

Oct. 12, 1943.

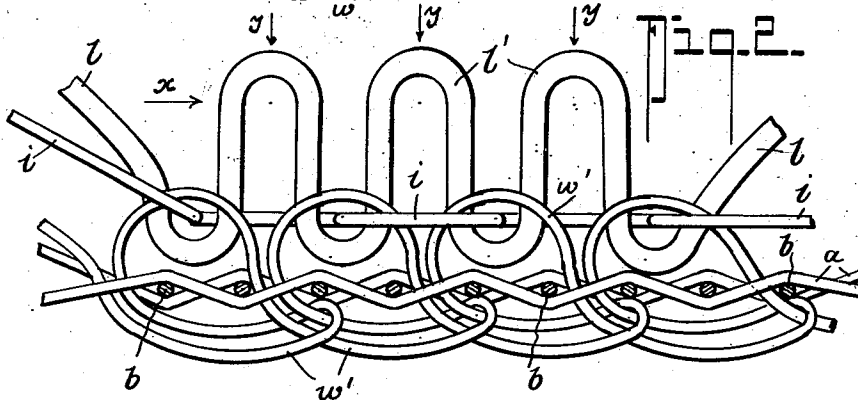
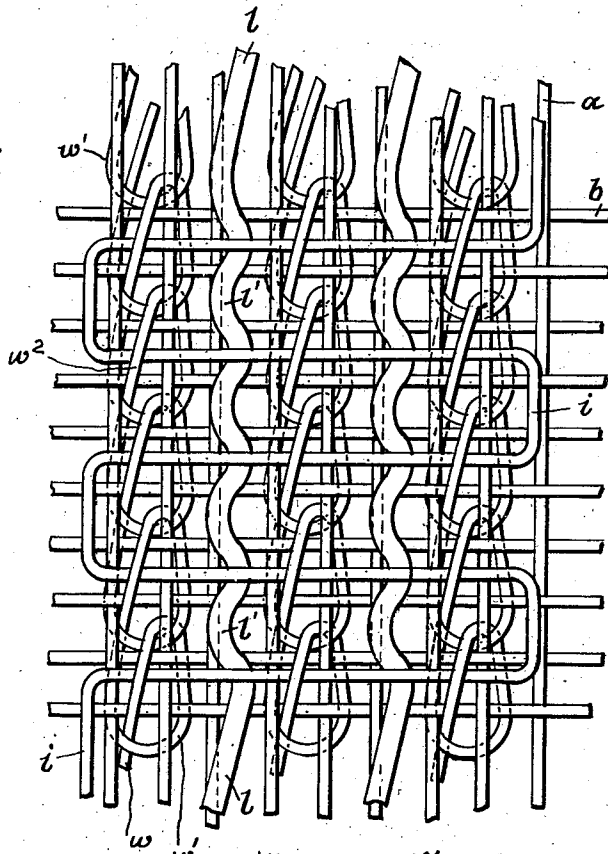
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FILE FABRIC

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Fig. 1.



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PILE FABRIC

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Refiled for abandoned applications, Serial No. 225,004, August 15, 1938, and Serial No. 372,641, December 31, 1940. This application June 25, 1942, Serial No. 448,480

4 Claims. (Cl. 66—191)

My invention relates to the art of knitting and it particularly has for its object to provide pile fabric such as plush fabrics or carpet fabrics which shall be substantially stretchless and can be knit on rapid flat knitting machines without materially slowing down their operations.

Further, it is an object to provide a knit pile fabric in which is embedded a woven fabric.

Further, it is an object to provide a knit pile fabric in which is embedded a woven fabric which serves as a backing for the pile-loop threads, the said threads underlying the cross-connecting threads or the inlay threads, which tie the rows of loops together, the pile threads not being woven into the sinker-loops or warp-chains but being held in place by the woven fabric, the adjacent warp chains and the cross-connecting threads.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, and then be particularly pointed out in the appended claims, reference being had to the accompanying drawing, in which:

Fig. 1 is a magnified, detail face view of a fabric according to the invention.

Fig. 2 is a detail side elevation, on a larger scale, of a portion of the structure shown in Fig. 1.

In the drawing, in which like letters of reference indicate like parts in all the figures, *w* indicates the threads which are knit into parallel rows of loops *w'* and which are connected by cross-connecting threads (or inlays) *i*.

The woven fabric comprises threads *a* and *b* woven together in the usual way.

The pile-loop threads *l* are, during the process of knitting, laid over the woven fabric and under the cross-connecting threads *i*. Of course the rows of loops and cross-connecting threads, during the knitting operation, are drawn tight enough so that the piles, formed by the loops *l* when cut, will be tightly held in place by the adjacent rows of loops and cross-connecting threads and the woven fabric, thereby making it unnecessary to provide a backing sheet cemented to the back face of the fabric as a whole (see Fig. 3 of my Patent No. 2,155,385, issued April 25, 1939).

A method of making the pile fabric consists in knitting through a pre-woven fabric and during the knitting operation laying the pile threads over the surface of the woven fabric beneath the cross-connecting threads *i* and between the thread portions *w*² which overlie the cross-connecting threads *i*, and hooking the pile-loop

threads through between adjacent runs of cross-connecting threads, and at the appropriate time cutting the loops to leave the piles.

The kind and thickness of the pile-loop threads used, and the kind and thickness of the threads *w* and *i*, are limited only by the capacity of the knitting machine and its ability to handle them.

The loops *l* may be cut by any approved means, either along the direction *v* or *x* in Fig. 2, as may be preferred.

In this application I make no claim to any method of making the fabric as various methods may be employed.

This application is a refiled of my application Ser. No. 225,004, filed August 15, 1938 and of my application Ser. No. 372,641 filed December 31, 1940 and allowed April 8, 1941.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction, operation and advantages of the invention will be clear to those skilled in the art to which it relates.

What I claim is:

1. A pile fabric comprising a plurality of rows of knit loops embedding a woven fabric, thread cross-connecting said rows, and pile threads lying on one face of the woven fabric and extending up between adjacent cross-connecting thread to form piles.

2. A pile fabric comprising a plurality of rows of connected knit loops and a woven fabric embedded in the same, thread cross-connecting said rows, said loops lying on one face of the woven fabric and the connecting portions of the thread between the loops lying on the other face of the woven fabric, and pile threads lying over said other face and under said connecting thread portions and extending up between adjacent cross-connecting thread to comprise piles.

3. A non-stretchable pile fabric comprising a woven fabric embedded in a knit fabric, the knit fabric including rows of loops located over one face of the woven fabric and loop-connecting cross-thread located over the other face of the woven fabric, and pile-loop threads overlying a face of the woven fabric and underlying said cross-thread, portions of said pile-loop threads extending between adjacent cross-thread and constituting piles.

4. A non-stretchable pile fabric comprising a woven fabric embedded in a knit fabric, the knit fabric including rows of loops and loop-connecting cross-thread, and pile-loop threads overlying a face of the woven fabric and underlying said cross-thread, portions of said pile-loop threads extending between adjacent cross-thread and constituting piles.

ROY C. AMIDON.