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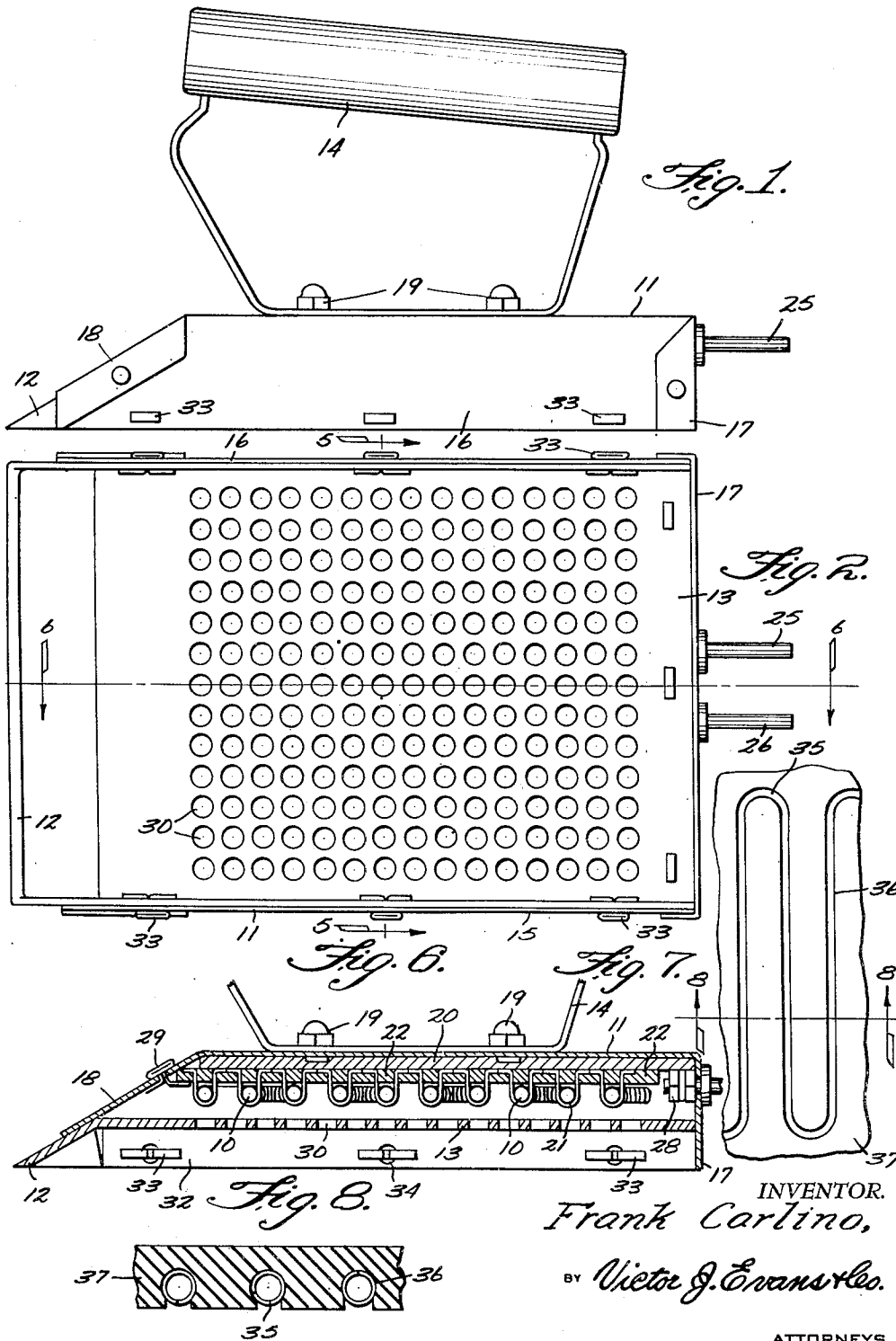
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ELECTRICALLY HEATED PAINT REMOVER

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2 Sheets-Sheet 1



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2,497,535

ELECTRICALLY HEATED PAINT REMOVER

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6 Claims. (Cl. 219—29)

1

This application is a continuation of my application for patent for electrically heated paint removers, Serial No. 8,709, filed February 16, 1948, now abandoned.

This invention relates to paint removers of the type which combines electric resistance elements for developing heat which is directly upon the painted surface in order to bring the paint to a plastic condition and a scraper for the removal of the paint so conditioned.

In the constructions heretofore proposed there has been no adequate provision for the protection of the heating elements against the accumulation upon them of flying particles liberated from the painted surface and no adequate provision for maintaining the scraper at a temperature which will insure the effective removal of the softened or plasticized paint.

The object of the invention is to provide a paint remover of the type set forth wherein the electrical heating elements are adequately protected and the means for the protection of the heating elements serves to distribute the heat uniformly to the painted surface and also serves to conduct the heat in adequate degree to the scraper, the construction otherwise being adequately protected against the heat developed by the heating elements.

In the accompanying drawing:

Figure 1 is a view showing a side elevation of the paint remover.

Figure 2 is a view looking forward toward the under side of the paint remover.

Figure 3 is a plan view of the paint remover.

Figure 4 is a view similar to that shown in Figure 2 with the protecting grid under the heating element removed.

Figure 5 is a cross section through the paint remover taken on line 5—5 of Figure 2.

Figure 6 is a longitudinal sectional view through the paint remover taken on line 6—6 of Figure 2.

Figure 7 is a fragmentary bottom plan view of an insulating plate which is included in the modified construction and is formed with a channel to accommodate the heating element.

Figure 8 is a sectional view on the line 8—8 of Figure 7.

The heating element 10, of any suitable convoluted form, is arranged within a casing 11 having an outer wall 11a in a plane parallel to the plane of the surface from which the paint is to be removed, side walls 15 and 16, a rear end wall 17, and a front end wall which, in the construction shown, includes an outer section 18, directly associated with the walls 11a,

2

15 and 16, and an inner section 12. The section 12 is a continuation of the section 13 and is formed to provide the scraper, for this purpose having an appropriate forward inclination and a blade-like free edge. At its inner side the casing is open, the open area being framed by the walls 15, 16 and 17 and the section 12 and providing for the transmission of radiant heat to the painted surface.

The device is moved over the painted surface in the manner of a sadiron and for this purpose carries a handle 13 suitably secured, for example by screws 19, to the wall 11a.

In order that the wall 11a may be protected from the heat developed by the element 10 a heat insulating plate 20 is interposed between the wall and the element. The element 10 is supported by a plate 22 arranged under the plate 20 and is mounted in suitable eyes or hangers 21 secured to and projecting inward from the plate 22.

The plates 20 and 22 are preferably connected as a unit which is supported in any suitable manner from the walls of the casing. As shown the plate 20 projects at its rear end beyond the plate 22 and the latter projects at its front end beyond the plate 20. The nuts 27 and 28 which secure the contact stems 25 and 26 may be advantageously utilized for the support of the unit at its rear end, the projecting portion of the plate 20 resting upon these nuts; and the front end of the unit is supported by fingers 29 carried by and projecting inward from the front wall section 18, the forwardly projecting portion of the plate 22 resting upon these fingers.

The heating element 10 is adequately protected against the accumulation of flying particles liberated from the painted surfaces by a plate 13 of screen like character, preferably an integral plate having closely associated openings 30 formed by punching. The plate 13 is located inwardly of, and in suitably spaced relation to, the heating element 10 and in a plane parallel to the plane of the wall 11a and is connected to the casing for support. In the construction shown the plate 13 is formed at its sides with inwardly projecting flanges 31 and 32 which adjoin, and are suitably connected to, the respective walls 15 and 16 of the casing, for example by conventional clips 33 which project through aligning openings 34 in the flanges of the plate and the walls 15 and 16.

The scraper 12 is heated to a suitable degree to insure the rapid and thorough removal of all of the loosened plasticized paint. For this pur-

pose the plate 13 is in heat conducting relation to the scraper 12 and is preferably formed integral with it, the scraper 12 projecting from the plate 13 at a suitable forward and downward angle.

The plate 13 is directly subject to the heat developed by the element 10, storing and radiating it, and effects the uniform distribution of heat upon the painted surface in order to loosen and plasticize the paint, such heat being that which is directly delivered by the plate 13 and also the radiant heat of the element 10 via the openings 30. The plate 13 substantially protects the heating element against liberated flying particles of damaging character; and suitable heat, as above explained, is transmitted by the plate 13 to the scraper 12 in order that the latter may operate at a temperature which will insure its rapid and effective action in the removal of paint.

The device is held, or slowly moved, over the painted surface in order to soften and loosen the paint and when this has been sufficiently accomplished over a suitable area the device is given one or more strokes in the manner of a sadiron in order to effect the removal of the softened and loosened paint by the heated scraper 12.

In the modification illustrated in Figures 7 and 8 a heating element 35 is mounted in openings 36 in an insulating plate 37 which may be used in place of the lower plate 22, and it will be understood that a heating element of any suitable type may be used and it may be installed in the casing in any manner.

I claim:

1. An electrically heated paint remover comprising a shallow rectangular-shaped box-like casing with the under side open and with the forward wall inclined, an insulating plate positioned in the upper part of the casing, a heating element suspended below the said insulated plate, and a perforated grid removably mounted in the casing and spaced from and positioned below the said heating element, said grid having a downwardly inclined scraper at the forward end thereof integral therewith and positioned parallel to and in engagement with the inclined forward wall of the casing.

2. In an electrically heated paint remover, the combination, which comprises, a box-like casing with the under surface open and having an inclined forward wall, a handle on said casing, an upper insulating plate positioned against the upper surface of the casing, a lower insulating plate having depending eyes therein, a heating element supported in the said depending eyes, a plug connection for the heating element, a perforated grid with downwardly extending flanges at the sides and having a scraper on the forward edge spaced from and positioned below the heating element, and means removably mounting the said grid and scraper in the casing.

3. An electrically heated paint remover comprising a shallow casing with the under side open, a heating element suspended in the upper part of the casing, and a perforated grid spaced from and positioned below the said heating element with a sharp scraping edge integral therewith and extending downwardly to a plane corresponding with the lower surface of the casing.

4. An electrically heated paint remover comprising a shallow casing with the under side open, an insulating plate positioned in the upper part

of the casing, a heating element carried by wire stirrup-like elements from the insulated plate and positioned below said plate, a perforated grid spaced from and positioned below the said heating element and having a scraping edge integral therewith, means removably mounting said grid in the casing, and a handle mounted on the casing and spaced therefrom.

5. An electrically heated paint remover comprising a casing having a top wall and rear, side and front walls projecting downwardly from the top wall and which frame an open bottom heat applying area, the front wall including an outer section which is directly connected to the top wall and a forwardly and downwardly inclined scraper element as a continuation of the outer section, said scraper element having a suitable scraping edge, a heating element supported within the casing and a perforated plate of screen-like character spaced from and positioned below the heating element, the plate being subject to the heat of the heating element, protecting it against liberated flying particles of damaging character, and effecting substantially uniform distribution of heat through the open area, the plate being mounted in heat conducting relation to the scraper element and serving to heat the scraper element to a degree such that said scraper element will quickly and thoroughly remove paint as softened and loosened by the heat delivered through said open area.

6. An electrically heated paint remover comprising a casing having a top wall and rear, side and front walls projecting downwardly from the top wall and which frame an open bottom heat applying area, the front wall including an outer section which is directly connected to the top wall and a forwardly and downwardly inclined scraper element as a continuation of the outer section, said scraper element having a suitable scraping edge, a heating element supported within the casing, a perforated plate of screen-like character spaced from and positioned below the heating element, the plate being subject to the heat of the heating element, protecting it against liberated flying particles of damaging character, and effecting substantially uniform distribution of heat through the open area, the plate being mounted in heat conducting relation to the scraper element and serving to heat the scraper element to a degree such that said scraper element will quickly and thoroughly remove paint as softened and loosened by the heat delivered through said open area and a heat insulating plate interposed between the heating element and the top wall and serving for the support of the heating element.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,664,429	Multhaup	Apr. 3, 1928
2,240,913	Roskos	May 6, 1941
2,254,925	Wirth	Sept. 2, 1941

FOREIGN PATENTS

Number	Country	Date
354,315	Great Britain	Aug. 7, 1931