

Oct. 27, 1970

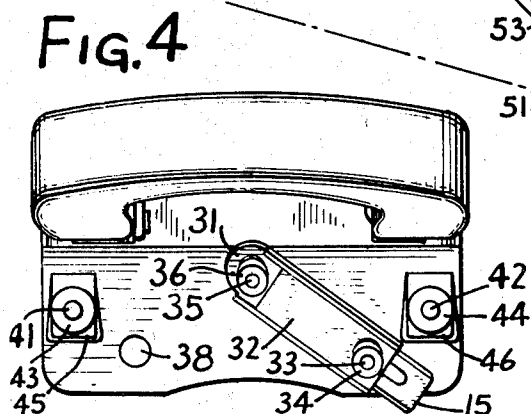
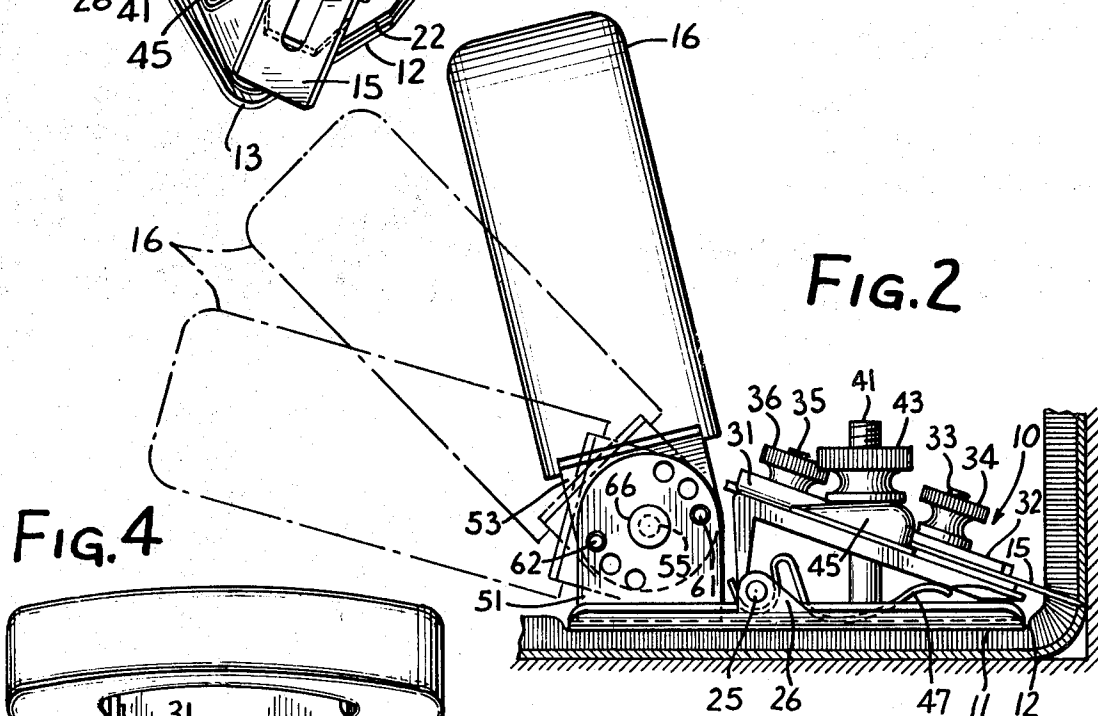
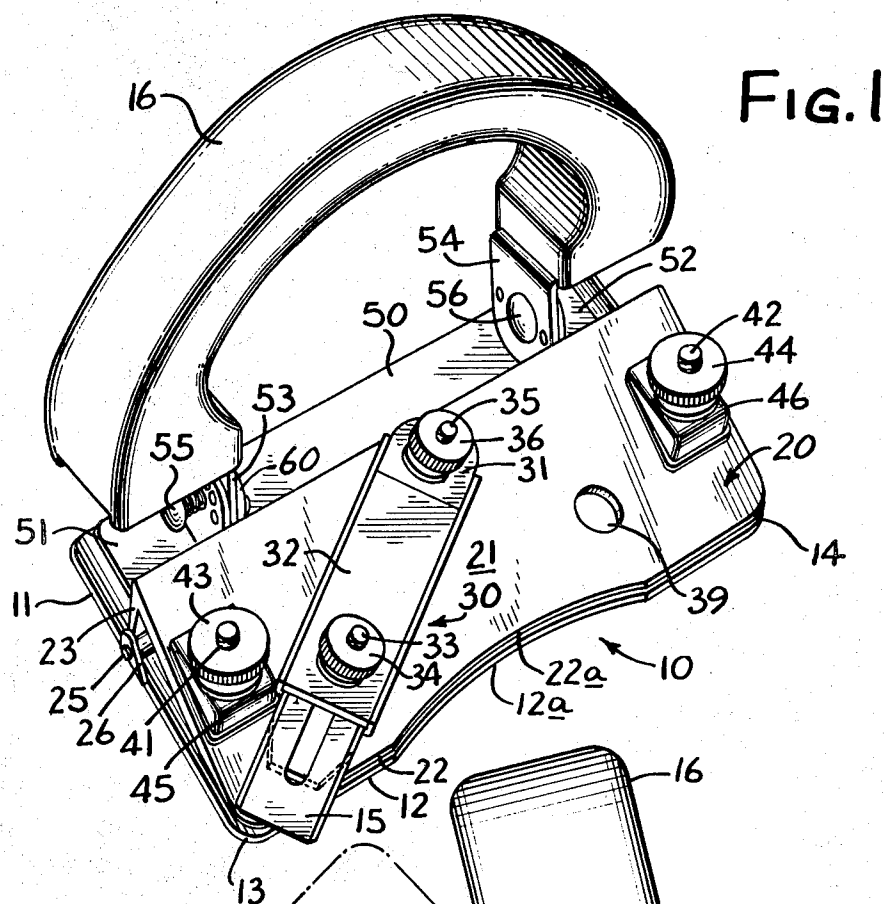
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3,535,786

TRIMMER FOR FOAM-BACKED CARPETING OR THE LIKE

Filed May 22, 1968

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

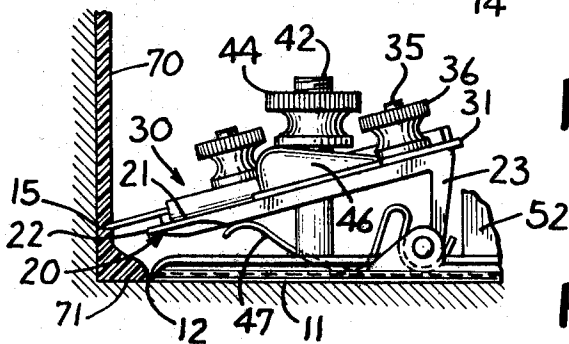
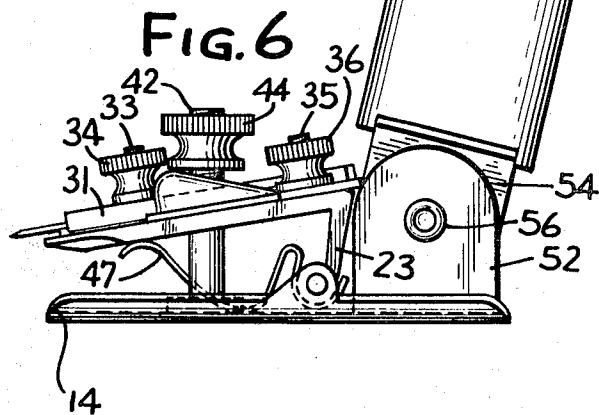
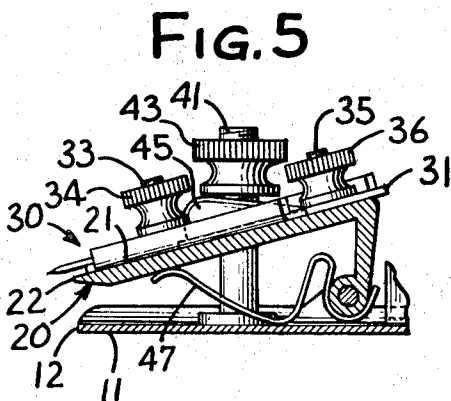
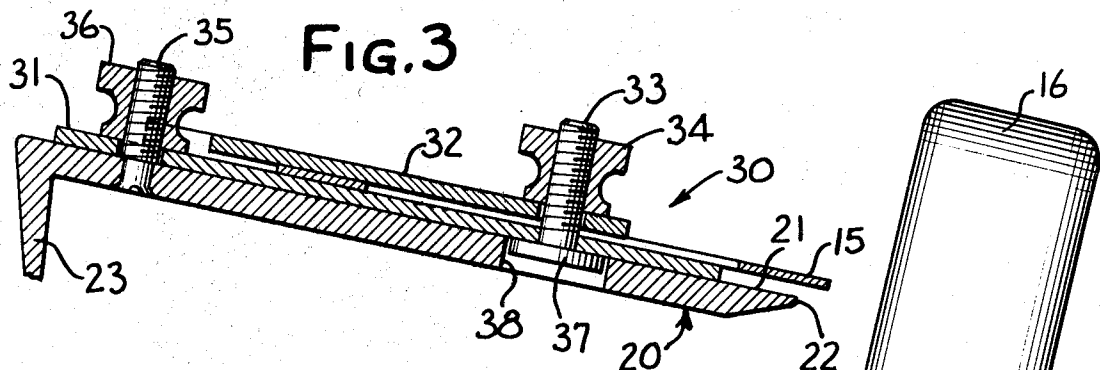
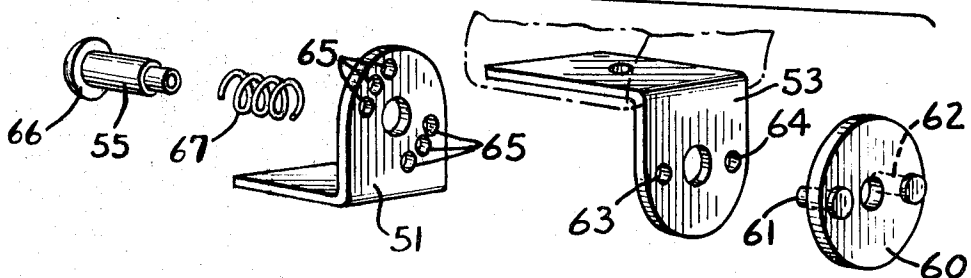


FIG. 8



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TRIMMER FOR FOAM-BACKED CARPETING OR THE LIKE

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6 Claims

ABSTRACT OF THE DISCLOSURE

A carpet trimmer especially intended for foam-backed carpeting which includes a plate for riding along the bent-up edge of the carpet at the wall position with a blade mounted thereon for trimming off the excess or scrap so that the trimmed edge abuts the wall. Means are provided for easily adjusting the tool for proper height and direction of cut and for adjusting the clearance height of the handle. An alternate form of blade holder is disclosed having a guide member of nylon or the like to prevent the blade from scoring the wall and which may be used to convert the trimmer for use with conventional carpet material.

In the laying of carpeting wall to wall it is necessary to trim off the excess to provide a precise fit. In the case of foam-backed carpeting in which a foam pad is permanently secured to the underside of the carpet, conventional carpet trimmers, in which the carpet is introduced into a blade-containing notch in the tool, have proven to be ineffective, the carpet tending to become "hung up" in the notch. It has been found necessary in the case of foam-backed carpeting to press the bent-up edge firmly against the wall during the time that it is being cut, using the wall as an anvil or backstop.

It is an object of the present invention to provide a carpet trimmer which is uniquely suited for foam-backed carpeting and which is capable of cutting it cleanly and accurately. It is a related object to provide a trimmer which holds the carpeting firmly against the wall during the cut but which is easily and simply operated, requiring no special skill or experience to do a neat and workman-like job.

It is one of the objects of the invention to provide a carpet trimmer which is capable of operating in either direction and which is convertible from one direction to the other in a few second's time by release and retightening of a single thumb nut. In this connection it is an object to provide a bidirectional trimmer which uses a single blade and which does not require touching or adjusting the blade itself for use of the trimmer in opposite directions and in which there is no risk of the blade slipping out of position in the blade holder upon failure to adequately tighten it upon changing direction of cut. On the contrary, it is an object to provide a trimmer in which the blade remains in its fixed and seated position in the tool without necessity for loosening it until replacement becomes necessary.

It is another object to provide a carpet trimmer which may be used both for foam-backed carpeting and for carpeting having a conventional backing of jute or the like.

It is a further object to provide a carpet trimmer for foam-backed carpeting which is more effective and versatile than trimmers previously available but which is of simple construction, capable of being manufactured at low cost and presenting a clean attractive and functional appearance.

Other objects and advantages of the invention will become apparent upon reading the attached detailed description and upon reference to the drawings in which:

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FIG. 1 is a perspective view of a carpet trimmer constructed in accordance with the invention;

FIG. 2 is an end elevation of the trimmer of FIG. 1 in the act of trimming foam-backed carpeting of typical thickness;

FIG. 3 is an enlarged fragmentary section taken through the blade holder in FIG. 1;

FIG. 4 is a plan view showing the blade holder in its alternate position;

FIG. 5 is a fragmentary section showing the profile of the biasing spring and taken along the line 5—5 in FIG. 1;

FIG. 6 is an end elevation showing the trimmer adjusted for cutting of the carpet at greater height than in FIG. 1;

FIG. 7 is a fragmentary end elevation showing the trimmer used for cutting off the cove on a section of plastic baseboard prior to installation of the carpeting; and

FIG. 8 is an exploded view showing the handle adjusting means.

While the invention has been described in connection with a preferred embodiment, it will be understood that I do not intend to be limited to the particular embodiment shown but intend on the contrary to cover the various alternative and equivalent constructions included within the spirit and scope of the appended claims.

Turning now to the drawings, FIG. 1 shows a carpet trimmer 10 having a base plate 11 in the form of a flat plate of metal, the bottom of which may be either smooth or longitudinally ridged for riding along on the surface of the carpet. The base plate has a working edge 12 terminating in corners 13, 14. As shown in FIG. 1, the blade 15 extends beyond the working edge in one of the corner positions. The tool is guided endwise in use by an arched handle 16 which may, for example, be formed of smoothly finished wood.

In accordance with the present invention a supporting plate is provided for the cutting blade, spaced above the base plate in a downwardly angled position and having a longitudinal hinge connection with the base plate for adjusting the effective cutting height of the blade. More specifically in accordance with the invention, means are provided for mounting the blade holder flatly against the supporting plate in alternate symmetrical positions in which the blade occupies one corner position or the other depending upon the desired direction of cut. Thus, referring to the drawings, a blade supporting plate 20 is provided having a sloping or angled surface 21 and terminating in a working edge 22 which is parallel to and slightly spaced above the working edge 12 of the base plate. Preferably the supporting plate is of L-shaped cross section, with the body comprising the longer leg of the L and with the shorter leg of the L forming an integral mounting portion 23 which extends downwardly toward the base plate.

For the purpose of hinging the supporting plate to the base plate, the mounting portion 23 has a longitudinally extending bore for accommodating a pin 25, the ends of the pin being received in hinge brackets 26, in the form of small, bent-up tabs at the opposite ends of the base plate.

To mount the blade 15, a blade holder 30 is provided formed of a shallow, trough-like receiving member 31 and a blade cover piece 32. A screw 33 permanently mounted in the member 31 carries a clamping nut 34 for the purpose of clamping the assembly together with the blade 15 securely sandwiched inbetween.

For clamping the blade holder 30 flatly against the supporting plate 20 in its alternate positions, an upwardly projecting mounting screw 35 is permanently mounted along the upper edge of the sloping surface 21 in a position which is centered, end to end. The screw 35

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registers with a hole formed in the upper end of the blade holder member 31 and has a clamping nut 36 screwed on the end. To insure that the blade holder is securely held in one of its two alternate positions, a detent is used, which in the present instance is formed of a downwardly extending projection or embossment 37 on the underside of the member 31 which selectively registers in apertures 38, 39 formed in the supporting plate. It is found that because of the downward angling of the blade, the pressure applied to the blade holder is such as to urge the locating embossment 37 firmly into one or the other of the selected apertures 38, 39 so that the single clamping nut 36 at the upper end of the blade holder suffices to maintain the blade in position under all conditions of use. The blade holder is always positioned at the "trailing" corner as the tool is moved along, and since the blade occupies the corner position, the tool can start its cut in tight corners.

To adjust the height of the blade the supporting plate is rocked in one direction or the other about the hinge axis to an adjusted working position. This adjustment is brought about in the present instance by providing adjusting screws 41, 42 which project upwardly from the base plate and which are engaged by clamping nuts 43, 44. The latter bear against leveling wedge blocks 45, 46 which may be either of metal or plastic and which are secured to the face of the supporting plate. To maintain the supporting plate biased upwardly against the adjusting nuts, a leaf spring 47 is provided under the supporting plate. This leaf spring is preferably bent into serpentine shape as shown and one end is hooked under the lower edge of the supporting plate to keep it in place (see FIG. 5). Screwing or unscrewing of the nuts 43, 44 in step with one another enables the supporting plate, and cutting blade, to be positioned either at a low cutting level as shown in FIG. 2 or at a higher level as shown in FIG. 6. The setting will depend upon the total thickness of the carpet, including the foam backing, the cut being made, in general, somewhat lower for a thick carpet than for a carpet of thin construction and limited nap height.

In carrying out the present invention the hinge axis is preferably located in the central region of the base plate and in any event spaced forwardly by a sufficient amount so that the space in back of the supporting plate defines a mounting shelf indicated at 50. Secured to this mounting shelf by spot welding or the like are upwardly extending angle brackets 51, 52 which are pinned to similarly formed brackets 53, 54 on the handle by means of pivot pins 55, 56. For the purpose of locking the handle in an adjusted, angled position, a simplified locking mechanism is provided including a locking member 60 of disc shape (see FIG. 8), mounted upon the central pin 55 and which includes locking pins 61, 62. The latter pins engage two registering openings 63, 64 in the bracket 53. Three pairs of openings, indicated at 65, are provided in the cooperating bracket 51 on the base plate permitting a total of three angles of tilt as shown in FIG. 2. In normal use, the handle will occupy a nearly upright position, but when working in spaces having limited overhead clearance, as for example, in the kick space under a typical kitchen cabinet, it is convenient to lower the handle to near-horizontal position. For the purpose of unseating the locking member 60, an operating button 66 is provided at the outer end of the pin 55 maintained in its outwardly extending position by a small coil spring 67. Thus, to change from one angle to another it is a simple matter to press the button 66 to withdraw the locking pins, following which the handle may rock to a new position and the button released to register the pins in a new pair of holes.

One of the distinguishing features of the present tool is that the working edges 12, 22 of the base plate and blade supporting plate are not only parallel but vertically aligned with one another so that pressure is applied

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to the edge of the carpet during cutting along two spaced lines, the spacing serving to maintain the edge of the carpet firmly pressed against the wall. It is found that cutting is easier depending upon the degree to which the carpet is held firmly and flatly against an "anvil" supporting surface. Moreover, since the hinge axis is at a relatively low level, and spaced remotely from the working edges 12, 22 to the extent possible, the working edges will be substantially maintained in vertical alignment over a wide range of adjustment of the supporting plate. It is, moreover, one of the features of the construction that the base and supporting plates are cut out as indicated at 12a, 22a along the line of a shallow arc to provide matching relief spaces which reduce the drag on the carpet as the tool is moved along and which tend to concentrate the lateral force at the corners of the base plate in the regions where the cutting takes place.

In adjusting the cutting height, it is convenient to start the cut by making a short insertion with a knife at the corner of the room, with the trimmed edge thus formed being bent down flat to check the fit. The blade of the tool may be placed in the cut, and the supporting plate 20 may be adjusted either upwardly or downwardly to matching height. Following this the tool is simply pushed along the wall, pressing the upwardly bent edge of carpet against the wall to produce a clean and continuous cut. Accuracy of cut is particularly important with foam-backed carpeting since it cannot be stretched to fit as is the case with conventional carpeting.

The term "foam-backed carpeting" has been employed simply for convenience and it will be understood that this term is intended to cover carpeting having a permanently attached resilient pad formed of rubber or resilient plastic compositions. The term "corner" as applied to the base plate has been used to refer to the limits of the plate and such corners may be rounded to any desired radius. The term "hinge" is intended to cover any joint which permits adjustment in the angling of the blade supporting plate.

I claim as my invention:

1. In a carpet trimmer, the combination comprising a base plate having a working edge terminating in corners, a blade supporting plate spaced above the base plate, a handle secured to the base plate rearwardly of the supporting plate, a double edged blade having a longitudinal slot therein, means for hinging the supporting plate to the base plate about a longitudinally extending hinge axis and for holding the plate in a downwardly angled adjusted position, a blade holder flatly mounted on said supporting plate and having a first clamping screw for clamping the blade so that it extends endwise a variable amount from one end of the holder to expose both of the edges, means including a second clamping screw centered along the rear edge of the supporting plate for pivotally engaging the other end of the blade holder, and registering means for holding the blade holder in alternate positions in which the respective edges of the blade project at an angle beyond the working edge of the base plate adjacent the respective corners thereof.

2. The combination as claimed in claim 1 in which the first clamping screw projects downwardly from the blade holder and in which the supporting plate has alternate registering holes for receiving the projection portion of the first clamping screw to hold the blade holder in its respective adjusted positions when the second clamping screw is tightened.

3. In a carpet trimmer, the combination comprising a base plate having a working edge terminating in corners, a blade supporting plate spaced above the base plate and having a working edge parallel to the edge of the base plate, a handle secured to the base plate adjacent the rear edge of the supporting plate, means for hinging the supporting plate to the base plate about a longitudinally extending axis and for holding the supporting plate in a

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downwardly angled adjusted position, a blade holder formed of a flat strip of metal having a blade projecting from the end thereof presenting oppositely facing sharpened edges, said blade holder being pivoted to the supporting plate for lateral swinging movement, said pivot point being located along the rear edge of the supporting plate and centered between the ends thereof, said blade holder having a downwardly extending projection spaced from the pivot and said supporting plate having registering openings for receiving the projection and thereby locking said blade holder in alternate positions in which the blade projects at an angle beyond the working edge of the base plate at the respective corner positions thereof.

4. In a carpet trimmer, the combination comprising a base plate having a working edge terminating in corners, a blade supporting plate, said blade supporting plate being of L-shaped cross section with the short leg of the L being hinged to the base plate for rocking movement about a longitudinally extending hinge axis and the long leg of the L forming a blade-mounting surface which is angled downwardly toward the working edge of the base plate, a blade holder having a blade projecting from one end thereof, means for mounting the blade holder flatly against the mounting plate in symmetrical angled positions in which the blade extends beyond the working edge of the base plate adjacent the corners thereof for cutting an upstanding edge of carpet upon movement of the trimmer in respectively opposite directions, and means for adjusting the mounting plate about the hinge axis for varying the height of the blade above the level of the base plate for trimming of the upturned edge of carpeting for fitting to the wall of the room.

5. In a carpet trimmer for trimming the upturned edge of carpeting to fit the walls of a room, the combination comprising a base plate having a working edge terminating in corners, a blade supporting plate spaced above the base plate, said supporting plate having a working edge and having a longitudinal hinge connection with the base plate along its opposite edge, adjusting means interposed between the base plate and supporting plate for holding the supporting plate in a downwardly angled position in which the working edge of the supporting plate is parallel to, and closely spaced above, the working edge of the base plate, a blade holder flatly mounted on said supporting plate and having a blade sharpened at its

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opposite edges projecting from one end thereof, and means on the supporting plate for holding the blade holder in alternate symmetrically angled positions in which the blade projects beyond the working edges of the plates adjacent the respective corner positions, said plates having matching relief in the form of a shallow arc at the central portions of the working edges.

6. In a carpet trimmer for trimming the upturned edge of a piece of carpeting for snug fitting against the wall of a room, the combination comprising a base plate having a working edge terminating in corners, a blade supporting plate spaced above the base plate and having a working edge paralleling the working edge on the base plate, a hinge connection extending longitudinally along the central portion of the base plate and engaging the rear edge of the blade supporting plate to define a clear shelf on the base plate, a blade holder flatly mounted on the supporting plate and having a blade sharpened along its opposite edges and projecting from the end thereof, means for securing the blade holder on the supporting plate in alternate symmetrically angled positions in which the blade extends beyond the working edges of the plates in the regions of said corners, adjustable means for holding the supporting plate at a shallow angle with respect to the base plate so that the working edges of the plates are in close vertical spacing and so that the working edges simultaneously press against the upturned edge of the carpet to hold it firmly against the wall as it is acted upon by the blade, and an upwardly extending handle mounted on the shelf portion of the base plate.

References Cited

UNITED STATES PATENTS

2,133,087	10/1938	Ericsson	30—321 X
2,141,565	12/1938	Stilson	30—321
3,382,579	5/1968	Prater	30—293
3,395,453	8/1968	Prater	30—293

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