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DEVICE FOR REMOVING LAYERS OF PAINT

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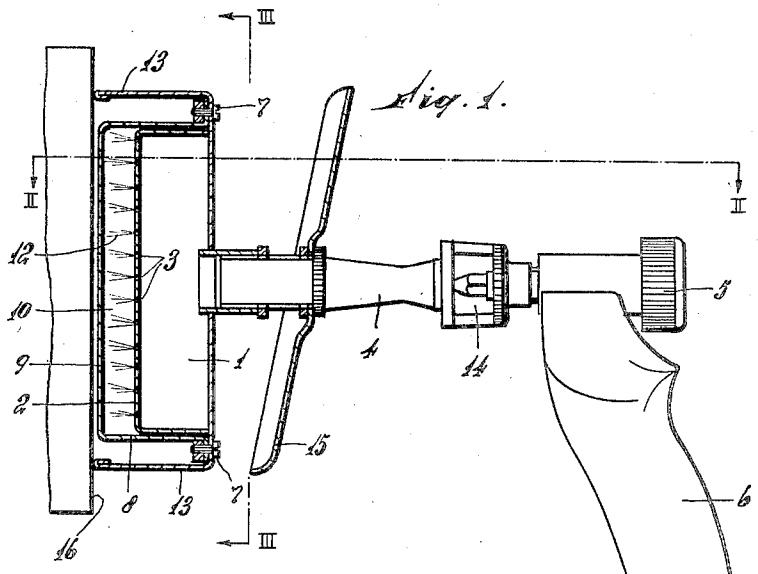


Fig. 1.

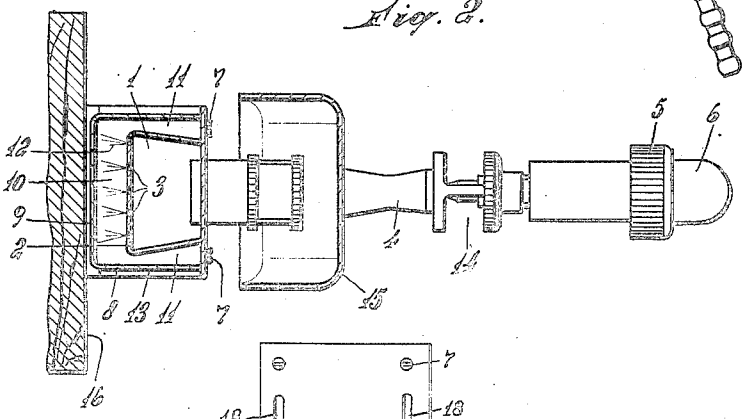


Fig. 2.

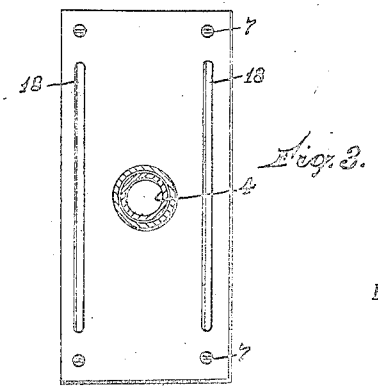


Fig. 3.

INVENTOR.
Jan Prent
BY
Robert E. Burns
Attorney

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DEVICE FOR REMOVING LAYERS OF PAINT

Jan Prent, Amsterdam, Netherlands

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2 Claims. (Cl. 158—13.6)

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Notwithstanding all other means proposed in the course of time, the method of burning off still remains the quickest and most effective way for removing the old layers of paint from surfaces that are to receive a fresh covering of paint. The said process of burning off old layers of paint is carried out with the aid of a burner, the darting flame of which is aimed at the paint to be removed.

The great danger of a fire being started by the use of a darting flame will, however, manifest itself again and again by the loss through fire of valuable buildings.

The present invention has for its purpose to provide a device by means of which the advantages of the method of burning off an old layer of paint will be preserved, whereas the danger of starting a fire will be obviated.

For this purpose the device according to the invention comprises a box-shaped gas chamber to which there is connected a feeding line for a combustible gas mixture, which gas chamber, the bottom of which is provided with burner openings, is enclosed with some intervening space by a bell-shaped hood attached to the said gas chamber, and is provided with at least two distancing members situated diametrically oppositely to each other and extending beyond the bottom of the said hood.

According to the invention the distancing members may extend at either side beyond the hood.

The sides of the distancing members that are facing outwards may, according to the invention be flat. It is also possible according to the invention that the edges of the distancing devices are continuous. Finally according to the invention a screening plate may be provided about the gas feeding line, for the purpose of deflecting the combustion gases.

In order to make the invention more clear, an embodiment of the same will now be described with reference to the accompanying drawing.

Fig. 1 represents a side view of the device, part of which is a longitudinal section.

Fig. 2 represents a front view of the same, part of which is a cross section according to the line II—II in Fig. 1.

Fig. 3 is a view taken along the line III—III of Fig. 1.

According to the said drawing the device comprises a gas chamber 1 the rectangular flat bottom 2 of which is provided with a plurality of perforations 3 forming the burner opening for a combustible gas mixture.

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The said gas mixture, which consists of a combustible gas mixed with the necessary combustion air, is conducted into the gas chamber 1 by means of a feeding line 4 connected with the said gas chamber, which feeding line 4 is provided with a controlling device 5 for the gas supply and a handle 6 for manipulating the device.

About the gas chamber 1 there is provided a bell-shaped hood 8 connected with the same by means of bolts 7, in such a way that between the bottom 2 of the gas chamber and the likewise rectangular flat bottom 9 of the hood there will remain a combustion space 10, and on either side of the gas chamber 1 between the said gas chamber and the walls of the hood, an open discharge space 11 for the combustion gases of the gas flames 12. The gas chamber 1 is, moreover, provided at each of its short side walls with a distancing member 13, which members extend beyond the bottom 9 of the hood and likewise beyond the short side walls of the hood 8.

Finally there has been provided about the feeding line 4, between the discharging space 11 for the combustion gases and the supply opening 14 for the combustion air, a screening plate 15 which is disposed above the combustion gas escape slots 16.

When the device is to be used, the gas flowing out of the burner openings 3 into the gas chamber bottom 2 is ignited. The combustion gases produced by the flames 12 are able to escape via the discharging space 11, provided between the gas chamber 1 and the hood 8, but the flames 12 are prevented from getting outside the device.

The bottom of the hood 9 is heated by the flames 12 to so high a temperature that, when the device is placed with the distancing members 13 on a portion of the layer of paint 16 that is to be treated, the said layer of paint, without getting into touch with the bottom 9 of the hood, will within a short time get sufficiently soft, owing to the heat radiating from the said bottom, that it can be removed with the aid of a ripping knife.

The distancing members 13 are attached to the gas chamber 1 at a distance so far removed from the heated bottom 9 of the hood, that they do not acquire so high a temperature that there will be any danger of fire caused by direct contact with the layer of paint.

Owing to the fact that the said distancing members also extend beyond the hood 8 in a lateral direction, they will prevent the said hood from getting into direct contact with the combustible portions of the surfaces to be treated by the device according to the invention.

As the supporting edges of the distancing members 13 are uninterrupted, the device is also suitable for treating layers of paint on narrow edges, such as window cross bars. The treatment of window cross bars with the device according to the invention has the great advantage that there can be no question of any cracking of the window panes.

Because of the fact that the sides of the distancing members 13 that are turned outwards are quite flat, particles of paint contingently falling on the same may be readily removed with the aid of a ripping knife, before the said particles can catch fire.

Particularly in case of the treatment of a layer of paint on horizontal surfaces, the combustion gases escaping from the discharging rooms 11 are deflected by the screening plate 15 in such a way that the entrance of the necessary combustion air into the inlet opening 14 provided for this purpose in the supply line 4 is not jeopardized.

The gas necessary for operating the device is readily available in containers under pressure that may be easily handled and connected to the device by means of a tube, so that the device may be used in all places where the supply of the said gas containers is possible.

Since the use of the device according to the invention does not require any open fires, all danger of fire will be excluded.

I claim:

1. A torch device for removing layers of paint from a painted surface while preventing contact of an open flame with said surface which comprises, in combination, a torch head having a handle, gas inlet means and air inlet means, a gas chamber at one end of said torch head for receiving a combustible mixture from said air inlet means and said gas inlet means, said gas chamber having a perforated wall, a bell-shaped hood enclosing said gas chamber and having at its forward end a substantially flat surface opposite the perforated wall of said gas chamber adapted to be heated by the ignited gases passing from the gas chamber through said perforated wall and to transmit the heat to the painted surface to be treated, said hood having side walls connected to said flat bottom for enclosing said ignited gases to prevent contact of said gases with the painted surface and having outlet means for said gases at its rearward end opposite said flat surface and support means for spacing said flat surface from the surface to be treated, said support means comprising spaced members each having an elongated substantially flat continuous edge laterally-spaced from and extending a short distance forwardly of said flat surface, whereby to engage the painted surface to be treated and to maintain the heated flat surface of the bell-shaped hood in proximity to, but a predetermined fixed distance therefrom, said support means being in heat-conducting relationship with a portion of said device directly heated by said ignited gases whereby heat from said ignited gases is transmitted by conduction to the flat continuous edges of the support means.

2. A torch device for removing layers of paint from a painted surface while preventing contact of an open flame with said surface which comprises, in combination, a torch head having a handle, gas inlet means and air inlet means, a gas chamber at one end of said torch head for receiving a combustible mixture from said air inlet means and said gas inlet means, said gas chamber having a perforated wall, a bell-shaped hood enclosing said gas chamber and having at its forward end a substantially flat surface opposite the perforated wall of said gas chamber adapted to be heated by the ignited gases passing from the gas chamber through said perforated wall and to transmit the heat to the painted surface to be treated, said hood having side walls connected to said flat bottom for enclosing said ignited gases to prevent contact of said gases with the painted surface and having outlet means for said gases at its rearward end opposite said flat surface and support means for spacing said flat surface from the surface to be treated, said support means comprising spaced sheet-form members each having an elongated substantially flat continuous edge laterally-spaced from and extending a short distance forwardly of said flat surface, whereby to engage the painted surface to be treated and to maintain the heated flat surface of the bell-shaped hood in proximity to, but a predetermined fixed distance therefrom, and a screening plate on said torch head between the gas chamber and the air inlet to deflect away from the air inlet the combustion gases emerging from the rearward end of the bell-shaped hood, said support means being in heat-conducting relationship with a portion of said device directly heated by said ignited gases whereby heat from said ignited gases is transmitted by conduction to the flat continuous edges of the support means.

JAN PRENT.

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