July 27, 1943. W. J. KRIJGER 2,325,520

PILE FABRIC

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Fig. 1.

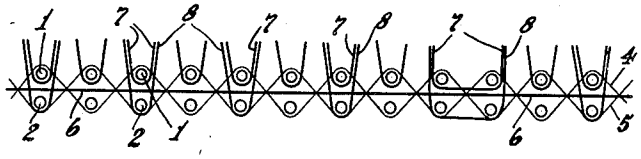


Fig. 2.

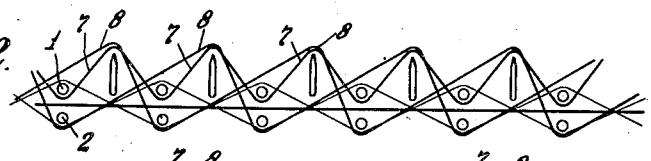


Fig. 3.

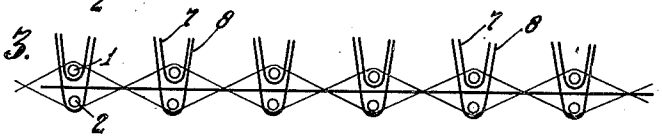


Fig. 4.

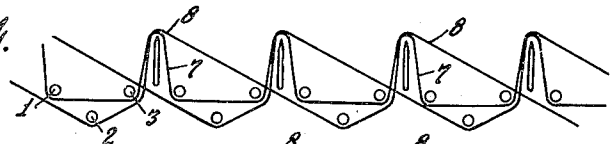


Fig. 5.

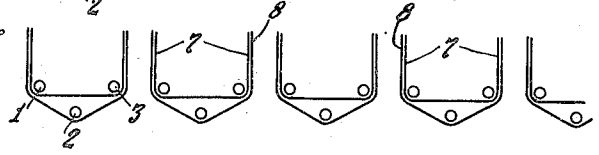


Fig. 12.

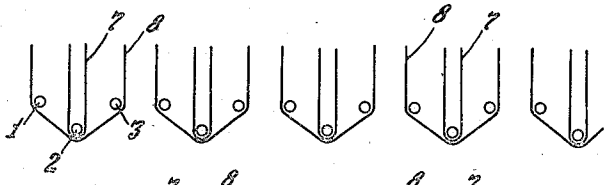


Fig. 13.

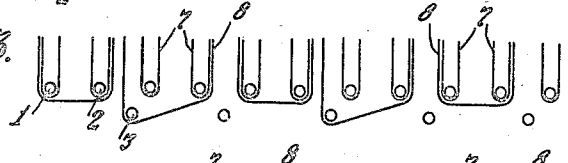
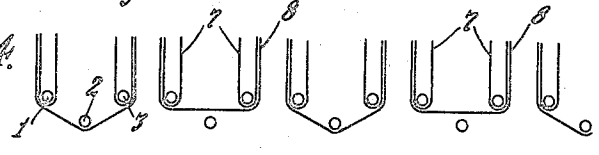


Fig. 14.



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Fig. 6.

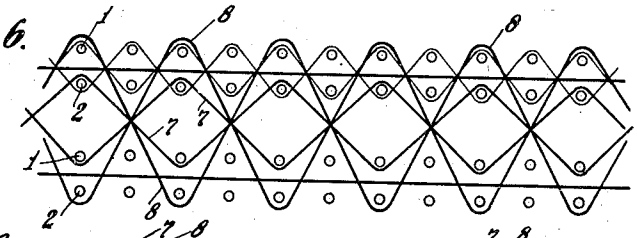


Fig. 7.

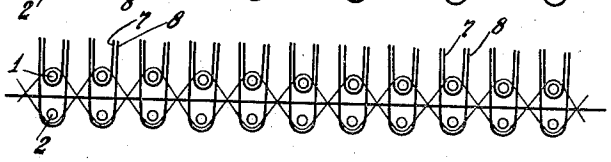


Fig. 8.

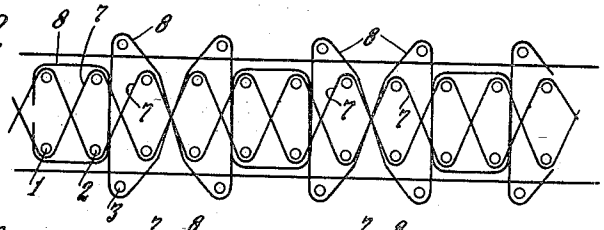


Fig. 9.

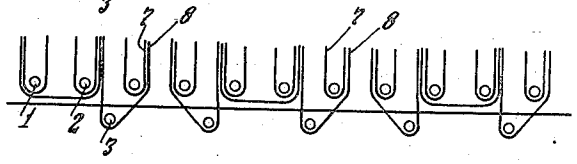


Fig. 10.

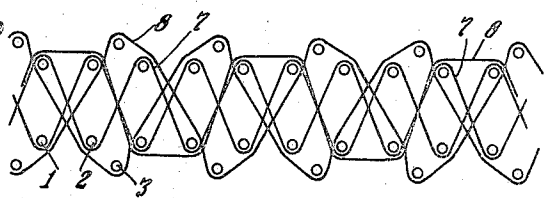
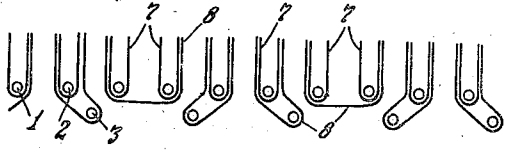


Fig. 11.



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Fig. 15.

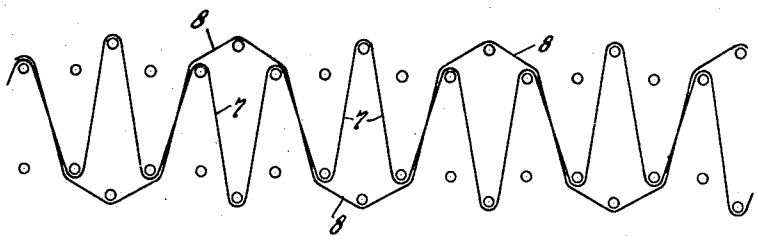


Fig. 16.

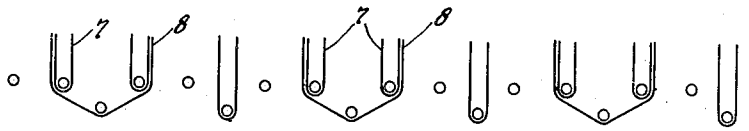
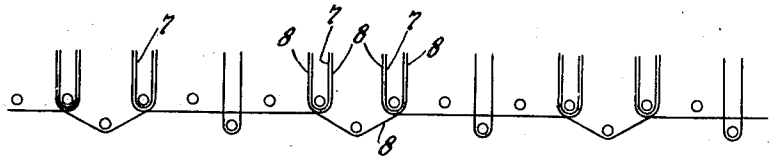


Fig. 17.



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UNITED STATES PATENT OFFICE

2,325,520

PILE FABRIC

Willem Jacobus Krijger, Deventer, Netherlands; vested in the Alien Property Custodian

Application March 17, 1941, Serial No. 383,863
In the Netherlands July 28, 1939

6 Claims. (Cl. 139—401)

This invention relates to a pile fabric which has advantages over the known pile fabrics, especially along the edges thereof. For the purpose of reinforcing the pile covering along the longitudinal edges of the fabrics, especially strip or stair carpeting, one could take two or more pile warp threads instead of one and bind said threads together. This has the drawback, however, that the binding is insufficient, for the blow of the reed remains the same and all of the threads together form one heavier thread, the working of which being more difficult than of a single thread.

The invention makes it possible to obtain a better pile covering along the edges or even in other portions of the remaining fabric without encountering the above mentioned drawbacks.

A pile fabric according to the invention contains complete pile tufts which are in one and the same plane in the direction of the warp and having overlying tufts. If used along the edges the pile tufts according to the invention may have like or dissimilar appearances, for example, they may be of one or different colors.

In using the invention it is not necessary to simultaneously bind two pile threads so a better weave is obtained than in case the same amcunt of pile material were bound to one portion side by side with the other portion on one and the same weft and moreover the pile may be worked up much easier.

With reference to the diagrammatical drawings the invention will be described including examples of various arrangements to build a reinforced edge or a pattern therebetween.

Fig. 1 illustrates a general form of thread arrangement embodying the invention herein.

Figs. 2 and 3 illustrate a wire pile fabric prior to and after cutting.

Figs. 4 and 5 show a still different wire pile fabric prior to and after cutting.

Figs. 6 and 7, 8 and 9, 10 and 11 illustrate three different possibilities of using the invention in double pile fabrics prior to and after cutting.

Figs. 12–17 inclusive illustrate still further possibilities.

Referring to Fig. 1, weft threads 1, 2, cooperate with binding warp threads 4, 5 and with the aid of ground warp threads 6 bind the pile tufts 7 and 8. The pile tufts 7 are distributed about the weft threads 1 and the tufts 8 are distributed about the weft threads 2. Each set of these built-up tufts have the weft threads in the same plane. In the showing of Fig. 1, the place is vertically across the ground warp threads 6. The piles sets 7 and 8 are U-shaped, the tufts 7 nested in the tufts 8, which latter set will hereinafter be referred to as "riding" pile tufts. These tufts reinforce to a considerable degree, so that they are highly suitable for use along the edges of pile fabrics, such as strip or stair carpeting.

In Fig. 1, the riding pile tufts 8 are not only shown bound around a single set of pile tufts 7, but a single set of riding pile tufts are shown as enshrouding two sets of pile tufts 7. However, the riding pile tuft always lies in the same reed space as the enshrouded tufts.

In Figs. 2 and 3 there is shown the development of a wire pile fabric wherein the riding pile tufts 8 enshroud two weft threads 1, 2 and a single tuft 7, the weft threads 1, 2, being in the same plane.

The weave illustrated in Figs. 4 and 5, has the riding pile tufts 8 enshrouding three weft threads 1, 2, and 3, and a set of pile threads 7 which in turn are bound about two weft threads 1 and 3. The warp threads are omitted from the showing for clarity.

Further application of the principle may be used in double woven pile fabrics. For instance there is disclosed a development in Fig. 6, resulting in the pile of Fig. 7 wherein each set of riding piles 8 enshrouds a set of piles 7 and a pair of weft threads 1 and 2 similar to the disclosure in Fig. 3.

There is also shown a development in Fig. 8 resulting in the pile structure shown in Fig. 9 wherein the riding pile 8 may enshroud a pair of tufts 7 and weft threads 1 and 2 or the riding pile may enshroud a pair of weft threads only one of which carries a tuft 7.

Still additional patterns are disclosed in Figs. 11, 12, 13, 14, 16 and 17. The development of Fig. 11 is shown in Fig. 10 and the development shown in Fig. 15 results in the pile structure shown in Fig. 16.

Various colored piles may be employed in combination resulting in multi-colored pile fabrics.

I claim:

1. A cut warp pile fabric in which complete pile tufts are bound each around at least one weft thread and in which additional complete pile tufts are provided each bound around at least one different weft thread and in one and the same plane in the direction of the warp over at least one of the first mentioned pile tufts.

2. A cut warp pile fabric according to claim 1 in which the first mentioned pile tufts are bound each around a weft thread at the pile side and the pile tufts lying over them around a weft thread at the back of the fabric.

3. A cut warp pile fabric according to claim 1 in which the first mentioned pile tufts are bound each around a weft thread at the pile side and the pile tufts lying over them around at least two weft threads at the back of the fabric.

4. A cut warp pile fabric according to claim 1 in which the first mentioned pile tufts are bound each around at least two weft threads at the pile side and the pile tufts lying over them around at least one weft thread at the back of the fabric.

5. A cut warp pile fabric according to claim 1 in which the first mentioned pile tufts are bound each around at least one weft thread at the pile side and the pile tufts lying over them around at least one weft thread at the back and at least around one weft thread at the pile side of the fabric.

6. A cut warp pile fabric according to claim 1 in which the first mentioned pile tufts are bound each around at least one weft thread at the back and the pile tufts lying over them around at least two weft threads at the back of the fabric.

WILLEM JACOBUS KRIJGER.