

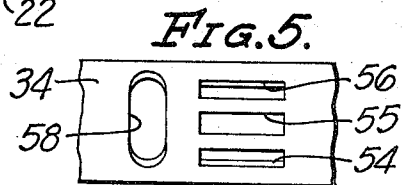
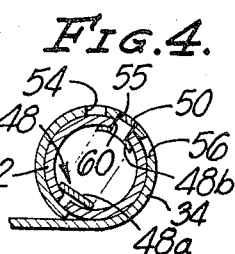
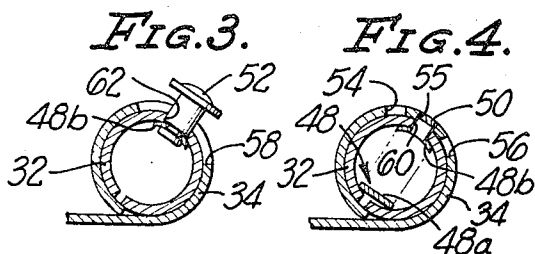
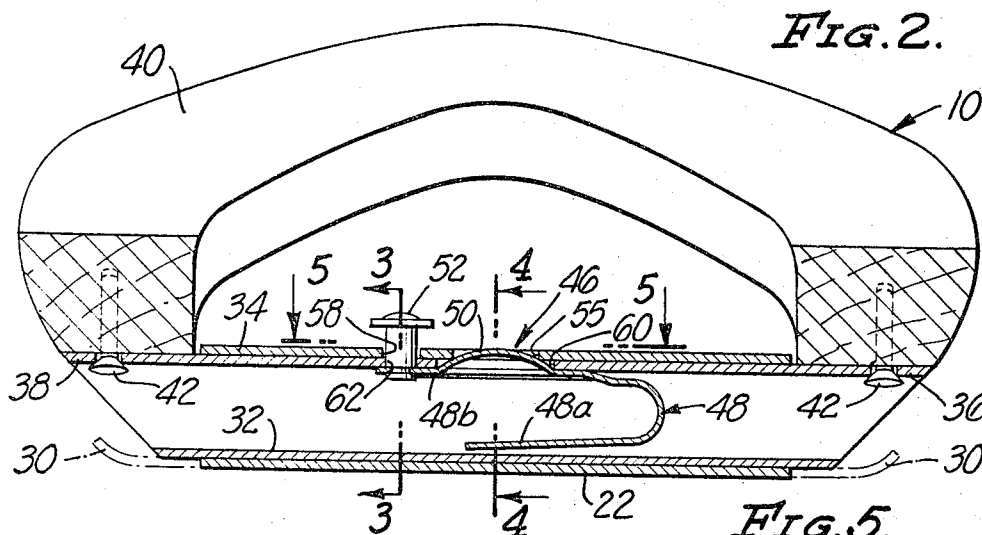
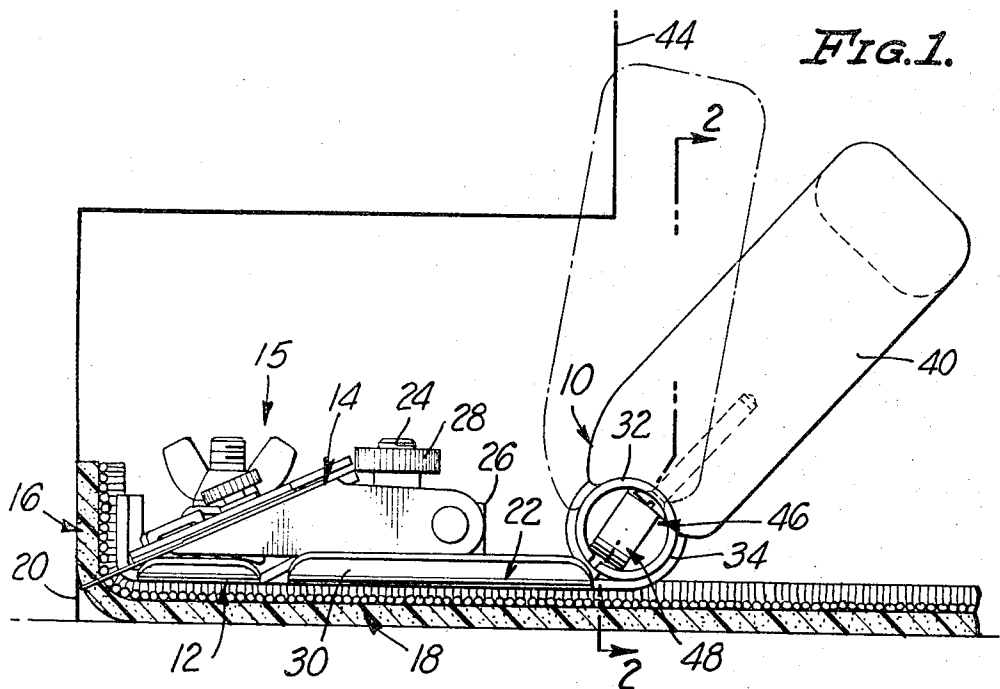
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FOLDDOWN HANDLE FOR CARPET TRIMMERS

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FOLDDOWN HANDLE FOR CARPET TRIMMERS
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ABSTRACT OF THE DISCLOSURE

A carpet-cutting tool which includes coaxial inner and outer tube-like members turnable relative to each other, a handle being connected to and extending radially from one of the members with a blade holder connected to the other.

Disclosure

The present invention relates to carpet-cutting tools and, more particularly, to a novel folddown handle mechanism for a carpet-cutting tool which permits the tool to cut and trim the edges of carpeting under various wall protrusions, which carpet edges heretofore could not be reached by such tools.

In installing wall-to-wall carpeting, it is desired that the edges of the carpeting butt snugly against the walls of a room at and immediately adjacent the floor. Since carpeting does not come precut to the exact dimensions of a room and since walls invariably include minor surface irregularities, to provide the desired snug fit between the edges of a carpet and the walls of a room, it is necessary during installation to cut the carpeting and to trim the edges to follow the contour of the walls adjacent the floor. Carpet cutting or trimming tools are employed for this purpose and, generally speaking, comprise a flat base plate carrying a blade holder assembly and a fixed handle for manually moving the tool.

During installation of wall-to-wall carpeting, edge portions of the carpeting are folded upwardly along the walls at the floor edges to follow the general contour of the walls. To cut the carpet such that its edges butt snugly against the walls, the carpet installer grasps the handle of the cutting tool and forces the tool downwardly on the top of the carpet and against the upwardly turned carpet edge portions to follow the contour of the walls. As the tool is moved, the blade in the blade holder assembly cuts the edge portions of the carpet such that the resulting carpet edges butt snugly against the wall.

Although such carpet-cutting tools function satisfactorily along clear walls, walls often include protrusions such as wall heaters, overhanging bookcases, and the like. Such protrusions often extend close to the floor and prevent the carpet-cutting tool with the fixed handle from fitting thereunder and cutting and trimming the edges of the carpeting. In such instances, the carpet-cutting tool must be discarded in favor of a knife or the like. The resulting carpet edge formed by hand operation of a knife is invariably uneven and ragged in appearance and does not butt firmly against the wall under the protrusion.

In view of the foregoing, it is an object of the present invention to provide an improved handle mechanism for a carpet-cutting tool which permits the tool to cut and trim the edges of carpeting under various wall protrusions close to the floor, which carpet edges heretofore could not have been reached by such a tool.

Another object of the present invention is to provide a carpet-cutting tool with a handle which is foldable away from a wall protrusion and which may be locked in a plurality of inclined positions which permit entry and carpet-cutting operation of the tool under the protrusion.

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A further object of the present invention is to provide a simple and inexpensive folddown handle mechanism which is adaptable for use in various carpet-cutting tools and which permits the associated tool to be used under low level wall protrusions.

Still another object of the present invention is to provide a folddown handle mechanism of the foregoing character including an outer tube-like member and an inner member supported for turning in and relative to the outer member with the handle being connected to and extended radially from one of the members, the other member being adapted for connection to a blade holder of an associated cutting tool, and further including detent means on the members for releasably locking the one member and the handle in different rotational positions relative to the other member and the blade holder.

A still further object of the present invention is to provide a folddown handle mechanism of the foregoing character wherein the detent means includes a plurality of circumferentially spaced stops on one of the members and a spring extending from the other of the members for releasably engaging and locking against different ones of the stops as the members are turned relative to each other to lock the handle in different rotational positions, the spring carrying a hand engageable means for releasing the spring from the stops to permit hand turning of the members with the handle.

The foregoing as well as other objects and advantages of the present invention may be more clearly understood by reference to the following detailed description when considered with the drawing which, by way of example only, illustrates one form of folddown handle mechanism embodying the features of the present invention.

In the drawing:

FIG. 1 is a side view of a carpet trimming tool including the folddown handle mechanism, the handle being locked at an acute angle to permit the tool to trim an edge portion of a carpet under a low level wall protrusion;

FIG. 2 is a sectional view of the handle mechanism taken along the line 2—2 in FIG. 1;

FIG. 3 is a sectional view taken along the line 3—3 in FIG. 2;

FIG. 4 is a sectional view taken along the line 4—4 in FIG. 2; and

FIG. 5 is a fragmentary top view taken along the line 5—5 in FIG. 2.

In the drawing, the folddown handle mechanism is represented generally by the numeral 10 and in FIG. 1 is shown connected to a base 12 of a blade holder 14 in a carpet-cutting tool 15. By way of illustration only, the blade holder 14 is the type illustrated and described in the co-pending U.S. patent application Ser. No. 634,601, filed Apr. 28, 1967 and reference should be made thereto for a complete understanding of such structure and its operation in severing the edge portion 16 of a carpet 18 along a wall 20.

For the purposes of this specification, it is sufficient to state that the base 12 and blade holder 14 are secured to the folddown handle mechanism 10 by means of a base plate 22 carrying a pair of upwardly extending threaded studs 24 receiving a stack of spacer plates 26 and knurled nuts 28 (only one of which is shown herein). The base 12 is adapted to fit optionally between different ones of the spacer plates and is secured to the base plate 22 by a tightening of the nuts 28.

In the illustrated form of the folddown handle mechanism 10, the base plate 22 is integral with the mechanism, is generally rectangular in shape including upwardly turned edges 30, and is adapted to slide over the upper surface of the carpet 18 during operation of the carpet-cutting tool 15.

In addition to the base plate 22, the fold-down handle mechanism 10 includes a pair of coaxial inner and outer tube-like members 32 and 34. The outer member 34 is formed by a curled rear edge portion of the base plate 22 and journals the inner member 32. In this regard, the inner member 32 is adapted for turning in and relative to the outer member and includes end portions 36 and 38 extending axially beyond the outer member 34 for connection to a generally U-shaped handle 40 as by means of a pair of wood screws 42. Thus arranged, the handle 40 extends radially from and outwardly beyond the members 32 and 34 and is adapted for hand grasping by a carpet installer using the carpet-cutting tool 15.

Since the handle 40 is connected to the inner member 32, it, like the inner member, is turnable relative to the outer member 34 and hence to the blade holder 14. This is in direct contrast to the fixed handle arrangement of conventional carpet-cutting tools and allows the carpet-cutting tool to cut the upturned edges of carpeting under low level wall protrusions, which carpet edges cannot be reached with carpet-cutting tools of a fixed handle construction.

The foregoing feature of the present invention is most clearly illustrated in FIG. 1. As represented, the carpet-cutting tool 15 is to sever the upturned edge portion 16 of the carpet 18 under a low level wall protrusion 44, such as a wall heater or the like. If the handle 40 were fixedly connected to the base plate 22 and were normally at the angle illustrated by the phantom outline, the carpet edge portion 16 could not be reached by the blades of the blade holder 14 and could not be severed utilizing the carpet-cutting tool 15. In such an instance, the carpet-cutting tool would have to be discarded in favor of a knife or similarly inefficient hand-held tool.

With the fold-down handle mechanism of the present invention, however, when it is desired to sever the carpet edge portion 16 under the protrusion 44, the handle 40 is simply folded down and locked in the inclined position illustrated by the solid outline. The carpet-cutting tool 15 is then slipped underneath the protrusion 44 to sever the carpet edge portion 16 in the usual manner.

In the fold down handle mechanism 10, the handle 40 may be turned between and locked in a plurality of different inclined positions relative to the base plate 22. One of the positions is illustrated by the phantom outline in FIG. 1 and is the handle position for normal operation of the carpet-cutting tool 15. A second position is that illustrated in solid outline. In a third position, not specifically illustrated in the drawing, the handle 40 is further angled relative to a vertical plane to permit entry and cutting operation of the carpet-cutting tool under very low level wall protrusions.

To releasably lock the handle 40 in such inclined positions, the fold-down handle mechanism 10 includes a detent device 46 on the inner and outer members 32 and 34 for releasably locking the inner member and the handle in different rotational positions relative to the outer member and the blade holder 14.

In the illustrated form of the present invention, the detent device 46 includes a number of holes and slots in the inner and outer members 32 and 34 and a locking spring 48 carrying a ridge 50 and a hand pressable button 52.

The slots in the outer member 34 comprise three axial slots 54, 55, and 56 (each defining a stop), and a circumferential arcuate slot 58. The slots in the inner tube-like member 32 comprise an axial slot 60 for alignment and communication with different ones of the axial slots 54, 55, and 56 upon a turning of the inner member relative to the outer member, and a hole 62 for communicating with the arcuate slot 58.

The locking spring 48 is a generally U-shaped leaf spring with a lower leg 48a bearing on an inner surface of the inner member 32 opposite the slot 60 and an upper

leg 48b bearing on a diametrically opposite inner surface of the inner member. The upper leg 48b carries the ridge 50 such that it extends radially outward through the axial slot 60 for entry into one of the axial slots 54, 55, and 56 in the outer member 34. The end of the upper leg 48b carries the button 52 which extends radially outward through the hole 62 and arcuate slot 58 to a point where it may be engaged by the finger of the installer using the carpet-cutting tool 15.

When the ridge 50 extends into one of the axial slots 54, 55, or 56, the ridge locks the inner member 32 in a predetermined rotational position relative to the outer member 34 and accordingly locks the handle 40 in a predetermined radial or inclined position. For example, with the ridge 50 in the axial slot 54, the handle 40 is in the inclined position illustrated in phantom outline in FIG. 1, that is in the first position. When the ridge 50 is in the axial slot 55, the handle is in the second inclined position illustrated by the solid outline in FIG. 1. When the ridge 50 is in the axial slot 56, the handle is in the third position.

To permit a turning of the handle 40 between the various inclined positions, the locking spring 48 is designed such that a downward depression of the button 52 causes the upper arm 48b to carry the ridge 50 inwardly out of the axial slots 54, 55, and 56. With the ridge 50, inward of the slots, the handle 40 may be turned by hand between the inclined positions. Upon reaching one of the inclined positions, the ridge 50, under the influence of the locking spring 48, automatically enters the corresponding one of the axial slots 54, 55, and 56 through the axial slot 58 and locks the handle 40 in place against further rotation until the button 52 is again depressed.

In the foregoing manner, the detent device 46 permits the handle 40 to be releasably locked in a plurality of rotational or inclined positions relative to the outer member 34 and blade holder 14 and permits the handle to be folded downwardly away from the wall protrusion 44 such that the carpet-cutting tool 15 may fit and efficiently trim the carpet edge portion 18 under the wall protrusion, which edge portion could not have been reached by such a carpet-cutting tool if the handle were fixed in the position indicated by the phantom outline.

While a particular form of fold-down handle mechanism has been described in some detail herein, changes and modifications may be made in the illustrated form without departing from the spirit of the invention. It is therefore intended that the present invention be limited in scope only by the terms of the following claims.

I claim:

1. A fold-down handle mechanism for a carpet-cutting tool including a blade holder, said mechanism comprising:

first and second members, one of said members being an outer tube-like member and the other being an inner member supported for turning in and relative to said outer member;

a handle connected to and extending radially beyond said first member;

means for connecting said second member to said blade holder; and

detent means between said first and second members for releasably locking said first member and said handle in any one of several different rotational positions relative to said second member.

2. The mechanism of claim 1 wherein said detent means comprises:

a plurality of circumferentially spaced stop means on one of said first and said second members;

spring means extending from the other of said first and second members for releasably engaging and locking against different ones of said stop means as said first member is turned relative to said second member to lock said handle in different rotational positions; and

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hand engageable means on said spring means for releasing said spring means from said stop means to permit hand turning of said first member and handle relative to said second member.

3. The mechanism of claim 2 wherein said stop means 5 comprise slots in said one of said first and second members; and

said spring means as supported by said other of said first and second members and as adapted to extend into different ones of said slots to releasably lock said first member and said handle in said different rotational positions. 10

4. The mechanism of claim 3 wherein:

said one of said first and second members is said outer member; 15

said other of said first and second members is said inner member;

said inner member is a tube-like member;

said inner member includes a first hole for aligning with said circumferentially spaced slots upon a turning of said first member with said handle, and a second hole axially spaced from said first hole; 20

said outer member includes a circumferential arcuate opening communicating with said second hole;

said spring means includes a locking spring seated in said inner member and carrying a ridge for extending radially outward through said first hole and into different ones of said slots in said outer member upon a turning of said first member relative to said second member to releasably lock said handle in said different rotational positions; and 25

said hand engageable means comprises a button on the end of said locking spring and extending radially outward through said second hole and said arcuate opening whereby inward pressure on said button depresses said locking spring and withdraws said ridge 30

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from said slots to permit turning of said first member relative to said second member.

5. The mechanism of claim 4 wherein:

said first member is said inner member;

said second member is said outer member;

said inner member is coaxial with said outer member and extends axially therebeyond for connection to said handle; and

said means for connecting said second member to said blade holder includes a base plate extending from said outer member for supporting said blade holder.

6. A carpet cutter, comprising:

a blade holder carrying a carpet-cutting blade at one side thereof;

first and second members, one of said members being an outer tube-like member and the other being an inner member supported for turning in and relative to said outer member;

a handle connected to and extending radially beyond said first member;

means for connecting said second member to said blade holder; and

detent means on said first and second members for releasably locking said first member and said handle in different rotational positions relative to said second member.

References Cited

UNITED STATES PATENTS

2,772,474	12/1956	Hill et al.	30—293
2,676,405	4/1954	Schierghofer	30—293

FOREIGN PATENTS

879,804	10/1961	Great Britain.
70,927	1/1893	Germany.

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