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A. L. CLEMENTS ET AL

2,032,114

CARPET CUSHION

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Fig. 1

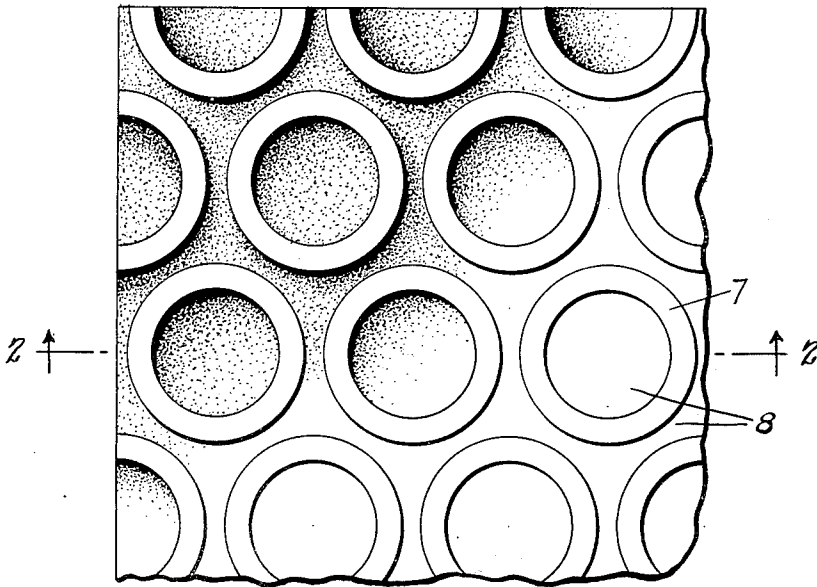


Fig. 2

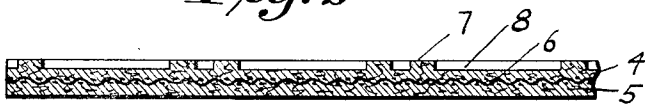
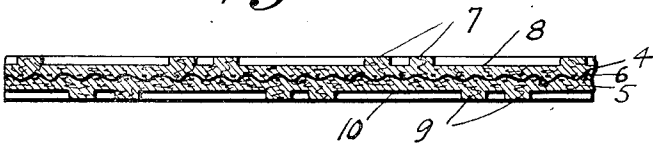


Fig. 3



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CARPET CUSHION

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4 Claims. (Cl. 154—54)

The invention relates to carpet cushions or underliners for carpets, rugs, and other floor coverings.

Heretofore carpet cushions made of hair felt or other suitable feltable fibres have had one or more tread surfaces of rectangular, square or diamond rib formation. Using straight sided ribs it has been found that parts of these ribs are relatively weak compared to the others and particularly those parts which extend parallel or substantially parallel to the line of movement of the reciprocatory felter plate. It is the object of this invention to provide a cushion in which the ribs of the tread surface are greatly reinforced over those commonly used by forming said ribs of circular formation so that only two points of very small area of each rib runs parallel to the line of motion of the felter plate.

A further object of the invention is to provide a carpet cushion having a ribbed tread surface of circular ribbed form on opposite sides thereof with the circular ribs on one side uniformly offset relative to those of the other so that the ribs of one side would, if projected through, uniformly intersect the ribs of the other side, thereby greatly increasing the resiliency and decreasing the tendency to mat over prior constructions.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawing:

Fig. 1 is a view of a portion of a cushion embodying the invention;

Fig. 2 is a detail sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a detail sectional view similar to Fig. 2 showing certain modifications.

The cushion comprises a top layer 4 of feltable fibres, a bottom layer 5 of feltable fibres and preferably an intermediate fabric reinforce 6 such as fairly wide mesh burlap. These parts may be secured and felted together, with adhesive between the reinforce and the bats of feltable fibres, as set forth in the prior U. S. patent to A. H. Gallagher No. 1,508,221, dated Sept. 9, 1924, or the bats forming the top and bottom layers may be secured to the reinforce 6 by punch felting said layers thereto in a suitable needle loom and thereafter felting the parts so secured, together as, for example by the method set forth in the prior U. S. patent to P. R. Bettison No. 1,742,238, dated January 7, 1930.

In either case during the felting process the cushioning material is subjected to the action on both sides of suitable felter plates. In the cushion shown in Figs. 1 and 2 one of these plates has its surface formed with a series of circular grooves while in the cushion shown in Fig. 3 both of the plates have their felting surface formed with a series of circular grooves, with the grooves of

one plate offset from those of the other plate. Usually one of the felter plates is stationary and the other vibrates relative thereto.

According to the present invention one of the tread surfaces of the cushion is formed by the circular ribs 7 and the depressions 8. These ribs may be arranged in various ways and it is to be noted that with a circular rib practically the entire surface thereof is formed of felting running at right or acute angles to the line of movement of the reciprocatory felter plate and that there are only two points which would be parallel to the line of motion of said movable felter plate. As a consequence the rib is formed of feltable fibres that interlock with each other at various angles and are thus firmly felted together and will thus stand up better than the straight sided ribs previously used.

In the structure shown in Fig. 3 the top surface has the circular ribs 7 and depressions 8 as in the first described construction and the bottom surface has similar circular ribs 9 and depressions 10 but the centers of the ribs 9 are uniformly staggered relative to the centers of the ribs 7 so that the ribs 9 do not at any point line up with ribs 7 but said ribs 9, if projected through, would uniformly intersect the ribs 7. Thus portions of the tread surface are suspended or supported from ribs on opposite sides thereof and this has the effect of greatly increasing the resiliency of the cushion over prior constructions and also decreasing the tendency of matting. As this tread surface is formed in the cushion during the felting process, it may be produced without any additional expense over known practice.

We desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claims.

What we claim as our invention is:

1. A carpet cushion having layers of felted feltable fibres, one side of said cushion having a surface formed by curved ribs and depressions.
2. A carpet cushion having layers of felted feltable fibres, the surface of one of said layers being formed by arcuate walled ribs and depressions.
3. A carpet cushion having layers of felted feltable fibres on opposite sides, the surface of one of said layers having outwardly-projecting, load-supporting cylindrical ribs.
4. A carpet cushion having outer layers of feltable fibres and a fabric reinforce between said fibres and felted thereto, the outer surfaces of said layers each having a plurality of load-supporting arcuate walled ribs and depressions, the ribs of one side being uniformly offset relative to those of the other side.

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