

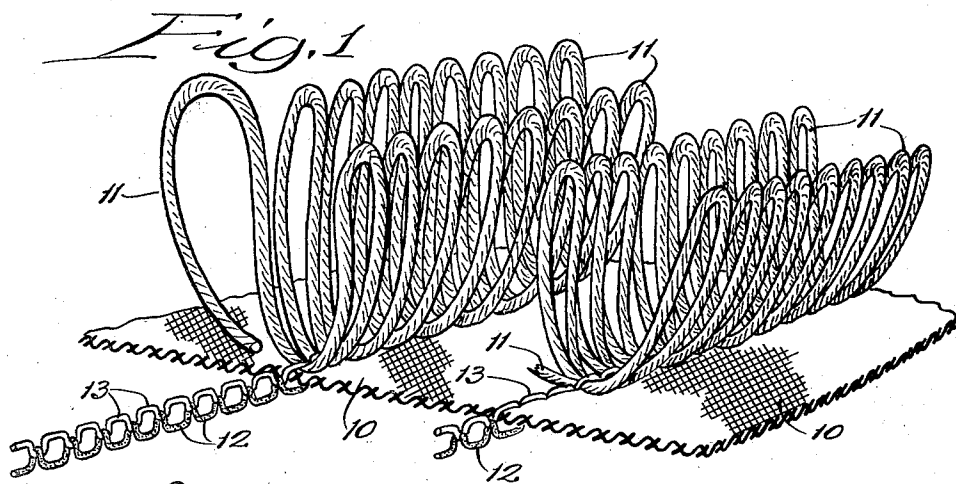
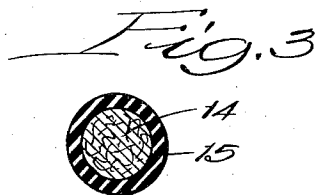
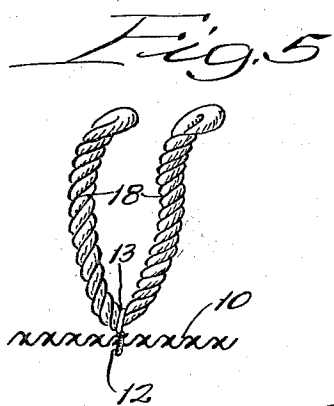
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RUG

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RUG

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This invention relates to a rug and is particularly useful in the type of rug in which pile warp threads are stitched to a fabric base.

The type of rug in which pile warp threads are stitched to a fabric base is cheaply and easily formed because the pile threads can be stitched readily to the base in an inexpensive sewing operation and large volumes of rugs are thus quickly produced. Such rugs, however, have the sharp disadvantage of presenting a rather smooth and flat surface to the floor and the rugs slip easily when stepped on. Furthermore, since the pile warp threads themselves do not pass through the fabric base but are secured to the base solely by threads, the structure is weak in that tension placed upon any of the warp threads tends to draw the stitching threads through the fabric and thus to produce an uneven pile. Since pile warp threads are secured to the base by stitching and usually by sewing machine stitching, there is a limit to the size and character of the stitching threads and the rug, which is otherwise sturdy and serviceable, has its weak link in the stitching connections.

An object of the present invention is to provide the fabric base and stitched form of rug referred to with means for reinforcing the stitching threads after they are in place, to protect them against breaking and to lock them against being pulled through the fabric base while, at the same time, presenting to the floor surface means for retaining the rug in place and preventing its slipping. A further object is to provide a rug formed of a fabric base and pile warp threads stitched thereto in which at least some of the stitching threads extending to the underside of the fabric are provided with a rug position-fixing composition which strengthens the threads, locks them against being pulled through the fabric, and provides a gripping surface which maintains the rug in position on the floor. Other objects and advantages will appear as the specification proceeds.

The invention is illustrated, in a preferred embodiment, by the accompanying drawing, in which—

Figure 1 is a broken perspective view of a portion of a rug constructed in accordance with my invention; Fig. 2, a broken detailed view showing the stitching which connects the pile warp threads to the fabric base; Fig. 3, a transverse sectional view of a stitching thread provided with a coating of latex; Fig. 4, a view similar to Fig. 3 but showing the stitching thread provided with a resinous coating; and Fig. 5, a view similar to

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Fig. 2 but showing the threads overtwisted and stitched to the fabric in over-twisted condition.

In the illustration given, 10 designates a fabric base which may consist of canvas or any other suitable fabric body. To the fabric base is stitched the warp pile threads 11, which are shown in the form of loops. The loops may be over-twisted, as illustrated in Fig. 5, or without twist, as illustrated in Figs. 1 and 2. The warp pile threads may not be in the form of loops but may be stitched to the fabric in any other desired shape or position. When the threads 11 are stitched to the fabric in the form illustrated, the loops themselves, after stitching, may be severed at their tops or left intact.

The stitching of the pile warp threads 11 to the base 10 may be accomplished in any desired manner and by any form of stitching. If desired, a single-stitch thread may be employed to pass back and forth through the fabric and about the threads 11. In the specific illustration given, a bottom thread 12 is employed on the underside of the base 10 and a stitching thread 13 is used to extend around the bottom portions of the loops formed by threads 11 and to be locked on its underside by the threads 12. The bobbin or through-stitching threads 13 are passed through the base 10 at regular intervals and the loops formed underneath the fabric are engaged by the shuttle or locking thread 12 so as to secure the stitching thread 13 firmly in position.

In the form of stitching illustrated, as well as in other forms of stitching, there is a tendency for the lower thread 12 to be drawn upwardly through the base when great strain is suddenly placed upon one of the loops forming the warp pile above the base. Sometimes the stitching thread 12 breaks, but often it is simply drawn upwardly through the base. Further, the canvas base 10, which is constantly exposed to a floor and often to a waxed or polished floor, becomes quite slippery and the rug tends to slip easily when stepped on.

I find that the above difficulties can be overcome and a very sturdy and stable rug structure produced by providing one, or some, or an occasional under-thread 12 in the rug with a coating or reinforcing composition which will strengthen the thread itself against being pulled through the rug and against being broken, and which will further provide a frictional or weighted member for holding the rug in place. The thread 12 may be formed of cotton or any other suitable material and sprayed or drawn through a bath containing a composition adapted to this

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purpose. For example, as shown in Fig. 3, the thread 12 may be drawn through a bath of latex so as to form a fabric core 14 covered by a resilient coating 15. The latex reinforces the cotton and provides a tough sheath 15 resistant to the cutting influences of the upper thread 13. At the same time, the coating 15 is extremely resistant to the fabric 10 and cannot be drawn through the fabric to release the upper thread 13. Further, the latex coating provides a tenacious surface, grips the floor, and maintains the rug firmly in position. Even though there are just a few of the threads 12 appearing on the underside of the rug, the combined effect of such threads serves to stabilize the rug in its position on the floor.

The treated thread 12 serves a further function in areas like porches, where the wind tends to carry the light rug from its position on the floor. Here the additional weight of the treated threads tends to fix the position of the rug.

In Fig. 4 is illustrated a thread having a fibrous core 16 and which is reinforced with a resinous material 17. The resinous material may be of any suitable composition which will reinforce the thread against breaking and against being drawn through the rug and which will, at the same time, tend to maintain the rug in its position on the floor. For example, resin such as methacrylate, vinyl resins, alkyd and any natural resin, as well as resin-like materials consisting of cellulose esters or derivatives, and cellulose acetate and cellulose acetate-butyrate. Such resins not only strengthen the thread but also have thermoplastic characteristics which enable them to be firmly united in the rug and when the rug is formed will, upon setting, tend to lock the stitching threads 13 firmly in place. It will be understood that there are a variety of resins and resin-like materials which will permeate the thread 12 or form a coating on the fibrous center thereof while still providing a flexible thread which may be fed through the machine for locking the lower loops of stitching thread 13.

A very attractive and satisfactory rug is formed when the loops of the warp thread 11 are given an over-twist and then stitched in position upon the fabric 10 as indicated in Fig. 5, the over-twisted loop being indicated by the numeral 18.

In the operation of the structure, the canvas base 10 which supports the looped pile thread 11 serves as a secure anchor for the loops by reason of the locking thread 12 which engages the loop portion of the stitched thread 13 when it comes through the fabric. The coated thread 12 with its latex or resin coating is resistant to tearing and further resists any tension placed upon the thread 13 which might otherwise tend to draw it through the fabric. The latex coating permits a slight yielding under the tension but restores the threads 12 and 13 to their original position after the tensile strain ceases.

It will be understood that instead of employing a locking thread 12 extending all the way

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under the fabric, a stitching thread may be employed which will extend through the fabric repeatedly and will serve to lock the pile threads 11 to the fabric. Such a stitching thread is preferably formed and treated like thread 12 in the illustration given and serves the same purpose of locking the members 11 in position, preventing tearing of the threads and also providing means on the bottom side for maintaining the rug in position. While stitching thread 13 has been described herein as a non-treated thread and thread 12 has been described as the treated thread, it will be understood that such an arrangement may be reversed and that the thread 13, which extends through the fabric, may be treated and thread 12 may be left untreated or, if desired, both threads 12 and 13 may be treated as described herein.

While in the foregoing description, I have set forth many details as illustrating one mode for use of the invention, it will be understood that such details may be widely varied by those skilled in the art without departing from the spirit of my invention and the claims herein should be looked to as definitive of the scope of the invention.

I claim:

1. A rug, comprising a finished fabric base, pile warp threads forming loops, and stitching threads extending through the base and around the lower portions of the loops to secure them to the base, said stitching threads being covered with a resilient material which yields upon the pulling of the loops.

2. A rug, comprising a finished fabric base, pile warp threads aligned thereon in loop formation, and chain-stitching threads securing said loops to said base, the lowermost of said chain-stitching threads extending through said fabric and being coated with a resilient body.

3. A rug, comprising a canvas base, pile warp threads aligned thereon in loop formation, and chain-stitching threads securing said loops to said base, at least the lowermost of said chain-stitching threads lying on the underside of said fabric and being coated with rubber, said coating producing a yielding of the stitching threads when tensile strain is applied to one of said loops.

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