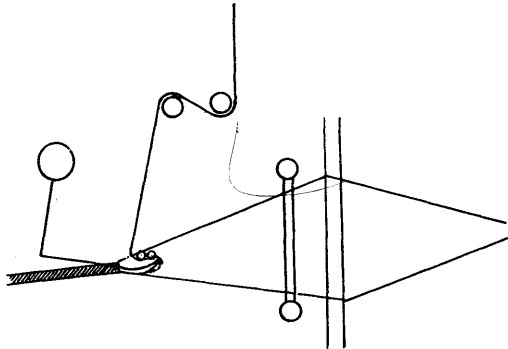


FIG. 16. SHOWING POSITION OF LOOPER AT THE THIRD PICK

in, and all the way in, as illustrated in Figs. 6, 7 and 8, the loom being fitted with a warp and attachments shown at Fig. 5. These three positions of the loopers will cause the insertion of a binder thread in any number of picks in a position similar to the con-

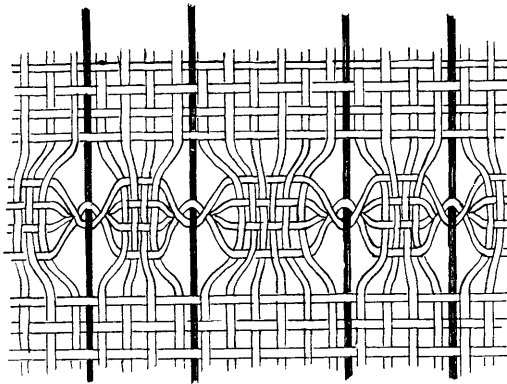


FIG. 17. SHOWING THE CROSSING OF PICKS IN A PLAIN WEAVE

struction shown at Fig. 1. Fig. 15 shows the position of the looper at the second pick; Fig. 16, at the third pick; Fig. 8 at the fourth, fifth and sixth picks.

These sketches illustrate one of four ways of producing filling leno effects on a power loom. A loom fitted as shown at Fig. 5 is not more difficult to run than a trailer lap-pet, and if properly adjusted should weave at about 150 picks per minute with a 30-inch reed spacer.

Figs. 1, 9, 10 and 11 show filling leno effects in stripes and blocks, while Figs. 12, 13 and 14 illustrate the much doubted, but

not impossible weave in net effects. It is in the latter class of work, especially such as is shown at Figs. 12 and 13, that the future of the filling leno undoubtedly lies. Many such intricate and interesting weaves are not only possible, but are entirely practicable. Fig. 17 shows the crossing of picks in a plain weave, using a colored thread as a binder which weaves into the plain cloth ten picks before and after crossing the filling and then floats until the next repeat. It is afterwards cut off by hand.

