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STAIR CARPET FASTENER

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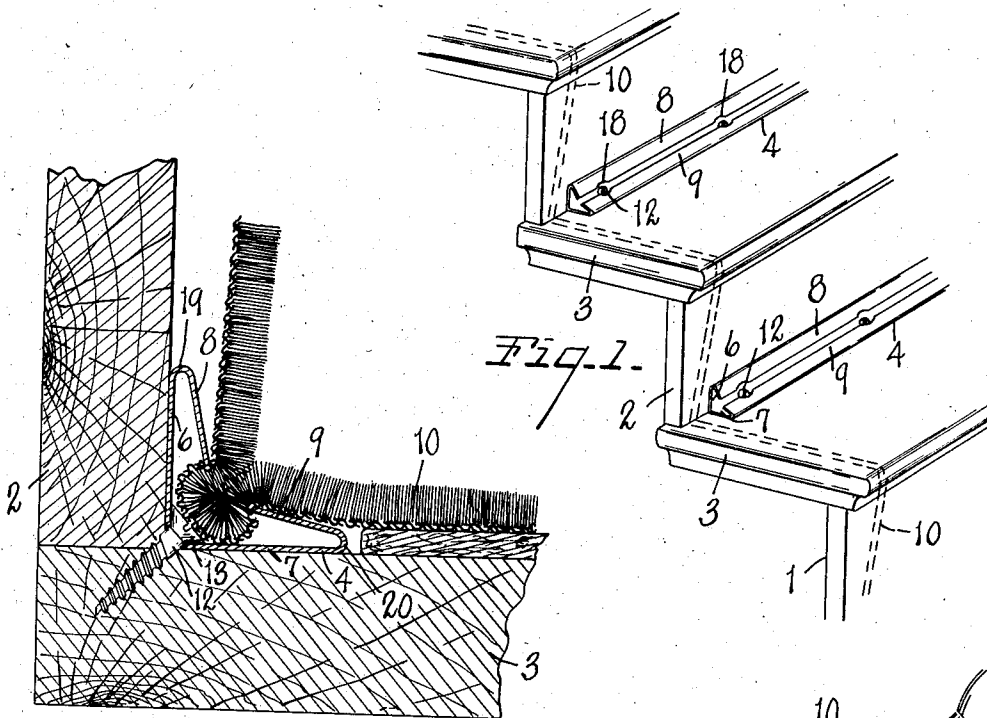


Fig. 2.

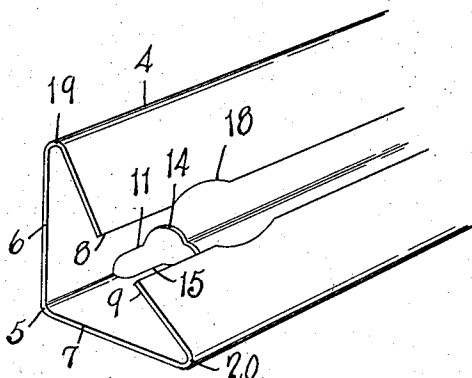


Fig. 3.

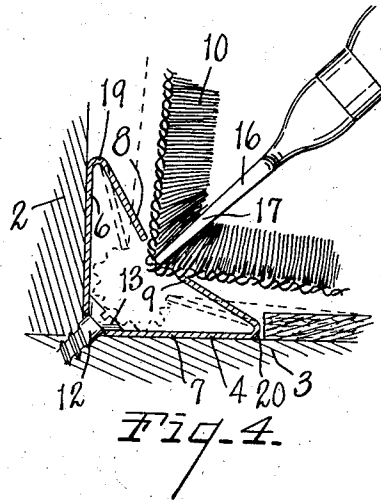


Fig. 4.

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STAIR CARPET FASTENER

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4 Claims. (Cl. 16—10)

This invention relates to stair carpet fasteners and has for its objects:

First, to provide such a fastener which may be simply and easily installed at the angle between the riser and the tread of a stair and which will effectively hold a stair carpet in position without injuring the carpet.

Second, to provide such a fastener which may be easily installed and easily removed and which will permit removal from the carpet without injury to the carpet.

Third, to provide such a fastener which may be inexpensively produced.

Further objects and advantages pertaining to details and economies of construction and operation will appear from the description to follow. A preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view showing a stairway with my fasteners in position thereon.

Fig. 2 is a detail sectional view through one of my improved fasteners with the carpet held therein.

Fig. 3 is a detail perspective view of the end of one of my fasteners.

Fig. 4 is a detail sectional view showing the method of inserting the stair carpet in my fastener.

In the drawing, I show my stair carpet fastener installed on a set of stairs 1, each step consisting of a riser 2 and a tread 3. The fastener is shown at 4. It is made up of springy sheet metal. I have found that in a fastener such as is shown, which is made up of a strip of sheet metal about four and one-quarter inches wide, 24-gauge galvanized iron is satisfactory and has sufficient spring for the purposes of my invention. Different gauges of sheet metal and different degrees of springiness could be used as will be understood from a perusal of the description of my invention.

The form of fastener 4 shown is made up of a single strip of sheet metal longitudinally bent to form the center bend 5 which fits in the angle between the riser and tread of the stair as shown in Figs. 1, 2 and 4. The bend 5 in effect forms two separate strips 6 and 7 disposed at right angles and joined together along their adjacent longitudinal edges at the bend 5. The free edges 8 and 9 of the strip are bent back toward the body portion of the respective strips as shown and are spaced apart such a distance that when a fold of stair carpet 10 is inserted between the free edges 8 and 9 they are deflected inwardly as shown in the dotted lines in Fig. 4 so that they form an

angle less than forty-five degrees with their respective strips 6 and 7, so that the fold of the carpet is wedged in place and, as will be appreciated, any pull on the carpet to pull it out of the fastener will merely increase this wedging action as the edges 7 and 8 will engage the carpet and the pull will tend to straighten them out, thereby bringing the edges closer together to grip the carpet with a firmer grip.

In making up the fastener, I have found that if the angle between the bent back edge and the strip itself is about thirty degrees, this action will take place most satisfactorily. The edges 8 and 9 of the strips are straight and smooth so that they will not injure the carpet and they serve most satisfactorily to grip the carpet and hold it firmly in place. This is of considerable advantage because heretofore it has been considered necessary to provide teeth or prongs on a stair carpet fastener which has led to injury of stair carpets.

Disposed along the bend 5 and extending longitudinally of the fastener are key-hole slots 11 and screws 12 are inserted at the apex of the angle between the tread and the riser as illustrated in Fig. 2, extending diagonally into the stair. The heads 13 on the screws are of such size that they will pass through the enlarged opening 14 of the key-hole slots 11 but will engage over the narrow portion 15 to hold the fasteners 4 in position as shown.

In installing the fasteners, they are placed in position and the screws are inserted and the fasteners are then arranged to be held firmly. A fold of the carpet 10 is then inserted as shown in Fig. 4 with a tool 16 having a flat blade 17 which serves to tuck the fold in between the edges 8 and 9 of the fasteners, deflecting them as shown in dotted lines and as shown in full lines in Fig. 2. The carpet is placed in position starting at the top of the stairs and inserting it in the holders on the steps in descending order. When it is desired to remove the carpet for any reason, it is necessary merely to tap the fastener 4 longitudinally to line up the heads 13 of the screws 12 with the enlarged portions of the key-hole slots so that the fastener and carpet are removed together. It is then a simple matter to slide the fastener off the carpet and the smooth edges thereof will not in any way injure the carpet, although they have held it firmly in place.

To replace the fasteners and carpet, the separated fasteners are again placed in position and the screws 12 tightened and the carpet is again inserted in the fasteners.

To facilitate the insertion of the screw driver,

I may provide a small cut-away portion 18 opposite the key-hole slots 11 to permit a screw driver to be easily inserted. This may not be necessary, but I can provide them if desired. The fasteners do not extend clear across the stairway and if a carpet is twenty-seven inches in width, a fastener twenty-five inches in width is employed. It will thus be seen that the fastener is completely hidden from view and holds the carpet most effectively.

I have shown my fastener made integral of a single piece of sheet metal which is a very inexpensive construction, although it will be appreciated that the parts could be made separately. By positioning the key-hole slots at the apex of the angle between the strips 6 and 7, I have the advantage of the springiness of the metal at the bend 5 as well as at the bends 19 and 20, although it will be appreciated that any suitable means of fastening could be employed with metal of the right degree of springiness.

I have shown and described my invention in the form preferred by me and wish to claim the same both specifically and broadly as pointed out in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A stair carpet fastener comprising a pair of rectangular springy sheet metal strips joined together along their adjacent longitudinal edges to form a substantially right-angle angle member for positioning in the angle between the tread and riser of a stair, each strip having its free edge straight and smooth and bent back toward the body of said strip, said free edges being spaced apart such a distance that they are deflected inwardly toward the apex of said angle member when a fold of stair carpet is inserted therebetween each at an angle less than 45° with the body portion of its strip, whereby said edges grip the fold of the carpet with a wedging action which is increased by an outward pull on the carpet, said fastener having a key-hole slot at the apex of the angle formed by said strips extending longitudinally of said fastener, and a headed fastening element for fastening to the stair and having a head insertable through the enlarged portion of the key-hole slot and adapted to engage in the narrow portion of the slot to hold said fastening member in position.

2. A stair carpet fastener comprising a pair of

rectangular springy sheet metal strips joined together along their adjacent longitudinal edges to form a substantially right-angle angle member for positioning in the angle between the tread and riser of a stair, each strip having its free edge bent back toward the body of said strip, said free edges being spaced apart such a distance that they are deflected inwardly toward the apex of said angle member when a fold of stair carpet is inserted therebetween, each at an angle less than 45° with the body portion of its strip, whereby said edges grip the fold of the carpet with a wedging action which is increased by an outward pull on the carpet, said fastener having a key-hole slot at the apex of the angle formed by said strips extending longitudinally of said fastener, and a headed fastening element for fastening to the stair and having a head insertable through the enlarged portion of the key-hole slot and adapted to engage in the narrow portion of the slot to hold said fastening member in position.

3. A stair carpet fastener comprising a pair of rectangular springy sheet metal strips joined together along their adjacent longitudinal edges to form a substantially right-angle angle member for positioning in the angle between the tread and riser of a stair, each strip having its free edge straight and smooth and bent back toward the body of said strip, said free edges being spaced apart such a distance that they are deflected inwardly toward the apex of said angle member when a fold of stair carpet is inserted therebetween, each at an angle less than 45° with the body portion of its strip, whereby said edges grip the fold of the carpet with a wedging action which is increased by an outward pull on the carpet.

4. A stair carpet fastener comprising a pair of rectangular springy sheet metal strips joined together along their adjacent longitudinal edges to form a substantially right-angle angle member for positioning in the angle between the tread and riser of a stair, each strip having its free edge bent back toward the body of said strip, said free edges being spaced apart such a distance that they are deflected inwardly toward the apex of said angle member when a fold of stair carpet is inserted therebetween, each at an angle less than 45° with the body portion of its strip, whereby said edges grip the fold of the carpet with a wedging action which is increased by an outward pull on the carpet.

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