O. KARCHER.

STAIR CARPET FASTENER.

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STAIR-CARPET FASTENER.


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To all whom it may concern:

Be it known that I, OTTO KARCHER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Improvement in Stair-Carpet Fasteners, of which the following is a specification.

The invention relates to a device for fastening a carpet on a stair without the use of tacks, nails, or other sharp-pointed instruments passing through the carpet; and the object of this improvement is to provide a fastener which can be applied to a stair having steps of various heights and which when applied to fasten the carpet will at the same time stretch it laterally, so that the carpet will lie neat and flat on the step. This object is attained by the construction, mechanism, and arrangement illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a fragment of a stair, showing a carpet fastened thereon; Fig. 2, a front elevation of the fastener as applied to hold the carpet, and Fig. 3 a cross-section showing the manner of applying the fastener.

Similar numerals refer to similar parts throughout the drawings.

The fastener is composed of the spring member 1 and the locking-bar 2, preferably made of malleable iron or other strong resilient metal. The spring member comprises the body or bracket part 3 and downwardly-curved or bow-shaped, laterally-extending arms 4, the outer ends of which are preferably curved upward, as at 5. On the lower sides of the outer ends of the arms are preferably provided the friction-teeth 6, which are adapted to engage, but preferably not to perforate the carpet. In the middle of the bracket is provided the vertical aperture or slot 7, across the top of which is provided the pivotal bar 8, which is preferably triangular in section, with an acute angle directed outward. The lower part 9 of the locking-bar is provided with the ratchet 10 on its inner side, the teeth of which are adapted to engage with the pivotal bar 8 of the spring member, and the upper part 11 is curved outward and upward, and the end is preferably forked to form the somewhat sharpened claws 12.

The fastener is applied to the carpet by pushing the curved ends of the bowed arms against the carpet into the lower angle 13 of one step, with the upper end of the bracket 14 inclined slightly outward, as shown in full lines in Fig. 3. The claws of the locking-bar are then pushed against the carpet and into the angle form by the overhanging edge 15 of the upper step and the molding or filling which is usually provided thereunder, as shown in the same figure. This brings the point of contact of the claws in a line outside of the inner lower angle of the step. An engagement is then made between the pivot-bar of the spring member and one of the ratchet-teeth of the locking-bar, so that as the handle 16 is pressed inward the curved arms are sprung down from the position shown in broken lines to the position shown in dotted lines in Fig. 2, at which time the pivot-point is in the neutral diagonal line between the lower angle of the step and the upper angle in which the claws engage, and when the spring member is pressed back flat against the inner side of the step the pivot-point will pass slightly inward beyond this line and the curved arms will spring slightly up again to the position shown in full lines in Fig. 2, thus locking the fastener in its holding position. By means of the engagement of the friction-teeth at the outer ends of the arms with the carpet when the spring member is forced down to lock the fastener in its holding position the carpet is at the same time stretched laterally, and the inward movement of these teeth, caused by the reaction of the spring after the pivot is passed in beyond the diagonal line, is so slight as to not materially affect the stretching which is thus accomplished.

While stair-carpet fasteners have been used comprising two members having an adjustable pivotal connection, it is not known that one of such members has heretofore included a spring element by means of which the endwise thrust of the two members, caused by forcing the pivot-point inwardly, has been cushioned so as to cause a rebound after the
pivot has passed the neutral line, whereby the fastener is locked and held firmly in its holding position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A stair-carpet fastener comprising a member having lateral spring-arms curved downwardly and a pivot-bar on the upper side intermediate the ends, and a locking-bar having a ratchet on the inner side of the lower part adapted to engage the pivot-bar and outwardly curved claws on the upper end.

2. A stair-carpet fastener comprising a member having lateral spring-arms curved downwardly and a locking-bar having outwardly curved claws on the upper end with an adjustable pivotal connection between the two.

3. A stair-carpet fastener comprising a member having lateral spring-arms curved downwardly and a locking-bar having outwardly curved claws on the upper end with a pivotal connection between the two.

In testimony whereof I hereunto sign my name to this specification in the presence of two subscribing witnesses.

OTTO KARCHER.

Witnesses:
G. R. CHALFANT,
HARRY FREASE.