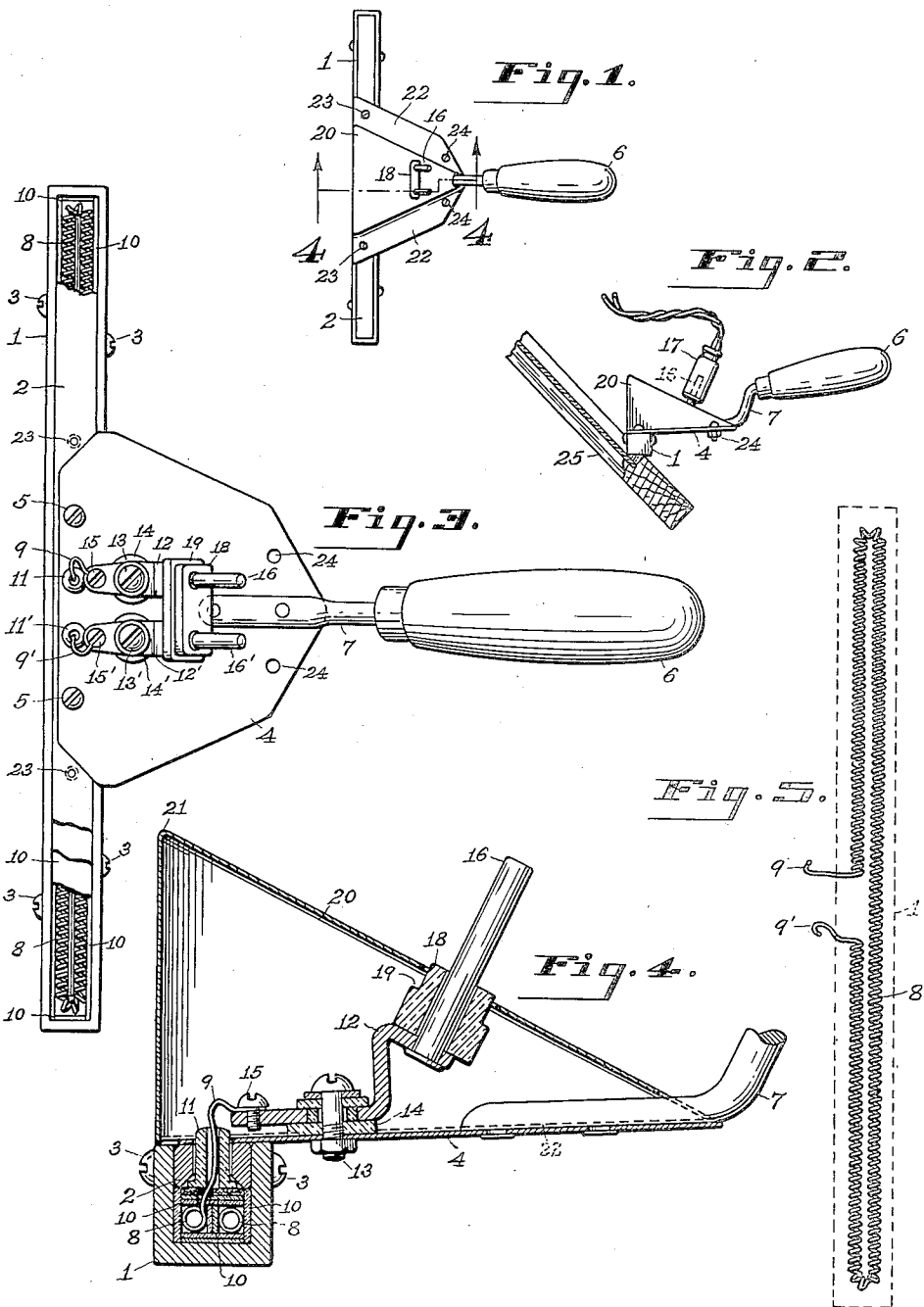


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ELECTRIC PUTTY HEATER
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ELECTRIC PUTTY HEATER

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7 Claims. (Cl. 219—21)

This invention relates to means for applying heat to set and hardened putty, and the like, in the sash lights of windows and other glazed frames.

5 Old hard-dried putty and paint thereon is softened by heating it, but it is difficult to apply properly and uniformly the requisite degree of heat to the putty filler in glazed frames such as window sashes. Thus, the main objects of my present invention are to produce a convenient and efficient implement for heating glaziers' putty filling so as to soften, loosen and condition it for ready removal; to provide in the device a heating iron of considerable length with means 10 for heating it electrically as required; and to arrange the implement so that it can be produced and marketed in the form of a hand tool capable of ready manipulation on its work, and susceptible of caloric regulation.

20 Further objects of the invention are the provision of means for facilitating the removal and replacement of the electrical resistance element of the heating iron; and the adaptation of the cover plate to serve both as a housing over the electrical conductors, and as a basal surface for supporting the tool when at rest.

Other objects and advantages will become apparent from the following description of a preferred embodiment of my invention, reference being had to the accompanying drawing, in which—

30 Fig. 1 is a plan view of the tool.

Fig. 2 is a side view of the same showing electrical connection, and its application to a window sash.

35 Fig. 3 is a plan view of the device with the cover plate removed, and parts of the closure and insulation of the heater-iron being broken away.

Fig. 4 is an enlarged sectional elevation taken on line 4—4 of Fig. 1.

40 Fig. 5 is a detailed top view of the resistance coil of the heater.

In the figures of the drawing the reference numeral 1 indicates the body of the heater-iron, which consists of an elongated metal channel square or rectangular in cross section having rather thick walls and closed ends. A metallic closure lid 2 of rectangular section is closely fitted within and flush with the top of the channel iron 1, being removably secured in place by the screws 50 3, which latter may have countersunk instead of projecting heads if preferred.

A flat metal handle plate 4 projects rearwardly in tapering form from the top of the mid-section of the heater-iron 1, being removably fastened thereto at its front edge by screws 5 thread-

ed into the lid 2. T handle 6 of wood, or other suitable material, is secured on a reversely bent metal stem 7 resembling a mason's trowel handle, and said stem is riveted as shown, or may be welded, at its forward end to the projecting part 5 of the plate 4. This completes the main framework of the tool.

The electrical resistance element, as now preferred, consists of a helical coil of nichrome, or other suitable resistance wire 8, as shown in Fig. 10 5, said coil extending substantially from end to end of the heater-iron channel 1, and being doubled back upon itself to lay flatwise in a twofold form, and to bring its terminals 9 and 9' near together midway of the heater-iron. Strips of 15 mica, or other reliable insulating and heat resisting material, are placed between and surrounding the folds of the coiled wire 8, as shown at 10 in Figs. 3 and 4. The terminals 9—9' lead up respectively through insulating bushings 11 20 and 11' of well known type set in properly spaced and registering apertures through the heater lid 2 and the plate 4.

Duplicate bracketed conductors and terminal supports 12 and 12' are set side by side, insulated, 25 and secured to the handle plate 4 by bolts 13 and 13' respectively. The said supports are flat metal bars bent up at right angles, and having their upper ends bent reversely down to an acute angle, like a distorted Z. The bolts 13—13' pass through 30 insulating washers 14—14' which separate the plate 4 from the bracket bars 12—12', and they also pass through insulating bushings in and washers above said bars, as shown, so that the bars have no electrical connection with the plate. 35

Each forward end of the bars 12—12' is provided with a binding screw 15—15' for connecting the terminals 9—9' of the heater coil respectively. Thus the heater coil may be disconnected and replaced without disturbing the conductors 40 12—12'. The sloping rear ends of the said conductor bars have fixedly secured respectively thereto terminal pins 16—16' adapted to engage and disengage a conventional plug socket 17, such as shown in Fig. 2, for supplying electric 45 current when required. A rectangular block 18 of hard insulating material provided with a pair of registering perforations is slipped over the terminal pins 16—16' linking them together and resting against the bars 12—12'; the upper part 50 of said block being preferably reduced in area to a shoulder 19, as shown in Figs. 3 and 4.

A thin sheet metal cover or housing 20 is provided, the body of which rises vertically flush with the front face of the heater-iron 1 to an acute 55

angled ridge at 21, thence sloping normal to the terminal pins 16, and with tapering side walls, to meet the rear edge of the plate 4. The side walls of the said cover are flanged outward at their bases, as at 22, to the contour of the plate 4, but the front corners of said flanges are extended over the heater-iron, and retaining screws at 23 pass therethrough and are tapped into the lid 2. Small bolts at 24 near the rear of said flanges secure the cover to the plate 4. An aperture is provided in the sloping top of the housing 20 through which the reduced top of the insulating link block 18 projects, and its shoulder 19 keeps the block in place. The said housing is also notched over the handle stem 7, as shown.

Thus the housing 20 prevents contact of the operator with live electric conductors; and its angular shape adapts the implement to stand at rest upon the front faces of the housing and heater-iron as a basal supporting surface, while it is heating up or cooling off.

In operation the device becomes heated and ready for use within half a minute of plugging in the flexible conductor cord socket 17, and its heater-iron is then pressed lightly against the putty filling of a window sash 25, as indicated in Fig. 2. The hard putty soon softens, whereupon it is readily scraped out while the heater is applied to another length of old putty. Obviously the heater-iron in this construction, by adapting the resistance coil thereto, can be made of any length within quite variable limits without deranging its capacity to function properly.

I further point out and distinctly claim as my invention—

1. In a putty heater, a heater-iron of rectangular cross-section comprising an elongated channeled bar with an open top and closed ends, a closure lid removably set flush with and secured within the walls of said iron by lateral screws, an electric resistance coil insulated and inclosed in said iron, a flat handle-plate affixed to said lid and extending laterally therefrom, and a mason's trowel handle fixedly secured to the projecting part of said handle-plate.

2. A putty heater comprising a hollow straight much elongated heater-iron of rectangular shape and having a removable lid set flush therein, a helical coil of resistance wire doubled back on itself and insulated within said heater-iron having its terminals led out through the mid-section of said lid, a flat handle-plate removably secured upon said lid and having its body extended laterally from the heater-iron, and a mason's trowel

handle fixedly secured to the projecting part of said handle-plate.

3. In a putty heater, a hollow bar-like heater-iron of rectangular cross-section throughout having a removable lid, an electric heating element therein, a handle-plate extending laterally from the heater-iron, a pair of conductor brackets carrying terminal pins and removably secured in insulation upon said handle-plate, and binding screws carried by and adapted to connect said brackets to the terminals of the heating element respectively.

4. In a putty heater, a hollow bar-like heater-iron of rectangular cross-section having a removable lid, an electric heating element therein, a handle-plate extending laterally from the heater-iron, a pair of insulated brackets mounted upon said handle-plate in circuit with the heating element, said brackets having upright shanks with tops bent down acutely to the rear, and projecting terminal pins fixed respectively to the bent top end portions of said brackets.

5. In a putty heater, a hollow bar-like heater-iron of rectangular cross-section having a removable lid and an electric heating element, a handle-plate extending laterally from the heater-iron, a pair of insulated brackets mounted upon said handle-plate in circuit with the heating element and provided at their upper ends with terminal pins respectively rising therefrom at an angle to the rear, and a block of rigid insulation embracing the roots of said pins and shackling the ends of said brackets.

6. In a putty heater having an elongated rectangular heater-iron containing an electric heating element, a flat handle-plate extending laterally from the top face of the heater-iron, electrical connections for the heating element removably mounted upon the handle-plate, and a covering housing for said connections removably secured to the handle-plate and heater-iron, the terminals of said connections projecting through the housing.

7. In a putty heater having an elongated rectangular heater-iron containing an electric heating element, a handle-plate extending laterally from the top face of the heater-iron, terminal connections for the heating element mounted upon the handle-plate, and a wedge-shaped housing over said connections removably secured to the handle-plate and heater-iron, the front of said housing rising flush with the heater-iron to a rearwardly sloping roof through which said terminal connections project.

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