KNEE-KICKER CARPET STRETCHER

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The present invention relates to a new and improved device for use in laying carpets. More specifically, it relates to a device which is primarily useful in laying wall-to-wall carpeting.

In the Hopkins Patent No. 2,631,403, there is described a device for stretching a carpet which comprises a head containing dependent means for engaging a carpet and means for adjusting these dependent means, a handle attached to this head, and a knee-pad attached to this handle. This type of construction is generally known as a knee-kicker because in use it is laid upon a carpet with the dependent means engaging the top of a carpet and the knee of the user of the device is forced against the knee-band, causing the entire construction to move in a forward direction, stretching the engaged carpet. By the use of knee-kickers of this type, it is possible to rapidly lay large areas of carpet.

The edges of such carpet are normally secured adjacent to a wall by having these edges held by small projections projecting generally upward from a board secured to the floor of a room between an adjacent wall and the terminal edge of a carpet cushioning pad. A board with projections of this variety is shown and claimed in the Roberts Patent No. 2,238,946.

It is desirable to stretch the carpet warp to the projections in the board at the farthest point of forward movement of the stretch. It is extremely difficult to make this engagement by hand at the extreme point of forward movement; thus, the carpet rebounds before contact with projections on the board, the result being a less desirable tautness. It is an object of the invention to produce a device that will keep the carpet warp pressed down on the projections in the board, so that, when the carpet has reached the farthest point of forward movement, the warp of the carpet will become engaged to the projections at the instant the carpet rebounds from these projection.

Another object of the instant invention to produce a device serving as a knee-kick which, by virtue of its construction, can easily and conveniently be employed as to hold carpet smooth adjacent to a wall. A further object of the invention is to produce a device of the class described which, because of constructive details, does not interfere with operations which may be carried on adjacent to such a wall during the laying of carpeting, and which, in fact, aids in many such operations.

Another object of the invention is to produce a knee-kicker of the broad variety described in the aforesaid Hopkins patent, which carries a removable construction which is adapted to serve the purposes indicated in the preceding sentences. Other objects of this invention, as well as the advantages of it, will be more fully apparent from the balance of this specification, the appended claims, and the accompanying drawings, in which:

Fig. 1 shows an isometric view of the device of the invention; and

Fig. 2 is an isometric view of the attaching means of the invention.

Perhaps the invention will be most fully apparent by direct reference to these accompanying drawings.

In Fig. 1 there is shown a knee-kicker 10 having a head 11 provided with a top 12 and a bottom 14 from which there project carpet engaging means such as prongs 15. Such carpet engaging means are as illustrated in the aforesaid Hopkins patent. Disposed along the top 12 of this head 11 and secured thereto so as to project therefrom in a direction generally parallel to the top 12 is a handle 16 having at its terminal extremity a pad 17 which is formed in such a manner as to be adapted to be engaged by the knee of a user of the knee-kicker 10. This pad is preferably formed utilizing a resilient, rubber material, or the like.

Secured to the top 12 of the head 11 of a body plate 20 having a lower projecting lip 21 between the top 12 and 22 of the head 11 so as to engage the bottom 14 of this head, and having flat parallel arms 23 disposed along the sides of the handle 16 on the top 12 of the head 11. Both of these parallel arms terminate in offset portions 24 connected to ears 25 and 26, the ears 25 and 26 being disposed in a direction generally parallel to the arms 23 and being held in such a manner as to project from an end 27 of the head 11 with the offset portions 24 being held against this end. Thus, the complete body plate 20 shown, when positioned, can be snapped onto the head 11 by virtue of the inherent resiliency of these offset portions 24, and the engagement of the lip 21.

The ear 26 is preferably provided with a rotatable arm 28 which is held by means of a pivot 29 to the ear 26 and which carries at its extremity a projection 30 which is adapted to snap into a corresponding depression 31 in the ear 25 when the arm 28 is rotated adjacent to this ear. The arm 28 carries a central depression 32 which is adapted to bear against the handle 16. Thus, when this arm 28 is rotated and the body plate 20 is in position, this depression 32 engages the handle 16 and pressure resulting from the engagement holds the projection 30 within the depression 31, further securing the body plate 20 in position.

Flexible arms 34 are carried by the arms 23 and are secured thereto by means of rivets 35. Both of these arms 34 project from the head 11 in a direction remote from the handle 16 and terminate in ends 36 provided with apertures 37. Both these ends 36 and the apertures 37 are preferably within the same general plane as the bottom 14 of the knee-kicker 10. A stiff pad 39 is held with respect to these arms 34 by means of small ears 40 attached to the pad 39 and projecting upward through the apertures 37 so as to be held loosely. This pad is made of a stiff material such as, for example, steel. Thus, the stiff pad 39 is flexibly held by the flexible arms 34 in such a manner that it easily and conveniently conforms to any surface irregularities. The pad 39 is provided with ends 41 which are relatively straight and which are at approximately right angles to the handle 16. Both of these ends 41 are removed from the main portion of the pad 39 by means of small curved edges 42 which prevent the straight edges 41 from biting into a carpet while in use.

In using the device, shown in the accompanying drawings, the knee-kicker 10 is normally employed in the general manner indicated in the initial part of the specification with the pad 39 secured to this knee-kicker by the various means illustrated in the drawings. By virtue of the flexible construction shown, this pad 39 adapts quite readily to any minor surface irregularities. It serves to hold the carpet in front of the knee-kicker 10 smooth so that manual operations can be
performed upon this carpet with a minimum of difficulty without buckling or rolling of this carpet. Thus, for example, the knee-kicker 10 illustrated in Fig. 1 of the drawings can be used adjacent to the wall of a room being equipped with wall-to-wall carpeting, to stretch the carpet up adjacent to the wall of such a room, and to hold this carpet down in contact with projections in a board such as is described in the aforesaid Roberts patent, thus engaging the warp of the carpet to the projections immediately adjacent to the wall. If desired, the body plate 20 and all of the elements attached thereto can be easily and conveniently removed from the head 11 when desired.

Those skilled in the art will realize that the herein described and disclosed invention is capable of modifications within the scope of this disclosure. Such modifications are to be considered as part of the inventive concept insofar as they are defined by the appended claims.

I claim as my invention:

1. A device of the class described, which includes: a head having a relatively flat top and a relatively flat bottom; carpet engaging means projecting through said bottom; a handle attached to the top of said head and projecting from one side thereof; a knee pad attached to an extremity of said handle remote from said head; a body plate having a projecting lip on one side thereof and flat parallel arms, connected to projecting ears, clamped to said head with said projecting lip secured to an edge of said bottom, said body plate being secured against one end of said head, said arms being disposed along the top of said head around said handle, said projecting ears projecting from a side of said head on opposite sides of said handle; a rotatable arm rotatably mounted on one of said ears; means carried by said rotatable arm and said other ear for securing said arm to said other ear; flexible arms attached to said body plate and projecting therefrom in a direction generally removed from said handle, said flexible arms having their ends disposed in the same plane as said flat bottom of said head; means defining an aperture in each of said ends of said flexible arms; and a stiff pad disposed in substantially the same plane as the bottom of said head and attached to said flexible arms by means of ears formed on said pad projecting loosely through said apertures.

2. A device as defined in claim 1, wherein said projecting ears are offset from the plane of said flat top and said head when said body plate is secured to said head.

3. A device as defined in claim 1, wherein said stiff pad has a relatively straight edge at right angles to said handle and wherein said straight edge is removed from the major portion of said stiff pad by a curved lip.

References Cited in the file of this patent

UNITED STATES PATENTS

60,216 Martindale ——— Dec. 4, 1866
2,631,403 Hopkins ——— Mar. 17, 1953