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R. J. DEMERS

2,197,207

POWER TOOL FOR REMOVING OLD PUTTY

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Fig. 1.

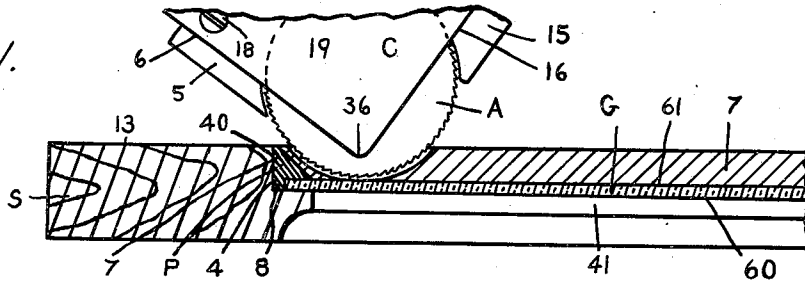


Fig. 2.

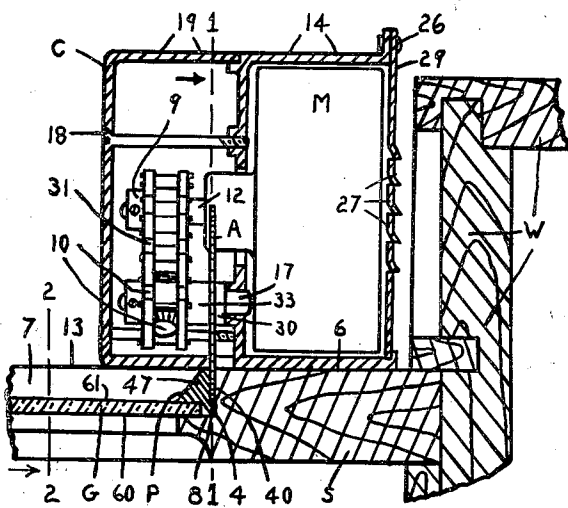
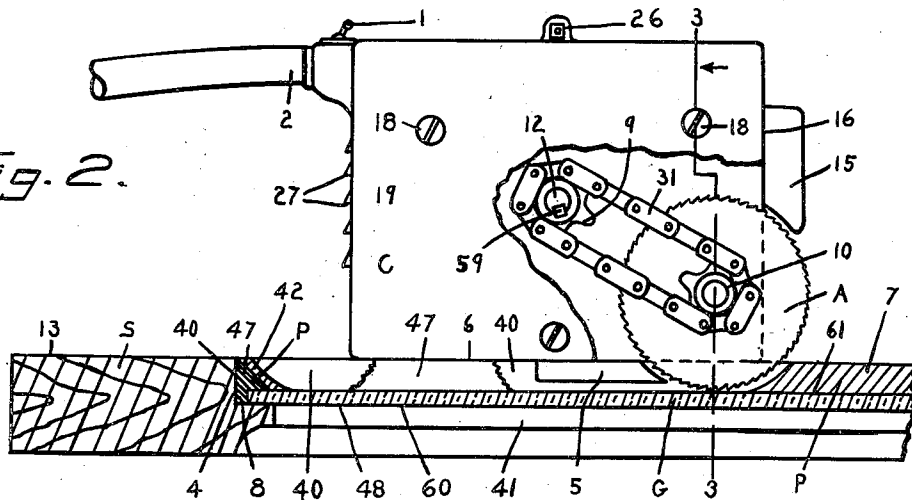


Fig. 3.

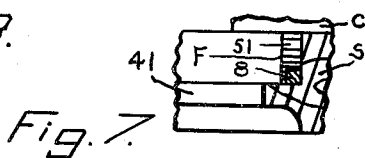


Fig. 7.

Fig. 4.

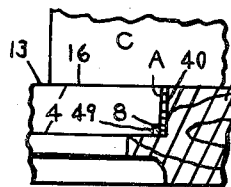
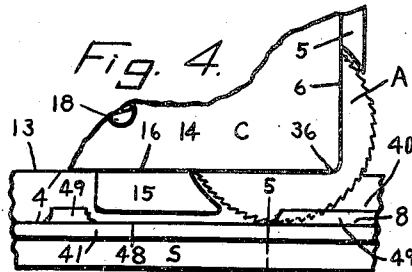


Fig. 5.

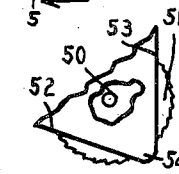


Fig. 6.
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POWER TOOL FOR REMOVING OLD PUTTY

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10 Claims. (Cl. 90—12)

This invention is a power driven tool especially adapted for removing the old and hardened putty when it is desired to remove the glass from a window sash.

Putty, which is almost universally used in tightly holding window glass in a sash, is usually on the outside, and gets very hard with time. Its exposed face is usually at an angle with the glass and with the adjoining sash, and this, together with the fact that it sticks very closely to the wood of the sash, makes the operation of removing the putty with a hand tool, such as a chisel, not only very slow but the sash itself is cut and marred.

It is practically impossible to make a perfect fit between the glass and the sash, and there are certain places between the edge of the glass and the sash into which the putty penetrates and becomes hard. If the first pane is broken and is removed, these edge deposits of putty must be carefully removed because the next pane will not be exactly the same size and shape, and the removing of these small edge deposits is very troublesome with a hand tool.

As glass wedges to fit the pane of glass in the sash rabbets and thin metal triangles to help hold the pane to the sash are often used, the putty cutting member must be capable of cutting metal and breaking glass wedges if necessary.

This device is a small and compact hand tool which includes a power driven circular cutting or grinding member, preferably a metal cutting circular saw which is so positioned that it projects a different distance from each of two adjoining flat faces so that the lesser projection can cut the putty down to the glass, and after the glass is removed, by merely turning the tool, the greater projection of the saw can cut out this troublesome edge deposit of putty, leaving the rabbet of the sash clean and free from putty its entire depth except for a short distance from each corner.

Preferably the cutting member also projects a short distance beyond the adjoining edge between the two guide faces, and preferably there is a direction guide which projects from each guide face on the other side of the cutting member from the adjoining edge.

This device is so convenient and easily operated that a pane of old glass can readily be removed from a window without removing the sash from the window frame.

The tool is so compact and so thin that its depth guide will fit between the edge of the sash

and the frame and it can be held, turned and fully controlled in one hand.

In the drawing, Fig. 1 is a vertical cross-section of a window sash as on the line 1—1 of Fig. 3, showing the tool, not in section, as a cut is started.

Fig. 2 is a view similar to Fig. 1 except that the sash at the left is shown on the line 2—2 of Fig. 3 and at the right on the line 1—1, some parts being broken away for clearness.

Fig. 3 is a vertical cross-section as on the line 3—3 of Fig. 2, parts of the tool being shown in section and other parts in full lines.

Fig. 4 is a fragmentary view similar to Figs. 1 and 2 but after the glass has been removed and with the deep cutting edge of the saw in action.

Fig. 5 is a vertical sectional view as on the line 5—5 of Fig. 4.

Fig. 6 is a view similar to part of Fig. 1 of a modification showing the angles between the depth guide faces as acute.

Fig. 7 is a view similar to Fig. 5 of a thick saw in place of a thin saw.

In the drawing, W is a window frame of any standard type in which, as shown, is a sash S which is a right angular rabbet 4 which extends all the way around.

In forming rabbet 4, a rib or ridge 41 is left, with a face 48 against which the face 60 of a pane of glass G rests. The other face 40 is at a right angle to 48. As the glass G cannot fit perfectly, the putty P fills in the space at 8 and holds the glass in place as it extends from the edge of the face 13 of sash S at a slope down to the surface 61 of the glass G. Putty P includes the narrow edge deposit 8 of varying widths, but of the thickness of the glass, the part 7 above 8 which is to be cut away, and the triangular part 47 which remains and which is removed with the glass G.

The tool is housed in a casing C which includes a motor casing 14 for the motor M, and a chain and saw housing 19, as well as a back cover plate 29 which preferably has air ventilators 27.

The parts of the casing C are held together by bolts such as 26 and screws 18, so that they can be quickly assembled and disassembled.

The motor M is preferably of the electrical type and current is supplied as by a flexible wire cord 2, there being also preferably a convenient switch 1 to close and open the circuit.

12 is the motor shaft to which a drive sprocket 9 is keyed as by a key 59, and 17 is a stud which carries a driven sprocket 10 which is free to rotate thereon and which may be of any size according to the power and speed desired.

33 are collars which hold this sprocket, and the saw A carried by sprocket 10 revolvably in place on stud 17.

31 is a transmission chain from drive sprocket 9 to driven sprocket 10.

Stud 17 is positioned nearer to the flat depth guide face 6 than to the flat depth guide face 16 of the casing C and is also a different radial distance from their adjoining edge 36 so that the depth of a saw cut can be regulated by tilting the tool.

5 and 15 are flat direction guides, each of which is in line with the saw and each of which projects from a different face 6 or 16, and each of which may be of a different length and depth. These are preferably of about the same thickness as the cutting part of the saw so that after a cut has been once started, each will guide the saw along the side 40 of the rabbet 4.

The saw A and the direction guides 5 and 15 are preferably near the middle of the depth guide faces 6 and 16 or, in any event, are far enough away from the side edges so that there is sufficient space on each side for part of the depth guide face 6 or 16 to rest smoothly on part of the face 13 of a sash such as S to keep the tool steady and the saw at right angles to face 13.

As shown in Fig. 6, the stud 50 or other device for carrying the saw, such as 51, can be a different distance from the depth guide face 52, than from depth guide face 53, and it may not project from the adjoining edge 54 and the direction guides 5 and 15 can be omitted entirely.

In using the device, it is often desirable, as shown in Fig. 1, to carefully start the cut near the corner by tilting the tool and then, as shown in Fig. 2, after a cut of sufficient length has been made, to turn the tool so that the shallow direction guide 5 will follow the cut and keep the saw accurately on the line. After the first cut on all four sides, what little putty 43 remains at the corner can easily be removed and the glass with putty 47 can then be removed, after which the cutting process is repeated with the edge of the saw which projects the greater distance from face 16, using the direction guide 15 to keep it true, as shown in Figs. 4 and 5.

By having the depth guide faces 6 and 16, all the putty can be removed with no adjustment.

The circular cutting or grinding member, which is preferably a metal cutting disk but might be an emery wheel, can be of any desired thickness such as one-sixteenth or one-eighth of an inch, as shown at F in Fig. 7, but its teeth should not project like a wood saw and the direction guides should be the same thickness or a trifle thinner than the saw itself.

As shown in Fig. 6, the depth guide faces need not be at right angles or perpendicular to each other. Preferably the depth guide faces are at a right or acute angle with each other as this allows the operator to see where he is cutting.

I can use a thin saw such as A, Figs. 1, 2, 3, 4, 5, which not only leaves a part 47 of putty P to be removed with the glass, but leaves a part 49 of the edge deposit 8, as shown in Figs. 4 and 5, to be removed by hand, or I can use a thicker saw such as F in Fig. 7, which is wider than 8 and removes it entirely.

I claim:

1. In a sash putty cutting tool, the combination of a casing having two adjoining flat depth guide faces which are substantially perpendicular to each other; a circular saw which is so

journaled in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face and a third distance from their adjoining edge; a motor in the casing for driving the saw; and direction guides, each of which is in line with the saw and projects from a different depth guide face.

2. In a sash putty cutting tool, the combination of a casing having two adjoining fixed flat depth guide faces which are substantially perpendicular to each other; a circular saw which is so journaled in bearings fixed in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face; and a motor in the casing for driving the saw.

3. In a sash putty cutting tool, the combination of a casing having two fixed flat depth guide faces; a circular cutting member which is so journaled in bearings fixed in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face; and means for driving the saw.

4. In a sash putty cutting tool, the combination of a casing having two adjoining fixed flat depth guide faces at an acute angle with each other; with a circular cutting member which is so journaled in bearings fixed in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face; a motor in the casing for driving the saw; and direction guides, each of which is in line with the saw and projects from a different depth guide face.

5. In a sash putty cutting tool, the combination of a casing having two adjoining fixed flat depth guide faces; with a circular cutting member which is so journaled in bearings fixed in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face; means in the casing for driving the saw; and direction guides, each of which is in line with the saw and projects from a different depth guide face.

6. In a sash putty cutting tool, the combination of a casing having two fixed flat depth guide faces which extend at angles with each other; with a circular cutting member which is so journaled in bearings fixed in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face; and means for driving the saw.

7. A portable electric sash putty cutting tool comprising a housing provided at its front with a downwardly inclined fixed flat depth guide face and at its bottom a flat fixed depth guide face at an angle therewith, a circular saw journaled in fixed bearings in the housing and projecting different distances from the two flat fixed depth guide faces, and a controllable electrically operated driving mechanism operatively connected with the saw for driving it.

8. In a sash putty cutting tool, the combination of a casing having two adjoining fixed flat depth guide faces which are substantially perpendicular to each other; a circular saw which is so journaled in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face and a third distance from their adjoining edge; an electric motor in the casing for driving the saw; and a switch on the outside of the casing for starting and stopping the motor.

9. In a sash putty cutting tool, the combination

tion of a casing of a size to be grasped by the hand and connected to electric conductors for a motor in the casing; with a switch accessible to the hand to make and break the circuit through
5 said conductors; said electric motor in the casing for driving a saw; said saw journaled in the casing and operable by the electric motor; two major depth guides, both lying in the same plane parallel with the axis of the saw and on each
10 side thereof, and two minor depth guides, each lying in the same plane on each side of the saw and parallel with the axis but at a less distance therefrom than the major depth guides, the planes of the major and minor depth guides be-
15 ing at an angle with each other and approach-

ing each other at a line on the opposite corner of the casing from the switch.

10. In a sash putty cutting tool, the combination of a casing having two adjoining flat depth guide faces which are substantially perpendicular to each other; a circular saw which is so journaled in the casing that its cutting edge projects perpendicularly different radial distances from proximate the middle of each guide face and a third distance from their adjoining edge; 5
10 a motor in the casing for driving the saw; and a direction guide which is in line with the saw and which projects from a depth guide face.

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